2017 SENATE APPROPRIATIONS

SB 2020

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020/SB 2080 (UGPTI)
1/18/2017
Job # 27039

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature Carrie Wiring

Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1 – 4.

Legislative Council: Alex Cronquist
OMB: Becky Deichert

(1:15) Senator Krebsbach: called the committee to order on SB 2020/SB 2080.

Denver Tolliver, Director, Upper Great Plains Transportation Institute:
Testified in favor of SB 2020/2080.
Testimony Attached # 1 – Agency Overview.
Testimony Attached # 2 – Power Point slides.

(6:51) Chairman Holmberg: Returned to committee.

(24:22) Senator Bowman: In regards to the $750,000 for the County and road infrastructure study, wasn't that a one-time study

Denver Tolliver: That was.

Senator Bowman: Does that mean just for two years and then do it again?

Denver Tolliver: That is correct.

Senator Bowman: So you want it to be part of your budget henceforth?

Denver Tolliver: Yes, we do because we never know if we are going to be doing it again. It gives me a lot more capability to plan and keep staff in place and we can do early contracting with consulting engineering companies to get better deals for them. We have never known

from biennium to biennium if we will be doing the study again until the legislative session is over because it is onetime funding.

Senator Bowman: When we talked about this two years ago, I remember very specifically that it was a onetime funding deal. I thought it was onetime and done. Evidently, we are not done.

Denver Tolliver: What we have been doing because the economy has been changing and the traffic patterns have been changing overtime, we think it is necessary to update the study periodically. Now the traffic went way down and that really changed the investment needs that we had computed in the previous biennium. If we had just taken the 20-year study from the previous biennium it would have been wrong. It seems to us that the traffic patterns are fluctuating so much that there is a need for a biennial study each year.

Senator Mathern: In the match concern you have for federal funds, you noted that the general funds are the best, but you also noted other partners are options – who are they?

Denver Tolliver: For the regional center grant, there are 7 other universities that are partnering with us. We have 3 in Colorado. We have 2 in Utah. We have 1 in Wyoming and 1 in South Dakota. When we allocate funds, we require that they provide the match. Sometimes they can't. We've had one university that was not able to match any of the money so we utilized all that money ourselves because we had enough to match.

Senator Wanzek: Has the past study during this biennium indicated that our efforts in the surge funding and the infrastructure funding that we sent out there made a difference? I would hope that it did. Has it helped us catch up? Are we still lagging behind?

Denver Tolliver: Certainly our results show it has made a huge impact. Whether the counties would agree that they are all caught up or not, I would not be sure. I would say that we have made great progress and the legislature has made some great investments that have provided us with a much better road system than we have had in the past. I was not deeply involved in the actual numbers.

(29:10) Tim Horner, Program Director, Upper Great Plains Transportation Institute: I and a team at DOT coordinated the study over the last two years. We did report this summer to an interim committee. I don't have a number now, but I will get them to you. We showed that the pavement conditions on county paved roads had improved a fair amount. It was part of our testimony to interim Transportation committee; that there had been gains made by the investments that were made. It analyzed the 30-60-90 rig movements. In all those cases, our 20 year needs are less than they were in the prior studies. The 20 year projections are down.

(31:00) Russ Hanson, Chairman, Advisory Committee, Associated General Contractors of North Dakota (Lobbyist # 052)
Testified in favor of SB 2020. Testimony Attached # 3 – NDCC 54-53. It is a broad based group that meets a couple times a year and we talk about the programs and the initiatives of the Upper Great Plains Advisory Committee. It is a broad based comprehensive group. I just

wanted pass onto the committee for UGPTI's efforts and appreciate your considerations on their funding efforts.

(32:05) Scott Rising, North Dakota Soybean Growers Association, Inc.: (Lobbyist # 069) Testified in favor of SB 2020. We have been long time supporters of the work of Upper Great Plains and we are very appreciative of the fact that you have funded these efforts. The first part of getting better is to quit digging the hole you find yourself in particularly as it relates to our rural and statewide infrastructure needs. We have accomplished that due to your willingness to fund onetime monies that were available for much needed road and rail improvements. We understand the "catch our breath" budget problem that we find ourselves in. I would encourage you to please take a hard look at this budget and aim it back toward "hold hole" effort because we still need to know collectively what the depreciation rate is and the impact of it long term. I am certain that I am one of the few people that drives down the interstate today and as I see trucks etc., and I wonder what kind of damage we are doing. I pay attention to that. One of the things that happen, through the efforts of the Upper Great Plains, that I think happens in every corner of the state, cities have access- everybody does. To go to them for assistance. Not only does their information provide good data for the DOT to choose to work on state highways but the information provides outstanding information for local entities that don't have the resources to do the work in their local areas. It is used in budget and planning processes all over the state. With that in mind, I encourage you to please stretch as far as you can to help put this together and continue this program.

(35:30) Steve Salwei, Transportation Programs Director, North Dakota Department of Transportation:
Testified in favor of SB 2020. Testimony Attached # 4.

Chairman Holmberg: Closed the hearing on SB 2020/SB 2080.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020/SB 2080 (Northern Crops Institute)
1/18/2017
Job # 27044

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature Pam Dever for Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1.

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Chairman Holmberg called the committee to order on SB 2003/SB 2063.

Mark Weber, Director, Northern Crops Institute
Testified in favor of SB 2020. Testimony Attached # 1. Thank you. You been great supporters through the years. We are getting ready for the future. I will share with you.
We have increased the level of short courses that we offer customers that come from throughout the world. The number of courses has tripled since inception. (Gave e.g.)

Sen. Krebsbach: Committee, any questions?

Senator Bowman: 9:25 Who is the competition that you compete against with this group versus who, to market ND products?

Mark: A similar facility at K State that does this kind of work. They have been around longer than NCI. They focus on wheat. We do not compete, but we partner with them and do joint educational programing. The only other in the region is Winnipeg. They have a world class system. That's who we work with.

Senator Wanzek: Since NCI is a cooperative between ND and other states, what is the likelihood of ever getting any funding? Do you get funding from other states?

Mark: Yes. We get some state appropriations from SD, through gas tax monies. One of their legislators was a strong supporter of the NCI and got it in a bill for permanent funding. We do not have to go back to the legislature each time. It is an ongoing thing. In MN, ag commissioner has discretionary authorities to utilize some funds for us. Year after year he

continues to fund. Commodity money from 4 states, MT, MN, SD, Northern Pulse growers and the Corn Growers, also, support us.

Keith Peltier, Chairman of the Board, Northern Crops Institute
Testified in favor of SB 2020. **No written testimony.**
I think we do a great job of promoting the crops of ND we provide great value. Any money we get from you is greatly appreciated. Want to emphasize a couple things. If we are doing a good job of promoting, the lower crop prices we should be promoting more than less. Where we going to get some money? Mark said we get great money from people coming for classes. We have a great lab for testing for technical services. We can raise some fees there. Got the guys to go out there and promote the product. We are getting more money there. Everyone can use more, but trying to do more ourselves. Working in conjunction with state and farmers. Thank you. Any questions?

14:24 **Senator Robinson**: Wanted to compliment Mark on his leadership and his enthusiasm. We could use a lot more of that. Appreciate the energy and the excitement.

Chairman Holmberg: (14.52) If you want to see his son, he's the one slightly taller than Jerry Klein. Committee. We will close the hearing on SB 2020/SB 2080.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020/SB 2080 (NDSU Extension Service)
1/18/2017
Job # 27073

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature pmonson for Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1 – 5.

Legislative Council: Alex Cronquist & Adam Mathiak
OMB: Becky Deichert

Chairman Holmberg called the committee to order on SB 2020/SB 2080.

Mike Beltz, Chairman, State Board of Agricultural Research and Education
Testified in favor of SB 2020.
North Dakota Agricultural Experiment Station book - Testimony Attachment # 1.
Speaking from page 7 he gave an overview of SBARE and asked for restoration of the funding.

10:21 **Senator Bowman**: When you have your discussions on prioritizing everything in the book do you ever discuss the marketing aspect of what we are producing? Now we are sitting with a huge surplus and no market and we are paying a big price for that.

Mr. Beltz: That's left to the commodity groups to promote their crops.

Chris Boerboom, Director, NDSU Extension Service
Speaking from page 1 in testimony #1 provided an overview of extension and some highlights and impacts on extension.

19:32 **Senator Erbele** asked for clarification of what the numbers on the map on page 11 meant.

Mr. Boerboom explained that they were just the dates of the events and had nothing to do with the response.
23:20 He then spoke to the Financial Schedules starting on page 91.

He asked for support of SBARE and asked that they be given the choice to fill employees as needed.

29:23 **Senator Robinson**: On Monday, Burgum released further budget reductions. How do they affect you?

Mr. Boerboom responded that Governor Burgum's additional recommendation would be an additional $806,000 reduction for Extension on top of $3M that would occur with a 10% cut.

Chairman Holmberg: You fall under Higher Education. The original budget of Governor Dalrymple was a 15% reduction and Governor Burgum asked for 5% reduction. The difference is that Higher Ed has some flexibility toward tuition which you don't have. Is that correct?

Mr. Boerboom: We report under Higher Ed, but we have a separate budget bill and we are a separate agency. We do not have the capacity to generate funds through tuition. The budget cuts that were recommended for Higher Ed are different than the recommendations that were provided to us as an Extension Agency.

Chairman Holmberg: Under the Burgum proposal do you fall in under the 31M out of Higher Ed or the 19M under other agencies.

Becky Deichert: They fall under the 19M.

Senator Mathern: In light of the plans you are working on, would this change our historic presence in every county in ND or, with the cuts, would you still have a presence of staff in every county.

Mr. Boerboom: Our plan is to maintain that local delivery of Extension this time. With these cuts it's a significant benefit that we can partner with the counties. The County provides 50% of salary and Extension provides 50% of the salary plus the fringe benefits. Through that partnership we are highly efficient in operating in the counties and providing those educational services. Our intent is to maintain service in all counties throughout the state.

33:40 **David Miller, Donnybrook, ND; third generation farmer; certified seed conditioner**.
Testified in favor of SB 2020. Testimony Attached # 2.

39:48 **Chairman Holmberg**: You mentioned transfer of research information. What is the role of the internet in this transfer and is that a growing or a diminishing aspect regarding research?

Mr. Miller: It's a very big part of our business in agriculture that we have the internet to get these answers readily. It's put out there through the Research and Extension Centers and we have access to the information immediately.

41:10 **Alden Fitterer. Rancher, Tuttle, ND**
Testified in favor of SB 2020. Testimony Attached # 3.

47:00 **Ellie German**, Missouri Valley Bunch 4-H Club in Morton County
Spoke about her experiences in 4H and how it helped build her confidence.

50:20 **Angie Benz, Moffit, North Dakota, Emmons County**
Testified in favor of SB 2020. Testimony Attached # 4.

54:24 **Senator Bowman**: Do you have suggestions for us where to find this money?

Angie Benz: Personally these programs have impacted my life. When you look at the counties where I'm involved, there are young people that have amazing resources available to them.

Senator Bowman: We need to find those dollars. We've seen 4-H, FFA, State Fair kids come and testify, but we're in a state of influx right now.

56:43 **Dennis Renner, Chairman, North Dakota Soil Conservation Committee.**
Testimony Attached # 5.

(58:17) **Natalie Marado, Beach, ND, Belfield City Auditor**
Testified in favor of SB 2020. No written testimony.
She came to ND from Nevada. She supports the Rural Leadership Program that she is a part of. It has given her valuable leadership skills that includes a closer look at her strengths and the ability to work on her weaknesses. She understands how levels are interconnected and how these work. Her project for Rural Leadership was Revitalization of the Belfield Theater. This small town theater had been the glue that connected the community members in Belfield. With the renovation and reopening, many see great possibilities for their small town. As a participant she has learned that even just one good leader in a community can move walls, bricks, and people where there are no mountains.

Chairman Holmberg said next they would move on to the Research Stations.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020/SB 2080 (Main Research Station & Agronomy Seed Farm)
1/18/2017
Job # 27099

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1 – 31

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Chairman Holmberg called the committee to order on SB 2020/SB 2080.

Ken Grafton, Vice President, Dean and Director for Agricultural Affairs, NDSU
Testified in favor of SB 2020. Continuing on page 21 of the North Dakota Agricultural Experiment Station book. Attached Testimony # 1 from Audio Job # 27044..

9:36 **Chairman Holmberg**: You were the beneficiary of SIFF funds.

Ken Grafton: Yes. He thanked the committee for their support last session. We're here to generate income for the state of ND through the research activities. The seed cleaning facilities are an excellent example of disseminating technology to the farmers.

20:11 **Senator Robinson**: The original budget was 90%. The additional reduction from the Burgum budget was $800,000. What would impact would the additional Burgum reduction be on your operations? Budget impact.

Ken Grafton: If Governor Burgum's budget cuts are implemented it would cost the main station an additional $1.6M and the Research Extension Centers slightly more than $530,000. In order to address the 10% budget cut that Governor Dalrymple requested, a minimum of 25 positions would be eliminated.

Chairman Holmberg: How does the suggestion in the Burgum budget that all employees pick up 5% of their health insurance affect your ability to obtain and retain employees.

Ken Grafton: As the extension service, we're recruiting our PhD's at a national level. To make North Dakota attractive a very good fringe benefits package has been exceptionally beneficial. It's been well received by young scientists, particularly. A diminution of that would make it more difficult. Unless a person has a tie to North Dakota or the upper great plains, it's hard to recruit.

Kris Ringwall, Director, Dickinson Research Center, Dickinson, ND
Testified in favor of SB 2020. Starting on page 53 of testimony # 1.
Additional Testimony Attached # 2: NDSU, Dickinson Research Extension Center (includes letter from Tim Meyer, Chairman, Dickinson Research Center Advisory Board).
Attached # 2A – Making a Difference
Attached # 2B – Project Final Report (Quantification of Road Dust and its Effect on Soil)
Attached # 2C – Fugitive Dust impacts on Plants and Landowner/Citizen

Kevin Sedivec, Interim Director, Central Grasslands Research Extension Center
Testified in favor of SB 2020. Speaking on page 49 of testimony # 1.
Additional Testimony Attached # 3 – NDSU Central Grasslands Research Extension Center

Chris Schauer, Director, Hettinger Research Extension Center
Testified in favor of SB 2020. Continuing on page 57 in testimony #1.
Additional Testimony Attached # 4 – Hettinger Research Extension Center

35:55 **Senator Robinson**: Is it still the case that your focus is in animal science, sheep in particular?

Chris Schauer: Our focus is broader than that. Sheep is what we have the most animals on the ground. There is a national program in sheep. Regionally, the weed science and agronomy program are very much addressing the regional needs of producers. The Range and Wildlife Program addresses issues that cover a large part of western North Dakota getting into endangered species. We are different than what we were 108 years ago when we were actually a dairy. We are a broader breath of research but we do a lot of research in livestock and the impacts of livestock both in cropping systems and grazing systems.

Senator Robinson: In 1995 the ag committee toured the Hettinger Research Center. The community ownership and buy-in in that facility was so evident. I think it's time we get our tour groups out to see these facilities first hand and meet the staff and the community surrounding these facilities.

Chris Schauer: Thank you for those comments. We would love to host you. The agronomy lab you supported a couple biennium ago has been a large impact in our research.

38:45 **Randy Mehlhoff, Director, Langdon Research Extension Center**
Testified in favor of SB 2020. Speaking from page 61 in Attachment #1.
Additional Testimony Attached # 5 – NDSU Langdon Research Extension Center

44:35 **Mr. Mehlhoff** clarified the name of the "faba" bean for **Senator Bowman.**

Senator Wanzek was interested in the comments about drain tiling. He said they have other bills put in to try to facilitate farmers' ability to do it. They've done tiling in the Jamestown area. He has yield maps before and after and finds the production results on his field amazing.

Randy Mehlhoff responded by saying that, in addition to what the tiles can do, they are also looking at making lands suitable for tiling. There are two aspects of that project.

46:00 **Shana Forster, Director, North Central Research Extension Center**
Testified in favor of SB 2020. Speaking from page 65 in testimony #1.
Additional Testimony Attached # 6.

49:00 **Jerry Bergman, Director, Williston Research Extension Center**
Testified in favor of SB 2020. Speaking from page 69 of testimony # 1.
Additional Testimony Attached # 7.

54:05 **Blaine Schatz, Director, Carrington Research Extension Center**
Testified in favor of SB 2020. Speaking from page 45 of testimony # 1.
Additional Testimony Attached # 8.

59:57 **Brian Otteson, Director, Agronomy Seed Farm**
Testified in favor of SB 2020. Speaking from page 73 of testimony # 1.
Additional testimony attached # 9.

1:02:36 **Neil Fischer, ND Wheat Commission**
Testified in favor of SB 2020. No written testimony.
The Wheat Commission was the first commodity group in ND in 1959. Since then a lot has happened. What the Legislature is doing is good work and positive and might ensure the fact that we won't have the financial situations of today in the future. The Wheat Commission focuses on foreign market development, research, domestic promotion, domestic policy through partners. Research has become the number one effort of the ND Wheat Commission and is now the largest program. They work on value development.
1:04:20 He talked about working relationships and partnerships. After the crop is grown, they look at that aspect. They partner with other wheat states and US wheat associates. They are constantly looking for ways to keep the markets we have and to promote our unique varieties and traits. They are very excited about new partnerships with the private sector. Wheat yields have doubled since we've started. There have been back to back record yields. Research works and pays big dividends.
1:06:19 The market base is about 80 countries. With the help of this research we have branded our wheat. We don't have to compete against the generic wheats. It is truly branded. It is called DNS in the market community in south Asia and they said this is the wheat they want. When he goes to our 19 peer states, they think we do it right in ND.

1:08:35 **Chairman Holmberg** stated that he would probably be interested in what happens over the next few months with the new administration and farm trade.

Neil Fischer responded that there are some concerns. They are disappointed that the Trans Pacific Partnership is not going to happen. Another concern is that he doesn't like China running the world markets.

1:09:45 **Shannon Berndt, Executive Director, Northern Pulse Growers Association**
Testified in favor of SB 2020. Testimony Attached # 10.

1:13:10 **Troy Coons, Donnybrook, ND Chairman, North Central Research Extension Center.** Testified in favor of SB 2020. No written testimony.
Agriculture is the mainstay of our state economy and hopes people will remember that and invest in it.

1:16:33 **Julie Ellingson, North Dakota Stockmen's Association**
Testified in favor of SB 2020/2080. Testimony Attached # 11.

1:18:57 **Del Gates, Farmer, Mohall, ND; President, North Dakota Crop Improvement and Seed Association (NDCISA).** Testified in favor of SB 2020. Testimony Attached # 12.

1:23:15 **Blake Inman, Director, US Durum Growers Association, Berthold, ND**
Testified in favor of SB 2020. Testimony Attached # 13.

Paul Mathiason, Chairman, North Dakota Ag Coalition
Testified in favor of SB 2020. Testimony Attached # 14.

Scott Rising, North Dakota Soybean Growers Association
Testified in favor of SB 2020. Testimony Attached # 15.
Please honor SBAREs interim work within research and extension community.

1:29:15 **Lyle Warner, Hettinger Research Center**
Testified in favor of SB 2020. No written testimony.
He asked the committee to prioritize the SBARE as priority number one to restore budgets so they can carry out the work.

1:30:38 **Dan Wogsland, Executive Director, ND Grain Growers Association**
Testified in favor of SB 2020. Testimony Attached # 16.

1:32:25 **Senator Wanzek**: If anyone could understand the challenge of the state budget, wouldn't you say it would be those of us in agriculture?

Dan Wogsland: That's absolutely correct. There's nothing worse than having 1000 bushels in the bin and needing 2000 bushels to pay off bills. The fact is, we have to be able to have the research in front of us that will help not only farmers specifically but the whole North Dakota economy.

Chairman Holmberg closed the hearing on SB 2020/SB 2080.

Additional testimony submitted:

Kip Kovar, District Engineer, Garrison Diversion Conservancy District – attached # 17.

Kayla Pulvermacher, North Dakota Farmers Union – attached # 18.

Sarah Lovas, Farmer and Agronomist, Hillsboro, North Dakota – attached # 19.

Kat Weinert, Chairwoman, Hettinger Research Extension Center Advisory Board – attached # 20.

NDSU Williston Research Extension Center (WREC)/Montana State University Eastern Agricultural Research Center (EARC) Advisory Board – attached # 21.

Wayne Berry, Chairman, WREC-EARC Joint Advisory Committee – attached # 22.

Justification for a New WREC Seed Cleaning Facility – attached # 23.

Connie Iverson, President and MonDak Area farmer/rancher – attached # 24.

Danielle Steinholt, Williams County Crop Improvement Association – attached # 25.

Shawn Wenko, Executive Director, Williston Economic Development – attached # 26.

Duane Pool, Assistant General Manager and Byron Lannoye, General Manager, Pulse USA, Bismarck, N - attached # 27.

Ben Larson, STI Agronomist, Safflower Technologies International (STI) – attached # 28.

Cameron Wahlstrom, Research Specialist, NDSU Williston Research Extension Center – attached # 29.

Robert Kostek, Farmer, Williston Research Extension Center – attached # 30.

Mike Ames, President, Agri Industries, Williston, North Dakota – attached # 31.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020 & 2070
1/23/2017
Job # 27237

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature Alexis Dalzer

Explanation or reason for introduction of bill/resolution:

Discussion on SB 2020- Extension Service

Minutes:

(0.22.16-0.26.38) Chairman Holmberg: Are there other bills we can look at that will be scheduling subcommittee hearings? (At 8:30 am on 01-23-17 the Appropriations Committee heard testimony from Sheila Peterson, OMB regarding the Revised Executive Budget Recommendation 2017-2019 Biennium) (Job # 27231)

V. Chairman Bowman: I would like to schedule the first hearing on the Ag Research and Extension budget. There will be a lot of changes in that and we spent a lot of money on one- time funding and we have to review that to find out what we got for the money we spent. Our committee will have whatever questions you have. Be prepared to ask once we meet because when that budget is done I want everyone to be on the same page. It's a pretty important budget for our state.

Chairman Holmberg: one of the things I hope you look at delivery systems and how they might have changed from 1968 and are there new models. I would schedule tomorrow the kinds of subcommittees that the folks that are going to be interested in are here in town. For example, Extension would be a little awkward

Senator Robinson: In terms of the research stations, some have received equipment, others are raising money to buy the same equipment in terms of application of some fairness, look at that. Was it Williston out trying to raise some money for a seed cleaning system that we paid for in full in another area?

V. Chairman Bowman: We paid partial payments to Minot and Carrington and then to go out and raise the money. They were supposedly two years ago the worst of the seed cleaning facilities and we didn't have the money to give them the full amount but we gave them the authority to raise, after we gave them so many dollars. They have the authority to do that. Williston's in this. You find that's fairly common in this budget. Once one gets it, they all want it. It's just a matter of how many dollars we have to able to apply to the next research center.

V. Chairman Krebsbach: Just to add, the Minot seed cleaning station has been condemned. It is in bad shape. And consequently they haven't been able to even increase the revenues that they usually have for investing back because they have had to rent equipment or farm it out for cleaning and that has been going on for years. So it is time we get it done.

Chairman Holmberg: Anything else? And come up with a budget of 80% of what they had last time. The discussion regarding SB 2020 was closed.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
1/26/2017
Job # 27486

☒ Subcommittee
☐ Conference Committee

Committee Clerk Signature Mary Muncer for Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes:

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Senator Bowman Called the sub-committee to order on SB 2020. **Senator Erbele** and **Senator Grabinger** were also present.
He said they have their work cut out. We are going to have to work together on some tough choices. If between now and the end of the session things happen to get better, then the House can do something.

Senator Grabinger: SB 2080, which was the companion bill, is no more?

Alex Cronquist: Senate appropriation has recommended a do not pass. You'll use it as a reference to see what changes you'd like to make. Green sheet is written to SB 2080 so you can use it as a reference of changes that the Governor had recommended.

Senator Bowman: Can you explain the base budget on SB 2020 with the allotment?

Ken Grafton, VP, Dean & Director for Agricultural Affairs, NDSU: In answer to your budget question, there was a one-time funding and the money was used for that; there would be no ongoing requests for any appropriation. (6:00)

Senator Bowman: The money that we put into the Souris River project. Is that all completed and you are waiting for results or has that all been completed and nothing more to do.

Ken Grafton:The funding that was provided for the Souris River project allowed us to carry out some of the research for that particular period of time. We still have some monies left to expend on that project and we will probably put in plots for the continued effort through this period of time but there would not be any additional monies.

Senator Bowman: The two grain facilities that we funded last time, what I have read is that they are on time with the schedule and are going to be completed. But then I also heard that Minot might have some problems. Is that true?

Ken Grafton: The seed cleaning plants are like a moving target at this point in time. We really appreciated the support that the Legislature provided for the $750,000.00 to both the North Central Research Extensions Center and the Carrington Research Center for the equipment and also the authorization to raise or use all the monies.
The Carrington research center decided to use their resources to construct their facility because they believe the best seed cleaning plant is one that is stationery. They used the funding from seed sales for construction for the building. The building is still a shell and they are putting electrical in now. They're going to be in a position to place the equipment in the facility but there will be other needs for that facility to be fully and completely operational. The North Central facility is in the position of developing a fund raising effort and seeking approval from the State Board of Higher Education to do that. They've got some soft commitments for funding at this point in time. Their goal is slightly less than $700,000.

Senator Bowman: When these two facilities are running, how much more money will be generated. The reason I ask is because there are more than these two that want these. To make it easier for finding funding, if we see a return back to those facilities it makes them easier for them to operate their facilities with that extra income.

Ken Grafton: When the seed cleaning plants are completed, that generates a lot of money. I can get the actual figures for you. The facilities are antiquated and it's also a worker's safety issue. There is a return on investment and a continued demand for certified seed. The seed that is produced is foundation grade seed and we sell it to certified seed growers. There is a demand for certified seed in the state. The centers will do as they have done in the past. They will produce seed and be able to use that money for production of seed, but other activities at the center as well.

Senator Grabinger: At these places where they are producing the seed, are they selling all they're producing?

Ken Grafton: Seed production and seed sales are an art, I suspect, because you have to produce a year or two in advance what the farmer may want down the road. You have to have the seed that the farmer wants, the varieties, and the amount to satisfy the demand.

Senator Grabinger: So they hold some over for inventory then. Ok.

Senator Bowman: Bioinformatics –we gave $800,000 last session and 2 FTEs. What have they done for the $800,000 dollars?

Ken Grafton: The two were hired in August 2016. We needed to get information ready to have programs functional. They are in process now of developing the appropriate software to take all the data in our hard red spring wheat program and make that available.

Senator Bowman: Is there money in the budget over and above the $800,000 we put in? Is there enough to carry that over?

Ken Grafton: We have sufficient funds to continue that program.

Senator Bowman: This wasn't $800,000 for every biennium for these two.

Ken Grafton: No sir. Not that I am aware of.

Senator Bowman: Precision Ag, how is that going? We put $600,00 dollars in that last session.

Ken Grafton: In Precision Ag, the activities that we are doing, we feel it is very important and in demand by farmers and ranchers of the state. What we decided to do at the last session is to make this a competitive grants program. We want to get the best ideas possible and the research efforts needed and move in that direction. I misspoke at the hearing the other day, saying there were 25 proposals, but actually there were 18 proposals. We funded I think 9 of them. The amount of the requests was $2.5 million dollars. I apologize on saying 25. There were 18. We were able to fund $600,000. of it.

Senator Bowman: I saw Precision Ag on display upstairs and I was very impressed with what I seen and where we are going is beyond me.

Ken Grafton: A few years ago, farmers were farming on an acre basis. Now they can farm at the square inch level now. It is unbelievable how fast the technology is moving.

Senator Bowman: We farm out there by the section.
Do you have a list available or things that you discussed that we could look at as far as priorities if we have to reduce the budget? I would like to get back on track with this in the next two years.

Ken Grafton: One of the things that I hope the committee might want to consider is to allow us to have the flexibility that we direct the cuts, as I believe we would have a better understanding, no disrespect to the group, a better way of dealing with it, as opposed to identifying particular programs to be cut at this point in time.

Senator Bowman: That is a good way to do it as you work with it every day, and you know the ramifications and amount of investments and where you're at with the different programs that we don't know because we don't follow it every day, so I'm glad you said that.

Ken Grafton: I'd be more than happy to identify positions that would cause some undue impact on moral and on individuals. We have a number of vacancies because of the allotment. We started slowing down on the hiring in July of 2015 soon after the Legislative session was over. The only other position that we advertised for, from the spring of 2016 to when it was filled in the summer of 2016, is the hard red spring wheat breeder. That is one of our premier plant breeding programs. When the allotments occurred we had 25 vacant positions. Now we have 44-45 vacancies. We know that the state is in a difficult situation. If a cut occurs, we aren't eliminating a position that is filled.

Senator Bowman: That horse trading quote is familiar with me from where I come from.

Senator Erbele: I got lost here, you talked about 25 empty positions when the allotment occurred and then in the next breath you said 45 empty positions. Clarify that a little would you?

Ken Grafton: In order for us to address the allotment, 80% of our budget is tied up in salaries and fringe benefits. We knew that there would probably be some issues. There were a number of vacancies that were not filled and when the allotment came we were able to address the allotment using those vacant positions.

Senator Erbele: You had 25 at the time that were already vacant?

Ken Grafton: No. When Governor Dalrymple asked for a 10% budget we gave up 25 positions to help address that 10% budget cut. So now we have 44-45 vacant positions.

Senator Erbele: Am I to think that between 25-45 we have wiggle room?

Ken Grafton: I respectively suggested earlier that if you gave us the flexibility, if cuts occurred, and if you gave us the flexibility to address those cuts internally, we could use those vacant positions to fill some of the strategic areas internally and prioritize.

Senator Erbele: So at this time we haven't affected lives in the terms of pink slips.

Ken Grafton: Not at this time.

Senator Bowman: When I read through the new governor recommendations it sounded like he was going to cut another $2,354,000 out of this. If you could give us ideas.

Ken Grafton: We received information from Governor Burgums office earlier this week. It takes a while to figure how to come up with $2.3 million as that is a significant cut.

Senator Bowman: I agree, but we're the ones that have to face the music. Next time we meet I am hoping you have some suggestions to help meet the requirement.

Ken Grafton: I understand the situation, we're all part of the same team.

Senator Bowman:A question on the greenhouse. Did we fund $400,000 dollars for that?

Ken Grafton: We did receive a one-time funding of $173,622.00 for utilities 2-3 biennium's ago. We did request a one-time funding of $400,000. And it was not provided.

Senator Bowman: There are private companies that use the greenhouse for research?

Ken Grafton: No we work with them, but there is no company leasing space or renting.

Senator Bowman: How about the new addition for biosafety level.

Ken Grafton: We had difficulty getting it approved by federal authorities, utilizing it as a non-biodiesel facility. We will get the final tests sometime in February.

Senator Bowman: From the business standpoint will that generate any revenue at all?

Ken Grafton: It will generate increased grant dollars for research purposes, it won't be revenue. When the BLD facility is up and running it will be costly to maintain. If there's a cooperative agreement they would be paying their fair share.

Senator Bowman: Are there any major issues on the various campuses that do the research is there anything we need to be aware of.

Ken Grafton: The government has been very supportive. Great research but considering the situation we are in, it is not something I can stand up here and ask for.

Senator Grabinger: I am looking forward to the list that we can work with.

Senator Erbele: SBARE has come out and said if we can get our 10% back (page 37 – testimony #1) we can get you 60% of the way back. Full restoration is number one priority, but you're asking that we let you plug the holes.

Ken Grafton: If there's anything that will allow us to move beyond a 10% budget, that would be huge.

Senator Erbele: If nothing more can be done and you have to live with the 10% cut, what's the biggest detriment to us as a state?

Ken Grafton: Research is a continuum. We would be eliminating positions and they would be in Animal sciences and plant sciences. They directly impact the farmers.

Senator Erbele: At Central Grasslands, the research they've been doing has been ongoing. Does some of that comes to a halt or is it just slowed.

Ken Grafton: It will come to a glacial pace, and then stop. It would take us years to get back the developing programs. I don't want to sound like a gloom and doom sort of position. The vacant positions would be eliminated, allowing us to use any remaining positions on a retaining basis, and we would do it. I don't know direct impact.

Senator Bowman: You guys have done a great job getting various production levels up, but we have one dilemma, we both produce according to the price. Instead of looking for greater bushels, we need to figure out how we can use the surplus. We have another industry other than crops and it requires a lot of feed. Do we need to put more of an emphasis on that end of it rather than putting emphasis on 'someday farmers have to have it'. The market shows we are overproducing and that's including livestock.

KenGrafton: Farming and ranching is a continuum and a lot of the commodity groups are focused on marketing. We listen very carefully with commodity groups and they fund many programs. We work closely with the commodity groups in the areas they feel are important. But they also maintain a marketing strategy as well. I agree with you in the sense that increasing livestock development in the state would be an asset to utilizing existing crop resources.

Senator Bowman: I also looked at the amount of bushels generated in our state that are transported out of our state and the transportation is not cheap. I think we need to talk about the extension service.

Chris Boerboom, Director of the NDSU Extension Service: Looking for suggestions on extension budget allotment of 6.55 and a 13.5% reduction to our budget. Similar to Dr. Grafton, we've had a number of retirements. The state specialist positions have been frozen. We have 14 FTE and vacancies that are currently frozen. We would need to have additional reductions to meet the current budget proposed by Gov. Burgum. I would need to do some additional cuts beyond what I have open now. It's not any secret what some of these positions currently are. Named the vacancies.
There is a range of positions that are open. Without some restoration in the budget, the majority of these positions are going to be closed.

Senator Bowman: When you evaluate all the programs you have in your book, the one that is the weakest of all of them, maybe get rid of and try to save one of the better ones. It's not that we want you to get rid of it, as you always come up with good ideas, but we can't fund all of these so do you have priority if you have to cut one?

Chris Boerboom: There are some that we'd prioritize higher than others. I don't know if there is a way to have other conversations other than a public list. I don't know if I would want to do that.

Senator Bowman: I can respect that. I am just looking to see everything open for discussion. We have to be able to explain it to the rest of the group. We have to show that we made some tough choices but have taken the least impacted areas so that we will survive this in the next two years.

Chris Boerboom: If you look at extension in the big picture, we have Ag, 4-H, family consumer science, and community vitality programs, so these are the four areas. We're not going to close down Ag. We'd prioritize. We can't close down 4-H but is there a position that we can do without at this time. Family Consumer science, we can't close the whole program, but again we can look at various positions. We can share that.

Senator Bowman: Good thank you. Is there anyone else that would like to speak?

Senator Grabinger: What I'd like to see, is we're trying to offer you flexibility in helping us to get to that point rather than doing things haphazardly.

Senator Bowman: Would you rather have us give you a number and that would give you the flexibility to try to reach.

Chris Boerboom: That's what it comes down to.

Senator Bowman: I think that is something we could come up with.

Brian Johnson, Soil Conservation Districts, NDSU: We want to thank the committee for their support in the past. We understand where things are at. We are all a part of this and we would like to be a part in helping fix it. Thank you.

Mike Beltz, Chair, State Board of Agricultural Research & Education (SBARE), NDSU What's the number, and we can prioritize and be flexible with the cuts. Thank you.

Senator Erbele:. The associated operating costs, how much are we reducing.

Ken Grafton: We are trying to address any budget cuts, and also minimizing equipment cuts.

Senator Erbele: In Streeter for instance, they still have x number of acres of hay to make even though we are cutting.

Ken Grafton: In order for us to do our job, operating is not going to be cut 10%.

Senator Bowman closed the hearing on SB 2020

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
2/2/2017
Job # 27794

☒ Subcommittee
☐ Conference Committee

Committee Clerk Signature Eva Luckert for Alice Delzer

Explanation or reason for introduction of bill/resolution:

A Subcommittee hearing on the Extension Service

Minutes: Attachments 1-9

V. Chairman Bowman: Called the Subcommittee hearing to order at 9:30 am in the Harvest Room. All subcommittee members were present. Senator Erbele and Senator Grabinger. Alex Cronquist, Legislative Council and Becky Deichert, OMB were also present.

V. Chairman Bowman: We are going to first go through the Upper Great Plains Transportation budget. There is a lot of money involved and the only question I have on that budget is the money we gave you last session for the study, is any request for back in this budget to do the same thing? Testimony attached # 1 – Base Level Funding Changes Budget No. 627 (UGPTI).

Tim Horner, Program Director, Upper Great Plains: It's both tables, we revised our budget and then we also created second table. We reduced a couple of the optional requests.

V. Chairman Bowman: So far the money that you invested in this study, how close are you to reaching the goal that you set when you asked for the money two years ago?

Mr. Horner: Our primary goal was to create a process that created a very creditable and acceptable means of identifying whether or not the investments the legislature had made into the local systems was improving situations. It is showing that there is improvement in the payment and gravel is ongoing. So the overall twenty year showed a reduction in those local road needs, there are still significant needs. The original goal was that we establish a credible system, and over the three biennium's we have taken comments from the locals on ways to improve. We have improved the input processes as far as the surveys of costing for gravel. We have trained them through webinars and we have identified issues that you had said were concerns about approaches to a creditable study. We think we have done a pretty good job of doing that but of course the roads change every year and prices change every year. We are under the assumption that this would continue as a bit of information that you would want nest session.

V. Chairman Bowman: One thing that I would like to see as we see the price of gravel continue to sky rocket, when is it going to be more cost effective over the life of that road to look at another source like pavement versus that. Has that been considered at all?

Mr. Horner: In the current biennium we worked with South Dakota, to create a smart phone application for local jurisdictions so they can evaluate their cost of maintaining their gravel road verses the cost of paving. That can be modified as unit prices change.

V. Chairman Bowman: We have done a lot of chip and seal roads down there but that is a continuing cost. We have to do it every year. The road we paved that is the most absolutely the most beautiful thing we've ever done down the oil field and it is going to last a long time. Either one of you have any questions on this part of the budget. We are using the Burgum budget numbers and that is what we are going to have to adjust to. By adjusting down to this, we are going to give each department head the right to make those adjustments in their own departments because they know best as to where it is going to least affect the overall investment that we make. I want everybody to be clear on that. There is no question that is the right approach from what I have heard.

Senator Erbele: When you say the Burgum budget but I think we need to put the caveat in that employee portion, that the health insurance will not be part of our consideration.

Alex Cronquist: Since we are working from the base budget if you would just ignore Governor Burgum's recommendation for that five percent health insurance increase, then it doesn't get changed. That five percent health insurance is a change that Governor Burgum recommended be made to the base budget so if you don't make that change, then it will be taken care of.

Senator Grabinger: On the back, I see these two on the back of Testimony attached # 1. Section 7 authorizes the State Board of Higher Education to adjust or increase the FTE's and just report it to the office of budget and management. Is that something that is done all the time. Why are we considering the FTE's here if they can adjust them regardless of what we think?

Alex Cronquist: So Higher Education and the Ag Research and Extension of the Upper Great Plains for at least the last several biennium's they have had the ability to adjust their FTE's within the availability of funding.

Senator Grabinger: My final one is on section 8. Why if there is left over unexpended funds in the previous biennium, why is that not going back to the general fund rather than allowing them to continue to use that.

Alex Cronquist: Yes, it is common practice so that has been included in past bills and Governor Dalrymple recommended it be included again this biennium and Governor Burgum did not change that recommendation.

Ken Grafton, Vice President, Dean & Director for Agricultural Affairs: Testimony attached # 2 – Base Level Funding Changes Budget No. 638 Northern Crops Institute. I am here to answer some questions if there are any regarding Northern Crops Institute.

V. Chairman Bowman: You guys have done a great job for us. You will be aware then at soon as we get this done and get the amendments drafted and finalized that we will be within the Burgum budget. Any other questions about this budget?

Ken Grafton: Yes. Regarding changing the FTE's the ability to modify the FTE numbers, is based on special funds, if we receive grants to carry out research we have to hire those individuals using those special funded positions. When the grants go away the positions go away. Section 8 we do allow for carry over, but for the experiment station we only use the carry over funding for capital improvement projects that might be continued and not finished up during that period of time. Those are the two examples of why section 7 and section 8 are included.

V. Chairman Bowman: We will start on the main research center. Testimony attached # 3- Base Level Funding Changes – Budget No. 640 NDSU Main Research Center. Any questions on the main research center on the numbers we are going to approve? I did talk to Mr. Grafton about what they are looking at and reducing their budget down to this budget. I appreciate you showing me where you are making your cuts, not what we want to do but what we have to do.

Ken Grafton: These are very difficult situations for all us. The last time we met there were some questions regarding seed cleaning plants and production and things such as that. We compiled some information. Testimony attached - #4. He asked to go through the handout and explained Langdon REC. (12:54-16:01)

V. Chairman Bowman: The money you receive from the sale stays with that center and they use that money for various projects, they have that flexibility?

Ken Grafton: You are correct. Those monies are used not only to maintain the foundation seed program but also for other research purposes and other activities.

V. Chairman Bowman: The final thought on this budget is the same thing with benefits package. We are going to leave five percent in there so we don't have to do anything. Is that the way it was in the last one?

Alex Cronquist: The employees will not be required to pay the 5% rate and that would be the same on all of them.

V. Chairman Bowman: Let's go with the extension.

Senator Erbele: The sheet you handed out Mr. Grafton, the second column over, what do the letters mean? What is MICR? Testimony attached, #5 The Main Station, information regarding biennial salary + fringe.

Ken Grafton: Microbiology, those were abbreviations based on the departments in which they are located in the main station.

V. Chairman Bowman: You showed me yesterday what you plan on doing with the reductions. Are you prepared to meet the budget with the reductions?

Chris Boerboom, Director, NDSU Extension Service: Testimony attached #6 – Base Level Funding Changes – NDSU Extension Service – Budget No. 630. Yes, we will work to meet the reductions and work with the budgets we have to work with. I shared with everyone the types of cuts that we will have to work with, the positions that will have to close at this time. (20:00-20:27)

V. Chairman Bowman: Do we have any questions. Out of that budget there is a line item for the soil conservation.

Alex Cronquist: Yes, for the soil conservation committee the amounts recommended in both Governor Burgum and Governor Dalrymple's budgets is one million, ninety-one thousand, five-twenty. It is a separate line item from the extension service but it is in the same division in the bill.

Mark Johnson: The soil conservation districts happy in the past with your support and we will live with what you give us. When times get better we will come ask you for more.

Ken Grafton: Agronomy Seed Farm is all special funds. Testimony attached # 7 Base Level Funding Changes Budget No. 649 0- Agronomy Seed Farm. (23:00-23:16)

V. Chairman Bowman: When you get a lot of rain in the fall and it effects the quality, how does that effect the sales? Does the price drop because of that?

Ken Grafton: Depending on the amount of adverse weather that could occur during harvest, yes it could. They still clean the seed but the amount that is discarded and then sold just as commercial seed is greater.

V. Chairman Bowman: The last thing that I want everybody to think about as we have done a good job in production, now when you come back in two years and guess what, we have a market that is going up, it will help us all a lot.

Ken Grafton: I have the information for the subcommittee. He presented Testimony attached # 8. Information sheets regarding budget cuts for the different divisions of the NDSU Extension Service and Testimony attached # 9 – Base Level Funding Changes – Budget No. 628 – Branch Research Centers. (25:22-26:04)

Mike Beltz, Chair, State Board of Agricultural Research & Education: Thank you for the flexibility letting us make the cuts, that is huge for us and very much appreciated.

right now, we have to be flexible to allow our facility to make the cuts and continue the research.

V. Chairman Bowman: I thank you all for coming. We will get through this the best we can.

Alex Cronquist: Is it your intention for us to write up the amendments? They will be ready by tomorrow morning.

V. Chairman Bowman: Yes, that will give help for the employees, keep that 5% in there, the hearing was closed on SB 2020.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
2/10/2017
Job # 28228

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1.

Chairman Holmberg called the committee to order on SB 2020.

Senator Bowman: presented amendment 17.0528.01001 – Testimony Attached # 1.
All of the budgets were adjusted down to the Burgum budget. We added back the 5% for healthcare. The FTEs were all checked and are the same as in the Burgum budget. Those were the only changes that were made in the whole budget which dealt with Extension Service, Northern Crops Improvement, Upper Great Plains Transportation, the research centers, the Main Research Center, and the Agronomy Seed Farm.

A short discussion was held on sick leave. If there would be a cost, it would be internal within the budget.

Senator Bowman: Moved Do Pass on Amendment 17.0528.01001
Senator Oehlke: Seconded the motion.
A Roll Call Vote was taken: 13 yeas, 0 nays, 1 absent.

Senator Bowman: Moved Do Pass as Amended.
Senator Erbele: Seconded the motion.

A Roll Call Vote was taken: 13 yeas, 0 nays, 1 absent.

Senator Bowman will carry the bill.

Chairman Holmberg: Closed the hearing on SB 2020.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
3/22/2017
JOB # 29537

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature Alicia Delzer

Explanation or reason for introduction of bill/resolution:

A BILL for an Act to defray the expenses of the North Dakota State University (NDSU) Main Research Division

Minutes:

1.Seed Department Budget and Activity Report

Chairman Holmberg: Announced that Brady Larson, Legislative Council has distributed the booklet Testimony attached # 1 – Seed Department Budget and Activity Report. This booklet had been left with his department, therefore, he brought it to the Senate Appropriations Committee. This is a statutory Report that must be filed with the Legislature. All of you committee members now have this report.

(As this report relates to the North Dakota State University (NDSU) Main Research Department) it is being filed in SB 2020 by the Senate Appropriations Clerk).

(The remainder of this Job # 29537 are the minutes recorded regarding HB 1155 which was heard before the Senate Appropriations Committee in the Harvest Room at 8:30 am on Wednesday, March 22, 2017).

17.0528.01001
Title.02000
Fiscal No. 1

Prepared by the Legislative Council staff for
Senator Bowman
February 10, 2017

PROPOSED AMENDMENTS TO SENATE BILL NO. 2020

Page 1, line 3, replace the period with "; to amend and reenact sections 4-05.1-05 and 4-08-10 of the North Dakota Century Code, relating to main research center experiment station and extension service position adjustments; and to provide an exemption"

Page 1, replace lines 19 through 24 with:

"Extension service	$52,517,908	($961,158)	$51,556,750
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,003,000)	$52,648,270
Less estimated income	25,826,708	847,676	26,674,384
Total general fund	$27,824,562	($1,850,676)	$25,973,886
Full-time equivalent positions	263.91	(10.93)	252.98"

Page 2, replace lines 5 through 9 with:

"Northern crops institute	$3,712,202	($66,993)	$3,645,209
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
Total general fund	$1,964,467	($75,473)	$1,888,994
Full-time equivalent positions	12.00	(0.20)	11.80"

Page 2, replace lines 14 through 19 with:

"Upper great plains transportation institute	$22,076,448	($7,704)	$22,068,744
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
Total general fund	$3,900,791	($455,477)	$3,445,314
Full-time equivalent positions	54.98	(11.10)	43.88"

Page 2, replace lines 24 through 28 with:

"Main research center	$110,529,780	($1,812,588)	$108,717,192
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
Total general fund	$53,581,255	($3,975,465)	$49,605,790
Full-time equivalent positions	353.85	(17.73)	336.12"

Page 3, replace lines 3 through 14 with:

"Dickinson research extension center	$6,996,678	($167,861)	$6,828,817
Central grasslands research extension center	3,531,779	(105,667)	3,426,112
Hettinger research extension center	5,086,767	(108,523)	4,978,244
Langdon research extension center	3,045,836	(79,363)	2,966,473
North central research extension center	5,044,213	(87,451)	4,956,762
Williston research extension center	5,267,400	(145,037)	5,122,363
Carrington research extension center	9,328,093	(145,655)	9,182,438
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238

Total general fund	$18,483,636	($1,310,665)	$17,172,971
Full-time equivalent positions	113.94	(3.65)	110.29"

Page 3, replace lines 19 through 21 with:

"Agronomy seed farm	$1,521,007	$15,744	$1,536,751
Total special funds	$1,521,007	$15,744	$1,536,751
Full-time equivalent positions	3.00	0.00	3.00"

Page 3, replace lines 26 through 28 with:

"Grand total general fund	$105,754,711	($7,667,756)	$98,086,955
Grand total other funds	124,036,762	3,953,658	127,990,420
Grand total all funds	$229,791,473	($3,714,098)	$226,077,375"

Page 4, after line 21, insert:

"**SECTION 4. AMENDMENT.** Section 4-05.1-05 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-05. North Dakota state university main research center position adjustments - Budget section report.

The North Dakota state university main research center must be located on the campus of North Dakota state university of agriculture and applied science. The center is the administrative location of the agricultural experiment station. The center shall conduct research and coordinate all research activities of the agricultural experiment station. The research must have, as a purpose, the development and dissemination of technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research must provide for an enhancement of the quality of life, sustainability of production, and protection of the environment. Subject to the availability of funds, the station director may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the agricultural experiment station. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full or partial positions must be separate from North Dakota state university. Annually, the station director shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section. The center may conduct baseline research, including production and processing in conjunction with the research and extension centers of the state, regarding industrial hemp and other alternative industrial use crops. The center may collect feral hemp seed stock and develop appropriate adapted strains of industrial hemp which contain less than three-tenths of one percent tetrahydrocannabinol in the dried flowering tops. The agriculture commissioner shall monitor the collection of feral hemp seed stock and industrial hemp strain development and shall certify appropriate stocks for licensed commercial cultivation.

SECTION 5. AMENDMENT. Section 4-08-10 of the North Dakota Century Code is amended and reenacted as follows:

4-08-10. Extension agent to submit monthly account of expenditures - Position adjustments - Budget section report.

The extension agent shall submit monthly an accurate itemized account of all expenditures incurred by the agent in the regular conduct of duties to the North Dakota

CR
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state university extension service for examination and audit. When charges are made by an extension agent for money expended in the performance of official duties, all items of one dollar or more expended and charged for must be covered by a subvoucher or receipt that must be signed by the person to whom the money was paid. The subvoucher or receipt must show at what place, on what date, and for what the money expended was paid. The extension agent shall forward the subvouchers or receipts with the bill, claim, account, or demand against the county. When charges are made for transportation expenses, they may not exceed the amounts provided by section 11-10-15, and must be in itemized form showing the mileage traveled, the days when and how traveled, and the purpose thereof, verified by affidavit. The account must be transmitted and recommended for payment by the North Dakota state university extension service which shall audit the same and which may approve or disallow any expense item therein. The state board of agricultural research and education and the president of North Dakota state university shall control and administer the North Dakota state university extension service subject to the supervision of the state board of higher education. Funds appropriated to the North Dakota state university extension service may not be commingled with funds appropriated to North Dakota state university. An appropriation request to defray expenses of the North Dakota state university extension service must be separate from an appropriation request to defray expenses of North Dakota state university. Subject to the availability of funds, the director of the North Dakota state university extension service may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the extension service. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full- or part-time positions must be separate from North Dakota state university. Annually, the director of the North Dakota state university extension service shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section."

Page 5, after line 16, insert:

"**SECTION 11. EXEMPTION.** The amounts appropriated for the veterinary diagnostic laboratory and the seed cleaning plants contained in subdivision 4 of section 1 of chapter 20 of the 2015 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2017, and ending June 30, 2019."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Senate Action

	Base Budget	Senate Changes	Senate Version
Transportation Institute			
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
General fund	$3,900,791	($455,477)	$3,445,314
Branch Research Centers			
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238
General fund	$18,483,636	($1,310,665)	$17,172,971
NDSU Extension Service			

Total all funds	$53,651,270	($1,003,000)	$52,648,270
Less estimated income	25,826,708	847,676	26,674,384
General fund	$27,824,562	($1,850,676)	$25,973,886
Northern Crops Institute			
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
General fund	$1,964,467	($75,473)	$1,888,994
Main Research Center			
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
General fund	$53,581,255	($3,975,465)	$49,605,790
Agronomy Seed Farm			
Total all funds	$1,521,007	$15,744	$1,536,751
Less estimated income	1,521,007	15,744	1,536,751
General fund	$0	$0	$0
Bill total			
Total all funds	$229,791,473	($3,714,098)	$226,077,375
Less estimated income	124,036,762	3,953,658	127,990,420
General fund	$105,754,711	($7,667,756)	$98,086,955

Senate Bill No. 2020 - Transportation Institute - Senate Action

	Base Budget	Senate Changes	Senate Version
Upper Great Plains Trans. Institute	$22,076,448	($7,704)	$22,068,744
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
General fund	$3,900,791	($455,477)	$3,445,314
FTE	54.98	(11.10)	43.88

Department No. 627 - Transportation Institute - Detail of Senate Changes

	Adjusts Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Removes FTE Positions and Adjusts Funding for Operating Expenses[3]	Adjusts Funding for Operating Expenses and Grants[4]	Reduces Funding for Equipment[5]	Adjusts Funding Sources[6]
Upper Great Plains Trans. Institute	($331,609)	$117,342	($213,402)	$579,882	($53,000)	
Total all funds	($331,609)	$117,342	($213,402)	$579,882	($53,000)	$0
Less estimated income	(388,117)	87,805	0	601,085	(53,000)	200,000
General fund	$56,508	$29,537	($213,402)	($21,203)	$0	($200,000)
FTE	(9.80)	0.00	(1.30)	0.00	0.00	0.00

	Reduces General Fund Appropriations by 3 Percent[7]	Total Senate Changes
Upper Great Plains Trans. Institute	($106,917)	($7,704)
Total all funds	($106,917)	($7,704)
Less estimated income	0	447,773

General fund	($106,917)	($455,477)
FTE	0.00	(11.10)

[1] Funding is adjusted for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes. This change also includes the removal of certain vacant FTE positions.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] The following FTE positions and related funding are removed:

	FTE	General Fund
Research scientist	(0.25)	($78,717)
General science professional	(0.45)	(98,027)
Program administrator	(0.40)	(142,496)
Information systems professional	(0.20)	(52,902)
Reduce operating funding		(37,568)
Restores funding for 2015-17 biennium budget reductions		196,308
Total	(1.30)	($213,402)

[4] Funding is adjusted for grants ($350,982) and operating expenses ($228,900).

[5] Funding from federal funds is reduced by $53,000 for equipment.

[6] Funding is adjusted to reduce general fund support by $200,000 and increase funding from special funds by $200,000.

[7] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

Senate Bill No. 2020 - Branch Research Centers - Senate Action

	Base Budget	Senate Changes	Senate Version
Dickinson Research Center	$6,996,678	($167,861)	$6,828,817
Central Grasslands Research Center	3,531,779	(105,667)	3,426,112
Hettinger Research Center	5,086,767	(108,523)	4,978,244
Langdon Research Center	3,045,836	(79,363)	2,966,473
North Central Research Center	5,044,213	(87,451)	4,956,762
Williston Research Center	5,267,400	(145,037)	5,122,363
Carrington Research Center	9,328,093	(145,655)	9,182,438
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238
General fund	$18,483,636	($1,310,665)	$17,172,971
FTE	113.94	(3.65)	110.29

Department No. 628 - Branch Research Centers - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Increases Funding for Capital Bond Payments[3]	Adjusts Funding for Salaries and Removal of FTE Positions[4]	Adjusts Funding for Operating Expenses[5]	Adjusts Funding for Additional General Fund Budget Reductions[6]
Dickinson Research	$46,379	$45,078		($192,200)	$64,473	($25,000)

Center						
Central Grasslands Research Center	22,997	34,344	40	3,500	(82,923)	(25,000)
Hettinger Research Center	29,435	42,930		(128,948)	42,344	(25,000)
Langdon Research Center	19,490	25,759		(80,000)	28,353	(25,000)
North Central Research Center	28,358	42,930	64	(180,000)	104,822	(25,000)
Williston Research Center	26,164	47,938		(24,760)	(84,107)	(25,000)
Carrington Research Center	54,268	95,876		(40,000)	(95,588)	(53,620)
Total all funds	$227,091	$334,855	$104	($642,408)	($22,626)	($203,620)
Less estimated income	30,744	90,364	0	0	0	350,000
General fund	$196,347	$244,491	$104	($642,408)	($22,626)	($553,620)
FTE	0.00	0.00	0.00	(3.65)	0.00	0.00

	Reduces General Fund Appropriations by 3 Percent[7]	Total Senate Changes
Dickinson Research Center	($106,591)	($167,861)
Central Grasslands Research Center	(58,625)	(105,667)
Hettinger Research Center	(69,284)	(108,523)
Langdon Research Center	(47,965)	(79,363)
North Central Research Center	(58,625)	(87,451)
Williston Research Center	(85,272)	(145,037)
Carrington Research Center	(106,591)	(145,655)
Total all funds	($532,953)	($839,557)
Less estimated income	0	471,108
General fund	($532,953)	($1,310,665)
FTE	0.00	(3.65)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] Funding is increased for capital bond payments at the Central Grasslands Research Center and the North Central Research Center.

[4] The following adjustments are made for salaries and the removal of FTE positions:

	FTE	General Fund Reduction	2015-17 Budget Reduction Adjustment	Total
Dickinson Research Center	(2.00)	($330,000)	$137,800	($192,200)
Central Grasslands Research Center	(1.00)	(120,000)	123,500	3,500
Hettinger Research Center	(1.50)	(200,000)	71,052	(128,948)
Langdon Research Center	(1.00)	(80,000)		(80,000)
North Central Research Center	(1.50)	(180,000)		(180,000)
Williston Research Center	(1.00)	(165,000)	140,240	(24,760)
Carrington Research Center	(2.00)	(250,000)	210,000	(40,000)
FTE Adjustments	6.35			0
Total	(3.65)	($1,325,000)	$682,592	($642,408)

[5] Operating expenses funding is adjusted to reduce appropriations by $22,626 from the general fund. This amount is net of $632,219 of 2015-17 biennium budget reductions.

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[6] Funding for equipment is reduced by $25,000 at each of the research centers. Funding for salaries is reduced by $28,620 at the Carrington Research Center. In addition, funding for the branch research centers is adjusted to reduce funding from the general fund by $350,000 and increase funding from special funds by $350,000.

[7] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

Senate Bill No. 2020 - NDSU Extension Service - Senate Action

	Base Budget	Senate Changes	Senate Version
Extension Service	$52,517,908	($961,158)	$51,556,750
Soil Conservation Committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,003,000)	$52,648,270
Less estimated income	25,826,708	847,676	26,674,384
General fund	$27,824,562	($1,850,676)	$25,973,886
FTE	263.91	(10.93)	252.98

Department No. 630 - NDSU Extension Service - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Adjusts Funding for Salaries and Removal of FTE Positions[3]	Adjusts Funding for Operating Expenses[4]	Reduces Funding for Equipment[5]	Reduces General Fund Appropriations by 3 Percent[6]
Extension Service	$567,552	$779,440	($1,419,206)	$217,399	($300,000)	($806,343)
Soil Conservation Committee				(41,842)		
Total all funds	$567,552	$779,440	($1,419,206)	$175,557	($300,000)	($806,343)
Less estimated income	265,427	382,249	200,000	0	0	0
General fund	$302,125	$397,191	($1,619,206)	$175,557	($300,000)	($806,343)
FTE	0.00	0.00	(10.93)	0.00	0.00	0.00

	Total Senate Changes
Extension Service	($961,158)
Soil Conservation Committee	(41,842)
Total all funds	($1,003,000)
Less estimated income	847,676
General fund	($1,850,676)
FTE	(10.93)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] The following adjustments are made for salaries and the removal of FTE positions:

	FTE	General Fund	Other Funds	Total
Remove FTE positions	(10.00)	($1,600,000)		($1,600,000)
Remove additional FTE positions	(3.00)	(480,000)		(480,000)
FTE position adjustment	2.07			0

2015-17 biennium budget reduction adjustment		698,000		698,000
Remove equity funding		(37,206)		(37,206)
Funding source adjustment		(200,000)	$200,000	0
Total	(10.93)	($1,619,206)	$200,000	($1,419,206)

[4] Funding for operating expenses is adjusted to increase appropriations by $175,557 from the general fund as follows:

	Operating Reduction	2015-17 Biennium Budget Reduction Adjustment	Total General Fund Change
Extension Service	($956,289)	$1,173,688	$217,399
Soil Conservation Committee	(121,280)	79,438	(41,842)
Total	($1,077,569)	$1,253,126	$175,557

[5] Equipment funding is reduced by $300,000 from the general fund.

[6] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

- A section is added to amend North Dakota Century Code Section 4-08-10 to clarify 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - Northern Crops Institute - Senate Action

	Base Budget	Senate Changes	Senate Version
Northern Crops Institute	$3,712,202	($66,993)	$3,645,209
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
General fund	$1,964,467	($75,473)	$1,888,994
FTE	12.00	(0.20)	11.80

Department No. 638 - Northern Crops Institute - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Reduces Funding for Equipment[3]	Reduces Funding for Travel[4]	Restores Funding for Operating Expenses[5]	Reduces General Fund Appropriations by 3 Percent[6]
Northern Crops Institute	$29,559	$34,344	($200,000)	($10,216)	$137,691	($58,371)
Total all funds	$29,559	$34,344	($200,000)	($10,216)	$137,691	($58,371)
Less estimated income	3,160	5,320	0	0	0	0
General fund	$26,399	$29,024	($200,000)	($10,216)	$137,691	($58,371)
FTE	(0.20)	0.00	0.00	0.00	0.00	0.00

	Total Senate Changes
Northern Crops Institute	($66,993)
Total all funds	($66,993)
Less estimated income	8,480
General fund	($75,473)
FTE	(0.20)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] Equipment funding is reduced by $200,000 from the general fund.

[4] Funding for travel is reduced by $10,216 from the general fund.

[5] Operating expenses funding removed as a result of the 2015-17 biennium budget reductions is restored.

[6] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

Senate Bill No. 2020 - Main Research Center - Senate Action

	Base Budget	Senate Changes	Senate Version
Main Research Center	$110,529,780	($1,812,588)	$108,717,192
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
General fund	$53,581,255	($3,975,465)	$49,605,790
FTE	353.85	(17.73)	336.12

Department No. 640 - Main Research Center - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Increases Funding for Bond Payments[3]	Adjusts Funding for Salaries and Removal of FTE Positions[4]	Adjusts Funding for Operating Expenses[5]	Restores Funding for Equipment[6]
Main Research Center	$834,750	$1,034,454	$291	($1,946,615)	($355,589)	$260,000
Total all funds	$834,750	$1,034,454	$291	($1,946,615)	($355,589)	$260,000
Less estimated income	196,105	366,772	0	0	0	0
General fund	$638,645	$667,682	$291	($1,946,615)	($355,589)	$260,000
FTE	0.00	0.00	0.00	(17.73)	0.00	0.00

	Adjusts Funding for Additional General Fund Budget Reductions[7]	Reduces General Fund Appropriations by 3 Percent[8]	Total Senate Changes
Main Research Center	($100,000)	($1,539,879)	($1,812,588)
Total all funds	($100,000)	($1,539,879)	($1,812,588)
Less estimated income	1,600,000	0	2,162,877
General fund	($1,700,000)	($1,539,879)	($3,975,465)
FTE	0.00	0.00	(17.73)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

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[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] Funding is increased for capital bond payments at the Main Research Center.

[4] The following adjustments are made for salaries and the removal of FTE positions:

	FTE	General Fund
Removes FTE positions	(25.00)	($4,250,000)
Adjusts FTE positions	7.27	
Restores 2015-17 biennium budget reductions		2,374,935
Removes equity funding		(71,550)
Total	(17.73)	($1,946,615)

[5] Funding for operating expenses is adjusted to reduce appropriations by $355,589 from the general fund. This amount is net of $1,128,922 of 2015-17 biennium budget reductions.

[6] Equipment funding removed as a result of the 2015-17 biennium budget reductions is restored.

[7] Equipment funding is reduced by $100,000 from the general fund. In addition, general fund support is reduced by $1,600,000 and special funds are increased by $1,600,000.

[8] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

- A section is added to amend Section 4-05.1-05 to clarify 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.
- A section is added to allow the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.

Senate Bill No. 2020 - Agronomy Seed Farm - Senate Action

	Base Budget	Senate Changes	Senate Version
Agronomy Seed Farm	$1,521,007	$15,744	$1,536,751
Total all funds	$1,521,007	$15,744	$1,536,751
Less estimated income	1,521,007	15,744	1,536,751
General fund	$0	$0	$0
FTE	3.00	0.00	3.00

Department No. 649 - Agronomy Seed Farm - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Total Senate Changes
Agronomy Seed Farm	$7,157	$8,587	$15,744
Total all funds	$7,157	$8,587	$15,744
Less estimated income	7,157	8,587	15,744
General fund	$0	$0	$0
FTE	0.00	0.00	0.00

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[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

2 Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

Date: 2-10-17
Roll Call Vote #: 1

2017 SENATE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

Senate Appropriations Committee

☐ Subcommittee

Amendment LC# or Description: 17.0528.01001

Recommendation: ☒ Adopt Amendment
☐ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By Bowman Seconded By Oehlke

Senators	Yes	No	Senators	Yes	No
Chairman Holmberg	✓		Senator Mathern	✓	
Vice Chair Krebsbach	✓		Senator Grabinger	✓	
Vice Chair Bowman	✓		Senator Robinson	✓	
Senator Erbele	✓				
Senator Wanzek	A				
Senator Kilzer	✓				
Senator Lee	✓				
Senator Dever	✓				
Senator Sorvaag	✓				
Senator Oehlke	✓				
Senator Hogue	✓				

Total (Yes) 13 No 0

Absent 1

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Date: 2-10-17
Roll Call Vote #: 2

2017 SENATE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

Senate Appropriations Committee

☐ Subcommittee

Amendment LC# or Description:

Recommendation: ☐ Adopt Amendment
☒ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☒ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐

Motion Made By Bowman Seconded By Erbele

Senators	Yes	No	Senators	Yes	No
Chairman Holmberg	✓		Senator Mathern	✓	
Vice Chair Krebsbach	✓		Senator Grabinger	✓	
Vice Chair Bowman	✓		Senator Robinson	✓	
Senator Erbele	✓				
Senator Wanzek	A				
Senator Kilzer	✓				
Senator Lee	✓				
Senator Dever	✓				
Senator Sorvaag	✓				
Senator Oehlke	✓				
Senator Hogue	✓				

Total (Yes) 13 No 0

Absent 1

Floor Assignment Bowman

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2020: Appropriations Committee (Sen. Holmberg, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (13 YEAS, 0 NAYS, 1 ABSENT AND NOT VOTING). SB 2020 was placed on the Sixth order on the calendar.

Page 1, line 3, replace the period with "; to amend and reenact sections 4-05.1-05 and 4-08-10 of the North Dakota Century Code, relating to main research center experiment station and extension service position adjustments; and to provide an exemption"

Page 1, replace lines 19 through 24 with:

"Extension service	$52,517,908	($961,158)	$51,556,750
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,003,000)	$52,648,270
Less estimated income	25,826,708	847,676	26,674,384
Total general fund	$27,824,562	($1,850,676)	$25,973,886
Full-time equivalent positions	263.91	(10.93)	252.98"

Page 2, replace lines 5 through 9 with:

"Northern crops institute	$3,712,202	($66,993)	$3,645,209
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
Total general fund	$1,964,467	($75,473)	$1,888,994
Full-time equivalent positions	12.00	(0.20)	11.80"

Page 2, replace lines 14 through 19 with:

"Upper great plains transportation institute	$22,076,448	($7,704)	$22,068,744
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
Total general fund	$3,900,791	($455,477)	$3,445,314
Full-time equivalent positions	54.98	(11.10)	43.88"

Page 2, replace lines 24 through 28 with:

"Main research center	$110,529,780	($1,812,588)	$108,717,192
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
Total general fund	$53,581,255	($3,975,465)	$49,605,790
Full-time equivalent positions	353.85	(17.73)	336.12"

Page 3, replace lines 3 through 14 with:

"Dickinson research extension center	$6,996,678	($167,861)	$6,828,817
Central grasslands research extension center	3,531,779	(105,667)	3,426,112
Hettinger research extension center	5,086,767	(108,523)	4,978,244
Langdon research extension center	3,045,836	(79,363)	2,966,473
North central research extension center	5,044,213	(87,451)	4,956,762
Williston research extension center	5,267,400	(145,037)	5,122,363
Carrington research extension center	9,328,093	(145,655)	9,182,438
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238
Total general fund	$18,483,636	($1,310,665)	$17,172,971
Full-time equivalent positions	113.94	(3.65)	110.29"

Page 3, replace lines 19 through 21 with:

"Agronomy seed farm	$1,521,007	$15,744	$1,536,751
Total special funds	$1,521,007	$15,744	$1,536,751
Full-time equivalent positions	3.00	0.00	3.00"

Page 3, replace lines 26 through 28 with:

"Grand total general fund	$105,754,711	($7,667,756)	$98,086,955
Grand total other funds	124,036,762	3,953,658	127,990,420
Grand total all funds	$229,791,473	($3,714,098)	$226,077,375"

Page 4, after line 21, insert:

"**SECTION 4. AMENDMENT.** Section 4-05.1-05 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-05. North Dakota state university main research center position adjustments - Budget section report.

The North Dakota state university main research center must be located on the campus of North Dakota state university of agriculture and applied science. The center is the administrative location of the agricultural experiment station. The center shall conduct research and coordinate all research activities of the agricultural experiment station. The research must have, as a purpose, the development and dissemination of technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research must provide for an enhancement of the quality of life, sustainability of production, and protection of the environment. Subject to the availability of funds, the station director may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the agricultural experiment station. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full or partial positions must be separate from North Dakota state university. Annually, the station director shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section. The center may conduct baseline research, including production and processing in conjunction with the research and extension centers of the state, regarding industrial hemp and other alternative industrial use crops. The center may collect feral hemp seed stock and develop appropriate adapted strains of industrial hemp which contain less than three-tenths of one percent tetrahydrocannabinol in the dried flowering tops. The agriculture commissioner shall monitor the collection of feral hemp seed stock and industrial hemp strain development and shall certify appropriate stocks for licensed commercial cultivation.

SECTION 5. AMENDMENT. Section 4-08-10 of the North Dakota Century Code is amended and reenacted as follows:

4-08-10. Extension agent to submit monthly account of expenditures - Position adjustments - Budget section report.

The extension agent shall submit monthly an accurate itemized account of all expenditures incurred by the agent in the regular conduct of duties to the North Dakota state university extension service for examination and audit. When charges are made by an extension agent for money expended in the performance of official duties, all items of one dollar or more expended and charged for must be covered by a subvoucher or receipt that must be signed by the person to whom the money was paid. The subvoucher or receipt must show at what place, on what date, and for what the money expended was paid. The extension agent shall forward the subvouchers or receipts with the bill, claim, account, or demand against the county. When charges are made for transportation expenses, they may not exceed the amounts provided by section 11-10-15, and must be in itemized form showing the mileage traveled, the days when and how traveled, and the purpose thereof, verified by affidavit. The account must be transmitted and recommended for payment by the North Dakota

state university extension service which shall audit the same and which may approve or disallow any expense item therein. The state board of agricultural research and education and the president of North Dakota state university shall control and administer the North Dakota state university extension service subject to the supervision of the state board of higher education. Funds appropriated to the North Dakota state university extension service may not be commingled with funds appropriated to North Dakota state university. An appropriation request to defray expenses of the North Dakota state university extension service must be separate from an appropriation request to defray expenses of North Dakota state university. Subject to the availability of funds, the director of the North Dakota state university extension service may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the extension service. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full- or part-time positions must be separate from North Dakota state university. Annually, the director of the North Dakota state university extension service shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section."

Page 5, after line 16, insert:

"**SECTION 11. EXEMPTION.** The amounts appropriated for the veterinary diagnostic laboratory and the seed cleaning plants contained in subdivision 4 of section 1 of chapter 20 of the 2015 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2017, and ending June 30, 2019."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Senate Action

	Base Budget	Senate Changes	Senate Version
Transportation Institute			
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
General fund	$3,900,791	($455,477)	$3,445,314
Branch Research Centers			
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238
General fund	$18,483,636	($1,310,665)	$17,172,971
NDSU Extension Service			
Total all funds	$53,651,270	($1,003,000)	$52,648,270
Less estimated income	25,826,708	847,676	26,674,384
General fund	$27,824,562	($1,850,676)	$25,973,886
Northern Crops Institute			
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
General fund	$1,964,467	($75,473)	$1,888,994
Main Research Center			
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
General fund	$53,581,255	($3,975,465)	$49,605,790

Agronomy Seed Farm			
Total all funds	$1,521,007	$15,744	$1,536,751
Less estimated income	1,521,007	15,744	1,536,751
General fund	$0	$0	$0
Bill total			
Total all funds	$229,791,473	($3,714,098)	$226,077,375
Less estimated income	124,036,762	3,953,658	127,990,420
General fund	$105,754,711	($7,667,756)	$98,086,955

Senate Bill No. 2020 - Transportation Institute - Senate Action

	Base Budget	Senate Changes	Senate Version
Upper Great Plains Trans. Institute	$22,076,448	($7,704)	$22,068,744
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
General fund	$3,900,791	($455,477)	$3,445,314
FTE	54.98	(11.10)	43.88

Department No. 627 - Transportation Institute - Detail of Senate Changes

	Adjusts Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Removes FTE Positions and Adjusts Funding for Operating Expenses[3]	Adjusts Funding for Operating Expenses and Grants[4]	Reduces Funding for Equipment[5]	Adjusts Funding Sources[6]
Upper Great Plains Trans. Institute	($331,609)	$117,342	($213,402)	$579,882	($53,000)	
Total all funds	($331,609)	$117,342	($213,402)	$579,882	($53,000)	$0
Less estimated income	(388,117)	87,805	0	601,085	(53,000)	200,000
General fund	$56,508	$29,537	($213,402)	($21,203)	$0	($200,000)
FTE	(9.80)	0.00	(1.30)	0.00	0.00	0.00

	Reduces General Fund Appropriations by 3 Percent[7]	Total Senate Changes
Upper Great Plains Trans. Institute	($106,917)	($7,704)
Total all funds	($106,917)	($7,704)
Less estimated income	0	447,773
General fund	($106,917)	($455,477)
FTE	0.00	(11.10)

[1] Funding is adjusted for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes. This change also includes the removal of certain vacant FTE positions.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] The following FTE positions and related funding are removed:

	FTE	General Fund
Research scientist	(0.25)	($78,717)
General science professional	(0.45)	(98,027)
Program administrator	(0.40)	(142,496)
Information systems professional	(0.20)	(52,902)

Reduce operating funding		(37,568)
Restores funding for 2015-17 biennium budget reductions		196,308
Total	(1.30)	($213,402)

[4] Funding is adjusted for grants ($350,982) and operating expenses ($228,900).

[5] Funding from federal funds is reduced by $53,000 for equipment.

[6] Funding is adjusted to reduce general fund support by $200,000 and increase funding from special funds by $200,000.

[7] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

Senate Bill No. 2020 - Branch Research Centers - Senate Action

	Base Budget	Senate Changes	Senate Version
Dickinson Research Center	$6,996,678	($167,861)	$6,828,817
Central Grasslands Research Center	3,531,779	(105,667)	3,426,112
Hettinger Research Center	5,086,767	(108,523)	4,978,244
Langdon Research Center	3,045,836	(79,363)	2,966,473
North Central Research Center	5,044,213	(87,451)	4,956,762
Williston Research Center	5,267,400	(145,037)	5,122,363
Carrington Research Center	9,328,093	(145,655)	9,182,438
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238
General fund	$18,483,636	($1,310,665)	$17,172,971
FTE	113.94	(3.65)	110.29

Department No. 628 - Branch Research Centers - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Increases Funding for Capital Bond Payments[3]	Adjusts Funding for Salaries and Removal of FTE Positions[4]	Adjusts Funding for Operating Expenses[5]	Adjusts Funding for Additional General Fund Budget Reductions[6]
Dickinson Research Center	$46,379	$45,078		($192,200)	$64,473	($25,000)
Central Grasslands Research Center	22,997	34,344	40	3,500	(82,923)	(25,000)
Hettinger Research Center	29,435	42,930		(128,948)	42,344	(25,000)
Langdon Research Center	19,490	25,759		(80,000)	28,353	(25,000)
North Central Research Center	28,358	42,930	64	(180,000)	104,822	(25,000)
Williston Research Center	26,164	47,938		(24,760)	(84,107)	(25,000)
Carrington Research Center	54,268	95,876		(40,000)	(95,588)	(53,620)
Total all funds	$227,091	$334,855	$104	($642,408)	($22,626)	($203,620)
Less estimated income	30,744	90,364	0	0	0	350,000
General fund	$196,347	$244,491	$104	($642,408)	($22,626)	($553,620)
FTE	0.00	0.00	0.00	(3.65)	0.00	0.00

	Reduces General Fund Appropriations by 3 Percent[7]	Total Senate Changes
Dickinson Research Center	($106,591)	($167,861)
Central Grasslands Research Center	(58,625)	(105,667)
Hettinger Research Center	(69,284)	(108,523)

Langdon Research Center	(47,965)	(79,363)
North Central Research Center	(58,625)	(87,451)
Williston Research Center	(85,272)	(145,037)
Carrington Research Center	(106,591)	(145,655)
Total all funds	($532,953)	($839,557)
Less estimated income	0	471,108
General fund	($532,953)	($1,310,665)
FTE	0.00	(3.65)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] Funding is increased for capital bond payments at the Central Grasslands Research Center and the North Central Research Center.

[4] The following adjustments are made for salaries and the removal of FTE positions:

	FTE	General Fund Reduction	2015-17 Budget Reduction Adjustment	Total
Dickinson Research Center	(2.00)	($330,000)	$137,800	($192,200)
Central Grasslands Research Center	(1.00)	(120,000)	123,500	3,500
Hettinger Research Center	(1.50)	(200,000)	71,052	(128,948)
Langdon Research Center	(1.00)	(80,000)		(80,000)
North Central Research Center	(1.50)	(180,000)		(180,000)
Williston Research Center	(1.00)	(165,000)	140,240	(24,760)
Carrington Research Center	(2.00)	(250,000)	210,000	(40,000)
FTE Adjustments	6.35			0
Total	(3.65)	($1,325,000)	$682,592	($642,408)

[5] Operating expenses funding is adjusted to reduce appropriations by $22,626 from the general fund. This amount is net of $632,219 of 2015-17 biennium budget reductions.

[6] Funding for equipment is reduced by $25,000 at each of the research centers. Funding for salaries is reduced by $28,620 at the Carrington Research Center. In addition, funding for the branch research centers is adjusted to reduce funding from the general fund by $350,000 and increase funding from special funds by $350,000.

[7] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

Senate Bill No. 2020 - NDSU Extension Service - Senate Action

	Base Budget	Senate Changes	Senate Version
Extension Service	$52,517,908	($961,158)	$51,556,750
Soil Conservation Committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,003,000)	$52,648,270
Less estimated income	25,826,708	847,676	26,674,384
General fund	$27,824,562	($1,850,676)	$25,973,886
FTE	263.91	(10.93)	252.98

Department No. 630 - NDSU Extension Service - Detail of Senate Changes

	Adds Funding for Base Payroll	Adds Funding for Health	Adjusts Funding for Salaries and	Adjusts Funding for Operating	Reduces Funding for Equipment[5]	Reduces General Fund Appropriations

	Changes[1]	Insurance Premium Increases[2]	Removal of FTE Positions[3]	Expenses[4]		by 3 Percent[6]
Extension Service	$567,552	$779,440	($1,419,206)	$217,399	($300,000)	($806,343)
Soil Conservation Committee				(41,842)		
Total all funds	$567,552	$779,440	($1,419,206)	$175,557	($300,000)	($806,343)
Less estimated income	265,427	382,249	200,000	0	0	0
General fund	$302,125	$397,191	($1,619,206)	$175,557	($300,000)	($806,343)
FTE	0.00	0.00	(10.93)	0.00	0.00	0.00

	Total Senate Changes
Extension Service	($961,158)
Soil Conservation Committee	(41,842)
Total all funds	($1,003,000)
Less estimated income	847,676
General fund	($1,850,676)
FTE	(10.93)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] The following adjustments are made for salaries and the removal of FTE positions:

	FTE	General Fund	Other Funds	Total
Remove FTE positions	(10.00)	($1,600,000)		($1,600,000)
Remove additional FTE positions	(3.00)	(480,000)		(480,000)
FTE position adjustment	2.07			0
2015-17 biennium budget reduction adjustment		698,000		698,000
Remove equity funding		(37,206)		(37,206)
Funding source adjustment		(200,000)	$200,000	0
Total	(10.93)	($1,619,206)	$200,000	($1,419,206)

[4] Funding for operating expenses is adjusted to increase appropriations by $175,557 from the general fund as follows:

	Operating Reduction	2015-17 Biennium Budget Reduction Adjustment	Total General Fund Change
Extension Service	($956,289)	$1,173,688	$217,399
Soil Conservation Committee	(121,280)	79,438	(41,842)
Total	($1,077,569)	$1,253,126	$175,557

[5] Equipment funding is reduced by $300,000 from the general fund.

[6] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

- A section is added to amend North Dakota Century Code Section 4-08-10 to clarify 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - Northern Crops Institute - Senate Action

	Base Budget	Senate Changes	Senate Version
Northern Crops Institute	$3,712,202	($66,993)	$3,645,209
	$3,712,202	($66,993)	$3,645,209

Total all funds			
Less estimated income	1,747,735	8,480	1,756,215
General fund	$1,964,467	($75,473)	$1,888,994
FTE	12.00	(0.20)	11.80

Department No. 638 - Northern Crops Institute - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Reduces Funding for Equipment[3]	Reduces Funding for Travel[4]	Restores Funding for Operating Expenses[5]	Reduces General Fund Appropriations by 3 Percent[6]
Northern Crops Institute	$29,559	$34,344	($200,000)	($10,216)	$137,691	($58,371)
Total all funds	$29,559	$34,344	($200,000)	($10,216)	$137,691	($58,371)
Less estimated income	3,160	5,320	0	0	0	0
General fund	$26,399	$29,024	($200,000)	($10,216)	$137,691	($58,371)
FTE	(0.20)	0.00	0.00	0.00	0.00	0.00

	Total Senate Changes
Northern Crops Institute	($66,993)
Total all funds	($66,993)
Less estimated income	8,480
General fund	($75,473)
FTE	(0.20)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] Equipment funding is reduced by $200,000 from the general fund.

[4] Funding for travel is reduced by $10,216 from the general fund.

[5] Operating expenses funding removed as a result of the 2015-17 biennium budget reductions is restored.

[6] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

Senate Bill No. 2020 - Main Research Center - Senate Action

	Base Budget	Senate Changes	Senate Version
Main Research Center	$110,529,780	($1,812,588)	$108,717,192
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
General fund	$53,581,255	($3,975,465)	$49,605,790
FTE	353.85	(17.73)	336.12

Department No. 640 - Main Research Center - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance	Increases Funding for Bond Payments[3]	Adjusts Funding for Salaries and Removal of	Adjusts Funding for Operating Expenses[5]	Restores Funding for Equipment[6]

		Premium Increases[2]		FTE Positions[4]		
Main Research Center	$834,750	$1,034,454	$291	($1,946,615)	($355,589)	$260,000
Total all funds	$834,750	$1,034,454	$291	($1,946,615)	($355,589)	$260,000
Less estimated income	196,105	366,772	0	0	0	0
General fund	$638,645	$667,682	$291	($1,946,615)	($355,589)	$260,000
FTE	0.00	0.00	0.00	(17.73)	0.00	0.00

	Adjusts Funding for Additional General Fund Budget Reductions[7]	Reduces General Fund Appropriations by 3 Percent[8]	Total Senate Changes
Main Research Center	($100,000)	($1,539,879)	($1,812,588)
Total all funds	($100,000)	($1,539,879)	($1,812,588)
Less estimated income	1,600,000	0	2,162,877
General fund	($1,700,000)	($1,539,879)	($3,975,465)
FTE	0.00	0.00	(17.73)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] Funding is increased for capital bond payments at the Main Research Center.

[4] The following adjustments are made for salaries and the removal of FTE positions:

	FTE	General Fund
Removes FTE positions	(25.00)	($4,250,000)
Adjusts FTE positions	7.27	
Restores 2015-17 biennium budget reductions		2,374,935
Removes equity funding		(71,550)
Total	(17.73)	($1,946,615)

[5] Funding for operating expenses is adjusted to reduce appropriations by $355,589 from the general fund. This amount is net of $1,128,922 of 2015-17 biennium budget reductions.

[6] Equipment funding removed as a result of the 2015-17 biennium budget reductions is restored.

[7] Equipment funding is reduced by $100,000 from the general fund. In addition, general fund support is reduced by $1,600,000 and special funds are increased by $1,600,000.

[8] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

- A section is added to amend Section 4-05.1-05 to clarify 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.
- A section is added to allow the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.

Senate Bill No. 2020 - Agronomy Seed Farm - Senate Action

	Base Budget	Senate Changes	Senate Version
Agronomy Seed Farm	$1,521,007	$15,744	$1,536,751
Total all funds	$1,521,007	$15,744	$1,536,751
Less estimated income	1,521,007	15,744	1,536,751
General fund	$0	$0	$0
FTE	3.00	0.00	3.00

Department No. 649 - Agronomy Seed Farm - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Total Senate Changes
Agronomy Seed Farm	$7,157	$8,587	$15,744
Total all funds	$7,157	$8,587	$15,744
Less estimated income	7,157	8,587	15,744
General fund	$0	$0	$0
FTE	0.00	0.00	0.00

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

2 Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

2017 HOUSE APPROPRIATIONS

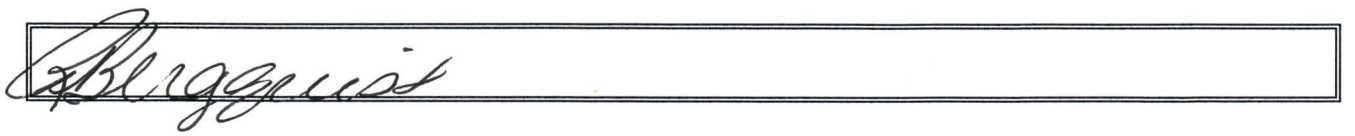
SB 2020

2017 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee - Education and Environment Division
Roughrider Room, State Capitol

SB 2020
3/7/2017
28771

☐ Subcommittee
☐ Conference Committee



Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota Forest Service Budget 244.

Minutes: Attachment 1

Chairman Monson: Called the meeting to order on ND Forest Service budget 244

Opening-24:13 Larry Kotchman State Forester: (attachment 1)

4:00 Forest Health (Page 4 of attachment 1) Our concern right now is about *ash borer,* North Dakota has 78 million ash trees that are threatened by this disease and we have been working closely with the ND dept. of Agriculture to make sure that we continue to monitor and survey annually.

5:30 Chairman Monson: On Forest Stewardship, do you work with the soil conservation or do you have your own program that you run?

Mr. Kotchman: Yes, we work extensively with local soil conservation districts but we also have our own program. For example, the Windbreak Renovation Initiative. Trees are provided by two nurseries in ND, the Towner State Nursery and Lincoln/Oaks facility here in Bismarck.

Representative Schmidt: Why don't you use private industry stock to do this?

Mr. Kotchman: Acclimated conservation tree stock from ND is very limited. It's really only handled by the public annuities like the Lincoln/Oaks and Towner; the reason for that is because private nurseries tend to focused on things that are more financially rewarding in terms of production. They are primarily focused on land scape type of materials. For a windbreak you need trees that are known as a seed source that can thrive in ND.

Chairman Monson: In Park River, county conservation service has been selling peach trees and the nurseries are a little upset with them because they think are competition with them and they are government subsidized, do you know anything about these peach trees?

Mr. Kotchman: I have heard of some issues over the sale of fruit trees, my understanding is that they have resolved that issue with the ND Greenhouse and Nursery Association members. We do chokecherry trees, and so on, but they are more for wildlife and as a conservation type of planting.

11:30 Funding Appropriation (page 8-13 of attachment 1)

14:00 Chairman Monson: So that fact that you have a pretty good carry over from the money for *ash borer* means it hasn't been a problem in North Dakota?

Mr. Kotchman: That's correct, it's as close as St. Paul Minnesota, and it's in 29 other states and two Canadian providences. One thing that is alarming is the situation of firewood being brought into ND and making its way to the protest sites. This wood came from some of those states that have a quarantines in place, this wood is not to be removed from their state unless they have been heat treated to insure that the pests that are in them have been killed. We have been encouraged that the Army Core of Engineers have taken steps along with the ESDA, Animal Plants and Health Inspection Services to clean up that material that is left in those sites. They are going to be burying it in a landfill facility. We didn't have the time frame available to burn it first so we went with a contractor to take it to a landfill facility instead. We didn't have any cost directly involved with the disposal of that wood material, we assume the Core of Engineers contracted that. We did have cost assisting law enforcement in ways of emergency fire fighters.

17:00 Rep Schatz: I'm looking at IBARS and see your expenditures for 2013 where 9.7 million, then in 2015-17 it jumped up to 15.2 million; why the increase?

Mr. Kotchman: IBARS brought into the process funding that was not appropriated to the ND Forest Service in the past. This is funding that comes primarily from our grants and contracts and other pass through money that come from amities that we get funding through like rural fire protection districts, communities and private land owners. It was really item that where brought into the budget because of changes in the IBAR system.

Rep Schatz: But your operating expenses went from 3.3 million to 7.5 million, is that part of that same process?

Mr. Kotchman: Absolutely, those funds are operations funds, this is not an increase in funding per say for the agency, it's just now reported in the budget and it hadn't been in the past.

Chairman Monson: Federal funds is a source in most cases? So you just need spending authority for those funds?

Mr. Kotchman: They're not always federal funds, it's an assortment of funding and yes, that is correct.

20:15 Funding Request (page 15 of attachment 1)

22:20 Chairman Monson: How many FTE do you have?

Mr. Kotchman: The forest service, coming into the 2015-17 budget had 29 FTEs and we will have 27 after this reduction. We are attempting to minimize the impacts of these reductions by increase program efficacies.

22:35 Capital Assets (page 19 of attachment 1)

24:40 Rep Schmidt: What is your breakdown of 27 FTEs as far as administrative staff and field staff.

Mr. Kotchman: Administrative is focused on 4 FTEs which includes myself as well as a team leader in Bottineau and two other account like technicians that handle all our other efforts. The rest are all specialist type positions or technician type positions that are at our field offices and they provided services.

Rep Schmidt: Is there any opportunity to contract any of those services with conservation districts or anybody else?

Mr. Kotchman: We have in the past done a number of thing with the soil conservations, they have a technician grants program right now that's in the NDSU Extensions services budget, we receive a consider amount of financial assistance through that to maintain their positions as soil conservation districts.

Chairman Monson: Do you have part time or seasonal help?

Mr. Kotchman: Yes we have 45 seasonal and that includes about 30 seasons at Towner State Nursery and about 15 that we bring on as emergency fire fighters.

Chairman Monson: anyone else? We will close this meeting.

2017 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee - Education and Environment Division
Roughrider Room, State Capitol

SB 2020
3/7/2017
28784

☐ Subcommittee
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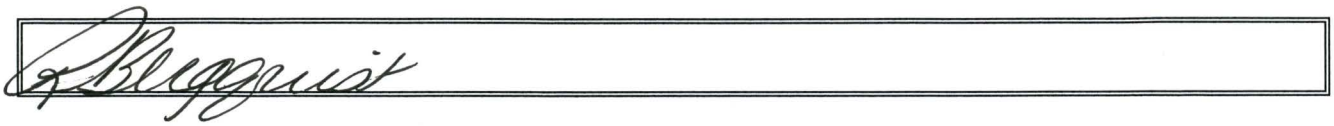

Explanation or reason for introduction of bill/resolution:
To provide an appropriation for defraying the expenses of the upper great plains transportation institute, budget 627.

Minutes: Attachment 1-3

Chairman Monson: called the meeting to order on the upper great plains transportation institute budget 627.

Dean Bresciauni, President NDSU: Introduces Dr. Denver Trolliver.

1:00-21:32 Dr. Denver Tolliver Director of the Upper Great Plains Transportation Institute: (attachment 1)

Private industry is a contributing factor; we just got a grant from Dubai to do research on transportation systems in Dubai. They were aware of us and recommend to us. They had decided to give the grant to Texas A&M and decided to go to us after our interview. The Department of Transportation always point to us a one of the best centers.

7:45: One-Time Funding (page 3 of attachment 1)

9:00 Vice Chairman Streyle: What is the relationship with NDSU? Do you pay them a fee? What do they provide you or are you totally separate?

Dr. Tolliver: They give us everything we need with no charge. We get office space, all the support we need for grants and contracts for management and human resources. We are part of NDSU.

10:10 Budget Recommendations (page 3-4 of attachment 1)

12:30 Impact of Budget Cuts (page 5 of attachment 1)

We need these dollars to match grants, they require a dollar for dollar match. Even those we've won $2.75 million dollars, authorized for the next 5 years, we can't use them without a match of nonfederal source funds. General funds are by far the best match, when you

use general funds I can look at important issue nationally but I can look at the ones that are important to the state.

21:35 Vice Chairman Streyle: What would you need for the asset management system?

Dr. Tolliver: We would continue to develop the program but at a slower pace. With an additional 200 thousand dollars to our base we can probably continue on pace because I am going to shut down some other positions and programs.

22:50 Rep Schmidt: On the green sheets, they indicate that Governor Dalrymple's executive budget compared to base level increases other funds 482 thousand dollars, I see that on your presentation. Where are those funds and what are they used for?

Dr. Tolliver: It is a guesstimate of federal funds; I don't know how they came up with that number. They are saying we are giving you spending authority if you get them. They are trying to convey that they want us to replace general funds then they are willing to increase our authority to collect.

Rep Schmidt: Are those hard dollars or soft dollars?

Becky Deichert OMB: That 18 million in the total base level funding of their special funds, we did a funding switch of 200 thousand from general to special.

Dr. Tolliver: Those were not funds that are given to us, they were an authority to collects.

26:15 Vice Chairman Streyle: What did DOT provide as far as funding during the current biennium? Did they eliminate all of your funding in their budget?

Tim Horner Program Director: I can get that information to you in about 15 minutes. They are mostly the federal or the matching funding.

Vice Chairman Streyle: Do any universities contract with you?

Dr. Tolliver: The only hard dollars in that budget are the general fund dollars.

Chairman Monson: Being on the campus, do they provide your heat, lights, things like that?

Dr. Trolliver: Yes, they do. They treat us just like we are another department. There's no double counting of any funds. I don't have that number but I will get it to you because it is a significant contribution that they give to us.

30:55 Erik Spencer with the ND Motor Carriers Assoc.: (attachment 2) I am also one of the 19 member of the institute advisory council I am passing around a copy of chapter 54-53 which is simply the member of the council for your awareness. It's a broad based collection of transportation stake holders. As the legislative chair, I would like to express the council's full support for Upper Great Plain's budget. I also ask that you give

consideration to the additional request from Dr. Trolliver. We understand you have a challenging task but any consideration would be greatly appreciated.

32:30 Steve Salwei NDDOT: (attachment 3)

Scott Rising with the Soybean Growers Association:
It's critical to put funds where they are most needed. We are going to fund our desperation of 30-37%. That money really needs to go where it's most needed and this budget does that.

34:40 Larry Syverson ND Township Officers Association: WE too, support the UGPTI budget requests. We appreciate the work they are doing and hope they are able to continue with their programs.

Kayla Pulvermacher ND Farmers Union: We are very supportive of all that they have done.

Chairman Monson: That concludes this meeting

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Roughrider Room, State Capitol

SB 2020
3/7/2017
28786

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Donna Whetham

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the northern crops institute, budget 638

Minutes: Attachment #1.

Chairman Monson: called the meeting to order SB 2020 on the Northern Crops Institute budget 638.

Mark Weber, Director of Northern Crops Institute: 00:04-4:00 One of the main areas of our program is our Education courses that we do on the facility with the diversity of crops the demand for our courses has tripled. Explained a flour mill in Vietnam and how the differing wheat with high protein and gluten strength makes a good loaf of bread. Then the Vietnam flour mill started purchasing wheat from this region. $19million worth. We try to teach costumers how to utilize our crops in their food and feed products. Another area in our programming is technical support. We have food scientists that travel to different parts of the world to provide technical support. The Canadian feed mills industry imports dry distiller's grains from this region to make feed and they were having problems in their factories to get the output and quality. The Canadian mills were blaming our crops for this. It is easy to suggest it is the grains. We sent up the director of our feed mill and there were some problems with some of the equipment. He redesigned the flow in the factory to improve efficiency. After several months they got their numbers back up to where they needed to be. As a result of that, they continue to buy dry distillers grain from us. (See Attachment #1)

Chairman Monson: You mentioned our high gluten wheat. How does the focus on gluten free products affect you? Everywhere you see now gluten free and there is intolerance to gluten.

Mr. Weber: Not significantly. It is a niche market. There are some people that have problems with that. We are not a gluten free facility. We have not hired any new staff and we did hire a part time technical director as a consultant to provide us some good savings for us. He has been very good about going out and talking to his industry friends and bringing in some additional business in the NCI. We hired a new accountant and reduced the hours

to 32. Last session we did not ask for any additional appropriations, we felt we had a good revenue stream and did not seek any new initiatives. We responded quickly to the budget cuts last August by launching an ambitious marketing program. We identified three areas to cut – overseas travel, new equipment and food and feed safety programs. Currently we have 12 FTE's. We are not asking for any new initiatives at this session. The Senate bill includes a general fund appropriation of $1.8 million which is an additional reduction of $75,000 from the adjusted 2015 appropriation that you approved in the emergency session. It does include a reduction of 12 FTE's down to 11.8 FTE's. That is because we put our accountant on 32 hours a week. Governor Burgum's budget would reduce that amount another $15,000 for a amount of $1.73 million. (Continued on attachment #1) 4:40 - 9:10

Chairman Monson: Food and feed safety is one of the areas you cut? That sounds a little dangerous.

Mr. Weber: Food and safety has been an important priority as part of the Federal government with their new proposals for companies to comply with the Federal regulations. We have a person on staff that helps to teach that. What we would do is reign that in and rely totally on industry support in order to maintain that. If the budget goes through as is, we will work even harder with industry friends for funds to keep that program going.

Chairman Monson: It is not that you are going to abandon that program, you are looking for other outside special fund and are you happy with the Senate budget?

Mr. Weber: Yes we will explore outside funds and we are prepared to deal with the Senate budget.

Chairman Monson: Any other testimony?

Keith Peltier, Chairman of the Advisory board for Norther Crops Institute: Mark and his staff are doing a great job promoting our crops. I would consider that an investment in the state and the crops, the promoting them has a direct result of increased market share and increase sales. Any money you can give them is appreciated. I just want to promote those guys.

Chairman Monson: Any other questions or testimony or opposition to this bill?
Seeing none. Closed the hearing on HB 2020.

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SB 2020
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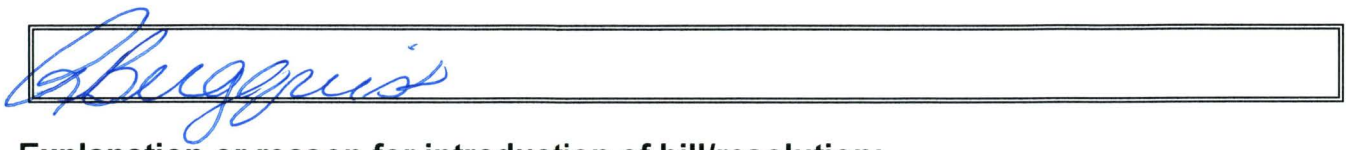

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service budget 630.

Minutes: Attachments 1-2

Chairman Monson: called the meeting to order on the NDSU Extension service budget 630.

Dean Bresciani President of NDSU: Introduced Mike Beltz. (attachment 1)

2:30-13:30 Mike Beltz Chairman of State board of Agriculture Research and Education: We were founded by the legislature back in 1997 and amended to include the extension service in 1999. Our responsibilities are policy and budget considerations for the ND Ag Experiment Station, which included the 7 RECs throughout the state. We are a 16-member board made up of 5 elected people by the Ag coalition, 5 elected by the Extensions districts across the state, Senator Klein and Representative Boe are our legislative members, Ag Commissioner Goehring, NDSU President Bresciani, VP, Dean and Director of Ag. Affairs @ NDSU Dr. Grafton, Extension Services Director Chris Boerboom. Commissioner Goehring, Dr. Grafton, and Dr. Boerboom and nonvoting members. We are to determine and adverse economic impacts to crops and livestock producing state, develop ongoing strategies for the provisions of research solutions, develop ongoing strategic strategies for the extension service. As part of those efforts we developed a biennium prioritized needs based budget request for reconsideration. We prioritize based on need and what it takes to address and issues not by predetermined dollars' amount. We report through the state board of higher education present to the OMB and the house and senate appropriation committees.

Extension Service have programs that impact people from cradle to grave. On the research side we have a multitude of entities to cover. The big four; wheat, soy beans, cattle and corn the second tier we have barley canola, dry beans, forage, potatoes, pulse crops, sugar beets and sunflowers along with hogs, sheep, turkeys, dairy and new crops as well.

10:30 Extension Service (Page 9 of attachment 1)

14:20- 41:30 Chris Boerboom Director of NDSU Extension Service: (page 1- 7 of attachment 1) Very briefly went through these pages.

17:15 Community Forums (page 13-15 of attachment 1)

22:30 Leadership and Civic Engagement (page 20 of attachment 1)

24:35 Vice Chairman Streyle: There were 21.75 vacant positions in extension and 16.25 in research as of December. Some of them have been vacant for a 50+ months, some in the 30-month range, those FTE cuts aren't effecting you at all.

Mr. Boerboom: I would like to sit down with you because I am wondering about some of that data.

26:00 Financial Schedules (page 103 of attachment 1)

30:05 Chairman Monson: When this snap shot was taken in the end of January, you still had 7.2 million left to expend, which will get you to the end of the biennium, and you won't have any carry over.

31:45 Chairman Monson: What was your FTE count before the 5.27 reduction?

Mr. Boerboom: Our FTEs at the beginning of 2015 where about 263

32:10 How would the proposed reductions would be made to Governor Dalrymple's 90% budget. (page 115 of attachment 1)

33:12 Chairman Monson: What kind of equipment needs did you have that you are not going to purchase?

Mr. Boerboom: Our biggest equipment usage is computer technology and we have extended our replacement on that.

33:45 Financial Audit (page 117 of attachment 1) There were no findings relative to extension.

34:00 Major components of base level (page 123 of attachment 1)

Rep Sanford: You said you had 263 FTEs? And now?

Mr. Boerboom: Yes, right now I'm holding 16 vacant positions open and that effects about 24 positions because some are joint positions. Then there are an additional 5 county agent positions that are on hold as well. NDSU has a faze retirement option available to tenure facility right now, deadline is March 10th. In the senate, they didn't specifically identify and FTE count, they were allowing us to fill depending on the budget that we had.

Rep Sanford: What percentage are you using and what is the senate using as it comes from the base?

Mr. Boerboom: The senate is working off of the adjusted 2015 budget, so it's after the 6.55% allotment is taken. So it is another 6.5% past the adjusted 2015 budget.

Chairman Monson: You said you had 5 county agents open, how do you fund that?

Mr. Boerboom: We have a partnership agreement with the counties, we refer to it as the base policy. The extension provides 50% of the salary for the agent the county provides 50% of the salary. Extension provides 100% of the benefits. So it ends up about ½ county and 2/3 extension (state). On the county side, they provide all the support staff and the county operating funds for the extension agent, so it works out almost a 50/50 partnership.

Rep Sanford: What percentage do you think you deliver strictly distance and/or the butts in the seat?

Mr. Boerboom: Maybe 25% technology and 75% in person? You can't say either or because they use them so close together and sometimes it's a mix of both.

41:45 Ellie Bierman representing Missouri Valley Bunch 4-H Club: When I started out in 4-H I was very terrified to speak and with some of the 4-H competitions speeches became less and less scary and now fun. I would never have been able to be here in front of you without 4-H. 4-H has brought my family closer together, giving us things to do together. I have also had the chance to travel with 4-H.

46:45 Sarah Lovas, Farmer and Agronomist from Hillsboro: I also was about 8 years old when I joined 4-H and I would have to agree that without it I would have never had the confidence to stand before you. I raise grain so I don't see the cattle side and I don't want to overshadow the importance of cattle ranching. As an agronomist, I take care of all of it on my farm and help the neighbors make decisions about how to manage their farms. There are never two years in farming that is the same, the extension service and the research that is conducted as the experiment stations have been a huge part of providing information for me.

The first thing that I learned from the extension service was call integrated pest management. Basically, how do you scout a field, I learned that the Eastern Crop Scouting School. Since then we have had many pests that are part of our daily lives. The crop pests like soybean aphids and soybean nematodes are controlled because of the research that has been done. A researcher at Williston did research on safflower which is a minor crop, without the extension services this wouldn't happen. I attend at least 3 extension meetings a year to keep up on my education, it is important to me and the farmers I work with. Our state motto is "strength from our soil"

52:50 Dawson Schefter Governor of Boys State: (attachment 2)

Chairman Monson: Further testimony? We'll close this meeting

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Virginia L Moch

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of NDSU Main Research Station and branch centers budget 640.

Minutes: Attachments 1-7

Chairman Monson: called the meeting to order on SB 2020 the Main Research Station and its branches budget 640.

Ken Grafton Director of the ND ag Experiment Station: (refer to attachment 1, page 23-48 of SB 2020 job 28784 from 3-7-2017)
3:50-23:45

Vice Chairman Streyle: 6:34 Were you able to raise all those special funds and donated funds, like seed cleaning?

Mr. Grafton: That would be on page 26. The legislature provided $750,000 to each the Carrington Research station and North Central Research Station to begin the process of developing seed cleaning facilities. The legislature provided $3 million dollars, $1.5 million to each for authorization to raise funding.

Chairman Monson: I think the amount that we put towards seed cleaning is going to be spent tearing down the old building.

Mr. Grafton: The facilities management at NDSU has identified as a health risk the old seed cleaning building because of the black mold and other things growing in it. So that building will be removed. We've found funds in the Main Station budget, not in the North Central budget, to authorize the removal of that building.

Chairman Monson: So you are able to move money from Main Research to the branch stations as needed?

Mr. Grafton: We are authorized to move money to the branch station, but the branch stations cannot move money into the Main Station.

Chairman Monson: Did the senate allow you to carryover unspent funds?

Mr. Grafton: Yes, we have carryover authority. continues 10:12

Chairman Monson: 18:20 The leadership program? I thought that was Extension.

Mr. Grafton: Last session $150,000 was placed in to the Ag Experiment budget for leadership activities and we partnered with the extension service on their rural leadership program as well as other entities in the state to promote and develop leadership. We were a pass through on that. 19:20 continues

Rep Sanford: 22:22 I'm hearing that you took a 6.5% allotment, then you took another 7% for the senate. What was that in terms of FTEs?

Mr. Grafton: Right now we have 32 FTEs that were frozen or eliminated and that includes the voluntary separation agreement that NDSU carried out in the fall of 2016. The senate gave us the same authorization as extension in that they removed the money but we have the authorization to fill those positions as needed. Frankly the $7.8 million reduction means the research extension service would be down an additional 3-5 positions.

Chairman Monson: Did you give up those positions in your allotment or do you still have the total amount of authorization for the FTEs?

Mr. Grafton: We just have the authorization, not the money.

Rep Martinson: You do a lot for people and you have a lot to brag about, but when you come back could you talk to us about the dollars received and the dollars spent?

Mr. Grafton: I am an introvert so it's hard for me to get up here, but our ag industry is phenomenal, 50% of our hard spring wheat is exported, 90% of our soybeans are exported, se have a tremendous livestock industry in the state that can only expand.

Vice Chairman Streyle: In January you had 42.60 FTEs vacant. With the general fund cost of $4.7 million and $2.3 million special funds so you can get a long way on the general fund just by not filling any of those positions.

Mr. Grafton: That is my strategy. Our Ag industry is amazing and a very large portion of our economy. A publication from an ag economist at Iowa State said that every $1 that is invested in Ag production activities returns $67. Those are very good returns.

Rep Sanford: Your budget is research, so is it fair to say all the money from the state is all research dollars?

Mr. Grafton: We are the research arm of the state. The only time that activities are combined are joint appointments between the scientists and the ag experiment station and the college

of agriculture food systems and natural resources. We have split appointments between the college and the ag experiment station. The typical appointment is about 80% research and 20% college. They match money provided by the legislature with grants and contracted research.

Rep Sanford: I'm assuming that those dollars would be broken out in the NDSU budget rather than the extension or research budget?

Mr. Grafton: You are correct. Would the committee like me to go through the information that Rep Delzer requested?

Chairman Monson: Just tell us where it is and we can look at it.

Mr. Grafton: The first bullet is on page 117, the second bullet of major components in the base level is on page 123, ongoing funding increases or decreases 127 and 129, the budget changes approved on pages112-114 of the financial tab and the 13-15 comparison to the adjusted numbers is on 107-111 (refer to attachment 1 SB 2020 D from 3-7-2017).

Rep Sanford: 33:00 In the green sheets there are "other funds". Would you tell us what the nature of those funds is and what you might be doing with them?

Mr. Grafton: The other funds are a combination of federal funds either through the Hatch Act which provides federal formula funding and that is a little under $4 million per year. We receive $25 million in grants from various groups, both at the federal and at the state level.

Rep Sanford: Are the grants from the state competitive or are they budgeted?

Mr. Grafton: The federal grants are exceptionally competitive. Less than 10% of those proposals that apply are funded.

Chairman Monson: We'll take a little time especially for those from out of town who would like to testify.

Blaine Schatz Director of Carrington Research Center: (attachment 1) 37:30-39:55

Mr. Grafton: The need of the seed plants requires the Williston Branch to ask for authorization to raise money.

Kevin Sedovic Interim Director of the Streeter Research Station: (attachment 2) 40:35-43:25

Chairman Monson: How many people are working at that station

Mr. Sedovic: We have one scientist on staff and two open scientist positions, we have a specialist and the rest are technicians for a total of 9.

Chris Ringwold Director of Dickinson Research Extension Center: (attachment 3)

44:10-47:**50**
Chris Schauer Director of Hettinger Research Center: 48:00- 50:00 (attachment 4)

Randy Melhoff Director of the Langdon Research Center: 50:10-53:09 (attachment 5)

Chairman Monson: How are you cleaning your seed?

Mr. Melhoff: We are cleaning seed right now. We are aware that we probably are not getting funding for our seed cleaning plant so we are being creative and fixing up our plant. It's going quite well.

Shana Forster Director of Minot's North Central Research Center: 55:15-58:10 (attachment 6)

Chairman Monson: The senate gave you authority to raise that money and you haven't spent any, yet?

Ms. Forster: We still need the approval of the State Board of Higher Ed to spend the $750,000.

Jerald Bergman Director of Williston Research Center: 58:30-1:03:35 (attachment 7) We have no authorization to raise money, but we would like that now to start raising money for the seed plant.

Chairman Monson: We probably can't give you money but we can give you the authorization to raise money. Alex, put that on our list to talk about adding an amendment. We won't take much more time as we are still going to hear about the Agronomy seed farm. Oh that's you!!

Brian Otteson introduces himself as we switch to recording 28842 and SB 2020

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Roughrider Room, State Capitol

SB 2020
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28842

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Donna Wheeham

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the NDSU Agronomy Seed Farm budget 649.

Minutes: Attachments 1-10

Chairman Monson: Called the meeting to order on the NDSU Agronomy Seed Farm budget 649.

Brian Otteson: Director of Agronomy Seed Farm at Castleton: (See attachment 1) 20: -3:15
The mission of the seed farm is to provide an adequate supply of high quality foundation seed to the seed producers of North Dakota.

Neil Fisher, ND Wheat Association: The North Dakota Wheat Commission is a very proud partner of this team. A high percentage of your checkoff dollars go into this program and level the relationship.

Tom Wheeler: Farmer from Ray ND: I am on the advisory board at Williston Research and Extension Center. I would like to follow up on what Jerry Bergman said we are not asking for any money we would like to start raising funds to get a new facility at Williston. So we are asking for an amendment on SB2020 giving us authority to raise funds for that. (5:20)

Mike Ames: From Williston I am involved in irrigation: I also serve on the Advisory Committee for the Williston experiment Station. We have been involved in value added agriculture irrigation since the mid-eighties when we started. When we started there were about 5,000 mechanized irrigated acres. Land that was irrigated with center pivots. Today there are 100,000 irrigated acres in our MonDak region.

Blake Inman, Director: US Durum Growers Association: I farm near Berthold: I am here today as the Director of the U. S. Durum Growers Association. We support as much funding as we can get. 60% of the durum is raised in this state and NDSU is home to the only breeding program for durum wheat in the United States. (8:21-8:50) (See attachment 2)

Don Morton State Board of Higher Education: Thanked the ag group for a wonderful job.

Sheri Harmes: I am a business person from Williston: The company I have in Williston is not value added is not an agriculture company it is a mining and processing company that sells a product around the world that is a fertilizer additive. I'm a member of the Williston Region Academic Development Council We support the seed facility that Dr. Bergman is requesting as well. As industry it is important to understand that the extension centers and the experiment centers and the research are available to our businesses and is a wonderful asset to our community.

Mike Beltz: Chairman State Board of Agriculture Research and Education: You have support from you at your desk. (refer to attachment 2 of SB 2020 NDAES tab, pages 77-78, Job # 28829)

Dan Wogsland: North Dakota Grain Growers Association: Anything that you can do to put some money into this budget would be very much appreciated. (See Attachment 3)

Chester Hill: Agronomist in the private industry in Agro Service Business: (15: -16:32) (no attachment) I would like to show my support for the Williston Research Extension Center and the projects they do for the producers in the area.

Scott Rising: With the Soybean Growers: Testified in support, please put sufficient money in the aphid bucket so farmers and ranchers in the state of North Dakota can continue to thrive. We in agriculture shouldn't have to contribute any more research to offset the budget problems than other people that come here for research money. I appreciate the past work that you have done but please look hard at this one.

Wayne Berry, Chairman of Williston Research Extension Center and Eastern Agricultural Research Center Joint Advisory Committee. In Support of Funding the Seed cleaning plant and NDSU. (See Attachment 4) handed out with no verbal testimony.

In support of SB 2020:
Del Gates, North Dakota Farmer: No verbal testimony. (See Attachment 5).
Kat Weinert, Chairwoman Hettinger Research Extension Center Advisory Board: (See Attachment 6).
Julie Ellingson, North Dakota Stockman's Association: (See Attachment 7).
Dennis Renner, Chairman of North Dakota State Soil Conservation Committee: (See Attachment 8).
Jim Bahm, Member of the North Dakota Ag Coalition Executive Committee: (See Attachment 9).
Kayla Pulvermacher, Member of North Dakota Farmer Union: (See Attachment 10).

Chairman Monson: Alex Please put this on our list to discuss again with APUC. We will close the meeting on SB 2020.

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Roughrider Room, State Capitol

SB 2020
3/21/2017
#29517

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Virginia L Mock

Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Attachments 1, 2,3,4,5,6

Chairman Monson: We are planning on taking all day on SB 2020. We may have tomorrow morning to go over some things we missed today. Sheila handed out our worksheet (Attachment 1). First on the list is Upper Plains Transportation Institute. It is mostly special funded. I am impressed with everything that the Senate did on all of these budgets. We are asking every agency to take out 7% from the general funded wages and salaries line item. We will take 7% of wages and salaries and see how the Senate did on that. We will ask Sheila to find those line items and give us that number to find the 7%.

Rep. Sanford: With NDSU and other higher education institutes, which have a relationship with these, we took 20%, and I think these should compare.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

Chairman Monson: Begin Attachment 1. 6:50-31:22

Chairman Monson: We have not done anything with this. The Senate took out 11.1 FTEs, 9.8 were ongoing. Most of that was other funded. Sheila, what is there general funded salaries line item?

Becky Deichert, OMB: Their salary budget with fringes is $4.3 million from the general fund. Total funding for salaries is $12.5 million. That number is from Dalrymple's recommendation.

Chairman Monson: The total general fund from the 17/19 Dalrymple's executive budget is $3.5 million. I would assume that is some operating as well.

Becky Deichert: Most of their general fund money is for salary. They had $750,000 one-time money.

Chairman Monson: We are looking at about $300,000. The Senate took out of general funds quite a bit over that: $213,000 and an FTE, and another 3% reduction that Burgum looked at. Does anyone see anything that we can reduce?

13:00
Representative Jim Schmidt: My notes on my Green Sheet say they wanted to add $300,000 for a bridge and road analysis. I guess we call that asset management. Are we talking about that anymore?

Vice Chairman Streyle: I don't think we can do $300,000, but I would like to do something. This has been a good program for the counties and various road systems. If we push it off for two years, we will be behind the eight ball again. I will get more information from Denver about the bottom dollar. Maybe we could do $150,000 and allow them to do matching funds. The reports give us good information, and it is a good program to fund at some level.

Chairman Monson: If they would do matching, where would you anticipate they get the matching dollars? Through the counties?

Vice Chairman Streyle: I would hope so, but we know they won't. We could just allow them authority to partner with them, instead of a match. It benefits the counties and townships, and they should help fund it.

Chairman Monson: Sheila, will you put this on a list as something we can look at?

Representative Mike Schatz: On the base level funding page, we are going from 54.98 FTEs down to 43.88 FTEs. I'm wondering what positions those are that are being eliminated, or if those positions were vacant.

Vice Chairman Streyle: According to the report that we got in January, there were 10 positions that said, "Will fill when needed and funded." There was one removed in the executive budget. That totals 10 positions, $21,000 general fund and $932,000 special funds.

Chairman Monson: They can hire people as needed like the University System. We could take 10 out, and they can put 10 back in if they need them and have the money for it. They have always done a good job of managing it.

Rep. Schmidt: Where would we add that back in to their budget?

Chairman Monson: They have a section that gives them the authority to add.

Vice Chairman Streyle: We'd want to code it as a one-time, as we've done in the past.

Rep. Schmidt: I would agree because I don't want it to be part of their base.

Ms. Deichert: They do have to report to budget section, though.

Rep. Sanford: On the Senate version it looks like it is reduced by 1.3 FTEs out of the general fund resources, $150,000. Where the other FTEs are reduced, the general fund has gone up $56,000. Repeated. When I look at the Senate version of what happened, in the general fund, the FTEs are 9.8 reduced, but the general fund went up $56,000. Obviously those are coming from the other positions, and you see that reduction in the next column.

Chairman Monson: Part of the reason that it went up is that there are costs to continue. We have seen that in other budgets. What all makes that go up in the general fund?

Ms. Sandness, LC: That is the cost to continue the second year of the increase in the current biennium. That would normally go up, and there is some offset for that 9.8 reduction employees, but not to the extent where there is an increase. It is possible that the 9.8 are special funded.

Chairman Monson: It is fair to say that the FTE reductions came from special funds with the exception of that 1.3?

Ms. Sandness: That could be right. It looks that way.

Rep. Sanford: This is not a significant reduction in the general fund. When we compare to NDSU, theirs was general fund.

Chairman Monson: When you look at the green sheet on the front page, in 11/13 they only had $1.9 million of general fund appropriated. Then it went up to $4.08 million in 13, and $4.53 million in 15/17. Now, it is reduced down to $3.56 million. Most of that is salaries, but it still is a reduction in the general fund, almost a million dollars (about 20+%).

Rep. Schmidt: My feeling is to take the Senate version, add in $150,000 for asset management and call it good.

Vice Chairman Streyle: We should mandate that the counties should do some of this, possibly $2000 a county. That would raise a couple hundred thousand per biennium. We could put in $100.000. They provide a lot of data, but the counties don't have any skin in the game right now. It would create a consistent funding piece to this. Then both the state and the counties have an investment.

Chairman Monson: It could be in as a match of 2 to 1 with the counties putting in the $2, and they would get $1 worth of services done. If the counties don't want to hire them, they don't have to. We could give them authority for $100,000 from general fund, and $200,000 of special funds for asset management. The language could say that it would be intended that the counties purchase it with a 2-to-1 match.

Ms. Sandness: You would be adding $100,000 general fund, or are you just expecting them to use their current funding?

Chairman Monson: We would put $100,000 in of general fund with the authority for them to raise $200,000 from other sources to match that, probably county.

Rep Schmidt: Do we want an optional or mandatory scenario? We can't have it both ways.

Vice Chairman Streyle: I prefer the mandatory, but once I get information about what the bottom dollar is to operate this program on an annual basis, then we can figure it out.

Rep Schmidt: Are we focusing on one part of the state to do this or the whole state?

Vice Chairman Streyle: The whole state. Most of the counties are participating.

Chairman Monson: I have a hard time telling counties they have to pay us money for a service that they may or may not feel they need. I would say that we put $100,000 out there with $200,000 paid by the counties. You will talk to Denver, Rep. Streyle?

Vice Chairman Streyle: I will.

Rep. Schmidt: I am fine with the Senate version of the asset management. I am wondering if my colleagues feel the same way?

Chairman Monson: No one is saying no. That would be the only adjustment for the Upper Great Plains budget then.

BRANCH RESEARCH CENTERS Attachment #2 32:00

Chairman Monson: Someone approached me from Williston asking for authority to raise money from special funds for their seed cleaning plant. I have no problem with any branch station that wants to raise money on their own. Is everyone okay with them raising money from private sources?

Rep. Schmidt: Why didn't the Senate do it?

Chairman Monson: I don't think they were made aware of that. It may have been an afterthought. I don't know the sources of that money.

Mike Beltz, Chairman SBARE (State Board of Agricultural Research and Education: That was brought up last session, and they have had some success, so that is probably why they are interested.

Chairman Monson: I would assume that SBARE has no problem with letting them raise money?

Mike Beltz: We are okay with that.

Chairman Monson: I think that this would be the only one that would be in the works to start raising money, unless Langdon might be.

Mike Beltz: I have talked to Randy, and they are not looking at doing anything at this period of time.

Rep Schmidt: The money that they raise will be only for bricks and mortor, not for salaries for anything else? We would have to spell that out in this bill, correct?

Mike Beltz: Yes, it can't be used for anything else. It is in the bill from last session for Carrington and Minot (or North Central).

Chairman Monson: We will have to specify that it is Williston, and it is for special funds that they go out and raise. The other two were budgeted $750,000 each of general fund with the authority to raise probably another $1.5 million. But this time, there is no extra money, so they are just asking if they can start fund raising. If we have money two years from now, we can add some money.

Rep. Schmidt: If it was $750,000, and we allot them another $1.5 million, are we going to allow Williston to go to $1.5 million plus the $750,000, since they don't have the $750,000?

Chairman Monson: I'd say let them raise as much as they want. The cost of the seed cleaning plant might even be higher yet by the time we get around to it two years from now. They will need to raise at least a million and a half.

Rep. Boe: I can't visualize what they are going to build. I'd have them tell us what they need, and then we'll give them the authority to raise the funds and let them do it.

Chairman Monson: That is fine with me. Mike, get a hold of them, and we will accommodate them. Don't they get oil money?

Chairman Monson: The Senate added to the report in 2019 how much money they got from their oil revenues. Was that section in there before, or is it new language?

Becky Deichert: That has been in there, for them and Dickinson.

Chairman Monson: Did they tell us how much money they have gotten from their oil revenue?

Dr. Ken Grafton, Vice President for Agricultural Affairs, Dean of the College, and Director of the North Dakota Experiment Station: When we met on March 7th, I indicated that Section 12, the Williston Research Center (p. 26) received $ 491,230 from July 1, 2013 to June 30, 2015. From July 1, 2015 to Nov. 30, 2016 they received and additional $132,048. Of that total they've spent $571,788 on equipment purchases. The legislature has given the authority for those two center to utilize the monies. The House years ago had the intent that money would stay at the Williston Research Extension Center for use of the research center. Historically, the legislature has not reduced the money down on those two centers. The revenue funds from oil declined, and the legislature gave some money to Dickinson to help with expenses in the recent past.

Chairman Monson: Williston can probably pay for that seed plant themselves. They can move money within their line items. 45:00
(See Attachment # 2)

Chairman Monson: How is Dickinson faring now? Did we get a report on the oil revenue?

Dr. Ken Grafton: In Section 11, the Dickinson Research Extension Center on p. 26, the mineral rights income. The legislature has given the authority to utilized up to $755,000 in mineral rights income. The oil revenue that they have received from July 1st to Nov. 30th this biennium was $123,819. That is significantly less than the $755,000.

Chairman Monson: The Senate made no adjustment to that, Sheila?

Ms. Sandness: No.

Chairman Monson: Can you move funds from the branch research stations, or not?

Dr. Ken Grafton: We have a number of fire walls in place that we can move monies from the main station to the research extension centers. The research extension centers can also transfer money, but the Director of the North Dakota Ag. Experiment Station may **not** take money from the research extension centers.

Continue Attachment #2 48:50-1:05

Chairman Monson: Let's take a look at the extension branch stations: 3.65 FTEs were removed from the Dalrymple budget. A total of $642,000 general fund. Additional budget reduction $553,620. Adjusting downwards, operating expenses $22,000. The Burgum budget reduced the general fund appropriation by another $533,000. Ongoing general fund changes the Senate removed $1.3 million. The only increases were the health insurance and a little money in the base payroll, as in all the budgets. Review.

Becky Deichert: The adjusted number is the 15/17 biennium appropriation less the allotment, which wasn't the entire increase. So, there was still an increase between 13/15 and 15/17.

Chairman Monson: What was the actual 2015 budgeted amount?

Becky Deichert: It was $20,073,447 general fund.

Chairman Monson: With the allotment it brought it back down to $18.4 million, and then the 10% Dalrymple budget brought it down to $17.7 million. Now, the Senate has it down to $17.173 million. The reduction in percentage is .8 in general fund and .2 in other funds, for a total of one-half percent reduction. Would that be to the base?

Becky Deichert: I believe that is a comparison from the Senate side to the Burgum recommendation. It went up slightly because of the insurance. (5%)

Rep. Sanford: (55:00) Overall, we'd be at the vicinity of 13.5%

Chairman Monson: Are we in line with higher education?

Becky Deichert: Higher Education has the option of raising tuition costs to raise funds.

Chairman Monson: Higher Ed. also has the ability to raise money through higher credits, if they do a good job of marketing. These guys are kind of stuck.

Rep. Delzer: I thought we could take a lot more money out of this, I think he forgot that higher education can raise tuition.

Rep. Sanford: I believe the research component is critical part of the operation. It has an affiliation with higher education. There is great value in this component.

Chairman Monson: Technology is changing new genetics, and new diseases are popping up. There is a lot of research to do.

Rep Schmidt: I feel the Senate has the same agricultural motivation as we do. Again, I will yield to what the senate came up with.

Chairman Monson: Anyone else see anything we missed? We will only have to change the Willison Research Center.

Ken Grafton: In light of those situations at the federal level, and the US Department of Agriculture is possibly taking a substantial a hit, a lot of the discretionary monies may be lost. Some of those monies are to programs such as the wheat/barley scab initiative. It is about a $5 million annual discretionary fund that the US Dept. of Agriculture makes available to about 26 states to carry out research on scab. We know how devastating scab has been to the North Dakota farmers. We get about 25% of that money on an annual basis. If the money for scab disappears, that will impact our barley program, our Durham program, and our wheat programs. Similarly, it will impact the Sclerotinia Initiative, which was spearheaded by North Dakota, and is not a federal program, but funded through discretionary monies by the Ag. Research Service. It is a high probability that it may be lost. Those are about $2.6 million annually. We also get about 25% of those monies. Given the light of what might happen at the federal level, I would strongly encourage the committee to listen to Rep. Schmidt's comments.

Mike Beltz: Talking to Ken at the Williston Research Center, they would be comfortable with $1.5 million of special authority.

ND EXTENSION SERVICE (Attachment 3) 1:05:00

Chairman Monson: It looks like Extension came through unscathed. I see close to the same pattern as in Research. Reduced funding for salaries, $1.6 million. Down 11 FTEs. Another reduction by Burgum, $806,000. Approximately, $2.4 million, and some equipment reduction. Chris, what kind of equipment do you have that the Senate reduced?

Chris Boerboom, Director of NDSU Extension Service: Our primary equipment is computers, projectors, and the type of equipment that we use to present educational programs.

Chairman Monson: How big was your equipment line before it was cut?

Director Boerboom: Each year we allocate about $175,000 for equipment.

Chairman Monson: You're down to about $25,000 a biennium. That won't be much equipment. Was that your decision to do that to meet the Dalrymple budget?

Director Boerboom: With our budget we are 82% salary. The remainder is either operating or equipment. We will be taking cuts across personnel positions and the remainder off of operating and equipment.

Chairman Monson: If you need computers and $25,000 isn't enough, will you have to lay off people and use their salaries or find it within your own budget?

Director Boerboom: Yes.

Chairman Monson: General funds and special funds are approximately 50/50 in the Senate version. What is your source of special funds?

Director Boerboom: We have 3 main sources. They are county for extension agents, federal funds, and grants and contracts from private industry, federal government, and state agencies.

Chairman Monson: What do other state agencies hire you to do?

Director Boerboom: For fiscal year 2017 our breakdown of funding sources is: 21% from counties ($5.7 million), 14% came from federal ($3.6 million), and 14% for grants and contracts ($3.6 million). Those total about 50% of our funding.

Chairman Monson: Does the Human Services budget have money earmarked in there for things that they pass through for you to do the work for them for nutrition and so on?

Director Boerboom: Yes.

Rep Schatz: It seems like there is duplication between Extension Service and DHS. Can you comment on that?

Director Boerboom: Right now the Extension is doing a comprehensive review. One of the main things that we are looking at is the programs that we have in our different areas: Ag. and Natural Resources, Family Consumer Sciences, 4-H, and Community Vitality. Your comment is frequently right. There is a lack of information to understand what is happening. Human Services is typically working at the level of intervention; they are working at a crisis mode, and the family needs specific services. Extension is working at the other end of the spectrum, which is the educational level to help families or individuals make decisions for their situations that **prevent** them from getting to the crisis situation. We work in collaboration with Human Services, DHI, the Department of Instruction, and other agencies. We provide educational resources. They work at the intervention level, but we work in partnership. In regard to our review, this is one of the specific questions that we are asking the review committee to investigate. As we came to the last meeting we wanted them to list

out the agencies that there is a perception of duplication. It was interesting as the committee members were bringing forward the examples, they were apologetic. Because by that point they understood that the mission of Extension is on the educational side, and rather than duplicating, we are complimenting the activities of the other agencies.

Rep Schatz: How about county Social Services? Seems like they are educational also.

Director Boerboom: The programs that we provide in the counties are primarily grant based. As far as Social Services we aren't providing direct services for investigating child abuse or any of those types of situations. Could you clarify for me?

Rep Schatz: The county Social Services has educational programs to prevent abuse. I think you and they are doing things that are similar and see duplication. I am wondering why NDSU Extension has gotten so much into family issues, since I thought it had to do with agriculture.

Director Boerboom: Going back to the Smith Lever Act of 1914, it defines the activity of cooperative extension to address the agricultural issues of the day and also the home economic issues of the day. Even in the original legislation home economics, the support of families, has been part of the fiber of extension for over 100 years.

Rep Schatz: A hundred years ago there were farms on every two quarters, so we had a lot of people spread across the land in an agricultural setting. We don't have that now.

Chairman Monson: Your delivery system has certainly changed in the last 100 years, but your mission is the same. I have heard criticism about the need of County Agents. As a farmer I use the County Agent a lot. They can tell me what diseases I might have in my crops. Almost every elevator has an agronomist, and I'm seeing them doing a lot of the same things that the County Agent used to do. As far as education I've seen results of your leadership programs, what the county home extension agent does, and the 4-H programs. Those are the things that I see you are very vibrant doing. Does every county have a County Agent now?

Director Boerboom: With the exception of Stark and Billings County, who share an office.

Chairman Monson: There are questions from legislators about how relevant the things are that you are doing.

Director Boerboom: The county model question has come up and will be the center of discussion at our meeting in Jamestown tomorrow. Right now there is demand to increase county agents. Kidder, Burleigh, Ward, Grand Forks, Dickey, Morton, Bowman, and Stark/Billings all have vacancies or want to increase the agents that they have in the county. SD did away with their county agents. Every state is different; the SD counties did not have skin in the game like they do in ND. North Dakota values their extension agents and the relationship and working knowledge that they have in the county. In visiting with Dr. Carla Trautman, the Associative Director in SD, she said if counties would had partnered up with the SD Extension Service, it would have been a completely different story. They have a different funding model, so it doesn't work to compare the two. For this biennium our counties

are investing over $11 million for Extension in North Dakota. They value the system. If the committee believes that the system is antiquated and no longer functional, I will listen to that, but at this point I don't believe that to be true. Based on feedback and input from County Commissioners across the state, I don't believe it to be true either.

Rep. Boe: Your county agent is unbiased in his recommendation. Your agronomist may be biased on brand names that you should buy as a product.

Chairman Monson: You are right, they can identify the disease, but probably going to try to channel you into buying their chemical.

Director Boerboom: Even if the disease is above the threshold to treat. Just because it's there, doesn't mean it is profitable to spray it. 1:28:00

Chairman Monson: Anything else, any sections?

Vice Chairman Streyle: How much of the budget do the commodity groups fund in Extension?

Director Boerboom: I don't have the exact breakdown to answer your question, but primarily our ag specialists have joint appointments with the Experiment Station, so they might be 90% Extension funded and 10% research funded. For current active grants by the specialists in the Ag. area, it is about $12 million dollars. But, I will put a big caveat on that. Of the $12 million, many of those grants are for Ag. research. Some of them do have an Extension component. A lot of the applied Ag. research is used in their Extension programing. In regard to the dollar amount if we did not have those extension specialists, we would not have access to that $12 million dollars as well.

Vice Chairman Streyle: If the county agent is benefiting the producer primarily, why should the state fund a large portion of that?

Director Boerboom: Again, at the county level the Extension pays for 50%, and the county pays for the other 50%. We pay for all of the fringe benefits for the agents. The county provides all of the operating funds for that county agent, plus the support staff and the office space. The county has a strong commitment to that. The agents work with the local crop improvement associations with projects and get in kind support and smaller amounts of support for local education.

Rep. Boe: We seem to focus on just the agronomy part of this, but there is also the delivery of licensure for chemical applicators. They administer those federal programs for us, so we meet our federal standards.

Chairman Monson: They keep us out of trouble in the waters of the U.S., that is huge. If we don't have the classes to certify us for spraying, which they provide, we are also in big trouble.
I think we will take a short break here. 1:37:17

Chairman Monson called the meeting back to order. During the break I was talking to Chris. I thought the scientists were funded by research, and he said they are not. I asked about the Junior Master Gardner Program; that was a one-time funded program. They still do it. They had money in their budget that they will have to cut back on, but they will still happen.

Chairman Monson: Put the $37.5 on the list, Sheila.

NORTHERN CROPS INSTITUTE: (Attachment 4) not discussed.

NDSU MAIN RESEARCH STATION: (Attachment 5) 1:43:00

Chairman Monson: Do you have a lot of summer time help?

Dr. Ken Grafton: We hire students year-around, but our summer crews are much larger. They are typically paid by grants that are received by the principle investigators. These would not be the positions that would be vacant.

Chairman Monson: How many of the 17 are vacant?

Dr. Ken Grafton: Currently, we have 32 vacant positions in the main station.

Chairman Monson: If we take some vacant ones, can you add them again later? We could take another ten.

Dr. Ken Grafton: We have the flexibility of adding positions or eliminating positions. We have indicated that to the Senate, and they have reduced our FTE count by over seventeen. If you take another ten, it would be very, very difficult for us continue operations on some critical programs. We are keeping the 32 vacant at this point in time to deal with the remaining allotment and because of how the budget might occur in July 1. Then those positions would be eliminated to address the budget shortfall.

Vice Chairman Streyle: Some of these vacancies have been open the entire biennium. They have different time periods. What you are going to cut (will be minimal).

Ken Grafton: Yes, you're correct. We have had a number of vacancies over the last biennium, even after the 2015 Session. I instituted a policy that we would slow down on hiring with the thought that we were going to be in a very conservative fiscal situation. Then in October of 2015 we instituted a much more severe freeze on hiring. When the allotment occurred in February of 2016, that freeze was a hard freeze. We have only hired three people as replacements on key critical positions since the beginning of 2016.

Vice Chairman Streyle: The total on these 32 positions is $4.7 million. Most of the ones in research are on special funds.

Ken Grafton: The flax breeder position was for an individual that passed away, and we are modifying that position by combining the canola and flax breeding projects. We are essentially eliminating the position. He was the only flax breeder in the US.

Vice Chairman Streyle: What is your plan then for the reduction of appropriations by Gov. Burgum (30%) of $1.5 million? Will it all have to be staff? You've lost 17, are you going to have to lose another 10?

Ken Grafton: In order to address the additional cut that Gov. Burgum required, we are going to be moving monies from general fund to special fund ($1.6 million). tThe scientists will be required to pay up to 25% of the salary and fringe benefits of all the technical research support staff. That would accommodate Gov. Burgum's reduction and also meet the intent of Gov. Dalrymple's request to move monies from general funds to special funds. Our scientists can include salaries and fringe benefits of technical support staff in their grants. So, we are requiring them to put a portion of those salaries on their grants. Some of the funding will be passed on to the state commodity groups through grants. It will be a negotiating process. Typically granting agencies do allow for salaries of support staff. The amount of money would be similar to the salary of a graduate student. We are not requiring the scientists to provide a tremendous amount of support, but it would be in about in the $20,000 to $25,000 range including benefits.

Chairman Monson: What is the percentage for administration of your grants?

Ken Grafton: The indirect cost rate for commodity grants is zero, so commodities and state agencies typically don't pay indirect costs to NDSU. The official rate is 45% on competitive and approved rates by the federal government. So, it ranges from zero and 45%. NDSU recognizes the policy of the company.

Chairman Monson: NDSU pays for your heat, lights and custodial, correct?

Ken Grafton: Yes, back in 1999 the legislature approved a one-time reduction of our base funding for the Experiment Station of $700,000 and transferred that to NDSU base funding. That accommodated all of the costs associated with having the Experiment Station on campus. So, now we don't pay anything.

Rep Schmidt: I'm trying to figure out the breakdown of your other funds. You have federal funds at about $8.4 million and the other special funds at about $48.7 million. Could you give me an idea of where those special funds come from?

Ken Grafton: We have strong support from various commodity groups. We get grant from commodity groups in North Dakota and Minnesota. We have contracts with various companies. We get about $25 million a year in grant activities.

Rep Schmidt: Is this just coming from a different pocket of the taxpayer? Is some of the money coming out of the right front pocket and some from the left front pocket?

Ken Grafton: That statement might be somewhat accurate. If the wheat commission is giving $1.5 million a year in funding for wheat research for our scientists, one could say that the tax payer in North Dakota is paying for it.

Rep. Schmidt: Are any of the federal funds ARS?

Ken Grafton: We work closely with the Ag. Research Service, but don't get grants from them, other than the discretionary funds for scab research. We do get funds from USDA from the Agri-Food Research Initiative. We don't have duplication with the ARS. They work on a national agenda; we work on a state agenda. They would view our research as complimentary. In terms of complementarity, they have a national agenda; and they have a responsibility to carry out **basic** research. Our mission is to have **applied** research to solve the issues that our farmers and ranchers face. We work closely with the ARS.

Chairman Monson: Many of those commodity dollars come from farmer check off fees.

Rep Schatz: What is the difference between what you do, and what private companies do as far as selling seed varieties?

Ken Grafton: We have strong programs in plant breeding. We do develop different varieties of wheat, and we do release those varieties in a number of different commodities for use by farmers in North Dakota. We do have a corn breeding program, but we do not release hybrid corn. We do have a soy bean breeding program, and we do release varieties from that. That may be construed as competition in private industry, but they have really focused on new technologies to develop new soy bean varieties. We focus on developing conventional varieties, which are non GMO. The private industry does not use Round Up Ready 1. We are permitted to use it as a tolerance gene, and are developing varieties and releasing with that gene. Other companies are not doing that.

Rep Schatz: A lot of the private companies have a royalty on seeds, and they can only be used to produce that once, not to reproduce. Do you do that, or profit from the farmers directly?

Ken Grafton: There is a research fee that is connected with the release of a new variety. There is a new model coming, but as we develop experimental lines, they are under the ownership of the North Dakota Ag. Experiment Station, owned by the state. When it is deemed ready as a variety, it can be released by the farmers in the state. It comes to my office to release. When it is released, it becomes the property of the NDSU research foundation. The Ag. Research Foundation then assesses a fee associated with that commodity. We are talking about a new model, and increasing the research fees. A vast majority of those fees go back to the research project that help develop it. A portion of the money can go to the inventor, a portion stays with the research foundation, in terms of marketing and management, and then there is a portion that goes back to the project that develops it.

Rep Schatz: I'd like to commend you on your research. We're combining 100-bushel winter wheat, and that is vastly different from when I farmed. That is due to you guys.

Chairman Monson: Monsanto is all GMO. They can get two crops, and stack up pest control and weed control There are about 20 different canola varieties.

Ken Grafton: We do like to partnership with industry because we need access to technology. The private companies like to have their seed tested in our plots because we are an unbiased source of information.

Rep Sanford: What is the percentage that goes to the foundation, and how does the foundation use those dollars?

Ken Grafton: 2:14: 54 I believe they retain 20%. It is a very small program with 2.5 FTEs, and the funds are used for salaries and fringe benefits of those individuals, patenting fees, and legal fees.

Chairman Monson: I'm assuming you had a big jump in dollars coming in when you opened your greenhouse. We're convinced that Ag research means a lot of extra dollars for the state. We'll set this one aside for now.

Ag. Research makes a lot of extra money for North Dakota. I don't know the effect of every dollar we cut.

AGRONOMY SEED FARM (Attachment 6) 2:18:30

Chairman Monson: The Agronomy Seed Farm is all special funds. We have never changed this.

Soil Conservation. What budget is that even in?

Off mic - Inaudible speaking in background.

Chairman Monson: They don't get any federal funding?

Off mic.

Rep Schmidt: You get some money off of Lincoln Oaks, don't you?

Off mic.

Chairman Monson: We'll take a lunch break here.

2017 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee – Education and Environment Division
Roughrider Room, State Capitol

SB 2020
3/21/2017
29523

☐ Subcommittee
☐ Conference Committee

Virginia L Moch

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to amend and reenact sections 4-05.1-05 and 4-08-10 of the North Dakota Century Code, relating to main research center experiment station and extension service position adjustments; and to provide an exemption

Minutes:

Chairman Monson: Called the meeting to order on 2020 since we still have the people from Fargo here. I told Rep Delzer we found very little to take out of extension because they don't have any way to raise fees like higher ed. He asked about soil conservation. Chris, do they have a million dollars left? They started with a million five, didn't they?

Rep Schmidt: Are we talking the soil conservation committee or the districts or the association of soil conservation?

Chris Boerboom NDSU Extension Service Director: The funding that passes through the extension service is for the state soil conservation committee. They manage the grants assistance program that soil conservation districts can apply for. They run up to $35-40,000 max. They use those grants to supplement their district projects.

Chairman Monson: Those projects would include the tree planting.

Rep Schmidt: I'm looking at IBARS on soil conservation committee. The 17-19 budget is for $1,091,520. Of that how much is pass through grant money?

Chris Boerboom: All of those grants are pass through dollars. The committee goes through and ranks them. Some districts get the max, some don't receive any funds at all. I believe all of the cost for Scot Hochhalter's position salary is contained in our extension base budget. We provide a small amount of administrative support and he supports the state soil conservation committee as an administrator. He is based here in Bismarck.

Rep Schmidt: I can only imagine that his support would be part time. He is full time to you but the assistance he provides to the soil conservation committee, is that full time.?

Chris Boerboom: Yes, he is full time reimbursing expenses, managing grants, and dispersing them. He plans and organizes the state soil conservation.

Rep Schmidt: If we separate out the soil conservation committee from the rest, what does it cost the taxpayer for the soil conservation to put out $1 million of grants?

Chris Boerboom: An estimate of $250,000 a biennium.

Rep Schmidt: That is 25% of the grant money to administer it. That's one FTE.

Chairman Monson: Is there a secretary involved, too?

Chris Boerboom: There is partial secretary support.

Chairman Monson: So as the number of dollars granted shrinks, wouldn't it be feasible to put him at .5 FTE there and reassign him to do some other work? That's pretty rich for administration.

Rep Schmidt: It's probably more than that when you add in the secretarial and other things, also when the committee comes together there is per diem. Now soil conservation districts can go to the heritage fund for grants.

Rep Boe: Maybe disburse the funds by district instead of by application and it wouldn't need an administrator.

Chairman Monson: I think they get money from a different source because they couldn't survive on a million dollars divided by how many districts there are. We have the State Forestry division that works with trees, too. They are in bill 2003. We need to discuss this. I feel bad telling Brian Johnson we weren't looking at much. I don't want to take anything out without him at least hearing the discussion.

Rep Boe: If this office is administering over a million dollars, if there are other duties, now is the time we need to be told about it.

Rep Schmidt: Brian works for the association of soil conservation; he doesn't work for the soil conservation committee. The soil conservation committee is appointed by the Governor. Brian works for the association that owns the nurseries that actually sell the trees, like Lincoln Nursery and Oakes Nursery. When I worked for USDA Soil Conservation the soil conservation committee was nothing more than a pass through. I don't know why you couldn't transfer the $1 of grant money to the Association of Soil Conservation Districts and let that entity decide where it goes, it will get out a lot cheaper than what you're getting it out now.

Chris Boerboom: That may be an option. The committee is appointed by the Governor so we'd have to check century code to see what needs to be changed.

Chairman Monson: Sheila check that how and see what the status of that committee is. I thought we might finish 2020 tomorrow but you don't have to come back. You can email us some information.

Rep Schmidt: I don't think soil conservation even has an office anymore. They run it all through you guys.

Chairman Monson: I'd like to know who gets the grants and where that money goes. Pre K has been a hot topic for a while. We have a program in DPI.

Chris Boerboom: Extension has nothing at all to do with Pre K. Extension collaborates with DPI on Gearing up for Kindergarten. I believe DPI had $675,000 in the last biennium for Gearing up for Kindergarten statewide. Extension receives $150,000 through DPI to get the school district signed up, to train teachers on the curriculum and to get everything set up.

Sheila Sandness LC: That money was removed in the house version. There is no funding left in that.

Chairman Monson: We haven't seen the bill on Pre K, yet. Chris, how much money do you have going out in grants?

Chris Boerboom: The only grant we give out would be to the Junior Master Gardener Program. We receive grants to do programs, we do the projects, we don't do granting.

Chairman Monson: Just looking at the bill doesn't tell us much. Streyle goes into IBARS and so does Rep Schmidt. They can get a lot of information from that. Let's set a time for Friday to get this information, Chris. We won't kick it out until next week. 23:28

2017 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee – Education and Environment Division
Roughrider Room, State Capitol

SB 2020
3/24/2017
29676

☐ Subcommittee
☐ Conference Committee

Jeanette Cook

Explanation or reason for introduction of bill/resolution: to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to amend and reenact sections 4-05.1-05 and 4-08-10 of the North Dakota Century Code, relating to main research center experiment station and extension service position adjustments; and to provide an exemption.

Minutes: Attachments 1-2

Chairman Monson called the meeting to order on SB 2020. Clerk called the roll. A quorum is present. Vice Chairman Streyle is absent. We are doing Research and Extension; they are one of the bigger budgets left. We've come across some big problems to take care of. There is mission creep, as many agencies cross into Research and Extension. We don't have time to do a study. Many people think we should get rid of SBARE (State Board of Agricultural Research and Education) or do a study. I don't think a study would give us any results that are usable. Why don't we have SBARE do the study with Commissioner Boerboom and look at taking some programs out. Mike Beltz came in and said they had been looking at taking out some programs that weren't as efficient. I visited with Allen Knudson; he is putting together an amendment for us to look at that would have SBARE's mission. They would look at initiatives that they could add, but they would have a look at what they can take out. With our financial situation we might have to do that anyway. This time we had to find 10% cuts. We are not there yet. Everybody is going to have to look at how they can cut their budget. I was talking to someone about soil conservation, and they found the same thing. The mission of soil conservation was stated in the 30's. Now we have a water commission. I'm putting together an amendment to really look at soil conservation and extension. I think we can find inefficiencies. Allen is doing that at the same time as he is doing the SBARE mission. We will see what they look like.

Rep Schmidt: I believe the duties of the soil conservation have changed drastically. I think soil conservation can be moved from the extension service to the association of soil conservation districts. I am sure they could handle the duties with the staff they have. I'm not so sure the need for the soil conservation is as great as it was. We should do a study on it.

Chairman Monson: Alex, put it on our list to study the soil conservation. My amendment would take an FTE out of extension and it probably will be the one appointed by the Governor. I don't disagree with you. We will see what the amendment looks like.

Rep Schmidt: I would like to see what your amendment says, first of all.

Brian Johnston, North Dakota Association of Soil Conservation Districts: (17:12) We sure would like to be a part of this. I do think we are equipped to handle this. I also think that there is more to that job than we think. I would like to talk to my board and have their blessing to do this. They are having a meeting Monday morning.

Chairman Monson: By the end of next week we have to have our budgets out. We are confident that Chris could find someone in extension who would give some guidance to your association. Chris, since you drove in, if we take a FTE, the one appointed by the governor, that you paid for that runs the Soil Conservation at the state level and the part time secretary. How could you cope with that?

Chris Boerboom, Director of NDSU Extension Service: After the discussion on Tuesday about the State Soil Conservation Committee, I sat down with Scott Hochhalter who is coordinator of the project. The question came up as to how to manage the granting program, how much time and effort does it take? I summarized what they were responsible for statewide for their organization and provided that back to Chairman Monson. I do have copies. That responsibility could be shifted to the Association of Soil Conservation Districts, if we were to provide the support from the extension to them. I am a little confused on how that would work if our FTE is cut. It would seem like we are coming up short, unless we assign another agent from another task.

Chairman Monson: We haven't taken much out of your budget or Research. If I said we will take another 3% out of your budget, what would you do?

Rep Boe: We have all seen your document of the duties that the office does, but we identified that we had a million-dollar disbursement from grants, and we had $250,000 that was the estimation of the cost of administering. Either you have to find a more efficient way of getting rid of the million dollars in disbursing it or get rid of the million dollars.

Chairman Monson: (See attachment #1) 24:49-26:07 Chris just handed out a list of the duties of that FTE in soil conservation.

Rep Schmidt: I don't see anything on this list that the state association can't do.

Rep Boe: Looking at this at 60% of the administration costs going through the grant administration, I still think that is inefficient. I would look to the rest of the committee for their experience on that.

Chairman Monson: We spend $250,000 to give away a million dollars. Not very efficient.

Brian Johnston: I heard loud and clear, and we certainly don't want to lose that million. The board stressed that we should be a part of administrating that.

Chairman Monson: Alex is distributing our worksheet with a list of proposals. (See attachment # 2.) 29:40
The person that is .4. Are they in Fargo?

Chris Boerboom: That person is here in Bismarck, and the .6 supports other staff in the office; that is a full time person. The other 60% is here. Their duties are to support two district directors and a nutrition and livestock specialist that are all in that office complex.
32:12

Chairman Monson: For right now we have one FTE and $125,000.

Alex Cronquist, Legislative Council: I was told that it was closer to $250,000, but it was kind of decided not to take all of the money for that proposal.

Rep Boe: Is this an individual office, or a cubicle in an office? Is the .4 capable of dispersing the grants?

Chairman Monson: He/she could at least call and get them together, I would think. Is $125,000 enough to cover…?

Commissioner Boerboom: I believe that Scott's salary is in the range of $67,000 - $68,000. That is salary, not fringe benefits. If you took $67,000 with 35% fringe benefits that would be about $90,000.

Chairman Monson: About $175,000 altogether.

Rep. Schatz: What was the reason for the Junior Master Gardener Program?

Chairman Monson: We funded them before, but not at the $37,500. Do you want to leave it at that level? At one time it was proposed at more than that.
35:15

NORTHERN CROPS INSTITUTE

Chairman Monson: No additional financial changes proposed.
NDSU Research Stations – no changes, other than what the Senate has done.
We have to take some money out of here; the full committee will say we didn't look deep enough. What should we do? We can pick and choose or take a flat amount, or try to run it up the flag pole with the full committee.

Rep. Boe: What kind of money are we looking for?

Rep Martinson: I wouldn't want to pick and choose. I think the people who run the organization should make the choices. I would rather give them the available money, and let them make the choices.

Chairman Monson: The first half we took 7% out of the general funded salary and wages line item. The Senate took enough out that, and we are probably not too far from that amount. That was below Dalrymple's budget. Alex, can you find out what 7% of these would do?

Alex Cronquist: It would be about $5.8 million. The Senate removed $7,668,000 from the general fund for the entire budget.

Chairman Monson: What is the percentage just for wages and salary?

Alex Cronquist: That number is $4.4 million. In the Burgum budget, he just took a flat 3%, and he didn't specify whether that is from operating or salaries.

Chairman Monson: Every budget is about 70% salaries. Let's use 70% of the 3%. If 2/3 of the Burgum cuts were salaries and wages, what would that be?

Alex Cronquist: It is about $6.2 million.

Chairman Monson: So, our goal would have been to take out $5.8 million, and the Senate took out more than we even asked. We are there.

Rep. Bob Martinson: You know we can't cut enough to please them. Let's just do what we think is best and defend our positons. If the whole committee turns us over, we'll have to come back and take a look at it.

Chairman Monson: That will work. In our study I would be okay with taking out the one FTE and $175,000.

Alex Cronquist: That FTE is $190,000.

Reviewed long sheets. 46:40-49:00

Rep. Sanford: In these budgets there is a consistency of about 13%, including the allotment, reduction in the general fund. Then there is an ability in some of the other funds to lessen the damage, so to speak. With the other funds, some of them are getting increases over the base budget. Some are in the range of 7%. I'm troubled when I look at that, and compare it to some of the other budgets that don't have access to those kind of other funds and still took a reduction.

Chairman Monson: Which one are you looking at specifically?

Rep. Sanford: I'm looking at all of them.

Chairman Monson: Why is your special going up?

Chris Boerboom: As Governor Dalrymple's budget was put together, they just added authority over in the special funds column for that funding. There aren't actual dollars there. When the governor added to the special funds column, it didn't add new grants that we are getting. It is just the authority to write more proposals.

Becky Deichert, OMB: Chris is correct. We took some special funds and gave them special fund authority, so if they could come up with the funds, they would have it there. Health insurance is part of that, too.

Chairman Monson: Do you have any hope of recovering some of those funds? Do you have other sources?

Chris Boerboom: We go after all the grant funds that we can leverage. We are maxed out right now. As we lose some of our staff, we lose the base capacity for people to write the proposals to get grants.

Chairman Monson: They will lose about 13% general fund, and if they can go out and raise 7% back then…

Rep. Sanford: In my notes I had written that there are county grants at $5.7 million, federal grants at $3.6 million, and grants/contracts for $3.7million. Are those solid now?

Chris Boerboom: Those are annual funds that we receive from our joint partnerships for extension agents. Those are stable. The federal funds, a month ago I would have hoped that those were stable, but with the more recent presidential budget, we are uncertain on how stable they are. The other funds of grants and contracts, I would hope we can compete to get those.

Rep. Sanford: About half of those would be safe then.

Ken Grafton, Director ND Ag Experiment Station: When we compete for grants, we **must** make certain that grant funds are utilized as specified by the granting agency, since they are essentially contracts. About 50% of our total money is from grants and contracts. I wanted to clarify that we **cannot** use that money in ways other than specified. They are not a gift.

Chairman Monson: Keep in mind that they are like the University, if they write some grants and get money, and need to hire someone to do the research, they can do that without approval.

Rep. Sanford: Are we taking that other position?

Chairman Monson: We have it on the list to do that. We also have the language to do a study that is being drafted. If we take that FTE and take the amount of money, I'm not sure about that. Maybe we should do one or the other. We won't repeal the code. The study would be to repeal the code.

Rep Martinson: Let's leave it as it is.

End of meeting.

2017 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee – Education and Environment Division
Roughrider Room, State Capitol

SB 2020
3/24/2017
29685

☐ Subcommittee
☐ Conference Committee

Virginia L Mock

Explanation or reason for introduction of bill/resolution:

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Minutes: Attachments 1+2

Chairman Monson: I'll call the meeting back to order and we have some more information on 2020 that we are going to discuss.

Rep Schatz: I've asked some specific information on the family and consumer science part of the Extension Service. I have 2 handouts (attachment 1 and attachment 2) There is $17 million in that program. This is one part where I said there is probably some overlap. I think we should look this over. I know there is some pass through going to the department of human services, there is $4.6 million of general fund money in community vitality That is $21.6 million of general funds in those two programs. I'll make a copy and we can discuss it. I need a little more information. I want to take a real close look at this. I'd like for you guys to look it over.

Chairman Monson: If you've been in contact with Chris, I think you should ask him what department those funds pass through to. If the general fund is a match for federal funds or if it leverages other funds, we'll have to leave it. Representative Schatz found a thread he's going to unravel. Anything else on 2020?

Meeting ended

2017 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee – Education and Environment Division
Roughrider Room, State Capitol

SB 2020
3/28/2017
29758

☐ Subcommittee
☐ Conference Committee

Virginia L Mock

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Minutes: Attachments 1 & 2

Chairman Monson: called the meeting to order on SB 2020 Research and Extension. We have this amendment, from the 27th, Is this the most recent, Alex? Alex will go through it.

Alex Cronquist LC: This is the amendment that you requested from Allen last week. This doesn't cover everything we've discussed. This is just to remove the one soil conservation employee and to provide for some studies. 2:30-5:08 reads the amendment. We discussed repealing the state soil conservation committee. I spoke with our legal staff and we didn't draft anything, yet, waiting for further direction from the committee. Repealing that state conservation committee will be a lengthy amendment. They have a couple sections in century code that is directly related to them and their duties and they are also mentioned close to another 70 times throughout that title. If you want that we will need additional direction as to who to replace them with.

Chairman Monson: Section 12 there, the study of soil conservation, came about from discussions I had with people from the ag committee, Representative Johnson's committee. When they were doing the rewrite of chapter 4, they said this was probably something we could do away with. If that is our intent, we need to leave it as a study and see if legislative management wants to do that. It would take a lot of time. The ag committee was pushing this, too. I think we should leave it as a study, if legislative management chooses that. *Section 13 is where SBARE* is studying itself. To me that makes sense. Some think we can do away with it, but I'm not ready for that. Fourteen tells them to come in with a 0 budget, which should be a result of what they find in 13, if they find some of the programs aren't as necessary as they used to be. They can put them on a list and we can take a look at it.

Rep Streyle: We need to talk about section 4 in the bill. It needs to come out about employees of less than a 12-month year accruing leave. There are only a couple of campuses doing this, so here we are putting this in when the trend is not to do it. Section 5 is the same deal. We can go through the work sheet; I just want those open for discussion.

Chairman Monson: Add that to the list Alex.

Alex Cronquist: That is under number 2 of other proposed changes on the sheet.

Chairman Monson: (attachment 1) 11:35-25:40

Vice Chairman Streyle: 14:06 This is a board decision not a legislative decision (about giving teachers accrued leave). They are going away from this at the campuses so why would we say they have to do this?

Rep Boe: This is a protection for the researchers who would be part time researchers and they would lose their benefits.

Alex Cronquist: Tami Dolan and the state board explained that certain employees of Ag Research and Extension are identified as faculty because they may also teach at NDSU. They are looking at a consistent policy for accrued leave and one of the options is that of faculty not being able to accrue leave from year to year because they are typically contracted for 9 months to a year. Basically, after their contract ended their leave would go back to 0. Their intention was that their research employees who are also faculty would be able to carryover their leave the same as all other employees. There is no maximum on sick leave. They could accrue up to 240 hours of annual leave.

Vice Chairman Streyle: You are either a teacher or researcher. They want to teach one class so they can get these benefits. I think we take it out. If you teach one class are you really faculty?

Chairman Monson: I'm sure other divisions have researchers. They should all be treated the same. How does the med school or other divisions in higher ed that do mostly all research do it?

Rep Sanford: I agree with Streyle that it is a board decision. If the board is in the process of looking at that. They can give the different categories the same treatment.

Vice Chairman Streyle: Let the board finish their process. I don't think we should pick one out and the others have to wait for a board decision.

Rep Boe: I think we should talk to the senate and get more information.

Rep Schatz: I'm looking at the staff reductions from 15 to 16 and some of the areas where they have increased people. Some of those areas are 1 person in Human Development and Family Science and 3 in 4-H Youth Development. Most other categories have been reduced, so if they got by in 15 they should be able to in 17.

Chairman Monson: Keep in mind that if we take them out, they are able to put them back if they have the money. They need $300,000 to do this.

Rep Schatz: Correct. It would be a money equivalent to 4 positions.

Chairman Monson: What is the total general fund, Alex, in the Extension part?

Alex Cronquist: As approved by the senate the total general fund appropriation is $25,973,886.

Chairman Monson: And in Extension what is the general funded wages and salaries line item?

Alex Cronquist: They don't have a line item for that. In their budget request as approved by Governor Dalrymple their general fund amount for salaries and wages was about $22.5 million. That amount may be affected by Governor Burgum's request to remove 3%. He did not specify" from what". That $22.5 million is after removing about $2 million in Governor Dalrymple's budget. They removed 13 FTEs.

Chairman Monson: That was part of the 10% reduction?

Alex Cronquist: Ten were part of the 10% reduction and 3 were an additional reduction of just over $700,000.

Chairman Monson: Of the actions taken so far, how much came out of the general funded line? We've been taking out 7%. They've already taken quite a beating. If we go ahead with amendment .02001 and everything we have on our sheet. What is the percentage reduction? Representative Schatz, what is it that you just handed out?

Representative Mike Schatz: 35:00-39:40 (attachment 2) This just shows the staff increases from 15 to 16. I think they should stay the same as they were in 15.

Chris Boerboom Extension Service: 39:40 The reason we went from 4 to 6 employees in 4-H was because we had 2 retirements and 1 departure resignation of a specialist so in 2015 we were short of staff by those 3 FTEs. Those positions were filled in 2016. The position in Nutrition, Food Safety & Health is being held open right now. We've frozen that position. This document was prepared for the review committee that SBARE is currently running for Extension. This was requested so they could see how much time agents and specialists were devoting in different program areas. We have a reporting system where agents and specialists report on their effort. These FTE numbers are not department numbers. They are a report of where individuals invested their time. We had a dip in 15 FTEs. It was abnormally low.

Rep Schatz: Seems like a lot of duplication when it comes to Nutrition, Food Safety & Health.

Chairman Monson: Those words describe different categories and different things that can be described by those words. Chris, Is there overlap?

Chris Boerboom: I would contend that there is not overlap. We work by contract with DPI to do a specific project because they don't have the capacity or the reach to provide that educational training out to the school districts. The same thing occurs in DHS. We have memoranda agreements with them. We do not overlap. They come to us to fulfill an obligation. Chairman Monson, you pointed out SNAP ED for limited resource families that we have the reach out in the state to reach those families for DHS (Department Human Resources). It is an efficiency to DHS.

Rep Sanford: Is the base of $27,824,562 the 6.55% budget?

Chris Boerboom: Yes, that is a 6.55% reduction from the 2015 budget.

Rep Sanford: From that general fund base there are reductions of $1.850,000. What percent is that of the original base?

Chris Boerboom: That is right under a 13% reduction from the 2015 base. Just shy of a $4 million reduction from last biennium and will be in the neighborhood of about 14 or 15 FTEs. The one difference is that the higher ed can raise tuition. We do not have the ability to raise funds.

Rep Sanford: I look at it as being part of NDSU and the mother ship took a 20% reduction. I think if you got to 15% that would be equivalent to the reduction for higher ed.

Rep Boe: This is a protection for the researchers who would be part time and they would lose their benefits.

Alex Cronquist: Tami Dolan and the state board explained that certain employees are identified as teachers
They are looking at faculty not being able to accrue leave Their intention was that their research employees who are also teachers would be able to carryover their leave the same as all other employees. There is no maximum.

Vice Chairman Streyle: You are either a teacher or researcher. They want to teach one class so they can get these benefits. I think we take it out.

Chairman Monson: How does the med school or other

Rep Sanford: I agree with Streyle that it is a board decision.

Vice Chairman Streyle: I don't think we should pick one out and the others have to wait for a board decision.

Rep Boe: I think we should talk to the senate

Chairman Monson: Strike 2 out Alex. Continues 21:40 We can drop 3. because there is no money for APUC. 5 Is in and 6 is in the amendment 25:40

Rep Schatz: I'm looking at FTEs and I see some areas where we could remove FTEs. It would be a money equivalent to 4 positions.

Chairman Monson: What is the total general fund?

Alex Cronquist: $25,973,886. In the Dalrymple budget the salaries and wages were $22.5 million after the 10% reduction. 10 were a part of the 10% and 3 were additional of just over $700,000.

Chairman Monson: How much money, general fund, came out of their salary and wages line?

Alex Cronquist: 29:07 They don't have a specific line for salaries and wages. It was a reduction of 13 FTEs and about $2 million. Included in the 10% was $1.6 million.

Chairman Monson: If we go with the amendment 02001and everything we discussed what is the reduction percent like what would be on the green sheets? The green sheet shows an increase from 2009 on page 2.

Alex Cronquist: After the senate reductions the cumulative increase from 2011 is 18%.

Rep Schatz: (attachment 2) 36:00- 49:00 I would take them back to the 2015 level.

Vice Chairman Streyle: taking 2 FTEs from 4-H Youth Development and 1 from Human Development and Family Science

Chris Boerboom Director of Research and Extension: In 2015 we were short of staff The position in food safety and health is being held open. This document was shared with the SBARE committee because they wanted to know how much time was spent in each area. These are FTEs of effort applied to the different areas. The 4-H FTEs was actually low in 2015.

Rep Schatz: My point is that there seems to be duplication of services. DPI has a division that sounds a lot like your Dept. of Human Development and Family Science. It's also a lot like the Human Services Dept. in that category.

Chairman Monson: The services are probably different. In DPI most of that is dealing with the federal USDA approved program. The breakfast and lunch programs. Chris is there overlap?

Director Boerboom: I would contend that there isn't. When we are contracted by DPI to do an activity it is because they don't have the capacity or reach to go out to the school districts. In DHS (Dept. Of Human Resources) we have memoranda of agreements and they come to us to fill a certain obligation such as SNAP ED to limited resource families because we have the reach out in the state and the staff to reach those families. DHS does not, so it is an efficiency for them to contract with us. We are very specific in our roles so we don't duplicate. Right now we are working with the SBARE committee because that was one of the issues that was raised with them and that they are reviewing right now.

Rep Sanford: The general fund base budget is $27.8, is the reduction 6.55% from last biennium? From the general fund base there are reductions of $1.850. What percent is that of the original base?

Director Boerboom: Yes, from the original base $24,562-dollar amount there was a 6.5% reduction of $1.5 million. With the additional reductions from the Dalrymple and Burgum budgets it is a 13% total reduction and with the soil conservation FTE reduction it would put us over the 13%. In terms of the reduction Representative Monson was talking about we would be at the 7% figure. Between the allotment and Governor Burgum's reduction that total was 3.8 million. It is just shy of a $4 million reduction or about 14 or 15 FTEs.

Chairman Monson: It's about $4 million when we add in the soil conservation one.

Rep Sanford: I look at it as part of NDSU and the mother ship got a 20% reduction. I think if you got to 15% that would be consistent with the Dalrymple request for higher ed.

Chris Boerboom: Our increase in 15 was 0. With the 10% Dalrymple and 3% Burgum budget proposals that would be an additional $1.85 million. The total amount would be $3.8 million and what E and E is considering right now would bring it up to $4 million. The one difference between Extension and NDSU Campus is they have the ability to raise tuition. We do not have that capacity to raise funds. 55:28

Chairman Monson: What would another 2% be?

Alex Cronquist: Just under $600,000. After removing the 1 FTE and adding back the Master Gardener Program it would be $440,000.

Rep Boe: I thought we were removing $250,000 for that FTE?

Chairman Monson: Alex, does the $191,000 include the health insurance?

Alex Cronquist: It is the salaries and benefits. It does not include any operating.

Representative Jim Schmidt: We didn't include the travel because that employee travels as well as the one from soil conservation for his meetings, lodging and per diem. It's probably more than $250,000.

Rep Boe: So we're there! By the time we take into consideration the things Representative Schmidt brought up, we should be good.

Rep Boe: I'd say we are good with the extra things Rep Schmidt brought up.

Alex Cronquist: It seems the committee wanted a study done.

Chairman Monson: That was if we were going to take out and eliminate that section of code with soil conservation. There were 27 pages of code.

Representative Jim Schmidt: The original intent was to take a hard look at it, but with the discussions I've had since we did that, I don't know that a study is necessary anymore. Just get rid of the study. Go with the dollar figure, the $196,000 plus the other figures that I added, and take that out.

Alex Cronquist: The soil committee is mentioned outside of that section about 70 times in code, that would have to be changed. We'll need additional information on what to replace those areas with. The Extension Service did give us some information on average expenses per year for the soil committee including the operating expenses for the FTE that is being removed. They estimate that is $23,394 per year. So the biennium would be $46,788 on top of that $191,000.

Representative Jim Schmidt: Bottom line is we'll save somewhere around $225-$250,000. If they have to take out 27 pages of code, I don't know that that would take a whole lot of effort.

Chairman Monson: It's more than 27 pages because they are referenced in other chapters. We left .6 of the secretary out. That person will have .4 of time to do some of the coordinating to have Extension and other agencies pick up some of this.

Alex Cronquist: We just need to know what to replace those references with.

Vice Chairman Streyle: If we do that, you guys better not give it up in conference after they do all that work.

Rep Boe: Are some of those 70 references obsolete?

Chairman Monson: They wouldn't know which are obsolete until they study it or dig deeper. We could maybe get by for 2 years without that person at the top and without those duties being assigned to anybody. In 2 years if we found out this isn't working we could put it back. If we do a study that would tell us how changing code would work.

Representative Jim Schmidt: In the workload study it didn't look to me like there were 27 pages of duties to be done there.

Chairman Monson: All 27 pages isn't just the duties of that one person. I think we leave it as a study because they would have to work night and day to get that done. Alex, Rep Schmidt is telling us to take $46,000 out of operating.

Rep Martinson: Can't we do a blanket amendment that would say "every reference to that deal is repealed?

Alex Cronquist: Right now we don't know what would have to stay until we get additional direction on replacing them. Right in the beginning there are definitions, we could replace state soil conservation committee with something right there, it's possible that may be all it takes.

Representative Jim Schmidt: What if we replaced that with "the state association of soil conservation districts?"

Chairman Monson: We still have people elected to the state soil conservation committee.

Rep Schmidt: No, they are appointed by the governor.

Rep Boe: I think 97% of the time that would be adequate but then next session somebody will say it was inadequate and we will have to stand on the floor and explain why we inadvertently left something out.

Rep Schatz: How will the changes to the farm bill in congress affect the Extension Service as far as grants? What happens when that dries up?

Chris Boerboom: Based on the language we've seen there were positive comments in regard to ag research and extension and so I hope our grants and funds are reasonably so. We work with FSA to do the direct face to face work with the farmers to help them understand the farm bill. Our bigger challenge is that our Ag economist that has worked with us for the last 5 farm bills, Dwight Aakre, retired.

Rep Boe: Just about every producer used the spreadsheet that Dwight Aakre designed to make their decisions.

Representative Jim Schmidt: Representative Streyle and I have to meet with the governor to talk about water. We should be back by 11:00.

Chairman Monson: Rep Sanford, Schatz, and Schmidt would like to see more dollars come out of this. As far as giving Alex direction?

Rep Schmidt: I'd like some time to discuss this with Alex.

Chairman Monson: So you and Streyle will be back here at 11. We'll take a break until then. 1:16:20

Chairman Monson: Called the EE section back to order. I'd like to get 2020 at least to the point of an amendment. During the break we discussed that higher ed can raise money 4% a year, which is not a cut then. Research and Extension doesn't have that option. What would 1% amount to?

Alex Cronquist: 1% is $162,000. 2% would be closer to $460,000, but that doesn't make sense.

Chairman Monson: Did you take into account the $1.96 and $41,000 already taken?

Alex Cronquist: Yes, Mr. Chairman. For the 14% cut the 162,000 is not a full 1% percent that's why it is not double.

Rep Martinson: Let it go.

Rep Boe: Yes

Chairman Monson: Let's put everything on the table in a package. What about everything on amendment 02001? The legislative management study on soil conservation, is it necessary since we are set on taking out the soil conservation head piece.

Rep Schmidt: When was the last time we did some of those duties. Just from the one page that Alex showed me it's been a long, long time.

Chairman Monson: Do you want the study?

Representative Jim Schmidt: No.

Rep Boe: Can we get it all done in the time available? Where are we going to assign the duties?

Chairman Monson: We will assign them to the ND Association of Soil Conservation Districts.

Representative Jim Schmidt: I can go along with a study if that is what the committee wants. I would like to go after it.

Chairman Monson: 1:27:30 We'll have SBARE do a study on themselves and Extension (section 13). We'll leave that in. Section 14 of the amendment? That might be harsh asking them to put something back in every time they take something out. We can ask them for a list of where to cut.

Rep Boe: If we are asking them where to cut, then we should also ask for efficiencies.

Chairman Monson: Do you want to leave section 14 in? Boe and Streyle want it out, I'm fine with that. 1 and 2 is in 3 we scratched 4,5,6 are in, removing soil conservation with the FTE and $46,000 in operating, add back in $25,000, so the net will be about $213,000?

Alex Cronquist: Do you want to leave sections 4 and 5 in the bill about the researchers leave?

Chairman Monson: They are 12 month contracts and without these two sections they get no leave. The board would like a policy of one size fits all. If we take that section out, then their option is to go to the board of higher ed.

Vice Chairman Streyle: It should be a board decision. Why should we pick out one to write the code on?

Chairman Monson: It's about 5 to 2. We just took out sections 4 and 5.

Rep Schatz: I 'd like to take out another $300,000.

Chairman Monson: Shall we leave the flexibility? We'll leave that one, taking an additional $300,00 out, separate. **The motion is everything on our worksheet except 4 on the bottom, section 4 and 5 removed, an additional $46,000 out for soil conservation operation, $25,000 put back in for the association of soil conservation operating. We will take out everything in codes relating to soil conservation.**

Rep Streyle makes the motion, seconded by Rep Schmidt. Chairman Monson called for a voice vote and the motion carried.

Representative Schatz made a motion to further amend by taking an additional $300,000 out of the budget. It was seconded by Rep Sanford.

Chairman Monson: That would make it about a 15% cut.
He took a roll call vote: Yea: 4 Nay: 3 Absent: 0 Motion carries.

Representative Martinson made a motion to Do Pass as Amended SB 2020.
Representative Schatz seconded the motion.

Chairman Monson took a roll call vote. Yea: 7 Nay: 0 Absent: 0 Motion Carries.

Representative Boe is the carrier.

Chairman Monson: Adjourned the meeting.

2017 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee – Education and Environment Division
Roughrider Room, State Capitol

SB 2020
3/31/2017
29867

☐ Subcommittee
☐ Conference Committee

Virginia L Mock

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to amend and reenact sections 4-05.1-05 and 4-08-10 of the North Dakota Century Code, relating to main research center experiment station and extension service position adjustments; and to provide an exemption.

Minutes: 1

:01-1:14 on recording 29860 of SB 2018 on 3-31-2017
Chairman Monson: We moved a Do Pass on SB 2020 upon review of the amendment when it came in. You have that amendment in front of you. I've reviewed it and don't find any corrections. Does anyone see any corrections? (Everyone agrees there are no corrections) Then we will pass 2020 out to full committee.

Chairman Monson: Called the EE section of House Appropriations back to order. We have a little business we have to take care of on SB 2020 which is research and extension. This morning we reviewed the amendment 17.0528.02005.

Rep Martinson: **I move we reconsider our action on the Do Pass As Amended.**

Rep Boe: I second that.

Chairman Monson: calls for a **voice vote. Motion carries**. We have 2020 back in front of us. The problem was that the amendment 2005 that we looked over this morning and said was fine, was technically not exactly the one that we had verbally put on when we did the Do Pass. They never even drafted the one we made the motion on. So we need the motion to approve.

Rep Martinson: Mr. Chairman, I move that we replace our previous amendment that we verbalized with 02005.

Chairman Monson: The previous amendment didn't have a number. It hasn't been drafted, yet. I hear a **second by Representative Streyle**. He calls for **a voice vote and motion carries**. We now have the amended bill 2020 before us with 02005, which is what we all thought we had, amended to it.

Vice Chairman Streyle: I have another amendment on SBARE. I don't think I have the votes with you 3 though.

Chairman Monson: Your amendment is to remove SBARE or repeal it? I have the same comment as I would have for our action where we were going to remove the statewide soil conservation district. If you want to study it, that's fine, but we are getting pretty close to the end and right before conference committees, I think we're biting off a lot more …We decided that this late in the game we couldn't get rid of the statewide soil conservation district and the same reasoning applies here with this one. If you would like to make a motion..

Vice Chairman Streyle: I'll wait for another hour or so. I make a **motion that we Do Pass on the bill As Amended**.

Rep Martinson seconds it.

Chairman Monson: Any other discussion? None. Clerk will take the roll. **A roll call vote** was taken. **Yea: 4 Nay: 0 Absent: 3 Ok, motion carries Do Pass.**
Now we're done with 2020. 4:21

2017 HOUSE STANDING COMMITTEE MINUTES

Appropriations Committee
Roughrider Room, State Capitol

SB 2020
March 31st 2017
29882

☐ Subcommittee
☐ Conference Committee

Donna Wetham

Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; relating to main research center experiment station and extension service position adjustments

Minutes: Attachment 1-2.

Chairman Delzer: Opened the hearing on SB 2020.

Representative Boe: Reviewed SB 2020 and explained amendment 17.0528.02005. This is an amendment to SB 2020 and that is the bill that takes care of the Extension Service, Soil Conservation committee, Northern Crops Institute, Upper Great Plains transportation, Main Research Center, Agronomy Seed farm and a few others. Grand total for the general funds started at $105,754,711 and ended at $97 million with an $8 million reduction. (See Attachment #1) (1:56-6:00).

Chairman Delzer: Any questions from the committee?

Representative Boe: I would move amendment 17.0528.02005.

Representative Monson: seconded.

Chairman Delzer: Any discussion?

Representative J. Nelson: What are we doing with the Burleigh County Junior Master Gardeners program that they need an influx of money for that?

Representative Boe: They have been getting $25 thousand appropriations and last session it was cut; this is to get it caught up to where it was.

Chairman Delzer: Plus giving $25,000 more?

Representative Boe: It brings it back to the historic level and replaces the money that was missing last time.

Representative J. Nelson Do we fund any other County Junior Gardener programs across the state?

Representative Monson: We asked if other counties have that and the Extension does fund them in other counties but these are interns.

Representative Martinson: This is to fund two interns that help the Junior Master Gardener program statewide. It is a wonderful program for little kids to learn about gardening.

Chairman Delzer: Any further discussion?

Representative Kempenich: What are they doing with all those 37 vacant FTEs?

Representative Streyle: They can go up and down as the money sees fit, they cut 30 or 40 positions, we don't really control the FTEs all we can do is cut the money.

Chairman Delzer: Any further discussion? Seeing none we will take a voice vote.

Voice vote taken: all in favor motion carries.

Representative Streyle: I have amendment 17.0528.02004 I will pass out. (See attachment #2.) This amendment eliminates SBARE. They have done some good things and I don't dispute that and this is probably very controversial. I think both of these places should be run in their agency and I don't believe this is necessary at this time. I make a motion to adopt amendment 17.0528.02004 to SB 2020.

Representative Schatz: Seconded.

Chairman Delzer: What are you repealing?

Representative Streyle: Removing SBARE (State Board of Agriculture, Research and Education). This would turn back more of the control of these various agencies to the agency and not have the clearinghouse on what project should be prioritized. They have two very good managers and should be able to decide that themselves.

Representative Pollert: Was SBARE put together to try to end the fighting we as legislators had trying to protect certain research centers?

Chairman Delzer: It was put together by Chairman Dalrymple and Representative Lloyd at that time in appropriation. It is really up to whoever wants to do whatever they want.

Representative Monson: We used to fight for our areas and we would take things too far, that was one of the reason that this was developed. Whether they are effective I don't know. This time we gave them an assignment this time that they could look at programs and see if they can cut costs and programs. If you think we should have a study to see if we should get rid of SBARE then that is fine.

Representative Boe: I think it's worthy of the study so we know what we want to replace it with. It may not be perfect but it is better than nothing. I don't think we want to go back to the past disagreements.

Representative Pollert: I would echo Representative Monson and Representative Boe, I do agree they seem to come in and want and not take away. The fact they need to come forward with solutions and not just ask for money is a great idea. I think SBARE still has a place here.

Chairman Delzer: In the amendment we adopted did you give them a guideline of 20% reduction or what is the actual wording?

Representative Boe: I think it came in closer to 15% reduction.

Representative Martinson: What bothers me about a lot of these boards are they are citizens and advisory boards but it really doesn't work that way and I have seen where a certain board thinks they run the school. They don't think they have to answer to anybody. I am supporting this amendment.

Representative Monson: Representative Boe was right, they are in about a 15% cut in research and extension.

Chairman Delzer: What goal did you give in your amendment did you give SBARE to come forward with a reduction next time. How much do we spend on that committee?

Representative Monson: We had told them dollar for dollar, we didn't leave that in there in the end.

Chairman Delzer: So you are just suggesting that they come in with the efficiencies.

Representative Monson: We told them that we wanted a list of ways to spend the money or grow it but also to come in with a list of priorities on how to get rid of some of the old programs and look at efficiencies.

Chairman Delzer: How much do we spend on SBARE committee? It has to be a sizable amount.

Representative Monson: We did not ask what it costs. If we do a study that is one of the things we could find out. I would hope we do a study.

Representative Boe: We had asked for a dollar for dollar at first but in our discussions we also gave them the thought if they could show us how productivity would be more for less that we would look at that too.

Chairman Delzer: Any further discussion? Seeing none. The clerk will take the roll.

A Roll Call vote was taken. Yea: 8 Nay: 9 Absent: 4. Motion fails.

Representative Boe: I move a Do Pass as Amended on SB 2020.

Representative Monson: seconded.

A Roll Call vote was taken. Yea: 18 Nay: 0 Absent: 3. Motion carries.

Representative Boe: Will carry the bill.

Chairman Delzer: Hearing adjourned.

4/5/17 DP 1 of 8

17.0528.02005
Title.03000
Fiscal No. 2

Prepared by the Legislative Council staff for
Representative Monson
April 5, 2017

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

Page 1, line 3, remove "to amend"

Page 1, remove line 4

Page 1, line 5, replace "research center experiment station and extension service position adjustments" with "to provide for a legislative management study; to provide for a budget section report"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	$52,517,908	($1,493,531)	$51,024,377
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,535,373)	$52,115,897
Less estimated income	25,826,708	819,981	26,646,689
Total general fund	$27,824,562	($2,355,354)	$25,469,208
Full-time equivalent positions	263.91	(11.93)	251.98"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	$3,712,202	($69,481)	$3,642,721
Total all funds	$3,712,202	($69,481)	$3,642,721
Less estimated income	1,747,735	8,095	1,755,830
Total general fund	$1,964,467	($77,576)	$1,886,891"

Page 2, replace lines 17 through 21 with:

"Upper great plains transportation institute	$22,076,448	$283,794	$22,360,242
Total all funds	$22,076,448	$283,794	$22,360,242
Less estimated income	18,175,657	641,411	18,817,068
Total general fund	$3,900,791	($357,617)	$3,543,174"

Page 2, replace lines 27 through 30 with:

"Main research center	$110,529,780	($1,887,537)	$108,642,243
Total all funds	$110,529,780	($1,887,537)	$108,642,243
Less estimated income	56,948,525	2,136,303	59,084,828
Total general fund	$53,581,255	($4,023,840)	$49,557,415"

Page 3, replace lines 5 through 15 with:

"Dickinson research extension center	$6,996,678	($171,127)	$6,825,551
Central grasslands research extension center	3,531,779	(108,155)	3,423,624
Hettinger research extension center	5,086,767	(111,634)	4,975,133
Langdon research extension center	3,045,836	(81,229)	2,964,607
North central research extension center	5,044,213	(90,561)	4,953,652
Williston research extension center	5,267,400	1,351,490	6,618,890
Carrington research extension center	9,328,093	(152,602)	9,175,491

Total all funds	$38,300,766	$636,182	$38,936,948
Less estimated income	19,817,130	1,964,561	21,781,691
Total general fund	$18,483,636	($1,328,379)	$17,155,257"

Page 3, replace lines 21 and 22 with:

"Agronomy seed farm	$1,521,007	$15,122	$1,536,129
Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($8,142,766)	$97,611,945
Grand total other funds	124,036,762	5,585,473	129,622,235
Grand total all funds	$229,791,473	($2,557,293)	$227,234,180

SECTION 2. HEALTH INSURANCE INCREASE. The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	37,500"

Page 4, replace lines 12 through 15 with:

"Flooded lands study	67,952	0
Road and bridge asset management system	0	300,000
Total all funds	$23,858,751	$1,837,500
Total other funds	21,325,000	1,700,000
Total general fund	$2,533,751	$137,500

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The upper great plains transportation institute, main and branch research centers, and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 4, remove lines 24 through 31

Page 5, remove lines 1 through 31

Page 6, remove lines 1 through 17

Page 6, line 24, after "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"SECTION 11. UPPER GREAT PLAINS TRANSPORTATION INSTITUTE - ROAD AND BRIDGE ASSET MANAGEMENT SYSTEM MATCHING FUNDS. Subdivision 3 of section 1 of this Act includes $100,000 from the general fund for a road and bridge asset management system, which may be spent only to the extent the upper great plains transportation institute provides two dollars of matching funds from nonstate sources for each one dollar provided from the general fund for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 12. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE. During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 13. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the office of the governor, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section of the legislative management by March 31, 2018."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of House Action

	Base Budget	Senate Version	House Changes	House Version
Transportation Institute				
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242
Less estimated income	18,175,657	18,623,430	193,638	18,817,068
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174
Branch Research Centers				
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257
NDSU Extension Service				
Total all funds	$53,651,270	$52,648,270	($532,373)	$52,115,897
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689
General fund	$27,824,562	$25,973,886	($504,678)	$25,469,208
Northern Crops Institute				
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721
Less estimated income	1,747,735	1,756,215	(385)	1,755,830
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891
Main Research Center				
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415

Agronomy Seed Farm				
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129
Less estimated income	1,521,007	1,536,751	(622)	1,536,129
General fund	$0	$0	$0	$0
Bill total				
Total all funds	$229,791,473	$226,077,375	$1,156,805	$227,234,180
Less estimated income	124,036,762	127,990,420	1,631,815	129,622,235
General fund	$105,754,711	$98,086,955	($475,010)	$97,611,945

Senate Bill No. 2020 - Transportation Institute - House Action

	Base Budget	Senate Version	House Changes	House Version
Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	$291,498	$22,360,242
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242
Less estimated income	18,175,657	18,623,430	193,638	18,817,068
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174
FTE	54.98	43.88	0.00	43.88

Department No. 627 - Transportation Institute - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Road and Bridge Asset Management System[2]	Total House Changes
Upper Great Plains Trans. Institute	($8,502)	$300,000	$291,498
Total all funds	($8,502)	$300,000	$291,498
Less estimated income	(6,362)	200,000	193,638
General fund	($2,140)	$100,000	$97,860
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] One-time funding of $300,000, of which $100,000 is from the general fund and $200,000 is from county matching funds is added for a road and bridge asset management system.

This amendment also adds sections to:

- Identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Provide matching fund requirements relating to the road and bridge asset management system.

Senate Bill No. 2020 - Branch Research Centers - House Action

	Base Budget	Senate Version	House Changes	House Version
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551
Central Grasslands Research	3,531,779	3,426,112	(2,488)	3,423,624

Center				
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257
FTE	113.94	110.29	0.00	110.29

Department No. 628 - Branch Research Centers - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Seed Cleaning Plant[2]	Total House Changes
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - NDSU Extension Service - House Action

	Base Budget	Senate Version	House Changes	House Version
Extension Service	$52,517,908	$51,556,750	($532,373)	$51,024,377
Soil Conservation Committee	1,133,362	1,091,520		1,091,520
Total all funds	$53,651,270	$52,648,270	($532,373)	$52,115,897
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689
General fund	$27,824,562	$25,973,886	($504,678)	$25,469,208
FTE	263.91	252.98	(1.00)	251.98

Department No. 630 - NDSU Extension Service - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for State Soil Conservation Committee[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total House Changes
Extension Service	($56,473)	($213,400)	($300,000)	$37,500	($532,373)
Soil Conservation Committee					
Total all funds	($56,473)	($213,400)	($300,000)	$37,500	($532,373)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($213,400)	($300,000)	$37,500	($504,678)
FTE	0.00	(1.00)	0.00	0.00	(1.00)

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] Funding of $213,400 from the general fund and 1 FTE position relating to the state soil conservation committee are removed. After this reduction, $25,000 remains for paying per diem and other expenses reimbursable to the state soil conservation committee members.

[3] Funding of $300,000 from the general fund is removed.

[4] One-time funding of $37,500 from the general fund is added for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section 4-08-10 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service.
- Adds a new section to provide for a Legislative Management study of the state soil conservation committee.

Senate Bill No. 2020 - Northern Crops Institute - House Action

	Base Budget	Senate Version	House Changes	House Version
Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721
Less estimated income	1,747,735	1,756,215	(385)	1,755,830
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891
FTE	12.00	11.80	0.00	11.80

Department No. 638 - Northern Crops Institute - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
General fund	($2,103)	($2,103)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.

Senate Bill No. 2020 - Main Research Center - House Action

	Base Budget	Senate Version	House Changes	House Version
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415
FTE	353.85	336.12	0.00	336.12

Department No. 640 - Main Research Center - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section

4-05.1-05 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - Agronomy Seed Farm - House Action

	Base Budget	Senate Version	House Changes	House Version
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129
Less estimated income	1,521,007	1,536,751	(622)	1,536,129
General fund	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00

Department No. 649 - Agronomy Seed Farm - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

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[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.

17.0528.02004
Title.

Prepared by the Legislative Council staff for
Representative Streyle
March 29, 2017

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

Page 1, line 4, after "sections" insert "4-05.1-02, 4-05.1-04,"

Page 1, line 4, after "4-05.1-05" insert ", 4-05.1-20,"

Page 1, line 4, after "Code" insert "and sections 11-38-12, 15-12.1-02, 15-12.1-04, and 15-12.1-18 of the North Dakota Century Code, as created by Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly"

Page 1, line 5, after "adjustments" insert "and the state board of agricultural research and education; to repeal sections 4-05.1-16, 4-05.1-17, 4-05.1-18, 4-05.1-19, and 4-05.1-21 of the North Dakota Century Code and sections 15-12.1-14, 15-12.1-15, 15-12.1-16, 15-12.1-17, and 15-12.1-19 of the North Dakota Century Code, as created by Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, relating to the state board of agricultural research and education"

Page 4, after line 23, insert:

"**SECTION 4. AMENDMENT.** Section 4-05.1-02 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-02. Agricultural experiment station.

The ~~state board of agricultural research and education and the~~ president of North Dakota state university shall control and administer the North Dakota agricultural experiment station subject to the supervision of the state board of higher education. Funds appropriated to the agricultural experiment station may not be commingled with funds appropriated to North Dakota state university. Appropriation requests to defray expenses of the agricultural experiment station must be separate from appropriation requests to defray expenses of North Dakota state university.

SECTION 5. AMENDMENT. Section 4-05.1-04 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-04. Reports.

Each center director shall submit an annual report to the station director ~~as directed by the state board of agricultural research and education~~. Each report must set forth in detail the investigations and experiments made during the preceding year, recommendations for the welfare of the center, the financial condition of the center, how all moneys have been expended, and the results of experiments. The station director shall submit these reports, with a report of the North Dakota state university main research center~~, to the state board of agricultural research and education~~ and the state board of higher education on or before the first day of September of each year."

Page 5, after line 17, insert:

"**SECTION 7. AMENDMENT.** Section 4-05.1-20 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-20. Agricultural research fund - ~~Continuing appropriation~~.

The agricultural research fund is a special fund in the state treasury. The moneys in the fund must be expended for purposes of agricultural research. ~~Any interest earned by the fund is appropriated to the state board of agricultural research and education.~~"

Page 6, line 4, overstrike "state board of agricultural research and education and the"

Page 6, after line 17, insert:

"**SECTION 9. AMENDMENT.** Section 11-38-12 of the North Dakota Century Code, as created by section 6 of Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, is amended and reenacted as follows:

11-38-12. Administration - Position adjustments - Budget section report.

The ~~state board of agricultural research and education and the~~ president of North Dakota state university shall control and administer the North Dakota state university extension service subject to the supervision of the state board of higher education. Funds appropriated to the North Dakota state university extension service may not be commingled with funds appropriated to North Dakota state university. An appropriation request to defray expenses of the North Dakota state university extension service must be separate from an appropriation request to defray expenses of North Dakota state university. Subject to the availability of funds, the director of the North Dakota state university extension service may adjust or increase full-time or part-time equivalent positions to carry out the mission of the extension service. All full-time or part-time positions must be separate from North Dakota state university. Annually, the director of the North Dakota state university extension service shall report to the office of management and budget and to the budget section any adjustments or increases made under this section.

SECTION 10. AMENDMENT. Section 15-12.1-02 of the North Dakota Century Code, as created by section 8 of Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, is amended and reenacted as follows:

15-12.1-02. Agricultural experiment station.

The ~~state board of agricultural research and education and the~~ president of North Dakota state university shall control and administer the North Dakota agricultural experiment station subject to the supervision of the state board of higher education. Funds appropriated to the agricultural experiment station may not be commingled with funds appropriated to North Dakota state university. Appropriation requests to defray expenses of the agricultural experiment station must be separate from appropriation requests to defray expenses of North Dakota state university.

SECTION 11. AMENDMENT. Section 15-12.1-04 of the North Dakota Century Code, as created by section 8 of Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, is amended and reenacted as follows:

15-12.1-04. Reports.

Each center director shall submit an annual report to the station director. Each report must set forth in detail the investigations and experiments made during the preceding year, recommendations for the welfare of the center, the financial condition

of the center, how all moneys have been expended during the preceding year, and the results of all experiments that have been completed during the preceding year. By September first of each year, the station director shall submit these reports, with a report of the North Dakota state university main research center, to the ~~state board of agricultural research and education and the~~ state board of higher education.

SECTION 12. AMENDMENT. Section 15-12.1-18 of the North Dakota Century Code, as created by section 8 of Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, is amended and reenacted as follows:

15-12.1-18. Agricultural research fund - Continuing appropriation.

The agricultural research fund is a special fund in the state treasury. Moneys in the fund are appropriated ~~to the state board of agricultural research and education~~ for purposes of agricultural research. Any interest earned by the fund must be returned to the fund."

Page 7, after line 18, insert:

"**SECTION 19. REPEAL.** Sections 4-05.1-16, 4-05.1-17, 4-05.1-18, 4-05.1-19, and 4-05.1-21 of the North Dakota Century Code are repealed.

SECTION 20. REPEAL. Sections 15-12.1-14, 15-12.1-15, 15-12.1-16, 15-12.1-17, and 15-12.1-19 of the North Dakota Century Code, as created by Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly are repealed."

Renumber accordingly

Date: 3-28-2017
Roll Call Vote #: 1

2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2020

House Appropriations - Education and Environment Division Committee

☐ Subcommittee

Amendment LC# or Description: everything on our worksheet, removing 4+5 on the bottom

Recommendation: ☒ Adopt Amendment
☐ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By Rep Streyle Seconded By Rep Schmidt

Representatives	Yes	No	Representatives	Yes	No
Chairman Monson			Rep Boe		
Vice Chairman Streyle					
Rep Martinson					
Rep Sanford					
Rep Schatz					
Rep Schmidt					

Voice Vote

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent: to approve our work sheet with changes and taking references to soil conservation Committee out of code

Motion Carries

Date: 3-28-2017
Roll Call Vote #: 2

2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2020

House Appropriations - Education and Environment Division Committee

☐ Subcommittee

Amendment LC# or Description: Take additional $300,000 from Extension Operating line

Recommendation: ☒ Adopt Amendment
☐ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By Rep Schatz Seconded By Rep Sanford

Representatives	Yes	No	Representatives	Yes	No
Chairman Monson		✓	Rep Boe		✓
Vice Chairman Streyle	✓				
Rep Martinson		✓			
Rep Sanford	✓				
Rep Schatz	✓				
Rep Schmidt	✓				

Total (Yes) 4 No 3

Absent 0

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent: further amend to take an additional $300,000 out of operating in Etension

Motion Carries

Date: 3-28-2017
Roll Call Vote #: 3

2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2020

House Appropriations - Education and Environment Division Committee

☐ Subcommittee

Amendment LC# or Description: _____

Recommendation: ☐ Adopt Amendment
☒ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☒ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By Rep Martinson Seconded By Rep Schatz

Representatives	Yes	No	Representatives	Yes	No
Chairman Monson	✓		Rep Boe	✓	
Vice Chairman Streyle	✓				
Rep Martinson	✓				
Rep Sanford	✓				
Rep Schatz	✓				
Rep Schmidt	✓				

Total (Yes) 7 No _____

Absent _____

Floor Assignment Representative Boe

If the vote is on an amendment, briefly indicate intent:

Date: 3-31-2017
Roll Call Vote #: 1

2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2020

House Appropriations - Education and Environment Division Committee

☐ Subcommittee

Amendment LC# or Description: _____

Recommendation: ☐ Adopt Amendment
☐ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☒ Reconsider ☐ _____

Motion Made By Rep Martinson Seconded By Representative Boe

Representatives	Yes	No	Representatives	Yes	No
Chairman Monson			Rep Boe		
Vice Chairman Streyle					
Rep Martinson					
Rep Sanford					
Rep Schatz					
Rep Schmidt					

Voice Vote

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Motion Carries

Date: 3-31-2017
Roll Call Vote #: 2

2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2020

House Appropriations - Education and Environment Division Committee

☐ Subcommittee

Amendment LC# or Description: 17.0528.02005

Recommendation: ☒ Adopt Amendment
☐ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By Rep Martinson Seconded By Rep Streyle

Representatives	Yes	No	Representatives	Yes	No
Chairman Monson			Rep Boe		
Vice Chairman Streyle					
Rep Martinson					
Rep Sanford		Voice Vote			
Rep Schatz					
Rep Schmidt					

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

To replace our previous amendment with 002 005

Motion Carries

Date: 3-3(-2017
Roll Call Vote #: 3

2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2020

House Appropriations - Education and Environment Division Committee

☐ Subcommittee

Amendment LC# or Description: _____

Recommendation: ☐ Adopt Amendment
☒ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☒ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By Representative Streyle Seconded By Rep Martinson

Representatives	Yes	No	Representatives	Yes	No
Chairman Monson	✓		Rep Boe	✓	
Vice Chairman Streyle	✓				
Rep Martinson	✓				
Rep Sanford	AB				
Rep Schatz	AB				
Rep Schmidt	AB				

Total (Yes) 4 No 0

Absent 3

Floor Assignment Representative Boe

If the vote is on an amendment, briefly indicate intent:

Date: 3/31/2017
Roll Call Vote #: 1

2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2020

House Appropriations Committee

☐ Subcommittee

Amendment LC# or Description: **17.0528.02005**

Recommendation: ☒ Adopt Amendment
☐ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By **Representative Boe** Seconded By **Representative Monson**

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer					
Representative Kempenich			Representative Streyle		
Representative: Boehning			Representative Vigesaa		
Representative: Brabandt					
Representative Brandenburg					
Representative Kading			Representative Boe		
Representative Kreidt			Representative Delmore		
Representative Martinson			Representative Holman		
Representative Meier					
Representative Monson					
Representative Nathe					
Representative J. Nelson					
Representative Pollert					
Representative Sanford					
Representative Schatz					
Representative Schmidt					

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Motion Carries

Date: 3/31/2017
Roll Call Vote #: 2

2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2020

House Appropriations Committee

☐ Subcommittee

Amendment LC# or Description: **17.0528.02004**

Recommendation: ☒ Adopt Amendment
☐ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By **Representative Streyle** Seconded By **Representative Schatz**

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer	X				
Representative Kempenich		X	Representative Streyle	X	
Representative: Boehning		X	Representative Vigesaa		X
Representative: Brabandt	X				
Representative Brandenburg		X			
Representative Kading	A		Representative Boe		X
Representative Kreidt	X		Representative Delmore	A	
Representative Martinson	X		Representative Holman		X
Representative Meier	X				
Representative Monson		X			
Representative Nathe	X				
Representative J. Nelson		X			
Representative Pollert		X			
Representative Sanford	A				
Representative Schatz	X				
Representative Schmidt	A				

Total (Yes) 8 No 9

Absent 4

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Motion Fails

Date: 3/31/2017
Roll Call Vote #: 3

2017 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. SB 2020

House Appropriations Committee

☐ Subcommittee

Amendment LC# or Description: _____

Recommendation: ☐ Adopt Amendment
☒ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☒ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By **Representative Boe** Seconded By **Representative Monson**

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer	X				
Representative Kempenich	X		Representative Streyle	X	
Representative: Boehning	X		Representative Vigesaa	X	
Representative: Brabandt	X				
Representative Brandenburg	X				
Representative Kading	X		Representative Boe	X	
Representative Kreidt	X		Representative Delmore	A	
Representative Martinson	X		Representative Holman	X	
Representative Meier	X				
Representative Monson	X				
Representative Nathe	X				
Representative J. Nelson	X				
Representative Pollert	X				
Representative Sanford	A				
Representative Schatz	X				
Representative Schmidt	A				

Total (Yes) 18 No 0

Absent 3

Floor Assignment **Representative Boe**

If the vote is on an amendment, briefly indicate intent:

Motion Carries

REPORT OF STANDING COMMITTEE

SB 2020, as engrossed: Appropriations Committee (Rep. Delzer, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (18 YEAS, 0 NAYS, 3 ABSENT AND NOT VOTING). Engrossed SB 2020 was placed on the Sixth order on the calendar.

Page 1, line 3, remove "to amend"

Page 1, remove line 4

Page 1, line 5, replace "research center experiment station and extension service position adjustments" with "to provide for a legislative management study; to provide for a budget section report"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	$52,517,908	($1,493,531)	$51,024,377
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,535,373)	$52,115,897
Less estimated income	25,826,708	819,981	26,646,689
Total general fund	$27,824,562	($2,355,354)	$25,469,208
Full-time equivalent positions	263.91	(11.93)	251.98"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	$3,712,202	($69,481)	$3,642,721
Total all funds	$3,712,202	($69,481)	$3,642,721
Less estimated income	1,747,735	8,095	1,755,830
Total general fund	$1,964,467	($77,576)	$1,886,891"

Page 2, replace lines 17 through 21 with:

"Upper great plains transportation institute	$22,076,448	$283,794	$22,360,242
Total all funds	$22,076,448	$283,794	$22,360,242
Less estimated income	18,175,657	641,411	18,817,068
Total general fund	$3,900,791	($357,617)	$3,543,174"

Page 2, replace lines 27 through 30 with:

"Main research center	$110,529,780	($1,887,537)	$108,642,243
Total all funds	$110,529,780	($1,887,537)	$108,642,243
Less estimated income	56,948,525	2,136,303	59,084,828
Total general fund	$53,581,255	($4,023,840)	$49,557,415"

Page 3, replace lines 5 through 15 with:

"Dickinson research extension center	$6,996,678	($171,127)	$6,825,551
Central grasslands research extension center	3,531,779	(108,155)	3,423,624
Hettinger research extension center	5,086,767	(111,634)	4,975,133
Langdon research extension center	3,045,836	(81,229)	2,964,607
North central research extension center	5,044,213	(90,561)	4,953,652
Williston research extension center	5,267,400	1,351,490	6,618,890
Carrington research extension center	9,328,093	(152,602)	9,175,491
Total all funds	$38,300,766	$636,182	$38,936,948
Less estimated income	19,817,130	1,964,561	21,781,691
Total general fund	$18,483,636	($1,328,379)	$17,155,257"

Page 3, replace lines 21 and 22 with:

"Agronomy seed farm	$1,521,007	$15,122	$1,536,129
Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($8,142,766)	$97,611,945
Grand total other funds	124,036,762	5,585,473	129,622,235
Grand total all funds	$229,791,473	($2,557,293)	$227,234,180

SECTION 2. HEALTH INSURANCE INCREASE. The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	37,500"

Page 4, replace lines 12 through 15 with:

"Flooded lands study	67,952	0
Road and bridge asset management system	0	300,000
Total all funds	$23,858,751	$1,837,500
Total other funds	21,325,000	1,700,000
Total general fund	$2,533,751	$137,500

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The upper great plains transportation institute, main and branch research centers, and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 4, remove lines 24 through 31

Page 5, remove lines 1 through 31

Page 6, remove lines 1 through 17

Page 6, line 24, after "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"**SECTION 11. UPPER GREAT PLAINS TRANSPORTATION INSTITUTE - ROAD AND BRIDGE ASSET MANAGEMENT SYSTEM MATCHING FUNDS.** Subdivision 3 of section 1 of this Act includes $100,000 from the general fund for a road and bridge asset management system, which may be spent only to the extent the upper great plains transportation institute provides two dollars of matching funds from nonstate sources for each one dollar provided from the general fund for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 12. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE. During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 13. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the office of the governor, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section of the legislative management by March 31, 2018."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of House Action

	Base Budget	Senate Version	House Changes	House Version
Transportation Institute				
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242
Less estimated income	18,175,657	18,623,430	193,638	18,817,068
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174
Branch Research Centers				
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257
NDSU Extension Service				
Total all funds	$53,651,270	$52,648,270	($532,373)	$52,115,897
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689
General fund	$27,824,562	$25,973,886	($504,678)	$25,469,208
Northern Crops Institute				
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721
Less estimated income	1,747,735	1,756,215	(385)	1,755,830
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891
Main Research Center				
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415
Agronomy Seed Farm				
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129
Less estimated income	1,521,007	1,536,751	(622)	1,536,129
General fund	$0	$0	$0	$0
Bill total				
Total all funds	$229,791,473	$226,077,375	$1,156,805	$227,234,180
Less estimated income	124,036,762	127,990,420	1,631,815	129,622,235
General fund	$105,754,711	$98,086,955	($475,010)	$97,611,945

Senate Bill No. 2020 - Transportation Institute - House Action

	Base Budget	Senate Version	House Changes	House Version

Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	$291,498	$22,360,242
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242
Less estimated income	18,175,657	18,623,430	193,638	18,817,068
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174
FTE	54.98	43.88	0.00	43.88

Department No. 627 - Transportation Institute - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Road and Bridge Asset Management System[2]	Total House Changes
Upper Great Plains Trans. Institute	($8,502)	$300,000	$291,498
Total all funds	($8,502)	$300,000	$291,498
Less estimated income	(6,362)	200,000	193,638
General fund	($2,140)	$100,000	$97,860
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] One-time funding of $300,000, of which $100,000 is from the general fund and $200,000 is from county matching funds is added for a road and bridge asset management system.

This amendment also adds sections to:

- Identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Provide matching fund requirements relating to the road and bridge asset management system.

Senate Bill No. 2020 - Branch Research Centers - House Action

	Base Budget	Senate Version	House Changes	House Version
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551
Central Grasslands Research Center	3,531,779	3,426,112	(2,488)	3,423,624
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257
FTE	113.94	110.29	0.00	110.29

Department No. 628 - Branch Research Centers - Detail of House Changes

	Adjusts Funding for Health	Adds One-Time Funding for a Seed Cleaning	Total House Changes

	Insurance Increases[1]	Plant[2]	
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - NDSU Extension Service - House Action

	Base Budget	Senate Version	House Changes	House Version
Extension Service	$52,517,908	$51,556,750	($532,373)	$51,024,377
Soil Conservation Committee	1,133,362	1,091,520		1,091,520
Total all funds	$53,651,270	$52,648,270	($532,373)	$52,115,897
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689
General fund	$27,824,562	$25,973,886	($504,678)	$25,469,208
FTE	263.91	252.98	(1.00)	251.98

Department No. 630 - NDSU Extension Service - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for State Soil Conservation Committee[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total House Changes
Extension Service	($56,473)	($213,400)	($300,000)	$37,500	($532,373)
Soil Conservation Committee					
Total all funds	($56,473)	($213,400)	($300,000)	$37,500	($532,373)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($213,400)	($300,000)	$37,500	($504,678)
FTE	0.00	(1.00)	0.00	0.00	(1.00)

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] Funding of $213,400 from the general fund and 1 FTE position relating to the state soil conservation committee are removed. After this reduction, $25,000 remains for paying per diem and other expenses reimbursable to the state soil conservation committee members.

[3] Funding of $300,000 from the general fund is removed.

[4] One-time funding of $37,500 from the general fund is added for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section 4-08-10 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service.
- Adds a new section to provide for a Legislative Management study of the state soil conservation committee.

Senate Bill No. 2020 - Northern Crops Institute - House Action

	Base Budget	Senate Version	House Changes	House Version
Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721
Less estimated income	1,747,735	1,756,215	(385)	1,755,830
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891
FTE	12.00	11.80	0.00	11.80

Department No. 638 - Northern Crops Institute - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
General fund	($2,103)	($2,103)
FTE	0.00	0.00

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[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.

Senate Bill No. 2020 - Main Research Center - House Action

	Base Budget	Senate Version	House Changes	House Version
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415
FTE	353.85	336.12	0.00	336.12

Department No. 640 - Main Research Center - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)
FTE	0.00	0.00

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[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - Agronomy Seed Farm - House Action

	Base Budget	Senate Version	House Changes	House Version
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129
Less estimated income	1,521,007	1,536,751	(622)	1,536,129
General fund	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00

Department No. 649 - Agronomy Seed Farm - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes

Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.

2017 CONFERENCE COMMITTEE

SB 2020

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
4/11/2017
Job # 30040

☐ Subcommittee
☒ Conference Committee

Committee Clerk Signature Millerlen for Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1 – 6

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Senator Bowman called the conference committee to order on SB 2020. Conferees were: **Senators Erbele and Grabinger and Representatives Monson, Schmidt and Boe.**

Alex Cronquist handed out:
Upper Great Plains Transportation Institute – Budget No. 627 – Testimony Attached # 1.
Branch Research Centers – Budget No. 628 – Testimony Attached # 2.
NDSU Extension Service – Budget No. 630 – Testimony Attached # 3.
Northern Crops Institute – Budget No. 638 – Testimony Attached # 4.
NDSU Main Research Center – Budget No. 640 – Testimony Attached # 5.
Agronomy Seed Farm – Budget No. 649 – Testimony Attached # 6.

Senator Bowman: We will review the differences between the House and the Senate version of the bill and how this will impact the agency. He asked the House to over the changes.

Rep. Boe: 1) We added $100,000 into a 2 for 1 match to the counties to continue the bridge study in the Upper Great Plains Transportation Institute.
2) the $1.5M for a Williston seed cleaning plant. We removed the provision for research FTE employee accrued leave that you had added into there.
3) Took $213,000 and one FTE out of the state soil conservation committee.
4) Removed $300,000 from the general fund and added $37,500 for the Burleigh County Master Gardner Program.
5) Put a couple studies together – for SBARE to look at the extension service and the other was for legislative management to help with the study of the Soil Conservation Committee.

Senator Bowman: When you made these cuts, what was the major rationale because there are some major changes from what we sent over. We cut $7.4M out of this budget, allowing the agencies to make those decisions so we had the least impact on the ag budget that we could possibly have. First you took another $300,000 out, why did you do that?

Rep. Boe: The $300,000 was to signify the fact that they had the ability to hire and fire employees as the money flow dictates. Instead of taking a FTE out which would be valueless, the target we were looking for is what we were getting pushed to do, was to find more savings to try to get close to a 15% reduction in last biennium's funding. There was some push to go to 20%, we resisted that for the fact that the university system has the ability to raise tuition and the extension service did not so we tried to hold it down at a lower level. We came out really close to 15%.

Senator Bowman: Rationale for soil conservation cut which basically you took the general manager away from that organization and I need to understand why you would do that because that's the person that is in charge of everything. Working with all the different districts, working with the federal money that comes down, working with the laws to make sure that they are all enforced. It's like taking the general manager and saying you're not needed. So my question is, why would you cut that position?

Rep. Schmidt: I used to work for the State Soil Conservation Committee. At that time, we had an executive director, two other individuals, myself included, plus we had two secretaries. At that time, we did a tremendous amount of work with conservation districts, training, etc. That has morphed into something else -a lot of those duties. We started looking at this and first of all, there is $1M dollars in grant, a little bit more than a million dollars in grants to conservation districts. Please keep in mind that we're talking the States Soil Committee, we're not talking the Association of Soil Conservation Districts, nor are we talking about an individual soil conservation district. Over the years the Association of North Dakota Soil Conservation Districts has done a lot of work and they are increasing their amount of work. They've got the tree program, as we well know, in Lincoln and Oakes; and that is starting to revive itself. So when we looked at the million dollars in grants, we asked the question 'what is it costing the state of ND to administer these grants'? Well the salary was at about $194,000 plus there was about $40 some thousand dollars in travel, plus there was ½ secretary. Then we asked for minutes of the last state soil conservation committee meeting. The last state soil conservation committee meeting was in May of 2015. We asked for the minutes of those meetings, all the discussion was about grants.

The second part of that was we asked for a work load analysis of the individual doing the job. I had some familiarity with it because I worked with the committee in my employment with USDA, Natural Resources Conservation Service until I retired in 2007. So some background with what that soil conservation committee is doing. It is actually morphing out of what it used to do. A lot of those duties are being picked up by the Association of North Dakota Conservation Districts which we totally support. So when we took a look at the workload analysis which was indicated over 60% of the time was dedicated to these grants, some of the effort was to train the employees in the districts and some of the effort was to do with respect to legal terms, in the legal situations for districts. When you go back and look at the establishment of the bill as it sits, the majority of the work would be if a conservation district wanted to consolidate with another one, which we haven't had for years, or if one was going to be eliminated or discontinue, and then the third step would be for establishment of soil

conservation districts. We haven't had that in quite some time as well. So when we took a look at the numbers and what the duty was, then we did ask the ND Association of Soil Conservationist Districts if they could take over a lot of these duties. The executive director came to the podium and said he believed that they could take about $20,000-$25,000 to do that. So, then there was going to be a tele-conference between those with the association, and the districts to discuss it. I do not know what the final result of that was. I did do some phone calling to the individuals that I still know that are associated with districts and there was a number of them that I talked to that felt that those duties could be done by the association. With respect to the legalities of it, is there an opportunity for another sector of state government to assist conservation districts with that, we thought there was. So when we looked at what's going on today versus what was going with the soil conservation committee when I worked for it, and then as well as when I was working with it from 2002-2007 as a USDA employee, it appeared to us that we could transfer those duties for $20-25,000 to the North Dakota Association of Conservation Districts, utilize the Department of Agriculture for some of the legal questions that they needed to do and so that was the basis for why we made the decision we did. We did not do it haphazardly. We looked into all of that. Then after the word got out that we were looking at it, then I heard from three different conservation districts were concerned about it. When I discussed with them the situation as how we viewed it, their response was "well, we understand how you could draw that conclusion". Now I also talked with a current member of the State Soil Conservation Committee, who is also a constituent of mine - and so there is some sort of 'ya, can we,'. That's why we also added to take a hard look at what the Soil Conservation Committee is doing in that study. So that is the basis for it.

Senator Bowman: Wouldn't it be better to study something first before you dive into it that seriously and eliminate that position? If you study and bring all the players together – you might find that its one of the most important jobs there is or we may find out that maybe the Dept. of Agriculture could do it. We won't know that until after we have a comprehensive study and at least discuss that part of it.

Rep. Monson: We looked at the mission of the Soil Conservation in state statute and much is covered by the Water Commission, the agricultural department, extension itself and even other agencies. The Senate and House ag committees did a re-write of the statutes dealing with ag codes. The House members thought they could eliminate that whole section of code. We thought we should do a study for the same reason, but eliminate that position at the top where they haven't been having meetings. And somebody wouldn't have to explain laws to them because each of these soil conservation districts around the state have a county state's attorney that they could go to. They were giving away about a million dollars in grants and we were spending approx. $250,000 to do that which is very inefficient, so we decided maybe we do the study before we totally eliminate that whole section of code. We thought the association could do much of this. The next two years we study it before we cut it out. We cut the top one position, we saved about $200,000 by doing that. We don't think the mission will suffer from it. They have the ability to add people as employees or FTE's as needed, so if they find they absolutely need that position, they could go back and add that position. They will be short the money, but if someone steps in and does part of that job, there's always the ability for them to do it within internally.

Senator Bowman: Another thing you're adding is Junior Gardening for Bismarck. Where did that idea come from and where does that set on the scale of 1-10 as far as the importance of this particular budget?

Rep. Monson: We've been funding those positions. The extension service has local people running this – even refugees. We've been funding something like intern positions through Burleigh County. Last time it was actually at $25,000. One of our members on our section, not on our conference committee here, we went to bat for that and put it in at $37,500. As far as where it fits, it's kind of valuable. I don't know if it's $37,500 worth, but it can be negotiated. Rep. Boe said he thinks it was at $12,500 in the end last time but one time we talked about $25,000. We've funded it before.

Senator Bowman: The bottom line is to prioritize everything that has been done. I've been here for several years and we need to sit down and see what it the most important thing that we can do. This budget is the backbone of ND's economy. Without ag research and extension, our economy goes south. Look at some of the investments that we made in agriculture and in this budget, that it has brought millions and millions of dollars back to our producers. Of all things that we're going to cut, let's not cut what is making North Dakota what it is. It is an agricultural state.

Senator Grabinger: We haven't talked much about the $300,000 for the road and bridge asset management system. Why are you putting $300,000 in there?

Rep. Boe: That is $100,000 general funds to put in there for a match a 2 for 1 match from the counties. If the counties choose to participate in the study in order to continue the study on bridges. They've been doing the study on the bridges for the last couple of biennium's.

Senator Grabinger: I show zero for the present biennium and you're increasing by $300,000.

Rep. Boe: $100,000 is general funds and $200,000 of that would be considered special funds because that's the buy in from the counties.

Senator Grabinger: We're doing it in this department instead of the DOT?

Rep. Boe: It is for the Upper Great Plains Transportation Institute which is in this budget.

Senator Erbele: You've removed the research employee of the accrued leave that we had put in, can you discuss that a little bit?

Rep. Monson: After the committee met, I talked with Dr. Grafton and Chris Boerboom (NDSU) and they felt they needed that language you put in because they had researchers that were 12 month employees so we understood why you put it in there. We felt that was an inconsistency with how people, other than those in Higher Ed were treated differently, so we thought we should treat them the same as Higher Ed. Other Higher Ed people do not have that same ability so, we took it out so there would be consistency across Higher Ed. Knowing that they are not really exactly higher education, that is something that we felt we should discuss it anyway.

Senator Bowman: The road and bridge study – we put a lot of money into that last session to study that. Did they bring out any info of what we got out of that $300,000 study? Other than we want to have $300,000 more to continue to study something we just got done studying.

Rep. Monson: This is not necessarily a study. It's when the county says we want to know why our county roads are falling apart. Or is our bridge safe out here? Upper Great Plains contracts with people all over the world. We gave them $100,000 of general fund money so if the counties want to come in and ask or contract with Upper Great Plains to study the road, the counties will have to come up with $2 bucks and we'll help with $1 buck of that study. If no county comes forward, no general funds will be spent. So it's to help the counties come up with funding if they say we want to know about why our roads are not good.

Senator Bowman: Our counties use that. Most oil producing counties have used that information because of the tremendous impact we've had on our roads out there, but is this going to be a million-dollar study in 5-6 years and continue to grow or are we going to get the kind of information that we need where we can send info back out to the counties and say here are your roads, here are your bridges, here is what you have to do. There should be a point in time that this is the best we can do for those.

Rep. Monson: This is not where we're going to send them information back. This is the counties choice. If they say we need this and we know the counties are strapped so instead of paying the whole bill for the county, if they say we've got some bridges and we're not sure their safe anymore, and they don't have all the money, this is a way for us to help the counties to be able to go to Upper Great Plains and it's one bridge at a time. We have no stake in it. We're just giving the counties $100,000 to help them conduct the study if they so choose. If they say we don't have $2 to get $1 back, then I guess the study won't get done.

Senator Bowman: We'll start to think about what we talked about today and next meeting, we'll narrow it down as to what we can agree on. The goal is to get this out of here, and hopefully we'll both be not real happy but kind of happy.

Senator Bowman closed the hearing on SB 2020.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
4/14/2017
Job # 30149

☐ Subcommittee
☒ Conference Committee

Committee Clerk Signature Mj Jurack for Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Senator Bowman called the conference committee to order on SB 2020. Conferees were: **Senators Wanzek (substituting for Senator Erbele) and Grabinger and Representatives Monson, Schmidt and Boe.**

Senator Bowman: From our last meeting, but for Senator Wanzek's part the basic change between House and Senate was the House took away the FTE for soil conservation and reduced the direct dollars out of extension service. The House added UGPTI (Upper Great Plains Transportation Institute) to be matched by counties. For Bismarck gardener program up to $37,500. We had a lot of conversation since last time about the gentleman that is ahead of the Soil Conservation. I've had a lot of calls since then. I've had calls from people that used to be in the Legislature that are working with that particular person. I've got a copy of it, he is saying he is one of the most valuable people for soil conservation in the state because is background knowledge of 20 some years provides all the local districts that expertise when they make their decisions so that they don't end up in lawsuits. (Letter from Rocky Bateman - Testimony Attached # 1) I think that is something I hope we really consider before we make our final decision. Anything more you would like to say on that.

Representative Monson: That he's important in keeping them out of lawsuits. We have 54 soil conservation districts, we have 53 county state's attorney's, these are attorneys. They are there to advise the local conservation districts. I don't know if this guy at the top is an attorney or not. But certainly the State's Attorney in each county who advises these local soil conservation districts is just as good if not a better position to keep their locals on the right track. They are attorneys. That's their job.

Senator Bowman: The point they are trying to make is this, if you do things right, to begin with, you avoid going to an attorney. That is where his knowledge comes in. I won't go into state's attorney's that is not what we are going to discuss today, but I am going to be pretty solid on keeping that position. I don't what, or I've never talked to my other guys about that. But, we are going to have to do something to hold on to that. We talked about $200,000 for salary. That wasn't what his salary was. His base salary is $67,250 and his benefits are $20, 175. That is what his salary is. The rest of it went, the way I understand it for some part time help or something in the office space. That's not what it is. It's not like he's a $125,000 a year guy. Then another area to discuss, why did you cut $300,000 out of budget for Extension? I'm trying to find reasoning except just to cut.

Representative Monson: That is the only reason. We have to find General fund money. If you wanted, we could not specify that soil conservation person. We'll take $400,000 out. Extension can take out FTEs at will. We roughly took $500,000 out of budget. If they can't live without that person, they'll have to take the money out of some other area. We just took it so we could find money to balance this budget. It is basically we thought there is a position there, that not just appropriations and committee, the ag group said this whole chapter on soil conservation could go. We thought it might be premature to take the whole chapter out. So there is a study in there. We're looking for general fund money. Every budget that passed thru us we took approximately 7% of their general funded money. That was the amount that we needed to reach that goal, to treat this agency like every other agency. We weren't as tough on research, but perception is reality. The research end is cutting edge and very important. The extension part of it they see as probably branching into social programs. Even soil conservation developed in the 30s have evolved into different things. They are not perceived to be cutting edge or as important. The perception needs to get more lean and up to the 21st century. We can make them more efficient and cutting some money out of their general fund.

Senator Bowman: Would you not agree though that the study should be done and find that out through a really good study? I think that is what the study is supposed to do. You're making a lot of decisions before you even study it. But, you made the statement that you had to cut, but you added money for what you thought that were important.

Representative Monson: We added $100,000 for bridges and roads to be matched by counties if they want it, if they don't want do a study they don't have too. So the $100,000 may or may not get spent. Then we added $37,500 for Gardening which was in the budget in previous years. That is exactly what we did. We also added money for a seed cleaning plant. Of course that is all special funds authority.

Senator Bowman: There are no funds there until they get out and raise them. That was the authority to raise the money. They forgot to add it here so I was sure you would do it in the House because it's a high enough priority. We heard from enough people up these to know that it is a high priority. There is no question on that amendment at all.

Representative Monson: We did reduce this budget. It was general fund money. At the end of the day, we met the same requirements as every other state budget. It was 7% of the salaries and wages line item. It wasn't over the top. We counted what Burgum and Dalrymple took out – and extra $300,000 over and above that soil conservation position.

That is what it took to get us to that level to treat this budget like every other budget that came through us.

Senator Grabinger: I would like some clarification on that gardener program. We had $12, 500 is the information I got for 2015-2017, and then it went up $25,000 that is a pretty sizable when you're considering it was $12,500 before to $37,500. What is the nature of that request? Why are we?

Representative Schmidt: Last session it was $25,000 and it was reduced to $12,500, this session we put in the original $25, 000 plus added the $12, 500 that was not included from last session for the program. That's how you got to $37,500.

Senator Grabinger: Wasn't it effective with $12,500 in the last biennium?

Representative Schmidt: It wasn't as effective as it could have been under $25,000.

Senator Bowman: If it's that good of a program, why isn't that program implemented in every single town so the kid in every town could take advantage of it rather than one particular town. I would like to get someone to explain that to me, because I've heard this for about 4 years now.

Representative Monson: I think every county that wants to have a program has a Junior Master Gardener program through extension. I think one is just Burleigh County, they have internships or something here so the counties do have a program if they chose to I believe. I am not an authority on this one here. We've funded it before and it was good for Burleigh County. Other counties do have programs; they just don't have the internship that this one pays for.

Senator Bowman: When things are good, and you add money to it, and yet, we've taken money out of the whole picture, which is extremely good, for the state of North Dakota, we cut this budget to the rock bottom on the Senate side. We had the logic that would be best, and that's allow extension and the research departments to tell us where to cut that would have the least effect on the budget for agriculture. That's what we did. Normally, this budget when I've been a part of it, we've added extra money to it, because it's so darn important to our state. Also want to discuss accrued leave. Is there a fiscal note with that? How do you measure that? That's what I want to know. Does anyone have any background in that please?

Representative Monson: I am no expert on this at all either but I did talk with Dr. Grafton and Dr. Boerboom after one of our sessions and got reasons behind those two sections. I understand their reasoning, but don't necessarily agree. Don't want it in there because board of Higher Ed is working on a policy to address all of the higher educational institutions. Research, extension, all of the higher education institutions. I hope they'd take into account these people when they develop their policy. Now we removed those two sections, because we felt that the Board of Higher Education should be trusted to make these decisions. Let them do their policies but they should take into account that there is a problem here. Will the Board of Higher Education assume and take responsibility? I would hope they would

listen to the reasons behind them. I don't know if it's our duties to pre-empt what the board of higher education is doing.

Senator Bowman: The Upper Great Plains TI, you added $100,000 in House. I was under assumption that we'd have a report that everyone would have access. But we're going to see growth in every single biennium. Do we slow that down at all? I know it is important what they do, but they come in and ask – are you going to give them what they want or allow them to have all they want?

Representative Monson: We put a lot of money into roads, bridges in counties. This time they are not going to get that kind of money. There are many roads and bridges to check out and they don't have as much money this time as they did last time. We'd fill some of the gap and shortfall that those counties and townships will experience this time with lower revenue. We don't want bridges to collapse. I don't understand everything UGPTI so and the counties and townships won't have the money like they did last time.

Senator Bowman: I support what they did two years ago. I understand what and why, but wondered about the magical number. I just wanted to know about the total amount of dollars. If there was a magical number to the $100,000, or would $50,000 do that? Hopefully by the time we meet again, would we get an answer to that, exactly what are we going to get for this $100,000 over and above what we got last time we spent the money?

Senator Wanzek: It would seem to me that the pursuit of managing our roads and our bridges is never ending. It is always going to be there. I would think that especially in difficult times the data is more important as we will have to make difficult decisions. We need information from the Upper Great Plains provides. Can someone describe the master gardening program to me, I don't know what it's about?

Representative Monson: Not sure, but next time we'll have information about the program.

Senator Wanzek: Senator Erbele: will be back Monday and I'll ask someone privately. What is it about?

Senator Bowman: Try to work and narrow our differences. I have an idea, but don't know if you'll work with me on this. We need to get those answers. You get the answer for UGPTI. We know about $300,000 budget that is a big hit for them. These are all things that need to be talked about. We need to find out what we need and what you need. Two years ago, you walked out half mad. We'll make a proposal- you make a proposal and we'll work on a compromise. Let's do it together for the benefit of agriculture for the State of North Dakota.

Senator Wanzek: If we're here until Christmas, Senator Erbele will be replacing me.

Representative Monson: Higher Education took a 20% hit, but they have the ability to raise tuition. This budget took a 14-15% hit and they can't raise tuition. Every institution and agency had reductions very similar in the House. Once it went thru ours, it was 13-15%. Not treating it any differently. We need to let them decide how to become more efficient and how they are going to do it. We just don't have the money like we did.

Senator Bowman: The art of compromise is everyone gives a little bit and come up with a budget that we can work with. This is the first time I ever remember NOT adding money to this budget – of not adding money to the producer. Agriculture is the back bone of the state. Have a nice Easter and we'll come back and try to work out something.
Everyone wished Happy Easter.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
4/18/2017
Job # 30213

☐ Subcommittee
☒ Conference Committee

Committee Clerk Signature MJHacker for Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes:

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Senator Bowman called the conference committee to order on SB 2020. Conferees were: **Senators Erbele and Grabinger and Representatives Monson, Schmidt and Boe.**

Senator Bowman: Go thru what the House and Senate did and see if we can come to a conclusion. House cute $300,000 from Extension, they also cut the FTE for Soil conservation of $213,400, added back the Gardening $37,500 and added back Roads & Bridge$100,000plus $200,000 in matching money from the counties. Is that correct?

Representative Monson: Yes.

Senator Bowman: The accrued leave, and that really is an important issue for the recruitment but I was the first to admit this is new to me. I have never worked with this. So, can someone tell me exactly what happens with the accrued leave and how it works. We've never been able to get a number for it as far as dollars and cents, but it is something. They would really like to see if they could get it, so can someone explain it and review what that is all about?

Senator Erbele: They are trying to seek consistency among all institutions. But among the extension services and they are on 12 month projects. With the predominance of 12-month contract, by not being able to carry these benefits forward, it does limit the benefit packages to people coming into the University system. It is not a case where one size fits all. They are kind of unique in their hiring and their needs, and we'd like to see the language back in on that.

Representative Monson: We talked at a previous meeting. We understand where they are coming from. I can't disagree with that as it would be nice if they have that, but at the same time, they are in the same bracket as Higher Ed. The Board of Higher Education is working on a package or leave policy that may take this into account already. Or a package. So, they are working on a policy right now, and they are not done with it. As far as I know they are discussing the same thing. Our thought was that we didn't want to get in the middle of them making their policy and derail it. We just took it out and we thought we'd leave it in and let them take care of it there.

Senator Erbele: The reverse could work as well too if we leave it in and we give them a template for them to work with especially with a program that we agree that is best for these agencies. We could do the language going forward with it but, if they come up with similar one, this goes away.

Representative Monson: If we were to do anything along that line, I would only agree to do that, that it would be one-time. They would have to readdress it two years from now and find out how does it compare to what the State Board did adopt. We really don't want to get in the middle of this, because we've got a Board that is working on a pretty serious issue for all agencies. I understand where they are coming from. I agree that they need something there, but I don't think we should be getting in the middle of it. I don't think it should be long term. I think it should be worded such that it is only good for two years and they have to come back.

Senator Bowman: I think we could actually live with that ourselves. We all agree that we could live with that, and we could write that up that way, so that it is limited but at least we are going to give it a shot.

Representative Monson: I didn't say we were ready to agree to it. I just said that would be a possible option.

Senator Bowman: On the House cuts, where are you willing to negotiate with us? Have you got any kind of an operating plan? Because one thing that I am very serious about and that is keeping the soil conservation FTE until after we do a thorough study to find out what impact this will have to this agency. I've talked to too many people and they have convinced me that this is a must.

Representative Monson: We have absolutely no desire to put that FTE back in. We are convinced that we could probably get rid of the whole chapter, because most of that is dealing with starting new Soil Conservation Districts. There are whole bunch of procedures that I don't think we'll ever be used again, unless some Soil Conservation District somehow gets upset and dissolves and needs to use that code. I think we could take about 27 pages of code out of chapter 4, as did our House AG committee.

Senator Bowman: But if we studied it, wouldn't that be brought out in the study? If it could be done, it would convince all of those on that committee that it is the right thing to do.

Representative Monson: They have the ability to bring that one back. We could take $491,600 out of here and not name it. I would say we're doing them a favor by naming the one FTE position. When we're taking 4.5% of 263 FTEs and many are vacant, this is a piece

of cake. He is going to have to make some tough decisions. He is going to not just say we're not going to hire 4-H or whatever. He has got to identify some people. He could find $491,000 probably by finding 3 FTE's. I would recommend that he goes in and finds 3-4 people that don't fit anything else that he needs. He can fill up vacant spots.

Senator Bowman: I thought about this and by what you added back into the budget, after you've made the $300,000 cut and the $213, 400 cut, and then you added back $37,500 for Gardening, $100,000 for Upper Great Plains plus the $200,000. I was running some figures that I would like to see the $174,850 for the FTE back in. That takes away all the extra money, that is just basic salary and benefits. I would like to see the $25,000 that is in that $213,000 for the meetings for Soil Conservation, stay in the budget because they have meetings and get paid for the meetings they go to.
Upper Great Plains Transportation - I would be willing to look at half of what you have suggested, $50,000 plus the $100,000. And also, the gardening was $12,500 in the last biennium. We don't want it, but I would be willing to look at that and if you didn't want it and wanted to put that back into the Upper Great Plains study, I think that would be good for everybody. That would be something to think about between now and our next meeting (12:00-12:17).

Representative Monson: So what was your proposal on the $37,500? How much of that?

Senator Bowman: If you wanted to keep the $12,500 which was in the last budget for Gardening, I'd be willing to accept. The road and bridge money – I never got an answer as to what absolutely had to be in that Upper Great Plains Transportation study after we've already spent a lot of money studying this. So I thought I'd go half way if that's something we can discuss. That would be $50,000 and $100,000 from counties. The FTE minus the operating and extra money that they've had in that budget would be $174,850. That could be written so that after the two-year study, that position will be discussed and the decision made. As to whether there is another way to streamline this to make it more efficient, but I don't want to do it until we know for sure if its right or not. That's my proposal. We can both come out a little bit and neither of us are big winners. But it is something that you're going to talk about and then we'll have make a final decision.

Representative Monson: We left $25,000 of operating in there for that Soil conservation and .4 FTE, so whatever board they still have $25,000, that was not taken out.

Senator Bowman: That's a line item and stays in the budget. That was out of the $213,000,

Team discussions –

Senator Bowman: Have you reached a conclusion?

Representative Monson: No. We'll be meeting again. We are pretty adamant that we can't add much back in here. Now the $100,000 for UGPTI – the $200,000 means nothing because that's special funds. We're talking $100,000 of general funds and then the difference in the gardening. Even if we gave up the Upper Great Plains one, we're still about $300,000 difference. We are pretty adamant that this budget needs to come down.

Senator Bowman: If I remember we were $7.4M from the original budget. We got down to the nuts and bolts when we started out. I carried it on the floor.

Representative Monson: Representative Boe understood you to say $174,000 back in?

Senator Bowman: I will go through this one more time. The House cut $300,000 out of extension, then you cut one FTE and $213,400 out of Soil conservation, but out of that there was $25,000 I believe for soil conservation meetings that they go to.

Representative Schmidt: The $25,000 is what the ND Association of Soil Conservation Districts thought they needed to do in order to assume some of those duties. And so that was not meant for any meetings or anything of the like, it was purely to for the ND Association of Soil Conservation Districts for travel.

Senator Bowman: You put it back in for that specific purpose.

Representative Schmidt: That is correct. It was to go to them to do those duties.

Senator Bowman: So we could save $25,000 right there for that FTE. We have a starting point that we never had at the other meetings. When we meet again, we might get down to the nuts and bolts and get this finalized. Is that fair enough? You can go ahead and agree if you want to, just want to practice.

Senator Bowman: Closed the hearing on SB 2020.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
4/19/2017
Job # 30236

☐ Subcommittee
☒ Conference Committee

Committee Clerk Signature Mary Jo Wilkens for Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Senator Bowman called the conference committee to order on SB 2020. Conferees were: **Senators Erbele and Grabinger and Representatives Monson, Schmidt and Boe.**

Senator Bowman: Handed out amendment 17.0528.02006 – Testimony Attached #1. Comments and asked Alex Cronquist to explain the amendment.

Alex Cronquist: Page 4 – UGPTI (Upper Great Plains Transportation Institute) $50,000 from general fund and $100,000 from county matching funds. The House version had provided for $100,000 general fund and $200,000 county matching funds. Under Senator Bowman's amendment they get half that amount.
Expiration date tied to accrued leave which expires on June 30, 2019.

Representative Monson: Alex, what part expires?

Alex Cronquist: Just that language added by the Senate in their version of the bill where it states that 12 month employees accrue leave the same as other state employees – that language would expire on June 30, 2019.

Health insurance adjustment is the same as what the House did. Instead of removing $213,400, relating to that soil conservation committee which included $191,000 for the one FTE. Under this amendment we just removed the $21,788 relating to the operating expenses. We will leave in the $191,000 and that FTE.

Senator Bowman: The money that was taken out – there is flexibility. We could negotiate that. That is money that is not dedicated and could be used elsewhere.

Representative Monson: You're very flexible with that amount of money.

Senator Bowman: UGPTI – if you would really like to spend it.

Representative Schmidt: I don't remember agreeing to taking the master gardener program down to $12,500.

Senator Bowman: You didn't agree. It is clear for the record. I went back and looked at what we gave them last session and that's what we gave them. I didn't want to cut, so that there wasn't an argument that we don't care about it, so we left it the same. But remember all the other major appropriations in this bill were cut. So they come out better than anybody else did by leaving it exactly where it was 2 years ago. Just so we are clear on that.

Representative Schmidt: They took a 50% cut last biennium. Did anybody else take a 50% cut last biennium? From my recognition I don't remember.

Senator Bowman: This section didn't want it at all. There is still $60,000 in the budget for gardening. I understand where the situation is, I understand what they do in Bismarck, it adds some extra value to this program. On a scale of 1 – 10 for this AG budget overall, everything, to me it's right on the very bottom as far as adding money to anything. That's the logic I used when I put these amendments together. I tried to take into consideration to put money in the transportation deal there is some flexibility to do that.

Representative Monson: On page 6, second bullet point down, "add section ..... Who pays for that? Where does money come from to pay for that? When you give somebody sick leave, or you give them vacation time, paid vacation– it comes with a cost. When they hired these people and contract to do research, can they on their own, say we'll hire for 12 months, we'll give you a month off in July, just because, but don't have to give them leave. Do they do that right in the contract? Can they do that? Do they do that? If they can't do that why can't they? Rather than change this leave policy, when they hire scientists to do research, can they say that you are a twelve- month employee and if you take off 3-4 weeks, that is something we should pursue some more.

Senator Bowman: This is a field I have no knowledge in at all. It is all new to me. All I know is, that 4 or 5 people from the university system asked me if we could get that in there because of the importance of this for the recruitment and retention of the best. When we are hiring people for this AG research, we want to hire the best we can get. We have to be competitive in our wages and we have to be competitive in the benefits. If this benefit package brings us in one of the best, to me it's worth every penny of it. Because the end result is the research that we get down the road from his expertise, will generate hundreds and hundreds of thousands of dollars back for the state of ND.

Representative Monson: I agree this is a great recruiting tool. Does it have to be in this form or is this something they can do on their own? We're not agreeing, but we're not rejecting it. If we can get this, we don't have time to probably get that answered. If we could get that answer tomorrow if we can set this up, to meet again, it wouldn't take but 15 minutes.

Senator Bowman: Asking Alex Cronquist if he has the info for Rep. Monson.

Alex Cronquist: I am not sure what he is looking for something from me or from the university system and the State Board of AG Research.

Representative Monson: Info between now and tomorrow afternoon.

Senator Bowman: Its' all new to me too. If this is a benefit that will help agriculture in the long haul and help. I've asked the question twice and have never got an answer from anybody.

Representative Monson: What will this cost and who is going to pay for it? Can you do this without this section?

Senator Grabinger: How many people does this involve and what are we contracting? Is this something that can be modified or do we change it like this?

Representative Monson: I would echo that because how many people is it. If we're talking 10 people or are we talking 100 people?

Senator Bowman: We'll get information but where we at on the rest of it as far as is?

Representative Monson: We're adamant about the FTE doesn't go back in, but at the same time if they find they can't live without the position, they can hire it back. If we say we take out an FTE and leave them the money, they can get someone to fill that position. It's a big deal to some of my people.

Senator Bowman: You said we could leave the money in and they could but hire someone but leave the FTE out? Is that what you said?

Representative Monson: Yes. We could take the money and the FTE, but if we take out the FTE, it's more difficult. If all we did was say we take out the FTE, and we name that position it makes it a little more difficult for them to take that. We can just reduce one FTE, and.

Senator Bowman: The language that we want incorporated into these studies, with that particular issue is, if the FTE is not needed after we study this, then we take it out. But as of now, until we know the answer to that, I think we have to leave it in until we find the answer. We're taking out the principal parts of the soil conservation. Everyone says how important this guy is. We aren't going anywhere until these amendments are drafted.

Representative Boe: Reads from amendment. They have the authority to add back or subtract any FTE's they see fit as the money is there.

Senator Bowman: What's the object of taking it out if they can add it back right away?

Representative Boe: In my opinion it would be symbolic – same as putting it back in.

Senator Bowman: Discussion on the gardening – do you want to use the money for UGPTI. I want to get back to home plate. We will figure out how many people are in this accrued leave stuff. We will try to get an answer for everyone so that is exactly on paper. As new to me as it is to you I think. I want to make sure it is done right.

Representative Monson: We'll work with it. We'll already on first and will steal all the way around the bases. Steal home.

Senator Erbele: I don't grasp this master gardener thing at all. I don't know why Burleigh County is so special. Why not do for Ward, Cass, Logan, Emmons, we already have the project. If you guys want to use the $12,500 and move it to any other category, that you see fit, I am fine with all of it going, not just the margin between $12,500 and $37,000.

Representative Monson: As far as the junior master gardener, the way it was explained to me, and I am not from Burleigh County, I have not much more knowledge about it than you, except I asked about the master gardener and the committee member from Burleigh County and it's important to him. These people work for all over the state. It is not just benefiting Burleigh County. There are other counties who have junior master gardener programs. I'm told everyone in the state benefits from this.

Senator Bowman: Tell me exactly what you want done with accrued leave. We want to know what you want? Do you have an idea on what you want?

Representative Monson: This amendment you have here, clarifies where you're at, and what you're proposing a lot more so we will digest this, get our answers for. We'll try to get some more information on the junior master gardener program and get some information on the leave for these scientists, and I think we are getting closer.

Senator Bowman: Closed the hearing on SB 2020.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
4/20/2017
Job # 30263

☐ Subcommittee
☒ Conference Committee

Committee Clerk Signature Emmery Crotberg for Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Senator Bowman called the conference committee to order on SB 2020. Conferees were: **Senators Erbele and Grabinger and Representatives Monson, Schmidt and Boe.**

Senator Bowman: Asked Representative Monson to go through the amendment.

Representative Monson: Explained amendment 17.0528.02007 – Attached # 1.

(2:00 – 7:00) **Committee Discussion:** The committee discussed the master gardener program and the money the House eliminated from the total funding for the UPGPTI which was originally set aside for matching funds with counties. The House asked to keep the money in for the junior master gardener program and the Senate wanted to remove that funding and fund the UPGPTI matching moneys. Representative Monson said that he would agree to put the money into the road fund as long as the money stays in the junior gardener program.

Senator Erbele: I'm hung up on the gardener program; it's earmarked for one county and I see it as an unnecessary program. I have a press release from April 20th where the Agriculture Commission awarded community schools with an orchard garden grant for the sum of $52,500. We have programs in the state that address youth gardening. I would agree with transferring this money to the Agriculture Department and allow them to disperse the grants so it goes statewide which would make more sense than to try to have this little area here in extension. I read in extension the history of the gardening program which goes back to 2007 when there were $60,000 in it and at that time, it was statewide. It's just in the last two biennia that it has been lined out as Burleigh County. The money does not go to the kids it's for, it's specified for interns to assist with the junior master gardening and associated

program so it goes to the interns. If we're going to support interns, let's support the graduate school interns that are going out to our research centers and give them an extra boost. That's' where I would like to spend the money.

Representative Monson: We don't have the Agriculture Commissioner's budget anymore so we can't put more money into that. The House has taken everything the Senate proposed except for this program.

Senator Bowman: The extension service took the biggest hit in this budget and the extension service would have been the most logical place to allocate funds if we were going to put any money back.

(11:00 – 12:30) **Committee Discussion:** Representative Monson and Senator Bowman discussed the offer of the House. Senator Erbele asked the House members to explain the benefit of the Burleigh County junior master gardener program.

Representative Monson: This goes for interns to help young kids (8th grade and below) learn how to plant gardens, trees, etc. 8th grade and below. They do have a program statewide but this is an enhancement in Burleigh County. I've talked to people on the committee who feel strongly about this program and they teach mostly underprivileged kids.

Senator Erbele: Do they do a better job than the county extension agent?

Representative Monson: In this case, yes.

Senator Bowman: You had mentioned putting some money back into Upper Great Plains, how much money is available for that?

Representative Monson: There would be $37,500 and if you wanted to further amend to this and leave $75,000 as matching, that would be fine with us.

Senator Grabinger: My biggest struggle is with the junior master gardener program because the reality is that we are talking about cutting a person's job in one of these departments and cutting everywhere else but in this program, we are looking at doubling it. We offered to keep it at its current funding of $12,500 and I haven't heard a good reason to expand the program.

(15:00 – 17:00) **Committee Discussion:** The Senate and House members discussed amongst themselves how they would proceed.

Representative Monson: Moved to Adopt Amendment 17.0528.02007

Representative Schmidt: Seconded the motion.

A Roll Call Vote was taken: 3 yeas, 3 nays, 0 absent.

Senator Bowman: No	**Representative Monson: Yes**
Senator Erbele: No	**Represenatative Schmidt: Yes**
Senator Grabinger: No	**Representative Boe: Yes**

Motion failed.

Senator Bowman: Closed the conference committee hearing on SB 2020.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020
4/21/2017
Job # 30264

☐ Subcommittee
☒ Conference Committee

Committee Clerk Signature for Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes:

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Senator Bowman called the conference committee to order on SB 2020. Conferees were: **Senators Erbele and Grabinger and Representatives Monson, Schmidt and Boe.**

Senator Bowman: After a good discussion the other day, we didn't go very far. I think we can all agree with that. So there's $37,500 between our versions. If we put half of it into Upper Great Plains and the other half into extension, and let the extension make the decision on whether that program has priority over everything else they've got, they can make the decision to put that money in up to $25,000, or whatever the figure was. Is that something we can discuss? If not, we are going nowhere.

Representative Monson: I would propose 17.0528.02007 Amendment which is the amendment that I had yesterday, which is basically your 17.0528.02006 with a couple small changes where we would take 07 for road and bridge, and for counties, and if they wish. All the counties have started doing this. Almost every county has some data, and they used up all the money and the allotment took a hit on it. They have $104,000 left to put towards this project. We wanted to put more in, but because of the budget we came up with a $200,000 match. After hearing it again this morning, I think we should put it in again at $100,000 and $200,000. If the counties don't use it, then we've saved $100,000 for the general fund. We'll go $15,000 in master gardening, and take the other $10,000 and stick it into extension, and they can use it as they wish. If Stutsman County is better, they can use it there, or wherever they want.

Representative Monson motioned to Adopt the Amendment with the discussed changes.
Representative Schmidt: Seconded the motion.

Discussion among the Senators.

Senator Bowman: So your proposal was to put $100,000 back to road and bridge, $15,000 for gardening for Burleigh county, and $10,000 back into extension?

Representative Monson: Yes.

Senator Erbele: On the gardening aspect – that is for every county. So, do we strike the Burleigh language then?

Representative Monson: It would be $15,000 for master gardening here, and the other $10,000 we will put it wherever extension wants.

Senator Erbele: Earmarked? Or wherever extension wants it?

Representative Monson: Wherever they want. They would use the other $10,000 to use wherever they want.

A Roll Call Vote was taken: 5 yeas, 1 nays, 0 absent.

Senator Bowman: Yes	**Representative Monson: Yes**
Senator Erbele: No	**Representative Schmidt: Yes**
Senator Grabinger: Yes	**Representative Boe: Yes**

Senator Bowman: Anything else to discuss before we close the hearing on this?

Representative Monson: We'd like to see the amendments before we sign off.

Senator Bowman closed the hearing on SB 2020.

2017 SENATE STANDING COMMITTEE MINUTES

Appropriations Committee
Harvest Room, State Capitol

SB 2020 (2)
4/21/2017
Job # 30273

☐ Subcommittee
☒ Conference Committee

Committee Clerk Signature Rose Laning

Explanation or reason for introduction of bill/resolution:

To provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

Minutes: Testimony Attached # 1

Legislative Council: Alex Cronquist
OMB: Becky Deichert

Senator Bowman called the conference committee to order on SB 2020. Conferees were: **Senators Erbele and Grabinger and Representatives Schmidt and Boe. Representative Monson** was hospitalized earlier in the day.

Senator Bowman: Handed out amendment 17.0528.02008 – Testimony Attached #1. Comments and asked Alex Cronquist to explain the amendment.

Alex Cronquist: went over the amendment.

Senator Grabinger: this is everything we agreed to.

Discussion.

Representative Schmidt: We're good.

Senator Bowman: Thank you for your nice compliments earlier today.

Prepared by the Legislative Council staff for
Representative Monson
April 20, 2017

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

That the House recede from its amendments as printed on pages 1256-1263 of the Senate Journal and pages 1480-1487 of the House Journal and that Engrossed Senate Bill No. 2020 be amended as follows:

Page 1, line 5, after "adjustments" insert "; to provide for a legislative management study; to provide for a budget section report"

Page 1, line 5, remove the second "and"

Page 1, line 6, after "exemption" insert "; and to provide an expiration date"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	$52,517,908	($1,314,419)	$51,203,489
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,356,261)	$52,295,009
Less estimated income	25,826,708	819,981	26,646,689
Total general fund	$27,824,562	($2,176,242)	$25,648,320
Full-time equivalent positions	263.91	(10.93)	252.98"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	$3,712,202	($69,481)	$3,642,721
Total all funds	$3,712,202	($69,481)	$3,642,721
Less estimated income	1,747,735	8,095	1,755,830
Total general fund	$1,964,467	($77,576)	$1,886,891"

Page 2, replace lines 17 through 21 with:

"Upper great plains transportation institute	$22,076,448	($16,206)	$22,060,242
Total all funds	$22,076,448	($16,206)	$22,060,242
Less estimated income	18,175,657	441,411	18,617,068
Total general fund	$3,900,791	($457,617)	$3,443,174"

Page 2, replace lines 27 through 30 with:

"Main research center	$110,529,780	($1,887,537)	$108,642,243
Total all funds	$110,529,780	($1,887,537)	$108,642,243
Less estimated income	56,948,525	2,136,303	59,084,828
Total general fund	$53,581,255	($4,023,840)	$49,557,415"

Page 3, replace lines 5 through 15 with:

"Dickinson research extension center	$6,996,678	($171,127)	$6,825,551
Central grasslands research extension center	3,531,779	(108,155)	3,423,624
Hettinger research extension center	5,086,767	(111,634)	4,975,133
Langdon research extension center	3,045,836	(81,229)	2,964,607

North central research extension center	5,044,213	(90,561)	4,953,652
Williston research extension center	5,267,400	1,351,490	6,618,890
Carrington research extension center	9,328,093	(152,602)	9,175,491
Total all funds	$38,300,766	$636,182	$38,936,948
Less estimated income	19,817,130	1,964,561	21,781,691
Total general fund	$18,483,636	($1,328,379)	$17,155,257"

Page 3, replace lines 21 and 22 with:

"Agronomy seed farm	$1,521,007	$15,122	$1,536,129
Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($8,063,654)	$97,691,057
Grand total other funds	124,036,762	5,385,473	129,422,235
Grand total all funds	$229,791,473	($2,678,181)	$227,113,292

SECTION 2. HEALTH INSURANCE INCREASE. The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	25,000"

Page 4, replace lines 13 through 15 with:

"Total all funds	$23,858,751	$1,525,000
Total other funds	21,325,000	1,500,000
Total general fund	$2,533,751	$25,000

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The main and branch research centers and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 6, line 24, after "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"**SECTION 13. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE.** During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the

committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 14. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the governor's office, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section of the legislative management by March 31, 2018.

SECTION 15. EXPIRATION DATE. Sections 5 and 6 of this Act are effective through June 30, 2019, and after that date are ineffective."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Transportation Institute						
Total all funds	$22,076,448	$22,068,744	($8,502)	$22,060,242	$22,360,242	($300,000)
Less estimated income	18,175,657	18,623,430	(6,362)	18,617,068	18,817,068	(200,000)
General fund	$3,900,791	$3,445,314	($2,140)	$3,443,174	$3,543,174	($100,000)
Branch Research Centers						
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
NDSU Extension Service						
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
Northern Crops Institute						
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
Main Research Center						
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
Agronomy Seed Farm						
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
Bill total						
Total all funds	$229,791,473	$226,077,375	$1,035,917	$227,113,292	$227,234,180	($120,888)
Less estimated income	124,036,762	127,990,420	1,431,815	129,422,235	129,622,235	(200,000)
General fund	$105,754,711	$98,086,955	($395,898)	$97,691,057	$97,611,945	$79,112

Senate Bill No. 2020 - Transportation Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	($8,502)	$22,060,242	$22,360,242	($300,000)
Total all funds	$22,076,448	$22,068,744	($8,502)	$22,060,242	$22,360,242	($300,000)
Less estimated income	18,175,657	18,623,430	(6,362)	18,617,068	18,817,068	(200,000)
General fund	$3,900,791	$3,445,314	($2,140)	$3,443,174	$3,543,174	($100,000)
FTE	54.98	43.88	0.00	43.88	43.88	0.00

Department No. 627 - Transportation Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Upper Great Plains Trans. Institute	($8,502)	($8,502)
Total all funds	($8,502)	($8,502)
Less estimated income	(6,362)	(6,362)
General fund	($2,140)	($2,140)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Senate Bill No. 2020 - Branch Research Centers - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551	$6,825,551	
Central Grasslands Research Center	3,531,779	3,426,112	(2,488)	3,423,624	3,423,624	
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133	4,975,133	
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607	2,964,607	
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652	4,953,652	
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890	6,618,890	
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491	9,175,491	
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
FTE	113.94	110.29	0.00	110.29	110.29	0.00

Department No. 628 - Branch Research Centers - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Seed Cleaning Plant[2]	Total Conference Committee Changes
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - NDSU Extension Service - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Extension Service	$52,517,908	$51,556,750	($353,261)	$51,203,489	$51,024,377	$179,112
Soil Conservation Committee	1,133,362	1,091,520		1,091,520	1,091,520	
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
FTE	263.91	252.98	0.00	252.98	251.98	1.00

Department No. 630 - NDSU Extension Service - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for Operating Expenses[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total Conference Committee Changes
Extension Service	($56,473)	($21,788)	($300,000)	$25,000	($353,261)
Soil Conservation Committee					

Total all funds	($56,473)	($21,788)	($300,000)	$25,000	($353,261)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($21,788)	($300,000)	$25,000	($325,566)
FTE	0.00	0.00	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] Funding of $21,788 from the general fund is removed. The House version removed $213,400 and 1 FTE position relating to the state soil conservation committee.

[3] Funding of $300,000 from the general fund is removed, the same as the House version.

[4] One-time funding of $25,000 from the general fund is added for the Burleigh County junior master gardener program. The Senate version did not include funding for the Burleigh County junior master gardener program. The House version included one-time funding of $37,500 from the general fund for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-08-10 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service, the same as the House version.
- Adds a new section to provide for a Legislative Management study of the state soil conservation committee, the same as the House version.

Senate Bill No. 2020 - Northern Crops Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
FTE	12.00	11.80	0.00	11.80	11.80	0.00

Department No. 638 - Northern Crops Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
	($2,103)	($2,103)

General fund		
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Senate Bill No. 2020 - Main Research Center - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
FTE	353.85	336.12	0.00	336.12	336.12	0.00

Department No. 640 - Main Research Center - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - Agronomy Seed Farm - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00	3.00	0.00

Department No. 649 - Agronomy Seed Farm - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Prepared by the Legislative Council staff for
Conference Committee
April 21, 2017

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PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

That the House recede from its amendments as printed on pages 1256-1263 of the Senate Journal and pages 1480-1487 of the House Journal and that Engrossed Senate Bill No. 2020 be amended as follows:

Page 1, line 5, after "adjustments" insert "; to provide for a legislative management study; to provide for a budget section report"

Page 1, line 5, remove the second "and"

Page 1, line 6, after "exemption" insert "; and to provide an expiration date"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	$52,517,908	($1,314,419)	$51,203,489
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,356,261)	$52,295,009
Less estimated income	25,826,708	819,981	26,646,689
Total general fund	$27,824,562	($2,176,242)	$25,648,320
Full-time equivalent positions	263.91	(10.93)	252.98"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	$3,712,202	($69,481)	$3,642,721
Total all funds	$3,712,202	($69,481)	$3,642,721
Less estimated income	1,747,735	8,095	1,755,830
Total general fund	$1,964,467	($77,576)	$1,886,891"

Page 2, replace lines 17 through 21 with:

"Upper great plains transportation institute	$22,076,448	$283,794	$22,360,242
Total all funds	$22,076,448	$283,794	$22,360,242
Less estimated income	18,175,657	641,411	18,817,068
Total general fund	$3,900,791	($357,617)	$3,543,174"

Page 2, replace lines 27 through 30 with:

"Main research center	$110,529,780	($1,887,537)	$108,642,243
Total all funds	$110,529,780	($1,887,537)	$108,642,243
Less estimated income	56,948,525	2,136,303	59,084,828
Total general fund	$53,581,255	($4,023,840)	$49,557,415"

Page 3, replace lines 5 through 15 with:

"Dickinson research extension center	$6,996,678	($171,127)	$6,825,551
Central grasslands research extension center	3,531,779	(108,155)	3,423,624
Hettinger research extension center	5,086,767	(111,634)	4,975,133
Langdon research extension center	3,045,836	(81,229)	2,964,607

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North central research extension center	5,044,213	(90,561)	4,953,652
Williston research extension center	5,267,400	1,351,490	6,618,890
Carrington research extension center	9,328,093	(152,602)	9,175,491
Total all funds	$38,300,766	$636,182	$38,936,948
Less estimated income	19,817,130	1,964,561	21,781,691
Total general fund	$18,483,636	($1,328,379)	$17,155,257"

Page 3, replace lines 21 and 22 with:

"Agronomy seed farm	$1,521,007	$15,122	$1,536,129
Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($7,963,654)	$97,791,057
Grand total other funds	124,036,762	5,585,473	129,622,235
Grand total all funds	$229,791,473	($2,378,181)	$227,413,292

SECTION 2. HEALTH INSURANCE INCREASE. The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	15,000"

Page 4, replace lines 12 through 15 with:

"Flooded lands study	67,952	0
Road and bridge asset management system	0	300,000
Total all funds	$23,858,751	$1,815,000
Total other funds	21,325,000	1,700,000
Total general fund	$2,533,751	$115,000

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The upper great plains transportation institute, main and branch research centers, and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 6, line 24, after "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"SECTION 13. UPPER GREAT PLAINS TRANSPORTATION INSTITUTE - ROAD AND BRIDGE ASSET MANAGEMENT SYSTEM MATCHING FUNDS.

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Subdivision 3 of section 1 of this Act includes $100,000 from the general fund for a road and bridge asset management system which may be spent only to the extent the upper great plains transportation institute provides two dollars of matching funds from nonstate sources for each one dollar provided from the general fund for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 14. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE. During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 15. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the governor's office, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section of the legislative management by March 31, 2018.

SECTION 16. EXPIRATION DATE. Sections 5 and 6 of this Act are effective through June 30, 2019, and after that date are ineffective."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Transportation Institute						
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242	$22,360,242	$0
Less estimated income	18,175,657	18,623,430	193,638	18,817,068	18,817,068	0
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174	$3,543,174	$0
Branch Research Centers						
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
NDSU Extension Service						
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
Northern Crops Institute						
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
Main Research Center						
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0

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Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
Agronomy Seed Farm						
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
Bill total						
Total all funds	$229,791,473	$226,077,375	$1,335,917	$227,413,292	$227,234,180	$179,112
Less estimated income	124,036,762	127,990,420	1,631,815	129,622,235	129,622,235	0
General fund	$105,754,711	$98,086,955	($295,898)	$97,791,057	$97,611,945	$179,112

Senate Bill No. 2020 - Transportation Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	$291,498	$22,360,242	$22,360,242	
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242	$22,360,242	$0
Less estimated income	18,175,657	18,623,430	193,638	18,817,068	18,817,068	0
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174	$3,543,174	$0
FTE	54.98	43.88	0.00	43.88	43.88	0.00

Department No. 627 - Transportation Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Road and Bridge Asset Management System[2]	Total Conference Committee Changes
Upper Great Plains Trans. Institute	($8,502)	$300,000	$291,498
Total all funds	($8,502)	$300,000	$291,498
Less estimated income	(6,362)	200,000	193,638
General fund	($2,140)	$100,000	$97,860
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $300,000, of which $100,000 is from the general fund and $200,000 is from county matching funds is added for a road and bridge asset management system, the same as the House version.

This amendment also adds sections to:

- Identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provide matching fund requirements relating to the road and bridge asset management system, the same as the House version.

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Senate Bill No. 2020 - Branch Research Centers - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551	$6,825,551	
Central Grasslands Research Center	3,531,779	3,426,112	(2,488)	3,423,624	3,423,624	
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133	4,975,133	
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607	2,964,607	
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652	4,953,652	
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890	6,618,890	
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491	9,175,491	
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
FTE	113.94	110.29	0.00	110.29	110.29	0.00

Department No. 628 - Branch Research Centers - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Seed Cleaning Plant[2]	Total Conference Committee Changes
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - NDSU Extension Service - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Extension Service	$52,517,908	$51,556,750	($353,261)	$51,203,489	$51,024,377	$179,112
Soil Conservation Committee	1,133,362	1,091,520		1,091,520	1,091,520	
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
FTE	263.91	252.98	0.00	252.98	251.98	1.00

Department No. 630 - NDSU Extension Service - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for Operating Expenses[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total Conference Committee Changes
Extension Service	($56,473)	($21,788)	($290,000)	$15,000	($353,261)
Soil Conservation Committee					
Total all funds	($56,473)	($21,788)	($290,000)	$15,000	($353,261)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($21,788)	($290,000)	$15,000	($325,566)
FTE	0.00	0.00	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] Funding of $21,788 from the general fund is removed. The House version removed $213,400 and 1 FTE position relating to the State Soil Conservation Committee.

[3] Funding of $290,000 from the general fund is removed. The House version removed $300,000 from the general fund.

[4] One-time funding of $15,000 from the general fund is added for the Burleigh County junior master gardener program. The Senate version did not include funding for the Burleigh County junior master gardener program. The House version included one-time funding of $37,500 from the general fund for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-08-10 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service, the same as the House version.
- Adds a new section to provide for a Legislative Management study of the State Soil Conservation Committee, the same as the House version.

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Senate Bill No. 2020 - Northern Crops Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
FTE	12.00	11.80	0.00	11.80	11.80	0.00

Department No. 638 - Northern Crops Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
General fund	($2,103)	($2,103)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Senate Bill No. 2020 - Main Research Center - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
FTE	353.85	336.12	0.00	336.12	336.12	0.00

Department No. 640 - Main Research Center - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)

FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - Agronomy Seed Farm - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00	3.00	0.00

Department No. 649 - Agronomy Seed Farm - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Date: _____
Roll Call Vote #: _____

2017 SENATE CONFERENCE COMMITTEE
ROLL CALL VOTES

Attendance Sheet

BILL/RESOLUTION NO. 2020 as (re) engrossed

Senate Appropriations Committee

Action Taken

- ☐ **SENATE accede to House Amendments**
- ☐ **SENATE accede to House Amendments and further amend**
- ☐ **HOUSE recede from House amendments**
- ☐ **HOUSE recede from House amendments and amend as follows**

- ☐ **Unable to agree**, recommends that the committee be discharged and a new committee be appointed

Motion Made by: _____ Seconded by: _____

Senators	4/11	4/14	4/18	Yes	No	Representatives	4/11	4/14	4/18	Yes	No
Senator Bowman	✓	✓	✓			Rep. Monson	✓	✓	✓		
Senator Erbele	✓		✓			Rep. Schmidt	✓	✓	✓		
Senator Grabinger	✓	✓	✓			Rep. Boe	✓	✓	✓		
Senator Wanzek		✓									
Total Senate Vote						Total Rep. Vote					

Vote Count Yes: _____ No: _____ Absent: _____

Senate Carrier _____ House Carrier _____

LC Number _____ . _____ of amendment

LC Title # _____ . _____ of engrossment

Emergency clause added or deleted

Statement of purpose of amendment

Date: _____
Roll Call Vote #: _____

2017 SENATE CONFERENCE COMMITTEE
ROLL CALL VOTES

Attendance

BILL/RESOLUTION NO. 2020 as (re) engrossed

Senate Appropriations Committee

Action Taken

- ☐ **SENATE accede to House Amendments**
- ☐ **SENATE accede to House Amendments and further amend**
- ☐ **HOUSE recede from House amendments**
- ☐ **HOUSE recede from House amendments and amend as follows**

- ☐ **Unable to agree**, recommends that the committee be discharged and a new committee be appointed

Motion Made by: _____ Seconded by: _____

Senators	4/19	4/20	4/21	Yes	No	Representatives	4/19	4/20	4/21	Yes	No
Senator Beckman	✓	✓	✓			Rep Monson	✓	✓	✓		
Senator Erbele	✓	✓	✓			Rep Schmidt	✓	✓	✓		
Senator Grabinger	✓	✓	✓			Rep Boe	✓	✓	✓		
Total Senate Vote						Total Rep. Vote					

Vote Count Yes: _____ No: _____ Absent: _____

Senate Carrier _____ House Carrier _____

LC Number _____ . _____ of amendment

LC Title # _____ . _____ of engrossment

Emergency clause added or deleted

Statement of purpose of amendment

Date: 4/20/2017
Roll Call Vote #: 1

2017 SENATE CONFERENCE COMMITTEE
ROLL CALL VOTES

BILL/RESOLUTION NO. 2020 as (re) engrossed

Senate Appropriations Committee

Action Taken

☐ **SENATE accede to House Amendments**
☐ **SENATE accede to House Amendments and further amend**
☐ **HOUSE recede from House amendments**
☐ **HOUSE recede from House amendments and amend as follows**

☐ **Unable to agree**, recommends that the committee be discharged and a new committee be appointed

Motion: To adopt 17.0528.02007

Motion Made by: Representative Monson Seconded by: Representative Schmidt

Senators				Yes	No		Representatives				Yes	No
Senator Bowman					N		Representative Monson				Y	
Senator Erbele					N		Representative Schmidt				Y	
Senator Grabinger					N		Representative Boe				Y	
Total Senate Vote				0	3		Total Rep. Vote				3	0

Vote Count Yes: 3 No: 3 Absent: 0

Senate Carrier _____ House Carrier _____

LC Number _____ . _____ of amendment

LC Title # _____ . _____ of engrossment

Emergency clause added or deleted

Statement of purpose of amendment

Date: _____
Roll Call Vote #: _____

2017 SENATE CONFERENCE COMMITTEE
ROLL CALL VOTES

BILL/RESOLUTION NO. 2020 as (re) engrossed Attendance Sheet

Senate Appropriations Committee

Action Taken
- ☐ **SENATE accede to House Amendments**
- ☐ **SENATE accede to House Amendments and further amend**
- ☐ **HOUSE recede from House amendments**
- ☐ **HOUSE recede from House amendments and amend as follows**

- ☐ **Unable to agree**, recommends that the committee be discharged and a new committee be appointed

Motion Made by: _____ Seconded by: _____

Senators	(2) 4/21			Yes	No	Representatives	(2) 4/21			Yes	No
Senator Bowman	✓					Rep. Monson	✓				
Senator Erbele	✓					Rep. Schmidt	✓				
Senator Grabinger	✓					Rep. Boe	✓				
Total Senate Vote						Total Rep. Vote					

Vote Count Yes: _____ No: _____ Absent: _____

Senate Carrier _____ House Carrier _____

LC Number _____ . _____ of amendment

LC Title # _____ . _____ of engrossment

Emergency clause added or deleted

Statement of purpose of amendment

Date: 4/21/2017
Roll Call Vote #: 1

2017 SENATE CONFERENCE COMMITTEE
ROLL CALL VOTES

BILL/RESOLUTION NO. **2020** as (re) engrossed

Senate Appropriations Committee

Action Taken
- ☐ **SENATE accede to House Amendments**
- ☐ **SENATE accede to House Amendments and further amend**
- ☐ **HOUSE recede from House amendments**
- ☒ **HOUSE recede from House amendments and amend as follows**

☐ **Unable to agree**, recommends that the committee be discharged and a new committee be appointed

Motion: To accept amendment 17.0528.02007 with discussed changes

Motion Made by: Representative Monson Seconded by: Representative Schmidt

Senators				Yes	No		Representatives				Yes	No
Senator Bowman				Y			Representative Monson				Y	
Senator Erbele					N		Representative Schmidt				Y	
Senator Grabinger				Y			Representative Boe				Y	
Total Senate Vote				2	1		Total Rep. Vote				3	0

Vote Count Yes: 5 No: 1 Absent: 0

Senate Carrier Senator Bowman House Carrier Representative Monson

LC Number 17.0528 . 02008 of amendment

LC Title # 17.0528 . 04000 of engrossment

Emergency clause added or deleted

Statement of purpose of amendment

Insert LC: 17.0528.02008
Senate Carrier: Bowman
House Carrier: Monson

REPORT OF CONFERENCE COMMITTEE

SB 2020, as engrossed: Your conference committee (Sens. Bowman, Erbele, Grabinger and Reps. Monson, Schmidt, Boe) recommends that the **HOUSE RECEDE** from the House amendments as printed on SJ pages 1256-1263, adopt amendments as follows, and place SB 2020 on the Seventh order:

That the House recede from its amendments as printed on pages 1256-1263 of the Senate Journal and pages 1480-1487 of the House Journal and that Engrossed Senate Bill No. 2020 be amended as follows:

Page 1, line 5, after "adjustments" insert "; to provide for a legislative management study; to provide for a budget section report"

Page 1, line 5, remove the second "and"

Page 1, line 6, after "exemption" insert "; and to provide an expiration date"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	$52,517,908	($1,314,419)	$51,203,489
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,356,261)	$52,295,009
Less estimated income	25,826,708	819,981	26,646,689
Total general fund	$27,824,562	($2,176,242)	$25,648,320
Full-time equivalent positions	263.91	(10.93)	252.98"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	$3,712,202	($69,481)	$3,642,721
Total all funds	$3,712,202	($69,481)	$3,642,721
Less estimated income	1,747,735	8,095	1,755,830
Total general fund	$1,964,467	($77,576)	$1,886,891"

Page 2, replace lines 17 through 21 with:

"Upper great plains transportation institute	$22,076,448	$283,794	$22,360,242
Total all funds	$22,076,448	$283,794	$22,360,242
Less estimated income	18,175,657	641,411	18,817,068
Total general fund	$3,900,791	($357,617)	$3,543,174"

Page 2, replace lines 27 through 30 with:

"Main research center	$110,529,780	($1,887,537)	$108,642,243
Total all funds	$110,529,780	($1,887,537)	$108,642,243
Less estimated income	56,948,525	2,136,303	59,084,828
Total general fund	$53,581,255	($4,023,840)	$49,557,415"

Page 3, replace lines 5 through 15 with:

"Dickinson research extension center	$6,996,678	($171,127)	$6,825,551
Central grasslands research extension center	3,531,779	(108,155)	3,423,624
Hettinger research extension center	5,086,767	(111,634)	4,975,133
Langdon research extension center	3,045,836	(81,229)	2,964,607
North central research extension center	5,044,213	(90,561)	4,953,652
Williston research extension center	5,267,400	1,351,490	6,618,890

Carrington research extension center	9,328,093	(152,602)	9,175,491
Total all funds	$38,300,766	$636,182	$38,936,948
Less estimated income	19,817,130	1,964,561	21,781,691
Total general fund	$18,483,636	($1,328,379)	$17,155,257"

Page 3, replace lines 21 and 22 with:

"Agronomy seed farm	$1,521,007	$15,122	$1,536,129
Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($7,963,654)	$97,791,057
Grand total other funds	124,036,762	5,585,473	129,622,235
Grand total all funds	$229,791,473	($2,378,181)	$227,413,292

SECTION 2. HEALTH INSURANCE INCREASE. The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	15,000"

Page 4, replace lines 12 through 15 with:

"Flooded lands study	67,952	0
Road and bridge asset management system	0	300,000
Total all funds	$23,858,751	$1,815,000
Total other funds	21,325,000	1,700,000
Total general fund	$2,533,751	$115,000

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The upper great plains transportation institute, main and branch research centers, and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 6, line 24, after "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"SECTION 13. UPPER GREAT PLAINS TRANSPORTATION INSTITUTE - ROAD AND BRIDGE ASSET MANAGEMENT SYSTEM MATCHING FUNDS. Subdivision 3 of section 1 of this Act includes $100,000 from the general fund for a road and bridge asset management system which may be spent only to the extent the upper great plains transportation institute provides two dollars of matching funds

from nonstate sources for each one dollar provided from the general fund for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 14. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE. During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 15. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the governor's office, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section of the legislative management by March 31, 2018.

SECTION 16. EXPIRATION DATE. Sections 5 and 6 of this Act are effective through June 30, 2019, and after that date are ineffective."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Transportation Institute						
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242	$22,360,242	$0
Less estimated income	18,175,657	18,623,430	193,638	18,817,068	18,817,068	0
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174	$3,543,174	$0
Branch Research Centers						
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
NDSU Extension Service						
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
Northern Crops Institute						
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
Main Research Center						
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
Agronomy Seed Farm						
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0

Bill total						
Total all funds	$229,791,473	$226,077,375	$1,335,917	$227,413,292	$227,234,180	$179,112
Less estimated income	124,036,762	127,990,420	1,631,815	129,622,235	129,622,235	0
General fund	$105,754,711	$98,086,955	($295,898)	$97,791,057	$97,611,945	$179,112

Senate Bill No. 2020 - Transportation Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	$291,498	$22,360,242	$22,360,242	
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242	$22,360,242	$0
Less estimated income	18,175,657	18,623,430	193,638	18,817,068	18,817,068	0
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174	$3,543,174	$0
FTE	54.98	43.88	0.00	43.88	43.88	0.00

Department No. 627 - Transportation Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Road and Bridge Asset Management System[2]	Total Conference Committee Changes
Upper Great Plains Trans. Institute	($8,502)	$300,000	$291,498
Total all funds	($8,502)	$300,000	$291,498
Less estimated income	(6,362)	200,000	193,638
General fund	($2,140)	$100,000	$97,860
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $300,000, of which $100,000 is from the general fund and $200,000 is from county matching funds is added for a road and bridge asset management system, the same as the House version.

This amendment also adds sections to:

- Identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provide matching fund requirements relating to the road and bridge asset management system, the same as the House version.

Senate Bill No. 2020 - Branch Research Centers - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551	$6,825,551	
Central Grasslands Research	3,531,779	3,426,112	(2,488)	3,423,624	3,423,624	

Center						
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133	4,975,133	
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607	2,964,607	
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652	4,953,652	
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890	6,618,890	
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491	9,175,491	
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
FTE	113.94	110.29	0.00	110.29	110.29	0.00

Department No. 628 - Branch Research Centers - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Seed Cleaning Plant[2]	Total Conference Committee Changes
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - NDSU Extension Service - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Extension Service	$52,517,908	$51,556,750	($353,261)	$51,203,489	$51,024,377	$179,112
Soil Conservation Committee	1,133,362	1,091,520		1,091,520	1,091,520	
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112

Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
FTE	263.91	252.98	0.00	252.98	251.98	1.00

Department No. 630 - NDSU Extension Service - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for Operating Expenses[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total Conference Committee Changes
Extension Service	($56,473)	($21,788)	($290,000)	$15,000	($353,261)
Soil Conservation Committee					
Total all funds	($56,473)	($21,788)	($290,000)	$15,000	($353,261)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($21,788)	($290,000)	$15,000	($325,566)
FTE	0.00	0.00	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] Funding of $21,788 from the general fund is removed. The House version removed $213,400 and 1 FTE position relating to the State Soil Conservation Committee.

[3] Funding of $290,000 from the general fund is removed. The House version removed $300,000 from the general fund.

[4] One-time funding of $15,000 from the general fund is added for the Burleigh County junior master gardener program. The Senate version did not include funding for the Burleigh County junior master gardener program. The House version included one-time funding of $37,500 from the general fund for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-08-10 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service, the same as the House version.
- Adds a new section to provide for a Legislative Management study of the State Soil Conservation Committee, the same as the House version.

Senate Bill No. 2020 - Northern Crops Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House

Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
FTE	12.00	11.80	0.00	11.80	11.80	0.00

Department No. 638 - Northern Crops Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
General fund	($2,103)	($2,103)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Senate Bill No. 2020 - Main Research Center - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
FTE	353.85	336.12	0.00	336.12	336.12	0.00

Department No. 640 - Main Research Center - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - Agronomy Seed Farm - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00	3.00	0.00

Department No. 649 - Agronomy Seed Farm - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Engrossed SB 2020 was placed on the Seventh order of business on the calendar.

2017 TESTIMONY

SB 2020

Department 627 - Upper Great Plains Transportation Institute
Senate Bill Nos. 2020 and 2080

Executive Budget Comparison to Prior Biennium Appropriations

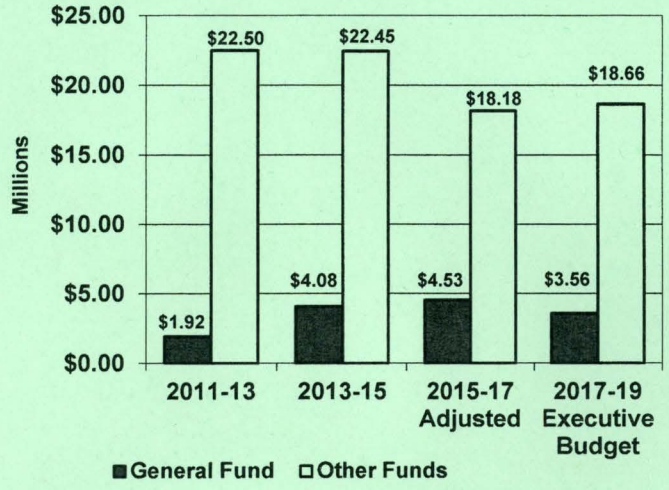
	FTE Positions	General Fund	Other Funds	Total
2017-19 Executive Budget	43.88	$3,563,901	$18,658,122	$22,222,023
2015-17 Adjusted Legislative Appropriations[1]	54.98	4,529,614	18,175,657	22,705,271
Increase (Decrease)	(11.10)	($965,713)	$482,465	($483,248)

[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

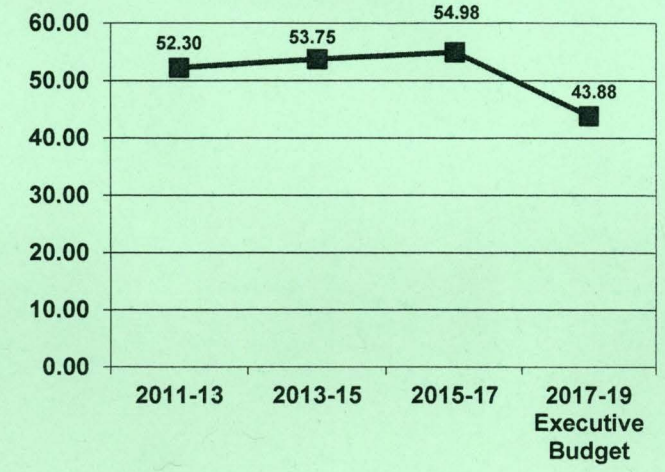
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Executive Budget	$3,563,901	$0	$3,563,901
2015-17 Adjusted Legislative Appropriations	3,900,791	628,823	4,529,614
Increase (Decrease)	($336,890)	($628,823)	($965,713)

Agency Funding



FTE Positions



Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Executive Budget	$3,563,901	$18,658,122	$22,222,023
2017-19 Base Level	3,900,791	18,175,657	22,076,448
Increase (Decrease)	($336,890)	$482,465	$145,575

Executive Budget Highlights

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $46,362 is for salary increases and $117,342 is for health insurance increases	$41,207	$122,497	$163,704
2. Removes 1.3 FTE positions and reduces funding for salaries and wages and operating expenses	($213,402)	$0	($213,402)
3. Adjusts funding for various operating expenses and grants	($21,203)	$601,085	$579,882
4. Adjusts funding sources agencywide	($200,000)	$200,000	$0

Other Bill Sections Recommended to be Added in the Executive Budget (As Detailed in Senate Bill No. 2080)

Additional income appropriation - Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

FTE position adjustments - Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

Upper Great Plains Transportation Institute - Budget No. 627
Senate Bill Nos. 2020 and 2080
Base Level Funding Changes

	Executive Budget Recommendation			
	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	54.98	$3,900,791	$18,175,657	$22,076,448
2017-19 Ongoing Funding Changes				
Base payroll changes	(9.80)	$56,508	($388,117)	($331,609)
Salary increase		11,670	34,692	46,362
Health insurance increase		29,537	87,805	117,342
Removes FTE positions and reduces funding for salaries and wages and operating expenses	(1.30)	(213,402)		(213,402)
Adjusts funding for operating expenses and grants		(21,203)	601,085	579,882
Reduces funding for equipment			(53,000)	(53,000)
Adjusts funding sources		(200,000)	200,000	0
Total ongoing funding changes	(11.10)	($336,890)	$482,465	$145,575
One-time funding items				
No one-time funding items				$0
Total one-time funding changes	0.00	$0	$0	$0
Total Changes to Base Level Funding	(11.10)	($336,890)	$482,465	$145,575
2017-19 Total Funding	43.88	$3,563,901	$18,658,122	$22,222,023

Other Sections in Upper Great Plains Transportation Institute - Budget No. 627

	Executive Budget Recommendation
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.

Department 627 - Upper Great Plains Transportation Institute

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$4,097,099	$750,000	$4,847,099
General fund reductions	(196,308)	(121,177)	(317,485)
Adjusted 2015-17 appropriations	$3,900,791	$628,823	$4,529,614
Executive Budget changes	(336,890)	(628,823)	(965,713)
2017-19 Executive Budget	$3,563,901	$0	$3,563,901

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for salaries and operating expenses	($196,308)	$0	($196,308)
Reduce funding for travel and consulting services	0	(121,177)	(121,177)
Total reductions	($196,308)	($121,177)	($317,485)
Percentage reduction to ongoing and one-time general fund appropriations	4.79%	16.16%	6.55%

2017-19 Executive Budget Changes to the Original and Adjusted Base Budgets

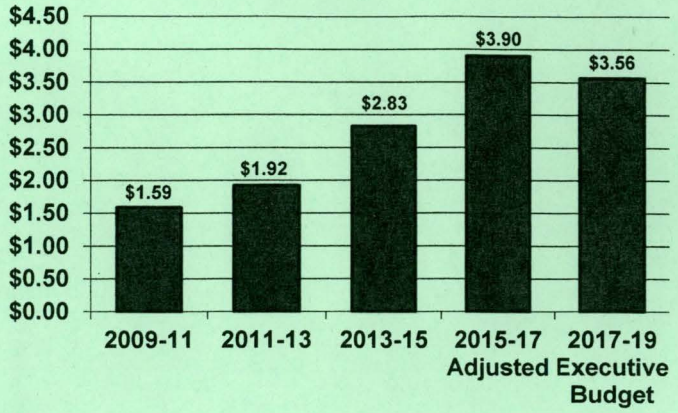
	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$56,508	$0	$56,508
Adds funding for recommended salary and benefit increases	41,207	0	41,207
Removes 1.3 FTE positions and reduces funding for salaries and operating expenses	(409,710)	196,308	(213,402)
Adjusts funding for various operating expenses and grants	(21,203)	0	(21,203)
Adjusts funding sources	(200,000)	0	(200,000)
Total	($533,198)	$196,308	($336,890)

Department 627 - Upper Great Plains Transportation Institute

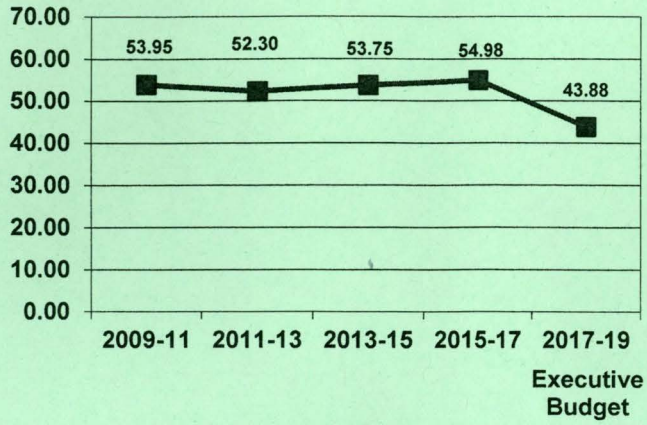
Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11

Agency Funding (in Millions)



FTE Positions



Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Executive Budget
Ongoing general fund appropriations	$1,589,793	$1,919,628	$2,826,824	$3,900,791	$3,563,901
Increase (decrease) from previous biennium	N/A	$329,835	$907,196	$1,073,967	($336,890)
Percentage increase (decrease) from previous biennium	N/A	20.7%	47.3%	38.0%	(8.6%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	20.7%	77.8%	145.4%	124.2%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. No major changes	$0

2013-15 Biennium

1. Added funding to match new federal grants	$750,000
2. Added 2 FTE positions	$349,908

2015-17 Biennium

1. Increased funding for rentals, leases, and professional services	$300,548
2. Increased funding to reflect anticipated decreases in federal grants and to aid in obtaining federal grants	$300,548
3. Added funding for a road and bridge asset management system	$793,000

2017-19 Biennium (Executive Budget Recommendation)

1. Removes 1.3 FTE positions and reduces funding for salaries and operating expenses	($213,402)
2. Adjusts funding sources	($200,000)

Department 628 - Branch Research Centers
Senate Bill Nos. 2020 and 2080

Executive Budget Comparison to Prior Biennium Appropriations

	FTE Positions	General Fund	Other Funds	Total
2017-19 Executive Budget	110.29	$17,765,103	$20,310,110	$38,075,213
2015-17 Adjusted Legislative Appropriations[1,2]	113.94	18,758,636	19,992,130	38,750,766
Increase (Decrease)	(3.65)	($993,533)	$317,980	($675,553)

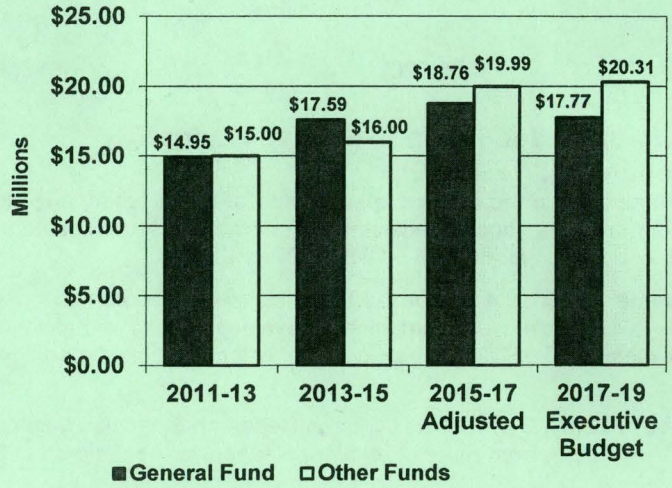
[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

[2]The number of FTE positions for the 2015-17 biennium does not reflect an adjustment of 6.35 FTE positions, from 113.94 to 120.29, pursuant to Section 15 of 2015 House Bill No. 1020, which authorizes the State Board of Higher Education to adjust FTE positions as needed subject to the availability of funds for institutions and entities under its control.

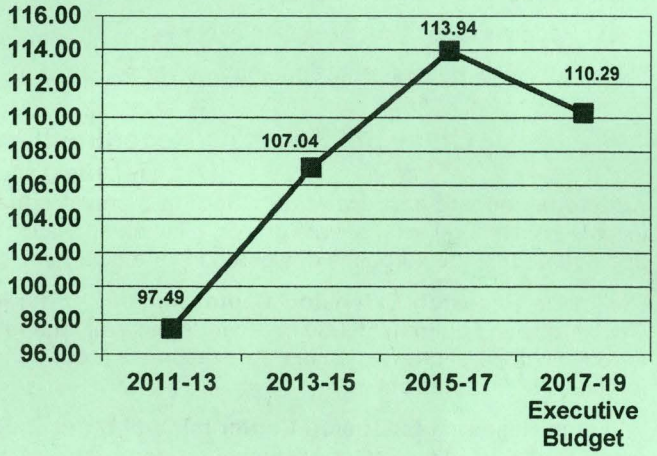
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Executive Budget	$17,765,103	$0	$17,765,103
2015-17 Adjusted Legislative Appropriations	18,483,636	275,000	18,758,636
Increase (Decrease)	($718,533)	($275,000)	($993,533)

Agency Funding



FTE Positions



Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Executive Budget	$17,765,103	$20,310,110	$38,075,213
2017-19 Base Level	18,483,636	19,817,130	38,300,766
Increase (Decrease)	($718,533)	$492,980	($225,553)

Executive Budget Highlights

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $81,051 is for salary increases and $334,855 is for health insurance increases	$303,670	$112,236	$415,906
Dickinson Research Center			
2. Reduces funding for salaries	($192,200)	$0	($192,200)
3. Increases funding for operating expenses	$64,473	$0	$64,473
4. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Central Grasslands Research Center			
5. Increases funding for salaries	$3,500	$0	$3,500
6. Reduces funding for operating expenses	($82,923)	$0	($82,923)

7. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Hettinger Research Center			
8. Reduces funding for salaries	($128,948)	$0	($128,948)
9. Increases funding for operating expenses	$42,344	$0	$42,344
10. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Langdon Research Center			
11. Reduces funding for salaries	($80,000)	$0	($80,000)
12. Increases funding for operating expenses	$28,353	$0	$28,353
13. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
North Central Research Center			
14. Reduces funding for salaries	($180,000)	$0	($180,000)
15. Increases funding for operating expenses	$104,822	$0	$104,822
16. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Williston Research Center			
17. Reduces funding for salaries	($24,760)	$0	($24,760)
18. Reduces funding for operating expenses	($84,107)	$0	($84,107)
19. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Carrington Research Center			
20. Reduces funding for salaries	($40,000)	$0	($40,000)
21. Reduces funding for operating expenses	($95,588)	$0	($95,588)
22. Additional budget reduction and funding adjustment	($103,620)	$50,000	($53,620)

Other Bill Sections Recommended to be Added in the Executive Budget (As Detailed in Senate Bill No. 2080)

Additional income appropriation - Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Dickinson Research Extension Center mineral rights income - Section 4 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.

Williston Research Extension Center mineral rights income - Section 5 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium.

Transfer authority - Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.

FTE position adjustments - Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

Branch Research Centers - Budget No. 628
Senate Bill Nos. 2020 and 2080
Base Level Funding Changes

	Executive Budget Recommendation			
	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	113.94	$18,483,636	$19,817,130	$38,300,766
2017-19 Ongoing Funding Changes				
Base payroll changes		$196,347	$30,744	$227,091
Salary increase		59,179	21,872	81,051
Health insurance increase		244,491	90,364	334,855
Increases funding for capital bond payments		104		104
Adjusts funding for salaries and removal of FTE positions	(3.65)	(642,408)		(642,408)
Adjusts funding for operating expenses		(22,626)		(22,626)
Additional budget reductions and funding adjustments		(553,620)	350,000	(203,620)
Total ongoing funding changes	(3.65)	($718,533)	$492,980	($225,553)
One-time funding items				
No one-time funding items				$0
Total one-time funding changes	0.00	$0	$0	$0
Total Changes to Base Level Funding	(3.65)	($718,533)	$492,980	($225,553)
2017-19 Total Funding	110.29	$17,765,103	$20,310,110	$38,075,213

Other Sections in Branch Research Centers - Budget No. 628

	Executive Budget Recommendation
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
Dickinson Research Extension Center mineral rights income	Section 4 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.
Williston Research Extension Center mineral rights income	Section 5 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium

Other Sections in Branch Research Centers - Budget No. 628

	Executive Budget Recommendation
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.

Department 628 - Branch Research Centers

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$19,798,447	$275,000	$20,073,447
General fund reductions	(1,314,811)	0	(1,314,811)
Adjusted 2015-17 appropriations	$18,483,636	$275,000	$18,758,636
Executive Budget changes	(718,533)	(275,000)	(993,533)
2017-19 Executive Budget	$17,765,103	$0	$17,765,103

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for salaries and wages	($682,592)	$0	($682,592)
Reduce funding for operating expenses	(632,219)	0	(632,219)
Total reductions	($1,314,811)	$0	($1,314,811)
Percentage reduction to ongoing and one-time general fund appropriations	6.64%	0.00%	6.55%

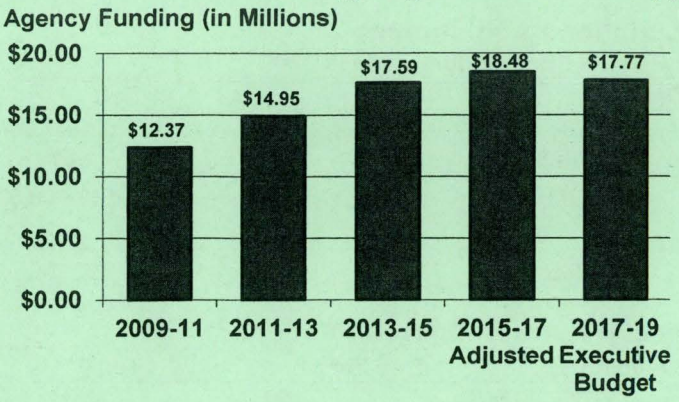
2017-19 Executive Budget Changes to the Original and Adjusted Base Budgets

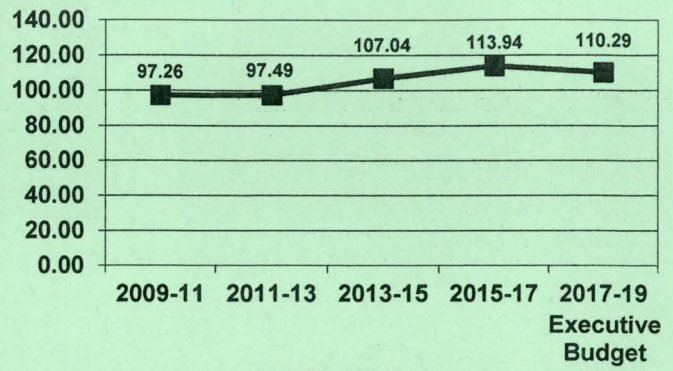
	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$196,347	$0	$196,347
Adds funding for recommended salary and benefit increases	303,670	0	303,670
Reduces funding for salaries, including removal of 3.65 FTE positions	(1,325,000)	682,592	(642,408)
Adjusts funding for operating expenses	(654,845)	632,219	(22,626)
Increases funding for capital bond payments	104	0	104
Additional budget reduction and funding adjustments	(553,620)	0	(553,620)
Total	($2,033,344)	$1,314,811	($718,533)

Department 628 - Branch Research Centers

Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11





Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Executive Budget
Ongoing general fund appropriations	$12,367,190	$14,945,208	$17,585,702	$18,483,636	$17,765,103
Increase (decrease) from previous biennium	N/A	$2,578,018	$2,640,494	$897,934	($718,533)
Percentage increase (decrease) from previous biennium	N/A	20.8%	17.7%	5.1%	(3.9%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	20.8%	42.2%	49.5%	43.6%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. Added funding for soil productivity and land management	$940,000
2. Added funding for infrastructure support	$100,000
3. Added funding to replace a reduction in oil-related revenue at the Dickinson Research Center	$800,000

2013-15 Biennium

1. Added funding for 4 new FTE positions, one each at the Central Grasslands Research Center, Hettinger Research Center, North Central Research Center, and Carrington Research Center	$650,000
2. Increased funding for operating expenses (Enhancing Research Capacity Initiative)	$560,000
3. Added funding for variety testing, crop pathology, and dryland crop improvement (Crop Initiative)	$360,000

2015-17 Biennium (Original Amounts)

1. Added funding for 1 animal science technical support FTE position for the Hettinger Research Center	$130,000
2. Added funding for 2 crop disease research FTE positions at the Williston Research Center	$330,000
3. Increased funding for operating expenses (this item was affected by agency budget reductions)	$210,000
4. Increased funding for equipment over $5,000	$550,000

2017-19 Biennium (Executive Budget Recommendation)

1. Reduces funding for salaries and wages, including the removal of 3.65 FTE positions	($642,408)
2. Additional budget reductions and funding adjustments	($553,620)

Department 630 - NDSU Extension Service
Senate Bill Nos. 2020 and 2080

Executive Budget Comparison to Prior Biennium Appropriations

	FTE Positions	General Fund	Other Funds	Total
2017-19 Executive Budget	252.98	$26,878,116	$26,768,589	$53,646,705
2015-17 Adjusted Legislative Appropriations[1,2]	263.91	27,837,062	25,826,708	53,663,770
Increase (Decrease)	(10.93)	($958,946)	$941,881	($17,065)

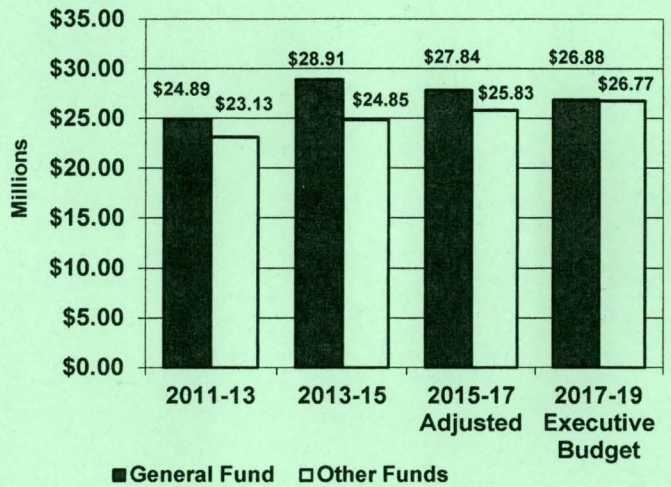
[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

[2]The number of FTE positions for the 2015-17 beinnium does not reflect an adjustment of 2.07 FTE positions, from 263.91 to 265.78, pursuant to Section 15 of 2015 House Bill No. 1020 and North Dakota Century Code Section 4-08-10 which authorizes the State Board of Higher Education to adjust FTE positions for the North Dakota State University (NDSU) Extension Service.

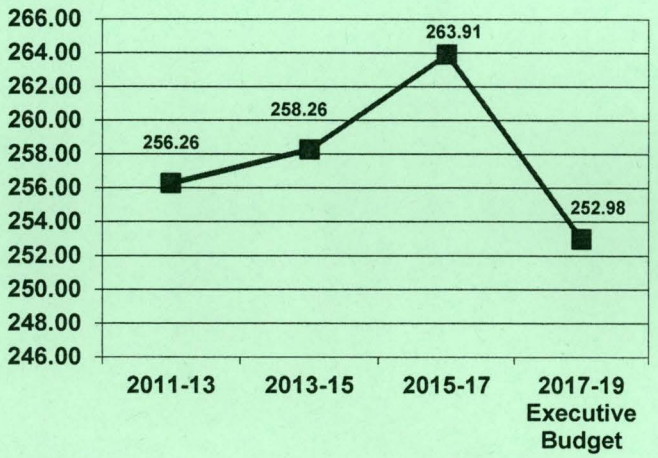
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Executive Budget	$26,878,116	$0	$26,878,116
2015-17 Adjusted Legislative Appropriations	27,824,562	12,500	27,837,062
Increase (Decrease)	($946,446)	($12,500)	($958,946)

Agency Funding



FTE Positions



Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Executive Budget	$26,878,116	$26,768,589	$53,646,705
2017-19 Base Level	27,824,562	25,826,708	53,651,270
Increase (Decrease)	($946,446)	$941,881	($4,565)

Executive Budget Highlights

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $192,092 is for salary increases and $779,440 is for health insurance increases	$495,078	$476,454	$971,532
2. Reduces funding for salaries, including removal of 10.93 FTE positions	($1,619,206)	$200,000	($1,419,206)
3. Adjusts funding for operating expenses	$175,557	$0	$175,557
4. Reduces funding for equipment	($300,000)	$0	($300,000)

Other Bill Sections Recommended to be Added in the Executive Budget (As Detailed in Senate Bill No. 2080)

Additional income appropriation - Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Transfer authority - Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.

FTE position adjustments - Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

House Bill No. 1038 - Caregiver training pilot project - Provides a one-time general fund appropriation of $197,580 to the NDSU Extension Service to establish a pilot project to expand local training programs to include family caregiver training.

NDSU Extension Service - Budget No. 630
Senate Bill Nos. 2020 and 2080
Base Level Funding Changes

	Executive Budget Recommendation			
	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	263.91	$27,824,562	$25,826,708	$53,651,270
2017-19 Ongoing Funding Changes				
Base payroll changes		$302,125	$265,427	$567,552
Salary increase		97,887	94,205	192,092
Health insurance increase		397,191	382,249	779,440
Reduces funding for salaries	(10.93)	(1,619,206)	200,000	(1,419,206)
Adjusts funding for other operating expenses		175,557		175,557
Reduces funding for equipment		(300,000)		(300,000)
Total ongoing funding changes	(10.93)	($946,446)	$941,881	($4,565)
One-time funding items				
No one-time funding items				$0
Total one-time funding changes	0.00	$0	$0	$0
Total Changes to Base Level Funding	(10.93)	($946,446)	$941,881	($4,565)
2017-19 Total Funding	252.98	$26,878,116	$26,768,589	$53,646,705

Other Sections in NDSU Extension Service - Budget No. 630

	Executive Budget Recommendation
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.

Department 630 - NDSU Extension Service

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$29,775,688	$12,500	$29,788,188
General fund reductions	(1,951,126)	0	(1,951,126)
Adjusted 2015-17 appropriations	$27,824,562	$12,500	$27,837,062
Executive Budget changes	(946,446)	(12,500)	(958,946)
2017-19 Executive Budget	$26,878,116	$0	$26,878,116

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for salaries and wages	($698,000)	$0	($698,000)
Reduce funding for NDSU Extension Service operating expenses	(1,173,688)	0	(1,173,688)
Reduce funding for Soil Conservation Committee operating expenses	(79,438)	0	(79,438)
Total reductions	($1,951,126)	$0	($1,951,126)
Percentage reduction to ongoing and one-time general fund appropriations	6.55%	0.00%	6.55%

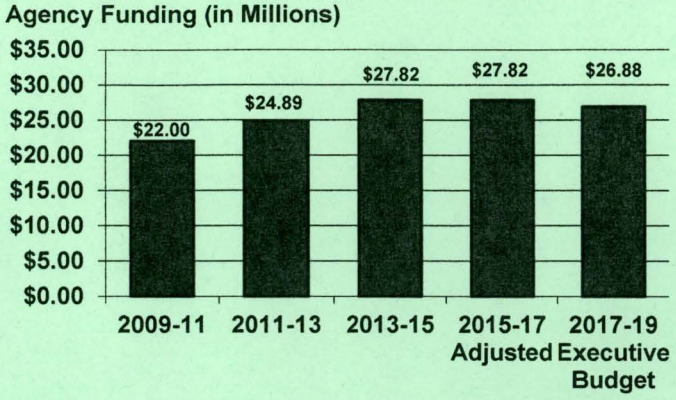
2017-19 Executive Budget Changes to the Original and Adjusted Base Budgets

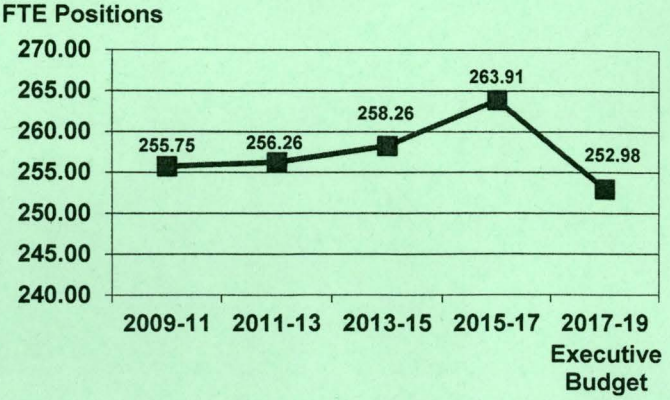
	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$302,125	$0	$302,125
Adds funding for recommended salary and benefits increases	495,078	0	495,078
Reduces funding for salaries, including removal of 10.93 FTE positions	(2,317,206)	698,000	(1,619,206)
Increases funding for NDSU Extension Service operating expenses	(956,289)	1,173,688	217,399
Reduces funding for Soil Conservation Committee operating expenses	(121,280)	79,438	(41,842)
Reduces funding for equipment	(300,000)	0	(300,000)
Total	($2,897,572)	$1,951,126	($946,446)

Department 630 - NDSU Extension Service

Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11





Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Executive Budget
Ongoing general fund appropriations	$22,000,412	$24,885,644	$27,824,265	$27,824,562	$26,878,116
Increase (decrease) from previous biennium	N/A	$2,885,232	$2,938,621	$297	($946,446)
Percentage increase (decrease) from previous biennium	N/A	13.1%	11.8%	0.0%	(3.4%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	13.1%	26.5%	26.5%	22.2%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. Added funding for State Board of Agricultural Research and Education priorities, including technical salary support, soil health and land management, and livestock stewardship	$1,390,000
2. Increased funding for soil conservation district grants to provide a total of $987,800	$250,000

2013-15 Biennium

1. Added funding for 1 area livestock specialist FTE position and 1 crop protection technician FTE position	$370,000
2. Added funding for the Rural Leadership North Dakota program	$125,000
3. Added funding for summer internships	$250,000
4. Increased funding for soil conservation district grants to provide a total of $1,137,800	$150,000
5. Added funding for operating support for livestock production economics	$150,000

2015-17 Biennium (original amounts)

1. Added funding for 1 livestock specialist FTE position at the Hettinger Research Extension Center	$240,000
2. Increased funding for soil conservation district grants to provide a total of $1,212,800 (this item was affected by agency budget reductions)	$75,000

2017-19 Biennium (Executive Budget Recommendation)

1. Reduces funding for salaries, including removal of 10.93 FTE positions	($1,619,206)
2. Adjusts funding for operating expenses	$175,557
3. Reduces funding for equipment	($300,000)

Department 638 - Northern Crops Institute
Senate Bill Nos. 2020 and 2080

Executive Budget Comparison to Prior Biennium Appropriations

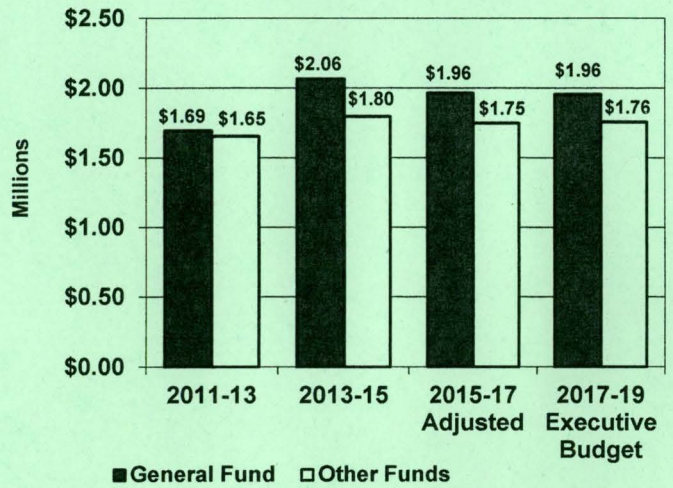
	FTE Positions	General Fund	Other Funds	Total
2017-19 Executive Budget	11.80	$1,955,702	$1,757,743	$3,713,445
2015-17 Adjusted Legislative Appropriations[1]	12.00	1,964,467	1,747,735	3,712,202
Increase (Decrease)	(0.20)	($8,765)	$10,008	$1,243

[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

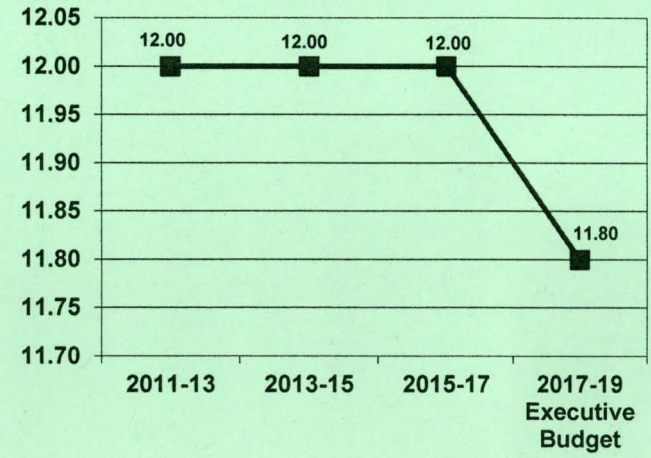
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Executive Budget	$1,955,702	$0	$1,955,702
2015-17 Adjusted Legislative Appropriations	1,964,467	0	1,964,467
Increase (Decrease)	($8,765)	$0	($8,765)

Agency Funding



FTE Positions



Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Executive Budget	$1,955,702	$1,757,743	$3,713,445
2017-19 Base Level	1,964,467	1,747,735	3,712,202
Increase (Decrease)	($8,765)	$10,008	$1,243

Executive Budget Highlights

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $9,865 is for salary increases and $34,344 is for health insurance increases	$37,361	$6,848	$44,209
2. Reduces funding for equipment	($200,000)	$0	($200,000)
3. Restores funding for operating expenses	$137,691	$0	$137,691

Other Bill Sections Recommended to be Added in the Executive Budget (As Detailed in Senate Bill No. 2080)

Additional income appropriation - Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Transfer authority - Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.

FTE position adjustments - Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

Northern Crops Institute - Budget No. 638
Senate Bill Nos. 2020 and 2080
Base Level Funding Changes

	Executive Budget Recommendation			
	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	12.00	$1,964,467	$1,747,735	$3,712,202
2017-19 Ongoing Funding Changes				
Base payroll changes	(0.20)	$26,399	$3,160	$29,559
Salary increase		8,337	1,528	9,865
Health insurance increase		29,024	5,320	34,344
Reduces funding for equipment		(200,000)		(200,000)
Reduces funding for travel		(10,216)		(10,216)
Restores funding for operating expenses		137,691		137,691
Total ongoing funding changes	(0.20)	($8,765)	$10,008	$1,243
One-time funding items				
No one-time funding items				$0
Total one-time funding changes	0.00	$0	$0	$0
Total Changes to Base Level Funding	(0.20)	($8,765)	$10,008	$1,243
2017-19 Total Funding	11.80	$1,955,702	$1,757,743	$3,713,445

Other Sections in Northern Crops Institute - Budget No. 638

	Executive Budget Recommendation
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute, and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.

Department 638 - Northern Crops Institute

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$2,102,158	$0	$2,102,158
General fund reductions	(137,691)	0	(137,691)
Adjusted 2015-17 appropriations	$1,964,467	$0	$1,964,467
Executive Budget changes	(8,765)	0	(8,765)
2017-19 Executive Budget	$1,955,702	$0	$1,955,702

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for operating expenses	($137,691)	$0	($137,691)
Total reductions	($137,691)	$0	($137,691)
Percentage reduction to ongoing and one-time general fund appropriations	6.55%	0.00%	6.55%

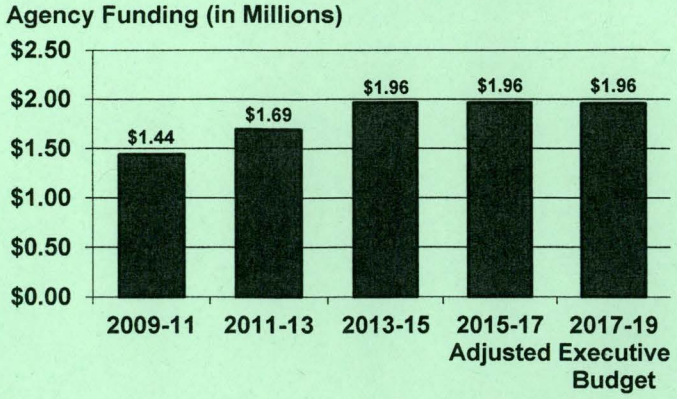
2017-19 Executive Budget Changes to the Original and Adjusted Base Budgets

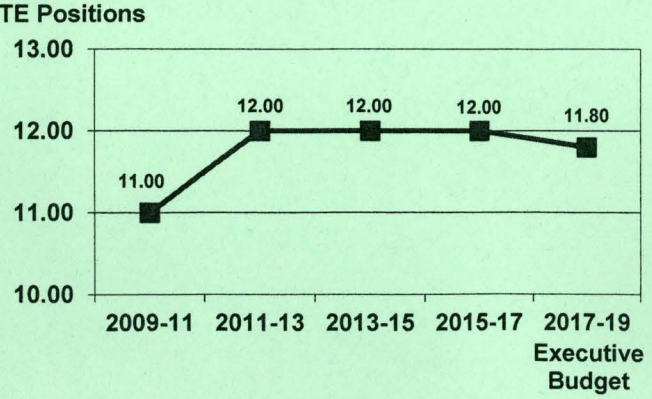
	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$26,399	$0	$26,399
Adds funding for recommended salary and benefit increases	37,361	0	37,361
Reduces funding for equipment	(200,000)	0	(200,000)
Reduces funding for travel	(10,216)	0	(10,216)
Restores funding for operating expenses	0	137,691	137,691
Total	($146,456)	$137,691	($8,765)

Department 638 - Northern Crops Institute

Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11





Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Executive Budget
Ongoing general fund appropriations	$1,439,221	$1,692,582	$1,964,861	$1,964,467	$1,955,702
Increase (decrease) from previous biennium	N/A	$253,361	$272,279	($394)	($8,765)
Percentage increase (decrease) from previous biennium	N/A	17.6%	16.1%	0.0%	(0.4%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	17.6%	36.5%	36.5%	35.9%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. Adjusted the funding source of 1 feed production center manager FTE position	$202,321

2013-15 Biennium

1. Increased funding for equipment	$30,780

2015-17 Biennium

1. No major changes	$0

2017-19 Biennium (Executive Budget Recommendation)

1. Reduces funding for equipment	($200,000)
2. Restores funding for operating expenses	$137,691

Department 640 - NDSU Main Research Center
Senate Bill Nos. 2020 and 2080

Executive Budget Comparison to Prior Biennium Appropriations

	FTE Positions	General Fund	Other Funds	Total
2017-19 Executive Budget	336.12	$51,329,311	$59,212,281	$110,541,592
2015-17 Adjusted Legislative Appropriations[1,2]	353.85	55,198,683	78,098,525	133,297,208
Increase (Decrease)	(17.73)	($3,869,372)	($18,886,244)	($22,755,616)

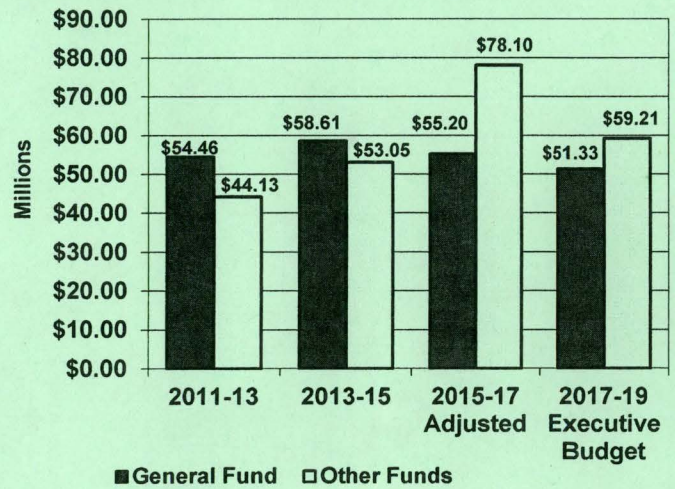
[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

[2]The number of FTE positions for the 2015-17 biennium does not reflect an adjustment of 7.27 positions, from 353.85 to 361.12, pursuant to Section 15 of 2015 House Bill No. 1020 and North Dakota Century Code Section 4-05.1-05, which authorizes the State Board of Higher Education to adjust FTE positions for the Main Research Center.

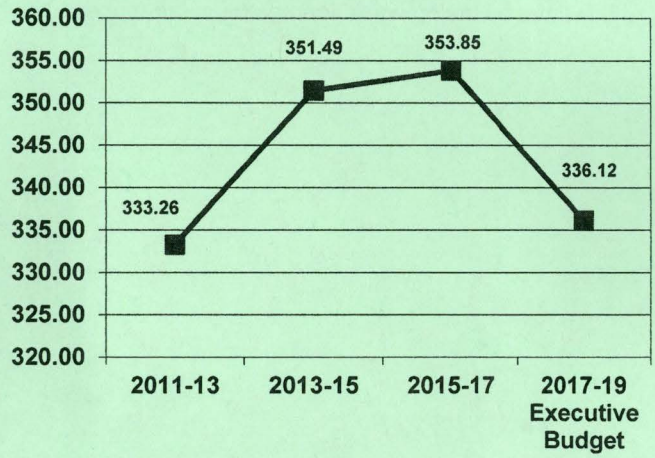
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Executive Budget	$51,329,311	$0	$51,329,311
2015-17 Adjusted Legislative Appropriations	53,581,255	1,617,428	55,198,683
Increase (Decrease)	($2,251,944)	($1,617,428)	($3,869,372)

Agency Funding



FTE Positions



Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Executive Budget	$51,329,311	$59,212,281	$110,541,592
2017-19 Base Level	53,581,255	56,948,525	110,529,780
Increase (Decrease)	($2,251,944)	$2,263,756	$11,812

Executive Budget Highlights

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $284,521 is for salary increases and $1,034,454 is for health insurance increases	$851,324	$467,651	$1,318,975
2. Reduces funding for salaries and wages, including removal of 17.73 FTE positions	($1,946,615)	$0	($1,946,615)
3. Reduces funding for operating expenses	($355,589)	$0	($355,589)
4. Restores funding for equipment	$260,000	$0	$260,000
5. Additional budget reductions and funding adjustments	($1,700,000)	$1,600,000	($100,000)

Other Bill Sections Recommended to be Added in the Executive Budget (As Detailed in Senate Bill No. 2080)

Additional income appropriation - Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Transfer authority - Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.

FTE position adjustments - Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.

Exemption - Section 9 allows the Main Research Center to continue unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

NDSU Main Research Center - Budget No. 640
Senate Bill Nos. 2020 and 2080
Base Level Funding Changes

	Executive Budget Recommendation			
	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	353.85	$53,581,255	$56,948,525	$110,529,780
2017-19 Ongoing Funding Changes				
Base payroll changes		$638,645	$196,105	$834,750
Salary increase		183,642	100,879	284,521
Health insurance increase		667,682	366,772	1,034,454
Increases funding for capital bond payments		291		291
Reduces funding for salaries and wages	(17.73)	(1,946,615)		(1,946,615)
Reduces funding for operating expenses		(355,589)		(355,589)
Restores funding for equipment		260,000		260,000
Additional budget reductions and funding adjustments		(1,700,000)	1,600,000	(100,000)
Total ongoing funding changes	(17.73)	($2,251,944)	$2,263,756	$11,812
One-time funding items				
No one-time funding items				$0
Total one-time funding changes	0.00	$0	$0	$0
Total Changes to Base Level Funding	(17.73)	($2,251,944)	$2,263,756	$11,812
2017-19 Total Funding	336.12	$51,329,311	$59,212,281	$110,541,592

Other Sections in NDSU Main Research Center - Budget No. 640

	Executive Budget Recommendation
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.

Other Sections in NDSU Main Research Center - Budget No. 640

	Executive Budget Recommendation
Exemption	Section 9 allows the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.

Department 640 - NDSU Main Research Center

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$57,345,112	$1,722,500	$59,067,612
General fund reductions	(3,763,857)	(105,072)	(3,868,929)
Adjusted 2015-17 appropriations	$53,581,255	$1,617,428	$55,198,683
Executive Budget changes	(2,251,944)	(1,617,428)	(3,869,372)
2017-19 Executive Budget	$51,329,311	$0	$51,329,311

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for salaries and wages	($2,374,935)	$0	($2,374,935)
Reduce funding for operating expenses	(1,128,922)	0	(1,128,922)
Reduce funding for equipment	(260,000)	0	(260,000)
Reduce funding for rural leadership project	0	(8,748)	(8,748)
Reduce funding for flooded lands study	0	(4,548)	(4,548)
Reduce funding for seed cleaning plants	0	(91,776)	(91,776)
Total reductions	($3,763,857)	($105,072)	($3,868,929)
Percentage reduction to ongoing and one-time general fund appropriations	6.56%	6.10%	6.55%

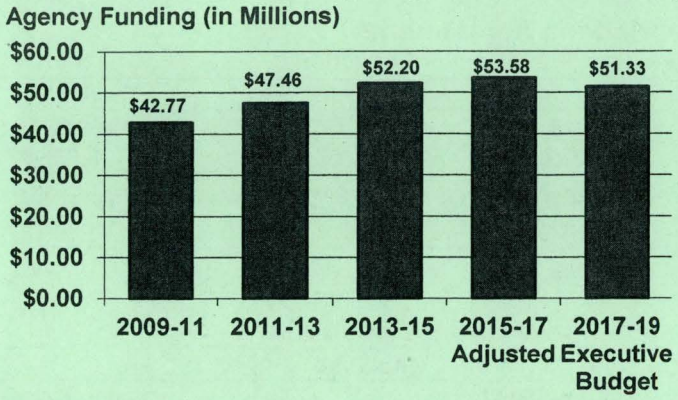
2017-19 Executive Budget Changes to the Original and Adjusted Base Budgets

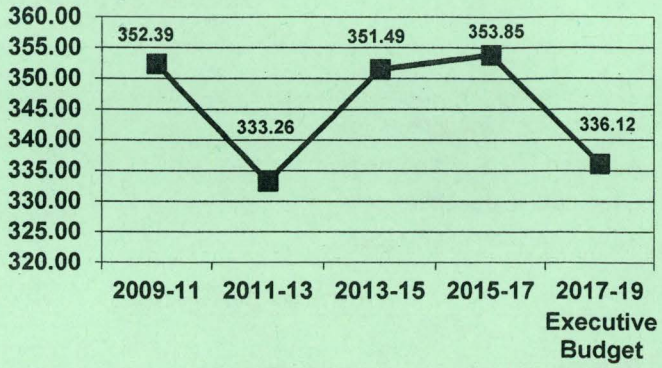
	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$638,645	$0	$638,645
Adds funding for recommended salary and benefits increases	851,324	0	851,324
Reduces funding for salaries and wages, including removal of 17.73 FTE positions	(4,321,550)	2,374,935	(1,946,615)
Reduces funding for operating expenses	(1,484,511)	1,128,922	(355,589)
Restores funding for equipment	0	260,000	260,000
Increases funding for capital bond payments	291	0	291
Additional budget reductions and funding adjustments	(1,700,000)	0	(1,700,000)
Total	($6,015,801)	$3,763,857	($2,251,944)

Department 640 - NDSU Main Research Center

Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11





Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Executive Budget
Ongoing general fund appropriations	$42,767,151	$47,464,748	$52,199,521	$53,581,255	$51,329,311
Increase (decrease) from previous biennium	N/A	$4,697,597	$4,734,773	$1,381,734	($2,251,944)
Percentage increase (decrease) from previous biennium	N/A	11.0%	10.0%	2.6%	(4.2%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	11.0%	22.1%	25.3%	20.0%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. Added funding and 2 technician FTE positions to improve animal productivity and livestock stewardship	$240,000
2. Added funding and 2 FTE positions to enhance canola crop development efforts	$210,000
3. Added funding for State Board of Agricultural Research and Education priorities, including greenhouse utilities, soil productivity and land management, and operations and infrastructure support	$2,543,622

2013-15 Biennium

1. Added funding for 3 FTE positions, including 1 nematologist, 1 nematology technician, and 1 crop development technician	$655,000

2015-17 Biennium (Original Amounts)

1. Added funding for 2 bioinformatics FTE positions	$800,000
2. Added funding for precision agriculture operating expenses and grants	$600,000
3. Increased funding for equipment (this item was affected by agency budget reductions)	$550,000

2017-19 Biennium (Executive Budget Recommendation)

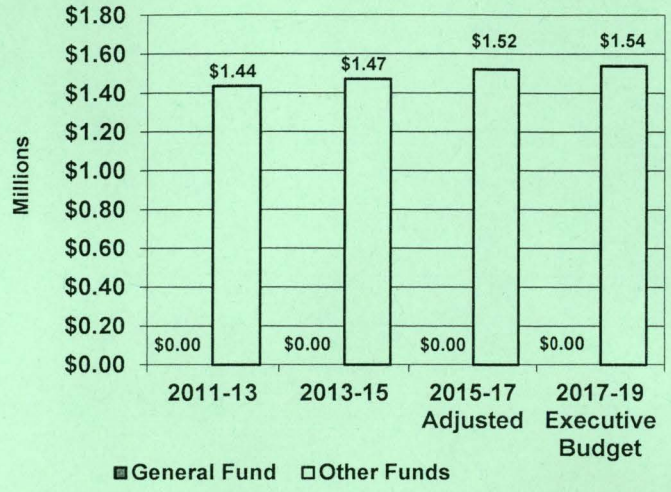
1. Reduces funding for salaries and wages, including removal of 17.73 FTE positions	($1,946,615)
2. Reduces funding for operating expenses	($355,589)
3. Restores funding for equipment	$260,000
4. Additional budget reductions and funding adjustments	($1,700,000)

Department 649 - Agronomy Seed Farm
Senate Bill Nos. 2020 and 2080

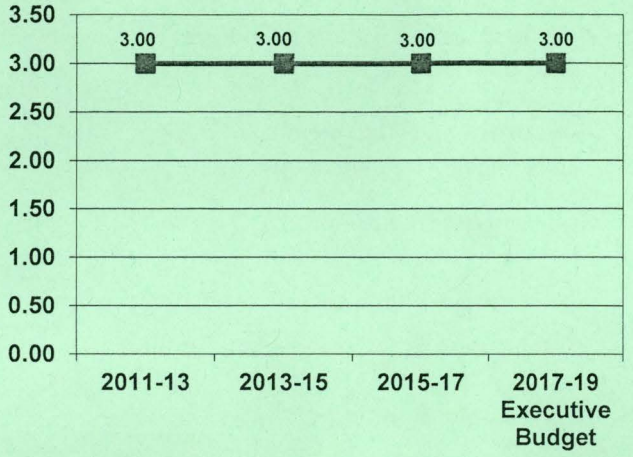
Executive Budget Comparison to Prior Biennium Appropriations

	FTE Positions	General Fund	Other Funds	Total
2017-19 Executive Budget	3.00	$0	$1,538,795	$1,538,795
2015-17 Adjusted Legislative Appropriations[1]	3.00	0	1,521,007	1,521,007
Increase (Decrease)	0.00	$0	$17,788	$17,788

Agency Funding



FTE Positions



Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Executive Budget	$0	$1,538,795	$1,538,795
2017-19 Base Level	0	1,521,007	1,521,007
Increase (Decrease)	$0	$17,788	$17,788

Executive Budget Highlights

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $2,044 relates to salary increases and $8,587 is for health insurance increases	$0	$10,631	$10,631

Other Sections in Bill

Additional income appropriation - Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

FTE position adjustments - Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

Agronomy Seed Farm - Budget No. 649
Senate Bill Nos. 2020 and 2080
Base Level Funding Changes

	Executive Budget Recommendation			
	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	3.00	$0	$1,521,007	$1,521,007
2017-19 Ongoing Funding Changes				
Base payroll changes			$7,157	$7,157
Salary increase			2,044	2,044
Health insurance increase			8,587	8,587
Total ongoing funding changes	0.00	$0	$17,788	$17,788
One-time funding items				
No one-time funding items				$0
Total one-time funding changes	0.00	$0	$0	$0
Total Changes to Base Level Funding	0.00	$0	$17,788	$17,788
2017-19 Total Funding	3.00	$0	$1,538,795	$1,538,795

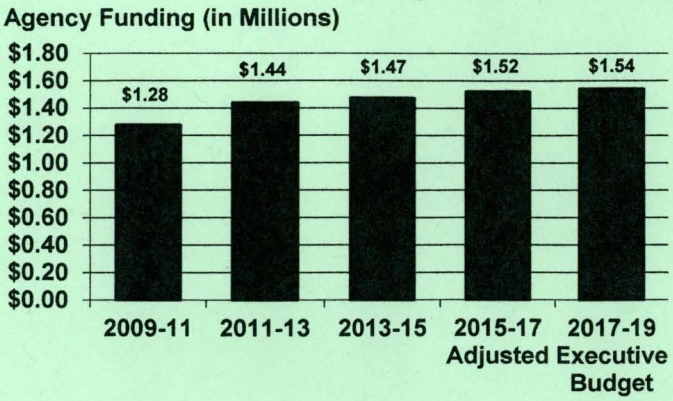
Other Sections in Agronomy Seed Farm - Budget No. 649

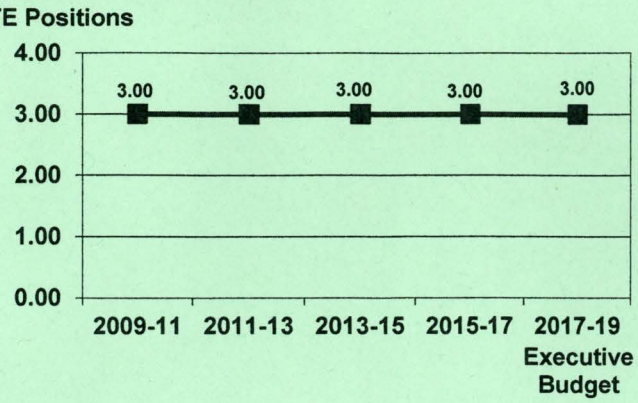
	Executive Budget Recommendation
Additional income appropriation	Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.

Department 649 - Agronomy Seed Farm

Historical Appropriations Information

Ongoing Other Funds Appropriations Since 2009-11





Ongoing Other Funds Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Executive Budget
Ongoing other funds appropriations	$1,275,238	$1,435,168	$1,471,759	$1,521,007	$1,538,795
Increase (decrease) from previous biennium	N/A	$159,930	$36,591	$49,248	$17,788
Percentage increase (decrease) from previous biennium	N/A	12.5%	2.5%	3.3%	1.2%
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	12.5%	15.4%	19.3%	20.7%

Major Increases (Decreases) in Ongoing Other Funds Appropriations

2011-13 Biennium

1. Increased funding for equipment $127,000

2013-15 Biennium

1. No major changes $0

2015-17 Biennium

1. No major changes $0

2017-19 Biennium (Executive Budget Recommendation)

1. No major changes $0

SB 2020/2080
(UGPTI)
1-18-17
#1

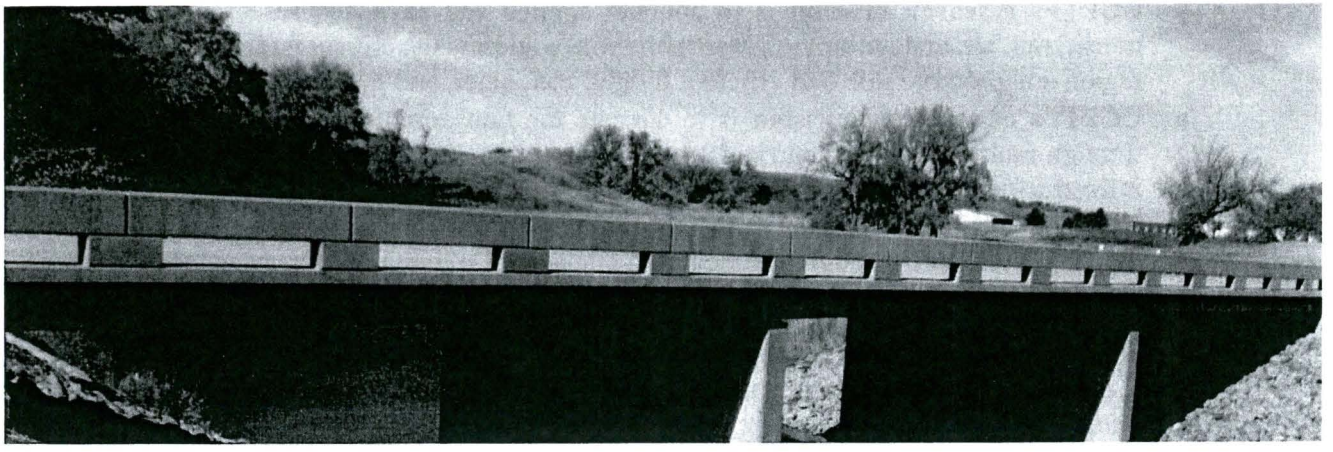
2017–19 BIENNIAL BUDGET REQUEST

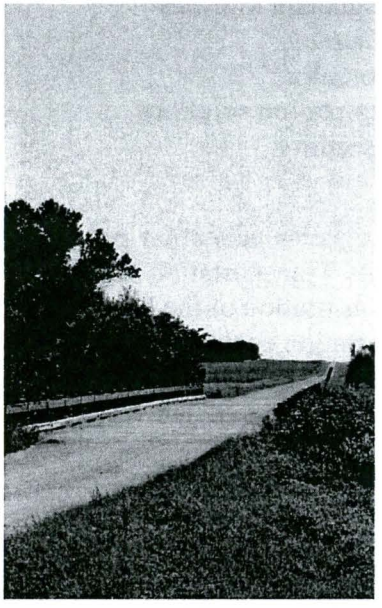
UPPER GREAT PLAINS TRANSPORTATION INSTITUTE – AGENCY 627
DENVER TOLLIVER, DIRECTOR

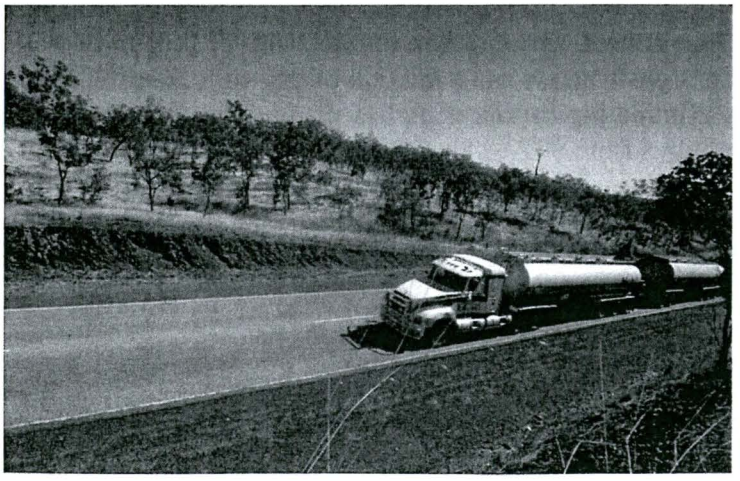
SENATE APPROPRIATIONS COMMITTEE HEARING
SENATOR RAY HOLMBERG, CHAIRMAN

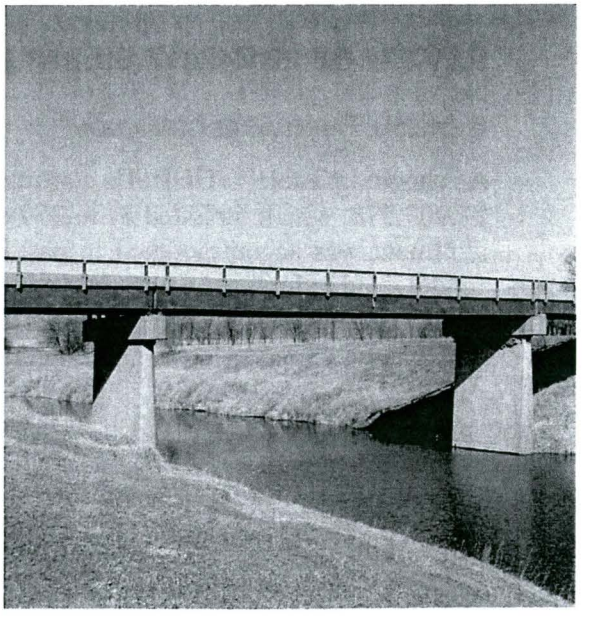
JANUARY 18, 2017

NDSU NORTH DAKOTA STATE UNIVERSITY









AGENCY OVERVIEW

The Upper Great Plains Transportation Institute was established at North Dakota State University in 1967 by the North Dakota Legislature to foster a better understanding of transportation's role in the State's economy.

- UGPTI's **research mission** is to conduct applied and advanced research in highway, transit, rail, air, and multimodal transportation to address the critical issues of the State and region and promote safe and efficient freight, passenger, and personal transportation.
- UGPTI's **educational mission** is to educate the transportation workforce of tomorrow through multidisciplinary curricula that focus on transportation economics, management, infrastructure planning, mobility, and supply chain logistics.
- UGPTI's **workforce development mission** is to improve the skills and knowledge of the existing workforce through technical and managerial training and the transfer of research results to practitioners.

UGPTI's multimodal research program provides timely and critical information to the North Dakota Legislature, state agencies, shippers, businesses, counties, townships, cities, and tribal governments. Some of UGPTI's research focus areas are:

- Road infrastructure planning
- Highway and motor carrier safety
- Small urban and rural transit
- Urban traffic analysis
- Transportation information technology
- Agricultural freight and logistics
- Supply chain planning
- Railroad transportation
- Intelligent transportation solutions
- Transportation security

UGPTI coordinates NDSU's multidisciplinary Transportation and Logistics education program and offers extensive training and workforce development through its Transportation Learning Network and Local Technical Assistance Program. UGPTI is the lead institution of the Mountain-Plains Consortium (MPC), a competitively selected university transportation center sponsored by the U.S. Department of Transportation. The consortium includes Colorado State University, South Dakota State University, University of Colorado Denver, University of Denver, University of Utah, Utah State University, and University of Wyoming.

REVIEW OF 2015-2017 BIENNIUM

GENERAL FUND APPROPRIATION

As shown in Table 1, UGPTI's starting general fund appropriation for the 2015-17 biennium was $4,983,378, which included $136,279 of carryover funds and $750,000 of one-time funding. The allotment was accommodated in part by eliminating certain activities planned for the one-time funding and reducing the one-time expenditures from $750,000 to $628,823. The remainder of the allotment effectively decreased UGPTI's base funding by $317,485 from $4,097,099 to $3,779,614. Considering the allotment, UGPTI's cumulative general fund expenditures at the end

of the biennium (June 30, 2017) are projected to be $4,416,208, reflecting an ending fund balance of $128,507.

Table 1. Budgeted and Actual Expenditures for the 2015-2017 Biennium: Upper Great Plains Transportation Institute			
Funds	**Biennium Budget**	**Post-Allotment Budget**	**Projected Expenditures***
General Funds – Original	$4,097,099	$3,779,614	$3,651,106
2011-2013 Carryover	$136,279	$136,279	$136,279
One-Time Appropriation	$750,000	$628,823	$628,823
Federal Funds	$12,162,945	$12,162,945	$9,517,544
Special/Other Funds	$6,012,712	$6,012,712	$5,147,393
	*Estimated expenditures through June 30, 2017		

ONE-TIME APPROPRIATION

As shown in Table 1, the legislature provided one-time funding of $750,000 to update the county and township road study. In addition to updating the 2014 analysis, the one-time funding was used for data collection—i.e., to count and classify truck traffic at various locations throughout the State, assess road surface conditions, and determine base and soil support levels. Using non-destructive testing methods and ground penetrating radar, soil and material profiles were developed for paved roads in oil producing counties and for major county roads throughout the State on a sample basis. These measurements have improved the reliability of UGPTI's road investment estimates and allowed more accurate assessments of the miles of road needing reconstruction. Moreover, this effort has allowed UGPTI to create an important database for county road planning. The results of UGPTI's updated study were presented to interim legislative committees in 2016 and the information and traffic forecasts from that study were made available to counties for planning purposes.

FEDERAL FUNDS

UGPTI was authorized to collect and spend roughly $12 million of federal funds in the 2015-17 biennium (Table 1). This request was based on historical funding levels, short-term forecasts of federal program activities, and expected levels of competition from other universities and consultants. Forecasting the receipt of federal grants is not an exact science and involves considerable uncertainty. As shown in Table 1, UGPTI expects to spend $9,517,544 of federal funds by June 30, 2016. Unspent federal funds will carry over to the next biennium, as most grants can be utilized over a multiyear time frame.

Most of UGPTI's federal funding comes from the Office of the Secretary of Transportation (OST) and three agencies within the U.S. Department of Transportation: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Federal Motor Carrier Safety Administration (FMCSA).

Non-Federal Grants and Contracts

UGPTI's authority to collect and expend other funds in the 2015-17 biennium is $6,012,712 (Table 1). As of June 30, 2017 UGPTI expects to spend $5,147,393 of special and other non-federal funds.

2017-2019 BUDGET REQUESTS

The Upper Great Plains Transportation Institute's 2017-19 budget requests are summarized in Table 2, along with UGPTI's 2015-17 budget authority. Overall, the SBHE's approved request for general fund appropriation is 17.9% less than in 2015-17, which is due largely to the additional 5% cut in general funds and the potential loss of one-time funding.

Table 2. Comparison of Post-Allotment Budget to the SBHE's 2017-19 Budget Request for the Upper Great Plains Transportation Institute

Description	Post-Allotment Budget 2015-17	SBHE Requested Budget 2017-2019	2017-2019 Requested	
			Increase (Decrease)	% Change
Core Program	$22,705,271	$22,058,319	-$646,952	-2.90%
Total Major Programs	$22,705,271	$22,058,319	-$646,952	-2.90%
UGPTI	$22,705,271	$22,058,319	-$646,952	-2.90%
Total Line Items	$22,705,271	$22,058,319	-$646,952	-2.90%
General Fund	$4,529,614	$3,722,694	-$806,920	-17.9%
Federal Funds	$12,162,945	$12,233,862	$70,917	0.58%
Special Funds	$6,012,712	$6,101,763	$89,051	1.48%
Total Funding Source	**$22,705,271**	**$22,058,319**	**-$646,952**	**-2.90%**

In December of 2016, the results of a national competition for University Transportation Centers (UTC) grants were announced. In this competition, the U.S. Department of Transportation received 212 applications. The Upper Great Plains Transportation Institute was selected as the Region 8 center. In addition, UGPTI was a partner in a second winning UTC proposal that provides additional funding. These grants extend for five years.

The regional center grant requires a dollar-for-dollar match of non-federal funds. Moreover, the size of the UTC grant is programmed to increase during the FAST Act, thus increasing the match requirement each year. From fiscal year 2017-18 through 2021-22, UGPTI must match $12.61 million in federal grants. Although part of the match is provided by partnering MPC universities, UGPTI faces an unprecedented match requirement for federal funds.

As shown in Table 3, UGPTI requests an increase of $1,734,710 in general funds in addition to the Executive Recommendation. The details and rationales for this request are presented below.

REQUEST 1: RESTORATION OF BASE BUDGET

UGPTI's first request is to restore its base budget to the original 2015-17 appropriation level prior to the allotment. The base budget gives the director and staff the flexibility to identify emerging transportation trends that will impact North Dakota and provide information to the Executive and Legislative branches to enable them to develop insightful strategies and policies.

Table 3. Comparison of the SBHE's Approved 2017-19 Budget Request for the Upper Great Plains Transportation Institute to the Executive Recommendation

	SBHE Approved 2017-19 Budget Request	2017-19 Executive Recommendation	Variance
Base Funding			
General Fund Requested	$3,722,694	$3,563,901	-$158,793
Federal Funds	$12,233,862	$12,319,272	$85,410
Special Funds	$6,101,763	$6,338,850	$237,087
Optional Packages			
Restoration of 10% Reduction	$409,710	$0	-$409,710
Continuation of County Road and Bridge Infrastructure Study	$750,000	$0	$-750,000
Rail Freight/Safety	$325,000	$0	-$325,000
Motor Carrier Safety	$250,000	$0	-$250,000
Total Requested vs. Executive Recommendation	$23,793,029	$22,222,023	-$1,571,006

Rationale 1: Rapid Pace of Technological Change

Transportation (driven by advances in telecommunications and technology) is changing at "warp speed." Assisted driving and quasi- and fully-autonomous vehicles are only part of the wave of changes that will impact North Dakota in the future. Robotic freight yards, quasi- and fully-autonomous freight trains and commercial motor vehicles, and truck platooning are emerging realities. Connected vehicle (CV) technologies (in which vehicles communicate with each other and roadway devices) are operational and being tested in several states. In addition to offering great efficiencies and safety benefits, CVs generate massive amounts of data, such as location, speed, and vehicle performance. The volume of data that CVs generate poses opportunities and challenges in data analysis that have never been experienced. In the future, "big data" will radically change the way transportation planning is done.

Electric vehicles will become part of the vehicle mix in major metropolitan centers, saving energy, and reducing greenhouse gas emissions. More fuel efficient traditional vehicles (with internal combustion engines) will do the same. Wireless roadside inspections will save trucks time while maximizing the use of scarce enforcement resources. "Smart vehicles" and "smart infrastructure" will provide capabilities only dreamed of a few years ago. Research and development is proceeding

at a pace that make stable planning and implementation guidelines a thing of the past. With huge private sector investments in R & D, prospects are changing from year to year.

In this rapidly changing but opportunistic environment, the State needs an objective entity such as the Upper Great Plains Transportation Institute to provide biennial reports to the governor and legislature that will help North Dakota channel deployments in the best interest of the State and its residents. Automobile manufacturers, telecommunication and technology companies, and a variety of third-party entities are pursuing their own individual interests—driven (at least in part) by return on investment. However, none of these entities makes decisions based on public welfare. In fact, they vigorously compete with each other for market share and profit—which is necessary and good! However, with rapid continuous changes, competition, and profit speculation, the impacts on the State may not emerge until much after the fact and may not be optimal in many respects.

If the legislature restores the UGPTI's base budget, UGPTI will function as an objective third party, much the way it has done in road infrastructure studies. The first deliverable will be a major study of transportation technologies and their potential impacts on the State. Under the leadership of the NDDOT, UGPTI will convene a working group that includes technology firms and manufacturers to provide input to and help draft an original prospectus. Reports will be provided to the interim Transportation Committee and a final report to the legislature. While important, these reports are only periodic status accounts—e.g., snapshots of a rapidly changing landscape. This must be a continuous effort, which is why we are asking for restoration of our base funding to its pre-allotment level.

UGPTI can play an important role that is difficult for any other state agency to play. Almost all of the data involved is highly confidential. If its base funding is restored, UGPTI will establish itself as a confidential data repository and analytical center where CV data can be confidentially assembled from many sources and harnessed under confidentiality agreements. In addition to benefiting transportation planning in a variety of ways, CV (and other futuristic) technologies will improve safety, reduce congestion and travel time by providing dynamic route information and real-time trip planning options for travelers, improve freight efficiency and reduce business logistics costs, and optimize the dispatching and routing of emergency vehicles. In this endeavor, UGPTI will work with the Departments of Transportation and Emergency Services, the Highway Patrol, MPOs, and other state and local agencies as well as a wide range of willing private sector entities.

Rationale 2: Capabilities to Compete for Federal Infrastructure Funds

There are some expectations of a substantial infrastructure bill being introduced in Congress in 2017. Any infrastructure bill enacted by Congress will most likely require detailed benefit/cost analyses and economic and safety justifications. Much of the new federal funding may be competitively allocated—in which case, the economic benefits and justifications of the projects will be critically important.

Over time, UGPTI has gained national recognition in highway modeling and has built a comprehensive set of models to analyze highway investment needs and benefits. These models are based on the same ones used by U.S. DOT to estimate investment needs and benefits for Congress. It is important to maintain and improve these models so that UGPTI can be ready to assist the

NDDOT in justifying the allocation of competitive federal funding to the State. UGPTI's needs include expanding upon the sample highway dataset that we now use, updating our regional economic models, and implementing additional benefit/cost procedures recommended by the U.S. DOT. Restoring UGPTI's base funding will allow us to continue to improve our models and be ready when a federal infrastructure bill is passed. Moreover, as described below, there are other important reasons for restoring UGPTI's base budget to its pre-allotment level.

Rationale 3: Continuity of Effort

During the last several biennia, UGPTI has developed new programs (and added depth to other programs) that directly benefit the State. In addition to the county road and bridge study, UGPTI is implementing a county road asset management system and providing essential research and analytical capabilities to the NDDOT and other state agencies. The asset management program will increase the ability to track the benefits of past legislative infrastructure investments. If UGPTI's base budget is permanently cut, it will be much harder to keep the momentum and expertise in place to respond to requests by the legislature and state agencies in the way that UGPTI has done in the past. Administratively, it is much more difficult to rebuild programs once they have been cut (i.e., ramp up and ramp down) than to maintain a continuous effort. Moreover, continuity of effort allows for continuous improvements in quality from year to year.

Rationale 4: Progress on Key Legislative Priorities will be Slowed

UGPTI has made a long-run commitment to develop and maintain a county road and bridge management system as a result of the increment in base funding provided by the 2015 legislature. Because this system is so important to the State, we will continue to develop it even if our budget is not fully restored. However, the pace and progress of implementation will be slowed. Some higher-level aspects of the asset management system may not be implemented for some time. Maintaining progress on the county road and bridge management system (which is the last program added) means that some older (pre-existing) activities that are beneficial to the State must be curtailed.

Rationale 5: UGPTI's Capability to Leverage Federal Funds will be Diminished

Almost all federal grants require matching contributions of non-federal funds. UGPTI has just been awarded two University Transportation Center grants that extend for 5 years but require substantial match. The Regional Center (MPC) grant requires a dollar-for-dollar match. The size of the MPC grant has increased over time from $1.8 million to $2.75 million, requiring more matching funds. While UGPTI has been awarded these grants, the funds cannot be expended without the non-federal match.

UGPTI regularly uses general funds to partially support researchers working on UTC grants to satisfy the match requirements. General funds are the best source of match because they allow federal dollars to be used for research work that is critically important to the State. Not only will the loss of general funds impact UGPTI's ability to match the UTC grant, it will hinder us in competing for federal grants. In the future, we may not have enough general funds to match available opportunities. Unless UGPTI's base budget is restored, we will be competitively disadvantaged with respect to universities in other states when competing for federal grants.

Although the loss of matching funds may not have an immediate impact on jobs this biennium, it will do so in the long run.

REQUEST 2: BIENNIAL COUNTY, TOWNSHIP, AND CITY ROAD INFRASTRUCTURE NEEDS STUDY

Growth and changes in traffic are expected to continue throughout the State, with transportation demands fluctuating over time in response to changes in the agricultural and energy sectors. Given North Dakota's dynamic economy, transportation demand and investment needs may fluctuate from biennium to biennium, sometimes peaking and stabilizing in different areas of the State at different times.

North Dakota needs a high-quality cost-effective road and bridge system to sustain economic prosperity. For the last four biennia, the Upper Great Plains Transportation Institute has provided the governor and legislature with reports on essential investments in county, township, and tribal roads throughout the State. With a growing and dynamic economy, it is important to continue these studies and provide up-to-date information and forecasts each biennium.

In the past, UGPTI's road and bridge studies have been funded through one-time appropriations. Our primary request for the 2017 legislative session is for $750,000 in base funding to continue these studies. The assurance of future funding is necessary for UGPTI to maintain the expertise that has been developed over the last five years and be ready to respond to requests from the governor and legislature.

With the requested funds, UGPTI will continue to collect traffic and truck data in partnership with the NDDOT at more than 1,000 locations on county and local roads throughout the State each biennium; develop current estimates of the surface conditions of all paved county and local roads; test additional miles of paved county and local road segments for subgrade/ substructure strength; develop updated forecasts of truck traffic resulting from economic activity in the State; and prepare reports and other information needed by the governor and legislature. The needs of urban areas will be reflected by including urban collector highways in the study.

REQUEST 3: FUNDING FOR RAIL FREIGHT AND SAFETY PROGRAM

A comprehensive and sustained effort in freight railroad logistics and safety is needed, rather than a single project or piecemeal approach. The requested funding of $325,000 will allow UGPTI to work closely with the Public Service Commission and other state agencies (including the Departments of Transportation and Emergency Services), as well as with the Federal Railroad Administration and Pipeline and Hazardous Materials and Safety Administration. In particular, the funding will allow UGPTI to partner with the PSC and FRA to analyze data compiled from inspections and provide operations research tools to help with safety planning. Specifically, the funding would allow research to be conducted into the causes and consequences of derailments, the risks associated with hazmat movements by rail, rail-highway grade crossing traffic, risks, and potential safety improvements, and emergency responses to railroad accidents and incidents. In addition, UGPTI will work closely with short-line railroads in the State on infrastructure planning and cost analysis.

The approximately 1,100 miles of short-line railroad in North Dakota provide essential services to agricultural-related industries and haul inputs needed for oil and gas production. More than 80% of the short-line system is built with light rails that limit capacity and are, in many cases, more than 100 years old and have exceeded their original life expectancies. Nevertheless, short-line railroads must move the same 286,000-pound railcars as Class I railroads handle or the businesses located along these lines will be competitively disadvantaged.

With the requested funds, UGPTI will work closely with short-line railroads to help them maintain and enhance local freight services and provide technical assistance. In addition, UGPTI will compile a statewide inventory of track infrastructure characteristics and conditions and provide the NDDOT with objective information to make decisions regarding proposed investments in grain-gathering and industrial lines to promote economic development. The initiative will generate additional benefits by providing work-study and internship opportunities for undergraduate students.

REQUEST 4: MOTOR CARRIER SAFETY FUNDING TO MATCH FEDERAL GRANTS

Highway traffic growth is increasing the frequency and risk of motor vehicle crashes. Most agricultural and oil-related traffic originates or terminates on two-lane rural roads. These roads have the highest crash and fatality rates of any class of highway in the nation. Safety risks have been heightened by the recent growth of hazardous materials shipments. With $250,000 of additional funding, UGPTI could collaborate with the North Dakota Department of Transportation and Highway Patrol to leverage federal grants to study key safety issues. The results will provide insights into: (1) the causes of heavy vehicle crashes; (2) the critical roles of company cultures, drivers, and vehicles; (3) risks related to the mixing of truck and automobile traffic; (4) the benefits and costs of potential safety mitigation measures; (5) the cost-effectiveness of potential enforcement strategies; (6) hazardous material movements and emergency response planning; and (7) applications of advanced technologies to improve motor carrier safety. In addition to working with the Department of Transportation and Highway Patrol, UGPTI will work with the North Dakota Motor Carrier Association and industry groups to promote safety awareness and practices.

SB 2003 - SB 2063
#2
(Power point Presentation)

NDSU Upper Great Plains Transportation Institute
2017-2019 Budget Request

Presented to
The Senate Appropriations Committee
65th North Dakota Legislative Assembly

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

UGPTI Agency Overview/Mission

Missions	Scope
• Research – Applied • Technology transfer – State and local • Education – Graduate • Workforce Development – Training	Multimodal Multidisciplinary

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

UGPTI: Multidisciplinary Staff Expertise

Degrees in

Civil Engineering	Transportation & Logistics
Industrial/Manufacturing Engineering	Transportation Planning
Electrical Engineering	Transportation Policy
Computer Science/MIS	Business Logistics
Natural Resources	Sociology
Geography	Agribusiness/Economics

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

Key Specialization Areas

Road infrastructure planning/asset mgmt.	Agricultural freight & logistics
Highway and motor carrier safety	Supply chain planning
Small urban and rural transit	Railroad transportation
Urban traffic analysis	Intelligent transportation solutions
Transportation information technology	Transportation security

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

Budgeted and Actual Expenditures for the 2015-2017 Biennium

Funds	Biennium Budget	Post-Allotment Budget	Projected Expenditures *
General Funds – Orig.	$4,097,099	$3,779,614	$3,651,106
2011-2013 Carryover	$136,279	$136,279	$136,279
One-Time	$750,000	$628,823	$628,823
Total Appropriated	$4,983,378	$4,544,716	$4,416,208
Federal Funds	$12,162,945	$12,162,945	$9,517,544
Special/Other Funds	$6,012,712	$6,012,712	$5,147,393
	*Estimated expenditures through June 30, 2017		

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

General Fund Budget Comparisons

Budget	Amount	Change From: Original	Change From: Post-Allotment
General Fund (Original): 2015-2017*	$4,847,099		
Post Allotment: 2015-17*	$4,408,437		
Executive Recommendation: 2017-19	$3,563,901	-26.47%	-19.2%
SBHE General Fund Request: 2017-19	$3,722,694	-23.20%	-15.6%
* Excluding carryover			

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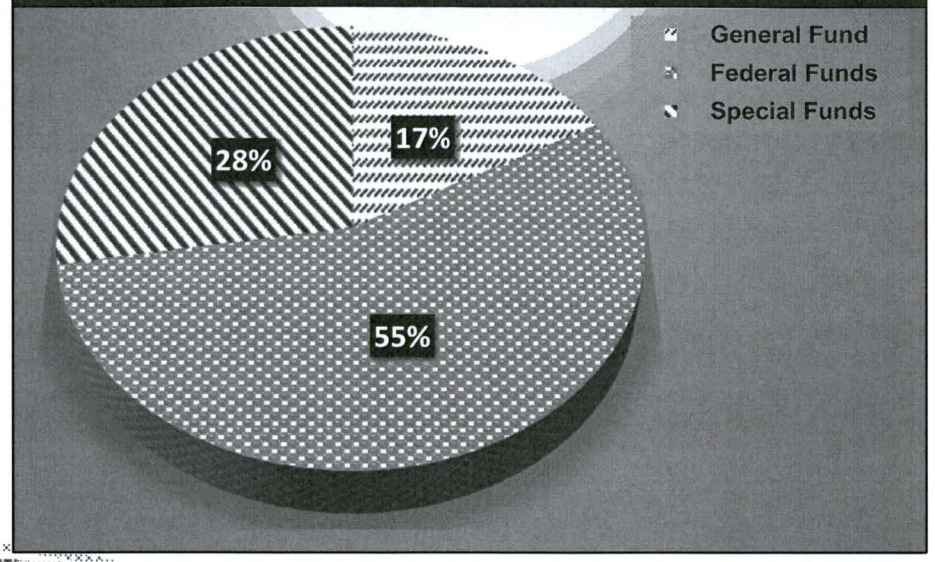
UGPTI's Budget: Fund Types



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Post-Allotment vs. SBHE Recommended Budget

Description	Post-Allotment Budget 2015-17	SBHE Requested Budget 2017-2019	2017-2019 Requested % Change
Total Line Items	$22,705,271	$22,058,319	-2.90%
General Fund*	$4,529,614	$3,722,694	-17.9%
Federal Funds	$12,162,945	$12,233,862	0.58%
Special Funds	$6,012,712	$6,101,763	1.48%

* Includes carryover

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UGPTI Optional Budget Requests

Option	Amount
Restoration of 10% Reduction	$409,710
Cont. of County Road & Bridge Study	$750,000
Rail Freight/Safety	$325,000
Motor Carrier Safety	$250,000

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Restoration of Base Budget: Rationales

- Rapid Pace of Technological Change
- Capabilities to Compete for Federal Infrastructure Funds
- Continuity of Effort
- Progress on Key Legislative Priorities
- Match Federal Grants

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Rapid Pace of Technological Change

- Innovations in progress:
  - Connected Vehicles; Autonomous Vehicles; Electric Vehicles; Truck Platooning; Autonomous Trains; Robotic Freight Yards
- Very competitive and potentially chaotic evolution
- Impacts on North Dakota and best interests of State
- UGPTI can serve valuable roles:
  - Objective third party
  - Confidential data warehouse
  - "Big data analytics"
- UGPTI will report to interim & legislative committees

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Federal Infrastructure Bill?

- Promised; some bipartisan support
- May bring great opportunities
- 5-year highway act already passed
- Funding may be competitively allocated
- Require detailed benefit/cost analyses and economic justifications
- Work with NDDOT to be ready when bill is passed

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Continuity of Effort/Progress

- Maintain expertise and capabilities developed over many years
  - Models: HERS-ST (needs assessment), highway network (Cube, TransCAD), REMI (state economic benefits)
  - Continuous improvements
- County road and bridge asset management system
  - Geographic roadway inventory in place
  - Provides capabilities to monitor conditions and performance of past investments
  - Analytics need to be added
  - Progress may be slowed

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Match Federal Grants

- UGPTI just awarded two UTC grants
- Five year grants with substantial match requirements
  - Non federal source dollars
- Region center (MPC) grant requires 100% match
- Match UTC grants ≈ $12.6 million
- General fund is best match

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Additional Requests

- Biennial County, Township, and City Road and Bridge Infrastructure Needs Studies
  - Continue studies but include urban areas
  - Report to legislative committees
- Rail Freight Infrastructure, Logistics, and Safety
  - Work with NDDOT, NDPSC, and short-line railroads
  - Short-line railroad infrastructure inventory/analytics
  - Provide research and data analysis for PSC
- Motor Carrier Safety
  - Leverage large federal grants for research

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Thank you!

Questions?

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

CHAPTER 54-53
UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

SB 2020/2080
1-18-17
#3

54-53-01. Upper great plains transportation institute - Establishment.

There is hereby established an upper great plains transportation institute. Such institute must be administered by and in conjunction with the North Dakota state university of agriculture and applied science. The president and administration of the North Dakota state university of agriculture and applied science are responsible for the selection of personnel for and the administration of the institute.

54-53-02. Advisory transportation council - Composition.

1. There is established a transportation council that shall serve in an advisory capacity to the upper great plains transportation institute. The director of the institute shall serve as the executive secretary of the council. The council shall elect its own chairman. The council membership consists of one representative from and appointed by the following:
   a. The North Dakota chamber of commerce.
   b. The North Dakota public service commission.
   c. The North Dakota farmers union.
   d. The North Dakota grain growers association.
   e. The North Dakota wheat commission.
   f. The North Dakota department of commerce.
   g. The North Dakota grain dealers association.
   h. The North Dakota motor carriers association.
   i. The North Dakota aeronautics commission.
   j. The North Dakota department of transportation.
   k. The North Dakota department of agriculture.
   l. The associated general contractors of North Dakota.
   m. The North Dakota railway industry, appointed by the council.
   n. The North Dakota primary sector of manufacturing, appointed by the council.
   o. The North Dakota association of counties.
   p. The North Dakota league of cities.
   q. The lignite energy council.
   r. A North Dakota member of the dakota transit association.
   s. The North Dakota corn council.
2. Members of the council shall serve without pay, but they may receive reimbursement for actual and necessary expenses incurred in the performance of their duties, if authorized by the director.
3. The council shall consult with the institute in matters of policy affecting the administration of this chapter and in the development of transportation in the state of North Dakota. The council shall meet at the call of the chairman or director or upon the written request of three or more members of the council.

54-53-03. Purpose - Powers and duties.

The purpose of the institute must be to conduct and supervise research in the field of transportation and logistics in order to facilitate acquisition of a wider knowledge and understanding of marketing factors associated with the geographical location of the state of North Dakota and the upper great plains in the field of transportation and their influence on the socioeconomic systems of the state, region, and country. Research areas must include the study of commodity and other freight movements into and out of the state in order to better know and understand the various factors affecting the marketing of area products and services. The institute shall make public its findings and conclusions in regard thereto together with any suggested solutions. In the administration of its duties under this chapter, the institute shall consult and coordinate with various governmental and nongovernmental agencies, shipper and producer groups, and carriers, in this state and in other states, interested in the field of transportation.

SB 2020/2080
UGPTI
1-18-17
#4

SENATE APPROPRIATIONS COMMITTEE
January 18, 2017 – 10:15 a.m. – Harvest Room

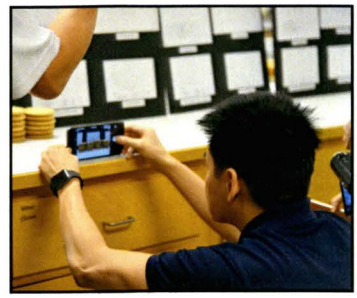
North Dakota Department of Transportation (NDDOT)
Steve Salwei, P.E. – Transportation Programs Director

SB 2080

Mr. Chairman, members of the committee. I'm Steve Salwei, and I serve as the Transportation Programs Director for the North Dakota Department of Transportation (DOT). I'm here today to support the Upper Great Plains Transportation Institute's section of Senate Bill 2080.

The DOT has utilized Upper Great Plains Transportation Institute (UGPTI) as a resource to assist in conducting research and special studies in areas where the Department lacks expertise, such as traffic modeling, preparing needs analysis, determining economic impacts and providing analysis on various transportation related topics. The services UGPTI provides are valuable to the State's Transportation industry.

Mr. Chairman, that concludes my testimony and I will be happy to answer any questions the committee may have.



SB 2029/2080
1-18-17
#1

NCI

Northern Crops Institute

Pg 1

ND SENATE APPROPRIATIONS COMMITTEE

Senator Ray Holmberg, Chairman
Senate Appropriations Committee

11 a.m., Wednesday, January 18, 2017

SB 2020 - SB 2080

NORTHERN CROPS INSTITUTE

Budget No. 638

Mark F. Weber, Director
Northern Crops Institute
Keith Peltier, Chairman
Northern Crops Council
Dean L. Bresciani, Ph.D., President
North Dakota State University
Ken Grafton, Ph.D., Vice Pres. of Agriculture
North Dakota State University

www.ndsu.edu/legislators

NORTH DAKOTA STATE UNIVERSITY

2017-2019 BIENNIAL BUDGET

Northern Crops Institute

Northern Crops Institute (NCI) is an international meeting and learning center that brings together customers, commodity traders, technical experts, agricultural producers, and food and industrial processors for education, discussion and technical services. A cooperative effort between North Dakota, Minnesota, Montana and South Dakota, we work to support the promotion, market development and expanded sales of crops grown in this four-state region.

Some of our accomplishments are highlighted in these materials. NCI continues to focus on education and technical services as mandated in the NDCC.

Prior to the 2015 legislative session we evaluated our current funding and found it to be adequate and therefore we did not request or receive any new general fund initiatives. The budget cuts approved by the August 2016 special emergency legislative session reduced NCI's state appropriations by $137,691. We responded quickly with an ambitious marketing effort to generate more fee income from industry for our processing, baking, and analytical laboratory services that we provide. We did not raise our fee structure, but instead we brought in more business.

We also identified three areas to cut back expenditures including overseas travel to deliver educational programs and technical assistance, food and feed safety training programs, and new equipment purchases. Through aggressive marketing efforts of our technical services we hope to continue bringing in additional fee income to cover these areas and additional operating expenses.

At the conclusion of this biennium ending June 30, 2017, it is anticipated that the NCI will have a zero ending balance in general appropriations. The majority of general appropriations covers 10 FTE's with the remaining two FTE's covered from other funds.

SB 2080 includes a general fund budget reduction of $8,765 from the adjusted 2015-17 biennium appropriation and a reduction from 12 FTE's to 11.8 FTE's. The general fund appropriation of $1,964,467 in SB 2020 remains the same as the adjusted 2015-17 biennium. SB 2020 also retains 12 FTE's.

For the 2017-19 biennium we are not seeking any one-time initiatives. Under a 10% budget cut as proposed by the Governor, the NCI would make cuts in three areas: overseas travel, food and feed safety training programs, and new equipment.

NCI continues to receive regional funding. However, without the support of the North Dakota Legislature, we would not be able to continue the level of work documented here. We appreciate your continued interest and support of the Northern Crops Institute.

Submitted by,
Mark F. Weber, Director
Northern Crops Institute
www.northern-crops.com
701-231-7736

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Northern Crops Institute

AGENCY STATUTORY AUTHORITY

North Dakota Century Code Chapter 4-14.2.

AGENCY DESCRIPTION

The Northern Crops Institute (NCI) is a cooperative effort between North Dakota, Minnesota, Montana and South Dakota to support the promotion and market development of crops grown in this four-state region. NCI brings together customers, commodity traders, technical experts, agricultural producers, and food and industrial processors for education, discussion and technical services. NCI provides technical and marketing assistance through specialized training courses and technical services that facilitate domestic and international market development and expanded sales of northern grown crops. Representatives from more than 135 countries have visited NCI since its inception. Northern Crops Institute is located on the campus of North Dakota State University.

AGENCY MISSION STATEMENT

Northern Crops Institute supports regional agriculture and value-added processing by conducting educational and technical programs that expand and maintain domestic and international markets for northern-grown crops.

AGENCY VISION STATEMENT

Northern Crops Institute will be the international meeting and learning center to promote the northern-grown crops of the United States.

AGENCY PERFORMANCE MEASURES

NCI provides status reports to the Northern Crops Council three times annually at Council meetings (per NDCC Section 4-14.2-02 and 4-14.2-03).

Minutes and financial reports of the following meetings of the Northern Crops Council for the 2015-2017 biennium are on file at the NCI office and with NCC members. The dates of the meetings are as follows:

June 23, 2015
November 19, 2015
March 22, 2016
June 21, 2016
November 22, 2016
Next scheduled meeting is tentatively set for March 21, 2017

Staff reports on educational courses, technical support of industry, future strategic plans, funding situation, and collaborative efforts with NCI's partners are given at each meeting.

The NCI also provides regular status reports on NCI accomplishments to other agencies and regional commodity groups that provide special (other) funds when requested. Those groups include: South Dakota and Minnesota Legislatures, Minnesota Department of Agriculture, and the commodity groups from the four-state region.

AGENCY FUTURE CRITICAL ISSUES

Since its inception, the Northern Crops Institute has achieved remarkable success by evolving into a first-class facility recognized throughout the world. Our region is exploding with opportunities where our farmers are in a strategic position to supply many world markets due to our logistics, climate, and crop quality characteristics. North Dakota has witnessed prolific growth in soybean, corn and pulse production the last two decades. Soybean production has increased ten-fold and corn has increased five-fold. While our farmers lead the nation in production of at least 12 crops, they are shifting to more alternative, specialty and identity-preserved crops. Buyers continue to seek northern-grown crops for their high quality and versatility, and the Northern Crops Institute is responding by providing increased services in quality evaluation, education, processing, and technical expertise.

Asia's exploding population, rising middle class incomes, and demand for more protein and better diets will dramatically change the current global food industry. It is predicted that Asian diets will adopt the U.S. trend of eating foods prepared outside the home, requiring a tremendous amount of education to the food industry in crop quality and utilization. The NCI will have the opportunity to demonstrate crop quality and functional characteristics as well as how to incorporate our crops into traditional and innovative products. The snack food market continues to grow in those markets and the NCI is increasing its efforts in teaching snack food extrusion processes.

We must communicate to our global audience that our producers not only are reliable suppliers, but we have the safest food supply on the planet. The NCI is committed to providing leadership in educating small regional companies on how to comply with the Food Safety Modernization Act (FSMA).

The dynamic commodity markets have renewed the interest from foreign buyers to better understand the latest in risk management tools so that they can become more efficient buyers of U.S. commodities. Incorporating NDSU's impressive new state-of-the-art electronic commodity trading room at Barry Hall into future NCI procurement courses is a tremendous learning experience for our customers.

Our farmers have relied on national commodity check-off groups, along with matching Foreign Agriculture Service funds, to promote our crops in overseas markets. Federal funding for those programs continues to decline and our region's producers can no longer rely on these traditional efforts. The market is increasing its demand for crops with very specific quality characteristics grown under certain climatic conditions. Showcasing our unique crop characteristics by increasing regional cooperative efforts with the ND Department of Agriculture and ND Trade Office and others will be necessary to expand future markets.

Cooperation is the key to any future success. The Northern Crops Institute is partnering up with the Wheat Marketing Center in Portland, Oregon, and the International Grains Program at Kansas State University to deliver educational programming in food safety, risk management, milling, and extrusion processing. An important partnership was formed in 2015 when NCI contracted with the Assistant Director of the International grains program at Kansas State University to train an NCI employee to be the flour mill manager. Because of this effort the NCI is seeing increased utilization of the flour mill. The NCI has also landed an important educational course for soybeans that has previously been held at the University of Illinois the past 25 years. The course will be held in June of 2017 and a portion of the course will be taught at South Dakota State University to take advantage of their expertise.

The Northern Crops Institute looks forward to meeting these challenges in cooperation with our valuable partners including the grower commodity check-off groups from the four-state region who provide significant funding for our programs, and the Departments of Cereal and Food Science, Plant Sciences, Agribusiness and Applied Economics and other departments at North Dakota State University, University of Minnesota, South Dakota State University, and Montana State University who provide valuable expertise to our educational programming. The Northern Crops Institute appreciates state funding support provided from the states of North Dakota, South Dakota, and Minnesota.

UPDATE ON NCI INITIATIVES IN 2015-2017

NCI did not seek any new initiatives in 2015-2017.

Northern Crops Institute

COMPARISON OF 2015-2017 APPROPRIATION AND ESTIMATED SPENDING

	2015-17 Original Appropriation	Current Appropriation	Expenditures	Remaining Appropriation
Total Expenditures	$3,849,893	$3,712,202	$2,328,437	$1,383,765
Expenditures by Funding Source				
General	$2,102,158	$1,964,467	$1,328,768	$635,699
Special	$1,747,735	$1,747,735	$999,669	$748,066
Total	**$3,849,893**	**$3,712,202**	**$2,328,437**	**$1,383,765**

Source: PeopleSoft through Nov. 30, 2016.
Note: NCI does not receive Federal Formula Funds. No change expected.

2017-2019 Needs-Based Budget

Reconciliation of 2015-17 Original General Fund Appropriation to 2017-19 SB 2020 and SB 2080

		NCI
General Fund:		
2015-17 Original General Fund Appropriation	$	2,102,158
Reduction of 6.55% for Allotment	$	(137,691)
2015-17 Adjusted GF Appropriation / SB 2020 Appropriation		1,964,467
2017-19 Changes in Executive Recommendation (SB 2080)		
Adjustment between Allotment and Gov. Guidelines (10% Gov. vs. 6.55% Allotment)		(72,525)
Base Payroll adjustment		26,399
1% salary/benefit increase FY19 and 2018-19 health insurance increases		37,361
Total Changes		(8,765)
2017-19 SB 2080 Appropriation		1,955,702
Other Funds:		
2015-17 Original Other Fund Appropriation	$	1,747,735
Adjustments:		
-		
2017-19 Other Fund Appropriation (SB 2020)	$	1,747,735
2017-19 Changes in Executive Recommendation (SB 2080)		
Base Payroll adjustments		3,160
1% salary/benefit increase FY19 and 2018-19 health insurance increases		6,848
Total Executive Recommendation Increases		10,008
2017-19 SB 2080 Other Fund Appropriation	$	1,757,743

Impact

Crops produced on the Northern Great Plains of the U.S. are among the finest in the world. The mission of Northern Crops Institute (NCI) is to tell global crop buyers about our crops' quality characteristics through technical education and services. NCI is the prime source of technical education about the region's wheat, feed grains, soybeans, pulses and oilseeds, and their value-added products. Demand continues to increase for our programs and services. This is a reflection of the success of our activities to date and the credibility of the information provided through our programs.

Results from educational programs are long-term. We provide information on marketing and technical utilization of northern-grown commodities for both domestic and export markets. This service increases the possibilities of buyers using northern-grown commodities in the future. Often purchases occur several years after educational efforts when conditions become optimal for the buyers.

Crops grown in the northern tier of the U.S. are valued by discriminating customers around the globe. Since 1983, NCI has hosted crop buyers, technical experts, commodity traders, processors and producers from more than 132 nations. They come to learn more about crop quality and availability. NCI does not buy or sell crops. We teach people how to use our crops in their food and feed products and how to buy them through the U.S. grain marketing system.

In 2015 and 2016, NCI trained more than 395 professionals from 46 countries in our educational programs, with 24 scheduled short courses and customized courses. Another important part of our educational program is our activity with trade teams. In the last two years, NCI hosted 163 international visitors from 17 countries representing trade missions. The total number of countries visiting NCI in 2015 and 2016 was 63. In addition, NCI's staff often participates in domestic and overseas programs reaching more than 1000 buyers and processors in the last two years alone. Our website (www.northern-crops.com) lists information and photos on our recent programs and trade teams, and the 2016 Annual Update is included at the end of this report.

State and Regional Impact

Agriculture is the economic backbone in the states of North Dakota, Minnesota, Montana and South Dakota. NCI conducts programs that focus on building relationships and developing markets for our high quality crops and value added products. Agricultural exports are extremely important to the North Dakota economy with $4.1 billion exported in 2015 (USDA ERS). Agricultural related jobs continue to be an important share of employment in all four states. The combined value of the four-state exports of agricultural products in 2015 was $15.3 billion, accounting for 12% of the total U.S. exports. (http://www.ers.usda.gov/Data-products/state-export-data).

Success Story

In 2015, the NCI was informed that several feed companies in Canada using U.S. imported DDGs were experiencing reduced pellet production and pellet quality. Rather than blame the problem on poor DDGs quality and lose future U.S. sales into Canada, NCI responded quickly. NCI feed mill director Kim Koch personally visited those facilities and discovered some necessary equipment adjustments in the paddle mixer, steam pipes, and conditioner. As a result, feed production quality and output increased significantly in those feed mills and today they continue to import high quality U.S. DDGS!

The NCI's South Asia Contracting for Wheat Value course has been instrumental in changing the minds of buyers toward a preference for U.S. Hard Red Spring Wheat (HRSW). Some of the world's fastest grow-ing wheat buyers attended the course where they learned the advantages of this region's HRSW. Vietnam Flour Mills verified that the course persuaded them to buy more HRSW. They increased HRSW purchases from 9,600 MT in 2012 to 78,000 MT in 2014, an estimated value of $19 million according to their publically made purchase records.

Recent Facility Improvements and Capabilities

Major funding for these projects came from industry, regional commodity groups, technical service and education course fees.

Feed Mill

In 2014, a major system upgrade at the NCI Feed Production Center included the installation of a new mixer, automation system and the facility's first micro-ingredient system. The 2014 North Dakota Legislature provided the initial seed money for this effort with the majority of the funding coming from industry.

Twin Screw Extruder

In the summer of 2015, NCI upgraded the twin-screw extruder that added a loss-in weight feeder and changed the extrusion barrel to steam and cold water.

Fluid Bed Dryer

In November 2015, NCI completed installation of a state of the art Buhler fluid bed dryer to compliment NCI's Wenger twin-screw extruder. The combination extruder and fluid bed dryer replicates processing capabilities for commercial operations.

Soy milk and Tofu Production Equipment

In 2016, NCI installed a pilot scale soy milk and tofu production system. The system will have the capability to perform soy foods product development activities with commercial-grade technology.

NCI has also purchased oil cold press equipment, we have access to a hexane oil press and we have made improvements in our Baking Lab.

Major Accomplishments

- **International business depends on personal relationships.** Offering courses at NCI remains the best means of connecting potential customers to our state and region. The hospitality displayed in our region by NCI staff, course lecturers, regional farmers and hosts for field trips to hotel, restaurant and retail personnel create positive connections to our state and region. For many international buyers of crops, developing a relationship with the producers and visiting their farms is essential.

- **Overseas seminars and service:** In 2015 and 2016, NCI staff attended twenty-three international seminars, events or provided technical support in Canada, China, Colombia, Costa Rica, Guatemala, India, Indonesia, Japan, Malaysia, Morocco, Myanmar, Philippines, Singapore, South Korea, Taiwan, Thailand, Turkey and Vietnam.

- **Wheat and soybean procurement training:** In 2015-16, NCI educated 211 crop buyers from 29 countries at four procurement courses. These courses teach grain merchandisers how to make more effective U.S. crop purchases while managing their risk. The Procurement Courses continue to utilize the NDSU electronic Commodity Trading Room (CTR), which is a high-technology room with live information feeds for financial information including equities and credit, plus commodity market information such as agriculture, energy and biofuels.

- **NCI is planning a wheat producers workshop in March 2017** for regional wheat commissioners from four states to learn more about the wheat quality characteristics that end-users need. The workshop is designed to enhance farmer leaders as international ambassadors for the wheat industry.

- **Technical services to processors and users of regional commodities:** Food companies, small to large, regional to multinational, use NCI's processing capabilities to develop new or modified food products and to evaluate ingredients and processing parameters under proprietary conditions. In 2016, NCI conducted in-house processing, baking investigations, and analytical testing projects for 40 food companies.

- **Continued demand for pasta courses:** NCI's pasta manufacturing courses are very unique. In fact, there are no other U.S. organization that offers pasta processing courses. Pasta courses remain in demand by U.S. and international pasta companies. In 2015 and 2016, three pasta courses were offered that attracted 38 participants from 11 countries.

- **NCI Feed Center activities:** In fiscal 2015, the NCI Feed Center made 1,579 tons of feed – 1,366 tons for teaching animals and 213 tons for research animals. In Fiscal 2016, the center made 1,649 tons – 1,425 for teaching animals and 224 for research animals. So far in Fiscal 2017, we have made 559 tons of feed – 537 tons for teaching animals and 22 for research animals.

- **Food and feed safety education:** Feed Production Center Manager Kim Koch, Ph.D., is a Trainer of Trainers and a Lead Instructor for Human and Animal Food Preventive Controls and serves on several national committees of the Food Safety Preventive Controls Alliance – the organization charged with the implementation of the training programs in support of the current Good Manufacturing Practice, Hazard Analysis and Risk Based Preventive Controls for Human Food 21 CFR 117 and Animal Food 21 CFR 507 set forward in the Food Safety Modernization Act. Trainings began in 2016 and Koch has provided training for five Human Food courses and two Animal Food courses.

Major Accomplishments (continued)

- **Overseas risk management courses:** To reach an even broader audience, NCI conducted four risk management courses in 2015-16 in Singapore, Jakarta, Bangkok, and Manila. The course is designed to help grain and oilseed buyers understand why risk management is essential to their business success when experiencing commodity price and margin volatility. There were127 total number of participants.

- **Learning about nutritional benefits of soy and soy flour procurement.** Twenty participants from Thailand, Guatemala, Myanmar, Malaysia, Burkina Faso, Cote d'Ivoire, Senegal and Uganda, learned about using soy protein in baked products and how to buy soy flour in three soy courses in 2015-16. The World Initiative for Soy in Human Health (WISHH), co-sponsored the courses. WISHH is a program of the American Soybean Association that brings the nutritional benefits of U.S. soybeans protein to people in developing nations.

- **Teaching the HRSW quality advantage to foreign buyers**: Twenty-three foreign flour millers and bakers from six countries have attended the three contracting for wheat value courses at the NCI in 2015-16. At the NCI's Baking Laboratory they test their own flours procured from other countries against this region's hard red spring wheat (HRSW) varieties in breads, cakes and other baked goods for functionality and quality. In side by side comparative baking trials HRSW from this region wins every time.

- **Pulses: dry beans, peas, and lentils.** Production of these crops has seen tremendous growth. To promote these markets, NCI offered four courses in 2015-16 which addressed their utilization, functionality, and quality characteristics. NCI staff has also been featured speakers for the pulse crops at national and international seminars. Bean and lentil production continues to expand significantly in Western North Dakota and Eastern Montana.

- **Teaching the soy advantage:** The program, in addition to providing trade and technical information, emphasized the U.S. soybeans advantage to importers in terms of its sustainable production, efficient transportation, transparent prices, better consistency and quality and importance of valuing U.S. soybeans against South American soybeans in terms of protein quality as opposed to crude protein.

- **Barley craft malting initiatives:** According to the Brewers Association website, the growing U.S. craft malting industry accounted for 11% of the total domestic malt production in 2014. NCI collaborated with NDSU Plant Sciences and the Institute of Barley and Malt Sciences on two courses teaching craft malsters to understand malt processing and effectively interpreting barley and malt analyses. There were a total of 47 participants that attended the courses in the past two years.

Partnerships and Leadership

- Northern Crops Institute provides leadership in North Dakota and the nation, and in return
- receives collaborative assistance from many companies, regional universities, organizations and individuals. Without these partnerships, NCI could not do its work.

- Educational courses are offered in partnership with American Association of Cereal Chemists (AACC), American Feed Industry Association (AFIA), American Society for Brewing Chemists (ASBC), American Soybean Association International Marketing (ASAIM), Ameriflax, Association of Oil Chemists Society (AOCS), International Association of Operative Millers (IAOM), National Grain and Feed Association (NGFA), NDSU Extension Service, U.S. Grains Council (USGC), U.S. Soybean Export Council (USSEC), World Initiative for Soy in Human Health (WISHH), U.S. Wheat Associates (USW), USA Dry Pea and Lentil Council (USADPLC), U.S. Dry Bean Council (USDBC), the USDA/FAS Cochran Program, and others. These groups assist in identifying possible participants and often provide other resources.

- Regional universities, particularly North Dakota State University, South Dakota State University, University of Minnesota, and Montana State University, make important contributions to NCI's programs through technical, scientific, and practical applications for the use of crops in food and feed processing. Significant contributions by the NDSU Departments of Agribusiness and Applied Economics, Agricultural and Biosystems Engineering, Cereal and Food Sciences, Plant Sciences, and the use of the electronic Commodity Trading Room in NDSU's Barry Hall allow NCI to offer programs with the most sophisticated information and research.

- Commodity check-off groups and their producer members in North Dakota, South Dakota, Minnesota, and Montana continue to be major partners and supporters of Northern Crops Institute. NCI staff identify new market opportunities for regional producers and design courses to focus on wheat, soybeans, corn, barley, pulses and other specialty crops.

- The Northern Crops Council, NCI's governing board of directors, continues to provide regional four-state leadership for NCI's programs and strategic planning. NCI's Industry Advisory Board, drawn from the four-state agricultural supply and processing industries and the grain trade, provides advice, lecturers, tours, and resources for NCI programs and initiatives.

63 Nations Learn More About Northern-Grown Crops

In 2015 and 2016, NCI staff taught short course participants, hosted trade teams and visitors, and consulted with companies from the following 63 countries.

Algeria
Angola
Argentia
Belgium
Bolivia
Brazil
Bulgaria
Burkina Faso
Canada
Chile
China
Colombia
Costa Rica
Cote d'Ivoire
Dominican Republic
Ecuador
Egypt
El Salvador
France
Germany
Ghana
Guyana
Guatemala
Haiti
Honduras
India
Indonesia
Italy
Israel
Jamaica
Japan
Jordan
Kuwait
Lebanon
Malta
Malaysia
Mexico
Morocco
Myanmar
Netherlands
Nigeria
Panama
Peru
Philippines
Poland
St. Vincent
Saudi Arabia
Senegal
Singapore
South Africa
South Korea
Spain
Switzerland
Taiwan
Thailand
Trinidad
Tunisia
Uganda
UAE
UK
USA
Venezuela
Vietnam

Sixty-fifth
Legislative Assembly
of North Dakota

SENATE BILL NO. 2020

Introduced by

Appropriations Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the purpose of defraying the expenses of the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the biennium beginning July 1, 2017, and ending June 30, 2019, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	Base Level	Adjustments or Enhancements	Appropriation
Extension service	$52,517,908	$0	$52,517,908
Soil conservation committee	1,133,362	0	1,133,362
Total all funds	$53,651,270	$0	$53,651,270
Less estimated income	25,826,708	0	25,826,708
Total general fund	$27,824,562	$0	$27,824,562
Full-time equivalent positions	263.91	0.00	263.91

Subdivision 2.

NORTHERN CROPS INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Northern crops institute	$3,712,202	$0	$3,712,202
Total all funds	$3,712,202	$0	$3,712,202
Less estimated income	1,747,735	0	1,747,735
Total general fund	$1,964,467	$0	$1,964,467
Full-time equivalent positions	12.00	0.00	12.00

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Upper great plains transportation institute	$22,076,448	$0	$22,076,448
Total all funds	$22,076,448	$0	$22,076,448
Less estimated income	18,175,657	0	18,175,657
Total general fund	$3,900,791	$0	$3,900,791
Full-time equivalent positions	54.98	0.00	54.98

Subdivision 4.

MAIN RESEARCH CENTER

	Base Level	Adjustments or Enhancements	Appropriation
Main research center	$110,529,780	$0	$110,529,780
Total all funds	$110,529,780	$0	$110,529,780
Less estimated income	56,948,525	0	56,948,525
Total general fund	$53,581,255	$0	$53,581,255
Full-time equivalent positions	353.85	0.00	353.85

Subdivision 5.

BRANCH RESEARCH CENTERS

	Base Level	Adjustments or Enhancements	Appropriation
Dickinson research extension center	$6,996,678	$0	$6,996,678
Central grasslands research extension center	3,531,779	0	3,531,779
Hettinger research extension center	5,086,767	0	5,086,767
Langdon research extension center	3,045,836	0	3,045,836
North central research extension center	5,044,213	0	5,044,213
Williston research extension center	5,267,400	0	5,267,400
Carrington research extension center	9,328,093	0	9,328,093
Total all funds	$38,300,766	$0	$38,300,766
Less estimated income	19,817,130	0	19,817,130
Total general fund	$18,483,636	$0	$18,483,636
Full-time equivalent positions	113.94	0.00	113.94

Subdivision 6.

AGRONOMY SEED FARM

	Base Level	Adjustments or Enhancements	Appropriation
Agronomy seed farm	$1,521,007	$0	$1,521,007
Total special funds	$1,521,007	$0	$1,521,007
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	Base Level	Adjustments or Enhancements	Appropriation
Grand total general fund	$105,754,711	$0	$105,754,711
Grand total other funds	124,036,762	0	124,036,762
Grand total all funds	$229,791,473	$0	$229,791,473

SECTION 2. ONE-TIME FUNDING. The following amounts reflect the one-time funding items approved by the sixty-fourth legislative assembly as adjusted for the 2015-17 biennium:

One-Time Funding Description	2015-17	2017-19
Agronomy laboratories	$150,000	$0
Rural leadership project	141,252	0
Seed cleaning plants	4,408,224	0
Upper great plains transportation institute road study	628,823	0
Junior master gardener program	12,500	0
Veterinary diagnostic laboratory	18,000,000	0
Dust issues technical support	100,000	0
Land purchase - Langdon	350,000	0
Flooded lands study	67,952	0
Total all funds	$23,858,751	$0
Total other funds	21,325,000	0
Total general fund	$2,533,751	$0

SECTION 3. ADDITIONAL INCOME - APPROPRIATION. In addition to the amount included in the grand total other funds appropriation line item in section 1 of this Act, any other income, including funds from federal acts, private grants, gifts, and donations, or from other sources received by the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, except as otherwise provided by law, is appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 4. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 5. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME - REPORT. The Williston research extension center shall report to the sixty-sixth legislative assembly on amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2015, and ending June 30, 2017, and the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 6. TRANSFER AUTHORITY. Upon approval of the state board of agricultural research and education and appropriate branch research center directors, the director of the main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of section 1 of this Act. Any amounts transferred must be reported to the director of the office of management and budget.

SECTION 7. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS. The state board of higher education may adjust or increase full-time equivalent positions as needed for the entities in section 1 of this Act, subject to availability of funds. All full-time or part-time positions must be separate from North Dakota state university. Annually, the board shall report to the office of management and budget and to the budget section any adjustments made pursuant to this section.

SECTION 8. UNEXPENDED GENERAL FUND - EXCESS INCOME. Any unexpended general fund appropriation authority to and any excess income received by entities listed in section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or revenues are available and may be expended by those entities, during the biennium beginning July 1, 2019, and ending June 30, 2021.

Sixty-fifth
Legislative Assembly
of North Dakota

SENATE BILL NO. 2080

Introduced by

Appropriations Committee

(At the request of the Governor)

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; and to provide an exemption.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the purpose of defraying the expenses of the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the biennium beginning July 1, 2017, and ending June 30, 2019, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	Base Level	Adjustments or Enhancements	Appropriation
Extension service	$52,517,908	$37,277	$52,555,185
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($4,565)	$53,646,705
Less estimated income	25,826,708	941,881	26,768,589

Total general fund	$27,824,562	($946,446)	$26,878,116
Full-time equivalent positions	263.91	10.93	252.98

Subdivision 2.

NORTHERN CROPS INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Northern crops institute	$3,712,202	$1,243	$3,713,445
Total all funds	$3,712,202	$1,243	$3,713,445
Less estimated income	1,747,735	10,008	1,757,743
Total general fund	$1,964,467	($8,765)	$1,955,702
Full-time equivalent positions	12.00	(0.20)	11.80

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Upper great plains transportation institute	$22,076,448	$145,575	$22,222,023
Total all funds	$22,076,448	$145,575	$22,222,023
Less estimated income	18,175,657	482,465	18,658,122
Total general fund	$3,900,791	($336,890)	$3,563,901
Full-time equivalent positions	54.98	(11.10)	43.88

Subdivision 4.

MAIN RESEARCH CENTER

	Base Level	Adjustments or Enhancements	Appropriation
Main research center	$110,529,780	$11,812	$110,541,592
Total all funds	$110,529,780	$11,812	$110,541,592
Less estimated income	56,948,525	2,263,756	59,212,281
Total general fund	$53,581,255	($2,251,944)	$51,329,311
Full-time equivalent positions	353.85	(17.73)	336.12

Subdivision 5.

RESEARCH CENTERS

	Base Level	Adjustments or Enhancements	Appropriation
Dickinson research center	$6,996,678	($48,789)	$6,947,889
Central grasslands research center	3,531,779	(40,136)	3,491,643
Hettinger research center	5,086,767	(29,081)	5,057,686
Langdon research center	3,045,836	(25,004)	3,020,832
North central research center	5,044,213	(18,626)	5,025,587
Williston research center	5,267,400	(45,697)	5,221,703
Carrington research center	9,328,093	(18,220)	9,309,873
Total all funds	$38,300,766	($225,553)	$38,075,213
Less estimated income	19,817,130	492,980	20,310,110
Total general fund	$18,483,636	($718,533)	$17,765,103
Full-time equivalent positions	113.94	(3.65)	110.29

Subdivision 6.

AGRONOMY SEED FARM

	Base Level	Adjustments or Enhancements	Appropriation
Agronomy seed farm	$1,521,007	$17,788	$1,538,795
Total special funds	$1,521,007	$17,788	$1,538,795
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	Base Level	Adjustments or Enhancements	Appropriation
Grand total general fund	$105,754,711	($4,262,578)	$101,492,133
Grand total other funds	124,036,762	4,208,878	128,245,640
Grand total all funds	$229,791,473	($53,700)	$229,737,773

SECTION 2. ONE-TIME FUNDING. The following amounts reflect the one-time funding items approved by the sixty-fourth legislative assembly for the 2015-17 biennium:

One-Time Funding Description	2015-17	2017-19
Agronomy laboratories	$150,000	$0
Rural leadership project	141,252	0
Seed cleaning plants	4,408,224	0
Upper great plains transportation institute road study	628,823	0
Junior master gardener program	12,500	0
Veterinary diagnostic laboratory	18,000,000	0
Dust issues technical support	100,000	0
Land purchase - Langdon	350,000	0
Flooded lands study	67,952	0
Total all funds	$23,858,751	$0
Total other funds	21,325,000	0
Total general fund	$2,533,751	$0

SECTION 3. ADDITIONAL INCOME - APPROPRIATION. In addition to the amount included in the grand total special funds appropriation line item in section 1 of this Act, any other income, including funds from federal acts, private grants, gifts, and donations, or from other sources received by the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, except as otherwise provided by law, is appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 4. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 5. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Williston research extension center shall report to the sixty-sixth legislative assembly on amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2015, and ending June 30, 2017, and the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 6. TRANSFER AUTHORITY. Upon approval of the state board of agricultural research and education and appropriate branch research center directors, the director of the main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of section 1 of this Act. Any amounts transferred must be reported to the director of the office of management and budget.

SECTION 7. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS. The board of higher education may adjust or increase full-time equivalent positions as needed for the entities in section 1 of this Act, subject to availability of funds. The board shall report any adjustments to the office of management and budget prior to the submission of the 2019-21 budget request.

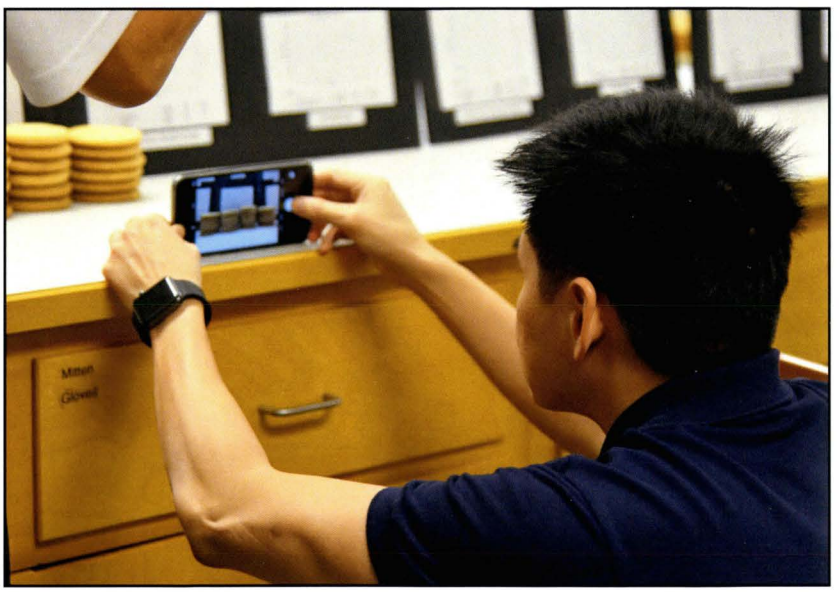
SECTION 8. UNEXPENDED GENERAL FUND - EXCESS INCOME. Any unexpended general fund appropriation authority to and any excess income received by entities listed in section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or revenues are available and may be expended by those entities, during the biennium beginning July 1, 2019, and ending June 30, 2021.

SECTION 9. EXEMPTION. The amounts appropriated for the veterinary diagnostic laboratory and the seed cleaning plants contained in subdivision 4 of section 1 of chapter 20 of the 2015 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2017, and ending June 30, 2019.

Northern Crops Institute
Annual Update

2016

Northern Crops Institute supports regional agriculture and value-added processing by conducting educational and technical programs that expand and maintain domestic and international markets for northern-grown crops.



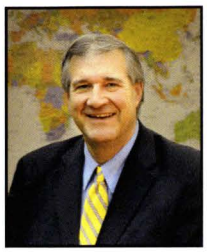
Connecting in the Global Marketplace

NCI NORTHERN CROPS INSTITUTE

Director Report

Mark Weber

We are positioning NCI for the future and we have engaged some of this region's leading agri-business leaders to help us lay out a strategic plan that capitalizes on our strengths while increasing future marketing opportunities for our high quality crops. They include:



Weber

NCI Chairman Keith Peltier of the Arthur Companies and Proseed, West Fargo, N.D.; Roger Hipwell, MGI Grain Processing, East Grand Forks, Minn.; Mike Krueger, The Money Farm, Fargo, N.D.; Vance Taylor, North Dakota State Mill, Grand Forks, N.D.; Eric Bartsch, AGT Foods, Bismarck, N.D.; Bob Sinner, SB & B Foods, Casselton, N.D.; Bob Majkrzak, Red River Commodities, West Fargo, N.D.; Dave Katzke, General Mills, Minneapolis, Minn.; John Crabtree, assistant NCI director; and myself.

We have identified several opportunities that we will build on in the near future. Understanding that there is growing uncertainty in future legislative budgets, we will continue to reach out to industry to generate additional fee income for flour milling, food extrusion and processing, baking, analytical, and other technical services that our energetic and experienced team of food technicians and scientists provide.

We have built an aggressive industry marketing effort promoting our technical services. The effort is paying off as we see demand for those services escalating.

We continue to expand our breadth of educational short course offerings teaching customers world-wide how to utilize our northern grown crops in their food and feed products. Even as these opportunities intensify, we have not added any new staff in six years. Future staff retirements will require different skill sets in response to changing demand for services from our customers. As we look into the future we see a need for additional expertise in the areas of risk management, animal nutrition and food processing.

Any business that expects to survive and prosper must embrace change and respond to market conditions quickly. We are responding to new challenges and opportunities in the same way through the help of those dedicated individuals volunteering their time away from their own business in serving the NCI and our mission.

An Interview with the NCC Chair

Keith Peltier, West Fargo, N.D. — Proseed

How do you anticipate NCI will continue to promote crops while commodity prices are low and with the current state of over supply?

NCI is committed to promoting crops grown in our region. When prices are low that is when promotion is the most important. NCI will encourage more use in current situations along with advocating and testing for new uses of our northern crops.

Peltier

How will NCI strengthen partnerships with organizations such as USSEC, U.S. Grains Council, U.S. Wheat Associates and four state commodity organizations etc. to promote our crops?

We are reaching out to our partners to seek new courses to promote our crops and to see if we can encourage new people to attend our courses. We are actively seeking new testing parameters that would promote new uses of the crops we promote.

What are some new and innovative ways, from both an educational and technical services standpoint, that NCI will be able to promote our crops?

We have been utilizing the Commodity Trading room in our classes. This is one of the premiere teaching tools in the country if not the world. We have been able to leverage our relationship with NDSU to be able to offer this opportunity. In addition, our equipment for testing is state of the art and mirrors the latest in technological developments.

Do you believe diversity in our crops along with their unique traits will help with long-term goals? If so, how?

The diversity of our crops in this region is one of our strengths. Just the fact that the farmer can have so many choices is good for everybody in the long run.

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NCI Thanks Outgoing NCC Members for Their Service

NCC Chairman Keith Peltier (left) and NCI Director Mark Weber (right) thanked outgoing NCC board members for their service on the Northern Crops Council (NCC) by presenting them with an engraved clock at the June 2016 meeting. Roger Hipwell (middle), Golden Valley, Minn., represented the MGI Grain Processing LLC, serving one term. Beau Anderson (not pictured), Williston, N.D., finished one term on the NCC by representing the Northern Pulse Growers. Thank you for your service!

2017
COURSE SCHEDULE

April 18-20
Pasta Production and Technology

June 5-10
NCI-INTSOY

September 11-20
Grain Procurement Management for Importers

Other courses will be added to our schedule as the year progresses. Please check our website www.northern-crops.com for the most up-to-date information.

Connect with us!

Did you know you can connect with NCI in more places than just northern-crops.com? Keep current with what is happening by following, liking and sharing NCI on Facebook, Twitter and YouTube.

2016-17 Northern Crops Council (NCC)

Keith Peltier, Chair
West Fargo, N.D.
Proseed

John Bartsch
Maple Grove, Minn.
Kelley Bean

Dean Bresciani, Ph.D.
Fargo, N.D.
North Dakota State University

Anthony Chavez
Minneapolis, Minn.
Buhler Inc.

Chet Edinger
Mitchell, S.D.
S.D. Wheat Commission

Doug Goehring
Commissioner of Agriculture
N.D. Department of Agriculture

Ken Grafton, Ph.D.
VP Agricultural Affairs
North Dakota State University

Justin Halvorson
Sheldon, N.D.
N.D. Corn Growers

Randy Hinebauch
Chinook, Mont.
Mont. Wheat & Barley Committee

Dave Katzke
Minneapolis, Minn.
General Mills

Greg Kessel, Vice Chair
Belfield, N.D.
N.D. Barley Council

Dwight Mork
Bellingham, Minn.
Minn. Corn Research and Promotion Council

Perry Ostmo
Sharon, N.D.
N.D. Soybean Council

Drew Parsley
Warroad, Minn.
Minn. Soybean R&P Council

Todd Sinner
Casselton, N.D.
SB&B Foods

Greg Svenningsen
Valley City, N.D.
N.D. Wheat Commission

Vance Taylor
Grand Forks, N.D.
North Dakota Mill and Elevator

Chris Westergard
Dagmar, Mont.
Northern Pulse Growers Association

Arnold Woodbury
Wyndmere, N.D.
N.D. Oilseed Council

Thank You to All Who Supported NCI Programs and Activities in 2016

North Dakota State University
- Agribusiness and Applied Economics
  - Frayne Olson, Ph.D.
  - William Wilson, Ph.D.
- Cereal and Food Sciences
  - Clifford Hall, Ph.D.
- Plant Sciences
  - John Barr
  - Paul Schwarz
  - Elias Elias, Ph.D.
  - Rich Horsley, Ph.D.
  - Frank Manthey, Ph.D.
  - Juan Osorno, Ph.D.
  - Senay Simsek, Ph.D.
  - DeLane Olsen
  - Kristin Whitney

Abbiamo Pasta Company
- Jim Gibbens

Alton Grain Terminal
- Cory Tryan
- Mark Wild

Ag Processing, Inc. (AGP)
- Chris Schaffer

AGT Foods U.S.A.
- Mehmet Tulbek
- Eric Bartsch

Axor America, Inc.
- Al Lucia

Benson-Quinn Co.
- Thomas Lahey

Brushvale Seed Inc.
- Paul Holmen
- Jon Miller

BNSF Railway Inc.
- Brandon Mortensen

Buhler, Inc.
- Michael Ehr
- Aidin Milani
- Jenni Harrington

Bush Brothers
- Nathan Kuenkel

Cargill, Inc.
- Wayne Koester
- Katie Jorgenson

CHS, Inc.
- Ryan Caffrey
- Mike Klein
- Greg Oberle
- Dick Carlson

Columbia Grain
- Darren Bjornson
- Mike Brinda

Dakota Growers Pasta
- Alexis Freier-Johnson

Dakota Specialty Milling
- Robert Meyer

Austin Damiani, Commodity Trader

De Mari Pasta Dies
- Gabriele Cannata

Duluth Seaway Port Authority
- Kate Ferguson
- Adele Yorde

EGT, LLC
- Matt Kerrigan

Fargo Brewing Company
- Chris Anderson

Global Innovative Solutions
- Gene Griffin

Bill Hejl Farm, Amenia, N.D.

Hunter Grain Company
- Paul Skarnagel

Radwan Ibrahim, Consultant

InfraReady Products Ltd.
- Mark Pickard

Kansas State University
- International Grains Program
  - Jay O'Neil

Kelly Bean
- John Bartsch

Malteurop North America
- Mary-Jane Maurice

Martinson Ag Risk Management
- Randy Martinson

Minneapolis Grain Exchange
- Joe Albrecht

Montana State University

North Dakota Barley Council
- Steve Edwardson

North Dakota Grain Inspection Service
- Pat Kehoe

North Dakota Mill
- Travis Devlin
- Vance Taylor

North Dakota Soybean Council
- Diana Beitelspacher
- Kendall Nichols
- Stephanie Sinner

North Dakota Wheat Commission
- Neal Fisher
- Erica Olson
- Jim Peterson

Northarvest Bean Growers

Northern Pulse Growers Association
- Shannon Berndt

Philadelphia Macaroni Company
- Tony Pierce

Port of Grays Harbor
- Leonard Barnes
- Kayla Dunlap

Rahr Malting Co.
- Jesse Theis

Ryan Richard Farm, Horace, N.D.

Richland Organics Inc.
- Matt Bohn
- Rick Brandenburger

SB&B Foods Inc.
- Robert Sinner
- Scott Sinner
- Todd Sinner

SK Food International
- Aaron Skyberg
- Joel Owen

South Dakota Soybean Processors
- Rodney Fenske

South Dakota State University
- Department of Economics
  - Lisa Elliot, Ph.D.

SunOpta, Inc.
- Mark Halvorson

Greg Svenningsen Farm, Valley City, N.D.

The Money Farm, Fargo, N.D.
- Mike Krueger
- Luke Swenson

USA Dry Pea and Lentil Council

USDA FAS Cochran Fellowship Program

USDA/GIPSA/ FGIS
- Noah Brook

U.S. Dry Bean Council
- Rebecca Bratter
- Randy Duckworth

U.S. Grains Council

U.S. Soybean Export Council
- Budi Tangendjaja, Ph.D.
- Basalisa Reas, DVM
- Tim Loh
- Ratan Sharma

U.S. Wheat Associates
- Roy Chung
- Matt Weimar
- Joe Sowers
- Steve Wirsching

University of Illinois
- Dept. of Animal Sciences
  - Hans Stein, Ph.D.

University of Minnesota

Wenger Manufacturing
- Gerry Hertzel

Wheat Value Consulting
- John Oades, Ph.D.

The NCI-INTSOY Course - June 5-10, 2017

The Northern Crops Institute (NCI) announces that it will host the 2017 NCI-INTSOY course at its facilities located on the campus of North Dakota State University during the week of June 5-10, 2017. National Soybean Research Laboratory (NSRL) at the University of Illinois has organized and hosted this successful course for many years and is pleased to cooperate with NCI as we take on this new role. NCI will utilize NSRL's expertise as part of the program. The course's educational mission will also essentially remain the same — to expand soybeans in the international marketplace.

Participants can expect to begin the week long course in Minneapolis, Minnesota. They will travel through farm country and visit commercial soymilk and livestock feed processing facilities. Participants will also visit a soybean farm on their trip to NCI and after two days of hands-on labs and lectures at NCI, the group will travel to South Dakota State University in Brookings, South Dakota for an additional day and a half of training and demonstrations. Also included are tours of an innovative aqua-feed research center and a soybean crushing plant. The program concludes with a drive through Minnesota's heartland including an overnight stay and additional site visits on the way back to Minneapolis where participants will depart.

More information including course fee and recommendations will be announced on our website at northern-crops.com in January 2017.

Thank You 2016 Agribusiness Sponsors!

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A Special Thank You to Our 2016-2017 Funding Partners

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Minnesota Wheat Research and Promotion Council
Montana Wheat and Barley Committee
State of North Dakota
North Dakota Barley Council
North Dakota Soybean Council
North Dakota Wheat Commission
Northarvest Bean Growers
Northern Food Grade Soybean Association
Northern Pulse Growers Association
State of South Dakota
South Dakota Soybean Research and Promotion Council
South Dakota Wheat Commission

Food Safety Modernization Act (FSMA)

Koch

FSMA was enacted to enable the FDA to better protect public health by strengthening the nation's food safety system. Implementation of FSMA regulations for the nation's food and feed production systems have begun and are continuing with greater frequency as 2016 wraps up and 2017 begins.

The tables, to the right, are broken into Small Business, General and Very Small Business compliance dates. These are FSMA's compliance dates as of June 2016 for animal/human food facilities that manufacture, process, package or hold food intended for consumption by animals or humans in the U.S.

For more information and updates on FSMA, please go to www.fda.gov/Food/GuidanceRegulation/FSMA/.

FDA FOOD SAFETY MODERNIZATION ACT

Small Business Compliance Dates

Rule	Small Business Definition	Compliance Date
Preventative Controls for Human Food 21-CFR 117	<500 full-time equivalent (FTE) employees	9-18-17
Preventative Controls for Animal Feed 21-CFR 507	<500 FTE employees	9-18-17 for cGMPs and 9-17-18 for PCs
Foreign Supplier Verification Program	N/A	1-26-19
Sanitary Transportation	<500 FTE employees, except that for certain motor vehicle carriers the definition is less than $27,500,000 in annual receipts	4-6-18

General Compliance Dates

Rule	Compliance Date
Preventative Controls for Human Food 21-CFR 117	9-19-16 (and 3-17-17 for supply chain program
Preventative Controls for Animal Feed 21-CFR 507	9-19-16 for cGMPs, 9-18-17 for PCs (except for some suppliers under the supply chain program)
Foreign Supplier Verification Program	Implementation will occur after issuance of Model Accreditation Standards
Sanitary Transportation	4-6-17

Very Small Business Compliance Dates

Rule	Very Small Business Definition	Compliance Date
Preventative Controls for Human Food 21-CFR 117	<$1M in sales+market value of food manufactured/processed/packed/held without sale	9-17-15
Preventative Controls for Animal Feed 21-CFR 507	<2.5M in slaes+market value of food manufactured/processed/packed/held without sale.	9-17-18 for cGMPs and 9-17-19 for PCs
Foreign Supplier Verification Program	<$1M	1-26-19

NCI Technical Staff Attended Baking Courses in Bangkok, Thailand

NCI's Food Technologist Sam Briss and Food Scientist Natsuki Fujiwara attended separate courses at the UFM Baking and Cooking School in Bangkok, Thailand.

Briss attended and completed the six week Baking Science & Technology Course, No. 38. The coursework consisted of group lab practical, exams and dough doctoring workshops in which the instructor created scenarios that could occur in a manufacturing setting and participants found the solution to the baking issue.

Fujiwara attended and completed a two week U.S. Wheat Frozen Dough Course. Participants learned how to produce different types of frozen dough for different bakery products.

Briss holds a recently baked loaf of bread with another participant from the six week Baking Science & Technology Course, No. 38.

Fujiwara (far right) shows recently baked goods with other participants from the two week U.S. Wheat Frozen Dough Course.

New MASE Soymilk and Tofu Production Equipment Will Assist in the Promotion of Northern Grown Soybeans Worldwide

Zach Liu, Ph.D., CFS

Soymilk and tofu are widely consumed in the Orient and are the most recognized soy foods in western countries. North Dakota is a global leader in producing top-quality food-grade soybeans for the world market. Recently, Northern Crops Institute (NCI) installed a pilot-scale soymilk and tofu processing system to promote northern grown soybeans by demonstrating their versatility and quality to international course participants. The system, designed by NCI, consists of several pieces of equipment which are made in Japan, China, India and the U.S. This state-of-the-art system is flexible in its ability to produce soymilk and tofu which are compatible with the differing tastes and cultures from Japan, China and other areas around the world.

The new soymilk and tofu production equipment is best described as a scaled down mimic of large commercial production equipment. It requires only 2 kilograms of soybeans for making tofu and 1.5 kilograms of soybeans for making soymilk. This system will be used for evaluating soybean quality and demonstrating soymilk and tofu production to visitors and international short-course participants. The system will also be used to develop new products and processes for assisting customers of northern grown soybeans.

Soybean foods (including beverages) are becoming popular because of their well-known health benefits. These benefits include, but are not limited to, preventing heart disease, reducing cancer risk, helping with obesity, aiding bone density and alleviating menopausal symptoms.

Due to these well-known health benefits, global soymilk production has grown rapidly. Traditional soymilk has been described as having a beany flavor. In China, Korea and most Southeast Asian countries, people prefer this flavor. But, in other countries such as India and Japan this beany flavor is a big barrier to consumer acceptance of soymilk. With the new processing equipment, our food scientists now have the capability to make both beany-flavor soymilk and non-beany flavor soymilk.

To explain exactly what soymilk is and how it is processed, it is best to start with the simple definition of what soymilk is. It is a water extract of soybeans. To process soybeans into soymilk the procedure is quite simple. First, dried soybeans need to be soaked in water for several hours. Then, the soaked soybeans are ground with water and the resultant slurry is cooked. Finally, the slurry is filtered to get cooked soymilk.

Tofu is a product based on soymilk. To make tofu, the cooked soymilk needs to be coagulated by mixing with coagulant or curdling agent such as calcium sulfate. The resultant curd can be directly consumed as pudding or silken tofu. To make regular and firm tofu, the curd needs to be broken and then transferred to a forming box where tofu is firmed and shaped by pressing. Tofu-making was first recorded in the Chinese Han dynasty some 2,000 years ago. There are many different types of tofu and tofu-derived products. With NCI's new system, their food scientists will now have the capability to make all types of tofu products.

NCI and its staff would like to thank the North Dakota Soybean Council and Northern Food Grade Soybean Association for their generous financial and overall support for the purchase and installation of the system. This collaborative effort will assist in expanding northern grown soybeans in the international marketplace.

In September, the North Dakota Soybean Council visited and toured the NCI. On the tour, Zach Liu, Ph.D., demonstrated the new soymilk and tofu machine.

Pasta Production and Technology

Canada, USA • April 12-14, 2016

This short course introduces the fundamental and applied aspects of manufacturing extruded and sheeted pasta products. Participants had the opportunity to process pasta on a hands-on pilot-scale and then they took part in cooking the processed pasta to evaluate the final product. Group activities included an exercise in identifying pasta defects and processing causes and they also had a field trip to a local pasta manufacturer.

U.S. Agribusiness Partnership Program

Indonesia, Philippines, Thailand, Vietnam • June 13-17, 2016

The program, in addition to providing trade and technical information, emphasized the U.S. Soy Advantage to importers in terms of its sustainable production, efficient and reliable logistic and transportation system,transparent and reliable trade practices, better consistency and quality of product, better value for the dollar, and importance of valuing soy against amino acid and metabolizable energy values as opposed to crude protein.

The course was sponsored by:

- USSEC
- United Soybean Board
- American Soybean Association
- Qualified State Soybean Boards - Minnesota, North Dakota, South Dakota and Kentucky

Utilization of U.S. Wheat Classes in Pasta Production

Angola, Cote d'Ivoire, Ecuador, Haiti, Honduras, Mexico, Nigeria, Panama, Peru, South Africa, USA • July 18-22, 2016

NCI's customized pasta production course assisted pasta processors in creating the right blend of wheat to meet their pasta specifications. Hands-on pasta processing and cooking quality evaluations supplemented course lecture topics which included U.S. wheat supply and price outlook, wheat quality evaluation, and quality tests for flour and semolina.

The seminar was sponsored by:

- U.S. Wheat Associates

South Asian Contracting for Wheat Value

Philippines, Singapore, Thailand, Vietnam • August 1-5, 2016

Quality control and purchasing personnel from South Asia attended the course. At the course, wheat buyers learned how to better manage supply chains and how to write contracts that accurately specify the wheat they want to purchase. The participants learned about wheat quality testing and procurement through lectures and end-product evaluations.

The course was sponsored by:

- U.S. Wheat Associates

Grain Procurement Management for Importers

Algeria, China, Ecuador, Egypt, Italy, Kuwait, Morocco, Panama, Peru, Philippines, Poland, Saudi Arabia, Singapore, United Arab Emirates, USA, Venezuela • September 12-21, 2016

NCI welcomed 25 participants from 16 countries to the Grain Procurement Management for Importers Course. The course highlights how companies can make effective purchases while managing their financial risk.

The course was sponsored by:

- U.S. Wheat Associates
- U.S. Grains Council
- U.S. Department of Agriculture FAS Cochran Fellowship Program

Dry Edible Beans as Food Ingredients

Argentina, Brazil, India, Indonesia, Italy, Malaysia, Philippines, Singapore, Thailand, Vietnam • September 19-20, 2016

NCI welcomed 22 participants from 10 countries for the Dry Edible Beans as Food Ingredients Course in mid-September. There was a broad range of course topics including industrial processing of canned beans and processing beans into flour to enhance pulse snack extrusion, baking and pasta applications.

The course was sponsored by:

- U.S. Dry Bean Council

Barley & Malt Quality: Field to Brewhouse Perspective

United States • October 3-6, 2016

Barley and Malt Quality: Field to Brewhouse Perspective course was held at NCI in October. NDSU Plant Sciences and Institute of Barley and Malt Sciences coordinated the course. There were lectures, discussion sessions and laboratory demonstrations that provided participants with knowledge to understand malt processing and to effectively interpret barley and malt analyses.

Soybean Procurement Management for Importers

India, South Korea • October 10-14, 2016

NCI hosted the Soybean Procurement Management for Importers Course to provide food grade soybean buyers with the latest risk management tools for procuring food grade soybeans from this region, and a better understanding of food grade soybeans as it relates to handling, storage, transportation and quality characteristics.

The course was sponsored by:

- Minnesota Soybean Research and Promotion Council
- North Dakota Soybean Council
- Northern Food Grade Soybean Association
- U.S. Soybean Export Council

Applications of U.S. Pulse Ingredients

United States • October 17-21, 2016

This customized course focused on major applications of using pulses as an ingredient. Emphasis was placed on bakery products, pasta and both extruded and fried snacks. Nutritional properties were also highlighted during the course.

The course was sponsored by:

- USA Dry Pea & Lentil Council

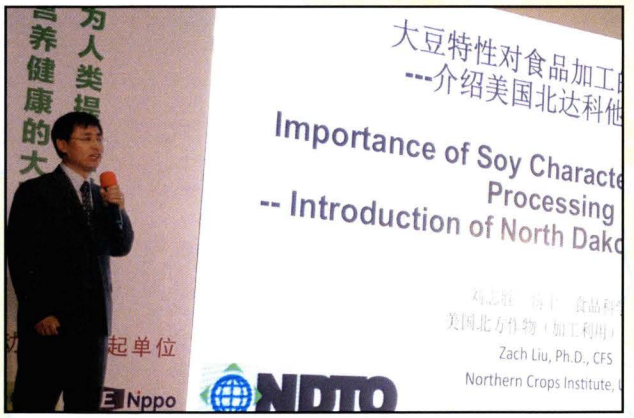
Algeria...Angola
Argentina...Brazil...Canada
China...Colombia...Cote d'Ivoire...Ecuador
Egypt...Honduras...India...Indonesia...Italy...Japan
Kuwait...Malaysia...Mexico...Morocco

Buyers from 37 Nations Educated by NCI in 2016

Myanmar...Nigeria...Panama...Peru
Philippines...Poland...Saudi Arabia...Singapore
South Africa...South Korea...Taiwan...Thailand
United Arab Emirates...United States
Venezuela...Vietnam

Morocco | March 6-11, 2016

Feed Production Center Manager Kim Koch, Ph.D. was in Morocco to attend the "Third USSEC Poultry Round Table for the Feed Industry of the Maghreb (North Africa)." There were approximately 60 people that attended the meeting. The picture above is of Kim Koch, Ph.D. and Khalid Benabdeljelin, contractor, North Africa for the U.S. Soybean Export Council (USSEC).

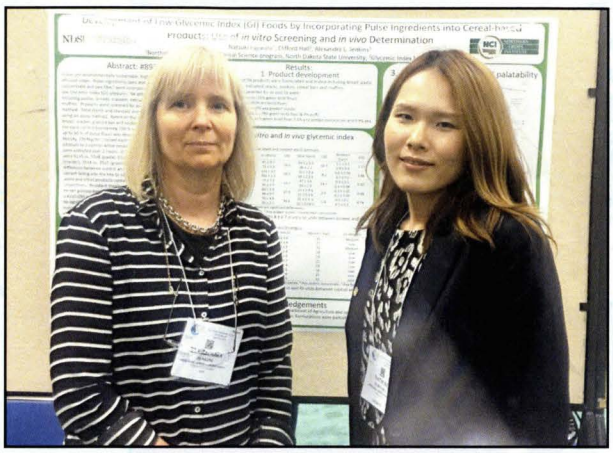


China | April 11-15, 2016

Food Scientist Zach Liu, Ph.D., CFS attended the 6th Annual China International Exhibition for Soyfood Processing Technology and Equipment and also the 4th Annual China International Soyfood Industry Development Conference held in Shanghai, China. During the conference Dr. Liu successfully delivered a one hour presentation titled "Importance of Soy Characteristics in Soyfood Processing - Introduction of North Dakota IP Soybeans." Dr. Liu represented NCI through the 2016 China Trade Mission group organized by the North Dakota Trade Office.

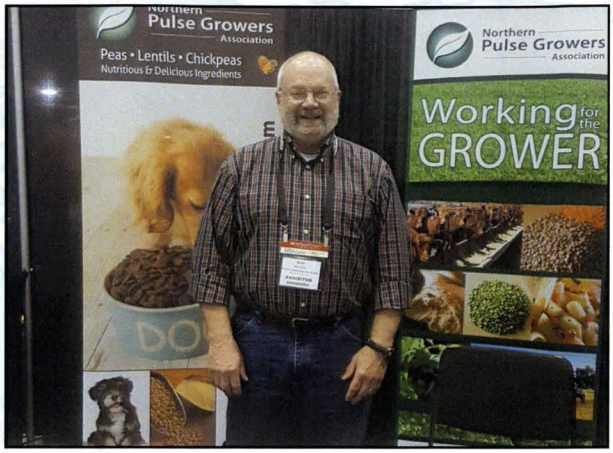
Guatemala | April 18-22, 2016

Natsuki Fujiwara attended a "Value-Added Foods with Bean Derivatives" seminar along with a hands-on baking demonstration in Guatemala City on April 19-20. It was hosted by the US Dry Bean Council. Participants from Central America learned about value-added applications of beans and also spent a day in the kitchen making products with bean flour.



USA | April 2-6, 2016

Natsuki Fujiwara attended the Experimental Biology Conference 2016 in San Diego, Calif. The conference brought together approximately 20,000 professionals and exhibitors. Fujiwara presented her poster, "Development of low glycemic index foods by incorporating pulse Ingredients into cereal-based products: Use of in vitro screening and in vivo determination." Alexandra Jenkins from Glycemic Index Laboratory, Inc., is listed as a coauthor and was also at the conference.



USA | April 21, 2016

Feed Production Center Manager Kim Koch, Ph.D. was in Kansas City, Missouri at the Pet Food Forum. He assisted the Northern Pulse Growers Association in their booth with technical questions. There were a record number of attendees and exhibitors at the Forum and the exhibition space sold out for the third year in a row.

Myanmar | May 14-21, 2016

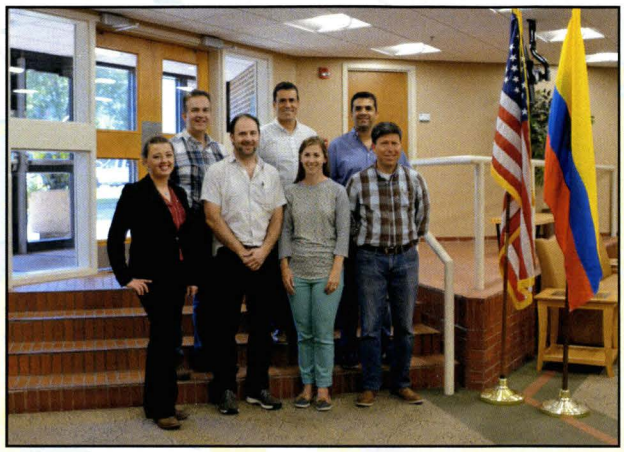
Food Scientist Zach Liu, Ph.D., CFS traveled to Myanmar to promote the use of U.S. food grade soybean protein ingredients. During the trip he visited three local companies that are currently producing or interested in producing soy-based beverages. Dr. Liu also delivered a 90 minute presentation at the Food Science Technology Association of Myanmar (FOSTA).The trip was organized by World Initiative for Soy in Human Health (WISHH/American Soybean Association) and was also financially supported by the North Dakota Soybean Council.

Southeast Asia | May 23-31, 2016

Dr. Frayne Olson, NDSU Department of Agribusiness & Applied Economics Crops Economist & Marketing Specialist was in Jakarta, Indonesia, Bangkok, Thailand and Manila, Philippines as part of the "Managing Risk and Profitability from Field to Food" meeting series. The meeting series was sponsored in part by NCI, Minnesota Soybean and the North Dakota Soybean Council. The program participants were buyers of U.S. soybeans and soybean meal. Most were soybean processors, feed millers and feed merchandisers. The meeting series focused on understanding the U.S. grain marketing system, with special emphasis on price risk management (i.e. futures markets, hedging and options).

Africa | June 20, 2016

NCI welcomed the Regional African Trade and U.S. Quality Assessment Team to NCI in June. Participants were from Ghana, Nigeria and South Africa. The team was hosted by the North Dakota Wheat Commission and Minnesota Association of Wheat Growers. They were at NCI to hear presentations and then the next day they toured a country elevator (the North Dakota Mill and Elevator) and they also toured the Alton Grain Terminal near Hillsboro, N.D.



Colombia | July 25, 2016

In July, NCI welcomed a Colombian Wheat Trade Mission Team. The team members were comprised of high level executives of the major flour, cookie and pasta groups from Colombia. The team was sponsored by U.S. Wheat Associates and USDA's Foreign Agricultural Service (FAS) and in cooperation with the North Dakota Wheat Commission along with many other state's wheat groups.

Singapore | August 13-20, 2016

NCI's Food Scientist Zach Liu, Ph.D., CFS presented at the South East Asia Soymilk Workshop organized by U.S. Soybean Export Council (USSEC) in Singapore. Zach presented on soybean variety, composition and storage. There were approximately 40 attendants who were from soymilk and tofu manufacturers in South East Asia. Dr. Liu's successful presentation and consultation lasted approximately 100 minutes and there many questions from the participants of the workshop.

Indonesia | August 18, 2016

In August, NCI welcomed the Indonesian Trade Team. The team was sponsored by U.S. Wheat Associates and hosted by North Dakota Wheat Commission.

Myanmar | August 25, 2016

At the end of August, NCI welcomed the Myanmar Trade Team sponsored by the American Soybean Association and WISHH. The team consisted mainly of oilseed processors. They also visited a soybean farm and a grain elevator, attended a session at NCI and also participated in the Global Trade Exchange in Indianapolis, Indiana.

India | August 25 - September 2, 2016

Feed Production Center Manager Kim Koch, Ph.D. was one of three lead instructors for the Center for Executive Education's "FSPCA Preventative Controls or Human Food Course sponsored by Cornell University - College of Agriculture and Life Sciences. Dr. Koch reported that it was well attended with 21 participants in the first part of the week and 30 participants towards the end of the week.

Japan, South Korea, Taiwan | September 12, 2016

In September, NCI welcomed the Food Barley Trade Team. The trade team was from Japan, South Korea and Taiwan. They were hosted by the North Dakota Barley Council.

Tunisia | September 26, 2016

We had a group of agriculture officials sponsored by the University of Minnesota Extension that were visiting from Tunisia. They took a tour of NCI and then they also visited other agricultural places of interest in the Fargo, N.D. area.

Philippines | October 4, 2016

The North Dakota Wheat Commission brought the Philippine Foremost Team to NCI for a tour of the facility. After the tour, the team headed to the Bagg Bonanza Farm in Mooreton, N.D. and also had a farm visit and tour.

Japan | October 26, 2016

NCI welcomed the Japanese Trade Team Showa Sangyo to our facility at the end of October. The trade team was sponsored by the North Dakota Wheat Commission.

Japan, South Korea, Taiwan | November 7-11, 2016

Food Scientist Natsuki Fujiwara traveled to Japan, South Korea and Taiwan in the beginning of November to assess the market potential for food barley. The team met with key staff in each company.

Colombia | November 14-18, 2016

Food Scientist Natsuki Fujiwara spoke at educational seminars for health professionals as a means to increase bean consumption in Bogota, Colombia. Fujiwara also had a technical seminar in Medellin, Colombia for culinary and technical professionals.

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2016 Annual Update

Offering Technical Services and Educational Opportunities

Educational Courses:

- Value-enhanced uses
- Grain standards and inspection
- Procurement, risk management
- Quality, processing and milling
- Extrusion technology
- Pasta processing
- Feed milling and manufacturing
- Customized seminars

Technical Services:

Pilot-Scale Processing

- Milling
- Baking
- Pasta processing
- Oilseed cold pressing
- Extrusion
- Post-extrusion
- Feed
- Industrial

NCI Provides:

- Skilled staff
- Up-to-date information
- Fully-equipped labs
- Hands-on experience
- Extrusion
- Confidential environment
- Network of resources

NCI Staff

Mark Weber, director
John Crabtree, assistant director
Linda Briggs, office manager
Betsy Armour, communications/public relations manager
Janel Brooks, account technician
Neil C. Doty, Ph.D., technical director (consultant)
Kim Koch, Ph.D., feed production center manager
Natsuki Fujiwara, food scientist
Rachel Carlson, food technologist
Sam Briss, food technologist
Rilie Morgan, process project manager
Zhisheng (Zach) Liu, Ph.D., CFS, food scientist

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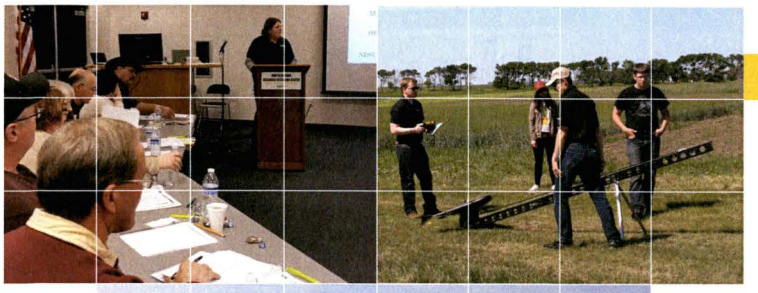
This publication will be made available in alternative formats for people with disabilities upon request, 701-231-6538.

NDSU Extension
SB 2020/2080
1-18-17



NORTH DAKOTA STATE UNIVERSITY

#1

North Dakota Agricultural Experiment Station

NDSU Extension Service

2017-2019 Biennial Budget Request

Senate Bill 2020 / 2080
Senate Appropriations Committee
Senator Ray Holmberg, chair
Jan. 18, 2017

NDSU Extension Service - Budget No. 630
North Dakota Agricultural Experiment Station
- Main Station - Budget No. 640
- Branch Research Extension Centers - Budget No. 628
- Agronomy Seed Farm - Budget No. 649

Dean L. Bresciani – President, North Dakota State University
Mike Beltz – Chair, State Board of Agricultural Research and Education
Ken Grafton – Vice President, Dean and Director for Agricultural Affairs, NDSU
Chris Boerboom – Director, NDSU Extension Service
Kris Ringwall – Director, Dickinson Research Extension Center
Kevin Sedivec – Interim Director, Central Grasslands Research Extension Center
Chris Schauer – Director, Hettinger Research Extension Center
Randy Mehlhoff – Director, Langdon Research Extension Center
Shana Forster – Director, North Central Research Extension Center
Jerry Bergman – Director, Williston Research Extension Center
Blaine Schatz – Director, Carrington Research Extension Center
Brian Otteson – Director, Agronomy Seed Farm

www.ndsu.edu/legislators

NDSU NORTH DAKOTA STATE UNIVERSITY

Agency Overview

NDSU Extension Service

Agency Statutory Authority

North Dakota Century Code Chapter 4-08.

Agency Description

The North Dakota State University (NDSU) Extension Service is part of a nationwide, university-based educational system that provides research-based educational programs to citizens in all 53 counties and four American Indian reservations in North Dakota. Programs focus on selected needs and issues affecting the state's agriculture, youth, families, communities and natural resources. The staff is located at state, area and local/county offices. The NDSU Extension Service combines funding from federal, state, county and grant sources to specifically address local concerns.

Agency Mission Statement

The purpose of the NDSU Extension Service is "to create learning partnerships that help youth and adults enhance their lives and communities." This purpose is accomplished through the dissemination of research-based information and the implementation of educational programs geared to the changing needs of North Dakotans. Major program areas include agriculture and natural resources; youth development; family and consumer sciences; and community economic development and leadership.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19, the State Board of Agricultural Research and Education (SBARE) presents a status report to the budget section of the Legislative Council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the Legislative Council office.

Agency Future Critical Issues

North Dakotans who were involved in 11 community forums in 2015 prioritized eight areas of concern related to the economic sector: struggling agricultural economy, public disconnect with agriculture, energy development, farm and business transition, labor force, natural resource protection, regulations, and rural communities. They also prioritized six areas of concern related to families and communities: health and wellness, civic engagement, successful families, infrastructure, crime and safety, and education. North Dakota is a great state in which to live, but residents experience frustrations and clearly see the potential for enhancements.

Forum participants recognized that these issues are complex, difficult issues without a single, simple solution. To make progress, multiple agencies and partners may be involved in different aspects of the issue. Because the NDSU Extension Service's mission is to provide research-based information to improve the quality of life of North Dakotans, we lead or collaborate on numerous programs across the state and within local communities that address many of the identified concerns. For instance, Extension cannot solve low commodity prices, but we provide tools for farmers to make better marketing decisions. We cannot create successful families alone, but we provide training to parents so they have better parenting skills.

NDSU EXTENSION SERVICE

To continue these relevant, community-driven programs, NDSU Extension needs sustained program support in agriculture, nutrition and wellness, leadership and civic engagement, and 4-H and youth development. Upon review of the issues from the community forums and other stakeholder needs, the State Board of Agricultural Research and Education (SBARE) prioritized the restoration of the NDSU Extension base budget as the most critical Extension need to maintain existing capacity to address state issues.

Prior to the proposed budget reduction, SBARE identified Extension's top need was increased operating funds to increase capacity to respond to the unmet needs identified during the community forums. In a manner similar to the internal grants program funded by the Legislature for precision agricultural research in the last session, Extension proposes to capitalize on existing specialists and agents to develop fixed-term projects, which target needs identified in the community forums. The need to increase Extension's delivery via media technologies must also be enhanced to support the growing demands of different generations of Extension users.

Ongoing state needs that Extension is not able to provide adequate educational programs are in the areas of farm safety, farm financial management, water quality, value added cropping systems, and pollinator management.

NDSU Extension Service

2015-2017 Legislation that Included Reporting Requirements to 2017 Appropriation Committees

HB1020 (NDSU Research & Extension, & Agronomy Seed Farm)

SECTION 2. ONE-TIME FUNDING — EFFECT ON BASE BUDGET — REPORT TO SIXTY-FIFTH LEGISLATIVE ASSEMBLY. The following amounts reflect the one-time funding items approved by the sixty-third legislative assembly for ... the 2015-17 one-time funding items included in the appropriation in section 1 of this Act:

One-Time Funding Description
Extension master gardener internships — $12,500

The 2015-17 one-time funding amounts are not a part of the entity's base budget for the 2017-19 biennium. The main research center shall report to the appropriations committees of the sixty-fifth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2015, and ending June 30, 2017.

Status: $12,500 received; funds allocated. 3 summer interns hired.

NDSU Extension Service

Update of Extension Initiatives Funded in 2015-2017 Budget

- **Costs to continue FY2015 salary increases**
  $272,281 received and allocated July 1, 2015

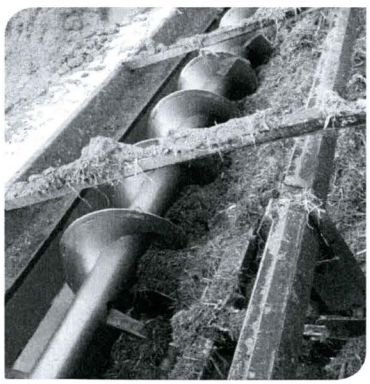
- **Agricultural programs and capacity**
  $247,972 received
  - $207,972 salary and fringe benefits and operating, 1.0 FTE Area Livestock Extension Specialist hired — Hettinger REC
  - $40,000 operating support; allocated

- **Junior master gardener program,** one-time funding
  $12,500 received; funds allocated. 3 summer interns hired.

- **State Soil Conservation Committee**
  $75,000 received and added to previous funding
  Additional funding received to fund grants to Soil Conservation Districts as well as help landowners reduce soil erosion/ improve water quality; and enhance tree plantings, grazing lands and wildlife habitat.

NDSU EXTENSION SERVICE

2017-19 Program Initiatives as Ranked by SBARE



1 Restore Budget to 2015-17 Original Appropriation

Need: Restoration of 10 percent budget cut - $2,977,569

2 Enhancing Extension Infrastructure

Situation: This initiative to enhance Extension's infrastructure is centered on increasing annual operational support for Extension programs to address new and emerging issues that warrant immediate attention. This initiative will be innovative, invest in North Dakota citizens and regularly inform stakeholders on the impacts made through Extension programs. Funding to provide operational support for NDSU Extension's infrastructure will provide long-term assistance to respond to critical issues affecting North Dakota. This initiative will:

- Innovate - Enhance the needs assessment process and the support to act on suggestions from the public, and provide a flexible and nimble response to enhance engagement through applied projects and educational programs
- Invest - Develop a competitive funding process to meet new and emerging issues in a timely manner and provide short-term investment in areas of high potential for success
- Inform - Provide impact reports upon completion of the projects that were funded through the competitive process and prioritize the development of enhanced access to NDSU Extension project data and research, as well as results and recommendations to the public through an improved web presence, searchable databases and smartphone applications

Need: Operating - $900,000

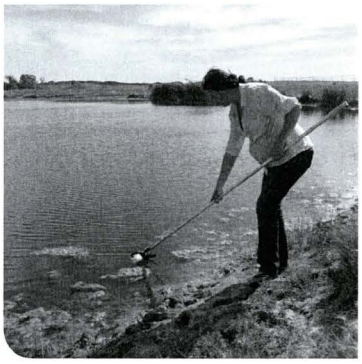
3 Farm Safety Education

Situation: This specialist will launch a new statewide farm safety educational program to reduce agricultural and related on-farm accidents, which kill and injure too many North Dakotans. Multi-faceted educational programs will target farmers and youth.

The farm safety initiative responds to a dire need of agriculture in North Dakota. Farm accidents have been increasing steadily in the Midwest. About 374 farmers and 113 youth (age 16 to 19) die each year from farm-related accidents. Approximately 167 workers suffer from farming-related injury every day. North Dakota is not immune to these statistics. Most farmers in North Dakota have experienced or know of someone who lost a life or was injured in a farm accident. The most common accident is tractor rollover. ATV, grain bin and electrical accidents also are common. Farm safety education is effective in reducing farm accidents in other states. Leadership is needed to develop a comprehensive, persistent educational program, which can be delivered in conjunction with Extension agents to create a culture of safety on the farm.

Need: Farm Safety Education Specialist (1.0 FTE) - $240,000; operating - $60,000

2017-19 Program Initiatives as Ranked by SBARE (continued)



4 Enhancing the Agricultural Economy

Situation: Extension Farm Financial Management Specialist – This specialist will develop and deliver Extension programs that enhance the financial management skills of farmers, ranchers and agricultural professionals, and increase the likelihood of maintaining successful farm and ranch enterprises. • Farm profitability is a priority issue in agriculture today. Low crop prices, declining livestock prices and high production costs have created an environment in which the financial condition of many farms is deteriorating rapidly. This is especially affecting the younger generation of farmers. Financial management education, including investment analysis (using your money wisely), risk analysis (how much could be lost), financial structuring (financial sources and terms) and business strategy (can the enterprise mix be improved), is a critical need. A farm financial management specialist will be able to improve the financial management skills of farmers and agricultural professionals and increase the efficiency of operations.

Need: Extension Farm Financial Management Specialist (1.0 FTE) - $240,000; operating - $60,000

Situation: Extension Water Quality Specialist – This specialist will provide statewide education on water quality and quantity related to human and livestock use, energy production, nutrient management, etc. The water quality specialist was a ranked SBARE need in the last two legislative sessions. • Water is a critical element to life in our state. Science-based answers are needed on topics such as water quality for human and livestock consumption, impacts of saltwater spills, and best management practices to prevent nutrient movement to surface water. Educational programs and information are needed to assist land owners and citizens in making informed decisions when using and protecting our precious water resources. The water quality educational program will work in cooperation with agricultural and conservation groups and state regulatory agencies.

Need: Extension Water Quality Specialist (1.0 FTE) - $240,000; operating - $60,000

Situation: Extension Value-added Cropping Specialists – These specialists will develop programs to build the management skills of new and existing farmers to overcome the unique production challenges of these crops and systems. This will build the capacity of North Dakota to meet opportunities in the marketplace. Positions will be located at the Dickinson and Carrington Research Extension Centers to service the state. • The lagging agricultural economy highlights the need and opportunity for diversification, including value-added crops and production systems. Many value-added crops and production systems have high rates of return. The industry is aggressively seeking farmers to fill these increasing demands. North Dakota agriculture can aggressively pursue and invest in alternative crops and productions systems to increase the profitability of its producers. Value-added cropping specialists can educate farmers on the specialized management that is needed to produce these crops and transition into these production systems successfully.

Need: Extension Value-added Cropping Specialists (2.0 FTE) - $400,000; operating - $120,000

Situation: Extension Pollinator Specialist – This specialist will provide leadership for statewide education on best management practices for beekeepers and other pollinators. These educational efforts will support the North Dakota Pollinator Plan. • Pollinators, most often honey bees, are beneficial to the production of many of North Dakota's crops. In addition, North Dakota leads the nation in honey production, which has a value of $84 million. Unfortunately, beekeepers are suffering significant colony losses from a multitude of factors. Extension can provide educational programs on best management practices for beekeepers and education on the North Dakota Pollinator Plan for the mutual benefit of the honey industry, commercial agriculture and North Dakota residents.

Need: Extension Pollinator Specialist (1.0 FTE) - $240,000; operating - $60,000

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DETAILS:
2017-2019 Program Initiatives as Ranked by SBARE

NDSU Extension Service

1. Restore Budget to 2015-2017 Original Appropriation

2. Enhancing Extension Infrastructure

Operating **$900,000**

This initiative to enhance Extension's infrastructure is centered on increasing annual operational support for Extension programs to address new and emerging issues that warrant immediate attention. This initiative will be innovative, invest in North Dakota citizens and regularly inform stakeholders on the impacts made through Extension programs. Funding to provide operational support for NDSU Extension's infrastructure will provide long-term assistance to respond to critical issues affecting North Dakota. This initiative will:

- **Innovate** — Enhance the needs assessment process and the support to act on suggestions from the public, and provide a flexible and nimble response to enhance engagement through applied projects and educational programs
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3. Farm Safety Education

1.0 FTE Farm safety education specialist **$240,000**
Operating **$160,000**

This specialist will launch a new statewide farm safety educational program to reduce agricultural and related on-farm accidents, which kill and injure too many North Dakotans. Multi-faceted educational programs will target farmers and youth.

The farm safety initiative responds to a dire need of agriculture in North Dakota. Farm accidents have been increasing steadily in the Midwest. About 374 farmers and 113 youth (age 16 to 19) die each year from farm-related accidents. Approximately 167 workers suffer from farming-related injury every day. North Dakota is not immune to these statistics. Most farmers in North Dakota have experienced or know of someone who lost a life or was injured in a farm accident. The most common accident is tractor rollover. ATV, grain bin and electrical accidents also are common. Farm safety education is effective in reducing farm accidents in other states. Leadership is needed to develop a comprehensive, persistent educational program, which can be delivered in conjunction with Extension agents to create a culture of safety on the farm.

4. Enhancing the Agricultural Economy

1.0 FTE Farm financial management specialist **$240,000**
Operating **$60,000**

This specialist will develop and deliver Extension programs that enhance the financial management skills of farmers, ranchers and agricultural professionals, and increase the likelihood of maintaining successful farm and ranch enterprises.

Farm profitability is a priority issue in agriculture today. Low crop prices, declining livestock prices and high production costs have created an environment in which the financial condition of many farms is deteriorating rapidly. This is especially affecting the younger generation of farmers. Financial management education, including investment analysis (using your money wisely), risk analysis (how much could be lost), financial structuring (financial sources and terms) and business strategy (can the enterprise mix be improved), is a critical need. A farm financial management specialist will be able to improve the financial management skills of farmers and agricultural professionals and increase the efficiency of operations.

1.0 FTE Water quality specialist **$240,000**
Operating **$60,000**

This specialist will provide statewide education on water quality and quantity related to human and livestock use, energy production, nutrient management, etc. The water quality specialist was a ranked SBARE need in the last two legislative sessions.

Water is a critical element to life in our state. Science-based answers are needed on topics such as water quality for human and livestock consumption, impacts of saltwater spills, and best management practices to prevent nutrient movement to surface water. Educational programs and information are needed to assist land owners and citizens in making informed decisions when using and protecting our precious water resources. The water quality educational program will work in cooperation with agricultural and conservation groups and state regulatory agencies.

2.0 FTE Value-added cropping specialists **$400,000**
Operating **$120,000**

These specialists will develop programs to build the management skills of new and existing farmers to overcome the unique production challenges of these crops and systems. This will build the capacity of North Dakota to meet opportunities in the marketplace. Positions will be located at the Dickinson and Carrington Research Extension Centers to service the state.

The lagging agricultural economy highlights the need and opportunity for diversification, including value-added crops and production systems. Many value-added crops and production systems have high rates of return. The industry is aggressively seeking farmers to fill these increasing demands. North Dakota agriculture can aggressively pursue and invest in alternative crops and productions systems to increase the profitability of its producers. Value-added cropping specialists can educate farmers on the specialized management that is needed to produce these crops and transition into these production systems successfully.

1.0 FTE Pollinator specialist **$240,000**
Operating **$60,000**

This specialist will provide leadership for statewide education on best management practices for beekeepers and other pollinators. These educational efforts will support the North Dakota Pollinator Plan.

Pollinators, most often honey bees, are beneficial to the production of many of North Dakota's crops. In addition, North Dakota leads the nation in honey production, which has a value of $84 million. Unfortunately, beekeepers are suffering significant colony losses from a multitude of factors. Extension can provide educational programs on best management practices for beekeepers and education on the North Dakota Pollinator Plan for the mutual benefit of the honey industry, commercial agriculture and North Dakota residents.

NDSU EXTENSION SERVICE

2015 Community Forums

STATEWIDE REPORT

327
PARTICIPANTS

GENDER

- **51%** Male
- **49%** Female

AGE

- **2%** Younger than 20
- **8%** 20 to 29
- **13%** 30 to 39
- **17%** 40 to 49
- **27%** 50 to 59
- **22%** 60 to 69
- **11%** Older than 69

OCCUPATION

- **14%** Education
- **20%** Government
- **27%** Farming/agriculture
- **13%** Business
- **11%** Retired
- **15%** Other

ETHNICITY

- **97%** White
- **3%** American Indian or Alaska Native

LIVED IN COMMUNITY

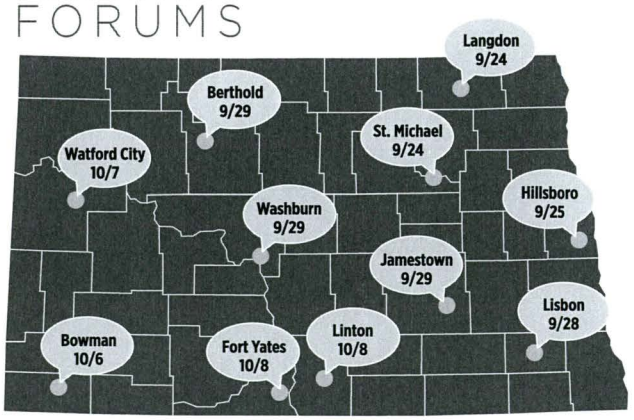
- **3%** Less than 1 year
- **12%** 1-5 years
- **6%** 6-10 years
- **11%** 11-20 years
- **35%** More than 20 years
- **33%** All of my life

The NDSU Extension Service is listening. NDSU Extension staff recognize that to be most effective, they need to listen to local stakeholders and regularly ask about crucial issues and challenges affecting each region.

Community forums during the fall of 2015 provided an opportunity to listen to North Dakotans across the state as they shared concerns around:

Thank you to the more than 300 people who participated in the 11 community forums. The information will help shape NDSU Extension's strategic planning efforts during the next three to five years and help us create the Extension programs that will most strongly align with the needs and priorities of North Dakota residents.

11
COMMUNITY FORUMS



EXTENDING KNOWLEDGE. CHANGING LIVES.

Agriculture, Energy, Natural Resources and the Economy

NDSU EXTENSION SERVICE

Priority Issues of Concern to Community Forum Participants

AG ECONOMY

Agriculture is critical to the North Dakota economy. Fluctuations in the agricultural economy bring challenges to farmers, especially in these lean times. More agricultural diversification and value-added products are needed to help farm families and communities.

PUBLIC DISCONNECT WITH AGRICULTURE

We say we can feed the world, yet there is a growing lack of general understanding about where food comes from. Farm-to-table consumer education programs about local foods and food production are needed for all ages.

ENERGY DEVELOPMENT

Fluctuating oil prices can cause dramatic shifts in North Dakota's economy, creating uncertainty. Additional areas of challenge in energy development include protecting natural resources in the Oil Patch Region, developing necessary infrastructure and preparing communities for changing dynamics.

FARM AND BUSINESS TRANSITION

As North Dakota ages, barriers to effectively enter and exit farming operations and other businesses need to be overcome to ensure a successful transition from one generation to the next.

LABOR FORCE

Recruiting and retaining an effective workforce across the state is a growing challenge. Adequate wages and benefits, and options for worker flexibility are two key factors. Retention of a young and vital workforce also requires affordable housing, good-quality child care and local community amenities.

NATURAL RESOURCES PROTECTION

Adequate water supplies, good-quality air and water, soil health and tree renovation are concerns. Being good stewards of the state's natural resources and using green technology, such as wind and other renewables, is recommended, as is expansion of local recycling programs.

REGULATIONS

Sustaining industry is viewed as difficult because of existing and proposed regulations in energy development and agriculture. One-size-fits-all federal agency regulations don't take into consideration variables that are unique to location. Oversight or flexibility at the state or local level is preferred.

RURAL COMMUNITIES

Keeping main streets viable through succession planning for businesses, economic development and updates to infrastructure are essential to sustain rural communities. Quality-of-life amenities are needed to attract and keep people in rural North Dakota.

Children, Families and Communities

NDSU EXTENSION SERVICE

Priority Issues of Concern to Community Forum Participants

HEALTH AND WELLNESS

Awareness education about chemical and other addictions, mental health issues and physical health is needed. Access to and quality of health care is a major concern, particularly in rural areas where medical personnel and emergency medical services volunteers are limited or not available. Also of concern is the increase of unhealthy lifestyles, and ongoing inaccessibility to nutritious foods and exercise programs or facilities.

CIVIC ENGAGEMENT

Gaps exist in participation and commitment at the local level. Positive changes in communities happen when adults and youth are engaged civically as volunteers and leaders. Successful community involvement and volunteerism hinges on the development of leadership skills and mentoring.

SUCCESSFUL FAMILIES

Many families are struggling. Families today are bombarded with competing priorities that are changing family dynamics. Frequently heard are that youth are overscheduled, changing cultures and technology are limiting family time, good-quality child care can't be found, and morals and ethics are on the decline. Financial security also is a major concern with an increase in poverty and the difficult challenges it causes.

INFRASTRUCTURE

Improvement to infrastructure is needed for the long-term development and resiliency of North Dakota. Housing, roads, child-care facilities, schools and public buildings need attention for safety reasons and because a lack of sufficient infrastructure impedes the recruitment and retention of the rural workforce.

CRIME AND SAFETY

Sex trafficking, drug and alcohol abuse, burglaries, sex offenders and an increase in crime are huge concerns, especially in western North Dakota. Ranking just as high, however, is Internet, social media and texting safety, and the increasing prevalence of cyber-bullying and sexting, especially among youth.

EDUCATION

Additional support is needed for pre-K through 12th-grade education systems, including more teachers and programs in many areas. Overcrowding of schools in some communities and declining enrollments in others is creating unique challenges, with discussion of regional collaboration more important than ever in some areas.

EXTENDING KNOWLEDGE. CHANGING LIVES.

NDSU EXTENSION SERVICE

The NDSU Extension Service mission is to provide research-based information to improve the quality of life of North Dakotans. Based on concerns of North Dakotans involved in the 11 community forums, three critical areas emerged: **economic prosperity, community engagement** and **healthy citizens**.

Potential Extension responses based on the community forum suggestions include:

ECONOMIC PROSPERITY:

Education for informed decisions and profitable economies

- Enhance agricultural diversification programs to include entrepreneurship and value-added components
- Educate about financial security to help sustain farm and ranch operations and small business, and to assist families with household budgeting
- Partner with organizations to help rural communities plan for their future
- Educate on the benefits of best management practices to sustain good-quality air, soil, water and other natural resources

COMMUNITY ENGAGEMENT:

Education for engaged, productive North Dakotans

- Strengthen character and ethics education for youth and adults, with parents as first teachers
- Reinforce local leadership training for adults and youth to develop skills and confidence in leading and becoming more civically engaged
- Facilitate succession planning to equip generations for successfully transitioning farm and ranch operations, and other businesses
- Mobilize communities around issues of concern such as protecting natural resources, updating infrastructure, developing the workforce and managing change

HEALTHY CITIZENS:

Education on food production, nutrition and healthful living

- Strengthen farm-to-table-related programs for youth, adults and urban communities
- Educate about safe food production and consumption, and the importance of good nutrition and wellness
- Convene conversations to address addictions, and mental and physical health challenges
- Focus on safety for youth, family and the farm
- Facilitate the development of healthful environments at the community level

As Extension considers these needs, we remain committed to our current successful programs in agriculture, natural resources, 4-H, families and communities.

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EXTENDING KNOWLEDGE. CHANGING LIVES.

NDSU EXTENSION SERVICE Takes Action

After listening to North Dakotans' current concerns about issues related to agriculture, energy, natural resources, the economy, children, families and communities during community forums across the state in 2015, the NDSU Extension Service responded by developing a number of new programs as well as strengthening other relevant programs already in place.

These responsive programs are framed around three key areas:

Economic Prosperity — education for informed decisions and profitable economies

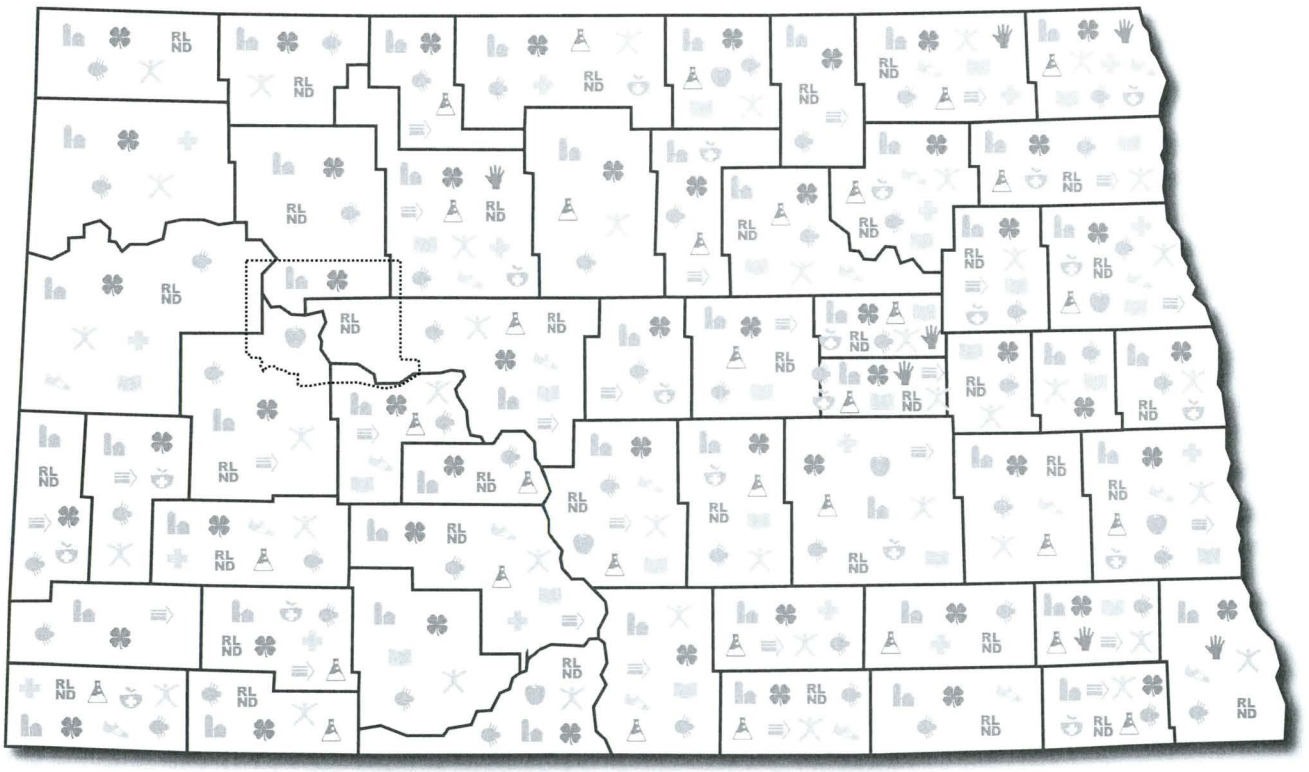
Community Engagement — education for involved, productive North Dakotans

Healthy Citizens — education on food production, nutrition and healthful living

Extension state and area specialists and county-based agents in all 53 counties work collaboratively to deliver these and many other educational programs.

Although issues and technologies have changed since the Cooperative Extension Service was created in 1914, NDSU Extension continues to be responsive to people's needs, and remains committed to extending knowledge and changing lives now and in the future.

Programs in the three key areas, as well as many others, are improving the lives of North Dakotans in all 53 counties.



Farm Bill
Soil Health
EFNEP
Design Your Succession Plan
Integrated Pest Management
4-H
Lead Local
RL ND Rural Leadership North Dakota
4-H National Youth Science Day
Nutrition and Wellness Education
Agricultural Literacy
Mental Health
Stepping On

EXTENDING KNOWLEDGE. CHANGING LIVES.

A sample of current educational programs:

NDSU EXTENSION SERVICE

BUILDING ECONOMIC PROSPERITY

North Dakotans receive education that helps them make informed decisions, ultimately building profitable farms, businesses and households. For example:

With Extension agent assistance, **4,040 farm operators** worked with NDSU Extension's online Farm Bill Decision Aid spreadsheet to make decisions related to the new farm bill, and in a follow-up survey, 90 percent of respondents used the decision aid tool when making their final farm bill decisions.

As a result of more healthful diets and reduced chronic disease, potential savings in long-term health-care costs range from **$3.62** to **$12.50** for every $1 spent on the Expanded Food and Nutrition Education Program (EFNEP).

Soil health café talks, cover crop demonstration sites and salinity management field days give producers opportunities to learn techniques to make soil healthy again and better manage salinity and improve soil health.

One year after the Extension workshop, **75 percent** of Design Your Succession Plan survey respondents reported having conversations, making decisions and meeting with professionals to create succession plans to keep their farm/ranch legacies alive.

Providing producers, gardeners and homeowners with strategies for controlling pests, diseases and weeds is a major part of the Integrated Pest Management program. These strategies delivered through a weekly Crop and Pest Report and local Extension agents are aimed at keeping a pest, disease or weed out of an area and showing producers how to monitor their fields, identify pests and determine economic thresholds.

DRIVING COMMUNITY ENGAGEMENT

Extension specialists and agents provide education and facilitation to encourage citizens to be engaged in their local communities to support agriculture and a positive quality of life. Results include:

235 volunteer groups across North Dakota have members and emerging leaders better prepared and more confident to serve on boards, councils or committees because of Extension's one-day Lead Local program. Extension also developed Lead Local for youth to provide them with tools for civic engagement.

4-H, the largest and only research-based youth organization in the state, provided hands-on, real-life experience through projects, activities and events to **29,306 youth** in 2016. 4-H youth are four times more likely to contribute to their communities than youth not involved in 4-H.

Rural Leadership North Dakota participants have acquired more than **$4 million** to complete local projects they've initiated across the state. This 18-month program has been preparing and developing effective leaders to strengthen North Dakota since 2003.

Youth at **30 North Dakota sites** have participated in 4-H National Youth Science Day, the world's largest youth-led science experience designed to help train youth for the workforce in science, technology, engineering and math topics and issues.

PRODUCING HEALTHY CITIZENS

North Dakotans receive education on food production, nutrition and healthful living. Impacts include:

More than **12,000 youth** are involved annually with Extension farm-to-table programs, including Ag in the Gym, Ag Careers, Ag Literacy and Junior Master Gardener, which are taught by local Extension agents. These programs provide information about local foods and food production to ensure a better understanding of the connection between agriculture and the food we eat.

186 individuals from law enforcement, K-12 education and communities participated in Mental Health 101 broadcasts to learn how to recognize signs and symptoms of people dealing with mental health challenges.

96 percent of Stepping On program participants reported practicing techniques for standing, walking, and climbing curbs and stairs safely. Stepping On, a national evidence-based program, teaches older adults how to avoid falling, increasing the likelihood of seniors being able to stay in their homes and age in place.

More than **9,000 elementary school students** per year benefit from nutrition and wellness education programs that result in students eating more fruits and vegetables, being more physically active and understanding how food gets from the field to the table.

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EXTENDING KNOWLEDGE. CHANGING LIVES.

NDSU EXTENSION SERVICE

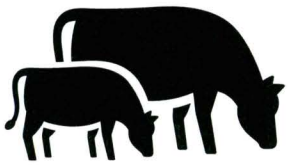
Extension helping North Dakota through **agriculture and natural resources**: A SNAPSHOT

Agriculture is critical to the economy of North Dakota and routinely accounts for approximately 30 percent ($9.1B in 2015) of all business activity in the state. Extension Agriculture and Natural Resources' (ANR) specialists and county based agents work to ensure that the latest research based information is available to all who seek it. These same specialists and agents continually probe and listen for agriculture's next "need", and develop innovative educational programs and field studies to meet those needs as fast as possible.

Approximately **15,000** **producers** attended Extension **farm bill education meetings**

90% of respondents used the **Extension-developed farm bill decision aid tool** when making their final decision with FSA; of these respondents, **83% used the decision tool for ALL** of their acres

6,100 **downloads** of the Extension **Pest Management App** since 2014, combining the Extension Plant Disease Management, Insect Control and Weed Control guides into a digital form



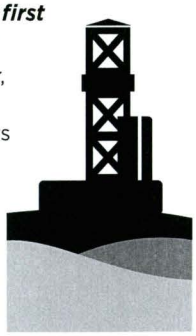
78% of respondents indicated a **$15,500** **increase in whole herd value** per operation after participation in the Extension **artificial insemination (AI) breeding education program**

92%

of responding **gardeners** plan to change their gardening practices after participating in the 2015 online **Spring Fever Garden Forums**

More than **150** landowners, community members and oil company representatives **increased their understanding** of their rights, the land reclamation process, and how to communicate and negotiate at Extension-led workshops

"This was long overdue. This should have happened when the oil industry first came to town."
Thomas Wheeler,
Vice-President
NW Land Owners
Association



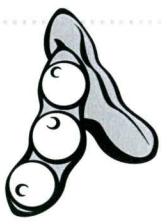
Over **2,860** **samples processed** at the self-funded NDSU **Plant Diagnostic Laboratory** in 2015 resulted in **informed pesticide use decisions and economic savings** for North Dakotans

Since 2014, **275** North Dakota families **evaluated 110 home garden varieties** resulting in over 1,000 analyzed trials

85% of responding families reported **more productive gardens**

76% **of children** in responding families who grew vegetables **improved their diets**

3X **more soil samples** were tested for **soybean cyst nematode (SCN)** since 2013 because of county Extension office test kit distribution



Estimated **$160** **per acre value** for SCN detection and management

For more information on these and other impacts of the NDSU Extension Service, go to www.ag.ndsu.edu/extension or contact Charlie Stoltenow at 701.231.7171 or charles.stoltenow@ndsu.edu.

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Extension helping North Dakota through **4-H**: A SNAPSHOT

NDSU EXTENSION SERVICE

4-H prepares youth for success and the challenges that face North Dakota. It contributes to the development of new leaders, encourages innovation and entrepreneurship, teaches good stewardship, and helps youth acquire important life skills that prepare them to be career- and work-ready.

Current priorities include helping youth develop science interests, skills and abilities in the areas of agriculture, energy, environmental stewardship and technology. Youth learn the importance of food access, where their food comes from, and how to make healthful food choices and live healthy lives. They develop leadership skills and understand the importance of giving back to their communities and society.

Youth throughout the U.S., including North Dakota, participated in research to define and measure positive youth development (Source: Lerner and Lerner 2011). **Compared with their peers, youth involved in 4-H programs are:**

2X **more likely to participate in STEM activities**

98% of youth who attended GEAR-Tech-21 camp reported they would feel comfortable **teaching robotics** to others

75% of youth participants in the Drone Discovery/National Youth Science Day Experiment reported it made them **more interested in science**

2X **more likely to make healthier choices**

90% of youth participating in the Healthy Camp Challenge said they planned to continue to **practice healthful activities**

28 4-H clubs with **433** youth earned the designation of **Healthy 4-H Club** in 2016

2X **more likely to be civically active**

76% of youth attending **Civic U** reported an increased effort to allow everyone to have a voice in **decision making**

1,000+ youth demonstrate **leadership skills** through 4-H club offices, 4-H Ambassadors, or special projects

4X **more likely to give back to their communities**

777 volunteer service hours contributed to the state by North Dakota 4-H Ambassadors

49 blankets made and donated to the Project Linus program by youth attending the Extension Youth Conference

North Dakota 4-H Camp

record **558** youth at North Dakota 4-H Camp near Washburn

86% of campers reported learning **new skills**

89% of campers **made new friends**

59% of campers demonstrated **more independence**

50% of campers are **more willing to participate** in other activities

50% of campers improved in **problem solving**

19% 4-H enrollment increase in past five years

North Dakota 4-H in 2015-16

29,306 youth participants

6,247 enrolled 4-H members

1,007 youth in 4-H camping programs

2,534 volunteers

342 youth volunteers

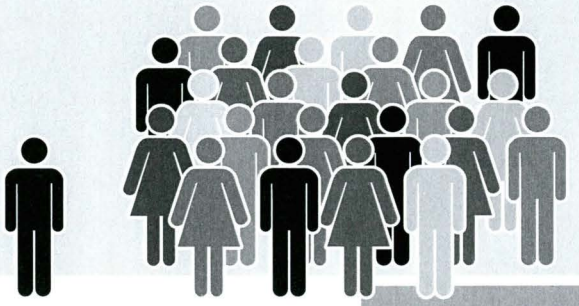
For more information on these and other impacts of the NDSU Extension Service, go to www.ag.ndsu.edu/extension or contact Brad Cogdill at 701.231.7259 or brad.cogdill@ndsu.edu.

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa@ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.

NDSU EXTENSION SERVICE

Extension helping North Dakota through **leadership and civic engagement**: A SNAPSHOT

NDSU Extension is working to meet the demand for leadership and civic engagement by helping new and existing leaders build their skills, confidence and willingness to lead through cohort groups and local training sessions. Here are some of those programs:



Lead Local is a training for aspiring, elected and appointed officials to help them feel better prepared to serve as an effective board, council or committee member.

283+ volunteer groups had members participate in Lead Local and become engaged civically in their communities

89% understand their board member tasks

77% feel comfortable handling conflict during a meeting

89% feel prepared to serve on a board, council or committee

Lead Local for Youth and **Civic U** give junior and senior high youth an opportunity to become familiar with civic responsibility, service and parliamentary procedure during day-long programs.

For more information on these and other impacts of the NDSU Extension Service, go to www.ag.ndsu.edu/extension/ccv or contact Lynette Flage at 701.231.7782 or lynette.flage@ndsu.edu.

Rural Leadership North Dakota (RLND) is an 18-month leadership development program designed to strengthen agriculture, local communities and the state for the future.

$4 million acquired by participants to complete local projects

19 participants have run for office; three were elected during the last election cycle

Stronger Economies Together (SET) enhances the capacity of people in rural communities to implement an economic development blueprint that builds on the region's emerging economic strengths. SET has:

- Strengthened **communication and partnerships** between health-care administrations
- Raised **$60,000+ in scholarship support** for students who will return to the region in a health-related career
- **Initiated critical conversations** regarding local foods and started groundwork to facilitate change for entrepreneurs at a federal level
- Cultivated **civically engaged youth** by encouraging participation in community planning and training them to be effective board, council or committee members
- Created a **unified tourism vision** for the region

(Funded and in collaboration with USDA Rural Development)

North Dakota Leadership by the numbers:

8,314
North Dakota nonprofit organizations and governmental units requiring people to serve in leadership roles

1 in 24
people age 18 and older needed to meet the leadership demand

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa@ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.

NDSU EXTENSION SERVICE

Extension helping North Dakota through **family and consumer sciences**: A SNAPSHOT

Health and wellness are among North Dakota's biggest challenges. An individual's quality of life can quickly change because of chronic disease, financial hardships and family issues. Preventing these life challenges in many cases can be done by identifying key factors and responding with targeted educational programs.

To help ensure the state has healthy people and communities, NDSU Extension's family and consumer sciences (FCS) programs focus on three key areas: personal and family finance, human development and family science, and nutrition, food safety and health. Programming in these areas prevent future problems and evidence indicates these programs are making a difference. As a result of FCS programs:

82% of parents completing the Gearing Up for Kindergarten program rated the program as **very/extremely useful**

(Nearly half of all Kindergarten students are not prepared for success when entering school.)

79% of seniors in the Stepping On program **reduced falling hazards** at home

(Falls are the number one reason for elderly having to leave their homes.)

94% of farmers/ranchers in the Design Your Succession Plan program **are prepared to meet with professional**

"It gave me a road map of what I want to do."
David Miller, Donnybrook-area producer

8.5% of all North Dakota households are food insecure. 14.5% of all North Dakota children live in poverty, 31.3% of school-enrolled children receive free and reduced meals and 15% of children are obese (source RWJF 2011). Extension's FCS programs are making a difference:

83% of participants in the Expanded Food and Nutrition Education Program **improved at least one nutrition practice**

and

47% **improved at least one food safety practice**

63% of adults in the Family Nutrition Program **spend their food budget more wisely**

58% of youth in On the Move to Better Health chose **more healthful snacks**

and

54% **ate more fruits and vegetables**

62% of youth in On the Move to Better Health **increased their daily physical activity**

For more information on these and other impacts of the NDSU Extension Service, go to www.ag.ndsu.edu/extension or contact Deb Gebeke at 701.231.9688 or debra.gebeke@ndsu.edu.

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa@ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.

Main Research Station

North Dakota Agricultural Experiment Station

Agency Statutory Authority

ND Constitution Article XIX; North Dakota Century Code Chapter 4-05.1.

Agency Description

The North Dakota State University Main Research Station is located on the campus of the North Dakota State University of Agriculture and Applied Science. The station is the administrative location of the North Dakota Agricultural Experiment Station. The station conducts research and coordinates all research activities of the Agricultural Experiment Station. The purpose of the research is the development and dissemination of technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research provides for an enhancement of economic development, quality of life, sustainability of production, and protection of the environment. The Main Research Station keeps detailed records of all activities and publishes the information that will be of value to the residents of this state.

Agency Mission Statement

The agricultural experiment station shall develop and disseminate technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research must provide for an enhancement of the quality of life, sustainability of production, and protection of the environment.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

Agency Future Critical Issues

The NDAES continues to focus on developing its infrastructure to effectively conduct research needed by the agricultural sector in the state. Shortfalls occur in laboratory research facilities, especially those for plant-based field research laboratories at the Main Station. Cereal and grain quality laboratories, critical to maintaining and enhancing quality parameters for new crop varieties, are in desperate need of renovation/replacement. Developing separate laboratories for quality evaluation of novel experimental breeding lines also is required, due to the separation of transgenic material required by Federal policies on transgenic material. Laboratory space at the Main Station needs to be renovated/enhanced in order to carry out both applied and fundamental research on crops and livestock.

The Meat Science laboratory, built in the 1950's and last renovated in the 1970's, is in very poor condition. A new facility is needed to allow our scientists to conduct cutting-edge research in meat quality, meat science, muscle biology, and physiology. Such a facility would enhance our ability to

carry out much-needed research for the livestock sector on end-use quality traits. As with other newer facilities, such as the new agronomy labs at the RECs, as well as the AES greenhouse and the animal research complex at the Main Station, a new Meat Science laboratory would have strong positive impacts on the ability of NDAES scientists to carry out high quality research in these state-of-the-art facilities.

New technologies in crop development will provide novel methodology to incorporate disease, insect, and environmental stress resistance, thereby improving the overall adaptation of our many crops grown in the state. Technology is changing almost daily, and we are developing the appropriate public-private partnerships with technology providers to ensure that our scientists have access to the best technologies available for their research programs.

Our scientists travel farther each year in the state to conduct site-specific research to control wheat and barley scab (an ongoing problem) and other important yield-limiting diseases of crop commodities grown in the state. Addressing new issues, such as wheat stem sawfly, new races of existing diseases for which there is little resistance, and identifying and responding to livestock producer concerns over outbreaks of zoonotic diseases are fundamental to the mission of the NDAES. The NDAES has insufficient laboratory space to meet the needs of 21st Century agriculture.

North Dakota is becoming increasingly urban, and urban populations require some products and services that are different than those needed by livestock and crop producers. Continual efforts to improve horticultural research are occurring, and NDAES is actively evaluating new research and demonstration programs in this area. Enhanced efforts in areas including, but not limited to, food security, food safety, natural resources management, and new bioproducts (including fuel) need to continue in order to allow NDAES to serve this segment of agriculture. Similarly, a systems approach (from conception to consumption) for livestock research has been implemented to better serve this important and growing sector of North Dakota agriculture.

Our strength is in our scientists and staff, but they are too few to cover all of the critical issues facing North Dakota agriculture, and the lack of adequate numbers precludes important scientific achievement. Reductions in numbers of scientists to comply with existing state revenues will further hamper our ability to provide unbiased, science-based information to our stakeholders and to one of the pillars of the state's economy.

2015-2017 Legislation that Included Reporting Requirements to 2017 Appropriation Committees

HB1020 (NDSU Research & Extension, & Agronomy Seed Farm)

SECTION 2. ONE-TIME FUNDING — EFFECT ON BASE BUDGET — REPORT TO SIXTY-FIFTH LEGISLATIVE ASSEMBLY. The following amounts reflect the one-time funding items approved by the sixty-third legislative assembly for ... the 2015-17 one-time funding items included in the appropriation in section 1 of this Act:

One-Time Funding Description
Agronomy laboratories - $150,000
Rural leadership project - $150,000
Dust issues technical support - $100,000
Seed cleaning plants - $4,500,000
Veterinary diagnostics laboratory - $18,000,000 (SIIF funds)
Souris River flooding - $72,500

The 2015-17 one-time funding amounts are not a part of the entity's base budget for the 2017-19 biennium. The main research center shall report to the appropriations committees of the sixty-fifth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2015, and ending June 30, 2017.

- Agronomy laboratories (CGREC) - $550,000
  Status: $400,000 received GF carryover from 2013-15
  $150,000 OF authorized 2015-17
  Construction underway - estimated completion Spring of 2017
  (See Central Grasslands REC forage agronomy lab facilities page 29)

- Rural leadership project
  Status: $150,000 received for leadership program. Includes the following leadership projects:

  1) Igniting Legendary Leaders Conference – April 27-28, 2016
     - 120 individuals from North Dakota attended.
     - 17 speakers shared stories of how they "ignited" an idea and turned it into action
     - Key points for conference attendees included:
       - Be more involved in your community.
       - Jump in and get involved.
       - Rethink current processes for engaging with others.
       - Think outside the box and share your story.

  2) Inspiring Legendary Leaders Conference – April 11, 2017
     - Speakers will focus on leadership stories about how to take action on ideas you are passionate about.
     - The conference will be held at the Heritage Center in Bismarck.
     - Ignite speakers will include individuals who are working on projects in their community.

- Dust issues technical support
  Status: $100,000 operating support received; allocated. Extensive data gathered summer of 2016 on soil disturbance and dust from truck traffic. Data is currently being analyzed.

- Seed Cleaning
  Status: Seed cleaning projects underway at Carrington REC and North Central REC

  Carrington REC ($750,000 General Fund, $1,500,000 Other Fund authorization)
  A 40ft x 75ft with 30ft sidewall building has been constructed to house seed cleaning equipment. The floor is cement at a minimum depth of 7 inches. Equipment bid out and on order include air screen, indent separator, and gravity table. Additional items in the process of requesting bids include seed transfer equipment (grain legs; belt, vibratory and auger conveyors), elevated stands, and platform for mounting equipment.

  North Central REC ($750,000 General Fund, $1,500,000 Other Fund authorization)
  Fundraising is underway and a site is being selected for a seed cleaning facility. Equipment expected to be purchased by June 2017, with construction complete by fall 2017.

- Souris River flooding - $72,500
  Status: (See Souris river research report page 43)

- Veterinary Diagnostics Laboratory - $18,000,000 (SIIF funds)
  Status: (See pages 27-28)

SECTION 5 APPROPRIATION — LANGDON RESEARCH EXTENSION CENTER. There is appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, the sum of $175,000, and from special funds, the sum of $175,000, or so much of the sum as may be necessary, to the Langdon research extension center for the purpose of purchasing the real property described in section 4 of this Act, for the period beginning with the effective date of this section, and ending June 30, 2017. The funding provided in this section is considered a one-time funding item.

Status: The land was purchased for $350,000

SECTION 11 DICKINSON RESEARCH EXTENSION CENTER — MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2015-17 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2015, and ending June 30, 2017.

Status: Oil Revenue received July 1, 2015 to November 30, 2016 - $123,819

SECTION 12 WILLISTON RESEARCH EXTENSION CENTER — MINERAL RIGHTS INCOME. The Williston research extension center shall report to the sixty-fifth legislative assembly on the amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2013, and ending June 30, 2015 and the biennium beginning July 1, 2015, and ending June 30, 2017.

Status: July 1, 2013 to June 30, 2015 - Amounts received $491,230; Amounts spent $0
July 1, 2015 to November 30, 2016 - Amounts received $132,048; Amounts spent $571,788

SECTION 19. EXEMPTION. The amounts appropriated for the agronomy laboratories contained in subdivision 4 of section 1 of chapter 51 of the 2013 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2015, and ending June 30, 2017.

Agronomy Lab Carryover Status

Project	GF carryover	Amount spend 12/31/2016
Langdon	$33,457.86	$33,457.86
Carrington	$101,024.58	$101,024.58
Central Grasslands	$365,654.33	$365,654.33

North Dakota Agricultural Experiment Station

Update of NDAES Initiatives Funded in 2015-2017 Budget

SBARE ranked/unranked initiatives:

- **Costs to continue FY2015 salary increases**
  $741,779 received and allocated July 1, 2015

- **Bioinformatics**
  $800,000 received; salary and fringe benefits, 2.0 FTE bioinformaticists; hired

- **Precision ag**
  $600,000 received; operating support — Internal grant committee formed; 25 proposals totaling $1.8M submitted; funding allocated to 9 projects (see precision ag initiative impacts preliminary results page 41)

- **Enhancing research infrastructure for greater research efficiencies and effectiveness**
  $1,100,000 received operating support- revolving equipment fund; allocated

- **Enhancing research capacities at RECs**
  $670,000 received
  - $130,000 salary and fringe benefits , 1.0 FTE Animal Science technical support staff — HREC; position descriptions being developed
  - $330,000 salary and fringe benefits , 2.0 FTE plant pathologist and technical support — WREC; hired
  - $210,000 operating support — LREC, CGREC, NCREC, WREC, HREC, CREC, DREC; allocated

Capital and one-time funding:

- **Veterinary diagnostic lab replacement**
  $18,000,000 received; Construction underway — estimated completion Summer of 2017

- **Seed cleaning facilities**
  $4,500,000 received ($1.5M General, $3M Other)
  - Carrington REC ($750,000 General Fund, $1,500,000 Other Fund authorization)
    A 40ft x 75ft with 30ft sidewall building has been constructed to house seed cleaning equipment. The floor is cement at a minimum depth of 7 inches. Equipment bid out and on order include air screen, indent separator, and gravity table. Additional items in the process of requesting bids include seed transfer equipment (grain legs; belt, vibratory and auger conveyors), elevated stands, and platform for mounting equipment.
  - North Central REC ($750,000 General Fund, $1,500,000 Other Fund authorization)
    Fundraising is underway and a site is being selected for a seed cleaning facility. Equipment expected to be purchase by June 2017, with construction complete by fall 2017.

- **Dust Issues technical support**

  $100,000 operating support received; allocated. Extensive data gathered summer of 2016 on soil disturbance and dust from truck traffic. Data is currently being analyzed.

- **Grasslands recovery: Souris river flooding research funding**

  $72,500 received and allocated
  (See Souris river research report page 43)

- **Land purchase — LREC**

  $350,000 received ($175k General, $175k Other); purchased

- **Leadership program**

  Status: $150,000 received for leadership program. Includes the following leadership projects:

  1) Igniting Legendary Leaders Conference - April 27-28, 2016
     - 120 individuals from North Dakota attended.
     - 17 speakers shared stories of how they "ignited" an idea and turned it into action
     - Key points for conference attendees included:
       - Be more involved in your community.
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     - Speakers will focus on leadership stories about how to take action on ideas you are passionate about.
     - The conference will be held at the Heritage Center in Bismarck.
     - Ignite speakers will include individuals who are working on projects in their community.

Capital and one-time funding:

- **Agronomy laboratories**

  $400,000 received
  - CGREC ($400k General, $150k Other)

  Construction underway, estimated completion Spring 2017.

North Dakota Agricultural Experiment Station

Veterinary Diagnostic Lab

FACILITIES

A new and modern facility to house the veterinary diagnostic laboratory (VDL) should be a minimum of 20,000 square feet and be designed to allow cost effective addition of laboratory space, as needed, to meet future testing demands (i.e. meat testing, analysis of feed and animal samplesfor petroleum residues, international export testing). The facility should include adequate laboratory and office space for sample receiving, toxicology, serology, information technology, administration, clinical pathology, gross pathology, histology, quality assurance, bacteriology/mycology, virology and molecular diagnostic sections.

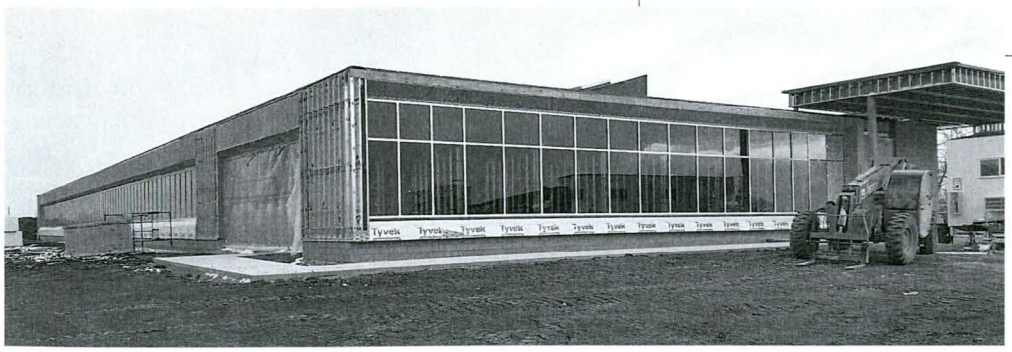
This was SBARE's #1 ranked Capital Project for the 2015-17 Legislative Session. The Legislature provided $18,000,000 from the Strategic Investment and Improvements Fund (SIIF).

Timeline:

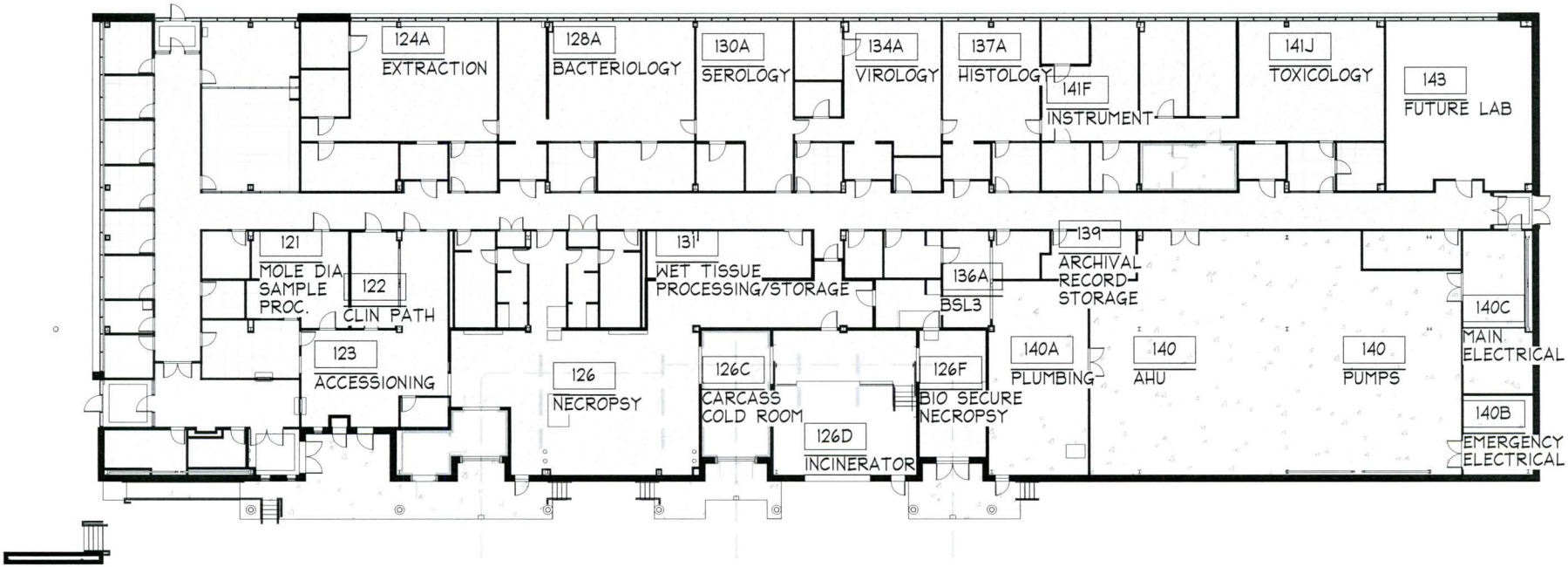
- April 2015 — HB 1020 Passed, including $18,000,000 for new VDL, which is declared to be an emergency measure
- Summer 2015 — Architects are interviewed and hired
- Fall 2015 - Jan. 2016 — Architects design building
- January 2016 — Project is bid, low bids accepted
- Spring 2016 — Construction begins
- November 2016 — Building is enclosed
- Summer 2017 — estimated completion

Architectural Design:

November 2016 view:



Floor plan of the veterinary diagnostic laboratory



Central Grasslands REC Forage Agronomy Lab

FACILITIES

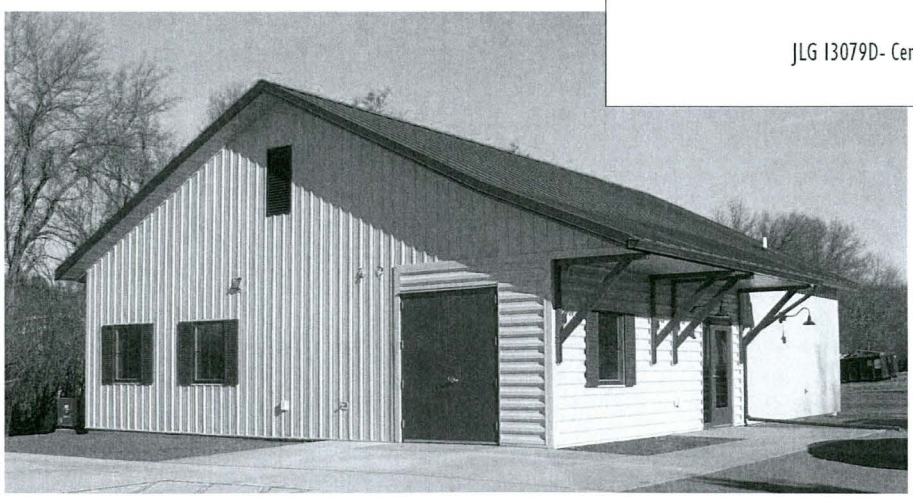
Central Grasslands REC Forage Agronomy Lab
$550,000 Project ($400,000 GF, $150,000 OF)
Construction underway, estimated completion Spring 2017.

Timeline:

- May 2013 — Legislature authorized funding as requested $400,000 in SB 2020, General Funds
- Fall/Winter 2013 — Project design
- Feb. 2014 — Project was bid and came in significantly over budget
- Spring 2015 — Additional Authorization of $150,000 in Other Funds included in HB 1020
- Fall 2015 — Addition design work completed
- Feb. 2016 — Successful bid opening
- Spring 2016 — Construction began
- Spring 2017 — Estimated completion

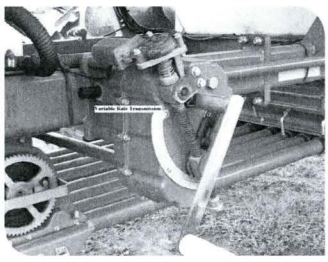
Architectural Design:

November 2016 view:



NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

2017-19 Program Initiatives as Ranked by SBARE



1 Restore Budget to 2015-17 Original Appropriation

Need: Restoration of 10 percent budget cut:

Branch RECs	$1,979,845
Main Station	$5,734,511
Total AES	$7,714,356

2 Oakes Irrigation Site

Situation: The Oakes Irrigation Site has been funded through the Garrison Conservancy District. This funding no longer will be available in the near future (as committed funding) due to reallocation to other projects. The facility has been supervised by the Carrington REC; salaries, operating and equipment are entirely grant supported. Stakeholders in the region have made commitments to providing support for the center; one commitment was a gift of 40 acres to increase the research footprint. State resources would be used for operating support. The facility conducts research on irrigated, high-value crops for the southeastern region of North Dakota.

Need: Operating - $600,000

3 Enhancing Research Infrastructure for Greater Research Efficiencies and Effectiveness

Situation: Graduate student funding (Increase pool of funds for additional graduate research assistantships) Graduate research assistantships are critical to ongoing, vibrant research programs. These students are hard-working, intelligent and driven to succeed. They carry out research under the supervision of scientists at the Main Station and RECs, and these research topics broaden the overall research agenda of AES projects. The students work for approved research programs in the AES, attend classes to improve their understanding of their respective disciplines and carry out their individual research topics (all part of educating and training the next generation of scientists). Access to a small pool of funding to increase the number of students in Agriculture has been very successful, not only in terms of enhancing research activities but also by leveraging funds from other sources to increase the number of students. In 2011-13, the AES was provided funds for 20 students; departments and individual scientists were able to leverage these funds to increase the number of students to 36. Of these 36 students, 33 were from the state (23) or region (10). Because of the importance of agriculture in North Dakota, jobs are plentiful and many students will remain in the state upon graduation. This request is to provide funds for an additional 20 research assistantships.

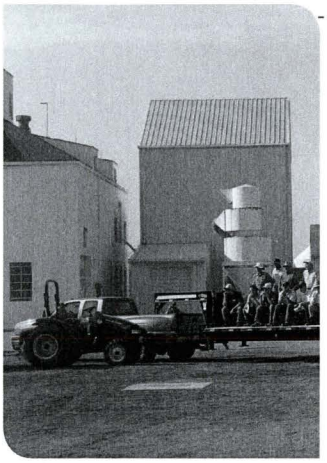
Need: Graduate Research Assistantships (20 @ $20,000/year) - $800,000

Situation: Operating Funds

The NDAES received $600,000 last biennium for precision agriculture research. These funds were used as a grants pool for research/Extension programs, with scientists in the AES and specialists in Extension eligible for funding. The call for proposals resulted in 25 proposals addressing issues in precision ag ranging from economics, crops issues (management, pest control) and livestock production to engineering. Of these proposals, which totaled $1.8 million in requests, nine were funded. Increasing the total funding available through the competitive program will allow more projects to be carried out in this important and rapidly changing area of agriculture. The activity and output of important programs such as the Soil Health Initiative, wheat improvement, pulse pathology and weed-resistance research could benefit from increased operating funds. Impacts on soil by the oil industry in western North Dakota have been reported. Many of these may have long-term impacts on land quality, which may reduce agricultural productivity. Brine spills and soil compaction have reduced land quality and crop productivity in western North Dakota. The Center for Ag Policy and Trade Studies, which is the premier agricultural policy center in the region, evaluates state, domestic and international policies that affect demand-supply of grains and net farm income. Identifying ways to enhance operations support for all programs in the AES would address increased costs of materials, supplies and small equipment, and allow scientists to increase their scope of work.

Need: Operating support for precision ag - $600,000
- Soil Health Initiative - $80,000
- Wheat improvement - $80,000
- Pulse pathology - $50,000
- Weed resistance research - $50,000
- Land reclamation and soil restoration due to oil impacts - $80,000
- Center for Ag Policy and Trade Studies (CAPTS) - $80,000

2017-19 Program Initiatives as Ranked by SBARE (continued)



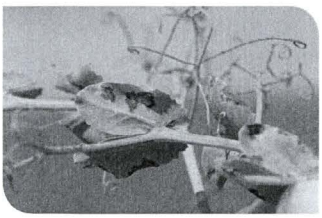
4 Enhancing Research Infrastructure at RECs

Situation: REC Operating support - Operating costs for research activities continue to increase. At the RECs, despite very high levels of funding obtained by scientists through grants, other costs, such as state motor pool costs, new project development, equipment repairs and supplies, and new issues facing the state's agricultural sector, continue to impact their ability to carry out their mission to serve their area of the state. A portion of the requested amount for increased operating funds for the RECs was authorized in the 2015-17 session and is greatly appreciated. This request is to provide the remainder of the requested amount.

Need: Operating funds (7 @ $30,000/biennium) - $210,000

Situation: The salary and fringe benefits of the director's position at the North Central Research Extension Center were paid equally by the center (AES) and Extension. Upon the retirement of the previous director, the Extension Service reduced its salary support to that (5 percent) for other REC directors. This results in a shortfall of salary and fringe benefits funds for the next director. The request is to stabilize the funding line for this important position.

Need: Stabilizing salary line (and fringe benefits) for NCREC director - $95,000



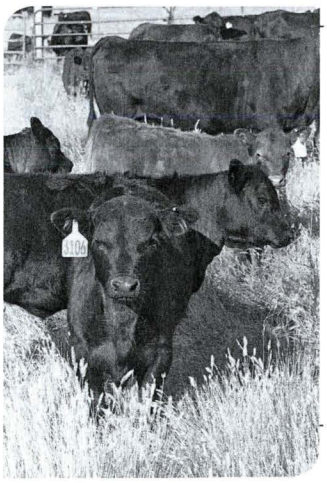
5 Enhancing Research Capacity in Plant Virology and Pulse Pathology

Situation: Virologist - North Dakota has a highly diverse crop agriculture sector, producing more than 40 crop commodities and leading the nation in the production of 15 commodities. Many of these crops are impacted by diseases caused by plant viruses. Also, recent reports of new (for this area) virus diseases have occurred. Cereals, pulse crops and other broad-leafed crops such as soybean, potato and sugar beet can have virus problems. Potato and pulses, in particular, have a number of virus diseases that are present in the state. Efforts to study the cause, spread and elimination of virus diseases at NDSU have been hampered by the lack of a dedicated virologist position that can focus on these unique diseases. Viruses can be spread by insect pests; increased numbers of insect vectors can spread the virus disease rapidly. Working with entomologists, geneticists and plant breeders, the virologist position will fill a critical void in reducing damage caused by disease.

Need: Scientist (1.0 FTE) - $355,000; Operating - $200,000; TOTAL - $555,000

Situation: Pulse Pathology Technical Support Staff - The Pulse Pathology program is responsible for carrying out research and finding solutions to disease problems affecting pulse crops. The program focuses on a wide range of diseases affecting dry edible bean, pea, lentil and chickpea. Each of these crops is affected by different diseases, and many diseases for each crop are of economic concern to growers in North Dakota. The wide breadth of this program is in need of additional technical support.

Need: Pulse Crop Technical Support (1.0 FTE, Main Station) - $180,000



6 Harnessing the Microbiome for Improved Plant, Animal and Soil Health

Situation: Microbiome Initiative (operating support) – The microbiome is the ecological community of organisms that can be beneficial (symbiotic), neutral (commensalistic) or antagonistic (pathogenic) to other organisms, including humans, animals and plants. Microbiome research is most advanced in humans – impacts on human health and phenotype have been reported widely – and the genomic interactions of microbes in the body and human DNA play a role in a wide number of phenotypic and human health-related issues, including diabetes, obesity and cardiac issues. Similarly, plants and animals have their respective microbiomes that affect health and productivity of the higher organism. Understanding the microbiome will aid in improved nutrition, and the disease and environmental impact of animal and crop production, ultimately benefitting human health. In addition, understanding the soil microbiome may allow for improving and maintaining soil health.

Need: Operating for improving microbiome in plant, animals, food and soils - $600,000

NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa.ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.

DETAILS:
2017-2019 Program Initiatives as Ranked by SBARE

North Dakota Agricultural Experiment Station

1. Restore Budget to 2015-2017 Original Appropriation

2. Oakes Irrigation Site

Operating **$600,000**

The Oakes Irrigation Site has been funded through the Garrison Conservancy District. This funding no longer will be available in the near future (as committed funding) due to reallocation to other projects. The facility has been supervised by the Carrington REC; salaries, operating and equipment are entirely grant supported. Stakeholders in the region have made commitments to providing support for the center; one commitment was a gift of 40 acres to increase the research footprint. State resources would be used for operating support. The facility conducts research on irrigated, high-value crops for the southeastern region of North Dakota.

3. Enhancing Research Infrastructure for Greater Research Efficiencies and Effectiveness

Graduate research assistantships (20 @ $20,000/year) **$800,000**

Graduate student funding (Increase pool of funds for additional graduate research assistantships) — Graduate research assistantships are critical to ongoing, vibrant research programs. These students are hard-working, intelligent and driven to succeed. They carry out research under the supervision of scientists at the Main Station and RECs, and these research topics broaden the overall research agenda of AES projects. The students work for approved research programs in the AES, attend classes to improve their understanding of their respective disciplines and carry out their individual research topics (all part of educating and training the next generation of scientists). Access to a small pool of funding to increase the number of students in Agriculture has been very successful, not only in terms of enhancing research activities but also by leveraging funds from other sources to increase the number of students. In 2011-13, the AES was provided funds for 20 students; departments and individual scientists were able to leverage these funds to increase the number of students to 36. Of these 36 students, 33 were from the state (23) or region (10). Because of the importance of agriculture in North Dakota, jobs are plentiful and many students will remain in the state upon graduation. This request is to provide funds for an additional 20 research assistantships.

Operating support for precision ag	**$600,000**
Soil Health Initiative	$80,000
Wheat improvement	$80,000
Pulse pathology	$50,000
Weed resistance research	$50,000
Land reclamation and soil restoration due to oil impacts	$80,000
Center for Ag Policy and Trade Studies (CAPTS)	$80,000

Operating Funds — The NDAES received $600,000 last biennium for precision agriculture research. These funds were used as a grants pool for research/Extension programs, with scientists in the AES and specialists in Extension eligible for funding. The call for proposals resulted in 25 proposals addressing issues in precision ag ranging from economics, crops issues (management, pest control) and livestock production to engineering. Of these proposals, which

totaled $1.8 million in requests, nine were funded. Increasing the total funding available through the competitive program will allow more projects to be carried out in this important and rapidly changing area of agriculture. The activity and output of important programs such as the Soil Health Initiative, wheat improvement, pulse pathology and weed-resistance research could benefit from increased operating funds. Impacts on soil by the oil industry in western North Dakota have been reported. Many of these may have long-term impacts on land quality, which may reduce agricultural productivity. Brine spills and soil compaction have reduced land quality and crop productivity in western North Dakota. The Center for Ag Policy and Trade Studies, which is the premier agricultural policy center in the region, evaluates state, domestic and international policies that affect demand-supply of grains and net farm income. Identifying ways to enhance operations support for all programs in the AES would address increased costs of materials, supplies and small equipment, and allow scientists to increase their scope of work.

4. Enhancing Research Infrastructure at RECs

Operating funds (7 @ $30,000/biennium) **$210,000**

REC Operating support — Operating costs for research activities continue to increase. At the RECs, despite very high levels of funding obtained by scientists through grants, other costs, such as state motor pool costs, new project development, equipment repairs and supplies, and new issues facing the state's agricultural sector, continue to impact their ability to carry out their mission to serve their area of the state. A portion of the requested amount for increased operating funds for the RECs was authorized in the 2015-17 session and is greatly appreciated. This request is to provide the remainder of the requested amount.

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5. Enhancing Research Capacity in Plant Virology and Pulse Pathology

1.0 FTE Virologist	**$355,000**
Operating	**$200,000**
Total	$555,000

Virologist — North Dakota has a highly diverse crop agriculture sector, producing more than 40 crop commodities and leading the nation in the production of 15 commodities. Many of these crops are impacted by diseases caused by plant viruses. Also, recent reports of new (for this area) virus diseases have occurred. Cereals, pulse crops and other broad-leafed crops such as soybean, potato and sugar beet can have virus problems. Potato and pulses, in particular, have a number of virus diseases that are present in the state. Efforts to study the cause, spread and elimination of virus diseases at NDSU have been hampered by the lack of a dedicated virologist position that can focus on these unique diseases. Viruses can be spread by insect pests; increased numbers of insect vectors can spread the virus disease rapidly. Working with entomologists, geneticists and plant breeders, the virologist position will fill a critical void in reducing damage caused by disease.

1.0 FTE Pulse pathology technical support staff **$180,000**

Pulse Pathology Technical Support Staff — The Pulse Pathology program is responsible for carrying out research and finding solutions to disease problems affecting pulse crops. The program focuses on a wide range of diseases affecting dry edible bean, pea, lentil and chickpea. Each of these crops is affected by different diseases, and many diseases for each crop are of economic concern to growers in North Dakota. The wide breadth of this program is in need of additional technical support.

6. Harnessing the Microbiome for Improved Plant, Animal and Soil Health

Operating **$600,000**

The microbiome is the ecological community of organisms that can be beneficial (symbiotic), neutral (commensalistic) or antagonistic (pathogenic) to other organisms, including humans, animals and plants. Microbiome research is most advanced in humans – impacts on human health and phenotype have been reported widely – and the genomic interactions of microbes in the body and human DNA play a role in a wide number of phenotypic and human health-related issues, including diabetes, obesity and cardiac issues. Similarly, plants and animals have their respective microbiomes that affect health and productivity of the higher organism. Understanding the microbiome will aid in improved nutrition, and the disease and environmental impact of animal and crop production, ultimately benefitting human health. In addition, understanding the soil microbiome may allow for improving and maintaining soil health.

North Dakota Agricultural Experiment Station
Main Research Station

2015-2017 IMPACTS

- Artificial insemination (AI) offers beef producers the potential to make genetic progress within their herd at a fraction of the cost it would require to purchase herd bulls of equivalent genetic value. Research conducted by NDAES scientists indicates that the value of replacement heifers can be increased by over $500 per head through the use of artificial insemination. If an additional 10% of the 375,000 replacement heifers maintained in North Dakota were generated from AI breeding, the net increase in their value would be over $18 million annually.
- Research efforts on the nutrient requirements for beef cattle have impacts on production and economic efficiencies for all beef cattle in North Dakota. The product of this NDAES research was the text, '2016 Nutrient Requirements of Beef Cattle'. This text is utilized around the world by livestock producers, nutritionists, and scientists to more accurately formulate beef cattle diets. Conservative estimates in North Dakota indicate that a 5% improvement in feed efficiency by using more precise nutrient recommendations could save North Dakota beef cattle producers over $25 million in feed costs annually.
- Research related to the interactions between reproduction and nutrition, and research concerning regulation of ovarian, uterine, and placental functions in non-pregnant and pregnant domestic animals, have identified selected mechanisms critical for reproductive efficiency that may ultimately improve fertility and embryo survival. A 1% increase in pregnancy rate in North Dakota livestock would potentially result in more than $10 million in increased revenue for North Dakota ranchers annually.
- North Dakota currently operates with four active mines which produce approximately 32 million tons of coal annually. Reclamation is required on nearly 2,000 acres of land each year to begin the 10-year bond release process. NDAES scientists are working with industry to improve both reclamation practices using native plant species and efficiencies, as well as reduce soil compaction. The average cost to reclaim is $60,000/ac. or $120 million per year.
- Soil health is of primary concern for farmers and ranchers in the state. Salinity or sodicity may affect nearly 25% of North Dakota's soils to some degree. Nearly 2 million acres in the Red River Valley are impacted by salt contents that reduce yields significantly. NDAES scientists, in collaboration with Extension and many commodity groups, are identifying ways to reduce the negative impacts of salinity and sodicity in our northern Plains production area. These programs have helped producers adopt management practices that help improve long-term soil productivity, such as managing soil salinity.

NDAES scientists, in collaboration with Extension and many commodity groups, are identifying ways to reduce the negative impacts of salinity and sodicity in our northern Plains production area.

- Fertilizer is one of the highest input costs that farmers require each year. Proper use and application is critical to ensure maximum yield while maintaining the environment. NDAES scientists are identifying methods to optimize nutrient use efficiencies for various commodities (e.g. wheat, corn, sugarbeet, specialty crops, wheat, soybeans) for our extreme northern production system. Based on fertilizer tonnage sales in ND, it is estimated that improving fertilizer efficiency by just 5% would save ND farmers $25 million annually.
- Cooperative work with wheat, barley, soybean, potato, and other breeding programs at NDSU has resulted in the development of disease-resistant germplasm and varieties for North Dakota. The genetic resistance in accepted cultivars grown on wide acreage saves producers tens to hundreds of millions of dollars in disease losses and in fungicide applications each year.

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- For crops or situations where fungicides are a necessary disease management tool, our research helps determine optimum timing for and rates of fungicide applications and helps identify new fungicide chemistries to control diseases. This work also assists North Dakota in obtaining Section 18 emergency exemptions that increases fungicide options for producers. Proper and judicial use of fungicides has saved North Dakota producers tens of millions of dollars per year through disease control.
- Disease forecasting systems that were developed, maintained, improved, and/or made accessible to the public by NDAES scientists are important tools for managing a variety of important diseases on several crops such as wheat, barley, sugarbeet, potato, and canola. These systems help producers make "spray or no spray" decisions with regards to fungicide applications throughout the growing season. The timely application of fungicides is necessary to achieve disease control when and where needed. Equally important, the decision to not apply fungicides when they are not needed saves producers significant input costs.
- NDAES microbiologists are helping producers to meet requirements of the Food Safety Modernization Act (FSMA). As an example, FSMA requires flaxseed processors to implement controls to reduce the levels of microbial pathogens. Research has shown that treatment with steam at sub-atmospheric pressures reduces the numbers of bacterial pathogens on flaxseed without affecting product quality, and can therefore be used by producers to help meet FSMA requirements. North Dakota produces 95% of the U.S. flaxseed with an estimated value of between $50 and $80 million.
- The use of legume cover crops planted after wheat reduces the need for nitrogen (N) fertilization in corn following in the rotation by 100 lbs N/acre/year. With an N credit of only 50 lbs N/acre, the economic value of reducing the fertilization of the 2.66 million acres of corn in North Dakota is $39.8 million per year.
- NDAES agronomists found that canola grown in narrower row widths generated higher grow revenue per acre (nearly $100/acre) than when grown in conventional row widths. If applied to all acres of canola sown in North Dakota (1,400,000 acres in 2015), the economic impact of proper row spacing would be $140 million.
- Research carried out on herbicide-resistant weeds identified genes and mutations responsible for resistance. Based on their results, NDAES scientists have identified strategies to minimize the occurrence of herbicide-resistant weeds, which are estimated to cost $10 to $40 more per acre to control than non-resistant weeds.

- Leafy spurge has been reduced from 1.5 million to less than 800,000 acres due to research carried out by the NDAES. The annual savings to the state from reduced leafy spurge infestation is estimated to be $13.9 million in direct costs including increased grazing land for cattle, increased hay production and decreased negative environmental impact.
- On average North Dakota produces over 60% of the durum in the United States and over 90% of the ND durum acreage is sown with varieties developed by the NDAES durum wheat breeding program. Varieties developed by this program generate over $400 million directly to producers annually. Carpio and Joppa, two new varieties developed by the NDAES durum breeding program are quickly being adopted by producers and have high yield and excellent quality potential.
- In 2015, 53% North Dakota's spring wheat acreage was sown to varieties developed by the NDAES. According to NDAES Ag Economist Dr. William Wilson, a variety released from the NDSU spring wheat breeding program has an estimated economic impact to the state ranging from $69 to $284 million over the period it remains in the marketplace, when compared to other competitive varieties.
- Based on a 2015 survey done by the American Malting Barley Association on barley varieties grown in North Dakota, about 50% of the North Dakota acres sown to two-rowed barley were done so with varieties developed by the NDAES. Changes in the malting and brewing industries in the US are resulting in an increased demand for two-rowed barley. In 2015, approximately 25% of North Dakota's 1.12 million barley acres were sown to two-rowed barley. Assuming 50% of these acres were sown with NDAES varieties and a $0.25 per bushel premium for two-rowed barley over six-rowed barley, growers across the state realized an additional $2.24 million in revenue from growing NDAES-developed two-rowed varieties.
- North Dakota is the leading producer of dry beans in the U.S. Based on the grower surveys in the MIN-DAK region from the last three years (2013-2015), approximately 90% of the black bean acreage, 10% of the navy bean acreage, and 30% of the pinto bean acreage is sown with varieties developed by the NDAES dry bean breeding program. Assuming an average grower price of $0.35/lb across the different market classes, these varieties contributed approximately $93 million per year to the state's economy during the last three years. This means that theoretically, for every dollar invested in the dry bean breeding program, there is an approximate return of $375 each year.

NDAES Ag Engineers provided statewide leadership in applied research and education on UAS application in agriculture

- NDAES Ag Engineers provided statewide leadership in applied research and education on UAS application in agriculture by bringing industries from across the country and around the world to North Dakota on economic development projects where industry investment amounted to many million dollars. The NDAES is working with state departments, the economic development commission, industries, farmers and rural cooperatives to address the precision agriculture needs of the state and to bring economic prosperity.
- An NDAES Ag Engineer is determining drawbar power requirements for chisel plowing under different calcium-based surface amendments. Subsurface drainage practices on sodic soil will help establish best management practices for soil surface amendments and drainage for improving soil health in sodic soils. Over 18,000,000 acres of saline/sodic soils in North and South Dakota may be at risk of conversion to sodic soils due to resumption/initiation of tillage and installation of subsurface drainage, and could benefit from this research.

- NDAES research on livestock manure and waste management helps develop new knowledge to develop and implement best management practices to mitigate environmental concerns from livestock facilities. NDAES researchers were instrumental in helping producers with bird flu incidence to put down and compost the birds to avoid further spread the disease.

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- Technology in agriculture is changing very rapidly and it is essential to partner with technology developers and end-users. The reason is simply to be assured that the state-of-the-art technology is accessible to North Dakota growers. NDAES researchers are working as a multi-disciplinary team to identify and create technology partnerships. Two commercial partnerships have been created, and there are three that are near fruition, in addition to a research/educational partnership. The partnerships with technology providers and major end-users involves joint research, simultaneous access to technology, and funding.

- NDAES researchers are studying the use of optical sensing data collected via unmanned aerial systems for the detection and management of crop stress, such as nutrient deficiency and disease of several major crops grown in North Dakota. Other researchers are measuring the adoption rates of precision agriculture technologies, especially the adoption of automatic section control (including row control) for planting and spraying, in different regions of the state. It is envisaged that this technology could substantially improve input use efficiency for farmers with the irregular field shapes and large numbers of in-field obstacles typical of the Prairie Pothole Region.
- The Center for Agricultural Policy and Trade Studies is completing research on evaluating the importance of commodity programs, the conservation reserve program, and crop insurance on farm income, efficiency, and productivity for the new Farm Bill. The Center also is evaluating the importance of the structure of farm programs on agriculture production functions and efficiency using farm level Agricultural Resource Management Survey (ARMS) data.

North Dakota Agricultural Experiment Station
Main Research Station

Precision Ag Initiative Impacts Report

Approved projects

1. Delineation of Chlorosis in Soybean Fields Using Unmanned Aerial Systems; PI:John Nowatzki, Agricultural and Biosystems Engineering
2. Drone-based Remote Sensing to Predict Sugarbeet in Season Nitrogen Demand and Yield; PI:Amitava Chatterjee, SNRS — Soil Sciences
3. Identification and Mapping of Resistant Weeds and Herbicide Drift Injury with High Resolution UAS Images; PI:Sreekala Bajwa, Agricultural and Biosystems Engineering
4. Increasing UAV Related Research Capacity at the Carrington Research Extension Center; PI:Paulo Flores, Carrington Research Extension Center
5. Optimizing Barley Quality Across a pH and Organic Matter Gradient; PI:Mike Ostlie, Carrington Research Extension Center
6. Precision Application of Herbicides for Sustainable Crop Systems; PI:Kirk Howatt, Plant Sciences
7. Use of Electronic Monitoring Systems for Precision Management of Cow/Calf and Cattle Feeding Enterprises; PI:Carl Dahlen, Animal Sciences
8. Using Crop Growth Models to Incorporate Temporal Variability into Precision Farming; PI:Joel Ransom, Plant Sciences
9. Whole-farm Analysis of the Decision to Invest in Automatic Section and Row Control Tech for planting and spraying in ND; PI:David C. Roberts, Agribusiness and Applied Economics

Preliminary Results

- Preliminary research indicates that efforts to control spray drift through the use of pulse-width modulation sprayers may result in less effective weed control than spraying with more conventional droplet sizes.
- Interest in Unmanned Arial Systems (UAS) is growing rapidly. Preliminary research conducted at the Carrington REC indicates that UAS technology can be used to predict soybean relative maturity and to assess the level of leaf disease on barley.
- Research conducted by the NDSU Agricultural and Biosystems Engineering Department indicates that UAS technology may be a useful tool for estimating the prevalence of herbicide resistant weeds and potentially allow for earlier detection of weed infestations.
- NDSU research using UAS to measure iron deficiency chlorosis may lead to better systems of matching varietal selection to field conditions for improvement of overall yield response in soybean fields.

North Dakota Agricultural Experiment Station
Main Research Station

Souris River Research Report

Current research on the Souris River flood impacts project builds on the work accomplished in Phase I. Soil, vegetation and seed bank analysis revealed differences among sampling locations. However, differences were not consistent with macro-scale elevations and distances from the river. Given that, we have broken down the current investigations into two components::

1. Subtle topographical differences in the landscape create micro watersheds that effectively holding water for different times. To determine where these locations are on the landscape we are using DEM (digital elevation models) and LIDAR (light detection and ranging) maps to overlay soil and vegetation data with more accurate elevations. With this we can identify basin and sinks to determine flood duration and better utilize the existing soil chemistry and vegetation from the previous project. Thus far, we have downloaded the appropriate data layers and started to overlay existing data within ArcGIS.
2. Following the initial flooding, the majority of exiting vegetation was killed by extended ponded water. After flood waters receded, much of the subsequent standing vegetation and seed bank was exotic grass and yellow sweet clover. Greenhouse trials revealed that as yellow sweet clover (a biennial) dies, nitrogen is released into the soil (Figure 1). Kentucky bluegrass was able to uptake the available nitrogen more readily than native plants which evolved under limited, rather than excess soil nitrogen (Figures 2 and 3). Understanding the vegetation dynamics existing after flood events can help predict where management actions will be required. Further, when combined with regional elevation and soils maps, vegetation data enables us to make tailored restoration/recovery recommendations to the broader region.

Figure 1

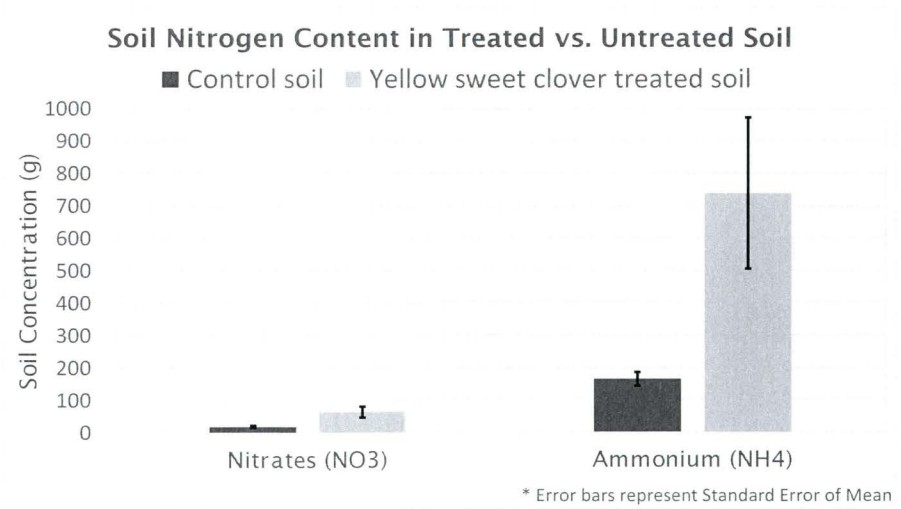


Figure 2

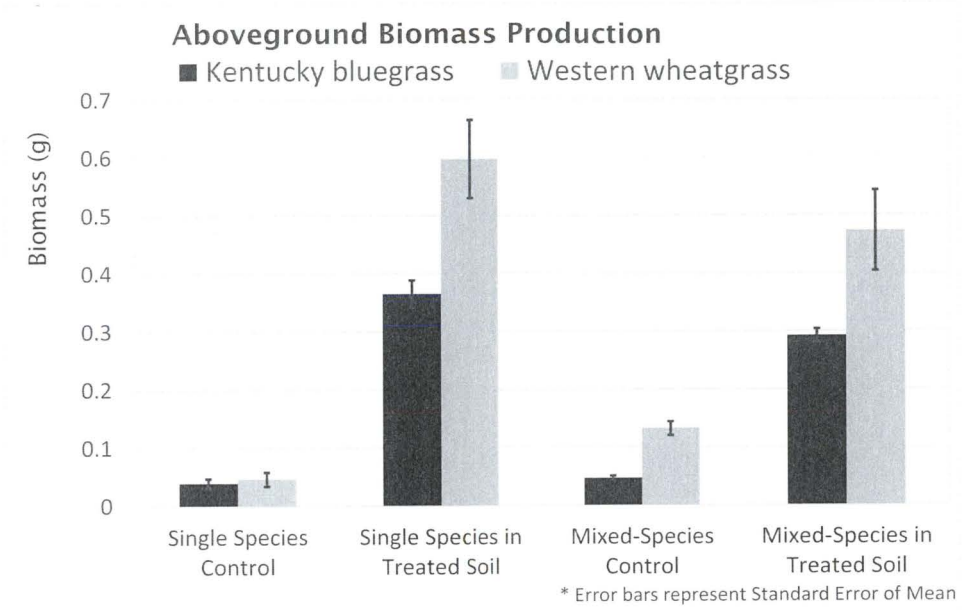
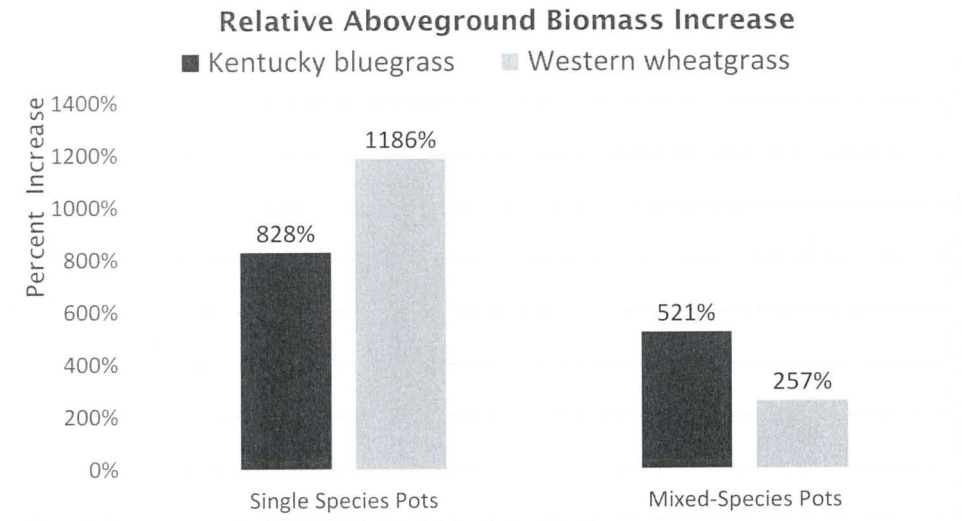


Figure 3



NDAES
Branch Research Centers

Carrington Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutor Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Carrington Research Extension Center (CREC) was established in 1960. CREC operates on a land base of around 1,940 acres where the majority of acreage is managed as traditional dryland and is utilized primarily for field crop research activities and foundation seed production. CREC has infrastructure to irrigate about 270 acres with center-pivot systems and to mist or micro-irrigate 55 acres with hand-set systems.

The research effort at the CREC focuses on these general program areas: traditional crop variety evaluation, crop production and management, plant disease management, crop fertility and soil management, cropping systems, alternative crop development, beef cattle nutrition, intensive cow/calf production, feedlot management, integration of crop and livestock production, livestock waste and nutrient management, irrigation, northern hardy fruit production, and foundation seedstocks production. Through these efforts, the CREC research program has gained a national reputation for its ability to investigate a broad base of agricultural challenges that benefit both producers and the agriculture based businesses that support them.

CREC maintains a strong Extension program as five extension specialists base their educational programming from the center. The extension program emphasis areas addressed by these specialists include: agronomy, livestock, plant pathology, and livestock waste - nutrient management.

Agency Mission Statement

The Carrington Research Extension Center conducts research that will lead to the enhancement of agriculture and improve the quality of life across the central region of North Dakota. Specifically, the Carrington Center conducts research on both dryland and irrigated crop production methods and systems, improved crop cultivars, feeding of beef cattle, cow/calf nutrition, sustainable agricultural production, and produces foundation seedstocks. The objective is to discover the balance between farm enterprise profitability and conservation of the natural resource base. The results of these studies are disseminated to the entire state through an on-going extension educational program.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- A secure (owned or long-term leases) land base is critical to sustain the current and future research mission of the Carrington Center. The diverse and broad based programs of the CREC operate on a relatively small land base. The Carrington REC operates on a land base of around 1,940 acres with the state owning around 840 acres. The 1,100 acres not secured by state ownership must be sourced by annual rental agreements with multiple landlords. This heavy reliance upon a willing group of land owners to annually rent a significant portion of the minimum amount of acres the CREC requires is risky at best. If any one parcel of rented land were not made available in a given year, the CREC would be forced to greatly reduce or eliminate program contributions that are depended upon by North Dakota producers and are basic to our department mission.
- The 2015 ND Legislative Assembly provided $750,000 from the general fund for a seed cleaning plant at the CREC and an additional $1,500,000 of authorization. The CREC is using the appropriation to purchase the primary conditioning equipment (e.g. air screen, indent, gravity table and spiral separator) and other funds to construct a basic building to house this equipment. Additional funding will be required to complete the integration of the equipment to make it a functional seed conditioning facility.
- The beef research unit needs a multi-use 'feedlot research support facility'. This facility would expand the scope of research capabilities, assist in sustaining IACUC compliance, address worker protection challenges, and reduce maintenance costs for equipment. An associated need for this program is an additional set of feedlot pens that would include a subset placed within a hoop structure. Current pens are fully utilized and feedlot research projects are often backlogged. An additional set of pens would allow the CREC to conduct at least one additional experiment per feedout period. Alternatively, these pens would allow more treatments or replications within other studies, thereby expanding research capacity and quality. Any feedlot pen expansion must include associated waste containment facilities to remain compliant with regulations.
- It is important that grant fund opportunities continue to be widely available in future years. Funds that support crop and livestock production or agricultural related issues in general are needed to leverage public funding. The CREC research programs must continue to have a diversity of opportunities to compete for grant funds that, when successful, allow us to most effectively empower current research programs.
- The programs of the CREC are supported by a diversity of facilities that include not only the primary buildings like headquarters and laboratory but also feedlot pens, feed and seed storage, animal shelters, water supply features, storage buildings, parking lots, roadways and waste containment. Current support for maintenance of these facilities is fully inadequate to address the current deferred maintenance costs.

Carrington Research Extension Center

2015-2017 IMPACTS

- Established UAV flight capacity to assess producer applications of this new technology for management of weed, fertility, disease and cultural issues.
- Conditioned and sold foundation grade seed of 29 varieties and nine crops to a diversity of seedsman.
- Evaluated the use of corn ethanol co-products as sources of phosphorus for crop nutrition.
- Provided producers with data to quantify their cattle performance in the feedlot with the Dakota Feeder Calf Show Feedout and the North Dakota Angus University.
- Trained producers and crop consultants in weed identification, nitrogen application techniques, soybean management and more resulting in an estimated value to participants of $10/acre.
- Provided data on summer confinement beef cow production to producers throughout the Midwest.
- Improved Sclerotinia disease control and soybean yield by delaying fungicide application to the R2 growth stage.

The CREC trained producers and crop consultants in weed identification, nitrogen application techniques, soybean management and more resulting in an estimated value to participants of $10/acre.

Agency Overview

Central Grasslands Research Extension Center – Streeter

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Central Grasslands Research Extension Center (CGREC) conducts research for the Coteau region of North Dakota, an area bounded by the Missouri River on the west and the James River on the east and extends from Divide and Burke counties in northwestern North Dakota in a southeasterly direction through Dickey County.

Research objectives must increase the range-carrying capacity of native range emphasizing conservation and preservation, stabilize grass production to compensate for the vagaries of the weather and precipitation as it influences forage production in the dryland agriculture, identify the impact of different management systems upon beef production in the central region and explore the increased use of crop residues and byproducts for the maintenance of the cow herd. CGREC's primary focus is management of grassland acreage which occupies about one-third of the agricultural land in the state and aims to improve production and increase returns to cattle producers.

Agency Mission Statement

The legislated mission of the CGREC is as follows: The CGREC shall conduct research designed to fulfill needs within an area bounded by the Missouri River on the west and the James River on the east with research objectives as follows:

1. To increase the range-carrying capacity of native range with emphasis on conservation.
2. Stabilization of grass production to determine how to best compensate for the variability of the weather as it influences forage production.
3. Identification of different management systems on beef production in the central region of the state.
4. Exploration of increased use of crop residues and by-products for the maintenance of the cow herd.
5. To disseminate research results and information for the benefit of the state of North Dakota.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- Livestock facilities continue to be deficient and impede potential research. Improvements to livestock handling and feeding facilities including replicated drylot pens, feed storage, and a new working barn are needed to allow for growth of the animal science research program.
- Significant improvements or replacement of the director's residence is needed as the current residence has water, mold, and foundational issues in the basement.
- Deferred maintenance and other repairs that affect both safety and use of facilities continue to be a critical issues.

Central Grasslands Research Extension Center - Streeter

2015-2017 IMPACTS

- Continued research on control of invasive grass species through early intensive grazing study and prescribed burning.
- Concluded 26 year grazing project evaluating the impacts of stocking rate on plant species composition.
- Expanded winter grazing research to include grazing of corn residues, cover crops, and bale grazing projects.
- Conducted research exploring the impacts of stocking rate and advancing season of forage intake of grazing beef cattle.
- Continued to expand on collaborative research efforts evaluating the impacts of management on reproductive performance of beef cattle.
- Hosted first annual Winter Grazing Workshop in collaboration with NDSU Extension Service.

The CGREC conducted research exploring the impacts of stocking rate and advancing season of forage intake of grazing beef cattle.

Agency Overview

Dickinson Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The NDSU Dickinson Research Extension Center (DREC) has an established record of service to the people in the 13-county region south and west of the Missouri River. The DREC operates 6,506 acres of owned land within the region as well as annual land leases needed to accommodate ongoing projects. The land base provides opportunities for a broad perspective in evaluating various agricultural systems that can serve as engines for economic development. This is a continuation of what has taken place for over 100 years. Currently, the DREC assists agricultural producers in solving production problems with agronomy, animal science and range science, while integrating new developments. Five major areas are served: agronomy, beef management, bio-security, range management, and sustainable agricultural practices. Faculty and staff are committed to engaging people of the region and to the identification of current economic opportunities, while sustaining natural resources for future generations as directed by the mission statement and advisory board. Research data and producer ideas are continually considered so the DREC can leverage the latest knowledge to best benefit the people of North Dakota.

Agency Mission Statement

The Dickinson Research Extension Center must be located at or near Dickinson in Stark County. The Center shall conduct research on increasing the carrying capacity of native rangeland, with emphasis on conservation and preservation for future generations. The Center shall conduct research on grass production to determine how to best compensate for the vagaries of the weather as it influences forage production in the dry land agriculture of western North Dakota. The Center shall conduct research at the ranch location in Dunn County with beef cattle breeding, feeding, management and disease control for the benefit of livestock producers of western North Dakota and the entire state. The Center shall conduct research designed to increase productivity of all agricultural products of the soil by maintaining or improving the soil resource base in the dry land agricultural region of southwestern North Dakota by the identification of adapted crop species and superior crop cultivars; propagation and distribution of selected seed stock; and development of profitable cropping systems that achieve the necessary balance between profitability and conservation of all natural resources. The Center shall disseminate research results and information for the benefit of this state.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- Sustainable and Integrated Beef Systems — Expandable, hopefully, more sustainable systems need to be evaluated to assess current trends. In the future, all avenues for additional compensation need to be explored, to enhance the economic viability for beef producers and the rural areas associated with beef production. This compensation may come from not only beef but synergistic crop production. For example, small grain production systems that integrate rotational cropping practices, high residue management and annual forages, with attention to wildlife habitat enhancement, could be used to diversify income while opening the door to other value-added opportunities for beef production in concert with crop production.

  The Dickinson Research Extension Center, as part of North Dakota State University, takes serious the need for sustainable beef systems. Currently, the Center is striving to develop sustainable and integrated production strategies that match conditions of western North Dakota and surrounding regions. The inclusion of forages into traditional cropping systems can provide the resources necessary for the development of integrated production strategies that increase sustainability and profitability.

  There is a need to develop agro-ecosystems that optimize the balance between forage-based and grain-based crop/livestock systems reflective of the many individual ecosystems. These integrated systems must be synergistic to, or enhance the native and agronomic plant communities, thus providing the base for future beef production. In addition, enhanced value for commodities produced from forage-based systems is key. As the general population requires protein, a need met by meat and high protein crops, meeting this demand is a unique opportunity that a forage based system integrated with crop production can respond to, in addition to current crop land use. These thoughts are changing how the Dickinson Research Extension Center addresses the future.

  Previous work has certainly set baseline production for high residue cropping systems, grassland systems and livestock systems. However further definition, integration and refinement of these system efforts is critical. Beef production needs to think outside the box and the Center also needs to do the same. Challenging the limits of conventional thinking by linking the components of agricultural management systems with value added opportunities ensuring long term sustainability of beef and cropping systems within the environment is critical. In response, a new approach needs to be embraced, a concept of integrated agricultural systems that truly entwines crop, beef and forage production as a working unit for betterment of all.

- Deferred Maintenance Increase — Deferred maintenance funding continues to be an important issue at the DREC. Updates and repairs to facilities that enhance worker safety and productivity are needed. The DREC, specifically, has maintenance issues with the main public use and cattle working facility at the ranch. The facility needs major roof repair and 1,800 square feet of additional cattle working space.

- Soil reclamation and dust issues in western ND — Soil disturbance and dust created by the extensive truck traffic servicing the oil industry in western ND has led to a number of potential soil reclamation, cropping and livestock issues. Subsequent productivity of disturbed soil, establishment of cropping systems following disturbance and the reduction of dust is critical. Production impacts may include reduced yields for both crop and forage production. The result is that soil disturbance and dust is creating an undocumented and potentially negative effect on crop and livestock enterprises. Research to assist livestock and crop producers is necessary to identify ways to document and minimize any adverse effect on soil and the agricultural industry in this region of the state.

Dickinson Research Extension Center

2015-2017 IMPACTS

- Continued work in agronomic, beef and range agricultural practices and developed managerial options reported in the Center's annual report located on the Center's web page https://www.ag.ndsu.edu/DickinsonREC.
- Continued and expanded work regarding soil disturbance and dust created by the extensive truck traffic servicing the oil industry in western ND.
- Shifted to explore new forage and cattle resources and inputs that shifts from a grain-based beef production model to a grass-based beef production model.
- Studied various management techniques involving grass cultivars, soil mineral nitrogen, prairie ecosystems, grassland restoration, grazing systems with the integration of beef cattle.
- Investigated conventional and organic agronomic systems, tillage systems, cropping systems, pest control systems, variety development, cover crops and the integration of beef cattle.

The Dickinson Research Extension Center continues work on integrated crop and livestock systems research.

Agency Overview

Hettinger Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Hettinger Research Extesnion Center (HREC) is a semi-arid site located in southwest North Dakota, providing the most southerly NDSU location in the non-glaciated portion of North Dakota as a site for its agricultural research programs. Research at HREC involves the disciplines of animal science, range science, wildlife science, agronomy, and weed science. The HREC conducts research in both sheep and cattle production and management systems, serving as the only REC in the ND Agricultural Experiment Station system with sheep. Livestock research is focused on feedlot nutrition and management, as well as enhancing reproductive efficiency in ruminants. Additionally, the HREC is located in a region where much of the land base is in the Conservation Reserve Program or has been recently removed from it, which has resulted in additional research evaluating potential changes in the CRP program and how these changes may affect upland native and game bird populations while enhancing livestock grazing opportunities. Agronomic and Weed Science research is focused on conducting variety and weed control trials in a no-till, semi-arid production system that is prone to drought. Collaboration is with Main Station scientists; Branch Station scientists; U.S. Forest Service; grazing associations; university scientists from WY, SD, and MT; and USDA research entities in these research disciplines to improve productivity of livestock, grazing, and cropping systems, and to improve economic development of the region.

Agency Mission Statement

The Hettinger Research Extension Center, an outreach of North Dakota State University, provides applied research and education in agriculture and environmental sciences that will enrich the lives of North Dakotans and support economic development.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

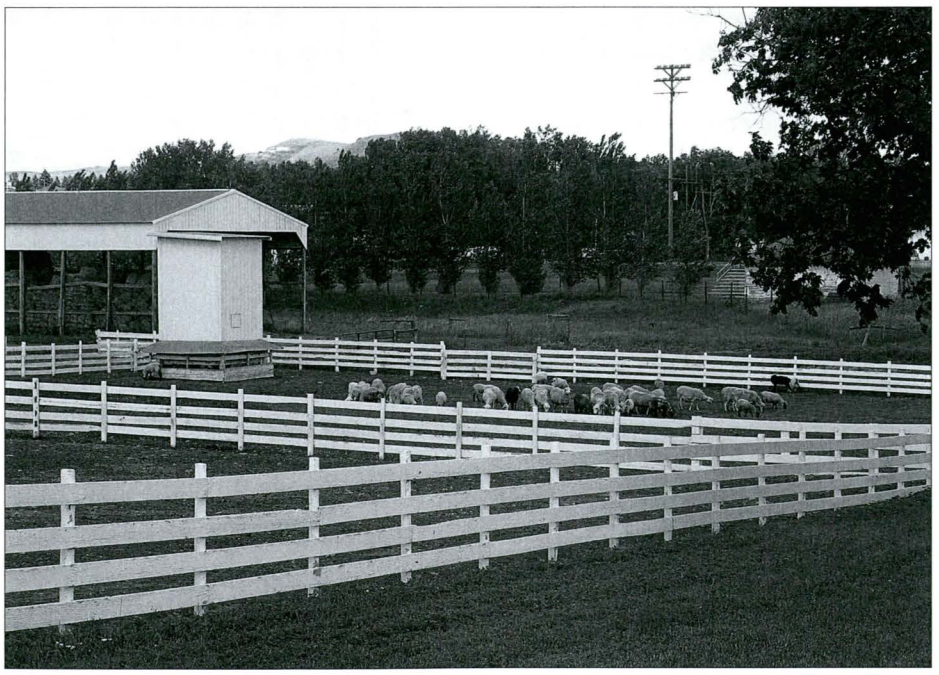
Agency Future Critical Issues

- Technical support for the livestock research program is dependent on restoration of the base budget. This position is needed to meet the research needs of producers in SW North Dakota.
- A modern livestock processing and research support facility is needed to enhance both quality and quantity of research by our sheep and cattle research programs. The current facility is a 16' x 32' lean-to, with no ability to utilize today's modern technology, such as web access, in our research program.
- A Sheep Feed Efficiency Research Facility for the evaluation of feed efficiency is needed for the sheep producers of ND to remain competitive. The ND Lamb and Wool Producers Association continues to support such a facility at the Hettinger REC.
- Housing of graduate students and technicians is needed for a nationally competitive program, and continues to be a struggle in western ND. Permanent housing, in a bunkhouse format, is needed to ensure the HREC program can continue to recruit these valuable members of our team on an annual basis.
- Deferred maintenance and safety issues will likely reach $1,000,000 by the end of the current biennium. Specifically, due to a past wet cycles and heavier than normal traffic, the road to the office is unstable and needs to be replaced. The most recent inspection by the Fire Marshall indicated that the 1970's-era bunkhouse needs to be renovated to maintain its use as a housing facility, due to fire and safety concerns. Additional needs include mechanical system renovation of the 1992 office, and parking lot re-paving.

Hettinger Research Extension Center

2015-2017 IMPACTS

- Evaluated new varieties and technologies to grow drought tolerant crops and new and emerging bio-fuels.
- Conducted multiple land use research evaluating: the nest ecology of an indicator species (sharp-tailed grouse) on National Grasslands, grazing strategies to complement pheasant habitat concerns, and native prairie restoration techniques on less productive farmland in the badlands.
- Collaborated with Sitting Bull College on the Standing Rock Sioux Reservation, USDA-ARS, NDSU, and SDSU on a multi-agency project evaluating the reclamation of lands degraded by prairie dogs.
- Conducted a nationally recognized sheep research program evaluating alternative technologies for increasing reproductive efficiency in both males and females and feedlot nutrition.
- Established a new Weed Science research program to evaluate weed control in dryland no-till cropping systems and control of invasive weeds of pasture and rangeland.
- Established a new Livestock Extension program.
- Completed the 8,000 sq. ft. Agronomy and Range Research Laboratory funded the previous biennium.



The HREC conducts a nationally recognized sheep research program evaluating alternative technologies for increasing reproductive efficiency in both males and females and feedlot nutrition.

Agency Overview

Langdon Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Langdon Research Extension Center (LREC) is located one mile east of Langdon on US highway five. The agricultural land base at the station consists of 549 owned acres and an additional 206 acres under lease agreement. The LREC serves a nine-county region located in northeast North Dakota. It has North Dakota's highest precipitation rates, coolest temperatures, and richest productive soils. The climate supports diverse crop production and recurring disease problems.

The LREC has a strong tradition of assisting the region's producers to meet agricultural production challenges throughout the course of its existence since 1909. In 1993, the LREC redirected much of its research programming to focus on the significant increase of disease and insect pressure associated with its climate. This redirected applied research programming has provided producers with information regarding disease minimizing cultural farming practices and trusted information regarding chemical applications and other inputs that minimize disease and insect pressures that give growers the best return on investment.

Recently, the LREC has significantly enhanced its overall agricultural research programming with an increase in the foundation seed stocks program, the addition of a crop protection scientist, farm business management instructor, Extension specialist in agronomy and an Extension specialist in soil health. New infrastructure additions in the past 12 years include a full service agricultural based learning center/headquarters building constructed in 2004, agronomy/pathology laboratory in 2015 and a 25 acre field tiling project completed in 2014. The NDSU LREC with its recent personnel and infrastructure additions and improvements will insure that growers can depend on research data that will improve their bottom line for the next 100 years.

Agency Mission Statement

The Langdon Research Extension Center will conduct applied agricultural research that enhances the quality of life for the region's citizens with a responsive, flexible and accessible overall agricultural based research program. This programming will combine the concepts of agricultural research, information technology and community/economic development while conserving the region's natural resources.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- The number one issue currently for the NDSU Langdon Research Extension Center is to maintain a level budget through the 2017/19 biennium based on the 2015/17 budget. This is needed to support the research and extension programming that has grown based on growers needs the past several years.
- In 1962, a seed cleaning plant was constructed at Langdon to provide local seedsmen and producers the ability to purchase and grow the highest quality seed available (foundation grade seed). The region's seedsmen and producers have come to depend on this program to supply them with foundation grade seed. Langdon still uses the same facility and equipment that was constructed in 1962. The inefficiencies associated with the plant forces Langdon's seed cleaners to run individual lots of dirty seed through the plant two to five times to achieve foundation grade seed. Because of this and the ability to only clean 20 to 30 bushels of seed per hour, Langdon does not complete its seed cleaning operation until the start of the growing season beyond the prime time for producers to acquire seed. In addition, numerous safety violations have been identified that can only be resolved with a new seed cleaning plant.

Langdon Research Extension Center

2015-2017 IMPACTS

- Continue to build and foster strong research and extension partnerships with commodity groups, regional crop improvement associations, area growers, and others associated with the ag industry in ND. These partnerships allow us to identify and address critical production issues as quickly as possible to protect growers' investment in their operations.
- Produced and distributed NDSU varieties of foundation grade seed of the major crops grown in our region. Our region is the number one producing region of HRSW in ND and 50 percent of the HRSW grown here is an NDSU variety originating from the NDSU foundation seed stocks program.
- Concluded successful negotiations with an absentee landowner to purchase 160 acres of crop land adjacent to Langdon REC land for research and extension purposes at fair market value. The state provided $175,000 of the funding and the other $175,000 was raised locally.
- Provided dependable support for main station crop breeding programs and other cropping system research programs based at the main station in Fargo at NDSU.
- Continue to foster and strengthen two new Extension Specialists outreach programs in agronomy and soil health that fills a vital educational need for growers in our region. They have also been very helpful mentoring several new extension agent hires recently in our region.

Center staff produced and distributed NDSU varieties of foundation grade seed of the major crops grown in our region.

Agency Overview

North Central Research Extension Center – Minot

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The North Central Research Extension Center (NCREC) was established in 1945 and is located one mile south of Minot on Highway 83. The 1,200-acre center specializes in crop research and extension education activities and foundation seed production. Approximately 1,500 owned, rented, and contracted acres are planted for foundation seed production each year. The NCREC evaluates conventional and new crops for production in the region and explores weed management and cropping systems to improve the economic potential of crop production in the north central region. The NCREC is a leader in North Dakota on production and disease research of canola, pea, lentil, and chickpea crops, in addition to the conventional crops of hard red spring and durum wheat, barley, flax, sunflower, and oats. The NCREC works closely with business and economic development leaders in the region to improve the economic vitality of north central North Dakota.

Agency Mission Statement

The North Central Research Extension Center conducts research to increase agricultural productivity in north central North Dakota. The center serves agricultural producers in a 12- county region surrounding Minot through crop research, foundation seed production and dissemination, and extension education programs in crop and livestock production. Studies at the center focus on crop variety and new germplasm evaluation, weed control, cropping systems, crop pest management, reduced tillage, and soil fertility. Research is conducted on cereal grains, oilseeds, legumes, forages, and new specialty crops.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- Increased base funding to support research and extension efforts
- Additional technical support
- Increased operating funds
- Equipment replacement
- Removal of old seedhouse
- Drain tile NCREC yard
- Encroachment from city of Minot
- Sale and purchase of additional land for seed production

North Central Research Extension Center - Minot

2015-2017 IMPACTS

- Produced, conditioned, and distributed foundation seed of nine crops grown in the region consisting of 24 unique varieties.
- Assisted in development of new varieties of economically important crops and evaluated production strategies for alternative crops such as carinata, fava bean, and energy beets.
- Researched crop production products in order to improve efficiencies and maximize economic return for minor and major acreage crops grown in ND.
- Provided extension education in the areas of livestock, soil health, crop protection, and cropping systems.
- Conducted residue trials with the USDA IR-4 program that lead to registration of new pesticides to control weeds, diseases, and insects in minor acreage crops important to ND agriculture.

Center staff assisted in development of new varieties of economically important crops and evaluated production strategies for alternative crops such as fava bean.

Williston Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Williston Research Extension Center (WREC), established in 1907 and relocated to the present site in 1954, is an 800-acre rain-fed farm located in northwest North Dakota near the city of Williston. In 2001, an additional 160 acres were purchased in the Nesson Valley 23 miles northeast of Williston and an irrigated research and development project was established. In 2012 an additional 1,100 acres of land were leased from the North Dakota Game and Fish Department for pure seed production and dryland research. WREC research studies are conducted on crop variety evaluation, herbicide performance and other cultural management research, plant disease control and management research in cropping systems, soil and water conservation practices, pipeline reclamation, and horticulture.

WREC research is intended to increase the producer's net profit, support crop diversification and encourage more intensive cropping and irrigation development. Research on soil and crop management systems for sprinkler irrigation, on alternative irrigated high value and value-added crops and on western malting barley programs are conducted. WREC also conducts variety development research on safflower, winter wheat, and durum and variety evaluations in cooperation with NDSU Main Station scientists. WREC produces and supplies foundation seed to area farmers of new and old varieties adapted to the region.

Agency Mission Statement

The Williston Research Extension Center conducts research to increase agricultural productivity in the semi-arid region for northwestern North Dakota while achieving a necessary balance between profitability and conservation of natural resources. Research on soil and crop management systems for sprinkler irrigation and alternative irrigated high-value/value-added crop production at the Nesson Valley site are conducted in cooperation with the Montana State University Eastern Agricultural Research Center at the USDA-ARS Northern Plains Agricultural Research Laboratory in Sidney, Montana and other cooperating NDSU and University of Minnesota scientists.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- Increasing operating costs and higher labor costs for research activities continue to impact WREC abilities to carry out our research programs vital to the improvement of the economic and environmental performance of our agricultural lands. A high priority need is the request to restore the 2015-2017 WREC budget to the 100% funding level. Deferred maintenance funding also continues to be an important need for WREC to maintain its facilities.
- The switch from a strict small grain-fallow rotation to a more intensive no-till diversified cropping system has resulted in northwest North Dakota farmers growing more than 20 different crops on over an additional million acres of previously fallowed land increasing the demand for pure seed of varieties of pulse crops and other fragile specialty seeds. The WREC seed conditioning plant built in 1954 is antiquated and was designed to only handle cereal crops and does not have the capability of cleaning peas, lentils, chickpeas, and other fragile seeds that are in high demand by our farmers. The outdated seed conditioning plant also poses considerable safety issues. A horizontal seed conditioning plant with optical color sorter and higher bushel per hour capacity is needed to allow WREC to condition Foundation seed of a wide array of new crop varieties to provide pure seed to growers.
- An additional equipment storage building is needed for WREC farm and plot research equipment to allow all WREC high cost farm and research equipment to be stored indoors from the elements.
- A greenhouse is needed for the new WREC Plant Pathology Program and the Horticulture Program to allow these programs to conduct plant disease and horticulture research during the winter months.
- Increased state operating costs due to state fleet rate/policy change.

Williston Research Extension Center

2015-2017 IMPACTS

- Continued a multi-disciplinary team long term dryland cropping system research project to evaluate and develop diversified cropping systems recommendations for improving soil health, water use efficiency, crop performance, and economic and environmental sustainability.
- The WREC Foundation Seed Program in 2015 produced over 50,000 bushels of Foundation seed of 21 varieties of small grains and broadleaf crops as a result of an acquired lease of 1,184 acres from the North Dakota Game and Fish Department that increased the WREC land base for Foundation seed program.
- New plant pathologist research program assembled a WREC plant pathology laboratory, established collaborations with USDA-ARS, Hettinger Research Extension Center, and NDSU Plant Pathologists, initiated plant pathology investigations on peas, lentils, durum, barley, and sugarbeets and obtained grant funding for a pulse crop pest scout to serve northwest North Dakota.
- WREC has developed and utilized a 160-acre irrigated site in its tenth year of research to identify improved irrigated cropping systems, tillage systems, and best management practices to improve water use efficiency, soil health, crop management systems, and economic and environmental sustainability.
- Evaluated the performance and adaption of new and established dryland and irrigated crop cultivars and crop cultural practices to improve productivity of agricultural products.
- Initiated a new long-term pipeline reclamation research project on WREC land to assess the economic impact of the disturbed soils on crop performance and to demonstrate reclamation treatments to restore crop yields and soil health.
- Horticultural program initiated high tunnel research with vegetable crops and cut flowers.
- Organized and assisted with outreach programming opportunities in the region: National Hard Red Spring Wheat Show, Irrigation Workshop, Pulse Days, offstation trials and tours, field day events, and MonDak Ag Showcase.
- Established a new reclamation research and demonstration project to reclaim a saline seep area on WREC land in collaboration with the Montana Salinity Control Association.

The WREC Foundation Seed Program in 2015 produced over 50,000 bushels of foundation seed of 21 varieties of small grains and broadleaf crops.

Agronomy Seed Farm

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1.

Agency Description

The Agronomy Seed Farm (ASF) is a 590 acre farm located near Casselton, which has been a part of the North Dakota Agriculture Experiment Station (NDAES) since it was gifted to the state in 1950. It was the result of a fund drive conducted by the North Dakota Crop Improvement Association, which solicited farmers, seed companies and many others throughout the state to help establish a farm whose main purpose is to increase seed of new varieties as they are developed by the plant breeding and supporting departments of the NDAES. The ASF also propagates seed of older but still desirable varieties for the seedsmen of the area.

Agency Mission Statement

To produce an adequate supply of foundation-grade seed for the seedsmen of the state and area at a reasonable price and to support the varietal development research of the NDAES.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19, the State Board of Agricultural Research and Extension (SBARE) presents a status report to the Budget Section of the Legislative Council. SBARE's most recent presentation to the Budget Section was on June 27, 2016. The report provided the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the Legislative Council office.

Agency Future Critical Issues

The critical issues facing the ASF are a continued demand for foundation-grade seed, favorable weather for growing seed and a good supply of varieties that are in demand by the seed industry. If these three conditions are present and good commodity prices accompany them, the future of the ASF is secure.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agronomy Seed Farm

2015-2017 IMPACTS

- Produced 35,000 to 50,000 bushels of seed for availability to the seed industry annually.
- Conditioned 35,000 to 50,000 bushels of seed for availability to the seed industry annually.

The Agronomy Seed Farm's main purpose is to increase seed of new varieties as they are developed by the plant breeding and supporting departments of the NDAES.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

2017-19 Capital Improvement and One-time Requests as Ranked by SBARE

1. Seed Cleaning Facilities – CREC, LREC, NCREC, WREC

(Priority No. 2 capital improvement request in 2013-15 and No. 3 in 2015-17 request)

Seed cleaning facilities at the CREC, LREC, NCREC and WREC need to be replaced. Current facilities are antiquated, lack reliable capability to ensure high-quality seed, and are slow and inefficient. Current facilities were designed to handle cereal crops and have limited/no capability of cleaning pulse crops and other fragile seed that are in high demand. These facilities pose considerable worker safety issues. Partial funding ($1,500,000) was received to purchase equipment for the Carrington and North Central REC seed cleaning plants, along with authorization to raise $3,000,000 in other funds for building construction. Difficulties in the farm economy reduce the opportunities to raise funds for building construction. No funding was received for the Williston or Langdon REC. - $3,750,000

2. Animal Science Meats Research Facility – Main Station

(Priority No. 2 capital improvement request in 2015-17)

A new/upgraded facility is needed urgently. The current Meats Lab was built in the 1950s and no longer serves the needs of modern meat science research. Annual repair and maintenance costs to the current facility continue to increase. Additionally, the lab continues to struggle to meet the U.S. Department of Agriculture inspection requirements for safe meat handling and processing. A new facility is necessary because opportunities to grow the state's livestock industries are tied to the knowledge of the end product and how that product meets the needs of national and international consumers. - $7,600,000

3. Agronomic, Pathology and Soils Field Lab Facility

(Waldron Hall replacement)

Waldron Hall was built in the mid-1950s to house the field laboratories for the wheat breeding programs in the Department of Agronomy. An addition was built in the mid-1960s to house approximately another 16 scientists from the Departments of Agronomy and Plant Pathology. The building now houses field labs and wet labs for nearly 40 scientists at the Main Station involving a number of disciplines. Many of these labs are shared, and the seed drying, cleaning and storage facilities needed by our scientists are grossly insufficient and a health hazard to anyone working in the facility. A new facility is needed to provide our scientists with a safe environment to conduct their research, as well as process, clean and store seed. - $39,000,000

4. Deferred Maintenance Increase

Deferred maintenance funding continues to be an important issue. Updates and repairs to facilities that enhance worker safety and productivity are needed across the AES. Various and ongoing issues exist at the Main Station and all RECs, primarily with respect to facility updates and repairs. - $1,440,465

5. Equipment Storage Sheds

Expensive purchased and/or leased field equipment is an investment that the AES needs to protect. Storing expensive research plot equipment, such as tractors, seeders and combines, outdoors reduces the life of the machines and can compromise the sophisticated electronics typically used on equipment. - 8 @ $306,250 = $2,450,000

One-time Requests:

1. **Utility Costs of Main Station AES Greenhouse** - $400,000
2. **Assessments for Road Improvement** - TBD

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DETAILS:
2017-2019 Capital Improvement and One-time Requests as Ranked by SBARE

ND Agricultural Experiment Station

1. Seed Cleaning Facilities **$3,750,000**

(Priority No. 2 capital improvement request in 2013-15 and No. 3 in 2015-17 request)

Seed cleaning facilities at the CREC, LREC, NCREC and WREC need to be replaced. Current facilities are antiquated, lack reliable capability to ensure high-quality seed, and are slow and inefficient. Current facilities were designed to handle cereal crops and have limited/no capability of cleaning pulse crops and other fragile seed that are in high demand. These facilities pose considerable worker safety issues. Partial funding ($1,500,000) was received to purchase equipment for the Carrington and North Central REC seed cleaning plants, along with authorization to raise $3,000,000 in other funds for building construction. Difficulties in the farm economy reduce the opportunities to raise funds for building construction. No funding was received for the Williston or Langdon REC.

2. Animal Science Meats Research Facility **$7,600,000**

(Priority No. 2 capital improvement request in 2015-17)

A new/upgraded facility is needed urgently. The current Meats Lab was built in the 1950s and no longer serves the needs of modern meat science research. Annual repair and maintenance costs to the current facility continue to increase. Additionally, the lab continues to struggle to meet the U.S. Department of Agriculture inspection requirements for safe meat handling and processing. A new facility is necessary because opportunities to grow the state's livestock industries are tied to the knowledge of the end product and how that product meets the needs of national and international consumers.

3. Agronomic, Pathology and Soils Field Lab Facility **$39,000,000**

(Waldron Hall replacement)

Waldron Hall was built in the mid-1950s to house the field laboratories for the wheat breeding programs in the Department of Agronomy. An addition was built in the mid-1960s to house approximately another 16 scientists from the Departments of Agronomy and Plant Pathology. The building now houses field labs and wet labs for nearly 40 scientists at the Main Station involving a number of disciplines. Many of these labs are shared, and the seed drying, cleaning and storage facilities needed by our scientists are grossly insufficient and a health hazard to anyone working in the facility. A new facility is needed to provide our scientists with a safe environment to conduct their research, as well as process, clean and store seed.

4. Deferred Maintenance Increase **$1,440,465**

Deferred maintenance funding continues to be an important issue. Updates and repairs to facilities that enhance worker safety and productivity are needed across the AES. Various and ongoing issues exist at the Main Station and all RECs, primarily with respect to facility updates and repairs.

5. Equipment Storage Sheds

8 @ $306,250 = **$2,450,000**

Expensive purchased and/or leased field equipment is an investment that the AES needs to protect. Storing expensive research plot equipment, such as tractors, seeders and combines, outdoors reduces the life of the machines and can compromise the sophisticated electronics typically used on equipment.

One-time Funding Requests

1. Utility Costs of Main Station AES Greenhouse - $400,000
2. Assessments for Road Improvement - TBD

17.0528.01000

Sixty-fifth
Legislative Assembly
of North Dakota

SENATE BILL NO. 2020

Introduced by

Appropriations Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the purpose of defraying the expenses of the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the biennium beginning July 1, 2017, and ending June 30, 2019, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	Base Level	Adjustments or Enhancements	Appropriation
Extension service	$52,517,908	$0	$52,517,908
Soil conservation committee	1,133,362	0	1,133,362
Total all funds	$53,651,270	$0	$53,651,270
Less estimated income	25,826,708	0	25,826,708
Total general fund	$27,824,562	$0	$27,824,562
Full-time equivalent positions	263.91	0.00	263.91

Subdivision 2.

NORTHERN CROPS INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Northern crops institute	$3,712,202	$0	$3,712,202
Total all funds	$3,712,202	$0	$3,712,202
Less estimated income	1,747,735	0	1,747,735
Total general fund	$1,964,467	$0	$1,964,467
Full-time equivalent positions	12.00	0.00	12.00

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Upper great plains transportation institute	$22,076,448	$0	$22,076,448
Total all funds	$22,076,448	$0	$22,076,448
Less estimated income	18,175,657	0	18,175,657
Total general fund	$3,900,791	$0	$3,900,791
Full-time equivalent positions	54.98	0.00	54.98

Subdivision 4.

MAIN RESEARCH CENTER

	Base Level	Adjustments or Enhancements	Appropriation
Main research center	$110,529,780	$0	$110,529,780
Total all funds	$110,529,780	$0	$110,529,780
Less estimated income	56,948,525	0	56,948,525
Total general fund	$53,581,255	$0	$53,581,255
Full-time equivalent positions	353.85	0.00	353.85

Subdivision 5.

BRANCH RESEARCH CENTERS

	Base Level	Adjustments or Enhancements	Appropriation
Dickinson research extension center	$6,996,678	$0	$6,996,678
Central grasslands research extension center	3,531,779	0	3,531,779
Hettinger research extension center	5,086,767	0	5,086,767
Langdon research extension center	3,045,836	0	3,045,836
North central research extension center	5,044,213	0	5,044,213
Williston research extension center	5,267,400	0	5,267,400
Carrington research extension center	9,328,093	0	9,328,093
Total all funds	$38,300,766	$0	$38,300,766
Less estimated income	19,817,130	0	19,817,130
Total general fund	$18,483,636	$0	$18,483,636
Full-time equivalent positions	113.94	0.00	113.94

Subdivision 6.

AGRONOMY SEED FARM

	Base Level	Adjustments or Enhancements	Appropriation
Agronomy seed farm	$1,521,007	$0	$1,521,007
Total special funds	$1,521,007	$0	$1,521,007
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	Base Level	Adjustments or Enhancements	Appropriation
Grand total general fund	$105,754,711	$0	$105,754,711
Grand total other funds	124,036,762	0	124,036,762
Grand total all funds	$229,791,473	$0	$229,791,473

SECTION 2. ONE-TIME FUNDING. The following amounts reflect the one-time funding items approved by the sixty-fourth legislative assembly as adjusted for the 2015-17 biennium:

One-Time Funding Description	2015-17	2017-19
Agronomy laboratories	$150,000	$0
Rural leadership project	141,252	0
Seed cleaning plants	4,408,224	0
Upper great plains transportation institute road study	628,823	0
Junior master gardener program	12,500	0
Veterinary diagnostic laboratory	18,000,000	0
Dust issues technical support	100,000	0
Land purchase - Langdon	350,000	0
Flooded lands study	67,952	0
Total all funds	$23,858,751	$0
Total other funds	21,325,000	0
Total general fund	$2,533,751	$0

SECTION 3. ADDITIONAL INCOME - APPROPRIATION. In addition to the amount included in the grand total other funds appropriation line item in section 1 of this Act, any other income, including funds from federal acts, private grants, gifts, and donations, or from other sources received by the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, except as otherwise provided by law, is appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 4. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 5. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME - REPORT. The Williston research extension center shall report to the sixty-sixth legislative assembly on amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2015, and ending June 30, 2017, and the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 6. TRANSFER AUTHORITY. Upon approval of the state board of agricultural research and education and appropriate branch research center directors, the director of the main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of section 1 of this Act. Any amounts transferred must be reported to the director of the office of management and budget.

SECTION 7. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS. The state board of higher education may adjust or increase full-time equivalent positions as needed for the entities in section 1 of this Act, subject to availability of funds. All full-time or part-time positions must be separate from North Dakota state university. Annually, the board shall report to the office of management and budget and to the budget section any adjustments made pursuant to this section.

SECTION 8. UNEXPENDED GENERAL FUND - EXCESS INCOME. Any unexpended general fund appropriation authority to and any excess income received by entities listed in section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or revenues are available and may be expended by those entities, during the biennium beginning July 1, 2019, and ending June 30, 2021.

Sixty-fifth
Legislative Assembly
of North Dakota

SENATE BILL NO. 2080

Introduced by

Appropriations Committee

(At the request of the Governor)

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; and to provide an exemption.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the purpose of defraying the expenses of the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the biennium beginning July 1, 2017, and ending June 30, 2019, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	Base Level	Adjustments or Enhancements	Appropriation
Extension service	$52,517,908	$37,277	$52,555,185
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($4,565)	$53,646,705
Less estimated income	25,826,708	941,881	26,768,589

Total general fund	$27,824,562	($946,446)	$26,878,116
Full-time equivalent positions	263.91	10.93	252.98

Subdivision 2.

NORTHERN CROPS INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Northern crops institute	$3,712,202	$1,243	$3,713,445
Total all funds	$3,712,202	$1,243	$3,713,445
Less estimated income	1,747,735	10,008	1,757,743
Total general fund	$1,964,467	($8,765)	$1,955,702
Full-time equivalent positions	12.00	(0.20)	11.80

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Upper great plains transportation institute	$22,076,448	$145,575	$22,222,023
Total all funds	$22,076,448	$145,575	$22,222,023
Less estimated income	18,175,657	482,465	18,658,122
Total general fund	$3,900,791	($336,890)	$3,563,901
Full-time equivalent positions	54.98	(11.10)	43.88

Subdivision 4.

MAIN RESEARCH CENTER

	Base Level	Adjustments or Enhancements	Appropriation
Main research center	$110,529,780	$11,812	$110,541,592
Total all funds	$110,529,780	$11,812	$110,541,592
Less estimated income	56,948,525	2,263,756	59,212,281
Total general fund	$53,581,255	($2,251,944)	$51,329,311
Full-time equivalent positions	353.85	(17.73)	336.12

Subdivision 5.

RESEARCH CENTERS

	Base Level	Adjustments or Enhancements	Appropriation
Dickinson research center	$6,996,678	($48,789)	$6,947,889
Central grasslands research center	3,531,779	(40,136)	3,491,643
Hettinger research center	5,086,767	(29,081)	5,057,686
Langdon research center	3,045,836	(25,004)	3,020,832
North central research center	5,044,213	(18,626)	5,025,587
Williston research center	5,267,400	(45,697)	5,221,703
Carrington research center	9,328,093	(18,220)	9,309,873
Total all funds	$38,300,766	($225,553)	$38,075,213
Less estimated income	19,817,130	492,980	20,310,110
Total general fund	$18,483,636	($718,533)	$17,765,103
Full-time equivalent positions	113.94	(3.65)	110.29

Subdivision 6.

AGRONOMY SEED FARM

	Base Level	Adjustments or Enhancements	Appropriation
Agronomy seed farm	$1,521,007	$17,788	$1,538,795
Total special funds	$1,521,007	$17,788	$1,538,795
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	Base Level	Adjustments or Enhancements	Appropriation
Grand total general fund	$105,754,711	($4,262,578)	$101,492,133
Grand total other funds	124,036,762	4,208,878	128,245,640
Grand total all funds	$229,791,473	($53,700)	$229,737,773

SECTION 2. ONE-TIME FUNDING. The following amounts reflect the one-time funding items approved by the sixty-fourth legislative assembly for the 2015-17 biennium:

One-Time Funding Description	2015-17	2017-19
Agronomy laboratories	$150,000	$0
Rural leadership project	141,252	0
Seed cleaning plants	4,408,224	0
Upper great plains transportation institute road study	628,823	0
Junior master gardener program	12,500	0
Veterinary diagnostic laboratory	18,000,000	0
Dust issues technical support	100,000	0
Land purchase - Langdon	350,000	0
Flooded lands study	67,952	0
Total all funds	$23,858,751	$0
Total other funds	21,325,000	0
Total general fund	$2,533,751	$0

SECTION 3. ADDITIONAL INCOME - APPROPRIATION. In addition to the amount included in the grand total special funds appropriation line item in section 1 of this Act, any other income, including funds from federal acts, private grants, gifts, and donations, or from other sources received by the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, except as otherwise provided by law, is appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 4. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 5. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Williston research extension center shall report to the sixty-sixth legislative assembly on amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2015, and ending June 30, 2017, and the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 6. TRANSFER AUTHORITY. Upon approval of the state board of agricultural research and education and appropriate branch research center directors, the director of the main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of section 1 of this Act. Any amounts transferred must be reported to the director of the office of management and budget.

SECTION 7. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS. The board of higher education may adjust or increase full-time equivalent positions as needed for the entities in section 1 of this Act, subject to availability of funds. The board shall report any adjustments to the office of management and budget prior to the submission of the 2019-21 budget request.

SECTION 8. UNEXPENDED GENERAL FUND - EXCESS INCOME. Any unexpended general fund appropriation authority to and any excess income received by entities listed in section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or revenues are available and may be expended by those entities, during the biennium beginning July 1, 2019, and ending June 30, 2021.

SECTION 9. EXEMPTION. The amounts appropriated for the veterinary diagnostic laboratory and the seed cleaning plants contained in subdivision 4 of section 1 of chapter 20 of the 2015 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2017, and ending June 30, 2019.

Extension Service, Main, and Branch Research Centers
Reconciliation of 2015-17 Original General Fund Appropriation to 2017-19 Executive Recommendation (SB 2020 /2080)

	Extension Service	Main Research Center	Branch Research Centers
2015-17 Original General Fund Appropriation	**$ 29,788,188**	**$ 59,067,612**	**$ 20,073,447**
Reduction of 6.55% for Allotment	**$ (1,951,126)**	**$ (3,868,929)**	**$ (1,314,811)**
	27,837,062	**55,198,683**	**18,758,636**
Less: Capital and One-time	(12,500)	(1,617,428)	(275,000)
2015-17 Adjusted Appropriation / SB 2020 Appropriation	**27,824,562**	**53,581,255**	**18,483,636**
2017-19 Changes in Executive Recommendation (SB 2080)			
Adjustment between Allotment and Gov. Guidelines (10% Gov vs. 6.55% Allotment)	(1,026,443)	(1,970,656)	(665,035)
Base payroll adjustment	302,125	596,490	181,396
Compensation Package (1% in FY 19)	495,078	851,324	303,670
Change in Bond payments	-	42,448	15,056
Funding change GF to Special	(200,000)	(1,600,000)	(350,000)
Equipment Reduction	-	(100,000)	(175,000)
Reduction in Health Insurance for decreased FTE	(37,206)	(71,550)	(28,620)
Further Reduction	(480,000)	-	-
Total Changes	(946,446)	(2,251,944)	(718,533)
SB 2080 Appropriation	**$ 26,878,116**	**$ 51,329,311**	**$ 17,765,103**

No optional items submitted were funded in the Executive Recommendation

Reconciliation of 2015-17 Original Other Fund Budget Appropriation to 2017-19 Executive Recommendation (SB 2020 / 2080)

2015-17 Original Other Fund Appropriation	**$ 25,826,708**	**$ 78,098,525**	**$ 19,992,130**
Remove Capital Project	-	(21,150,000)	(175,000)
2015-17 Adjusted Other Fund Appropriation / SB 2020 Appropriation	**$ 25,826,708**	**$ 56,948,525**	**$ 19,817,130**
2017-19 Changes in Executive Recommendation (SB 2080)			
Base Payroll adjustments	265,427	196,105	30,744
1% salary/benefit increase FY19 and 2018-19 health insurance increases	476,454	467,651	112,236
Other changes in estimated income	200,000	1,600,000	350,000
SB 2080 Other Fund changes	**941,881**	**2,263,756**	**492,980**
SB 2080 Other Fund Appropriation	**$ 26,768,589**	**$ 59,212,281**	**$ 20,310,110**

Branch Research Centers Detail
Reconciliation of 2015-17 Original General Fund Appropriation to 2017-19 Executive Recommendation (SB 2020 / 2080)

	Dickinson REC	Central Grasslands REC	Hettinger REC	Langdon REC	North Central REC	Williston REC	Carrington REC	Total
2015-17 Original General Fund Appropriation	**$ 3,992,095**	**$ 2,302,107**	**$ 2,510,254**	**$ 2,004,271**	**$ 2,179,057**	**$ 3,155,573**	**$ 3,930,090**	**$ 20,073,447**
Reduction of 6.55% for Allotment	**$ (261,483)**	**$ (150,788)**	**$ (164,421)**	**$ (131,280)**	**$ (142,728)**	**$ (206,690)**	**$ (257,421)**	**$ (1,314,811)**
	3,730,612	**2,151,319**	**2,345,833**	**1,872,991**	**2,036,329**	**2,948,883**	**3,672,669**	**18,758,636**
Less: Capital and One-time	(100,000)			(175,000)				(275,000)
2015-17 Adjusted Appropriation / SB 2020 Appropriation	**3,630,612**	**2,151,319**	**2,345,833**	**1,697,991**	**2,036,329**	**2,948,883**	**3,672,669**	**18,483,636**
2017-19 Changes in Executive Recommendation (SB 2080)								
Adjustment between Allotment and Gov. Guidelines (10% Gov vs. 6.55% Allotment)	(127,727)	(79,423)	(86,604)	(51,647)	(75,178)	(108,867)	(135,588)	(665,034)
								-
Base payroll adjustment	34,610	27,255	22,330	16,560	29,819	24,560	41,212	196,346
Compensation Package (1% in FY 19)	48,089	39,584	43,101	29,528	31,079	48,007	64,283	303,671
Change in Bond payments	-	40	-	-	64	-	-	104
Funding change GF to Special	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	(350,000)
Equipment Reduction	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)	(175,000)
Reduction in Health Insurance for decreased FTE	(5,724)	(4,293)	(2,862)	(2,862)	(4,293)	(2,862)	(5,724)	(28,620)
Total Changes	(125,752)	(91,837)	(99,035)	(83,421)	(93,509)	(114,162)	(110,817)	(718,533)
SB 2080 Appropriation	**3,504,860**	**2,059,482**	**2,246,798**	**1,614,570**	**1,942,820**	**2,834,721**	**3,561,852**	**17,765,103**

No optional items submitted were funded in the Executive Recommendation

Reconciliation of 2015-17 Original Other Fund Appropriation to 2017-19 Executive Recommendation (SB 2020 / 2080)

2015-17 Original Other Fund Appropriation	**$ 3,366,067**	**$ 1,380,460**	**$ 2,740,933**	**$ 1,522,845**	**$ 3,007,884**	**$ 2,318,517**	**$ 5,655,424**	**$ 19,992,130**
Adjustments				(175,000)				**(175,000)**
2015-17 Adjusted Other Fund / SB 2020 Appropriation	**$ 3,366,067**	**$ 1,380,460**	**$ 2,740,933**	**$ 1,347,845**	**$ 3,007,884**	**$ 2,318,517**	**$ 5,655,424**	**$ 19,817,130**
Executive Recommendation Increases (Decreases):								
Base Payroll adjustments	11,767	(4,258)	7,106	2,930	(1,461)	1,604	13,056	30,744
Compensation package (1% year two) and health insurance & retirement increases	9,471	1,666	9,987	2,625	22,051	13,999	52,437	112,236
Estimated income increase	50,000	50,000	50,000	50,000	50,000	50,000	50,000	350,000
SB 2080 Other Fund changes	**71,238**	**47,408**	**67,093**	**55,555**	**70,590**	**65,603**	**115,493**	**492,980**
SB 2080 Other Fund Appropriation	**$ 3,437,305**	**$ 1,427,868**	**$ 2,808,026**	**$ 1,403,400**	**$ 3,078,474**	**$ 2,384,120**	**$ 5,770,917**	**$ 20,310,110**

NDSU Extension Service - 630

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total General Fund Appropriation	**$27,837,061**	**$18,314,819**	**$9,522,242**	**--Balance will be drawn down for expenditures by end of biennium.**

Source: November 2016 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Main Research Station - 640

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total General Fund Appropriation	*** $55,698,821**	**$34,402,705**	**$21,296,116**	**--Balance will be drawn down for expenditures by end of biennium.**
				*** Includes carryover of $500,137**

Source: November 2016 Appropriation Status Report

Note: uncertain changes expected to Federal funding levels.

NDSU Dickinson Research Center- 641

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total General Fund Appropriation	**$ 3,730,612**	**$ 2,355,693**	**$ 1,374,919**	**--Balance will be drawn down for expenditures by end of biennium.**

Source: November 2016 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Central Grasslands Research Center- 642

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total General Fund Appropriation	**$ 2,151,319**	**$ 1,455,353**	**$ 695,966**	**--Balance will be drawn down for expenditures by end of biennium.**

Source: November 2016 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Hettinger Research Center- 643

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total General Fund Appropriation	**$ 2,345,833**	**$ 1,754,743**	**$ 591,090**	**--Balance will be drawn down for expenditures by end of biennium.**

Source: November 2016 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Langdon Research Center- 644

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total General Fund Appropriation	**$ 1,872,991**	**$ 1,311,844**	**$ 561,147**	**--Balance will be drawn down for expenditures by end of biennium.**

Source: November 2016 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU North Central Research Center- 645

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total General Fund Appropriation	$ 2,036,329	$ 1,266,635	$ 769,694	**--Balance will be drawn down for expenditures by end of biennium.**

Source: November 2016 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Williston Research Center- 646

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total General Fund Appropriation	$ 2,948,883	$ 1,985,105	$ 963,778	**--Balance will be drawn down for expenditures by end of biennium.**

Source: November 2016 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Carrington Research Center- 647

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total General Fund Appropriation	$ 3,672,669	$ 2,345,444	$ 1,327,225	**--Balance will be drawn down for expenditures by end of biennium.**

Source: November 2016 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Agronomy Seed Farm- 649

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 11/30/16	Remaining Balance	Comments
Total Appropriation	**$ 1,521,007**	**$ 945,419**	**$ 575,588**	

Source: November 2016 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

640 - Main Research Center

"Original 2015-17 budget and the effects of the budget reductions approved August 2016"

Total Budget

	Original Appropriations	Reductions	Adjusted Appropriations
Total all funds	$137,166,137	($3,868,929)	$133,297,208
Less estimated income	78,098,525	0	78,098,525
Total general fund	$59,067,612	($3,868,929)	$55,198,683

One-Time, General Fund

Original One-time items	Original Appropriations	Reductions	Adjusted Appropriations
Rural leadership project	$150,000	($8,748)	$141,252
Flooded lands study	72,500	($4,548)	67,952
Seed cleaning plants	1,500,000	($91,776)	1,408,224
Total	$1,722,500	($105,072)	$1,617,428

Ongoing, General Fund

Programs	Original Ongoing Appropriations	Ongoing Appropriation Reductions	Adjusted Ongoing Appropriations
Main Research Center	$57,345,112	($3,763,857)	$53,581,255

Effects of the allotment:

The Main Station addressed the allotment with a combination of operating and position cuts. Positions are frozen as they become vacant. If a position is deemed critical, a recruitment may take place. A Voluntary Separation Incentive Program was initiated and resulted in a reduction of 7.53 FTE with annual Main Station salaries totaling $605,671. Operating allocations were reduced by 10% in FY 2017. Equipment funds were reduced.

630 - NDSU Extension Service

"Original 2015-17 budget and the effects of the budget reductions approved August 2016"

Total Budget

	Original Appropriations	Reductions	Adjusted Appropriations
Extension service	$54,402,096	($1,871,688)	$52,530,408
Soil conservation committee	1,212,800	(79,438)	1,133,362
Total all funds	$55,614,896	($1,951,126)	$53,663,770
Less estimated income	25,826,708	0	25,826,708
Total general fund	$29,788,188	($1,951,126)	$27,837,062

One-Time, General Fund

One-time items	Original Appropriations	Reductions	Adjusted Appropriations
Burleigh Co Junior Master Gardener Program	$12,500		$12,500
Total	$12,500	$0	$12,500

Ongoing, General Fund

Programs	Original Ongoing Appropriations	Ongoing Appropriation Reductions	Adjusted Ongoing Appropriations
Extension service	$28,562,888	($1,871,688)	$26,691,200
Soil conservation committee	$1,212,800	($79,438)	$1,133,362

Effects of the allotment:

The NDSU Extension Service addressed the allotment with a combination of operating and position cuts. Positions are frozen as they become vacant. If a position is deemed critical, a recruitment may take place. A Voluntary Separation Incentive Program was initiated and resulted in a reduction of 5.27 FTE with annual NDSU Extension Service salaries totaling $385,462. Operating allocations were reduced by 10% in FY 2017.

628 - Branch Research Centers

"Original 2015-17 budget and the effects of the budget reductions approved August 2016"

Total Budget

Line item	Original Appropriations	Reductions	Adjusted Appropriations
Dickinson REC	$7,358,161	($261,483)	$7,096,678
Central Grasslands REC	3,682,567	(150,788)	3,531,779
Hettinger REC	5,251,188	(164,421)	5,086,767
Langdon REC	3,527,116	(131,280)	3,395,836
North Central REC	5,186,941	(142,728)	5,044,213
Williston REC	5,474,090	(206,690)	5,267,400
Carrington REC	9,585,514	(257,421)	9,328,093
Total all funds	$40,065,577	($1,314,811)	$38,750,766
Less estimated income	19,992,130	0	19,992,130
Total general fund	$20,073,447	($1,314,811)	$18,758,636

One-Time, General Fund

One-time items	Original Appropriations	Reductions	Adjusted Appropriations
Dust issues tech support - DREC	$100,000		$100,000
Cavalier County property purchase	175,000		175,000
Total	$275,000	$0	$275,000

Ongoing, General Fund

Programs	Original Ongoing Appropriations	Ongoing Appropriation Reductions	Adjusted Ongoing Appropriations
Dickinson research center	$3,892,095	($261,483)	$3,630,612
Central grasslands research center	$2,302,107	($150,788)	$2,151,319
Hettinger research center	$2,510,254	($164,421)	$2,345,833
Langdon research center	$1,829,271	($131,280)	$1,697,991
North central research center	$2,179,057	($142,728)	$2,036,329
Williston research center	$3,155,573	($206,690)	$2,948,883
Carrington research center	$3,930,090	($257,421)	$3,672,669
	$19,798,447	($1,314,811)	$18,483,636

Effects of the allotment:

The Branch Stations addressed the allotment with a combination of operating and position cuts. Positions are frozen as they become vacant. If a position is deemed critical, a recruitment may take place. A Voluntary Separation Incentive Program was initiated and resulted in a reduction of 3.0 FTE with annual Branch Station salaries totaling $151,021. Operating allocations were reduced by 10% in FY 2017. Equipment funds were reduced.

The 10% adjustmenst necessary to meet the Governor's Budget request guideline was entered into IBARS via Change Package AA1 and described as follows:

NDSU Extension Service

The Governor's budget guidelines called for all state agencies to submit a 90 percent budget request. The 10 percent reduction equals $2,977,569 for Extension. To meet this amount, Extension would eliminate 10 positions ($1.6M) in administration, state specialist, area specialist, county, technician, and support staff positions. The budget for new equipment purchases would be reduced by $300,000 and operating budgets would be reduced by $956,289. Extension program areas in agriculture, 4-H, family and consumer sciences, and agricultural communications would be affected.

Funding for Soil Conservation Committee assistance would be reduced by 10% ($121,280).

Branch RECs

The Governor's budget guidelines called for all state agencies to submit a 90 percent budget request. The Directors of the REC collectively proposed a reduction strategy that was approved by SBARE on August 2, 2016. The plan calls for a reduction of General Funded posiitons, reduced State Fleet vehicles, reduced travel, and a shifting of expenses from General Fund to Other Funds.

Between elimination and shifting to Other Fund sources (if available), General Fund FTE are estimated to be reduced as follows:
DREC 2.0 FTE up to $330,000 biennial impact
CGREC 1.0 FTE up to $120,000 biennial impact
HREC 1.5 FTE up to $200,000 biennial impact
LREC 1.0 FTE up to $80,000 biennial impact
NCREC 1.5 FTE up to $180,000 biennial impact
WREC 1.0 FTE up to $165,000 biennial impact
CREC 2.0 FTE up to $250,000 biennial impact
Total 10.0 FTE up to $1,325,000 biennial impact
The remaining $654,845 reduction is from operating expenses.

Main Station

The Governor's budget guidelines called for all state agencies to submit a 90 percent budget request. The 10 percent reduction equals $5,734,511 for the Main Station. To meet this amount, the Main Station would eliminate 25 FTE ($4.25 M) in administrative, faculty, technical, and support staff positions. Operating budgets would be reduced by $1,484,511 through strategic program cuts and/or closures, as approved by the State Board of Agricultural Research and Education.

North Dakota Agricultural Experiment Station

NDSU Extension Service

2017-2019
Biennial Budget Request

Senate Bill 2020 / 2080
Senate Appropriations Committee
Senator Ray Holmberg, chair
Jan. 18, 2017

NDSU NORTH DAKOTA STATE UNIVERSITY

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NDSU Extension
SB 2020/2080
1-18-17
#2

NDSU EXTENSION SERVICE - SUPPORTING REMARKS BY DAVE MILLER
THURSDAY JANUARY 12, 2017

Good afternoon committee members, I am David Miller from Donnybrook, ND a third generation farmer and certified seed conditioner. My wife Sharon and I raised our family of two girls and four boys on our farm.

If someone asked you "What does rural North Dakota mean to you?" How would you answer?

Would you say "Rural ND is a place where families are close knit, communities are close knit and they are surrounded by farmers and ranchers." You will not find a better answer!

As a young boy of a farm/ranch family 4-H was a big part of my life. My wife Sharon, also a 4-H'er, and I passed this tradition on to our children.The 4-H program is one of the many programs administered by the NDSU Extension Service, This program is a one of a kind program for the fact that it encourages parents to work with their children in a vast array of projects. Whether it's baking or sewing, welding or woodworking, working with cattle or horses it promotes a unifying and bonding process between parents and children. Clubs are formed and meet in neighbors homes bringing families and communities closer together as well as planting some seeds into our children's minds that launches then into professions that are important to ND.

On the other end of the spectrum, the NDSU Extension Service has put together one of the best programs to give to farmers and ranchers a guide to transfer their business to the next generation. It is called "Design Your Succession Plan". I have worked with two other transition firms and found them to be helpful but not the roadmap that the extension service gives in their program. These are just two examples of the great family programs the Extension service offers.

Speaking of family, has your family ever put together a 500 or 1000 piece jigsaw puzzle? It's a good way to get 4 or 5 family members working on the same project for several hours, and it's quiet! All minds and hands are working toward one goal - to get all those pieces figured out and in place, and after many hours it is a finished picture through a family effort. But if pieces are missing that goal cannot be obtained.

In the same manner a farm or ranch family puts their heads and hands together to plant, nurture and harvest a crop of grain or nurture and care for a cow calf operation. In today's world of farming and ranching the stakes are high and there is no room for error! So to make this possible in ND you have to have all the pieces of the

puzzle and get them in the right place. Sweat and hard work and long hours just are not enough any more to make a successful farm or ranch. What is needed is the knowledge to make the right decisions and at the right time. With all of the research done by the NDSU research centers, they are by far the best source of knowledge and tools for farmers and ranchers to be on the cutting edge of technology. Whether it is in plant nutrition or cattle nutrition, plant health or cattle health, weed control in crops or pastures, new plant varieties or cattle breeding, the research centers develop this research information for farmers and ranchers for their benefit..

In 1970 I came home from NDSU with a degree in agricultural engineering. I have been farming raising certified seed, have been in dairy, had a cow calf herd, and have a certified seed cleaning business. My success was enabled in a large part with the knowledge that the research centers provide.

This research can only be done if the centers are fully staffed. For example If they cannot staff an agronomist, a weed scientist, a plant breeder, an animal feed nutritionist, an animal breeding scientist a piece of the puzzle is missing and the ones who really are affected are the ND farmers and ranchers.

Another very critical piece of the puzzle is the extension service. They provide the key step in transferring the research center results and knowledge to the farmers and ranchers. Again staffing is critical, the county extension specialists, whether at the research centers or at campus, and the county agents with supporting positions are needed to accomplish this task. If any of these pieces are missing, the ones who really suffer are the ND farmers and ranchers.

What makes this state so great? What is the number one economic mover in this state? Just take a drive out on our prairies and you cannot miss it, it is all right there, the farmers and ranchers of our state. Please for the future of this state, do your best to keep all the pieces of this puzzle together. Thank you

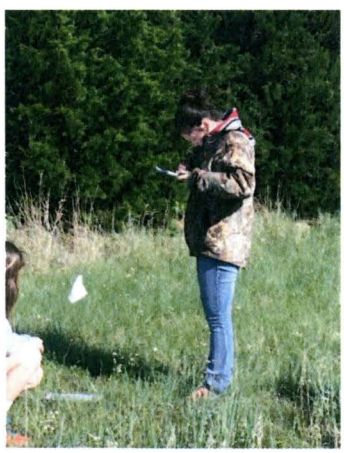
SB2020/2080
1-18-17
NDSU Extension #3

Alden Fitterer, Rancher from Tuttle, Kidder County, ND: Testimony to the Senate Appropriations Committee – SB 2020

January 18, 2017

Alden and Connie Fitterer have a commercial Red Angus/Simmental operation south of Tuttle, ND. The Fitterer's have two daughters. Monica is 19 and attending NDSU majoring in Veterinary Technology. She is currently in her 8th year of 4-H and a 4-H Ambassador. Michelle is 17 and also in her 8th year of 4-H. She recently competed at the National Western Stock Show in Denver, CO representing the state of ND in 4-H Livestock Judging. Connie works as the book keeper at the Tuttle Farmers Elevator. In her spare time she volunteers her time working with the local 4-H club and is currently the Kidder County 4-H Council Treasurer. Alden also serves as a director of the Kidder County Soil Conservation District for the past 8 years and the former President of the local livestock Weighing Association.

- When my daughter's first signed up for 4-H, I questioned why they were doing it. My wife grew up as a 4-H member, but I never had the experience of participating in the 4-H program. Now 8 years later, I appreciate the program and what it has done for my daughters. I know that my kids would never have had the opportunity to travel and compete at the state or national contest level outside of 4-H, as they have done through 4-H livestock and range judging. It has given them the experience to be able speak in front of 4-H members and groups in their community. Not only have they had an opportunity to learn from volunteers and our extension agent, they have also worked with area and state Extension specialists to learn about judging.



- I appreciate how 4-H has taught my kids responsibility and the ways of life. An example of this is my daughters beef project last year. Monica was unable to show her beef steer at 4-H Achievement day. Instead of quitting the project, she did a display about beef to complete her project area for the year. This taught her that life may not go the way as planned, but it enforced her to follow through and finish what she started.

- I work regularly with our Kidder County Extension Agent, Penny Nester. Not only does she attend the Soil Conservation District meetings and help us on an advisory role but she has also helped me in the farming operation. Penny has helped me take forage samples and formulate rations for my cows and backgrounding calves for several years. She also sat down and helped me understand my signup options for the 2014 Farm Bill. I also attend programs that the NDSU Extension hosts in our county such as the annual "Crops and Cattle Days."
- I worked very closely with my local agent and the area extension livestock systems specialist, Fara Brummer, on the grazing. I have bale grazed for the past 3 winters. I set bales out on poorly producing hay or tame pasture land and allocate feed for a 7-10 day period. I use electric fence to move cattle through each bale allotment. This allows me to not have to utilize my tractor to feed cows every day, saving on fuel costs and I believe it helps improve my land.

- Extension has provided information and input from the first year that I tried bale grazing. The local Extension team is helping first hand on our bale grazing project. From moving fences in the cold, soil sampling in the sleet and rain to spending a hot day out in the pasture clipping grass, Extension personnel have worked at my operation to complete a research project looking at the effects of bale grazing this past year.

- Its effects has helped my operation on multiple levels. Not only do I see my tame pastures producing 3 times the forage in the summer, but last year my wheat crop had an increased protein content of 16.5% on the bale grazed ground vs. non grazed ground which had a 15.5% crude protein level. This increased protein adds quality and a premium to the product sold. I also was able to save on starter fertilizer costs with the bale grazed ground since the cows naturally fertilized the area for me.

I believe that what the area extension livestock systems specialist, Fara Brummer, was trying to do was connect NDSU research to local farmers. This helps operators come up with a more educated plan for their operation, rather than just learning through trial by error.

I have made some mistakes and had some wreaks when bale grazing, but Extension and its employees have helped my operation to move forward and be more productive. 4-H and Extension have helped my girls learn things and experience things they would have never had the opportunity to do otherwise.

NDSU Ext. SB 2020/2080
1-18-17

Testimony in regards to SB 2020: A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

#4

Mr. Chairman and members of the Senate Appropriations Committee,

My name is Angie Benz, I am a resident of rural Moffit in Emmons County. I come before you today to request that your restore the NDSU Extension budget to the base line from the 2015 – 2017 biennium.

I want to start by sharing a quote from Helen Keller that portrays the impact that NDSU Extension has had on my life. Ms. Keller's quote is, "Alone we can do so little; together we can do so much". Together we can do so much...but how do we get from alone to together? For me it was with the help of Extension. Help that came from local Extension Agents and members of the Community Vitality program. Help that came from not only working with the best Extension Agents around but from being given roles that allowed me to grow my own leadership capacity. With the help of Extension I was able to conduct a community forum in Hazelton. It was at the forum, which was based off of a previously attended NDSU Extension community forum in Emmons County, that we were able to come together as a community and discuss our needs and brainstorm solutions. This could not have been accomplished in a small rural town, which lacks new leadership, without the assistance of Extension.

Alone we can do so little; together we can do so much. Together we can do so much by involving our youth, getting their opinions on their community needs, and developing their leadership capacity. Last year I had the privilege of facilitating a Youth Forum at HMB High School with Emmons County Extension Agent Acacia Stuckle. We spent half a day with students in grades 7 – 12 gathering their opinions. We were building their capacity to become lifelong leaders within their communities. The results from that forum were shared, along with the results from the Community Forum with local and school leaders. This forum would not have taken place without the support of NDSU Extension. We had hopes of going to all the schools in Emmons, McIntosh, and Logan Counties but due to time and budget constraints that did not take place. Without Extension going into our schools and building leadership capacity within our youth we are going to have a very bleak future in our rural communities. We have great kids, we have great Extension agents...we just have to have the resources available to them to get into the schools. Because together they can do so much.

Alone we can do so little; together we can do so much. Together we can do so much by fostering a collaborative environment. I have been so lucky to be part of the initial stages of the SET program. SET stands for Stronger Economies Together and fosters the notion of working together across county lines to strengthen their future. While working with local Extension Agents and some amazing people from Emmons, McIntosh and Logan Counties we were able to strengthen communication between counties and set the stage for collaboration in the future. This is no small task and without the proper resources NDSU Extension will not be able to bring members of different communities together to further this collaboration. SET and Extension truly embody the notion of together we can do so much.

At this point, I am sure you are asking, what does a Helen Keller quote have to do with restoring NDSU Extension's budget to the baseline from the last biennium? Well, it is Helen's words themselves that are essential to why I request that their budget be restored. Alone, without the help of proper state funding, we can do so little; together, with the help of restored state fundi ng they can do so much!

Thank you for your time.

Angie Benz - Moffit, ND

1

Testimony
North Dakota State Soil Conservation Committee
Senate Bill 2020
Senate Appropriations

NDSU Extension
SB 2020/2080
1-18-17
#5

Chairman and Members of the Senate Appropriations, my name is Dennis Renner. I am the Chairman of the North Dakota State Soil Conservation Committee.

The Soil Conservation Districts are charged by the North Dakota Century Code with the conservation of soil and soil resources of the State. For the control and prevention of soil erosion, and to preserve the States natural resources, control floods, prevent impairment of dams and reservoirs, assist in the navigability of rivers, preserve wildlife, protect the tax base, protect public lands, protect and promote the health, safety and general welfare of the people of North Dakota.

With the responsibility given it is important for the continued financial support within the NDSU Extension Service budget.

The State Soil Conservation Committee appreciates the funding assistance provided by the State for the Soil Conservation District Assistance Program. The Soil Conservation Districts need this funding assistance. The funding provided by the Legislative Assembly assist Soil Conservation Districts in helping landowners reduce soil erosion, improve water quality and enhance tree plantings, grazing lands and wildlife habitat. The funding helps create and maintain jobs in rural North Dakota. Soil Conservation Districts are working hard to get landowners signed up, plans and designs developed and approved. The installation of conservation practices by participating Soil Conservation Districts has had a significant impact on North Dakota's Natural Resources.

During the current biennium the State Soil Conservation Committee allocated $1,212,800 appropriated to 49 local Soil Conservation Districts, who in turn, utilized the funds to strengthen the conservation programs determined by the soil conservation districts annual plan of work as reflected in their application to sustain the productivity of our natural resources. Projects and activities have include shelterbelt and windbreak tree planting, crop rotation, grazing systems, rangeland management and promotion of reduced tillage systems to name a few. The State funds have allowed more soil conservation districts to provide longer lasting career opportunities in rural communities.

The State Soil Conservation Committee has received 51 applications from Soil Conservation Districts requesting $1,953,000 for the 2017-2019 Biennium.

As this legislative session proceeds the State Soil Conservation Committee would appreciate your support for the Soil Conservation Districts Assistance Program. In addition to the conservation of the natural resources, the economic viability of local communities will be enhanced with this funding.

Thank You for your support.

SB 2020/2080
1-18-17
#2

NDSU | DICKINSON RESEARCH EXTENSION CENTER

Our Mission . . .

... at or near Dickinson in Stark County. The Center shall conduct research on native rangeland, beef cattle, and agricultural products of the soil with emphasis on conservation and preservation for future generations.

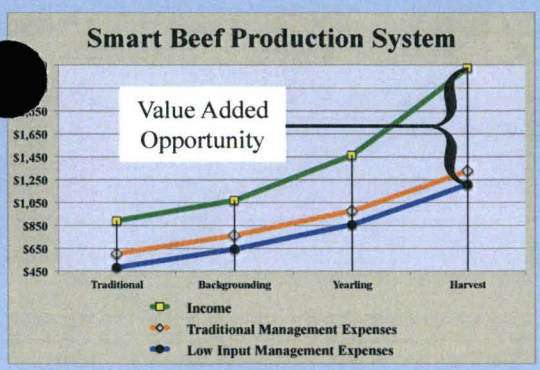
Crop and Forage Production

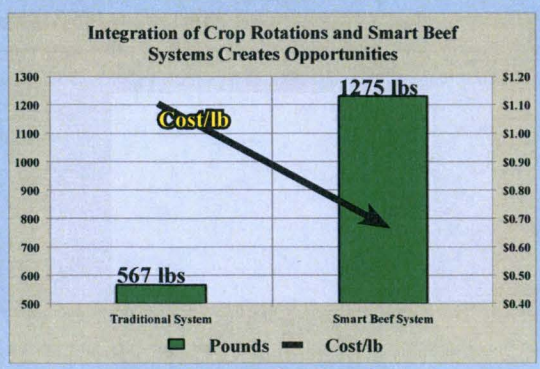
Cropping system solutions that improve soil health, increase grain/forage production and decrease cost.

Smart Beef Production

Integrating cropping systems research to more efficiently grow beef and increase value.

Continuing our commitment to North Dakota seeking answers that are needed to help agriculture and protect our natural resources!





Sources: Dickinson Reearch Extension Center Annual Reports:
•• Effect of Grazing Cover Crops, Stockpiled Improved Grass, and Crop Residues on Cow Wintering Performance, Economics, and Calving Rate -- Şentürklü S. and D. Landblom
•• Effect of Beef Cattle Frame Score, Forage Grazing Sequence, and Delayed Feedlot Entry on Yearling Steer Grazing and Feedlot Performance, Carcass Trait Measurements, and Systems Economics -- Şentürklü S. and D. Landblom, et. al

Producer outcomes:

- **Improved soil health**
  Quantify impact through research
- **More diversity per acre**
  Establish crop rotations including cover crops
- **More pounds of forage per acre**
  Produce more biomass, grain, grass and hay
- **More pounds of beef per acre**
  Extend conventional marketing of beef from 567 pounds to 1275 pounds
- **More dollars per acre**
  Decrease costs and increase new revenue stream

Smart Beef Impact in Pounds of Beef

420,360 steer calves X 708 lbs = 297,614,880 lbs

Smart Beef, Crop and Forage Production

Growing North Dakota's Economy and Adding Value

Thank You for Your Support of the State Board of Agricultural Research and Education

1

NDSU | DICKINSON RESEARCH EXTENSION CENTER

Caring for People and Resources Since 1905

Research and Extension education opportunities

We are bringing the discussion to you! One-on-one presentations designed and developed to assist with management decisions.

Producer outcomes:

- Improved soil health
- More diversity per acre
- More pounds of forage per acre
- More pounds of beef per acre
- More dollars per acre

A Professional Partnership with Producers

Forage Alternatives
Doug Landblom
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Integrated crop and beef cattle research.

Cropping Systems
Ryan Buetow
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Area extension specialist working with producers.

Range Science
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Biologically effective grazing management.

Beef Management
Kris Ringwall, Ph. D.
701-456-1103
kris.ringwall@ndsu.edu
Beeftalk columnist and extension specialist.

Dickinson Research Extension Center

1041 State Avenue • Dickinson, ND 58601 • 701-456-1100

www.ag.ndsu.edu/DickinsonREC/

NDSU | DICKINSON RESEARCH EXTENSION CENTER

Dickinson Experiment Station Established by ND Legislature.

1907: USDA Co-op begins. Root crop variety trials initiated.

1934: Dr Warren C. Whitman commences range management research to maximize vegetation utilization and improve rangeland.

1980: ND Legislature authorizes purchase of Kubik Polled Hereford Ranch southwest of Manning.

2005-2008: DREC and North Dakota Beef Cattle Improvement Association lead electronic ID animal research effort with CalfAID™, USDA approved source and age verification program.

1923: Dairy herd transferred to Hettinger.

1951: Swine research initiated.

1953: Long term rotation tillage trials reported.

1985-present: Twice over grazing system research for grass management and beef production.

1905 1915 1925 1935 1945 1955 1965 1975 1985 1995 2005 2015

Station Directors

L.C. Waldron | J.C. Thysell | L. Moomaw | R. J. Douglas | T. J. Conlon | K.A. Ringwall

First crops seeded: durum, HRSW, oat, barley, flax, brome, alfalfa.

1917: first livestock purchased.

1923: Dairy herd transferred to Hettinger.

1945: ND Legislature adds livestock research to DES mission. Ranchers/farmers donate 100 acres to DES for research.

1953: Sawfly resistance breeding materials turned over to Bureau of Plant Industry, USDA

1969: Chicken research terminated.

2002: Swine research terminated

1976-79: Mine spoil reclamation studies.

1989: ND Legislature changes name to Dickinson Research Center and expands mission.

2008: Major crop rotation project initiated to study ways to improve producer revenue stream and reduce use of fertilizers and pesticides.

1963: Alfalfa mixture with tame grass early season grazing research initiated, NDAES 142.

2015: ND Legislature authorizes purchase of Boehm Research Farm southeast of Richardton.

We Continue Our Commitment of Service

Our efforts and successes are the direct result of the trust the legislature has in developing and maintaining research efforts that create sustainable, positive outcomes for our citizens.

Thank you for your support to do this important work.

Dickinson Research Extension Center
1041 State Avenue • Dickinson, ND 58601
701-456-1100 • Kris A. Ringwall, Director
www.ag.ndsu.edu/DickinsonREC/

To: Members of the Senate Appropriations Committee

RE: Dickinson Research Extension Center Budget

For 11 decades, the Dickinson Research Extension Center has served the people of North Dakota by fulfilling our legislatively funded and mandated mission. My letter today is to respectfully request your support of Senate Bill 2020 before you today. The Dickinson Research Extension Center needs this support to continue its commitment, as requested by the North Dakota Legislature, to the people of North Dakota.

The strength of the Dickinson Research Extension Center—and the greater North Dakota Agricultural Experiment Station and North Dakota University Extension Service—is cemented in the bond between the people we serve and the elected leaders who ask us to assist with the all-important task of stewardship for our air, water and soil.

The Dickinson Research Extension Advisory Board takes seriously its task "as boots on the ground" to work with the DREC faculty and staff to conduct research, which will protect the stewardship principles and facilitate positive outcomes for the agricultural sector. These rural business owners depend on the interaction with research and extension institutions to minimize risk exposure and facilitate positive production returns. This cycle is especially important to produce the food needed by non-rural partners so together North Dakota's quality of place enhances our quality of life.

On behalf of the DREC Advisory Board, I respectfully request your support of Senate Bill 2020 along with the funding restoration and priorities identified through the State Board of Agricultural Research and Education. With this level of support, the DREC can fulfill its commitment to the people of the region and North Dakota. The DREC Advisory Board would like to thank you for your hard work and dedication as we work as partners to secure a strong future for agriculture research, education and extension.

Sincerely,

Tim Meyer

Tim Meyer, Chair

Dickinson Research Extension Center Advisory Board

NDSU EXTENSION SERVICE
NORTH DAKOTA STATE UNIVERSITY

MAKING A DIFFERENCE

SB 2020/2080
1-18-17
#2A

Soil & Community Health Agriculture Education Site

The Situation

Local hospital, Dickinson CHI St. Alexius Health, had a plot of land that they were not able to maintain and it quickly became covered in weeds. The soil had been abused from multiple construction projects. A collaboration with the hospital created the Soil & Community Health Agriculture Education Site.

Extension Response

Demonstrations were planned for the site, however there were many obstacles in getting crops to grow at the site, including compaction, herbicide residual, and drought stress. Demonstrations were planned showing cover crop species, a cover crop mix, water infiltration, cropping systems trial, and soil pit.

Impact

Two workshops planned at the site provided information to local producers, agronomists and seed dealers, and ANR agents. The first workshop on August 18th 2016 included presentations from Ryan Buetow and Marisol Berti on current cover crop work in the region and the benefits of cover crops. Doug Landblom from the Dickinson Research Extension Center also spoke about the work that was being done at the Dickinson Research Extension Center Ranch near Manning, ND. At the second workshop on October 13th 2016 presentations from Jon Stika, Ryan Buetow, and Kurt Froelich included information on water infiltration, effect of crop rotation and management on soil erosion, and the influence of plants and soil biology on soil structure.

Kurt Froelich discussing soil structure at the workshop on October 13th 2016.

Public Value Statement

Strengthening the relationship between NDSU Research and Extension Centers builds trust, community health and relationships with the local community.

The Soil & Community Health Agriculture Education Site is located in Dickinson, ND to the west of the Dickinson Research Extension Center on Empire Road.

Primary Contact

Ryan Buetow
NDSU Area Extension Specialist/Cropping Systems
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Ryan.buetow@ndsu.edu

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SB 2020/2080
1-18-17
2B

PROJECT FINAL REPORT

Project Title: Quantification of road dust and its effect on soil

PI: **Dr. Shafiqur Rahman, Associate Professor,** Agricultural and Biosystems Engineering, North Dakota State University

Co-PI: **Dr. Kris Ringwall, Director, DREC,** North Dakota State University
Dr. Bernhardt Saini-Eidukat, Associate Professor, Geosciences, North Dakota State University
Dr. Larry Cihacek, Associate Professor, Soil Science, North Dakota State University

November, 2016

1) Project Summary:

Western North Dakota, USA is experiencing economic growth due to the rapid oil development. The increased oil activities are also causing heavy vehicle traffic on the unpaved roads. Unpaved road traffic may create coarse particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$), and Total Suspended Particles (TSP) emissions, and deposit them in adjacent areas. These PMs may affect human and animal health, and soil quality. To address this issue, a study was conducted to characterize and quantify PM_{10}, $PM_{2.5}$, and TSP generated from unpaved roads surrounding oil development areas. Particulate matter concentrations were measured from two different sites using the miniVOL™ portable air samplers (Air Metrics, Springfield, OR, USA) at three pre-selected distances from the road using the Federal Equivalent Method. Additionally, composite soil samples were collected at the same location of PM sampling location in one site (site 2) only. Scanning Electron Microscopy (SEM) was done on dust samples to determine particle elemental compositions and X-Ray Diffraction (XRD) to identify minerals present. Inductively Coupled Plasma - Mass Spectrometry (ICP-MS) was performed on soil samples taken from the same location as dust samples to determine the elemental composition. The pooled average PM_{10} and $PM_{2.5}$ concentrations were 30.84 ± 14.19 $\mu g/m^3$ and 14.08 ± 6.56 $\mu g/m^3$ from a periodically treated road (Site 1), respectively; the pooled average PM_{10} and $PM_{2.5}$ concentrations were 70.42 ± 38.37 $\mu g/m^3$ and 19.60 ± 7.51 $\mu g/m^3$ from an untreated loose gravel road (Site 2), respectively over a two-year sampling period. Magnesium chloride was found to be the most effective treatment in reducing PM. Scanning Electron Microscopy (SEM)/ Energy Dispersive Spectroscopy (EDS) analyses revealed that most of the particulates were quartz (46%) or silicates (36%) minerals or biogenic particles (9%). Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) analyses on soil samples revealed that concentrations of most elements were below the reference level measured by United States Geological Survey National Geochemical Survey (USGS – NGS). This study improves our understanding of PMs in Western North Dakota, USA and suggests avenues for future research to be taken for more in-depth study.

Overall goals and objectives

The overall goal of this project is to quantify road dust emission, especially $PM_{2.5}$ and PM_{10} concentration, in western North Dakota due to road traffic in the oil development area. Specific objectives are:

i) Quantification of $PM_{2.5}$ and PM_{10} concentration,
ii) Quantify elemental composition of dust, and
iii) Quantify dust impacts on roadside soil quality and elemental composition of soil

2) Introduction and Rationale

Unpaved road traffic is a major source of dust nuisance and road traffic may emit considerable amounts of coarse particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$) emissions. Particulate matter has been recognized as an air pollutant due to nuisance and its adverse impact on the environment, and can be a pulmonary health risk (Mao et al., 2013; Pattey and Qiu, 2012). Fine particles ($PM_{2.5}$) result from fuel combustion from motor vehicles and power generation, while coarse particles (PM_{10}) are generally emitted due to vehicles traffic on unpaved roads, and materials handling, and as well as windblown dust. Inhalable PM includes both fine and coarse particles. Small particulates ($PM_{2.5}$) can be inhaled, resulting in respiratory diseases and premature death (Gonzales et al., 2011; Pattey and Qiu, 2012; Samet and Krewski, 2007; Saxton et al., 1999; Donham and Thelin, 2006). Fine particulate matter on the road surface is also a significant source of air pollution (Gunawardana et al., 2012). These particles can deposit in the respiratory system and are associated with numerous health effects. Exposure to coarse particles is primarily associated with the aggravation of respiratory conditions, such as asthma. In addition to health problems, PM is the major cause of reduced visibility (USEPA, 2016). Increased dust in Western North Dakota, USA, from unpaved road traffic is an inevitable consequence of increasing traffic from oil activities. The rapid growth

of transportation activities is causing and releasing numerous pollutants to the environment and depositing on the nearby road or crop land. Dust may contain heavy metals that may be toxic when their concentrations exceeded certain thresholds (Guney et al., 2010). The amount of dust emissions from the unpaved road is dependent on vehicle type, weight and speed of vehicle, wind speed and condition of the road (Mao et al., 2013).

Road dust may affect plants, animals and humans that are exposed to it. Road dust is believed to affect both the yield and/or marketability of crops grown alongside unpaved roads due to both physical and chemical impacts. Dust can physically block stomata of plants and chemical characteristics of dust may affect either soil or plants (Farmer, 1993). Dust cover on leaf surfaces may affect yield in a variety of ways, with the yield reduction depending upon the thickness of cover and to an extent, the type of plant (McCrea, 1984). The effect is likely to be greater on plants with young leaves as these retain a greater amount of dust, even after a moderate rainfall. Similarly, dust may carry and cause plant disease and increased pest infestation. Additionally, dust may also cause depressed appetite in livestock, which may result in a retarded growth rate of around 20% for each day the animal is kept on the contaminated pasture (McCrea, 1984). Agricultural worker exposure to dust or particulate matter is likely to result in mild to chronic respiratory illness (Canadian Center for Occupational Health and Safety, 1999; Pattey and Qiu, 2012). It is reasonable to postulate that oil field workers, truck drivers, and local residents similarly exposed would exhibit these symptoms. Therefore, it is important to carefully quantify dust emission rates to assist in the development of techniques or technologies to control dust from the source.

According to the US Energy Information Administration (USEIA, 2014), North Dakota's oil production topped 1 million barrels per day in June, 2014, compared to 315,000 barrels per day only four years previously in June, 2010. This significant increase in oil production has concomitantly increased oil rig activities and traffic volumes in western North Dakota which is also causing noticeably increased dust emission.

The chemistry of dust is important since it may contain a number of metals and elements which may be concentrated in the smaller particles and they may travel further (Farmer, 1993). Studies suggest that heavy metals may be concentrated within the first few meters of the roadside and their concentration may decrease with distance from the road (Guney et al., 2010). However, their concentration in soil may increase over time. Impacts of road dust due to oil exploration and production activities on surrounding landscapes and vegetation are not well understood.

There is one recent study on dust control technology in North Dakota (Schwindt, 2013). However, that study neither quantified the dust emissions nor measure the impact of dust on crop, soil, animal, and human health. Prior to this study, no scientific data were available in western North Dakota on dust emissions and their impact on soil health.

Therefore, there is an urgent need to quantify the dust emissions and adapt appropriate technology to mitigate environmental impact. In this study diurnal dust deposition in a nearby livestock grazing area due to traffic on an unpaved road was quantified and its impact on soil quality was monitored. This work evaluated impacts of dust on landscapes surrounding oil field roads and/or drilling sites particularly with regard to the distribution of potential elemental contaminants in dust distributed with distance across the adjacent landscapes. The work evaluated any changes in the elemental composition of soil from the beginning of the construction of the road out to areas up to 200 m from the road. In addition, changes in soil organic matter, salinity and sodicity were evaluated.

Therefore, the objectives of this study were to i) quantify $PM_{2.5}$ and PM_{10} concentration, ii) quantify elemental composition of $PM_{2.5}$ and PM_{10}, and iii) quantify dust impacts on roadside soil quality and elemental composition of soil.

3) Method

Dust sampling

This study was conducted near the North Dakota State University Dickinson Research Extension Center Manning Ranch Headquarters (Latitude: 47°12' N, Longitude: 102° 50' W), located in Dunn County about 35 kilometers north of Dickinson and 5 kilometers west of Manning, North Dakota, USA (Figure 1) (Site 1 and 2). Site 1, at the first location, was approximately 7 kilometers away from site 2. Monitoring sites were established at DREC Manning Ranch, where one site is next to cropping trials and the another site is on forage land. In both locations four EPA approved MiniVol portable air samplers (Airmetrics, Springfield, OR, USA) were deployed. Samplers were swapped between sites. Initial sampling began with Total Suspended Particles (TSP) to measure total dust accumulated on the filter in 24 hours. TSP contains particulate matter up to a size of 45 micrometers (μm) in diameter. As the project moved forward, the TSP sampling head was replaced with $PM_{2.5}$ and PM_{10} sampling heads.

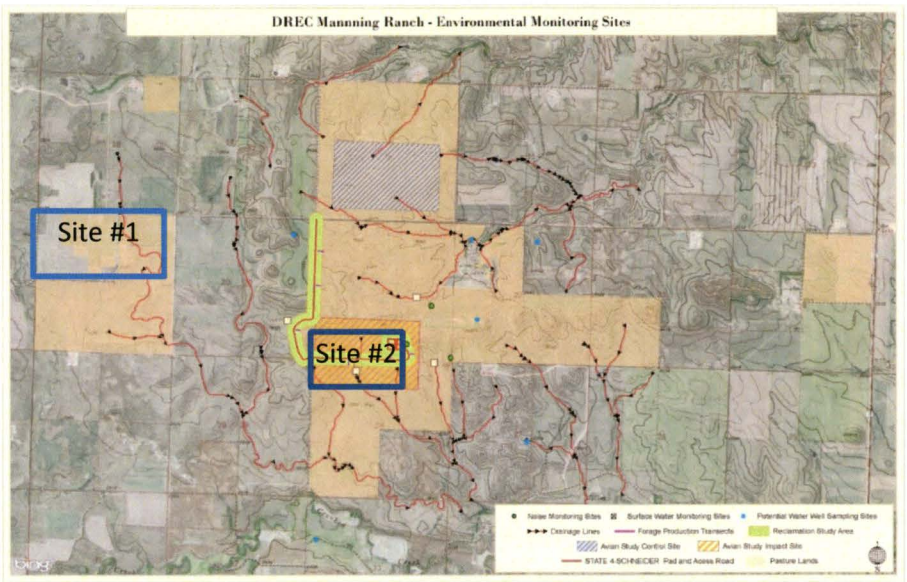


Fig. 1. Sampling locations at Manning ranch are shown with blue rectangular boxes. Site#1 has significant well development; and Site#2, no well development yet

Sampling was carried out on the following dates (a table, or is this something for an appendix?)

Out of four MiniVol samplers, one sampler was installed upwind and three others were installed downwind of the road sites depending on the prevailing wind directions at the monitoring sites to collect PM_{10} and $PM_{2.5}$ samples over 20 hour periods (Figure 2). Downwind samplers were installed at different distances from the unpaved traffic to measure PM_{10} and $PM_{2.5}$ deposition. The sampler was mounted to a pole vertically as shown in Figure 3. After several samplings, the impactor was cleaned and greased for the next sampling.

Before installing samplers in the field, 47 mm glass fiber filters or quartz filters were labeled with ultra-fine Sharpie® pen while wearing latex gloves, stored in petri-dishes (48 mm in diameter), and conditioned in an environmentally controlled room (relative humidity = 50.5 ± 0.2%, temperature = 22.6 ± 1.4 °C) at the Nanoscale Science and Engineering (CNSE) Research lab at NDSU. Pre- and post-sampling weight of

filters were taken by a microbalance (Sartorius CP2P) in an environmentally controlled room to determine particulate matter mass with a resolution of 1 μg (0.001 mg).

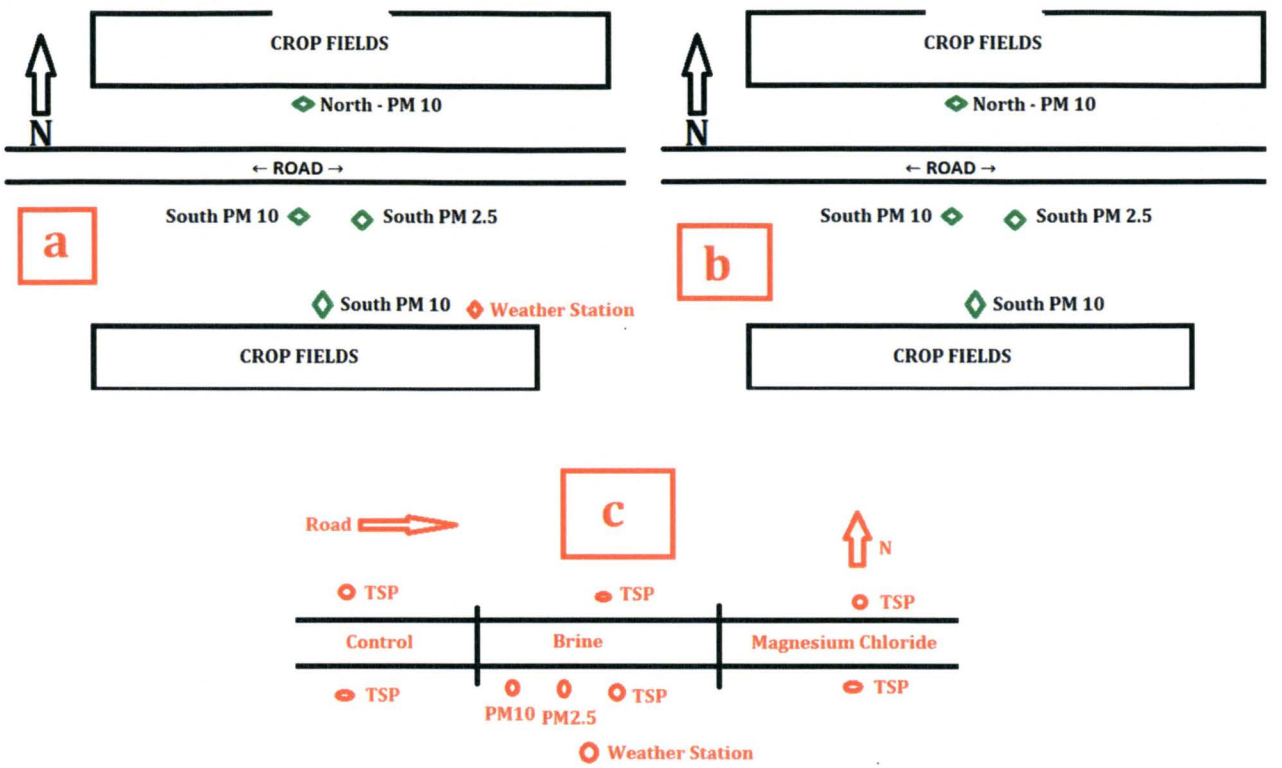


Figure 2. Experimental setup of different locations: a. site #1; b. site #2; c. site #3

Figure 3. MiniVol™ Portable Air Sampler in operation at site #1 (vertically mounted)

To avoid static, a polonium bar at the back of the microbalance was used. During conditioning, filters were reweighed 2-3 times for consistent weight. The differences in weight after each measurement should not exceed 0.5% of the previous weight. After conditioning, filters were used within 7 days and protective

holders were used during transportation. In the field, a cassette separator was used for insertion and removal of these filters to and from the cassette. After inserting the filter, a pre-calculated actual air flow rate was adjusted for the sampler and sampling was started.

During sampling, an air sample was drawn at 5 L/min, which is the recommended flow rate for $PM_{2.5}$ and PM_{10} using the MiniVol air sampler. A flow rate check was performed before and after each deployment of samplers. All samples were protected in petrislides filter holders before and after sampling and weighed twice in a 24-h period in order to obtain more accurate results.

Soil Sampling

Besides the dust sample, composite soil samples (a mixture of three samples) were collected at site 2 at different distances (12 m, 30 m, 60 m, 90 m from the center of the road on both south and north side) using a 25.4 mm soil core sampler (inside the cutting tip, diameter = 19 mm). Each soil core was taken at a 150 mm depth. Before collecting the soil sample in sampler bags, vegetation and ground litter were removed to avoid contamination by plant materials. Then, the cores were stored in ziploc bags and labelled with a unique ID. The sampling was done on a monthly basis to see the impact of dust on soil quality. These soil samples were analyzed for potential changes is a soil elemental composition over time as well as for potential chemical changes that could be used as "fingerprints" for evaluating dust issues in future studies.

Traffic Monitoring

Two battery-operated Simmons Whitetail Cameras (119234C) (Simmons Outdoor Products, Overland Park, KS, USA) were used for tracking the number of vehicles passing through the study site (Figure 4). Cameras were equipped with motion sensor and night vision (Infra-red) capabilities for capturing photos of a passing vehicle even during night time. These cameras were set up on the same pole as the air sampler in such a way that they would pick up both fast and slow moving objects. After each sampling, the number of vehicles passed during the sampling period was counted and correlated with total dust emission during the sampling.

Figure 4. Simmons Camera (deployed on site #2)

Meteorological Data

In-situ meteorological data (e.g., temperature, relative humidity, pressure, wind speed, gust speed, and wind direction) were collected on site 1 using Hobo micro weather station data logger (H21-002) (Onset, Bourne, MA, USA) (Figure 5). Additionally, weather data were also downloaded from North Dakota Agricultural

Weather Network (NDAWN) and National Weather Service (NWS) to correlate important factors with the dust emissions.

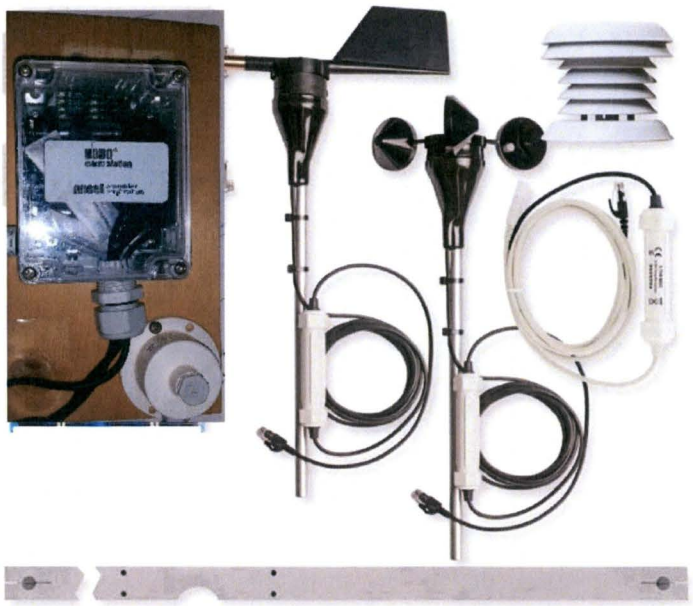


Figure 5. Onset Hobo Data Logger (H21-002) (Image partially from Onset Website – www.onsetcomp.com)

Sample analysis

After sample collection, filters were transported back to NDSU and conditioned in the same pre-sampling environment. During weighing and handling of filters, identical pre-sampling room conditions were maintained and polonium sources were used to avoid any static during weighing of samples. To calculate PM concentration for a sample taken with the MiniVol sampler, the volume of air that passed through the filter at standard conditions, V_{std}, or at ambient conditions, V_{amb}, was calculated as follows:

$$PM_{act} = \frac{M_{PM}}{V_{act}}$$

Where: PM_{act} = actual PM concentration, $\mu g/m^3$ (actual condition); M_{PM} = PM concentration, $\mu g/m^3$ (Standard condition); V_{act} = Volume of air, m^3 (actual condition)

The volume of actual air passed through the filter during sampling period at actual ambient condition would be calculated as:

$$V_{act} = \frac{60_{min/hr} \times Q_{act} \times t_{hr}}{1000_{l/m^3}}$$

Where: Q_{act} = Flow rate of the sampler, liters/min; t_{hr} = Sampling period, hr

After weighing, particles from selected dust filters were analyzed for their physical and chemical characteristics using Scanning Electron Microscopy (SEM), and Electron Dispersive Spectrometry (EDS) (Pachauri et al., 2013; Tasic et al., 2006). Use of these complimentary methods was done to identify particles (biogenic, geogenic, or anthropogenic), their grain sizes and size distribution, and their chemical composition. SEM-EDS analysis was carried out for phase identification and semiquantitative chemical characterization using a JEOL JSM-6490LV SEM at NDSU's Electron Microscopy Center. Energy-dispersive X-ray information was collected using a Nanotrace EDS detector with a NORVAR light-element

window and Noran System Six imaging system (ThermoFisher Scientific, Madison WI, USA) at an accelerating voltage of 15keV for the JSM-6490LV. In this analysis, samples were not coated with carbon or gold because of the possibility of having biogenic organisms in the filters, because biogenic organisms are basically made of carbon and oxygen (C + O > 75% of the total molecular weight), which may bias the quantification (Figure 6). During EDS analysis, when the carbon was <10%, the carbon was excluded from 'quant spectrum' option. About 10-20 images were taken per sub-sample and when necessary, EDS was done on the image by picking up several points. The magnification level used for taking the images was x1500. The magnification level and spot size was fixed according to particles countered in the filters.

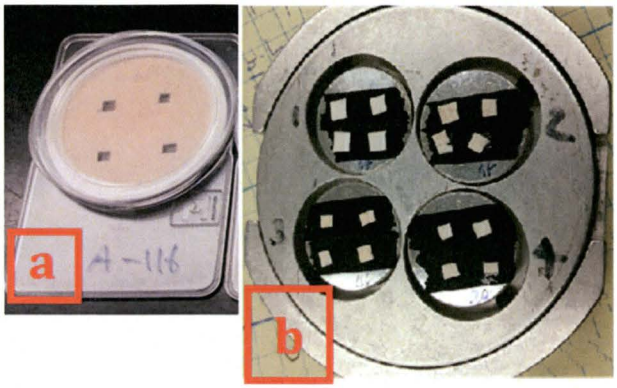
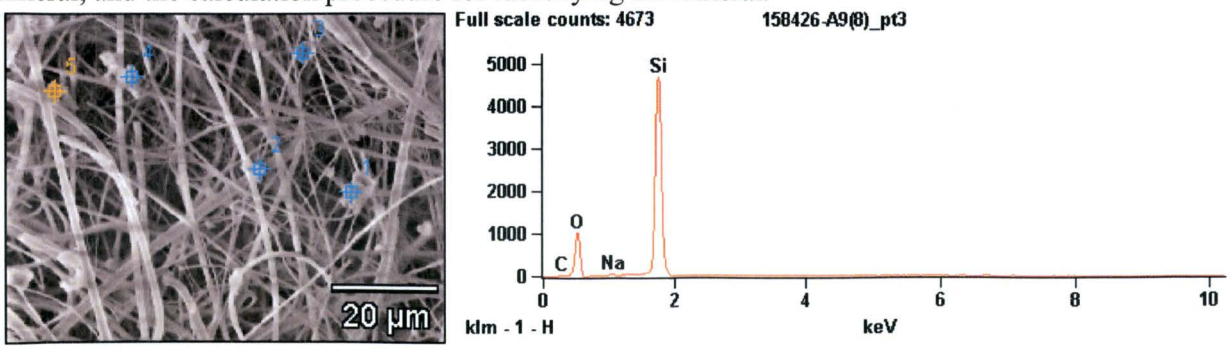


Figure 6. Sample preparation for SEM analysis: a. small sections cut from filter; b. sections placed on carbon tape on cylindrical mounts

After collecting the soil cores from site 2, soil samples were air dried for at least 72 hours before processing. The soil was hand crushed to pass through a 2 mm sieve and plant residues and rock fragments were removed. A 10 g subsample of soil was taken from the bulk samples for ball-milling. The soil subsamples were milled to pass through a No. 80 (80-mesh opening = 180 µm). Then, the prepared samples were analyzed using Inductively Coupled Plasma Mass Spectrometry (ICP-MS) at Activation Laboratories Ltd (Ancaster, ON, Canada) using the Ultratrace 2 method (aqua regia digest).

Identification of mineral phase from SEM results

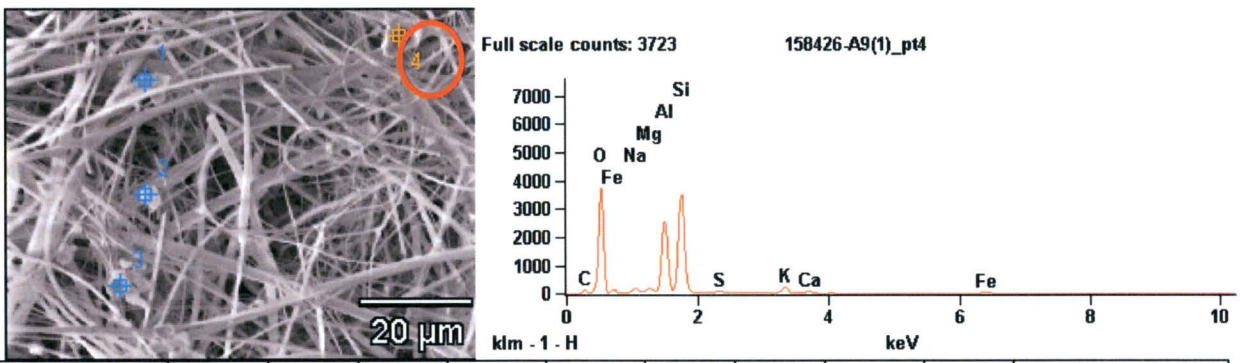
Relative atomic weight percentages were taken from SEM results to calculate approximate empirical formulas. In the ideal case, each coefficient for a crystallographic site will be a whole number, and will give the accurate mineral formula. SEM/EDS outputs data as percentage weight of atoms or oxides present in the sample. These data together with the atomic mass of corresponding elements are used to calculate the empirical formula of the mineral. The procedure is simple for pure phases and complex with phases with impurities and trace elements. Figure 7 shows a sample SEM image and the EDS spectrum of quartz mineral, and the calculation procedure for identifying the mineral.



Elements	O	Si	Na	Notes
wt. %	53.06	46.40	0.54	Mineral: Quartz (SiO_2); Major elements: O, Si; Trace elements: Na; Nearly Spherical particles; Formula: 2 O, 1 Si
grams/mol	16.0	28.09	22.98	
mols	3.32	1.65	0.02	
Normalized mols	2	1	Negligible	

Figure 7. Top: SEM image of filter showing particles, along with an EDS spectrum of a particle. Bottom: Example calculation of possible mineral/phase group from SEM data (Quartz)

Reported weight percentages were divided by atomic mass to obtain the number of moles normalized. This particular sample had the ratio of 1 mol Si and 2 mol O (and a trace amount of Na). So, it was determined to be quartz. The procedure is similar for a complex mineral oxide weight as shown in Figure 8. In this case, molar mass of oxide is used instead of the atomic mass. If the number of moles could not be brought to a whole number, an approximate empirical formula is calculated. Morphology and knowledge in mineralogy and crystallography can be beneficial in this case for identification. Figure 8 shows the calculation for an aluminosilicate mineral phase. The mole numbers may not be brought to whole numbers which could be due to the electron beam accuracy of the EDS method on small particles, and fluorescence from silica filters.



Elements	O	Na	Mg	Al	Si	S	K	Ca	Fe	Notes
wt. %	47.58	1.18	0.61	15.63	26.55	0.70	3.01	1.42	3.31	Possible Mineral Phase: Aluminosilicates Major elements: O, Si, Al; Trace elements: Na, Mg, S, K, Ca, Fe; Nearly Spherical particles; Formula: 136 O, 2 Na, 1 Mg, 27 Al, 43 Si, 1 S, 4 K, 2 Ca, 3 Fe
grams/mol	16.0	22.98	24.3	26.98	28.09	32.06	39.09	40.07	55.86	
mols	2.97	0.05	0.025	0.58	0.94	0.02	0.078	0.035	0.059	
Normalized mols	136	2	1	27	43	1	4	2	3	

Figure 8. Calculating possible complex mineral formulas from SEM data (Aluminosilicates)

RESULTS AND DISCUSSION

Particulate matter concentrations

Particulate matter (PM) is one of the Ambient Air Quality Standards (AAQSs) pollutants and constitute a major class of air pollution (Cooper & Alley, 2002). Figure 9 shows the average PM concentrations (PM_{10} and $PM_{2.5}$) measured at site 1 over two years with respect to the number of vehicles and the amount of rainfall during the corresponding sampling dates, while, Figure 10 shows the yearly average PM concentrations (PM_{10} and $PM_{2.5}$). Table 1 shows the stepwise regression analysis of PM at site 1.

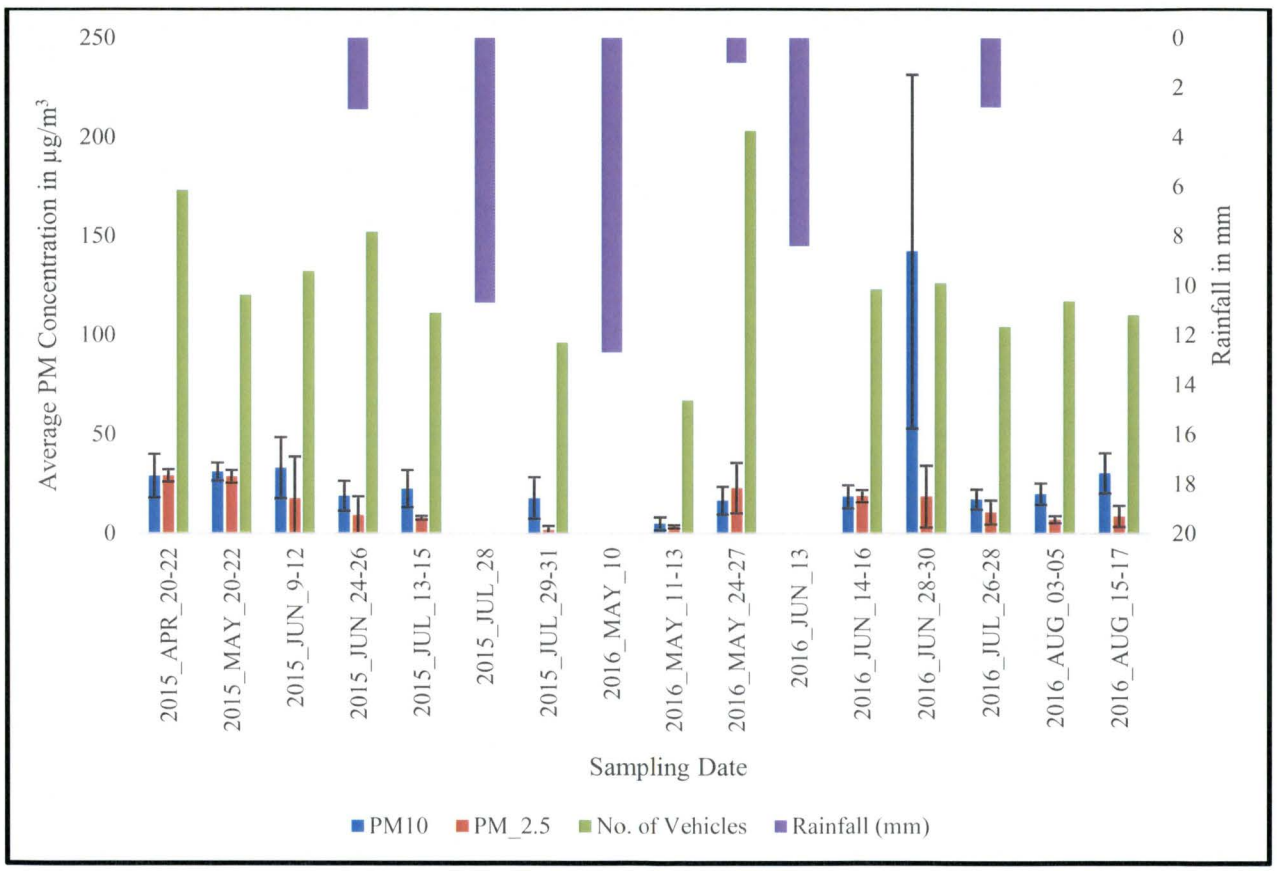


Figure 9. Average PM concentrations with respect to traffic and rainfall at site 1.

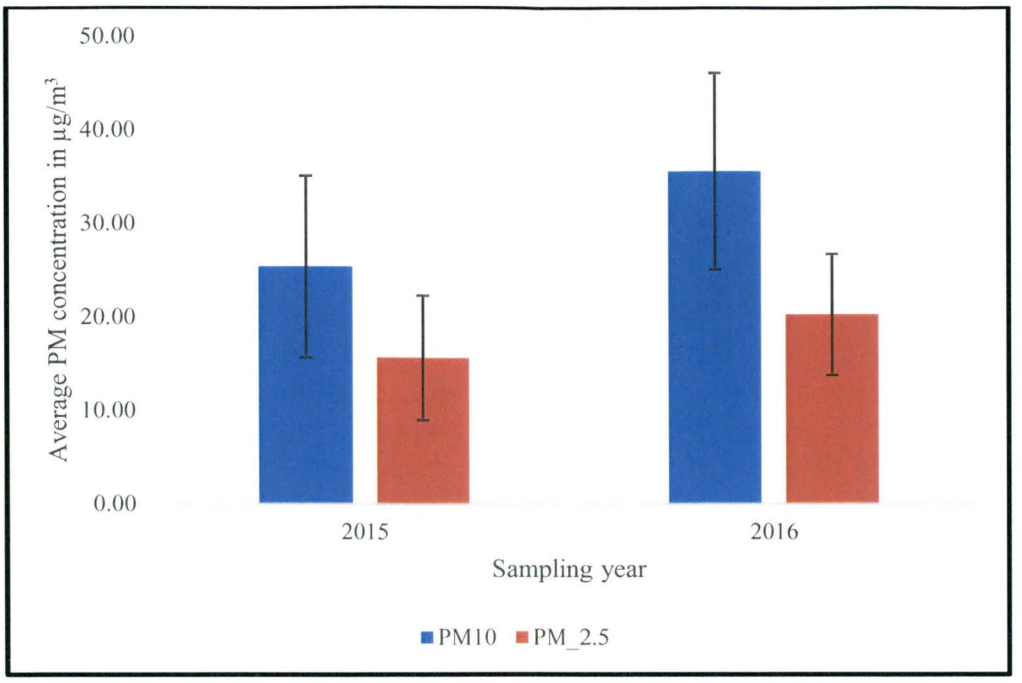


Figure 10. Yearly average PM concentrations at site 1.

Table 1. Stepwise regression analysis results of PM concentrations at site 1

Particulate matter type	Year of sampling	Stepwise regression model equations
PM_{10}	2015 & 2016 combined	No variables were statistically significant
	2015	$PM_{10} = 28.516 - 79.55 \times$ rainfall_in_mm *($r^2 = 0.07$)*
	2016	$PM_{10} = 46.978 + 1.4615 \times$ vehicle_count $- 32.2796 \times$ wind_speed $- 0.37429 \times$ wind_direction $-51.06820 \times$ rainfall_in_mm *($r^2 = 0.30$)*
$PM_{2.5}$	2015 & 2016 combined	$PM_{2.5} = -0.75421 + 0.19184 \times$ vehicle_count *($r^2 = 0.16$)*
	2015	$PM_{2.5} = 0.98252 + 0.02480 \times$ wind_direction $+ 63.485 \times$ rainfall_in_mm *($r^2 = 0.51$)*
	2016	$PM_{2.5} = -11.33165 + 0.43686 \times$ vehicle_count *($r^2 = 0.38$)*

Notes: - All variables here are significant at 0.15 level (p=0.15)
- r^2 values reported are model r^2 values

Based on 24-hour sampling period, the PM_{10} concentration value ranged from 7.55 $\mu g/m^3$ to 60.5 $\mu g/m^3$ in 2015 and from 0.79 $\mu g/m^3$ to 261.45 $\mu g/m^3$ in 2016. Similarly, the $PM_{2.5}$ concentration value ranged from 0.34 $\mu g/m^3$ to 15.85 $\mu g/m^3$ in 2015 and from 2.63 $\mu g/m^3$ to 37.00 $\mu g/m^3$ in 2016. Figure 10 shows the average PM_{10} concentrations in 2015 and 2016 were 25.33 ± 9.74 $\mu g/m^3$ and 35.56 ± 20.25 $\mu g/m^3$, respectively; and the average $PM_{2.5}$ concentrations in 2015 and 2016 were 15.64 ± 6.65 $\mu g/m^3$ and 20.25 ± 6.48 $\mu g/m^3$, respectively. Most of the time, the PM_{10} concentration was below the NAAQS value (150 $\mu g/m^3$). However, during June 28-30, 2016 sampling, the average PM_{10} concentration was 142.14 ± 89.28 $\mu g/m^3$ which exceeded the NAAQS threshold values. This may be attributed to the gravel road construction and ongoing well pad construction near site 1 (15th St). The average PM concentrations for 2016 were slightly higher than that of 2015 which might be due to drier weather and road construction/leveling activities. In site 1, $PM_{2.5}$ concentration value exceeded (37 $\mu g/m^3$) NAAQS reference value for $PM_{2.5}$ (35 $\mu g/m^3$ for 24-hour sampling period) for one instance (June 28-30, 2016) during the sampling time. Except for one or two incidents, the PM concentrations were below the NAAQS reference value despite having high traffic.

PM emissions from a road likely depend on road conditions (dry vs. wet, treated vs. un-treated), the number of vehicles, and weather conditions (precipitation, calm vs. windy), etc. The lower PM concentration in site #1 during June 24-26, 2015 was likely due to road treatment. The road (15th St) adjacent to site 1 was periodically treated with dust suppressants i.e., magnesium chloride. In addition, there was 2.88 mm of rainfall during that sampling period, which might also contribute to lower PM emissions. There was a significant drop in PM emissions during May 11-13, 2016, which may be attributed to freezing and thawing effect as well as lower traffic activities.

A stepwise regression analysis was conducted to find out the impact of different variables on PM emission. Statistical analysis revealed that, in 2015 sampling, the rainfall was poorly correlated (r^2=0.07) with PM_{10} concentrations; but, the combination of rainfall and wind direction had a better relationship (r^2=0.51) in the case of $PM_{2.5}$ concentration emission at a significance level of p=0.15. In 2016, PM_{10} concentrations were moderately correlated (r^2 = 0.30) with vehicle passing by, wind speed, wind direction, and rainfall. A similar or equally better correlation (r^2 = 0.39) was observed for the $PM_{2.5}$ concentrations.

Figure 11 shows the average PM concentrations (PM_{10} and $PM_{2.5}$) measured at site 2 with respect to the number of vehicles and the amount of rainfall during the corresponding sampling dates. Figure 12 shows the yearly average PM concentration at site 2. Table 2 shows the stepwise regression analysis of PM at site 2.

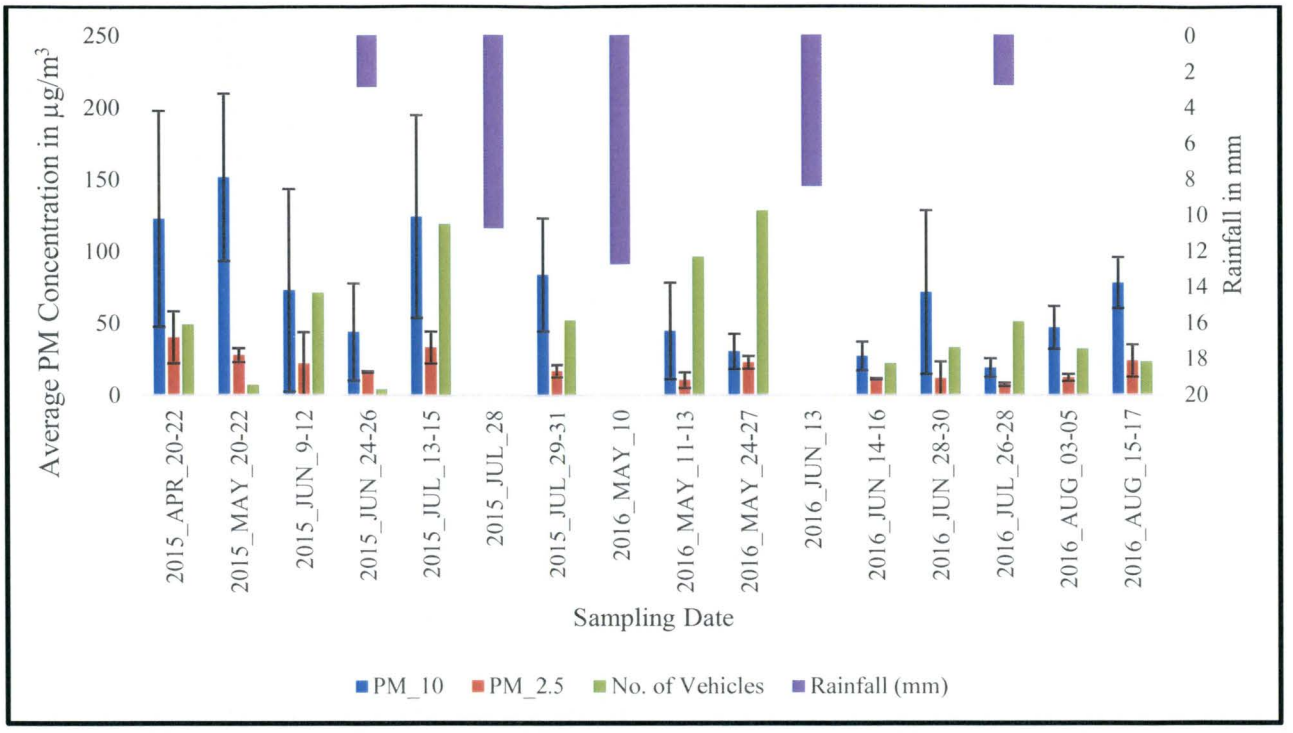


Figure 11. Average PM concentrations with respect to traffic and rainfall at site 2.

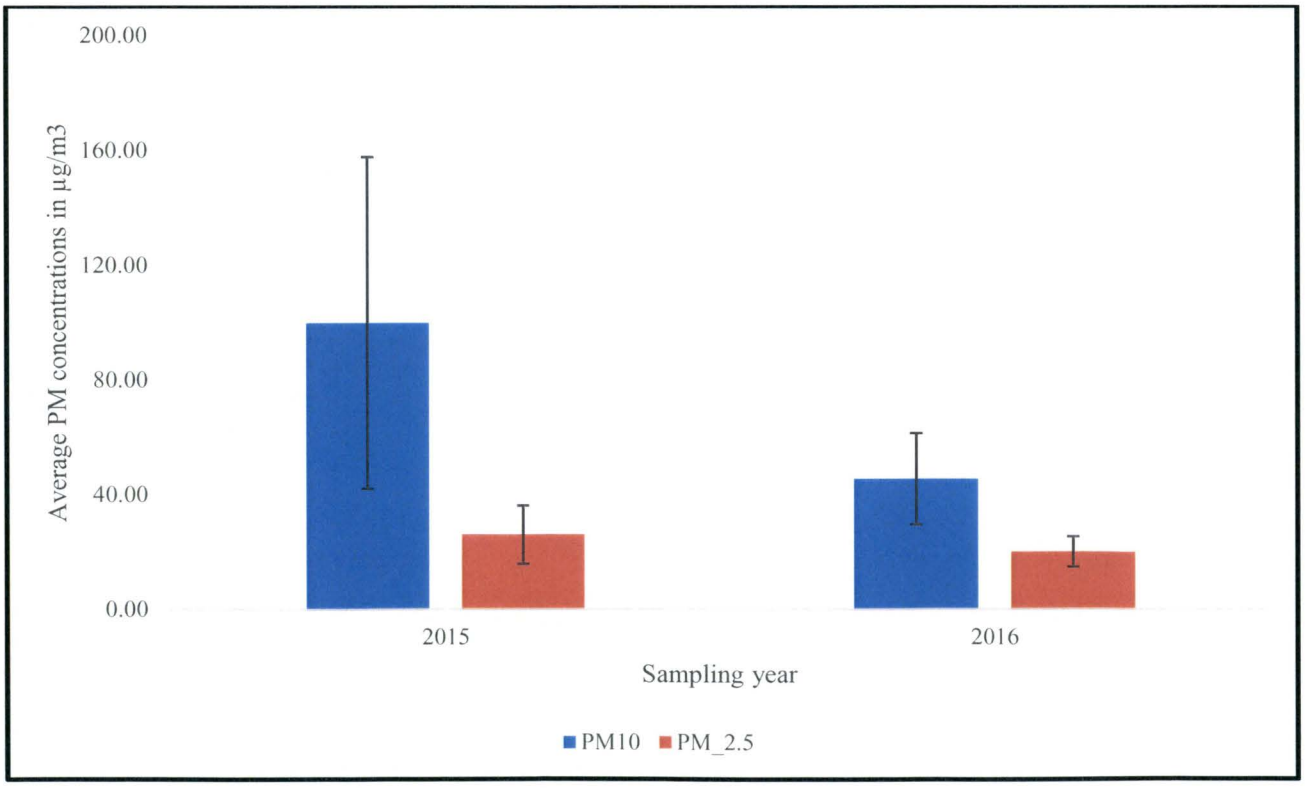


Figure 12. Yearly average PM concentrations in site 2.

Table 2. Stepwise regression analysis results of PM concentrations at site 2

Particulate matter type	Year of sampling	Stepwise regression model equations
PM_{10}	2015 & 2016 combined	PM_{10} =72.08904 – 51.12641 × rainfall_in_mm ($r^2 = 0.07$)
	2015	PM_{10} = 99.74191 – 552.38530 × rainfall_in_mm ($r^2 = 0.10$)
	2016	PM_{10} = 70.44775 – 2.63587 × wind_speed – 35.85478 × rainfall_in_mm ($r^2 = 0.20$)
$PM_{2.5}$	2015 & 2016 combined	No variables were statistically significant
	2015	$PM_{2.5}$ = -14.91731 + 0.50329 × vehicle_count + 0.11719 × wind_direction ($r^2 = 0.58$)
	2016	No variables were statistically significant

Notes: - All variables here are significant at 0.15 level (p=0.15)
- r^2 values reported are model r^2 values

The pooled average PM_{10} concentrations at site 2 were 70.42 ± 38.37 µg/m^3 and $PM_{2.5}$ concentrations were 19.60 ± 7.51 µg/m^3 at standard pressure and temperature measured over a two-year sampling period. However, the PM_{10} concentration over a 24-h sampling ranged from 1.91 µg/m^3 to 253.60 µg/m^3 in 2015 and from 5.17 µg/m^3 to 179.66 µg/m^3 in 2016, which is higher than the pooled average concentration. Similarly, $PM_{2.5}$ concentration value ranged from 2.56 µg/m^3 to 52.91 µg/m^3 in 2015 and from 3.27 µg/m^3 to 31.52 µg/m^3 in 2016. Figure 12 shows that the average PM_{10} concentrations in 2015 and 2016 were 99.74 ± 57.88 µg/m^3 and 45.29 ± 15.95 µg/m^3, respectively, and the average $PM_{2.5}$ concentrations in 2015 and 2016 were 25.94 ± 10.12 µg/m^3 and 19.88 ± 5.27 µg/m^3, respectively. Same as site #1, t the average PM_{10} concentrations in site #2 were lower in 2016 than 2015. This may be attributed to lower traffic from decrease oil extraction activities in the sampling area.

In 2016, the average PM_{10} concentrations (199.32 ± 36.13 µg/m^3) and $PM_{2.5}$ concentrations (47.02 ± 8.33 µg./m3) exceeded the NAAQS reference values (PM_{10} = 150 µg/m^3; $PM_{2.5}$ = 35 µg/m^3 for 24-hour sampling period). This was likely attributed to various factors i.e., high traffic on a loose gravel road and untreated road conditions. Also, traffic next to the sampling area likely contributed to higher PM concentration, except May 20-22, 2015 when gravel was applied to the road. For example, on May 20-22, 2015, the average PM_{10} concentration was 151.4 ± 58.32 µg/m^3 that exceeded NAAQS PM_{10} value. The lower PM concentrations during June 24-26, 2015 was likely due to lower traffic and 2.88 mm rainfall. During July 13-15, 2015, there were higher PM concentrations compared to the amount of traffic which may be attributed to the ongoing underground cable/pipe installation about 30 m to the south of the road, as well as drier road

conditions. Despite of having comparatively higher traffic count, the PM concentrations during May 11-13, 2016 were low likely due to the rainfall on May 10th (12.5 mm) and high wind speeds. A similar pattern was also observed during May 24-27, 2016 (2.8 mm rainfall on May 25th), June 14-16, 2016 (8.4 mm rainfall on June 13th) and July 26-28, 2016 (2.88 mm rainfall).

From stepwise regression analysis, in 2015, the PM_{10} concentrations had weak correlation (r^2 = 0.07) with rainfall but $PM_{2.5}$ concentrations seemed to have a better relationship (r^2 = 0.58) with vehicle count and wind direction (p=0.15). In 2016, the PM_{10} concentrations had a weak correlation (r^2 = 0.20) with wind speed and rainfall, whereas $PM_{2.5}$ had no association with other factors (p=0.15).

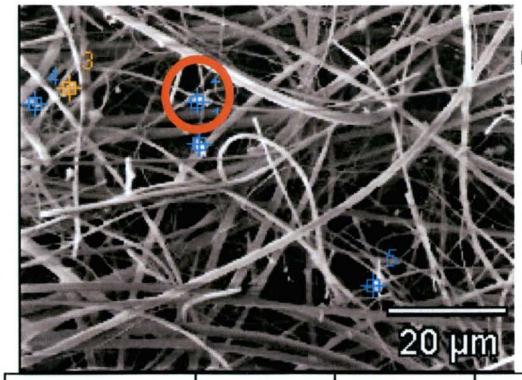
Mineralogical characterization of particulate matter

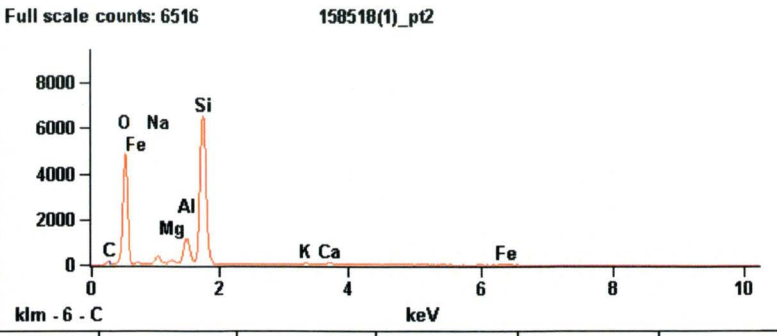
Based on elemental composition and morphology, 299 particles were analyzed using SEM-EDS. These particles were classified into three major groups: geogenic particles (derived from soil sediments, weathered rock surfaces), anthropogenic particles (particles derived from industrial and combustion activities), and biogenic particles (fungal hyphae with root outgrowth, organic plant fragments, living micro-organisms). Some of them are explained below:

Geogenic particles

Most of the analyzed particles were found to be geogenic particles. These particles with crustal origin include silicates of iron, magnesium, aluminum, calcium, quartz, Fe/Ti oxides, calcium particles, chloride particles, carbonate minerals etc.

Quartz (SiO_2) is one of the most common minerals found in on earth's surface as it is a significant component of many sedimentary, metamorphic, and igneous rocks. Quartz can occur in many different colors, habits, and forms. Quartz crystals can be prismatic and can also appear in massive form with no definable shape with no visible aggregate or crystals. The source of quartz can be of natural origins. Quartz is characterized by high content of oxygen (O) and silicon (Si) (Si + O>90% by weight) summing up to 100% with an atomic ratio of 1 Si to 2 O.
Non-quartz silicates particles are identified by high Si, aluminum (Al), O, and iron (Fe) content with variable content of sodium (Na), magnesium (Mg), potassium (K), calcium (Ca), titanium (Ti) with trace amounts of phosphorus (P) and sulfur (S), and sometimes carbon (C). Most particles in this group showed irregular, sub-spherical, and spherical morphology. Possible phases/minerals include feldspars, clays, oxides, carbonates, etc. Figure 13 shows possible identification of aluminosilicates group (Al_2SiO_5) containing O, Si, and Al with lesser amounts of Na, Mg, K, and Ca. It showed irregular morphology. Oxide minerals are identified by the high content of O and other elements like Fe, Al with a low amount of trace elements. They tend to have sub-spherical shape. Figure 14 shows an oxide mineral which has high Al and O content with a trace amount of Na, Mg, K, Ca, and Fe. It likely is aluminum oxide.

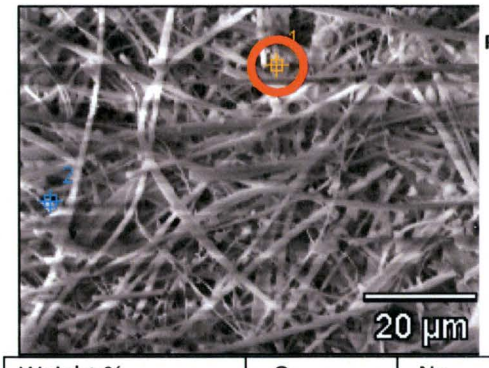


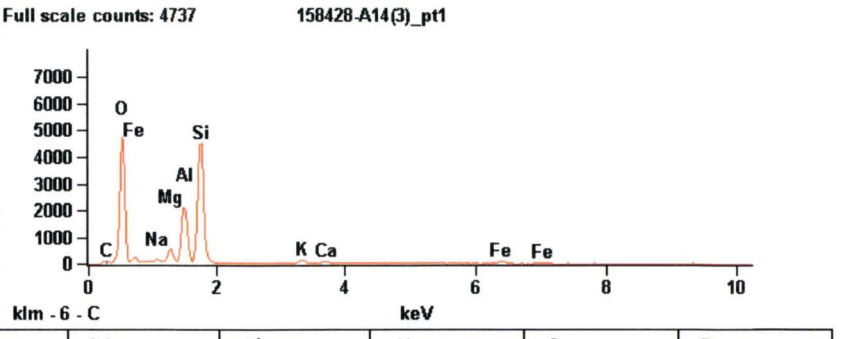


Weight	O	Na	Mg	Al	Si	K	Ca	Fe
158518(1)_pt2	50.27S	2.76	0.56	5.49	37.64	0.88	1.28	1.11

SEM ID Number	Mineral Group	Major Elements	Minor Elements	Morphology	Formulas from SEM data
158518(1)_pt2	Silicates	O, Si, Al	Na, Mg, K, Fe	Irregular	158 O, 6 Na, 1 Mg, 10 Al, 67 Si, 2 Ca, 1 Fe

Figure 13. Particulate matter identification from actual samples (Silicate minerals - aluminosilicates)





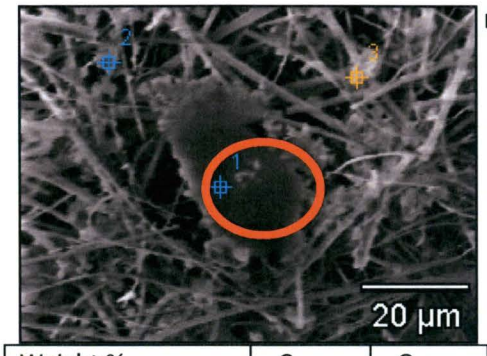
Weight %	O	Na	Mg	Al	K	Ca	Fe
158428-A14(3)_pt1	40.50S	2.35	6.36	31.36	3.02	2.42	13.98

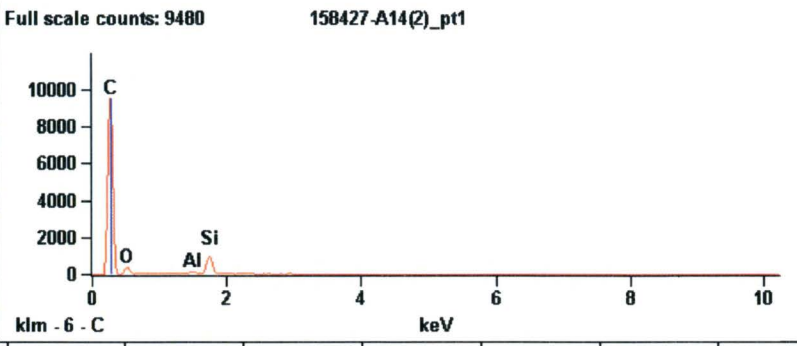
SEM ID Number	Mineral Group	Major Elemer	Minor Elemer	Morphology	Formulas from SEM data
158428-A14(3)_	Oxides	O, Al	Na, Mg, K, Fe	Sub-spherica	42 O, 2 Na, 4 Mg, 19 Al, 1 K, 1 Ca, 4 Fe

Figure 14. Particulate matter identification from actual samples (Silicate minerals - oxides)

Anthropogenic Particles

Anthropogenic particles include carbonaceous and industrial particles. Among industrial particles, the dominant metalliferous particles contain Cr>40%, Mn>50% and Ni>10% by weight in combination with trace particles. Very few industrial particles were found in this study as the sampling sites were very far from industrial zones. Carbonaceous particles are significant as they contribute highly to the total mass of the particles. In Figure 15, soot was identified. It had high carbon content and low oxygen content. This type of particle can be produced from biomass and biofuel burning. Earlier studies show that this spherical particle can scatter and absorb light (Cong et al. 2008). Agricultural burning, tire residue, and waste incineration might be the origin of these particles.





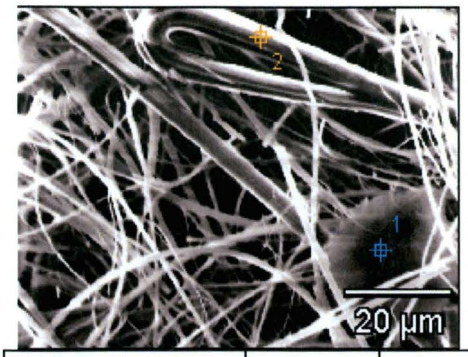
Weight %	C	O	Na	Mg	Al	Si	K	Ca	Fe
158427-A14(2)_pt1	95.66	2.30S			0.13	1.92			

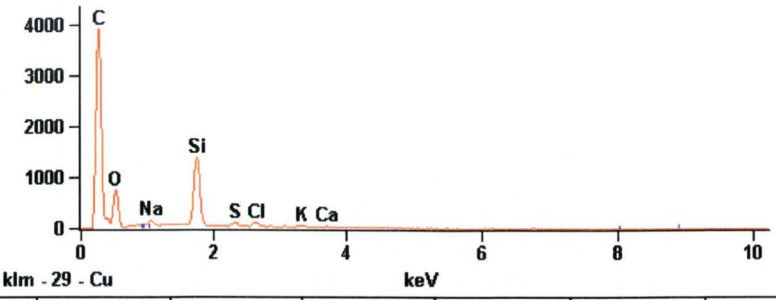
SEM ID Number	Mineral Group	Major Elemer	Minor Elemer	Morphology	Formulas from SEM data
158427-A14(2)_	Soot	C, O	Al, Si	Sub-spherica irregular	1653 O, 30 O, 1 Al, 14 Si

Figure 15. Particulate matter identification from actual samples (Anthropogenic minerals - soot)

Biogenic particles

Particles of biological origin were quantified by the method used by Matthias-Maser and Jaenicke (1994). Both dead and alive biogenic aerosols contain minor amounts of Na, Mg, K, P, Si, Cl, Al and Ca. These elements sum to approximately 10% of the whole weight of the particle. These elements are also essential trace elements present in plants (Artaxo & Hansson, 1995). The rule to identify such particles is: biological aerosols will have combined weight percentage of greater than 75% of carbon and oxygen, and phosphorus, potassium and chlorine will have weight percentage of between 1% and 10% (Coz et al., 2010). S, Si, Zn, and Ca are also tracers of biogenic materials. Figure 16 shows a round shaped outgrowth. It has a high carbon and oxygen content which sums up to more than 75% by weight with trace amounts of K, Na, Cl, and Ca. The silica content is probably from the filter fibers.





Weight, %	C	O	Na	Si	S	Cl	K	Ca
158426-A10(1)_pt1	26.32	71.87S	0.16	1.33	0.10	0.12	0.06	0.04

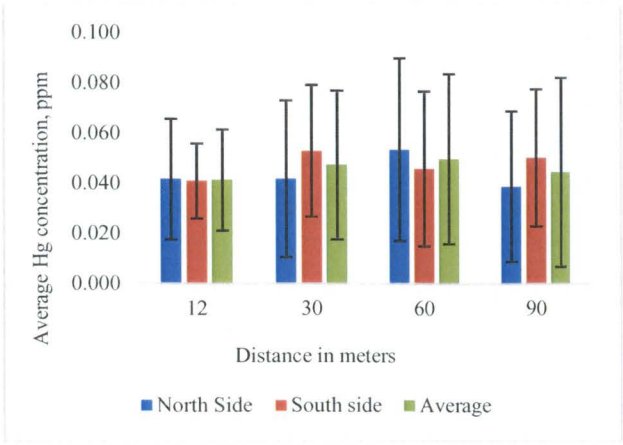
SEM Number	Mineral Group	Major Elemer	Minor Elemer	Morphology	Formulas from SEM data
158426-A10(1)_	Biologica group	C, O	Si, Na, Cl, K, Ca	Round/spher	2195 C, 4500 O, 7 Na, 47 Si, 3 3 Cl, 2 K, 1 Ca

Figure 16. Particulate matter identification (Biological particles)

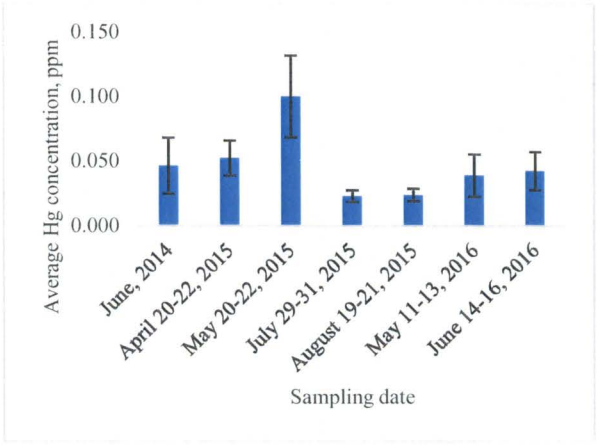
Such biological particles include microorganisms and fragments of all varieties of living matter like viruses, bacteria, fungal growth, spores, pollen, plant debris, etc. (Cong et al., 2008; Coz et al., 2010; Matthias-Maser & Jaenicke, 2000).

Elemental analysis of soil samples

The soil samples were analyzed to determine their elemental composition with regard to sixty chemical elements by ICP-MS. Selected metals of interest were chosen because of their potential impact on the local environment and, essentially, crops and human health. There were several studies conducted in early 1980s which depict the elemental compositions of metals and their reference values in the soil (Shacklette & Boerngen, 1984). In this study, concentrations of most of the metals were lower than the reference values. Additional data collected by the United States Geological Survey (USGS) Mineral Resources National Geochemical Survey (NGS) (USGS, 2003) (Sample ID: C – 250179, C – 237228, C-237239) and Smith et al. (2013) (Lab ID: C – 340224) were used to compare the measured values with these previously published values. Evaluation of the analytical data from this study showed few elements that appeared to be potentially influenced by dust from road traffic. However, some anomalies appeared to occur in the data from mercury (Hg), lead (Pb), and nickel (Ni). Thus, these elements were examined more closely. Figure 17 and 18 show the average mercury (Hg), and lead (Pb) concentrations with increasing distances from the center of the road and their concentrations with respect to sampling dates.



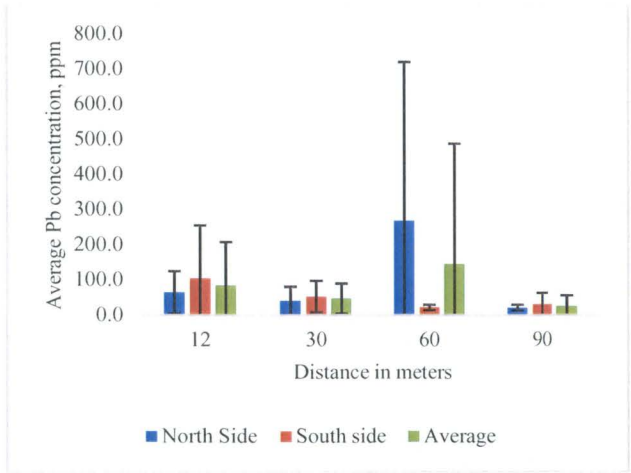
(a)



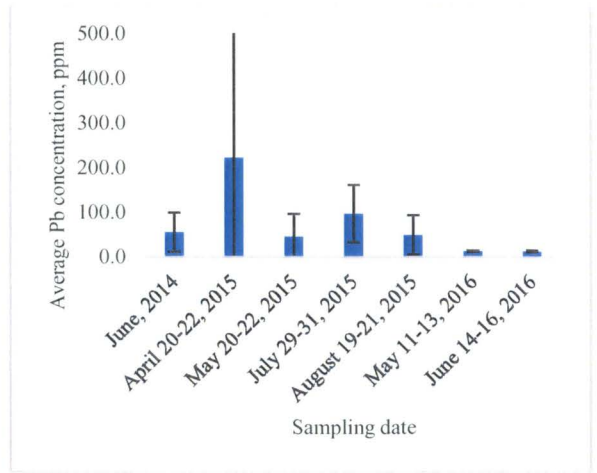
(b)

Figure 17. (a) Average mercury (Hg) concentrations in ppm in soil at varying distances from the road (n=8 at 12 m, n=6 at 30 m, 60 m, 90 m); (b) Average mercury (Hg) concentration in ppm with respect to the date of trip (n=8 for all sampling dates except, n=6 for April 20-22, 2015).

The pooled (over a three years period) average Hg concentration was 0.046 ± 0.029 ppm. The concentration of Hg varied from 0.020 to 0.10 ppm. The reference value from NGS was found to be 0.020 ppm and 0.07 ppm (Smith et al., 2013). The average Hg concentrations on the north side of the road were higher than that on the south side of the road. The mercury concentration is highest in the month of May, 2015 and then decreased significantly. There is a rise in Hg concentration in 2015, but the concentrations during 2014 and 2016 were low. It could be also due to disturbance of soil on the south side of the road as the underground cable/pipe installation activities were going on at that time.



(a)



(b)

Figure 18. (a) Average lead (Pb) concentrations in ppm in soil at varying distances from the road (N=8 at 12 m, N=6 at 30 m, 60 m, 90 m); (b) Average lead (Pb) concentration in ppm with respect to the date of trip (n=8 for all sampling dates except, n=6 for April 20-22, 2015).

The pooled average Pb concentration was 76.7 ± 168 ppm sampled over a period of three years. The reason of large error range is due to high Pb concentrations on April 20-22, 2015 sampling

date (222.3 ± 391.5 ppm), and on July 29-31, 2015 sampling date (97 ± 64.2 ppm). The Pb concentrations varied from 6.4 to 435.9 ppm. The reference value from NGS was found to be 8.3 ± 1.5 ppm and 15.2 ppm (Smith et al., 2013). The average Pb concentrations increased over distance to the 60m sampling point and then dropped at 90 m. The Pb concentrations, like Hg, were much higher in 2015 than that of 2014 and 2016's. The high Pb concentrations during the 2015 sampling period could cause health issues to human working in the area and the animals that are feeding off the site, if the soil is ingested. As the soil pH (5.92) was below 6.50, it could also become available to plants.

Conclusions

The primary objective of this project was to quantify particulate matter (PM_{10}, $PM_{2.5}$) emissions from unpaved roads (treated vs untreated) in well development area in the Western North Dakota. Airmetrics miniVOL™ Tactical Air Samplers (Springfield, OR, USA) were used to quantify PM_{10}, $PM_{2.5}$, TSP at selected locations. The pooled average PM_{10} and $PM_{2.5}$ concentrations were 30.84 ± 14.19 $\mu g/m^3$ and 14.08 ± 6.56 $\mu g/m^3$ from a periodically treated road (Site 1), respectively over a two-year sampling period. The PM_{10} emissions at site 1 were found to be weakly correlated with rainfall in 2015 ($r^2 = 0.07$) and moderately correlated with vehicle count, wind speed, wind direction, and rainfall in 2016 ($r^2 = 0.30$) at p=0.15. Likewise, the $PM_{2.5}$ emissions were strongly correlated with wind direction and rainfall in 2015 ($r^2 = 0.51$) and with vehicle count in 2016 ($r^2 = 0.38$). So, most of the time, the PM concentrations were high when the vehicle count was high and PM concentrations were low when there was a rainfall event. However, the average PM concentrations in 2015 were higher than 2016 but they were still below the NAAQS threshold values. In addition, the PM concentrations were low when magnesium chloride was applied on the road surface.

The pooled average PM_{10} and $PM_{2.5}$ concentrations (over a two-year sampling period) were found to be 70.42 ± 38.37 $\mu g/m^3$ and 19.60 ± 7.51 $\mu g/m^3$ from an untreated loose gravel road (Site 2), respectively. There were some instances when the PM concentrations exceeded NAAQS values which could be due to construction activities on road or high vehicle count or new gravel application on the road or due to the untreated road surface. The PM_{10} concentrations were loosely correlated ($r^2 = 0.10$) with rainfall in 2015 and with wind speed and rainfall ($r^2 = 0.20$) in 2016. The $PM_{2.5}$ concentrations were strongly correlated ($r^2 = 0.58$) with vehicle count and wind direction in 2015 and no correlation was found in 2016 (p=0.15). The PM concentrations in 2016 were lower than that of 2015 because of a decrease in oil rigging activities in the sampling area.

Elemental composition, and morphology of samples were analyzed by scanning electron microscopy energy dispersive spectroscopy (SEM/EDS) which revealed there is a wide range of minerals, biological aerosols, and little amount of anthropogenic particles in the area. 46% of the particles analyzed were quartz, and 36% of the particles were found to be other types of silicates which are basically constituents of road gravels in the sampling area. There were small amounts of biological particles (9%), and oxides (7%). Very limited amount of anthropogenic particles (soot, 1%) was found in the area. The relative amount of quartz was higher at site 1 than that of site 2 which could be due to accelerated weathering process from a high number of traffic. Quartz and oxides were predominant in $PM_{2.5}$ samples too.

Soil samples were analyzed using inductively coupled plasma – mass spectroscopy (ICP-MS) to find out elemental compositions of metals present in the sampling area. To compare the measured value, elemental compositions of metals from three reference sites were compared with the United States Geological Survey (USGS) – National Geochemical Survey website and (Smith et al., 2013). It was found that the concentrations of most metal decreased with increasing distances from the center of the road to the north and south sides. Concentrations of the metals were higher in some cases which were likely due to increased oil drilling activities, higher traffic, disturbance of soil from underground cable installations, etc. The concentrations of most of the metals were higher in 2015 than that of 2014 and 2016, during which, traffic and oil activities were the highest. However, most of the metal concentrations were lower than the USGS reference values, thus road dust may not pose any concern on soil quality based on this study. However, additional long term studies are needed to evaluate the impact on soil and crop, as well as on human health and livestock welfare.

Acknowledgment

We would like to acknowledge North Dakota State University Dust Research fund and as well as funding from the Dickinson REC. Thanks to Sumon Datta and Dr. Md. Borhan who carried out sampling and analysis. Special thanks to Dr. Kris Ringwall, Director DREC, for providing logistical support during sample collection.

Products

Under this project, Mr. Sumon Datta has completed his MS degree in Agricultural and Biosystems Engineering and title of his thesis is "Quantification and characterization of particulate matter generated from unpaved roads in the oil development area of western North Dakota". Sumon has also presented preliminary research findings in the ASABE annual meeting (Datta, S., S. Rahman, M.S. Borhan, B. Saini-Eidukat, and L. Cihacek. 2016. Quantification and characterization of particulate matter generated from unpaved roads in the oil development area of western North Dakota. 2016 ASABE Annual International Meeting, Orlando, Florida, July 17-20, 2016).

References

Cong, Z., S. Kang, S. Dong, X. Liu, & D.Qin. 2008. Elemental and individual particle analysis of atmospheric aerosols from high Himalayas. *Environmental Monitoring and Assessment, 160*(1), 323-335. doi:10.1007/s10661-008-0698-3

Cooper, C. D. and F. C. Alley. 2002. *Air pollution control: a design approach*: Waveland Press.

Coz, E., B. Artíñano, . L. M. Clark, M. Hernandez, A. L. Robinson, G. S. Casuccio, T. L. Lersch, and S. N. Pandis. 2010. Characterization of fine primary biogenic organic aerosol in an urban area in the Northeastern United States. Atmos. Environ. 44: 3952–3962.

Donham, K. J., and A. Thelin. 2006. Agricultural medicine: Occupational and environmental health for the health professions. Victoria: Blackwell Publishing Asia.

Farmer, A. M. 1993. The Effects of Dust On Vegetation - A Review. *Environmental Pollution* 79(1):63-75.

Gee, G. W. and J. W. Bauder. 1996. Particle-size Analysis. *In* A. Klute (ed.) Methods of Soil Analysis,

Gonzales, H. B., R. G. Maghirang, J. D. Wilson, E. B. Razote, and L. Guo. 2011. Measuring cattle feedlot dust using laser diffraction analysis. *Transactions of the Asabe* 54(6):2319-2327.

Gunawardana, C., A. Goonetilleke, P. Egodawatta, L. Dawes, and S. Kokot. 2012. Source characterisation of road dust based on chemical and mineralogical composition. *Chemosphere* 87(2):163-170.

Guney, M., T. T. Onay, and N. K. Copty. 2010. Impact of overland traffic on heavy metal levels in highway dust and soils of Istanbul, Turkey. *Environmental Monitoring and Assessment* 164(1-4):101-110.

Mao, Y., J. D. Wilson, and J. Kort. 2013. Effects of a shelterbelt on road dust dispersion. *Atmospheric Environment* 79:590-598.

Matthias-Maser, S. and R. Jaenicke. 1994. Examination of atmospheric bioaerosol particles with radii > 0.2 mm. J. Aerosol Sci. 25: 1605–1613.

Matthias-Maser, S., and R. Jaenicke. 2000. The size distribution of primary biological aerosol particles in the multiphase atmosphere. *Aerobiologia, 16*(2), 207-210. doi:10.1023/a:1007607614544

McCrea, P. R. 1984. An assessment of the effects of road dust on agricultural production systems. Research Report No. 156. Agricultural Economics Research Unit Lincoln College, Canterbury, New Zealand

Pattey, E., and G. W. Qiu. 2012. Trends in primary particulate matter emissions from Canadian agriculture. *Journal of the Air & Waste Management Association* 62(7):737-747.

Samet, J., and D. Krewski. 2007. Health effects associated with exposure to ambient air pollution. *Journal of Toxicology and Environmental Health-Part a-Current Issues* 70(3-4):227-242.

Saxton, K., D. Chandler, and W. Schillinger. 1999. Wind erosion and air quality research in the northwest U.S. Columbia plateau: Organization and progress. In *Sustaining the Global Farm: Selected Papers from the 10th Intl. Soil Conservation Organization Meeting* (ISCO '99), 766□770. E. E. Stott, R. H. Mohtar, and G. C. Steinhardt eds. West Lafayette, Ind.: USDAARS National Soil Erosion Laboratory.

Schwindt, F. 2013. Investigation of methodologies to control dust on County roads in western North Dakota. Report submitted to North Dakota Industrial Commission, January 2013. Contract no. G025-054.

Smith, D. B., W. F. Cannon, L. G. Woodruff, F. Solano, J. E. Kilburn, and D. L. Fey. 2013. *Geochemical and Mineralogical Data for Soils of the Conterminous United States*. In Sparks et al. (eds.) Methods of Soil Analysis, Part 3. Chemical Methods. *SSSA Book Series* 5(3):575-1010. Sparks et al. (eds.) Methods of Soil Analysis, Part 3. Chemical Methods. *SSSA Book Series* 5(3):961-601.

Tasic, M., B. Duric-Stanojevic, S. Rajsic, Z. Mijic, and V. Novakovic. 2006. Physico-chemical characterization of PM10 and PM2.5 in the Belgrade urban area. *Acta Chimica Slovenica* 53(3):401-405.

USEIA, 2014, Crude Oil Production. http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_m.htm. Accessed 07/07/2014.

USEPA, 2011. Particulate matter pollution from unpaved roads. www.epa.gov/oecaagct/trur.html. Accessed 09/21/2011.

SB2020/2080
1-18-17
#2C

Fugitive dust impacts on plants and landowner/citizen perceptions of Bakken development

Final report (30 November 2016)

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Objectives: The purpose of the project was to (1a) describe quantity and spatial extent of fugitive dust from Bakken oilfield traffic and (1b) determine if dust exposure causes physiological stress to economically-important plants. We also sought to (2a) determine landowner perceptions of energy-related impacts and (2b) identify research priorities in the Bakken.

Methods applied: (1) We collected dust and soil samples and measured plant physiology from wheat fields in the Bakken region during two growing seasons, and conducted a greenhouse experiment with several crops and perennial grasses under extreme dust load. (2) We conducted focus groups with community leaders to develop a by-mail landowner survey.

Results in a nutshell: *Biological component:* Oilfield traffic generates substantial amounts of fugitive dust and while most of it is concentrated within 30 m of roadways, non-negligible deposition rates occur up to 100-200 m into fields. However we have little evidence that dust exposure harms crop physiology and no evidence that dust exposure affects post-defoliation recovery of perennial grasses. *Sociological component:* In general, focus group participants and survey respondents alike seemed to welcome energy development on farm and rangeland in western North Dakota, and recognized the potential financial gains for themselves and their communities. At the same time both groups expressed discomfort with the speed of development during the Bakken boom and skepticism of the capacity and willingness of government to regulate the energy industry and share energy revenues with Bakken-area communities in a fair and timely manner.

Summary of products: 5 state-level poster presentations, 3 national-level poster presentations, 1 national-level oral presentation, 1 international-level oral presentation (also published in conference proceedings); minimum 4 peer-reviewed journal articles in preparation.

Overview of accomplishments

We achieved all research objectives of the original proposal; presentation and outreach activities are ongoing as thesis and manuscript preparation continues. We leveraged project funds to collaborate with a number of additional parties including Dickinson State University and the Dickinson Research Extension Center. Research activities involved two NDSU graduate students, a group of DSU undergraduate summer interns, and two NDSU undergraduate research assistants. Research presentations were given at state, national, and international levels with additional materials in preparation.

Biological component

Field study

Research objectives

- Determine the amount and spatial extent of fugitive dust generated by oilfield traffic
- Determine if foliar deposition of fugitive dust has negative impacts on crop physiology
- Determine if chemicals associated with dust suppressants accumulate in soil

Figure 1: Jonathan Spiess with one of his dust traps in a Dunn County wheat field.

Results

Oilfield traffic produces a substantial amount of dust, even up to 100-200m from the road. We installed dust collectors in crop fields throughout the Bakken at increasing distances from unpaved roads to determine how much dust was produced, and how far this fugitive road dust traveled (Fig. 1). Although our 2016 data are still being processed, we found that while most dust deposition occurs within 30 m of the road, a substantial amount of dust drifts out to ca. 100 m and even out to nearly 200 m (Fig. 2). The amount of dust generated is a combination of vehicle speed and size (weight and number of axles) and road surface wetness. The direction and distance of dust deposition is determined by wind speed and direction.

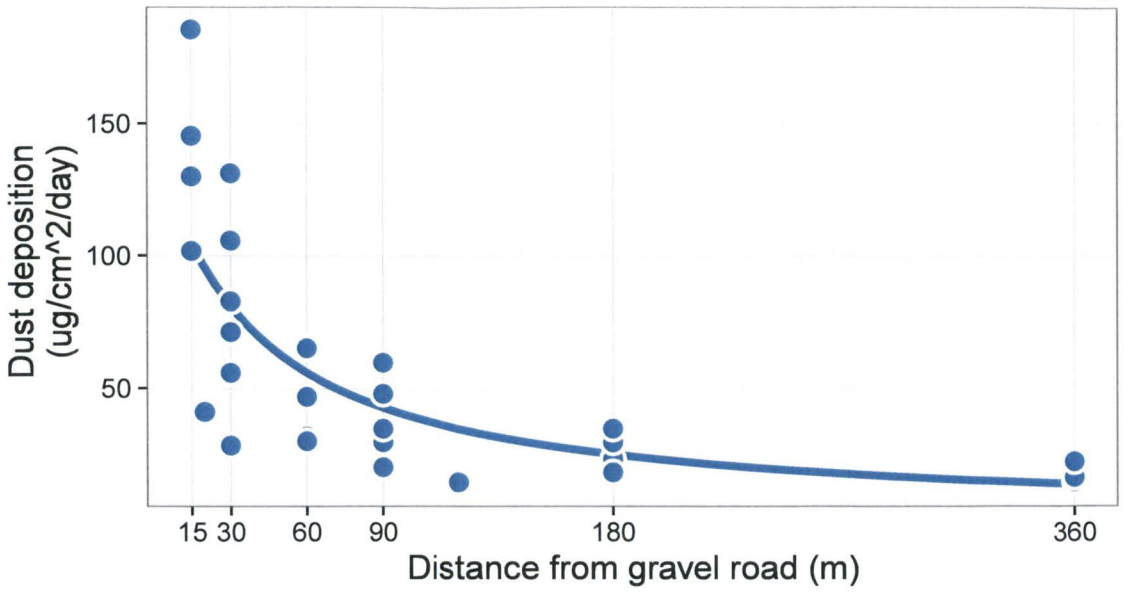

Figure 2: While fugitive dust deposition is certainly most extreme near roadways, a substantial amount of deposition often occurs up to 100-200 m from the road. These data are expressed as amount per day for 2015 (2016 data are still being processed.)

We found little evidence that foliar dust deposition affects physiology of wheat. Along transects extending nearly a quarter-mile into wheat fields, we measured three traits widely associated with plant performance and connected in the literature to dust response, specifically: photosynthetic activity, stomatal conductance, and chlorophyll content. We found little evidence for an overall effect of dust on plant physiology (Fig. 3). These data were characterized by high variability at nearly all sampled scales: plant-plant, within fields, among fields, and from year to year.

One note on these data: both 2015 and 2016 growing seasons were characterized by frequent rainfall. In our observations, precipitation causes dust to run off the surface of plant leaves. Thus, it is likely that despite high levels of dust deposition in these fields (Fig. 2), the actual dust pressure on crops was low as leaves were frequently washed clear. It is possible that in seasons with less rainfall, crops might show physiological responses to dust (although our greenhouse study on juvenile plants also show high variability under extremely high levels of dust exposure; see below).

Little evidence that dust suppressants accumulate in soil. Farmers and conservation agents reported concern over the environmental fate of chemicals applied to road surfaces as dust suppressants; after continued heavy traffic the crust formed by the application of solutions such as magnesium chloride (MgCl) breaks up, fugitive dust production resumes, and observers wonder: where did the MgCl end up? To determine if MgCl carried by dust and deposited in fields—creating a potential long-term impact with chronic impacts on crops—we collected soil samples from fields located along recently-treated roads. There is no conclusive evidence to suggest MgCl accumulates in fields (Fig. 4) but trends were curious: sub-soil magnesium concentrations were greater further from roads, suggesting that if road-applied MgCl is a source, the chemical is both carried far and apparently permeates through the topsoil and collects in the subsoil. Trends in both magnesium and chloride require further exploration of their soil chemistry.

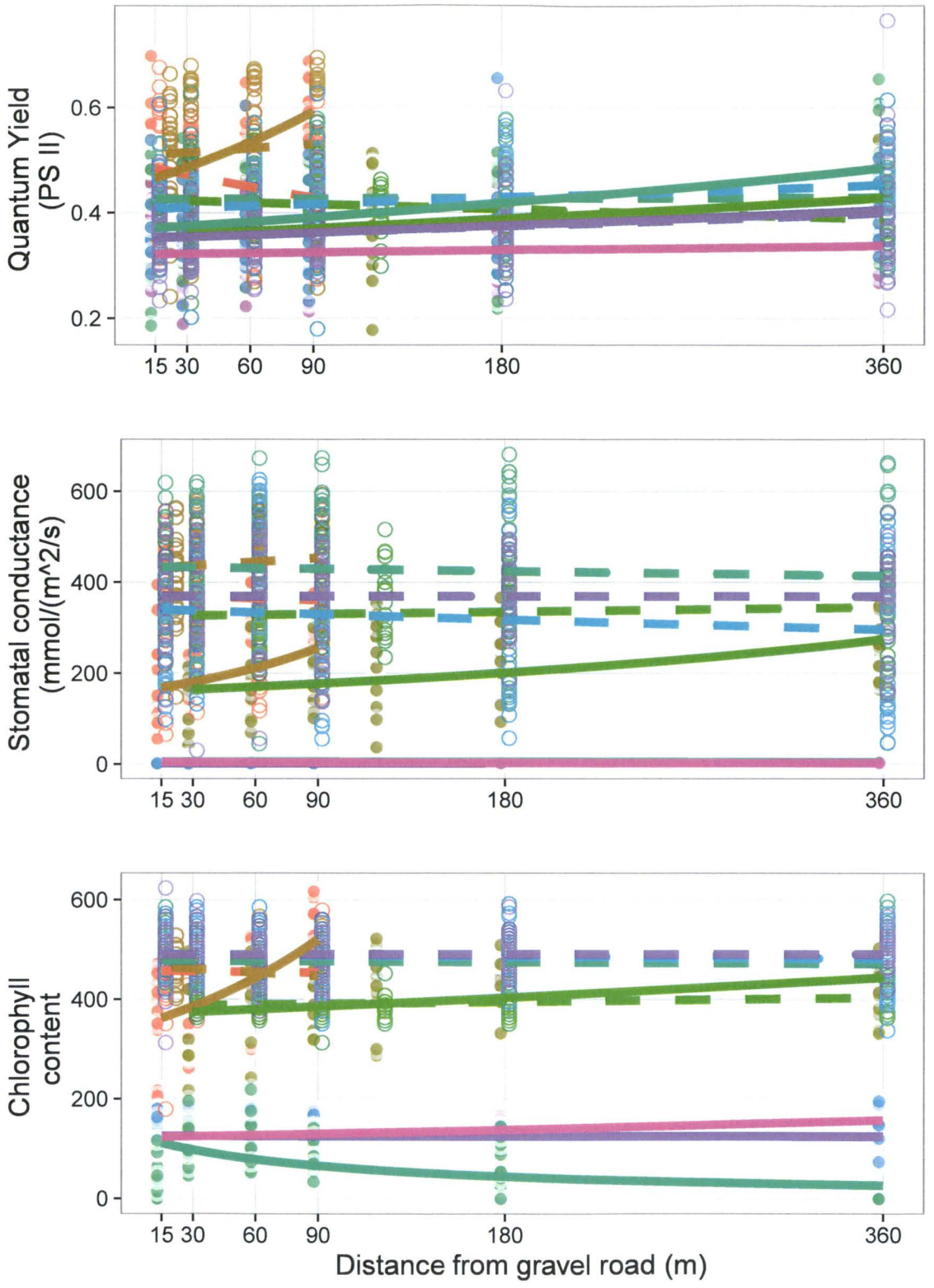

Figure 3: Physiological responses of wheat plants at increasing distances from gravel roads in the Bakken oil patch are characterized by high variability. Top: Photosynthetic efficiency (carbon fixed/photons absorbed); Center: Stomatal conductance (gas exchange rate through leaf stomata); Bottom: Colors represent individual fields. Open circles and broken lines denote 2015 data, filled circles and solid lines represent 2016 data.

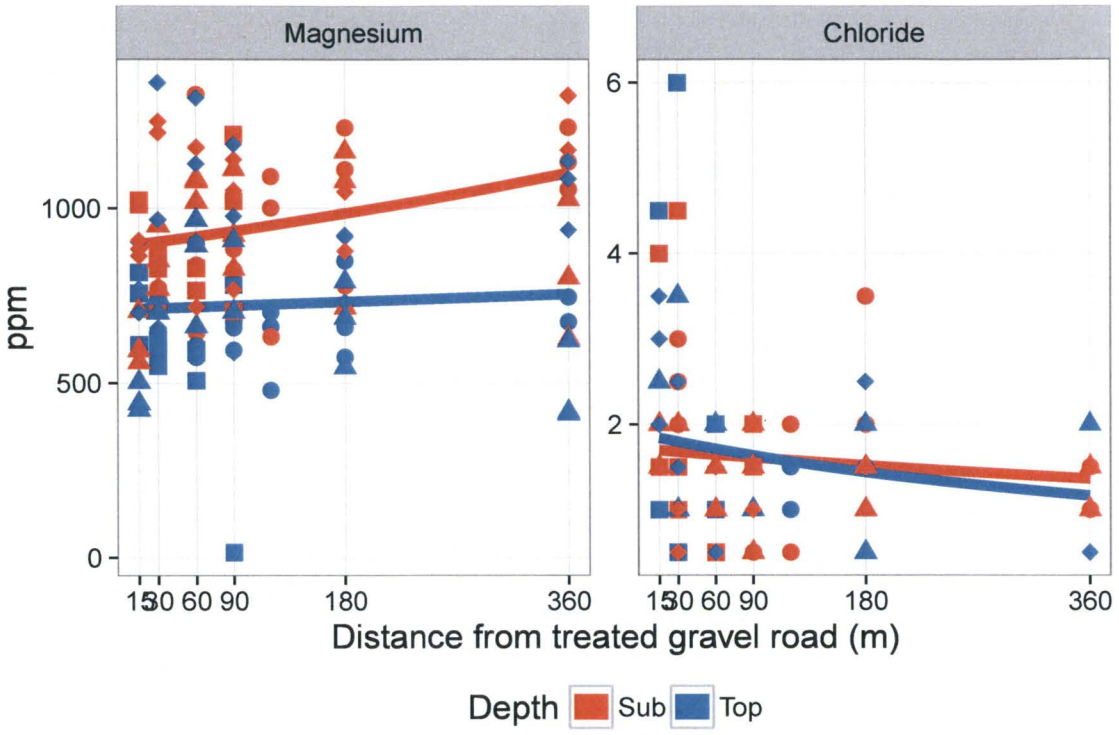

Figure 4: Magnesium and chloride concentrations in fields along gravel roads in the Bakken oil patch show divergent trends, providing little direct evidence that the magnesium chloride applied to gravel roads for fugitive dust abatement has accumulated in the soil.

Greenhouse study

Research objectives

- Determine physiological responses of plant to extremely high levels of dust exposure (field observations were limited to low foliar dust levels due to frequent rainfall)
- Test responses to dust exposure across a broad suite of crops and perennial grasses (field observations were limited to wheat)

(a) Poly tents and duster.

(b) Close-up of dust on *Bouteloua gracilis*.

Figure 5: View of experimental set-up for perennial grass response to dust in the greenhouse.

Results

Little evidence that dust exposure affects crop physiology. As in the field, we measured quantum yield, stomatal conductance, and chlorophyll content in addition to a destructive measure, specific leaf area. This experiment added two key components to the field study (Fig. 5):

- Several crops of three different types: cool-season grains (barley, durum wheat), warm-season grains (corn, sorghum), legumes (pinto beans and lentils), and sunflower.
- Extremely high dust exposure: Plants were exposed to a months' worth of road dust at a time, three times a week, for two weeks.

However, we found little evidence for consistent dust effects across plants exposed to dust and adjacent un-exposed plants (Figs. 6 & 7).

No evidence of dust impact on perennial grass recovery from defoliation. To test the response of several economically-important perennial grasses to dust, we clipped long-established, potted grasses and compared the amount of biomass recovery across groups of plants exposed and not exposed to dust. The clipping treatment was repeated to test for an effect of dust and additional stress from defoliation, but we found no differences between species or clipping events across dust exposure levels (Fig. 8).

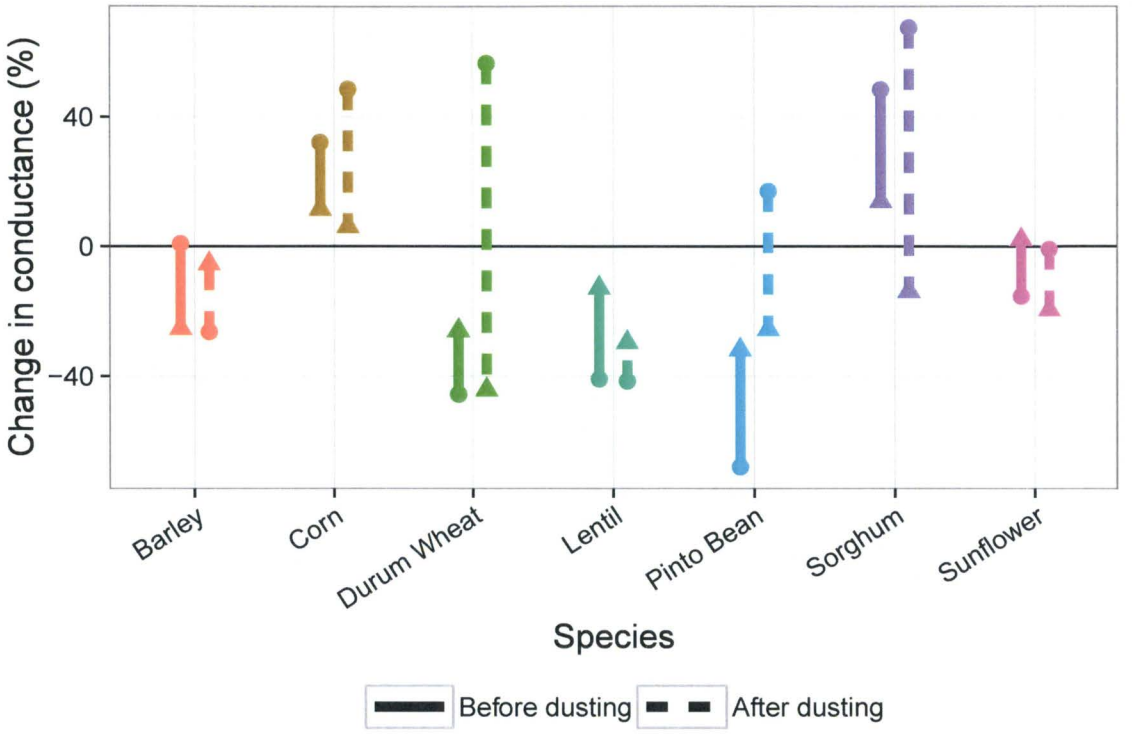

Figure 6: No evidence of a consistent effect of dust on stomatal conductance, reported here as percent difference among plants exposed to dust versus unexposed controls. Measurements were taken from exposed plants immediately before dust exposure (solid lines) and immediately after (broken lines); differences in side-by-side comparison of line types suggest no immediate effect of dust. Lines connect two replicated blocks of eight individual plants each; line length characterizes variability in response.

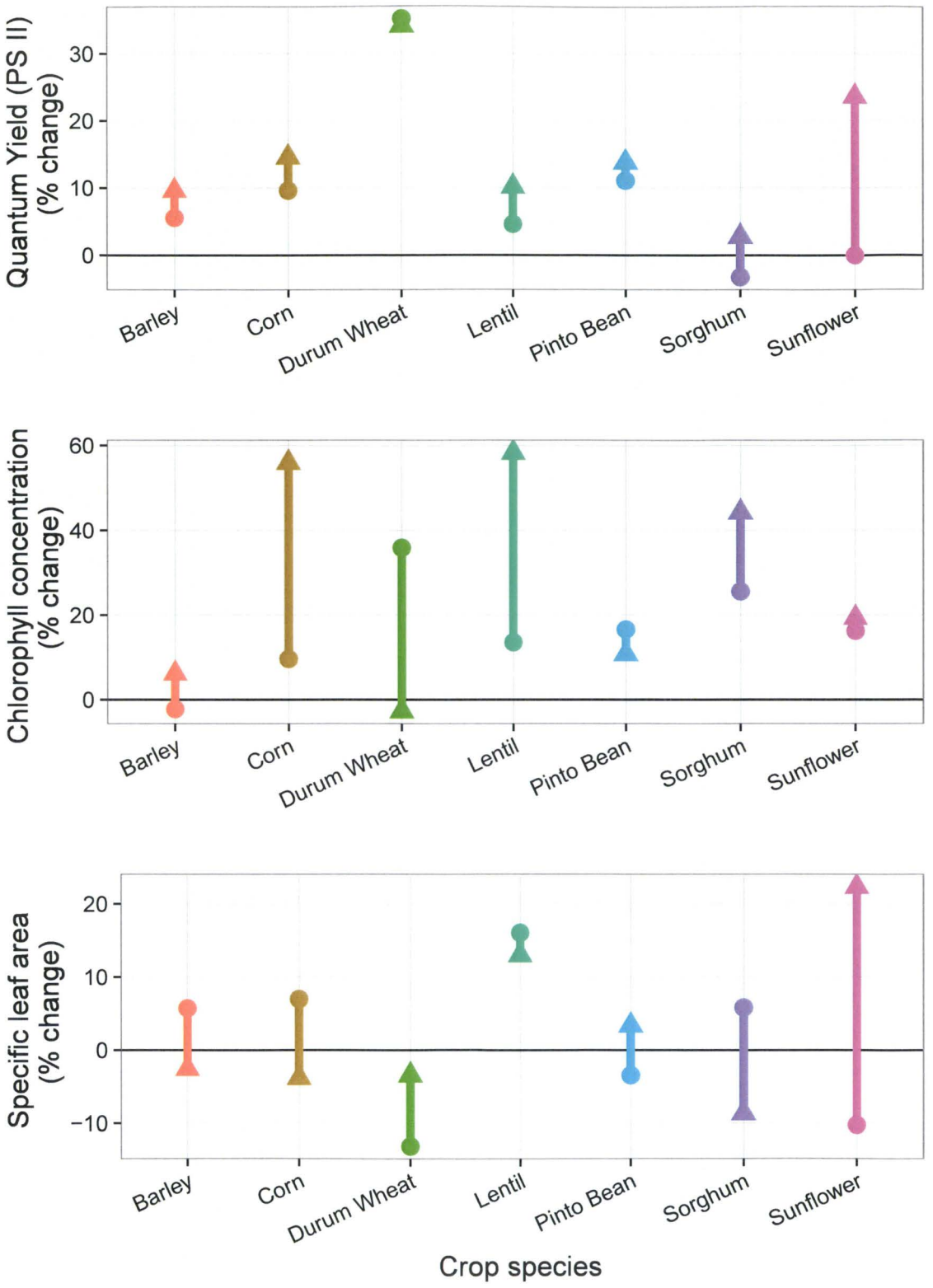

Figure 7: Physiological responses to dust expressed as percent difference between dust-exposed and un-exposed control plants. Symbols denote replicate blocks, which are connected by lines to denote within-block variability. Data from last of six dust events.

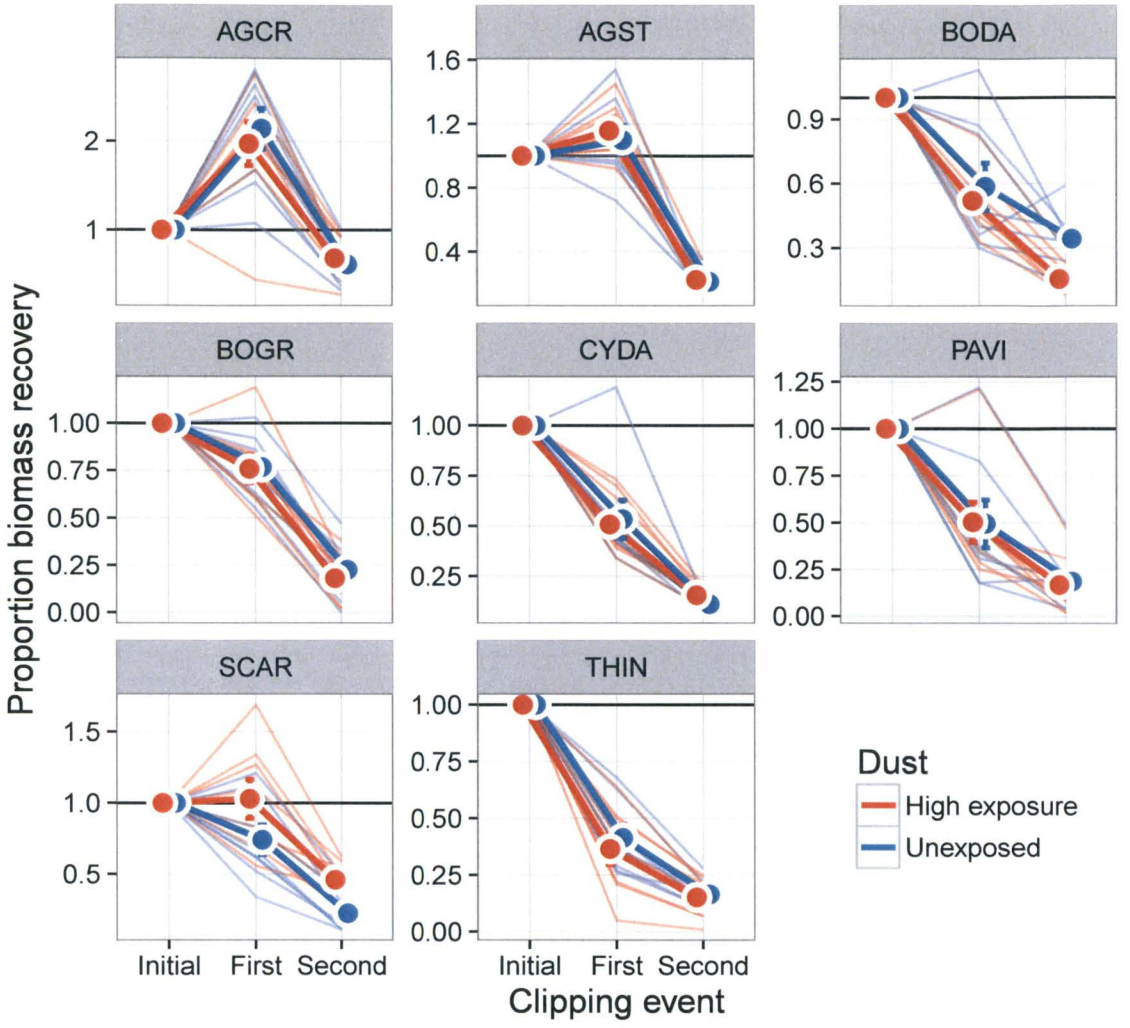

Figure 8: Dust exposure showed no pattern of effect for any species on recovery of perennial grasses following two clipping events. Thin lines in background trace recovery of individual plants (pots); bold lines, points, and error bars show mean (+/- s.e.) of exposure groups.

Sociological component

Research objectives

- Identify primary concerns of rural residents of the Bakken region with respect to energy development impacts on agricultural and natural resources as well as local communities.
- Identify priorities for research needs and extension support in Bakken communities, particularly for the development of research, education, and other support/assistance programs by North Dakota state institutions and agencies.

Results

Focus group outcomes Focus group participants in Watford City, Stanley, and Williston identified a breadth of issues relating to agricultural and natural resources, local communities, and the practice and policy of energy development in rural western North Dakota. These issues related to four primary themes (Table 1): (1) Local communities and local services, (2) Health/safety concerns related to traffic, (3) Issues relating to the operation/management of farms and ranches, and (4) Relationships with energy companies and their representatives.

Table 1: Summary of topics identified by participants in three focus groups in the Bakken oil patch of North Dakota, organized within four thematic areas defined through qualitative data analysis. Specific questions were crafted from each topic and a mail survey conducted with rural residents of the Bakken region to determine the degree to which focus groups represented the broad community in defining issues related to energy development impacts on agricultural, social, and natural resources.

Local communities and local services
Changing demographics: retirees leave, but some young folks return for jobs
Increased population strains local services (ambulance, fire, police, schools)
Too little revenue returned to local communities, and takes too long
Health and safety concerns related to traffic
Dust, spills, leaks, and industrial chemical use pollute environment
Energy activity increases traffic and makes rural travel difficult, dangerous
Increased rail activity makes crossing rights-of-way time-consuming
Farm and ranch management
Road dust reduces crop yield, hay and range productivity
Travel between tracts is slow, dangerous
Compensation inadequate; money not enough to cover time lost
Difficult to monitor distant tracts, some leases being terminated
Soil disturbance, long reclamation time interfere with conservation
Relationships with energy industry
Energy companies and their representatives lack respect for local lifestyle
Energy companies and their representatives are aggressive and too money-centric
Legal jargon is confusing and companies don't begin with fair offers, negotiation

Research priorities identified by survey respondents

Agricultural and Natural Resource concerns Traffic was the most-frequently mentioned concern raised by survey respondents and the only concern raised under both Agriculture and Natural Resources (20 instances) Social Issues (14 instances) (Table 2). Among Agriculture and Natural Resources concerns related to traffic, responses focused on dust and traffic volume. Respondents were concerned about negative impacts of dust on crops, livestock, and pets; one described how dust deters livestock from grazing near roads, which causes overgrazing elsewhere. The other concern about traffic was difficulty moving farm equipment on local roads. Two respondents specifically noted that they terminated leases for land far from their home place, and survey respondents of all impact categories tended to agree with this complaint.

Table 2: Summary of issues respondents of mail survey gave in hand-written responses to two questions prompted by "Please tell us your main concern regarding agriculture and natural resources..." and "...social issues," respectively. Issues are grouped by theme and are followed by the number of specific mentions in text analysis.

A. Agricultural and Natural Resource concerns		
Environmental		
Pollution (22)	Water (13)	Wildlife and ecosystems (11)
Dust (10)	Reclamation/restoration (10)	Spills and leaks (10)
Litter (5)	Fracking (4)	Air (4)
Erosion (2)	Cultural resources (1)	
Farm and ranch management		
Impacts on production (17)	Land area loss (15)	Land value (2)
Energy infrastructure and operations		
Traffic (20)	Pipelines (8)	Flaring (1)
Policy		
Industry relations (21)	Regulations (8)	Government (6)
Property rights (6)		
B. Social Issues concerns		
Community		
Crime (30)	Services (25)	Demographics and dynamics (22)
Cost of living (12)	Way of life (9)	
Policy		
Government (7)	Revenue (6)	Industry relations (4)
Utilities and roads		
Traffic (14)	Infrastructure (6)	Dust (1)

Survey respondents raised several overlapping concerns about environmental impacts of energy production—for example, most concerns about water related to pollution of the groundwater local residents rely upon for drinking, although other water-related concerns included overuse of scant ground and surface water resources as inputs in hydraulic fracturing. Concerns about pollution and spills/leaks obviously overlapped and two major trends emerged among these responses: concerns about long-term effects on farmland due to spilled, highly-saline wastewater from hydraulic fracturing, and concerns about the quality of workmanship over the long-term, with questions about when oil-related infrastructure will crumble and cause even more problems

than experienced during development and initial production phases.

From these data, it appears that bottlenecks in successful soil reclamation and vegetation restoration arise from a lack of willingness or unfamiliarity on the part of energy companies and are exacerbated by a lack of policy and resources to regulate recovery, rather than a lack of science on how such processes should proceed. Focus group participants described how local landowners and lawyers were becoming savvy about how reclamation/restoration practices and standards must be included in easements prior to construction impacts, as well as how energy companies increasingly seek guidance on local best management practices from public resources like USDA-NRCS agents.

Social Issues concerns Crime was the often-most reported social concern (30 instances, Table 2) and echoed statements by focus group participants. Focus groups and survey respondents cited an increase in criminal activity—mostly unspecified, but several mentioned drugs, theft, and prostitution—on account of increased population and a greater degree of transience related to the demographics of the energy industry. While actual risk from increased criminal activity might be overstated, these concerns speak to a widespread sense among both focus group members and survey respondents that the rural way of life these community members value is changing—in fact nine survey respondents specifically mentioned threats to way of life or culture in their handwritten responses and focus group participants expressed feelings of alienation resulting from unsmiling faces in town and unreciprocated waves on rural roads.

Overlapping considerably with crime were concerns over recent changes in the demographics of local communities on account of energy-related activity (22 instances, Table 2). These responses showed the most variability in respondent perceptions of energy-related impacts, ranging from the intolerant—"Everyone that comes here should act like us and speak English"—to the considered—"we always had 1% of our population that were bad and/or disruptive ... but now we have 1% or less say of 5000 rather than 1% of 1000. Change is hard to accept and will take time." Aside from specific concerns about increased criminal activity, survey respondents expressed general concern that oil workers expected support from social services—often provided informally by local churches and community groups—without "paying in" to these institutions through regular attendance, donation, or volunteering.

SB 2020/2080
1-18-17
#3

NDSU Central Grasslands Research Extension Center Legislative Report: Senate Appropriations – SB 2020

January 18, 2017

Central Grasslands REC: 2015 – 2017 Update

- Completed Range and Forage Research laboratory. Partially funded (72 %) during 2013 – 2015 Legislative Session

Central Grasslands REC: 2015 – 2017 Research Programs

- Late-season grazing options to enhance value to cropland.
  - *Grazing corn residue with and without cover crop mixture*
  - *Bale grazing using selected supplements compared to traditional drylot winter feeding strategies*
    - Impacts on livestock performance and herd health.
    - Feeding efficiency
    - Soil health
- Enhancing reproductive efficiency of beef cows using new synchronized breeding program
  - *Allows for shorter calving season – increasing performance and adding value to the land*
  - *Allows for superior selection of breeding stock, improving herd genetics and long-term economic return to the rancher*
  - *Testing pre-breeding vaccines and injectable trace mineral supplements to improve herd health*
- Using new reproductive techniques through embryo transfer to enhance genetic traits of the cow herd

Central Grasslands REC: 2017 – 2019 Research Programs

- Implement an innovative strategy to support range research in times of reduced funding. Create four new applied range studies in 2017 to address grazing and disturbance ecology to enhance economic value to the land for ranchers, control invasive plants, create pollinator habitat, and develop higher quality habitat for wildlife
  - *Determine best stocking density to achieve optimum grazing efficiency*
  - *Study different disturbances, including grazing to reduce invasive plants, increase native plant diversity modify grazing distribution, improve soil health, and create sustainable cow herd on a limited land base*

NDSU Central Grasslands Research Extension Center Legislative Report – Senate Appropriations – SB 2020

January 18, 2017

Central Grasslands REC: 2015 – 2017 Extension Program

- Area Livestock Systems Specialist prioritized and taught three programmatic strategies while enhancing the visibility of the Center.
  - *Demonstration projects*
    - Engaged four ranchers to study effects of winter-time bale grazing. Designed to reduce input costs and use of fossil fuels, enhance land value by double use, enhance soil health
  - *Intense 2-day workshop on late-season grazing options in North Dakota*
    - Conducted within the Center's mission area in Jamestown – almost 100 ranchers attended
  - *Extension agent training workshops*
    - Helped teach 4 in-service training programs on determining pasture carrying capacity, pasture monitoring techniques, plant identification, and demonstrated late-season grazing strategies
    - Co-authored two extension publications and develop the Center's first newsletter distributed to our local ranchers and land managers

Central Grasslands REC: 2017 – 2019 Extension Program

- The Livestock Systems Specialist departed for a new job. She had the opportunity to go back home and work for Oregon State University
  - *The Center will lose this position without restoration of funds to the NDSU Extension budget*

Central Grasslands REC Advisory Board Meeting: November 9, 2016

- Restored budget to 2015 – 2017 appropriations as ranked #1 for the NDSU Agricultural Experiment Station and NDSU Extension Service by the State Board of Agricultural Research and Education (SBARE)
- Hire vacancy positions (3 positions) at the Center
  - *#1 ranking – Range Scientist*
  - *#2 ranking – Extension Livestock Systems Specialist*

SB 2020/2080
1-18-17
#4

Testimony for the NDSU Hettinger Research Extension Center
Submitted by Christopher Schauer, Director Hettinger Research Extension Center
Senate Appropriations Hearing – SB2020/2080
January 18, 2017

Thank you for your support during the last legislative session. We have hired a new Area Livestock Extension Specialist, Dr. Janna Kincheloe, and she is putting the groundwork in developing a new livestock extension program for southwest North Dakota. Due to the budget allotments of the current biennium, we were unable to hire the livestock research technician that was funded in the last session, and currently have an open agronomy research technician position due to the early retirement buyout and the budget allotments.

Moving forward, the top issues facing the HREC, and supported by our Advisory Board, is restoration the funding to the HREC back to the 2015-2017 base budget. The priority of the HREC Advisory Board and myself over the past 10 years has been to build a team of scientists that can answer a diversity of research and extension questions, and I believe we have accomplished that goal. We currently have 4 disciplines of research at the HREC; Animal Science (Dr. Christopher Schauer), Range and Wildlife Science (Dr. Ben Geaumont), Weed Science (Dr. Caleb Dalley), and Agronomy (John Rickersten), as well as the new Area Livestock Extension Specialist (Dr. Janna Kincheloe). This team of Research and Extension personnel are poised to tackle the downturn in the agricultural economy through diverse research and extension. Increasing production on a decreasing land base is one goal, but our team also has the ability to address the larger needs society has placed on agriculture. Examples of these needs include: improving pollinator habitat, maintaining a diverse ecosystem for wildlife, maintaining and improving grasslands for livestock production, finding new varieties of crops that can thrive in SW ND, and minimizing the impact of dangerous and invasive weeds on our cropping systems. Some highlights of our team's research are:

- Preliminary data indicating sheep grazing winter wheat during the spring for 30 days had no impact on subsequent winter wheat yields. This project also includes incorporating cover crops and sheep grazing into a cropping winter wheat rotation – a novel concept in SW ND. This project incorporates all 4 disciplines of research and extension at the HREC, and is an example of the team approach to research we are utilizing.
- Dried distiller's grain with solubles appears to negatively impact male fertility in growing ram lambs when fed at high levels of the diet (30% of the diet or more).
- 51% of the spring wheat varieties planted in SW ND were new varieties tested at the HREC in the past 5 years.

However, a team of scientists is limited by the technicians they have in place to conduct the field research. Maintaining a technician for each research scientist is essential to continue to provide the research that the producers of ND expect from the HREC. Any progress towards a budget based on the 2015-2017 base budget will allow us to consider hiring the 2 technicians that have been cut from our program the past 2 years. Additionally, the importance of equipment funds that have increased to $150,000 per biennium cannot be understated. With the down turn in the agriculture commodity sector, rental tractors will become less available, and the funds required to replace older tractors will become more important, not less important than in the past.

In closing, I support the SBARE priority list and hope I have provided additional information to support the restoration of the 2015-2017 base budget. Thank you.

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NORTH DAKOTA **AGRICULTURE EXPERIMENT STATION**

[redacted]ettinger Research Extension Center

Hettinger REC Research in Brief

- Integrated crops, livestock, and range research and extension
- Variety, herbicide, and crop production research
- Lamb and beef feedlot nutrition and management
- Reproductive management of fall, winter, and spring lambing ewes
- Multiple-land use management including cropping systems, livestock, and wildlife as potential outputs
- Range monitoring techniques

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The Hettinger Research Extension Center (HREC) was established from a gift of 160 acres by the residents of Adams County and the city of Hettinger in 1909. Original work at the HREC involved converting native prairie to farm land for the purpose of agronomic research. In 1912, through cooperation with the United States Department of Agriculture, a dry land farming trial began. In 1913 a herd of Guernsey and Jersey cows and bulls was purchased to aid local producers in the production of replacement dairy cattle. Following a brief closure during the Depression, the HREC continued to grow the research programs, focusing on agronomy and sheep breeding. In 1947, an option was secured for the purchase of an extra quarter of land to continue and expand sheep and agronomy research. In the 1980's the research programs were solidified with the addition of land bringing the total owned land to 1130 acres, and the hiring of an agronomist.

The HREC is a semi-arid site located in southwest North Dakota, providing the most southerly NDSU location in the non-glaciated portion of North Dakota as a site for its agronomy research program. The HREC also is located at the center of the North Dakota sheep industry, the focus of one of its animal research programs. Furthermore, the HREC is located in an area of rapidly growing livestock feeding ventures, another focus of animal research at the HREC. Additionally, the HREC is located in a region where much of the land base is in the Conservation Reserve Program and Forest Service lands, which has resulted in additional research evaluating potential changes in the CRP program and how these changes may affect upland native and game bird populations. A new research program evaluating low-cost rangeland monitoring strategies on U.S. Forest Service lands has resulted in a significant increase in the quantity of rangeland, livestock, and wildlife interaction research conducted at the HREC throughout the western Dakotas. Research at HREC involves the disciplines of animal science, range and wildlife science agronomy, and weed science. Collaboration is with Main Station scientists, Branch Station scientists, U.S. Forest Service, grazing associations, university scientists from WY, SD, and MT, and USDA research entities in these research disciplines to improve the productivity of livestock and cropping systems and economic development of the region. Through these efforts, the center's research program has gained a national reputation for its involvement with sheep production systems as well as a strong regional and state reputation for its research in agronomy, multiple-land use, and calf backgrounding.

AGRONOMY and WEED SCIENCE

- Conducted crop variety and hybrid yield trials for 21 different crops at Hettinger along with off-station small grains trials at 4 locations. The 2016 ND spring wheat variety survey shows 51 percent of the acres in southwest ND were planted to varieties released in the past five years. The HREC variety testing program is an excellent source of unbiased information on new varieties to help farmers determine the optimal crop cultivars to plant.
- Evaluation of carinata, an oilseed mustard like canola, for adaptation to western ND for use biofuel production. This crop looks promising with yields of carinata being competitive with hybrid canola and having fewer problems with seed shatter.
- Conducted crop production studies including planting date and seeding rate on soybean, planting date and zinc fertilization to reduce cadmium uptake in durum wheat, and a study looking at the management of root rots in field peas with crop rotation
- Evaluation of new herbicides for crop safety and weed control in crops important to SW ND.
- Evaluation of herbicides for weed control on rangelands and their impact on the growth and establishment of desirable forages.

RANGE and LIVESTOCK SCIENCE

- Collaboration with the USDA-ARS evaluating the effects of woody cover and Kentucky Blue Grass encroachment on bird and butterfly abundance.

HREC Crops, Weeds, Livestock, and Range

- Evaluation of rangeland restoration and wildlife habitat opportunities on the Elkhorn Ranch near Medora, ND.
- Evaluate the ecological effects of integrating livestock herbivory and annual forages into a winter wheat cropping system.
- Evaluate alternative land management options on expiring CRP lands that integrate livestock, wildlife, and fire.

- Evaluated supplementation strategies during pregnancy and their effect on embryonic death loss, fetal development, and potential feedlot and reproductive performance of offspring.
- Continued research in "Value Added Animal Production"; a research program focused on evaluating forage, grain, byproduct, and marketing alternatives in calf backgrounding and lamb finishing.
- Evaluation of feeding and supplementation strategies that impact ram fertility.
- Conduct the Dakota Fall Performance Ram Test; a 140 day Rambouillet Certificate of Merit program, one of three Rambouillet Ram Tests in the nation.

OUTREACH and EXTENSION

- Contributed to NDSU Weed Control Guide.
- Conduct annually the HREC Beef Day, Sheep School, Shearing School, Wool Classing School, Carcass Ultrasound School, Crops Tours, Crops Day, and Soil Health and Wildlife Workshops.
- Published NDSU Sheep Research Report and Hettinger Crops Day Report and contributed to NDSU Beef and Range Report and Weed Research Report.
- Hired a new Area Livestock Extension Specialist who is developing a new Extension program for SW North Dakota focusing on cattle production systems.

HREC Research Faculty

Dr. Christopher Schauer, Director & Animal Scientist
christopher.schauer@ndsu.edu

Mr. John Rickertsen, Agronomist
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Dr. Benjamin Geaumont, Wildlife and Range Scientist
benjamin.geaumont@ndsu.edu

Dr. Caleb Dalley, Research Weed Scientist
caleb.dalley@ndsu.edu

Dr. Janna Kincheloe, Area Livestock Extension Specialist
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NDSU | HETTINGER RESEARCH EXTENSION CENTER

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Langdon Center SB 2020/2080 1-18-17

NDSU Langdon Research Extension Center Legislative Report — Senate Appropriations

January 18, 2017

#5

Langdon REC 2015—17 Update

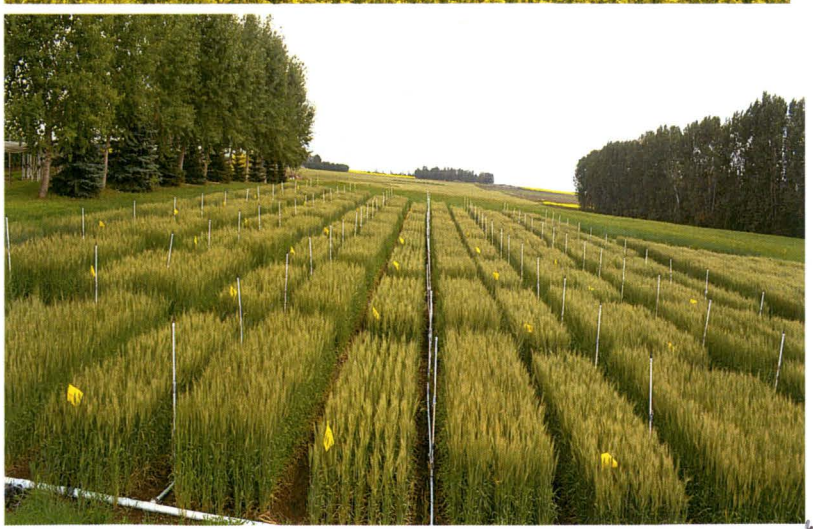
- Purchase of 160 acres of land. Total acres farmed for research is now 755 acres.

Langdon REC AES Research Programs

- Agronomy research programming on all crops grown in our region.
- Applied research emphasis on canola.
- Significant new crop research in industrial hemp, faba beans and others.
- Plant Pathology research program focuses on diseases of ALL crops in North Dakota. The NE ND climate is the epicenter of crop disease incidence making Langdon an ideal disease research site.
- Foundation Seed production provides regional growers with superior NDSU crop varieties.
- Support main station development of new technologies such as new variety development with NDSU crop breeders to maximize state tax dollars ROI.

Langdon REC Extension Program

- Agronomy Area Specialist prioritizing agent training, grower questions and IPM surveys in northeast ND.
- Soil Health Area Specialist prioritizing agent training, soil health education, and grower questions. In 2015 Langdon completed a groundwater management tiling project 100% funded by the ag industry and is assisting growers to maximize field tiling ROI.



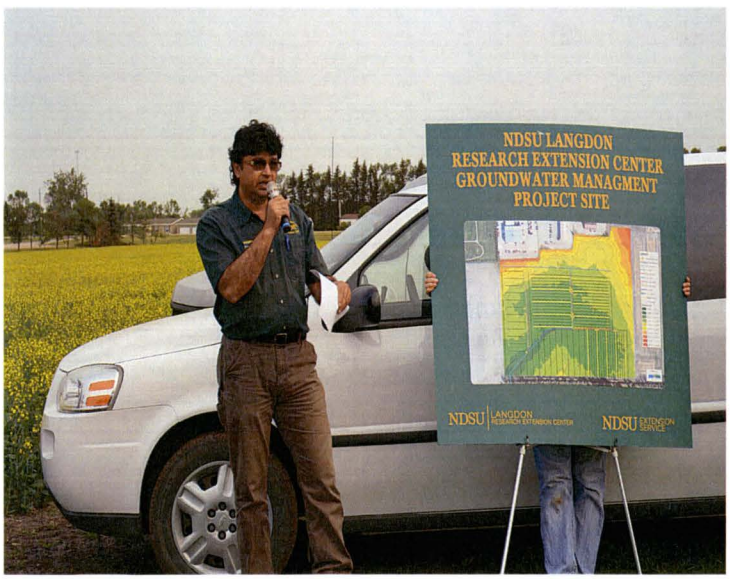
NDSU Langdon Research Extension Center
Legislative Priorities — 2017/19 Biennium

Langdon REC Advisory Council Meeting—December 9, 2016

1) Restoration of 2015/17 Base Budget
2) Support SBARE Ranking of NDSU Agricultural Experiment Station Needs Based Budget.
3) Support SBARE Ranking of NDSU Extension Service Needs Based Budget.

Capital Requests

1) Support SBARE Ranking of Capital Projects (Seed Cleaning Plant Renovation Number 1).



SB 2020/2080
1-18-17

#6

Testimony to North Dakota Senate Appropriations Committee: SB 2020
North Dakota State University
North Central Research Extension Center, Minot, ND
January 2017

Mr. Chairman and Members of the Committee: Thank you for the opportunity to address this committee. I am Shana Forster, director of the NDSU North Central Research Extension Center located in Minot, ND. I am relatively new to this position, having assumed this role in April 2016. I have been a dedicated member of the team at the NCREC since 2008.

The state of ND has an estimated 5.8 million acres of soil (roughly the size of Vermont) that are considered saline. The 2011-2013 ND Legislature established the NDSU Soil Health Initiative, which will continue to address this issue and provide long-term benefits to ND. The NCREC received funding for an Extension soil health specialist and has provided the people of ND valuable research and extension information on how to best manage saline/sodic soils in order to make them more productive. Efforts at the NCREC include on-farm demonstrations, field tours, and research trials using a team approach to increase the efficiency of our number one resource, our soil.

NCREC's no-till, precision planter was funded by the ND Legislature, in support of the upgrade of research equipment at RECs. This planter consists of four, adjustable row-spacing options and has the same technology that ND producers are currently using. Upgrading our small plot research equipment is necessary in order to maintain our relevance and relatability with ND production agriculture.

The people of ND own the largest seed company in the US. The NCREC Foundation Seed effort is one of several such efforts in the AES system to maintain foundation class seed for distribution to the ND agricultural industry. Our current seed cleaning equipment at the NCREC is no longer operational. The 2015-2017 ND Legislature provided the NCREC $750K in order to purchase seed conditioning equipment. We are currently seeking approval to complete this process and move forward with a fundraising campaign thru the NDSU Foundation. We hope to purchase seed conditioning equipment to continue to provide the best, pure genetics to ND producers. Currently, SBARE has ranked upgrading the REC's seed cleaning facilities as their #1 capital project.

Most of the projects conducted at the NCREC are long-term. New, updated equipment is consistently necessary to perform our duties effectively. The restoration of the budget to 2015-2017 levels will enable us to maintain the projects to which we are committed and invested. In addition, the ability to complete the NCREC seed conditioning facility will enable us to provide quality seed to the producers of ND.

I extend my thank you to this committee and the entire North Dakota Legislature for your support of the NCREC, NDAES, ND Extension Service, and SBARE Initiatives. Also, thank you for your continued support of SB 2020.

Shana M. Forster, Director
North Central Research Extension Center
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SB 2020/2080
1-18-17
#7

January 18, 2017

Chairman Holmberg and Members of the Senate Appropriations Committee,

I am Jerry Bergman, Director of the NDSU Williston Research Extension Center. I support the SBARE Recommendations to restore the North Dakota Ag Experiment Station and NDSU Extension Service Budget to the 2015-2017 original appropriation and SBARE's highest priority capital improvement one-time funding request for seed cleaning facilities at the Williston Research Extension Center, Langdon Research Extension Center, Carrington Research Extension Center, and North Central Research Extension Center.

Our current seed cleaning facility built in 1954 is antiquated and outdated with low seed cleaning capacity and not designed to condition pulse crops and other crops requiring gentle handling and conditioning. Our land base and yield potential for pure seed production was dramatically increased in 2012 through a land lease with North Dakota Game and Fish Department of 1,184 acres of bottom land rich in organic matter and having high water holding capacity.

A new seed cleaning facility with optical sorting technology will not only improve our seed cleaning efficiency but allow us to handle and condition pulse crops and other specialty crop varieties of high economic importance to western North Dakota.

Dr. Audrey Kalil, our new WREC Plant Pathologist, has initiated a new plant pathology program to evaluate the efficacy of fungicides, crop rotations, tillage practices and other IPM management techniques on reducing disease and pathogen populations. One area of her focus will be the effect of different management practices on the naturally occurring beneficial organisms and the use of advanced molecular techniques to precisely quantify populations of soil-borne pathogens.

Audrey was successful in obtaining grant funding for a pulse crop pest scout to serve northwest North Dakota, has assembled a new WREC plant pathology laboratory, and established collaborations with pathologists at the USDA-ARS, Montana State University, NDSU, and other REC's.

The Nesson Valley Irrigation Research Program continues to identify best soil and crop management options to enhance irrigated crop production, improve water use efficiencies, soil health, water quality, and best integrated pest management practices and cropping systems to manage crop diseases.

The WREC Horticultural Research Program has initiated research on hops production and in the use of season extending high tunnels to expand local specialty crop opportunities for vegetables and cut flowers.

Other new projects include (1) a long-term pipeline reclamation project on WREC land to assess the economic input of the disturbed soils on crop performance and to demonstrate best reclamation treatments to restore crop yields and soil health in the disturbed soils and (2) a saline seep reclamation project in collaboration with the Montana Salinity Control Association to identify the recharge area and utilize salt tolerant grass mixes and alfalfa to reclaim the saline seep area.

WREC also established a cooperative partnership with the Williams County Soil Conservation District to construct a 60 x 100 cold storage/ equipment building at WREC for storing tree and nursery stock for spring plantings with space not needed to be used by WREC.

I thank you for your long term funding for the Ag Experiment Station, the Extension Service and the Research Extension Centers and your consideration of SBARE Requests.

Kind Regards,

Jerald Bergman
WREC Director

Carrington Research Extension Center

Testimony to North Dakota Senate Appropriations Committee: SB 2020/2080
January 18, 2017
North Dakota State University
NDSU Agriculture Research Extension Centers

1-18-17
#8

Good afternoon, my name is Blaine Schatz, I am the director of the Carrington Research Extension Center. Senator Holmberg and Senate Appropriations Committee members, I thank you for the opportunity to address your committee. The CREC is dynamic part of NDSU agriculture's research and extension capacity that is responsible for supporting a major economic industry in the state, agriculture. There are times when the public under-estimates the significance of agriculture in the state, not realizing the tremendous crop diversity that exists, the opportunities presented by livestock enterprises, and the many businesses that provide services and processing of the crops and livestock we produce. However, agriculture is a challenging business and the sheer diversity of North Dakota's agriculture presents a wide array of issues that must be addressed to allow our producers to remain economically viable and competitive in the marketplace. Farmers and ranchers across the state are currently working through challenging economic times. The Agriculture Experiment Station and our Extension Service are really the front line of defense for addressing the challenges of our diverse agriculture and bringing guidance and new knowledge to the forefront for farmers and ranchers.

I began by stating that the CREC is an important part of NDSU Agriculture. Thanks to the foresight of the ND legislature over the years, SBARE and that of other decision makers including NDSU leadership, the CREC is positioned to address many of the challenges facing this diverse agriculture. The CREC's agronomy, pathology, soils, livestock and foundation seedstock programs continue to work on behalf of the many sectors of agriculture to answer new production problems. We are researching ways to reduce input costs or to use products and practices more efficiently. We are working with our Fargo based plant breeders to help identify improved crop varieties and then increase those through our foundation seedstocks program. The CREC listens closely to our advisory board and other constituent feedback to conduct a relevant research program addressing the traditional diversity of our agriculture. However, we also work hard to stay on the forefront of emerging issues and new agricultural opportunities. I recently redirected the efforts of one of my scientists to focus on issues related to precision agriculture, including the use of unmanned aerial system technologies. At Carrington we have succeeded in securing some grant funds to address the rapidly expanding organic agriculture industry and are working to further our crop diversity even more. The Center's work to identify cover crop practices and strategies complements NDSU's soil health program and presents new options for livestock producers. The many research projects and diversity of issues the CREC addresses would not be as effective if it were not for the presence of our Extension Specialists both at Carrington and across the state. Before I conclude I wish the extend my appreciation to this committee and the legislature last session which provided some funding toward improving the foundation seed conditioning infrastructure at Carrington and Minot. At Carrington we have used that funding to purchase new equipment, build a basic structure and now are implementing some of the electrical features and are preparing for installation of that equipment.

As I conclude, I wish to reiterate that NDSU Agriculture is well structured to support the agriculture industry in the state. We are on the frontlines to address the challenging economic times we now face and the new opportunities that are being presented for the future. I certainly understand the state is facing challenging economic times and we respect the difficult decisions your committee must make in the months ahead. I would ask that you positively consider the needs of NDSU Agriculture, just as you have in the past. The #1 SBARE priority has been discussed and I ask you to support that to the extent possible. You are aware that there are other issues that have been identified as SBARE priorities. These other priorities reflect the fact there are other important issues our constituency believe NDSU needs to address. Ultimately your determinations will define how well we are positioned to support agriculture in the years ahead. We appreciate your support and know that whatever budget results, will be used to the best of our ability to support the farmers, ranchers and agricultural industries across the state.

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Carrington Research Extension Center
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SB2020/2080
1-18-17
#9

NDSU AGRONOMY SEED FARM

LEGISLATIVE REPORT-SENATE APPROPRIATIONS COMMITTEE

Testimony by Brian Otteson, Director
Budget No. 649
JANUARY 18, 2017

- **MISSION**
  - To provide an adequate supply of Foundation Seed to the seed producers of North Dakota
  - Provide support to the main station scientists
  - Support research and outreach efforts that focus on the evaluation and development of new crop varieties
- **FINANCES**
  - Completely self-supportive through seed sales and crop revenues
  - Unique in that no general fund money is used
- **LAND USE**
  - Approximately 1300 acres of seed production and research land maintained by the seed farm
  - Provides land preparation assistance to NDSU research projects at Casselton, Prosper and Fargo
- **PERSONNEL**
  - Three FTE's
  - Occasional seasonal help as needed
- **SEED PRODUCTION**
  - Wheat, barley, oat and soybean
  - Typically grow between 20-25 varieties per year
  - Carry an additional 15 varieties from previous years
  - Sell on average 32,000 bushels of seed per year

- **2017-19 BUDGET**
  - Continue operating as in the past within our appropriated budget
  - Replace aging equipment as needed
  - No major changes

Northern Pulse Growers Association

SB 2020/2080
1-18-17
#10

Testimony of Shannon Berndt
Northern Pulse Growers Association
Senate Bill 2020
Senate Appropriations
January 18, 2017

Good afternoon Chairman Holmberg, Vice Chairman Bowman and members of the committee. For the record, my name is Shannon Berndt and I am the executive director for the Northern Pulse Growers Association. The Northern Pulse Growers Association represents pea, lentil and chickpea growers and processors throughout North Dakota and Montana. On behalf of the pulse industry, I am here today to provide testimony in support of SB2020.

I would like to thank the North Dakota Legislature, SBARE and NDSU for the tremendous support the pulse industry has received over the past several years. With the establishment of the pulse breeding program in 2007 and quality lab in 2009, our industry has continued to flourish. The regions pulse industry accounts for 85% of all pulse acres produced in the United States. In 2016 pulse acres reached historic levels. 2.5 million acres of dry peas, lentils and chickpeas were planted in the United States. It is forecast that in 2017, pulse acres could increase another 30%.

The efforts by the NDSU research and extension centers around the state have had a major impact on the development of the pulse industry. Pulse crops are no longer found only in the soup aisle. Fractions of pulses—flours, starches, proteins and fibers have opened up many new marketing opportunities. According to an article in *World Grain*, the pulse flour market is expected to triple by 2024. The breeding, quality and pathology programs at NDSU Main Station will be paramount to the continued growth of our industry and meeting these market demands.

We currently have a vacancy in the pulse breeding program as Dr. Kevin McPhee took a new position at Montana State University. The timing of the vacancy in conjunction with budget cuts leaves our industry in a precarious position. As new markets develop, varieties that meet customer demands as well as

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promote producer profitability will be vital. In addition to the $470,000 that the ND Legislature committed to the establishment of the breeding program, pulse producers have invested more than $1 million into the program. The pulse industry is gaining market share and we want North Dakota producers to continue to play a significant role. It is our hope that budget flexibility remains to allow for vacancies to be strategically filled.

The Northern Pulse Growers Association greatly appreciates the collaborations with NDSU research and extension over the past several years. NDSU research and extension has assisted in moving our industry forward through increased production, quality and market opportunities. In addition to the major pulse focused programs at NDSU, we have also worked closely with Extension. An example would be our work with Dr. Julie Garden-Robinson in developing programs and activities to promote pulses to consumers. Dr. Garden-Robinson has been instrumental in developing materials that are used throughout our industry for promotion. Our industry is relatively small and we appreciate the opportunity to utilize expertise in cost effective ways to promote the quality crops grown by ND producers. Extension Centers across the State have always played a major role in promoting pulse acreage growth to producers. By providing educational resources, hosting tours and answering producers' questions in addition to field research. It is vital that research and extension continues to receive adequate funding levels for the continued growth for all of North Dakota agriculture.

On behalf of the regions pulse producers, I would like to again thank the ND Legislature, SBARE and NDSU for their support. The regions pulse industry will continue to play a significant role in the future of agriculture in North Dakota and the United States. Thank you and I would be happy to answer any questions you may have.

SB2020/2080
1-18-17
#11

North Dakota Stockmen's Association
Testimony on SBs 2020 and 2080
Jan. 18, 2017

Good morning, Chairman Holmberg and Senate Appropriations Committee members. My name is Julie Ellingson, and I represent the North Dakota Stockmen's Association.

Before I begin my comments on the bills before us, I want to express our organization's appreciation to the North Dakota Legislature for all of its support of beef industry priorities over the years – most notably the Veterinary Diagnostics Laboratory, which was approved last session. I am happy to report that the new lab is well on its way to completion and will service and fortify our industry for many years to come by identifying disease, preventing outbreaks and protecting our financial investments. Thank you for recognizing this and other important needs and bringing them to fruition.

Today, I rise in support of SBs 2020 and 2080 and the critical programs and projects that they represent and that were vetted and prioritized by the State Board of Agricultural Research and Education.

We recognize the fiscal reality facing our state and the incredibly challenging task on your shoulders as you prioritize needs and allocate funds for the next biennium. As you weigh those important decisions, we urge you to keep in mind the state's return-on-investment when you invest in ag research and Extension endeavors. Instead of being part of the problem, this bill can be part of the solution, as it will help bolster the state's primary economic driver, agriculture; leverage matching dollars from industry and private investors; and generate more tax dollars that will result from agriculture's prosperity – dollars that can help solve some of our state's other economic woes.

Unfortunately, the budget allotment process has already taken a toll on livestock industry people and programming at locations across the state, from Hettinger to Carrington and points in between, creating or leaving vacancies in areas important to cattlemen and cattlewomen. Coupled with additional reductions, gaps in livestock program areas will be further exposed.

We respectfully request that you do all that you can to preserve this budget, so we don't lose ground on the research and Extension progress we have made.

We also respectfully request that you afford these institutions the flexibility they need to make strategic hires so they can utilize the available dollars where they make the most impact, instead of being forced into accepting vacancies as they occur and that may leave critical programs vulnerable or lopsided.

Thank you for your consideration of our concerns and for all the hard work you have already devoted to keeping agriculture strong.

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SB2020/2080
1-18-17
#12

Testimony of Del Gates

NDCISA President

In Support of SB 2020

Chairman Holmberg and members of the Senate Appropriations Committee:

My name is Del Gates, and I farm near Mohall and I grow, condition and sell Certified Seed. I am President of the North Dakota Crop Improvement and Seed Association, here today in support of SB 2020 as we recognize the significant importance of ag research and extension to the future of agriculture in North Dakota.

Ag research and extension is an important tool for the state's producers, the results that producers receive from ag research translates into higher yields and better quality and more income for the farmers. Breeding and research programs are multiyear commitments. They cannot be successful if funded and then reduced. It operates like turning them on and off. The breeding and research programs look to the Extension Centers, as they are agricultures main street. No city will exist without its main street.

In the fall of 2015 I contacted each Extension Center, Langdon, Carrington, Williston and Minot. I asked the Director of each site what they needed for Capital Projects, they all responded with stationary cleaning facilities. With that request NDCISA also supports the one-time funding for seed cleaning facilities, as these facilities are extremely important for producers statewide. NDCISA has been instrumental in working with SBARE to include funding for this investment into agricultures future in this state. We have seen grass roots support for the construction of these facilities because of the increased benefit from new and improved genetics. These facilities are also income generating and I must stress "income generating" for the research centers and will become more important in the future as crop diversity continues to grow in the state. The current facilities are either not functioning or are inadequate to handle all of the diverse crops that are now grown and do not contain the technology that is needed to do a proper job of conditioning new generation seed. Without these facilities, you are tremendously short changing the research and the breeding programs.

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We understand that there are budget constraints to worry about, but we feel that there is a difference between and investment and an expense. We need to continue to make investments into agriculture as we always have. The most futuristic investments have come, when what looks to be the worst of times. The dividends will pay down the road. Agriculture is and always will be the backbone of our state's economy and we need to insure that agriculturalists are given all of the tools they need to continue to be successful.

This is information on the value of money going into ag research at NDSU and the pay back compiled by Dr. Bill Wilson, NDSU Ag economist.

Major results from this study for ND are:

- The benefit-cost ratio for state level research and extension for ND is 37.3. This compares to 21 for the US. This result implies that for every dollar spent on research in this state, $37 is returned to the economy of the state. It also indicates;
- The internal rate of return for research an extension in ND is 23.8% vs., 18.9% for the country;
- Both of these indicate that returns to research and extension in ND exceed that of the country.

Suggest invest money in Ag would be a good investment for the Ag industry of ND and the future budget of North Dakota.

We appreciate your past support and urge your continued support of ag research and extension.

Thank you,

Del Gates

205 Lawndale St.

Mohall, ND. 58761

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U.S. Durum Growers Association

PROMOTING THE PRODUCTION AND MARKETING OF DURUM AND SEMOLINA

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office@durumgrowers.com • www.durumgrowers.com

SB 2020/2080
1-18-17
#13

Testimony of Blake Inman
USDGA Director
In Support of SB 2020

Chairman Holmberg and members of the Senate Appropriations Committee:

My name is Blake Inman, and I farm near Berthold and am the owner of a seed company that conditions and sells certified seed. I am here today as a director of the U.S. Durum Growers Association in support of SB 2020 as we recognize the significant importance of ag research and extension to the future of agriculture in North Dakota.

Ag research and extension is an essential tool for the state's producers, and there is a high rate of return to the state's economy for money invested in ag research and breeding programs. Restoring the funding for ongoing research is essential as quality breeding programs, such as those that have been established at NDSU, take decades to establish and, therefore, can't just be turned on and off. North Dakota produces 60 percent of the nation's durum, and NDSU's durum breeding program is essential as no significant private breeding programs exist. The program is known around the nation, if not the world. Research, especially for scab management and resistance and quality management in durum, is also of utmost importance.

USDGA also supports the one-time funding for seed cleaning facilities as these facilities are extremely important for producers statewide. They provide new and pure genetics that have contributed to increased revenue. They are also an income generator for the research centers through the sale of foundation and registered seed. The cost of not building new plants ~~in~~ is high for producers. The delay of Carpio durum by two years had a significant impact on reduced yields and quality. The new facilities would have equipment that could have caught the contamination early and corrected it.

We understand the budget constraints being faced in the upcoming biennium. However, agriculture is and will continue to be the foundation of our state's economy. Even in times of low commodity prices, our families will continue to be here buying groceries, patronizing local businesses and contributing to the state's economy.

We appreciate your past support and urge your continued support of ag research and extension.

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SB 2020/2080
1-18-17
#14

North Dakota AG COALITION

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VOTING MEMBERS

Ameriflax
Independent Beef Association of ND
Milk Producers Association of ND
Minn-Dak Farmers Cooperative
ND Ag Aviation Association
ND Agricultural Assn.
ND Ag Consultants
ND Agri-Women
ND Barley Council
ND Corn Growers Association
ND Corn Utilization Council
ND Crop Improvement & Seed Association
ND Dairy Coalition
ND Dry Bean Council
ND Dry Edible Bean Seed Growers Association
ND Elk Growers
ND Ethanol Council
ND Farm Credit Council
ND Farmers Union
ND Grain Dealers Association
ND Grain Growers Association
ND Irrigation Association
ND Lamb & Wool Producers
ND Oilseed Council
ND Pork Producers Council
ND Soybean Growers Association
ND Stockmen's Association
ND Wheat Commission
Northern Canola Growers Association
Northern Plains Potato Growers
Northern Pulse Growers Association
Northwest Landowners Association
Red River Valley Sugarbeet Growers
U.S. Durum Growers Association

NON-VOTING MEMBERS

BNSF Railway Company
Ellingson Companies
Garrison Diversion Conservancy District
ND Association of Ag Educators
ND Association of Soil Conservation Districts
ND Beef Commission
ND Department of Ag
ND Soybean Council
ND State Seed Commission
NDSU Agricultural Affairs

Testimony of Paul Mathiason
North Dakota Ag Coalition Chairman
SB 2020

Chairman Holmberg and members of the committee, my name is Paul Mathiason, and I am here today as the Chairman of the North Dakota Ag Coalition. The Ag Coalition has provided a unified voice for North Dakota agricultural interests for over 30 years. Today, we represent more than 40 statewide organizations and associations that represent specific commodities or have a direct interest in agriculture. Through the Ag Coalition, our members seek to enhance the climate for North Dakota's agricultural producers.

The Ag Coalition takes a position on a limited number of issues, brought to us by our members, that have significant impact on North Dakota's agriculture industry. The Ag Coalition supports the funding of the 2017-19 SBARE priorities for the NDSU Extension Service and the North Dakota Agricultural Experiment Station, as ag research and extension continue to be one of the top priorities for North Dakota's crop and livestock producers. Private industry provides numerous options for producers who then rely on ag research and extension to determine the value of those products and services.

We appreciate your past support and urge your continued support of research and extension as these programs provide valuable information, education, and tools for the state's producers. They have been, and will continue to be, the driving force in the future of North Dakota's agriculture industry. We encourage your support of SB 2020.

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SB 2020/2080
1-18-17
#15

North Dakota Soybean Growers Association
1555 43rd Street South, Suite 103, Fargo, ND 58103
(701) 640-5215 | www.ndsoygrowers.com

Good morning Chairman Holmberg and Senate Appropriations members. I'm Scott Rising representing the North Dakota Soybean Growers Association.

I stand at the podium 1st to thank you all for your past funding of these cornerstone budgets to North Dakota's many Agricultural successes. I'm excited about this opportunity to share our support for these budgets.

The concept of "Research" for crop production conjures up images of thieving lush green crop test plots for many. I see sun, smell the soil, feel the moisture of the morning air. I recall images greenhouse visits, strange equipment of all types, but mostly the faces of trusted researchers.

I think about the relationship between the concepts of "Effective" and "Efficient"; getting it "right" versus getting it "soon." In that contest, we favor results being "right", above "soon."

Effective Ag research takes time. The time that often extends dreamed about returns on investments into years, not just months. A recent soybean community national study indicates that returns on soybean research investments average $6.50 for each $1.00 invested. The success formula includes healthy investments in researchers themselves; their time, experience, talent, patience and persistence, coupled with the tools and facilities to complete their work are all critical. Research is a people endeavor!

North Dakota's Agricultural Research & Extension teams are world-class organizations dedicated to effective and timely sharing of research results and application information, whether for crops, critters or other targets.

North Dakota has top-notch Agricultural destination and provider of crops, critters, practices and research. We are anchored by a world-class Greenhouse and Commodity Trading Center, clustered with the Northern Crops Institute and Cereal Science Program at NDSU. The cluster draws producers and customers from near and far. It facilitates building of

collaborative relationships vital to researcher to producer and producer to customer trust, accommodating world-wide market development.

Properly resourced North Dakota researchers at NDSU's Main Station; the Branch Stations at Langdon, Minot, Williston, Dickenson, Hettinger, Streeter, and within our Extension Network are all critical to North Dakota's future successes, not just in our fields, but every community, big and small.

We are supportive of the State Board of Ag Research & Education and the SBARE priorities before you today. We only ask that you make every effort to restore full funding to the base level established in the 2015-17 budget.

We fully understand this huge "lift" we seek. The Soybean community itself has increased its research investments this year in spite of over-all revenue reductions. Our Council is funding about $1.5 million for projects ranging from production issues to final product ingredient development.

Please honor the State Board of Research and Education's interim work and the magnificent men and women of North Dakota's Agricultural Research and Extension Community **by fully funding this request to Effectively and Efficiently plant, tend and harvest the origins of ND's future Economic Strength.**

Thank You,

Scott Rising
NDSGA Legislative Director
Scott.rising@ndsoygrowers.com
Cell 701.527.1073

North Dakota
Grain Growers Association

Your voice for wheat and barley. www.ndgga.com

SB 2020/2080
1-18-17
#16

North Dakota Grain Growers Association
Testimony on SB 2020
Senate Appropriations Committee
January 18, 2017

Chairman Holmberg, members of the Senate Appropriations Committee, for the record my name is Dan Wogsland, Executive Director for the North Dakota Grain Growers Association (NDGGA). Through our contracts with the North Dakota Wheat Commission and the North Dakota Barley Council our Association engages in domestic policy issues on behalf of North Dakota wheat and barley farmers. NDGGA appears before you today in support of SB 2020.

Chairman Holmberg, members of the Senate Appropriations Committee, you are all very much aware that agriculture is one of the backbones of the North Dakota economy. Through thick and thin our state's farmers, ranchers and agribusinesses have stood strong providing an economic engine that propels our state. NDSU agricultural research and the ability to share that research through NDSU Extension is the lifeblood of the agriculture economic engine in North Dakota. In today's global economy it is impossible for North Dakota farmers and ranchers to be competitive if they aren't provided the latest and greatest in research and extension which will help to make them successful. It takes adequate funding to provide for that success; thus you have SB 2020 before you today.

Mr. Chairman, members of the Senate Appropriations Committee, the budget you have before you today is an investment it North Dakota's economic future. As stated before NDGGA is in support of SB 2020 with one caveat; our Association feels it critical the 10 percent reductions instituted earlier to the NDSU Research and Extension budgets be restored in this legislative proposal. Additionally NDGGA believes that NDSU Research and Extension be given the ability to adjust spending within the limits of the legislative appropriations set forth by the North Dakota Legislative Assembly.

Research and extension funding pays huge dividends for our state. Whether its new commodity variety development, improved pesticide use, soil health initiatives, leadership training, economic analysis, marketing training, or outreach NDSU Research and Extension have been on the front lines of agriculture's success in our state. It isn't by accident that North Dakota leads the nation in the production of 10 to 14 different crops annually. It isn't by accident that North Dakota farmers are leaders nationally in pesticide compliance. It isn't by accident that NDSU economists are leaders in agriculture analysis in the U.S. It is the quality of people carrying out the research and extension efforts who are allowed to perform through the funding of the North Dakota Legislature that makes their efforts possible. That said, without that funding support we risk diminishing success in a pillar of our economy.

Chairman Holmberg, members of the Senate Appropriations Committee, I would be remiss if I did not mention one essential program in particular which deserves your attention and support; namely the Center for Ag Policy and Trade Studies (CAPTS). CAPTS provides essential state specific Ag policy analysis; this analysis will be critical in the upcoming new Farm Bill debate. Farm policy is just as important to North Dakota farmers and ranchers as weather and prices. Having the ability to call on CAPTS for independent analysis of policies impacting our state can be the difference between success or failure of the North Dakota farm community.

Therefore Chairman Holmberg, members of the Senate Appropriations Committee NDGGA respectfully requests your favorable consideration of restoring SB 2020 to its pre-allotment funding and for your favorable recommendation regarding the legislation.

SB 2020/2080
1-18-17
#17

Testimony by Kip Kovar, District Engineer
Garrison Diversion Conservancy District

to the

Senate Appropriations Committee

Bismarck, North Dakota
January 18, 2017

Chairman Holmberg, members of the Senate Appropriations Committee, thank you for this opportunity to testify in support of SB 2020, the NDSU Extension Budget. My name is Kip Kovar; I am the District Engineer for the Garrison Diversion Conservancy District.

Garrison Diversion focuses on the development, expansion and enhancement of irrigation in North Dakota and together, through a cooperative agreement with the North Dakota State University, provides aid to the Oakes Irrigation Research Site. Recently, the 20-acre site was expanded to 40-acres, and irrigation research practices continue to benefit both irrigators and dryland farmers throughout North Dakota.

The Oakes Irrigation Research Site was established as a 20-acre plot in 1970 and recently expanded to 40 acres.

The objectives of the Oakes Irrigation Research Site are to provide irrigators with information that results in efficient crop production, develop and refine best management practices, support irrigation development in North Dakota, and to determine alternate and specialty crops to be grown under

irrigation in North Dakota. Garrison Diversion funds 75% of the Oakes Irrigation Research Site, with the remaining 25% funded through grants.

We support the SBARE process of identifying and prioritizing state funding. In addition, we support the restoration of the NDSU Agriculture budget, which supports the number one industry in North Dakota. We would appreciate your efforts to restore cuts to the NDSU Agriculture budget and any consideration you could give to the Oakes Irrigation Research Site.

Many people will come before you this session and make the point that funding their priority will be good financial business for the state. The return on investment of NDSU Agriculture to the state of North Dakota is profound; the improved farming practices, quality of life and leadership training for youth and adults is unequaled by any other organization in the state.

Thank you for the opportunity to testify in support of SB 2020.

NORTH DAKOTA
Farmers Union

SB 2020/2080
1-18-17
#18

January 18, 2017

SB 2020
Senate Appropriations

Chairman Holmberg and members of the Senate Appropriations Committee,

My name is Kayla Pulvermacher; I am testifying on behalf of the members of North Dakota Farmers Union. We support SB 2020.

We urge the North Dakota Legislature and the Governor to support the funding of agricultural research. Recognizing the adverse economic condition the state is currently in, we agree that enhancements to the budget are not possible; however, we do respectfully ask for the committee to restore the 10 percent budget to 2015 to '17 original appropriations.

Agricultural research is vital for the industry. According to an NDSU study done 2 years ago, the return on investment for agricultural research is huge: $25 of return for every one dollar invested. This investment helps to combat crop and animal diseases, create better plant breeds, and to find new crops that will help North Dakota's producers diversify.

Thank you for the opportunity to testify, Mr. Chairman. I can take any questions you may have.

SB 2020/2080
1-18-17
#19

January 16, 2017

North Dakota Senate Appropriations Committee

Harvest Room, State Capitol

Bismarck, ND 58505

RE: Support SB 2020, SB 2080, Restore the SBARE budget to the 2015-17 original appropriation

Dear Senators:

My name is Sarah Lovas and I am a farmer and an agronomist from Hillsboro, ND. North Dakota's budget is tight this year, but I'm asking you, as a farmer/agronomist, to support funding the NDSU Extension and the Agricultural Experiment Stations, by restoring the SBARE budget to the 2015-17 original appropriation. I apologize that I'm not attending the hearing on this senate bill in person, but I'm attending Dr. Franzen's (NDSU Extension Soil Specialist) Soil and Water Workshop. This workshop and other Extension workshops are critical to my continuing education as an agronomist.

It is important to support the NDSU Agricultural Experiment Stations:

1) **ND's agriculture is extremely diverse across the state. Research conducted at experiment stations across North Dakota make it possible to collect applied research data from environments where there crops are commonly produced.** Canola is a good example. North Dakota is the #1 producer of canola in the USA. Very few canola acres are produced near NDSU's main campus. Most of the Canola acres are located in the northern counties. Canola research conducted near Fargo is not as relevant to North Dakota's canola producers as canola research conducted in Langdon or Minot. The temperature, moisture conditions, and soils are different in Langdon and Minot compared to Fargo. The experiment stations located in Minot and Langdon are critical to having relevant environments for conducting relevant canola research.
2) **North Dakota Agriculture Experiment Stations do research on crops important to North Dakota that might not otherwise be done nationally.** North Dakota is #1 producer of crops such as flax, barley, canola, dry beans, dry edible peas, durum; the #2 producer of sunflowers and lentils; and the #3 producer of sugarbeets. Nationally, these crops are planted on a small number of acres in comparison to corn and soybeans. Therefore, there is not as much economic incentive for private companies or other states to do research on these minor acreage crops. However, North Dakota's cropping diversity is one of North Dakota's strengths. It's important that our agricultural experiment stations conduct research on these crops so that farmers have the information they need to make good agronomic and economic decisions.

It is important to support NDSU Extension:

1) **North Dakota Agriculture Extension Specialists provide research for real-world agricultural problems with unbiased research.**

a. Extension Specialists conduct research with commercially available products and provide statistically analyzed, unbiased results which can help farmers and agronomists make good agronomic and economic decisions for their farming operations.
b. Extension Specialists conduct research which is readily applicable to farmer's decision making processes. Examples of research information provided by Extension Specialists include, but are not limited to: fertilizer rates and placement method information, herbicide adjuvant trial information, and crop variety trial information.

2) **North Dakota Extension also provides information and education at a county level.**
   a. Every county has an Agriculture and Natural Resources Extension Agent. These Agents make education programming available for such topics as farm succession planning, cover crop and soil health education, and county crop and pest updates throughout the growing season. It's important to keep a county extension presence because agriculture is diverse across the state and the County Extension Agents can make sure that the counties have the information needed for the agriculture in their county.
   b. Not every county has a Family and Consumer Sciences (FACS) Agent. However, the presence of FACS Agents in our state should not be reduced any further. The FACS Agents provide information about food and nutrition, family budgeting, parenting, and other such topics. It's important to keep this presence as close to the county level as possible. North Dakota is diverse state and the education needs are different. For example, the FACS education needs in a more urban city, such as, Grand Forks are different from those needed in a more rural city, like Hillsboro.

Listed above are how I utilize Extension and the Experiment Stations. However, there are two other items to mention, which are important, but I'm not using at this time. 1) **Extension and Experiment Station involvement in livestock research and education.** I am not a livestock producer and so don't actively seek livestock information very often. However, Extension and the Agriculture experiment stations play a major role in livestock research and education in North Dakota. 2) **The Extension Community Vitality Program.** This program is important to North Dakota because its purpose is to help enhance communities, develop North Dakota's future leaders, and assist community organizations.

In closing, NDSU Extension and the NDSU Agriculture Experiment Stations play an important role in providing research and education to North Dakota. I hope the 2017 legislature supports re-instating the original budget from 2015-2017 and support SB 2020 and SB 2080.

Sincerely,

Sarah E. H. Lovas

607 5th Ave SE

Hillsboro, ND 58045

(701)-866-1704

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SB 2020/2080
1-18-17
#20

Testimony for the NDSU Hettinger Research Extension Center
Submitted by: Hettinger Research Extension Center Advisory Board, Kat Weinert Chairwoman
Senate Appropriations Hearing – SB2020/2080
January 18, 2017

Thank you for your support during the last legislative session. The HREC has hired a new Area Livestock Extension Specialist, Dr. Janna Kincheloe, and she is preparing her program for western ND. As a local producer, I am excited to see her begin her extension and applied research programming, and to see her be utilized by SW ND producers during this time of fluctuating markets.

The #1 priority for the Hettinger REC Advisory Board is the restoration of the 2015-2017 base budget. The Advisory Board and the staff at the HREC have spent the last 10 years developing the team of scientists and technicians needed to address the issues of today's agricultural producers. We finally feel like we have the team in place that was envisioned in 1907 when the HREC was founded by a group of local producers.

The 2015-2017 base budget included the funding necessary for each scientist to have a research technician. With the current biennium allotments, and the potential reductions for this biennium, 2 of the 4 scientists will not have a research technician. In order for our HREC scientists to continue the quality of research and outreach, a technician is needed to oversee grant writing, maintain lab equipment, and help facilitating research projects. In today's research environment additional time is required to maintain research budgets, therefore, having research scientists without technicians is not an efficient use of time or resources, and more importantly, will decrease the amount of research and outreach that is conducted in SW North Dakota. The challenging times in the agriculture sector require more, not less, research and outreach to assist local producers in finding efficiencies in their production systems to maintain profitability. Please consider restoring as much of the base budget from 2015-2017 as possible.

In closing, *we support the SBARE priority list* and hope we have provided additional information to support the need of maintaining funding for the Hettinger REC and producers it serves. Thank you.

Sincerely,

Hettinger Research Extension Center Advisory Board
Kat Weinert, Chairwoman

SB 2020/2080
1-18-17
#21

TO: North Dakota Senate Appropriations Committee
FROM: NDSU Williston Research Extension Center/MSU Eastern Ag Research Center Advisory Board

The joint NDSU Williston Research Extension Center (WREC)/Montana State University Eastern Agricultural Research Center (EARC) Advisory Board on December 6, 2016 unanimously passed the following resolutions in support of the North Dakota State Board of Research and Extension Budget Priorities

Resolution #1
The joint NDSU Williston Research Extension Advisory Board strongly endorses and supports the funding of new Seed Cleaning Facilities at WREC, LREC, NCREC and CREC as the number one priority for 2017-19 Capital Improvement projects. No funding was received from the 2013-2015 North Dakota Legislative Assembly for the Williston REC seed cleaning facilities that were built in 1954 and are the oldest (and very antiquated) REC seed cleaning facilities that pose considerable worker safety issues, of low seed cleaning capacity, and lacking in capability of cleaning pulse crops and other fragile seeds that are of economic importance to western North Dakota

Resolution #2
The Joint NDSU Williston Research Extension Center (WREC)/Montana State University Eastern Agricultural Research Center (EARC) Advisory board strongly supports and endorses the North Dakota State Board of Research and Education's # 1 priority for Program Initiatives to restore the North Dakota Agricultural Experiment Station, Research Extension Centers, and the North Dakota Extension Service to 2015-2017 Original Appropriations.

If the budget is not restored to 100 % of the 2015-2017 original appropriations and the 10% cut as proposed by the Governor is approved by the legislative assembly the budget reduction will reduce the Ag budget by $5.8 million to the main station, $2 million to the Research Extension Centers and $3 million to the Extension Service. This will result in the loss of 35 main station research positions and 10 Research Extension Center positions that will negatively impact agricultural research and research outcomes to improve the economic and environmental benefits to North Dakota crop and livestock producers and North Dakota

SB2020/2080
1-18-17
#22

December 28, 2016

To: Senate Appropriations Committee, Senator Ray Holmberg, Chairman

RE: Seed Cleaning Plant at NDSU Williston Research Extension Center

Greetings,

On behalf of The Joint Williston Research Extension Center and Eastern Agricultural Research Center Joint Advisory Committee: I express our unanimous support for funding the seed cleaning plant at the NDSU Williston Research Extension Center.

1. The existing plant is limited in capabilities and totally not designed to prepare pulse crop or specialty crop seeds.
2. Cropping patterns in the region have exploded with diversity in the last 10-20 years. The recent 5 years has demonstrated a phenomenal increase of cropping diversity.
3. New and adapted varieties offer grain producers improving opportunities to enhance soil health and increased profitability. The total dollar impact needs to be estimated by professionals other than our committee.
4. Increased volume of specialty and traditional seeds will add tremendous income to the WREC. A private seed business would consider going in debt to build this profit center.
5. WREC has the oldest seed cleaning plant out of all other research extension centers and cleans approximately 40,000 bushels of seed each year (please see attachments).

Thank you for your careful attention.

Regards,

Wayne Berry

Wayne Berry
Chairman, WREC-EARC Joint Advisory Committee

SB 2020/2080
1-18-17
#23

Justification for A New WREC Seed Cleaning Facility

The current foundation seed conditioning facility was built in 1954, making it the oldest and most outdated seed cleaning facility at the Research Extension Centers. The area designated to load and unload trucks only accommodates small single axle trucks. Grain legs that move the dirty and clean grain are worn out and need replacement. WREC asked two companies to give bids to replace the grain legs, however, upon inspection of the seed cleaning facility, neither company supplied a bid because the legs run through four floor levels and the companies found it would be very difficult to replace the legs, and it would not cost effective. With this outdated facility, WREC is limited to cleaning a maximum of 35 bushels per hour. Equipment for the distribution and conditioning of grain is currently located on five different floor levels in the building, requires constant stair climbing during seed cleaning operations and is not designed to readily accommodate air exchange and dust control mechanical features to address worker safety concerns. The conditioning plant is necessarily cleaned thoroughly at every floor level between each crop variety that is conditioned to insure seed purity for Foundation Seed. This is a task that takes two people approximately ten hours to complete and occurs about 15 times each season. The vertical seed cleaning plant at the research extension center is not suitable for cleaning pulse crops and other crops that require both soft handling equipment and horizontal seed cleaning equipment.

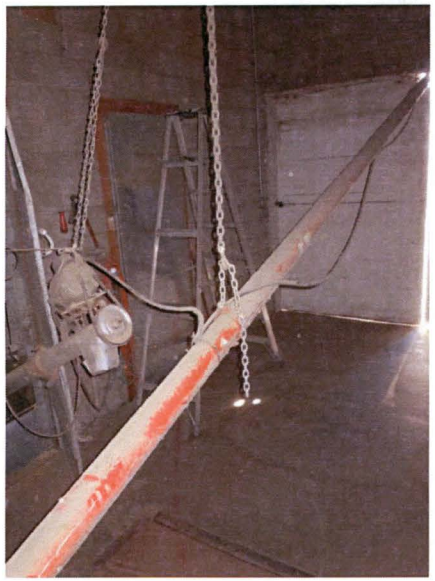
New seed cleaning technologies and superior horizontal systems are now available for the seed cleaning of pure genetics and include optical (color) sorters. Optical sorters at WREC would enhance both seed purity and germination by sorting out unwanted material, diseased and insect damaged seeds, unwanted seed types, etc. and result in more bushels of pure seed meeting foundation seed standards.

WREC plays a key role in distribution of pure seed of new varieties to foundation seed growers and to many producers in our cropping district usually in smaller quantities to quickly reach and provide economic benefits from new seed varieties our producers in North Dakota. The importance of this effort cannot be over emphasized to increase farm gate income and economic returns to ND. With the increase of transgenic and identity preserved traits in the crops and crop varieties grown in North Dakota, the role of the research extension centers in pure seed increase of both transgenic and conventional crops will increase not diminish provided available seed cleaning facilities are available to efficiently clean and process more seed varieties during the winter months. Based on the manpower demands and time available to condition seed varieties, it is justified to have permanent stationary facilities at WREC to provide genetically pure seed supplies of breeder seed to the foundation seed producers and reputable producers and certified throughout our region to quickly transfer the economic benefit to the farm gate, producers, and the state of North Dakota.

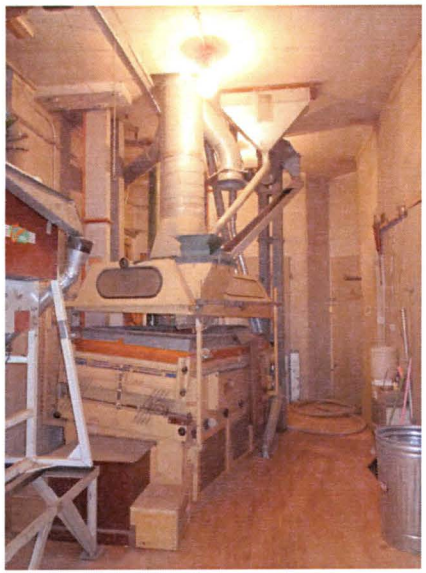
The Williston Research Extension Center is an 800-acre rain-fed farm. In 2001, an additional 160 acres were purchased in the Nesson Valley 23 miles northeast of Williston and an irrigated research and development project was established. In 2012, an additional 1,100 acres of highly productive bottom land were leased from the North Dakota Game and Fish Department for pure seed production.

Because of its semi-arid climate, and its increased land base, WREC with new seed cleaning equipment technologies and superior seed handling facilities would be able to supply a high number of bushels of high-quality pure seed of small grains, pulse crops, oil seed crops, and specialty crops to North Dakota growers.

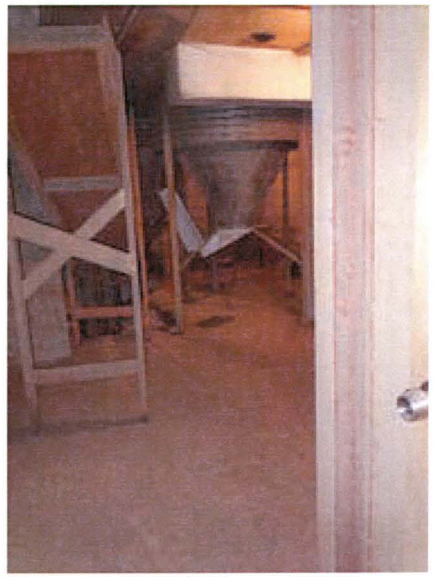
Williston Research Extension Center
Seed Cleaning Facility
Built in 1954



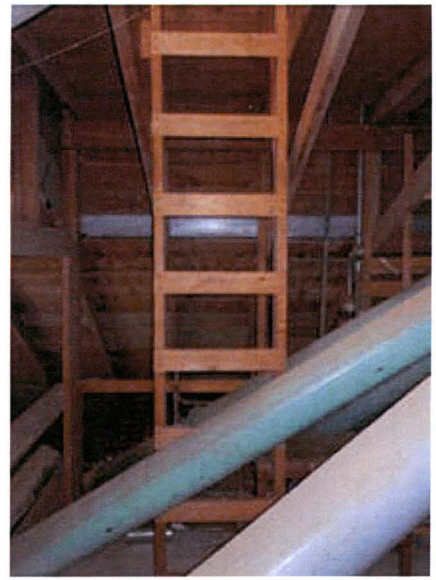
Driveway -Only auger to remove cleaned seed



Main Floor-Gravity table-Screen separator-Note duct tape on legs

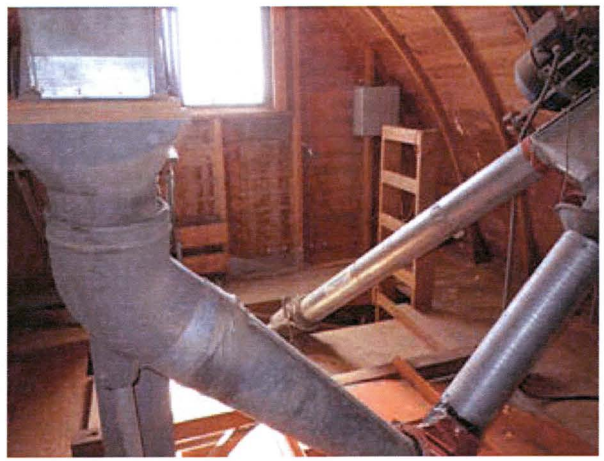


Basement-Only accessible by stairs

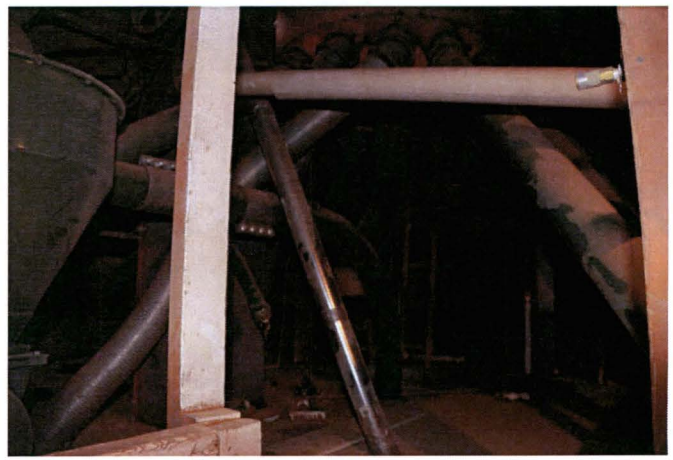


Ladder from 4th to 5th floor

3rd Floor-Disk mill indent cylinder



5th Floor-Main leg-Top of distributor-Accessible only by ladder-Note duct tape on legs



4th Floor-Patch work floor-Crowded overhead pipes; need to crawl to get to 5th floor ladder

SB 2020/2080
1-18-17
#24

January 10, 2017

To whom it may concern,

We are writing in support of a return to full funding for agricultural research in North Dakota and particularly North Dakota State University's Williston Research and Extension Center (WREC). While we fully understand the need to cut back budgets to reflect the decline in the Bakken oil development, the proposed across-the-board cuts do nothing to adequately (or fairly) address those shortfalls when they target programs, such as agricultural research, that provide **large, long-term, net returns to the ND economy and its citizenry**. As evidence, a recent study by NDSU economists indicated a $25 return for every dollar invested, while a third-party analysis by the University of Minnesota found an even higher **return of $38 for every tax dollar invested**. Other studies also show positive returns at the federal level including a Cornell University study showing a minimum return of $10 for every $1 of federal tax dollars invested, with other studies showing even higher returns.

Given the support agricultural research provides to the number one industry in ND, it just doesn't make sense to unilaterally make cuts in the program. And frankly, in this part of the world (western ND and eastern MT) we suspect the aforementioned positive returns are even higher because of our shared partnership between WREC, Montana State University's Eastern Ag Research Center (EARC) in Sidney, MT and our own USDA Agricultural Research Service laboratory, also in Sidney. Our **MonDak "Agricultural Research Triangle"** allows us to leverage expertise and equipment from all three entities for various individual projects as well as conducting joint research efforts. This three-way partnership also helps avoid duplication of research efforts and state researchers have also pointed to the partnership as **an important factor in successful grant applications** for new equipment and programs at state facilities.

This long standing partnership has led to significant advances for producers in the region and continues today with joint research efforts, most recently a 3-year study between Sidney ARS and WREC initiated to investigate the effect of crop rotation on *Rhizoctonia solani* AG 2-2 soil populations. Collaboration with the new WREC Plant Pathologist, Dr. Audrey Kalil, has also been initiated on economically important diseases of pulse crops and Fusarium Head Blight, a critically important disease of durum, wheat, and barley.

Our ARS Customer Focus Group in Sidney includes **more than 80 farmers and ranchers and representatives from various ag industries and organizations from all across the two-state region**, as well as local, state and federal agencies. Several of our members also serve on advisory groups for WREC and EARC. We recognize the value of agricultural research to our industry and to the economies of our respective states. In particular, we recognize the very real need for agricultural research in this part of the country where **semiarid climates mean very narrow operating margins for producers**. Those margins drastically limit area producers' opportunities (assuming they have the expertise) to "experiment" on their own operations to identify new crops, cropping rotations, and weed and disease management options as well as techniques to improve and protect water quality, soil health and fertility, all of which are **needed to ensure a successful, sustainable operation**. And as historically high commodity prices have dropped to new lows, producers need more help than ever to stay afloat. Cutting ag research just doesn't make economic sense under these circumstances.

Consequently, we respectfully request that you **restore funding for the Williston Research Extension Center to the original 2015-17 levels**. As you can see, the benefits of doing so far outweigh the costs.

Respectfully submitted on behalf of the Sidney ARS Customer Focus Group by:

Connie Iversen

Connie Iversen, President and MonDak Area farmer/rancher
406-798-7770, nji@midrivers.com

SB 2020/2080
1-18-17
#25

January 6, 2017

The Williams County Crop Improvement Association strongly supports for the WREC to receive funding for a new seed cleaning facility.

1. The WREC provides the Williams County Crop Improvement Association with Foundation seed of the newest NDSU varieties to our farmers and seedsmen.
2. In 1956 the WREC cleaned less than 10,000 bushels and is now conditioning well over 40,000 bushels.
3. A new seed conditioning facility with larger capacity, modern technology, horizontal equipment layout, and an adequate dust ventilation system is needed to replace the existing seed cleaning equipment and facility.
4. The existing seed cleaning facility built in 1955 consists of multiple levels, stairs and even ladders. The capacity of the existing plant is only 35 bushels an hour. The new seed facility would be on one floor to reduce contamination, provide safe operation to employees, increase cleaning capacity upwards of 200-300 bushels an hour, and allow cleaning of pulse crops and other specialty crops that require gentle handling and conditioning.
5. We thank you in advance for your consideration to fund a new seed conditioning facility at the WREC.

Thank You

Danielle Steinwand

Williams County Crop Improvement Association

SB 2020/2080
1-18-17
#26

Williston
Economic Development

January 13, 2017

Senator Ray Holmberg
Chairman
Senate Appropriations Committee
600 E. Boulevard Avenue
Bismarck, North Dakota 58505

RE: Support for Legislative approval of providing funds for a new seed cleaning facility at the NDSU Williston Research Extension Center

There is a critical need for the NDSU Williston Research Extension Center to receive funding to build a new seed cleaning facility with superior horizontal handling and seed cleaning equipment including optical (color) sorters to condition and distribute pure seed of new value added small grain, pulse crop, oilseed and other specialty crop varieties to our western North Dakota producers.

The current pure seed conditioning facility at WREC was built in 1954, making it the oldest and most outdated seed cleaning facility at the Research Extension Centers and limits WREC to cleaning only a maximum of 35 bushels per hour. It also is not suitable for cleaning pulse crops and other crops that require gentle handling and horizontal seed cleaning equipment and lines.

Because of their increased land base of 2,000 acres, WREC will be able to produce an estimated 40,000 bushels of high-quality pure seed of new and superior value added crop varieties including pulse crops and other specialty crops with a new seed cleaning facility and support more value added processing facilities in our region. This is a prime time to fund this capital improvement at WREC to support more value added production and manufacturing in western North Dakota.

I thank you for your special attention and consideration to provide one-time funding for a new WREC seed cleaning facility.

Sincerely,

Shawn Wenko
Executive Director
Williston Economic Development

SB 2020/2080
1-18-17
#27

PULSEUSA

2200 Northern Plains Drive Bismarck, ND 58504 *Phone: 888-530-0734* *Fax: 701-530-1826*

January 13, 2017

North Dakota State Senate
Senate Appropriations Committee

Honorable Chairman and members,

We (Pulse USA) are writing in support of NDSU WREC and the value a new seed cleaning plant will contribute to WREC and the private sector agricultural companies and growers that work with them. Seed growers and seed companies rely on facilities like WREC for seed multiplication and expansion to commercialize new and highly competitive varieties and they are an important link making seed accessible to North Dakota growers. These efforts contribute to the competitiveness of North Dakota growers and seed companies.

The current facility is antiquated, inefficient and labor intensive. A more efficient and better quality facility will further WREC's endeavor to self-fund significant portions of their agricultural services. The current cleaning capacity of 35 bushels per hour is insufficient for the scale of operations WREC supports. This antiquated plant and design is also more damaging to sensitive crops like peas, lentils and other pulses.

We support and are committed to continuing to work with WREC on high pedigree seed multiplication and the funding of a new plant would allow us to contract WREC to do even more work with our varieties. Research stations have a long history supporting innovative agriculture. NDSU WREC also helps bring the best technology to North Dakota growers and companies which increases their competitiveness and profitability. The continued updating of WREC and other NDSU research facilities is critical to advancing our industry and promoting the use of the forefront of agronomic practices and varieties.

Best Regards,

Duane Pool, Assistant General Manager,
and
Byron Lannoye, General Manager

Cc: Jerrald Bergman
Kyle Dragseth

Ben Larson | Safflower Technologies International | Fairview, MT
Cell 406 480 1338 | blarson@safflowertech.com

SB 2020/2080
1-18-17
#28

January 6, 2016

RE: WREC New Seed Cleaning Plant

To Whom It May Concern,

Safflower Technologies International (STI) is in the business of contracted seed production in North Dakota, South Dakota, Montana and other western states. One of the primary sources of high quality specialty seed has been the Williston Research Extension Center. The cleaning abilities needed to adequately and safely clean some of the specialty crops that WREC has production lately requires additional cleaning equipment and a change in grain flow.

As a consistent buyer of seed from WREC, STI is strongly in favor of any and all improvements that can be made to the seed cleaning operation at WREC.

Sincerely,

Ben Larson

Ben Larson
STI Agronomist

Safflower Technologies International
626 S. Montana Ave. | P.O. Box 485 | Fairview, MT 59221
Phone | 701.844.4797 | Fax 701.844.5972 | www.safflowertech.com

1/08/2017

SB 2020/2080
1-18-17
#29

To Whom It May Concern,

My name is Cameron Wahlstrom. I am 30 years old, a 2009 NDSU graduate with a bachelor's degree in Crop and Weed Science, currently a Research Specialist for the NDSU Williston Research Extension Center, the McKenzie County Soybean Representative for the ND Soybean Council, President of the McKenzie County Crop Improvement Association, and currently serving as a Director on the McKenzie Electric Coop Board. I am a lifetime resident of Alexander, ND, married with 2 children and a 4th generation farmer in McKenzie County. Who bought 450 acres of my grandparents' land, which my great grandfather homesteaded, and also rent around 2,600 acres of land.

The reason I am writing this letter is because I am very concerned and frustrated with the lack of financial support the Williston Research Extension Center has received for a new seed cleaning facility. It appears that the further away one is from Fargo and the eastern side of the state, the harder it is to get funding. It appears to be a west vs. east mentality. I feel this is because if you look at the location of WREC in relation to the crops grown around it, in its region, it is probably the most important extension center for the state land grant university due to the diversity of crops grown and the quality of the seed harvested. The WREC currently farms 2,000 acres of land where it produces over 40,000 bushels of foundation quality seed. However, due to the fact that the current seed cleaning facility was built in 1955 and has an existing capacity of 35 bushels per hour, they cannot clean all of their own seed and have to have the majority of seed cleaned by a private seed cleaner. I see this as a sad display of what WREC, NDSU, and North Dakota, as an agricultural state, stands for. The research centers should be leading the state when it comes to seed cleaning facilities, not falling behind by using over half a century old equipment and buildings facilities. If we, as an agricultural state, want the Ag producers, farmers, ranchers, our neighbors, and friends to prosper and have the best provided to them, then we as a state need to invest back into what makes this state great, which is agriculture. What better investment than having our research centers offer a state of the line cleaning facility. If this investment were to happen for WREC, they would be able to serve and provide for the whole western North Dakota and Eastern Montana region with quality foundation seed.

Sincerely,

Cameron Wahlstrom

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SB 2020-2080
1-18-17
#30

January 11, 2017

To: Senate Appropriations Committee, Senator Ray Holmberg, Chairman

RE: Seed Cleaning Facility at NDSU Williston Research Extension Center

Greetings,

I am a local farmer that purchases Foundation Seed from the Williston Research Extension Center on an annual basis. I would like to extend my support for funding a new seed cleaning plant with a color sorter at the Williston Research Extension Center. They have the oldest seed cleaning facility out of all the research extension centers and have a high volume of seed that needs to be cleaned each season. The Williston Research Extension Center is limited in the type of crops they are able to clean with the current seed cleaning plant. With the numerous types of crops produced and harvested at the Williston Research Extension Center, a new seed cleaning facility is certainly needed and justified.

Kind Regards,

Robert Kostek

Robert Kostek

SB 2020/2080
1-18-17
#31

AGRI INDUSTRIES
Water Professionals - Underground Contractors
3105 - 2nd Street West • Post Office Box 1166 • Williston, North Dakota 58802-1166
Telephone (701) 572-0767 • FAX (701) 577-4040
www.agriindustries.com

January 16, 2017

Agri Industries
PO Box 1166
Williston, ND 58801

North Dakota Legislative Council
State Capitol
600 East Boulevard
Bismarck, ND 58505-0360

RE: WREC Seed Cleaning Facility

To Whom It May Concern,

Agri Industries is an agriculture based company who has been serving Eastern Montana and Western North Dakota for the past thirty five years. We aid local farmers in their quest for value-added agriculture by providing top of the line irrigation products, pipeline services, and water well services to keep their farms functioning at optimal levels.

Certified seed is not only important to these farmers but it's essential to the health of their crops. Access to high quality pure seed varieties allows growers to provide better products to their consumers, therefore furthering the economic circle in North Dakota.

The current state of the seed cleaning facility at the Williston Research Extension Center does not allow for optimal pre and certified seed provision. Most of the work done with the seed cleaning must be done by hand and requires an extensive amount of man hours in proportion to the seed that subsequently becomes available for producers to purchase. Seed purity potentially suffers from human error as insects and wrong seed type have better chances of slipping through inspection.

Seed cleaning technology has greatly improved since the Extension Center was first built in 1954. A new facility would redirect the manpower needed to clean the seed by hand and put those efforts back into other aspects of the Center's functions. The process would become more efficient, increase the number of seed varieties available to producers, and increase the bushel quantity of certified seed available to purchase.

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www.agriindustries.com

We respectively ask the state for financial funding for this project, which will not only enable agriculture to continue to feed the world but also be able to provide benefits to the farmers and ranchers of North Dakota.

Sincerely,

Mike Ames
President of Agri Industries

Upper Great Plains Transportation Institute - Budget No. 627
Senate Bill No. 2020
Base Level Funding Changes

2-2-17 SB2020 Subcommittee #1
P1

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	54.98	$3,900,791	$18,175,657	$22,076,448	54.98	$3,900,791	$18,175,657	$22,076,448	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes	(9.80)	$56,508	($388,117)	($331,609)				$0	9.80	($56,508)	$388,117	$331,609
Salary increase				***0***				***0***				***0***
Health insurance increase		29,537	87,805	117,342				0		(29,537)	(87,805)	(117,342)
Employee portion of health insurance		***(15,473)***	***(45,997)***	***(61,470)***				***0***		***15,473***	***45,997***	***61,470***
Removes FTE positions and reduces funding for salaries and wages and operating expenses	(1.30)	(213,402)		(213,402)				0	1.30	213,402		213,402
Adjusts funding for operating expenses and grants		(21,203)	601,085	579,882				0		21,203	(601,085)	(579,882)
Reduces funding for equipment			(53,000)	(53,000)				0			53,000	53,000
Adjusts funding sources		(200,000)	200,000	0				0		200,000	(200,000)	0
Reduce appropriations by 3 percent		***(106,917)***		***(106,917)***				***0***		***106,917***		***106,917***
Total ongoing funding changes	(11.10)	($470,950)	$401,776	($69,174)	0.00	$0	$0	$0	11.10	$470,950	($401,776)	$69,174
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(11.10)	($470,950)	$401,776	($69,174)	0.00	$0	$0	$0	11.10	$470,950	($401,776)	$69,174
2017-19 Total Funding	43.88	$3,429,841	$18,577,433	$22,007,274	54.98	$3,900,791	$18,175,657	$22,076,448	11.10	$470,950	($401,776)	$69,174
										13.7%	-2.2%	0.3%

Other Sections in Upper Great Plains Transportation Institute - Budget No. 627

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	

#1
02

Other Sections in Upper Great Plains Transportation Institute - Budget No. 627

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.	
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.	

SB2020
Subcommittee
2-2-17
#2
P1

Northern Crops Institute - Budget No. 638
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	12.00	$1,964,467	$1,747,735	$3,712,202	12.00	$1,964,467	$1,747,735	$3,712,202	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes	(0.20)	$26,399	$3,160	$29,559				$0	0.20	($26,399)	($3,160)	($29,559)
Salary increase				***0***				***0***				***0***
Health insurance increase		29,024	5,320	34,344				0		(29,024)	(5,320)	(34,344)
Employee portion of health insurance		***(15,204)***	***(2,787)***	***(17,991)***				***0***		***15,204***	***2,787***	***17,991***
Reduces funding for equipment		(200,000)		(200,000)				0		200,000		200,000
Reduces funding for travel		(10,216)		(10,216)				0		10,216		10,216
Restores funding for operating expenses		137,691		137,691				0		(137,691)		(137,691)
Reduce appropriations by 3 percent		***(58,371)***		***(58,371)***				***0***		***58,371***		***58,371***
Total ongoing funding changes	(0.20)	($90,677)	$5,693	($84,984)	0.00	$0	$0	$0	0.20	$90,677	($5,693)	$84,984
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(0.20)	($90,677)	$5,693	($84,984)	0.00	$0	$0	$0	0.20	$90,677	($5,693)	$84,984
2017-19 Total Funding	11.80	$1,873,790	$1,753,428	$3,627,218	12.00	$1,964,467	$1,747,735	$3,712,202	0.20	$90,677	($5,693)	$84,984
										4.8%	-0.3%	2.3%

Other Sections in Northern Crops Institute - Budget No. 638

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	

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P 2

Other Sections in Northern Crops Institute - Budget No. 638

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute, and provides that any adjustments be reported to the Office of Management and Budget.	
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.	

2-2-17
SB2020
Subcommittee
#3
p1

NDSU Main Research Center - Budget No. 640
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	353.85	$53,581,255	$56,948,525	$110,529,780	353.85	$53,581,255	$56,948,525	$110,529,780	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes		$638,645	$196,105	$834,750				$0		($638,645)	($196,105)	($834,750)
Salary increase				***0***				***0***				***0***
Health insurance increase		667,682	366,772	1,034,454				0		(667,682)	(366,772)	(1,034,454)
Employee portion of health insurance		***(349,770)***	***(192,136)***	***(541,906)***				***0***		***349,770***	***192,136***	***541,906***
Increases funding for capital bond payments		291		291				0		(291)		(291)
Reduces funding for salaries and wages	(17.73)	(1,946,615)		(1,946,615)				0	17.73	1,946,615		1,946,615
Reduces funding for operating expenses		(355,589)		(355,589)				0		355,589		355,589
Restores funding for equipment		260,000		260,000				0		(260,000)		(260,000)
Additional budget reductions and funding adjustments		(1,700,000)	1,600,000	(100,000)				0		1,700,000	(1,600,000)	100,000
Reduce appropriations by 3 percent		***(1,539,879)***		***(1,539,879)***				***0***		***1,539,879***		***1,539,879***
Total ongoing funding changes	(17.73)	($4,325,235)	$1,970,741	($2,354,494)	0.00	$0	$0	$0	17.73	$4,325,235	($1,970,741)	$2,354,494
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(17.73)	($4,325,235)	$1,970,741	($2,354,494)	0.00	$0	$0	$0	17.73	$4,325,235	($1,970,741)	$2,354,494
2017-19 Total Funding	336.12	$49,256,020	$58,919,266	$108,175,286	353.85	$53,581,255	$56,948,525	$110,529,780	17.73	$4,325,235	($1,970,741)	$2,354,494
										8.8%	-3.3%	2.2%

Other Sections in NDSU Main Research Center - Budget No. 640

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	

#3
p 2

Other Sections in NDSU Main Research Center - Budget No. 640

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.	
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.	
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.	
Exemption	Section 9 allows the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.	

2-2-17 SB2020
subcommittee #4
P1

Langdon REC	FY 14	FY 15	FY16
Seed Grown	12,724	11,071	11,098
Processed and Sold	9,895	5,146	8,303
Carryover	2,829	5,925	2,795

*All Amounts in Bushels

North Central REC	FY 14	FY 15	FY16
Seed Grown	40,003	41,246	33,654
Processed and Sold	33,530	27,953	20,311
Carryover	6,473	13,293	13,343

*All Amounts in Bushels

Williston REC	FY 14	FY 15	FY16
Seed Grown	19,957	21,939	35,369
Processed and Sold	18,457	19,827	32,398
Carryover	1,500	2,112	2,971

*All Amounts in Bushels

Carrington REC	FY 14	FY 15	FY16
Seed Grown	52,509	54,422	44,759
Processed and Sold	56,437	35,196	36,132
Carryover	(3,928)	19,226	8,627

*All Amounts in Bushels

MAIN STATION

SB 2020 subcommittee 2-2-17 #5 P1

To address 6.55% cut (allotment) – biennial salary + fringe

19584	PLSC	Professor	0.95	Hammond	334,125
20851	ANSC	Professor	0.9	Park	290,797
19348	MICR	Professor	0.6	Wolf-Hall	279,400
21261	ANSC	Assoc Prof	0.25	Schroeder	70,908
24314	ABAE	Assoc Prof	0.65	McKee	173,492
19351	PPTH	As. Prof	0.6	LeBoldus	65,463
20022	MICR	As. Prof	0.6	Fisher	143,367
21424	ABEN	Lecturer	0.05	Solseng	9,166
28475	PLSC	Post-Doc	1.0	Michalak	133,480
101196	VDL	Microbiolog	1.0	Miller	271,715
28717	PPTH	Grants OFF	1.0	Oelrich	157,667
100561	AES	PI Officer	0.9	Nord	116,247
21786	PPTH	Res. Spec.	1.0	Dunnell	114,898
100210	AES	Ass't GH	1.0	Brady	115,747
21806	PLSC	Res. Spec.	1.0	Lammers	126,520
19268	PLSC	Res. Spec.	1.0	LaTorre	137,364
19127	MICR	Res. Spec.	1.0	Doetkott	159,587
19832	PPTH	Acc't tech	0.9	Iverson	130,727
22994	ABEN	Acc't Tech	0.6	Ogundolani	76,400
27886	PLSC	Res. Spec.	1.0	Giles	120,497
20836	MS Farm	Ag R. Tech	1.0	Ostby	101,930
19408	SNRS	Office Coord	0.25	Lynnes	28,758
			17.25		$3,158,255

Voluntary Separation

VSIP

21040	ANSC	Professor	0.9	Redmer	328917
21544	AES	Assoc Budg. Dir	0.63	Swank	216,275
18984	PLSC	Res Spec.	1.0	Ciernia	169,239
19494	PLSC	Res. Spec.	1.0	Gregoire	152,076
21100	PLSC	Res. Spec.	1.0	Roach	179,130
20739	PLSC	Res. Spec.	1.0	Nudell	145,370
18634	PLSC	Ag Res. Tech	1.0	Baumann	188,907
18886	SNRS	Res. Spec.	1.0	Carcoana	173,843
			7.53		$1,553,757

Less FY18 payment	(444,712)
VSIP total	1,109,045
Grand TOTAL	**$4,267,300**

7-5 8 do

DRAFT

2-2-17 SB 2020 Subcommittee #6 #1

NDSU Extension Service - Budget No. 630
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	263.91	$27,824,562	$25,826,708	$53,651,270	263.91	$27,824,562	$25,826,708	$53,651,270	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes		$302,125	$265,427	$567,552				$0		($302,125)	($265,427)	($567,552)
Salary increase				***0***				***0***				***0***
Health insurance increase		397,191	382,249	779,440				0		(397,191)	(382,249)	(779,440)
Employee portion of health insurance		***(208,071)***	***(200,244)***	***(408,315)***				***0***		***208,071***	***200,244***	***408,315***
Reduces funding for salaries	(10.93)	(1,619,206)	200,000	(1,419,206)				0	10.93	1,619,206	(200,000)	1,419,206
Adjusts funding for other operating expenses		175,557		175,557				0		(175,557)		(175,557)
Reduces funding for equipment		(300,000)		(300,000)				0		300,000		300,000
Reduce appropriations by 3 percent		***(806,343)***		***(806,343)***				***0***		***806,343***		***806,343***
Total ongoing funding changes	(10.93)	($2,058,747)	$647,432	($1,411,315)	0.00	$0	$0	$0	10.93	$2,058,747	($647,432)	$1,411,315
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(10.93)	($2,058,747)	$647,432	($1,411,315)	0.00	$0	$0	$0	10.93	$2,058,747	($647,432)	$1,411,315
2017-19 Total Funding	252.98	$25,765,815	$26,474,140	$52,239,955	263.91	$27,824,562	$25,826,708	$53,651,270	10.93	$2,058,747	($647,432)	$1,411,315
										8.0%	-2.4%	2.7%

Other Sections in NDSU Extension Service - Budget No. 630

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	

Other Sections in NDSU Extension Service - Budget No. 630

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.	
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.	

SB 2020
2-2-17
#7

Agronomy Seed Farm - Budget No. 649
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	3.00	$0	$1,521,007	$1,521,007	3.00	$0	$1,521,007	$1,521,007	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes			$7,157	$7,157				$0			($7,157)	($7,157)
Salary increase				***0***				***0***				***0***
Health insurance increase			8,587	8,587				0			(8,587)	(8,587)
Employee portion of health insurance			***(4,498)***	***(4,498)***				***0***			***4,498***	***4,498***
Total ongoing funding changes	0.00	$0	$11,246	$11,246	0.00	$0	$0	$0	0.00	$0	($11,246)	($11,246)
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	0.00	$0	$11,246	$11,246	0.00	$0	$0	$0	0.00	$0	($11,246)	($11,246)
2017-19 Total Funding	3.00	$0	$1,532,253	$1,532,253	3.00	$0	$1,521,007	$1,521,007	0.00	$0	($11,246)	($11,246)
										N/A	-0.7%	-0.7%

Other Sections in Agronomy Seed Farm - Budget No. 649

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.	
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.	

2-2-17 SB 2020 Subcommittee #8
P1

The DREC will meet the 6.55% reduction ($261,482) in General Fund dollars as previously noted.

As a recap, the anticipated salary line item reduction is estimated at $240,00, and operating line item estimated at $25,000 for this biennium. This includes not filling 1 FTE agronomic scientist, .2 FTE reduction in animal scientist to grant funds, reduction to .5 FTE research specialist, reduced temporary labor and operating.

The anticipated draft of the 10% reduction remains the same.

As a recap, the possible elimination of two positions and associated operating.

This may include the vacant 1 FTE agronomy position and a support position (may be two half time positions) along with associated operating reductions. The soft money support for .2 FTE animal scientist is anticipated to remain.

DRAFT

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p 2

31 January 2017
VP, Dean, Director Grafton,
I took Dr. Bryan Neville's strategic budget cut plan and modified to match my plans to reduce $250,000 from the CGREC 2015-2017 appropriated budget.

The CGREC had three open full-time positions as of April 1, 2016, 2 FTE scientist positions and 1 FTE technician position. We have had salary savings for all positions, leaving the Center in excellent position through the remainder of this budget cycle.

- For the 90% budget I plan to leave open the FTE scientists' position (forage scientist) and change the open FTE forage technician position to a forage specialist position. This move will allow the Center to retain a forage research programming while saving $171,000/biennium and reducing operator costs (state fleet vehicles, travel, seasonal labor associated with projects) of $20,000 for a total **$191,000/biennium savings**.
- The change from a technician position to a research specialist will change the projected biennial budget from $121,800 (technician position) to $142,100 (research specialist position) or a *$20,300/biennium more spending*.
- I also increased our budget expense for the administrative assistant position by *$23,780/biennium more spending*.
- I also created a stricter overtime spending policy for the three FTE technician positions and eliminated overtime spending for the new research specialist (created an exempt status position). This policy, based on average overtime spent the past four years, will create a **$28,902/biennium savings**.

These program adjustments and salary savings will reduce our 2017-2019 budget by $175,822. The remaining budget adjustments will occur through replacing operator expenses and part-time labor totaling **$74,178/biennium** to soft funds for a total savings of $250,000. Our budget will still provide sufficient funds within a 90% projected budget to fund the remaining CGREC's open FTE (1) scientist position, allowing the Center to recruit and hire a range scientist.

Sincerely,

Kevin Sedivec
Interim Director, Central Grasslands Research Extension Center

DRAFT

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Hettinger Research Extension Center
February 1, 2017
Allotment Response and Budget Reduction Plan

Allotment Response: The Governor's office authorized a 6.55% allotment on the 2015-17 biennium General Fund to all state agencies. For the Hettinger Research Extension Center, $164,421 was removed from the 2015-2017 biennium General Fund. In order to meet this budget reduction, the HREC used a combination of the following procedures:

- The Livestock Research Technician that was funded in the 2015-2017 biennium was not filled to meet the majority of the budget reduction. This leaves the livestock research program with no research technician.

- Operating expenses were reduced.
    - While most travel in the HREC is funded using Other Funds, expenses are being closely monitored to maximize efficiency.
    - Equipment purchases are being monitored by the Director to identify budget savings.

- Additional funds needed to meet the allotment amount will be from Other Funds.

Proposed 10% Budget Cut: A proposed 10% cut will result in a $251,020 reduction to the HREC budget. The following procedures are estimated to be used to meet this cut:

- The Livestock Research Technician funded the previous biennium, but not filled due to the 6.55% allotment, will not be filled.

- The HREC had one VSIP retirement, the agronomy program technician. This individual retired on January 1. A portion of the VSIP buyout ($15,000) will occur in August of 2017. Therefore, the combined effect of the 10% reduction and the $15,000 buyout will likely mean this position remains open. Other Funds may be used to hire temporary help to maintain the program, but this is not a long term solution. Two individuals are needed to harvest the agronomy plots, with harvest occurring after school starts in the fall, therefore this program needs a technician to continue conducting its research. A cut of greater than 10% will ensure that we cannot fill this position with General Funds at any point in the future.

- Operating and equipment expenses will be monitored closely to ensure maximum efficiency.

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NDSU Langdon REC 2016 Allotment and 2017/19 - 90 Percent Budget Report

Langdon REC Summarized First Allotment Report (4.05 percent)

1) Land Lease Savings (Lease savings from purchase of 160 acres): $32,000
2) SF Vehicles Savings (Return three SF pickups): $19,944.00
3) Summer Workers Savings (Will hire two less summer workers): $22,400.00
4) Reduce other operating: $6,829.00

Langdon REC Summarized Second Allotment Report (2.50 percent)

1) No longer pay overtime: $7,100
2) SF Vehicles Savings (Return two more SF vehicles - car and pickup): $6,500.00
3) No longer pay travel from appropriated funds: $9,000
4) Salary savings due to research technician retirement: $16,346
5) Pay remaining summer workers with soft funds (not appropriated): $11,600

Langdon REC Summarized 90 Percent Budget Proposal for 2017-2019 Biennium:

1. Land Lease Savings: $32,000
2. SF Vehicles Savings: $37,578
3. Summer Workers Savings: $46,464
4. Retired Research Technician Position Savings: $65,385
5. Overtime Savings: $14,200
6. Travel Savings: $18,000

For a total savings of $213,627 for the 2017-2019 biennium. This meets the LREC's required 10% 2017/19 biennium cut of $200,427.

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North Central Research Extension Center's 6.55% ($142,728) Allotment:

- NCREC will no longer allow out of state travel expenses to be paid from appropriated funds ($5000)
- NCREC will return four state fleet vehicles ($5000)
- NCREC will no longer pay overtime or seasonal/hourly salaries from appropriated funds ($5000)
- NCREC will no longer out-source cleaning and facility management ($5200)
- Overall reduction in operating

North Central Research Extension Center's 90% Budget ($217,906) for 2017-2019 Biennium:

- State Fleet vehicle savings ($10,000/biennium)
- Research Specialist position eliminated due to VSIP ($143,002/biennium)
- Reduce Appropriated Research Technician position to 50% ($60,339/biennium)
- Overtime savings (no overtime paid from appropriated funds) $5,000/biennium
- Travel savings (no out-of-state travel paid from appropriated funds) $5,000/biennium
- Reduce appropriated seed production specialist position to 50% ($77,564/biennium)

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#8
P6

WREC's Plan for the 2017-2019 Proposed 90% Budget Reduction ($315,557)

1. Eliminate the Dryland Research Specialist-Crop Production position 00018796 ($165,000/biennium savings).
2. Reducing operating expenses by $150,557. Operating expenses, travel, and equipment purchases will be closely monitored to identify budget savings with an increased reliance on grantsmanship and use of soft funds.
3. The Williston Research Extension Center will ensure our core missions are met, however, any vacant positions may remain open for extended periods to garner salary savings.

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P7

CREC: Addressing current biennium's 6.55% budget allotment:

The CREC addressed the allotment by budget reductions in both staffing and operating funds.

Reductions in staffing costs were achieved by not refilling two positions that resulted from a resignation and a retirement. Further cuts in staffing costs were achieved by reductions in over-time and student assistants.

Reduced operating costs are being achieved primarily through reductions of expenditures for research sample analysis, travel expenses, and facility maintenance.

{Draft}

CREC: Addressing a 10% budget cut for 2017-2019 biennium budget:

The CREC will eliminate 3 FTE positions. Positions eliminated will reduce technical staffing with responsibilities focused on the livestock, agronomy and clerical/agronomy research programs. Further cuts will be made in operating costs to fully achieve the 10% reduction.

The impact of the loss of these positions can be summarized as follows:

Eliminate 1 FTE, livestock research technician; The research program will eliminate one set of feedlot trials each year of biennium.

Eliminate 1 FTE, agronomy research technician; The agronomy program will reduce the scope of research on subject matter related to forage production, organic agriculture and a yet to be determined number of basic crop production studies.

Eliminate 1 FTE, clerical/agronomy technician; The constituency who call upon the CREC will receive less timely assistance, crop variety trial reports will be delayed, and online accounting procedures will be less timely.

The reductions in operating costs will be primarily accounted for in reduced travel costs and research sample analysis costs.

DRAFT

Branch Research Centers - Budget No. 628
Senate Bill No. 2020
Base Level Funding Changes

2-2-17 SB2020 Subcommittee #9 p1

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	113.94	$18,483,636	$19,817,130	$38,300,766	113.94	$18,483,636	$19,817,130	$38,300,766	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes		$196,347	$30,744	$227,091				$0		($196,347)	($30,744)	($227,091)
Salary increase				***0***				***0***				***0***
Health insurance increase		244,491	90,364	334,855				0		(244,491)	(90,364)	(334,855)
Employee portion of health insurance		***(128,079)***	***(47,338)***	***(175,417)***				***0***		***128,079***	***47,338***	***175,417***
Increases funding for capital bond payments		104		104				0		(104)		(104)
Adjusts funding for salaries and removal of FTE positions	(3.65)	(642,408)		(642,408)				0	3.65	642,408		642,408
Adjusts funding for operating expenses		(22,626)		(22,626)				0		22,626		22,626
Additional budget reductions and funding adjustments		(553,620)	350,000	(203,620)				0		553,620	(350,000)	203,620
Reduce appropriations by 3 percent		***(532,953)***		***(532,953)***				***0***		***532,953***		***532,953***
Total ongoing funding changes	(3.65)	($1,438,744)	$423,770	($1,014,974)	0.00	$0	$0	$0	3.65	$1,438,744	($423,770)	$1,014,974
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(3.65)	($1,438,744)	$423,770	($1,014,974)	0.00	$0	$0	$0	3.65	$1,438,744	($423,770)	$1,014,974
2017-19 Total Funding	110.29	$17,044,892	$20,240,900	$37,285,792	113.94	$18,483,636	$19,817,130	$38,300,766	3.65	$1,438,744	($423,770)	$1,014,974
										8.4%	-2.1%	2.7%

Other Sections in Branch Research Centers - Budget No. 628

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	

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Other Sections in Branch Research Centers - Budget No. 628

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Dickinson Research Extension Center mineral rights income	Section 4 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.	
Williston Research Extension Center mineral rights income	Section 5 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium.	
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.	
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.	

SB 2020

17.0528.01001
Title.
Fiscal No. 1

Prepared by the Legislative Council staff for 2-10-17
Senator Bowman
February 2, 2017

#1

PROPOSED AMENDMENTS TO SENATE BILL NO. 2020

Page 1, line 3, replace the period with "; to amend and reenact sections 4-05.1-05 and 4-08-10 of the North Dakota Century Code, relating to main research center experiment station and extension service position adjustments; and to provide an exemption"

Page 1, replace lines 19 through 24 with:

"Extension service	$52,517,908	($961,158)	$51,556,750
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,003,000)	$52,648,270
Less estimated income	25,826,708	847,676	26,674,384
Total general fund	$27,824,562	($1,850,676)	$25,973,886
Full-time equivalent positions	263.91	(10.93)	252.98"

Page 2, replace lines 5 through 9 with:

"Northern crops institute	$3,712,202	($66,993)	$3,645,209
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
Total general fund	$1,964,467	($75,473)	$1,888,994
Full-time equivalent positions	12.00	(0.20)	11.80"

Page 2, replace lines 14 through 19 with:

"Upper great plains transportation institute	$22,076,448	($7,704)	$22,068,744
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
Total general fund	$3,900,791	($455,477)	$3,445,314
Full-time equivalent positions	54.98	(11.10)	43.88"

Page 2, replace lines 24 through 28 with:

"Main research center	$110,529,780	($1,812,588)	$108,717,192
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
Total general fund	$53,581,255	($3,975,465)	$49,605,790
Full-time equivalent positions	353.85	(17.73)	336.12"

Page 3, replace lines 3 through 14 with:

"Dickinson research extension center	$6,996,678	($167,861)	$6,828,817
Central grasslands research extension center	3,531,779	(105,667)	3,426,112
Hettinger research extension center	5,086,767	(108,523)	4,978,244
Langdon research extension center	3,045,836	(79,363)	2,966,473
North central research extension center	5,044,213	(87,451)	4,956,762
Williston research extension center	5,267,400	(145,037)	5,122,363
Carrington research extension center	9,328,093	(145,655)	9,182,438
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238

Total general fund	$18,483,636	($1,310,665)	$17,172,971
Full-time equivalent positions	113.94	(3.65)	110.29"

Page 3, replace lines 19 through 21 with:

"Agronomy seed farm	$1,521,007	$15,744	$1,536,751
Total special funds	$1,521,007	$15,744	$1,536,751
Full-time equivalent positions	3.00	0.00	3.00"

Page 3, replace lines 26 through 28 with:

"Grand total general fund	$105,754,711	($7,667,756)	$98,086,955
Grand total other funds	124,036,762	3,953,658	127,990,420
Grand total all funds	$229,791,473	($3,714,098)	$226,077,375"

Page 4, after line 21, insert:

"**SECTION 4. AMENDMENT.** Section 4-05.1-05 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-05. North Dakota state university main research center position adjustments - Budget section report.

The North Dakota state university main research center must be located on the campus of North Dakota state university of agriculture and applied science. The center is the administrative location of the agricultural experiment station. The center shall conduct research and coordinate all research activities of the agricultural experiment station. The research must have, as a purpose, the development and dissemination of technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research must provide for an enhancement of the quality of life, sustainability of production, and protection of the environment. Subject to the availability of funds, the station director may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the agricultural experiment station. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full or partial positions must be separate from North Dakota state university. Annually, the station director shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section. The center may conduct baseline research, including production and processing in conjunction with the research and extension centers of the state, regarding industrial hemp and other alternative industrial use crops. The center may collect feral hemp seed stock and develop appropriate adapted strains of industrial hemp which contain less than three-tenths of one percent tetrahydrocannabinol in the dried flowering tops. The agriculture commissioner shall monitor the collection of feral hemp seed stock and industrial hemp strain development and shall certify appropriate stocks for licensed commercial cultivation.

SECTION 5. AMENDMENT. Section 4-08-10 of the North Dakota Century Code is amended and reenacted as follows:

4-08-10. Extension agent to submit monthly account of expenditures - Position adjustments - Budget section report.

The extension agent shall submit monthly an accurate itemized account of all expenditures incurred by the agent in the regular conduct of duties to the North Dakota

state university extension service for examination and audit. When charges are made by an extension agent for money expended in the performance of official duties, all items of one dollar or more expended and charged for must be covered by a subvoucher or receipt that must be signed by the person to whom the money was paid. The subvoucher or receipt must show at what place, on what date, and for what the money expended was paid. The extension agent shall forward the subvouchers or receipts with the bill, claim, account, or demand against the county. When charges are made for transportation expenses, they may not exceed the amounts provided by section 11-10-15, and must be in itemized form showing the mileage traveled, the days when and how traveled, and the purpose thereof, verified by affidavit. The account must be transmitted and recommended for payment by the North Dakota state university extension service which shall audit the same and which may approve or disallow any expense item therein. The state board of agricultural research and education and the president of North Dakota state university shall control and administer the North Dakota state university extension service subject to the supervision of the state board of higher education. Funds appropriated to the North Dakota state university extension service may not be commingled with funds appropriated to North Dakota state university. An appropriation request to defray expenses of the North Dakota state university extension service must be separate from an appropriation request to defray expenses of North Dakota state university. Subject to the availability of funds, the director of the North Dakota state university extension service may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the extension service. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full- or part-time positions must be separate from North Dakota state university. Annually, the director of the North Dakota state university extension service shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section."

Page 5, after line 16, insert:

"**SECTION 11. EXEMPTION.** The amounts appropriated for the veterinary diagnostic laboratory and the seed cleaning plants contained in subdivision 4 of section 1 of chapter 20 of the 2015 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2017, and ending June 30, 2019."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Senate Action

	Base Budget	Senate Changes	Senate Version
Transportation Institute			
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
General fund	$3,900,791	($455,477)	$3,445,314
Branch Research Centers			
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238
General fund	$18,483,636	($1,310,665)	$17,172,971
NDSU Extension Service			

Total all funds	$53,651,270	($1,003,000)	$52,648,270
Less estimated income	25,826,708	847,676	26,674,384
General fund	$27,824,562	($1,850,676)	$25,973,886
Northern Crops Institute			
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
General fund	$1,964,467	($75,473)	$1,888,994
Main Research Center			
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
General fund	$53,581,255	($3,975,465)	$49,605,790
Agronomy Seed Farm			
Total all funds	$1,521,007	$15,744	$1,536,751
Less estimated income	1,521,007	15,744	1,536,751
General fund	$0	$0	$0
Bill total			
Total all funds	$229,791,473	($3,714,098)	$226,077,375
Less estimated income	124,036,762	3,953,658	127,990,420
General fund	$105,754,711	($7,667,756)	$98,086,955

Senate Bill No. 2020 - Transportation Institute - Senate Action

	Base Budget	Senate Changes	Senate Version
Upper Great Plains Trans. Institute	$22,076,448	($7,704)	$22,068,744
			$22,068,744
Total all funds	$22,076,448	($7,704)	
Less estimated income	18,175,657	447,773	18,623,430
			$3,445,314
General fund	$3,900,791	($455,477)	
			43.88
FTE	54.98	(11.10)	

Department No. 627 - Transportation Institute - Detail of Senate Changes

	Adjusts Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Removes FTE Positions and Adjusts Funding for Operating Expenses[3]	Adjusts Funding for Operating Expenses and Grants[4]	Reduces Funding for Equipment[5]	Adjusts Funding Sources[6]
Upper Great Plains Trans. Institute	($331,609)	$117,342	($213,402)	$579,882	($53,000)	
Total all funds	($331,609)	$117,342	($213,402)	$579,882	($53,000)	$0
Less estimated income	(388,117)	87,805	0	601,085	(53,000)	200,000
General fund	$56,508	$29,537	($213,402)	($21,203)	$0	($200,000)
FTE	(9.80)	0.00	(1.30)	0.00	0.00	0.00

	Reduces General Fund Appropriations by 3 Percent[7]	Total Senate Changes
Upper Great Plains Trans. Institute	($106,917)	($7,704)
Total all funds	($106,917)	($7,704)
Less estimated income	0	447,773

General fund	($106,917)	($455,477)
FTE	0.00	(11.10)

[1] Funding is adjusted for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes. This change also includes the removal of certain vacant FTE positions.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] The following FTE positions and related funding are removed:

	FTE	General Fund
Research scientist	(0.25)	($78,717)
General science professional	(0.45)	(98,027)
Program administrator	(0.40)	(142,496)
Information systems professional	(0.20)	(52,902)
Reduce operating funding		(37,568)
Restores funding for 2015-17 biennium budget reductions		196,308
Total	(1.30)	($213,402)

[4] Funding is adjusted for grants ($350,982) and operating expenses ($228,900).

[5] Funding from federal funds is reduced by $53,000 for equipment.

[6] Funding is adjusted to reduce general fund support by $200,000 and increase funding from special funds by $200,000.

[7] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

Senate Bill No. 2020 - Branch Research Centers - Senate Action

	Base Budget	Senate Changes	Senate Version
Dickinson Research Center	$6,996,678	($167,861)	$6,828,817
Central Grasslands Research Center	3,531,779	(105,667)	3,426,112
Hettinger Research Center	5,086,767	(108,523)	4,978,244
Langdon Research Center	3,045,836	(79,363)	2,966,473
North Central Research Center	5,044,213	(87,451)	4,956,762
Williston Research Center	5,267,400	(145,037)	5,122,363
Carrington Research Center	9,328,093	(145,655)	9,182,438
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238
General fund	$18,483,636	($1,310,665)	$17,172,971
FTE	113.94	(3.65)	110.29

Department No. 628 - Branch Research Centers - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Increases Funding for Capital Bond Payments[3]	Adjusts Funding for Salaries and Removal of FTE Positions[4]	Adjusts Funding for Operating Expenses[5]	Adjusts Funding for Additional General Fund Budget Reductions[6]
Dickinson Research	$46,379	$45,078		($192,200)	$64,473	($25,000)

Center						
Central Grasslands Research Center	22,997	34,344	40	3,500	(82,923)	(25,000)
Hettinger Research Center	29,435	42,930		(128,948)	42,344	(25,000)
Langdon Research Center	19,490	25,759		(80,000)	28,353	(25,000)
North Central Research Center	28,358	42,930	64	(180,000)	104,822	(25,000)
Williston Research Center	26,164	47,938		(24,760)	(84,107)	(25,000)
Carrington Research Center	54,268	95,876		(40,000)	(95,588)	(53,620)
Total all funds	$227,091	$334,855	$104	($642,408)	($22,626)	($203,620)
Less estimated income	30,744	90,364	0	0	0	350,000
General fund	$196,347	$244,491	$104	($642,408)	($22,626)	($553,620)
FTE	0.00	0.00	0.00	(3.65)	0.00	0.00

	Reduces General Fund Appropriations by 3 Percent[7]	**Total Senate Changes**
Dickinson Research Center	($106,591)	($167,861)
Central Grasslands Research Center	(58,625)	(105,667)
Hettinger Research Center	(69,284)	(108,523)
Langdon Research Center	(47,965)	(79,363)
North Central Research Center	(58,625)	(87,451)
Williston Research Center	(85,272)	(145,037)
Carrington Research Center	(106,591)	(145,655)
Total all funds	($532,953)	($839,557)
Less estimated income	0	471,108
General fund	($532,953)	($1,310,665)
FTE	0.00	(3.65)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] Funding is increased for capital bond payments at the Central Grasslands Research Center and the North Central Research Center.

[4] The following adjustments are made for salaries and the removal of FTE positions:

	FTE	**General Fund Reduction**	**2015-17 Budget Reduction Adjustment**	**Total**
Dickinson Research Center	(2.00)	($330,000)	$137,800	($192,200)
Central Grasslands Research Center	(1.00)	(120,000)	123,500	3,500
Hettinger Research Center	(1.50)	(200,000)	71,052	(128,948)
Langdon Research Center	(1.00)	(80,000)		(80,000)
North Central Research Center	(1.50)	(180,000)		(180,000)
Williston Research Center	(1.00)	(165,000)	140,240	(24,760)
Carrington Research Center	(2.00)	(250,000)	210,000	(40,000)
FTE Adjustments	6.35			0
Total	(3.65)	($1,325,000)	$682,592	($642,408)

[5] Operating expenses funding is adjusted to reduce appropriations by $22,626 from the general fund. This amount is net of $632,219 of 2015-17 biennium budget reductions.

[6] Funding for equipment is reduced by $25,000 at each of the research centers. Funding for salaries is reduced by $28,620 at the Carrington Research Center. In addition, funding for the branch research centers is adjusted to reduce funding from the general fund by $350,000 and increase funding from special funds by $350,000.

[7] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

Senate Bill No. 2020 - NDSU Extension Service - Senate Action

	Base Budget	Senate Changes	Senate Version
Extension Service	$52,517,908	($961,158)	$51,556,750
Soil Conservation Committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,003,000)	$52,648,270
Less estimated income	25,826,708	847,676	26,674,384
General fund	$27,824,562	($1,850,676)	$25,973,886
FTE	263.91	(10.93)	252.98

Department No. 630 - NDSU Extension Service - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Adjusts Funding for Salaries and Removal of FTE Positions[3]	Adjusts Funding for Operating Expenses[4]	Reduces Funding for Equipment[5]	Reduces General Fund Appropriations by 3 Percent[6]
Extension Service	$567,552	$779,440	($1,419,206)	$217,399	($300,000)	($806,343)
Soil Conservation Committee				(41,842)		
Total all funds	$567,552	$779,440	($1,419,206)	$175,557	($300,000)	($806,343)
Less estimated income	265,427	382,249	200,000	0	0	0
General fund	$302,125	$397,191	($1,619,206)	$175,557	($300,000)	($806,343)
FTE	0.00	0.00	(10.93)	0.00	0.00	0.00

	Total Senate Changes
Extension Service	($961,158)
Soil Conservation Committee	(41,842)
Total all funds	($1,003,000)
Less estimated income	847,676
General fund	($1,850,676)
FTE	(10.93)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] The following adjustments are made for salaries and the removal of FTE positions:

	FTE	General Fund	Other Funds	Total
Remove FTE positions	(10.00)	($1,600,000)		($1,600,000)
Remove additional FTE positions	(3.00)	(480,000)		(480,000)
FTE position adjustment	2.07			0

2015-17 biennium budget reduction adjustment		698,000		698,000
Remove equity funding		(37,206)		(37,206)
Funding source adjustment		(200,000)	$200,000	0
Total	(10.93)	($1,619,206)	$200,000	($1,419,206)

[4] Funding for operating expenses is adjusted to increase appropriations by $175,557 from the general fund as follows:

	Operating Reduction	2015-17 Biennium Budget Reduction Adjustment	Total General Fund Change
Extension Service	($956,289)	$1,173,688	$217,399
Soil Conservation Committee	(121,280)	79,438	(41,842)
Total	($1,077,569)	$1,253,126	$175,557

[5] Equipment funding is reduced by $300,000 from the general fund.

[6] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

- A section is added to amend North Dakota Century Code Section 4-08-10 to clarify 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - Northern Crops Institute - Senate Action

	Base Budget	Senate Changes	Senate Version
Northern Crops Institute	$3,712,202	($66,993)	$3,645,209
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
General fund	$1,964,467	($75,473)	$1,888,994
FTE	12.00	(0.20)	11.80

Department No. 638 - Northern Crops Institute - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Reduces Funding for Equipment[3]	Reduces Funding for Travel[4]	Restores Funding for Operating Expenses[5]	Reduces General Fund Appropriations by 3 Percent[6]
Northern Crops Institute	$29,559	$34,344	($200,000)	($10,216)	$137,691	($58,371)
Total all funds	$29,559	$34,344	($200,000)	($10,216)	$137,691	($58,371)
Less estimated income	3,160	5,320	0	0	0	0
General fund	$26,399	$29,024	($200,000)	($10,216)	$137,691	($58,371)
FTE	(0.20)	0.00	0.00	0.00	0.00	0.00

	Total Senate Changes
Northern Crops Institute	($66,993)
Total all funds	($66,993)
Less estimated income	8,480
General fund	($75,473)
FTE	(0.20)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] Equipment funding is reduced by $200,000 from the general fund.

[4] Funding for travel is reduced by $10,216 from the general fund.

[5] Operating expenses funding removed as a result of the 2015-17 biennium budget reductions is restored.

[6] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

Senate Bill No. 2020 - Main Research Center - Senate Action

	Base Budget	Senate Changes	Senate Version
Main Research Center	$110,529,780	($1,812,588)	$108,717,192
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
General fund	$53,581,255	($3,975,465)	$49,605,790
FTE	353.85	(17.73)	336.12

Department No. 640 - Main Research Center - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Increases Funding for Bond Payments[3]	Adjusts Funding for Salaries and Removal of FTE Positions[4]	Adjusts Funding for Operating Expenses[5]	Restores Funding for Equipment[6]
Main Research Center	$834,750	$1,034,454	$291	($1,946,615)	($355,589)	$260,000
Total all funds	$834,750	$1,034,454	$291	($1,946,615)	($355,589)	$260,000
Less estimated income	196,105	366,772	0	0	0	0
General fund	$638,645	$667,682	$291	($1,946,615)	($355,589)	$260,000
FTE	0.00	0.00	0.00	(17.73)	0.00	0.00

	Adjusts Funding for Additional General Fund Budget Reductions[7]	Reduces General Fund Appropriations by 3 Percent[8]	Total Senate Changes
Main Research Center	($100,000)	($1,539,879)	($1,812,588)
Total all funds	($100,000)	($1,539,879)	($1,812,588)
Less estimated income	1,600,000	0	2,162,877
General fund	($1,700,000)	($1,539,879)	($3,975,465)
FTE	0.00	0.00	(17.73)

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

[3] Funding is increased for capital bond payments at the Main Research Center.

[4] The following adjustments are made for salaries and the removal of FTE positions:

	FTE	General Fund
Removes FTE positions	(25.00)	($4,250,000)
Adjusts FTE positions	7.27	
Restores 2015-17 biennium budget reductions		2,374,935
Removes equity funding		(71,550)
Total	(17.73)	($1,946,615)

[5] Funding for operating expenses is adjusted to reduce appropriations by $355,589 from the general fund. This amount is net of $1,128,922 of 2015-17 biennium budget reductions.

[6] Equipment funding removed as a result of the 2015-17 biennium budget reductions is restored.

[7] Equipment funding is reduced by $100,000 from the general fund. In addition, general fund support is reduced by $1,600,000 and special funds are increased by $1,600,000.

[8] General fund support is reduced by 3 percent of Governor Dalrymple's recommended general fund appropriation.

- A section is added to amend Section 4-05.1-05 to clarify 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.
- A section is added to allow the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.

Senate Bill No. 2020 - Agronomy Seed Farm - Senate Action

	Base Budget	Senate Changes	Senate Version
Agronomy Seed Farm	$1,521,007	$15,744	$1,536,751
Total all funds	$1,521,007	$15,744	$1,536,751
Less estimated income	1,521,007	15,744	1,536,751
General fund	$0	$0	$0
FTE	3.00	0.00	3.00

Department No. 649 - Agronomy Seed Farm - Detail of Senate Changes

	Adds Funding for Base Payroll Changes[1]	Adds Funding for Health Insurance Premium Increases[2]	Total Senate Changes
Agronomy Seed Farm	$7,157	$8,587	$15,744
Total all funds	$7,157	$8,587	$15,744
Less estimated income	7,157	8,587	15,744
General fund	$0	$0	$0
FTE	0.00	0.00	0.00

[1] Funding is added for cost-to-continue 2015-17 biennium salaries and benefit increases and for other base payroll changes.

[2] Funding is added for increases in health insurance premiums from $1,130 to $1,249 per month.

Department 627 - Upper Great Plains Transportation Institute
Senate Bill No. 2020

Dalrymple Executive Budget Comparison to Prior Biennium Appropriations

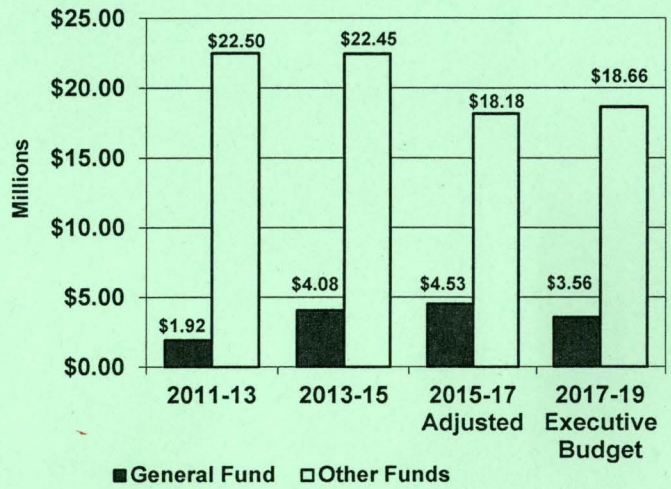
	FTE Positions	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	43.88	$3,563,901	$18,658,122	$22,222,023
2015-17 Adjusted Legislative Appropriations[1]	54.98	4,529,614	18,175,657	22,705,271
Increase (Decrease)	(11.10)	($965,713)	$482,465	($483,248)

[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Dalrymple Executive Budget	$3,563,901	$0	$3,563,901
2015-17 Adjusted Legislative Appropriations	3,900,791	628,823	4,529,614
Increase (Decrease)	($336,890)	($628,823)	($965,713)

Agency Funding



FTE Positions

Dalrymple Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	$3,563,901	$18,658,122	$22,222,023
2017-19 Base Level	3,900,791	18,175,657	22,076,448
Increase (Decrease)	($336,890)	$482,465	$145,575

First House Action

Attached is a comparison worksheet detailing first house changes to base level funding and the executive budget.

Dalrymple and Burgum Executive Budget Highlights (With First House Changes in Bold)

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $46,362 is for salary increases and $117,342 is for health insurance increases. (The Burgum budget removed funding for salary increases and provided for employees to pay for a portion of health insurance.) **The Senate removed funding for the salary increases.**	$41,207	$122,497	$163,704
2. Removes 1.3 FTE positions and reduces funding for salaries and wages and operating expenses	($213,402)	$0	($213,402)
3. Adjusts funding for various operating expenses and grants	($21,203)	$601,085	$579,882
4. Adjusts funding sources agencywide	($200,000)	$200,000	$0

5. The Burgum budget reduced general fund appropriations by 3 percent	($106,917)	$0	($106,917)

Other Sections in Senate Bill No. 2020

Additional income appropriation - Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

FTE position adjustments - Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

Upper Great Plains Transportation Institute - Budget No. 627
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	54.98	$3,900,791	$18,175,657	$22,076,448	54.98	$3,900,791	$18,175,657	$22,076,448
2017-19 Ongoing Funding Changes								
Base payroll changes	(9.80)	$56,508	($388,117)	($331,609)	(9.80)	$56,508	($388,117)	($331,609)
Salary increase				***0***				***0***
Health insurance increase		29,537	87,805	117,342		29,537	87,805	117,342
Employee portion of health insurance		***(15,473)***	***(45,997)***	***(61,470)***				***0***
Removes FTE positions and reduces funding for salaries and wages and operating expenses	(1.30)	(213,402)		(213,402)	(1.30)	(213,402)		(213,402)
Adjusts funding for operating expenses and grants		(21,203)	601,085	579,882		(21,203)	601,085	579,882
Reduces funding for equipment			(53,000)	(53,000)			(53,000)	(53,000)
Adjusts funding sources		(200,000)	200,000	0		(200,000)	200,000	0
Reduce appropriations by 3 percent		***(106,917)***		***(106,917)***		***(106,917)***		***(106,917)***
Total ongoing funding changes	(11.10)	($470,950)	$401,776	($69,174)	(11.10)	($455,477)	$447,773	($7,704)
One-time funding items								
No one-time funding items				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(11.10)	($470,950)	$401,776	($69,174)	(11.10)	($455,477)	$447,773	($7,704)
2017-19 Total Funding	43.88	$3,429,841	$18,577,433	$22,007,274	43.88	$3,445,314	$18,623,430	$22,068,744

Other Sections in Upper Great Plains Transportation Institute - Budget No. 627

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.

Department 627 - Upper Great Plains Transportation Institute

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$4,097,099	$750,000	$4,847,099
General fund reductions	(196,308)	(121,177)	(317,485)
Adjusted 2015-17 appropriations	$3,900,791	$628,823	$4,529,614
Dalrymple Executive Budget changes	(336,890)	(628,823)	(965,713)
2017-19 Dalrymple Executive Budget	$3,563,901	$0	$3,563,901

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for salaries and operating expenses	($196,308)	$0	($196,308)
Reduce funding for travel and consulting services	0	(121,177)	(121,177)
Total reductions	($196,308)	($121,177)	($317,485)
Percentage reduction to ongoing and one-time general fund appropriations	4.79%	16.16%	6.55%

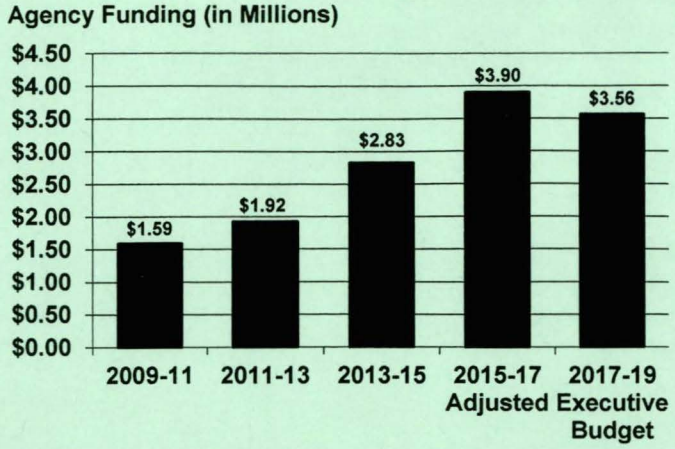
2017-19 Dalrymple Executive Budget Changes to the Original and Adjusted Base Budgets

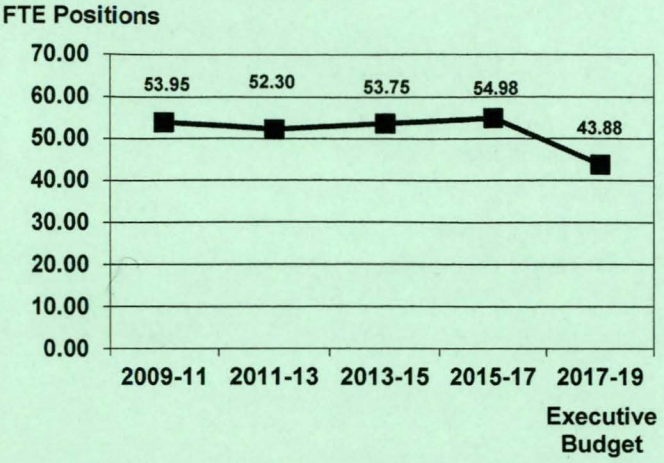
	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$56,508	$0	$56,508
Adds funding for recommended salary and benefit increases	41,207	0	41,207
Removes 1.3 FTE positions and reduces funding for salaries and operating expenses	(409,710)	196,308	(213,402)
Adjusts funding for various operating expenses and grants	(21,203)	0	(21,203)
Adjusts funding sources	(200,000)	0	(200,000)
Total	($533,198)	$196,308	($336,890)

Department 627 - Upper Great Plains Transportation Institute

Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11





Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Dalrymple Executive Budget
Ongoing general fund appropriations	$1,589,793	$1,919,628	$2,826,824	$3,900,791	$3,563,901
Increase (decrease) from previous biennium	N/A	$329,835	$907,196	$1,073,967	($336,890)
Percentage increase (decrease) from previous biennium	N/A	20.7%	47.3%	38.0%	(8.6%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	20.7%	77.8%	145.4%	124.2%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. No major changes	$0

2013-15 Biennium

1. Added funding to match new federal grants	$750,000
2. Added 2 FTE positions	$349,908

2015-17 Biennium

1. Increased funding for rentals, leases, and professional services	$300,548
2. Increased funding to reflect anticipated decreases in federal grants and to aid in obtaining federal grants	$300,548
3. Added funding for a road and bridge asset management system	$793,000

2017-19 Biennium (Dalrymple and Burgum Executive Budget Recommendations)

1. Removes 1.3 FTE positions and reduces funding for salaries and operating expenses	($213,402)
2. Adjusts funding sources	($200,000)
3. The Burgum budget reduced general fund appropriations by an additional 3 percent	($106,917)

Department 628 - Branch Research Centers
Senate Bill No. 2020

Dalrymple Executive Budget Comparison to Prior Biennium Appropriations

	FTE Positions	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	110.29	$17,765,103	$20,310,110	$38,075,213
2015-17 Adjusted Legislative Appropriations[1,2]	113.94	18,758,636	19,992,130	38,750,766
Increase (Decrease)	(3.65)	($993,533)	$317,980	($675,553)

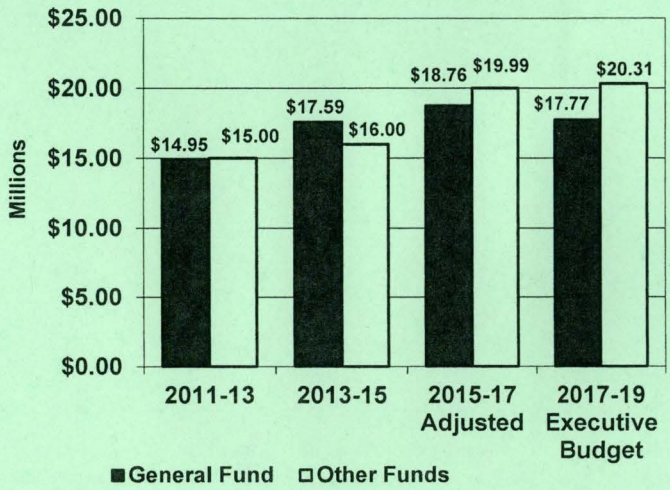
[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

[2]The number of FTE positions for the 2015-17 biennium does not reflect an adjustment of 6.35 FTE positions, from 113.94 to 120.29, pursuant to Section 15 of 2015 House Bill No. 1020, which authorizes the State Board of Higher Education to adjust FTE positions as needed subject to the availability of funds for institutions and entities under its control.

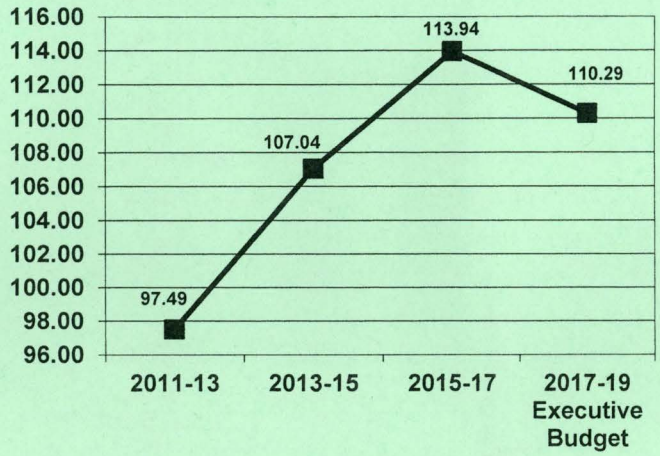
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Dalrymple Executive Budget	$17,765,103	$0	$17,765,103
2015-17 Adjusted Legislative Appropriations	18,483,636	275,000	18,758,636
Increase (Decrease)	($718,533)	($275,000)	($993,533)

Agency Funding



FTE Positions



Dalrymple Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	$17,765,103	$20,310,110	$38,075,213
2017-19 Base Level	18,483,636	19,817,130	38,300,766
Increase (Decrease)	($718,533)	$492,980	($225,553)

First House Action

Attached is a comparison worksheet detailing first house changes to base level funding and the executive budget.

Dalrymple and Burgum Executive Budget Highlights (With First House Changes in Bold)

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $81,051 is for salary increases and $334,855 is for health insurance increases. (The Burgum budget removed funding for salary increases and provided for employees to pay for a portion of health insurance.) **The Senate removed funding for the salary increases.**	$303,670	$112,236	$415,906
2. The Burgum budget reduced general fund appropriations by 3 percent	($532,953)	$0	($532,953)

Dickinson Research Center			
3. Reduces funding for salaries	($192,200)	$0	($192,200)
4. Increases funding for operating expenses	$64,473	$0	$64,473
5. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Central Grasslands Research Center			
6. Increases funding for salaries	$3,500	$0	$3,500
7. Reduces funding for operating expenses	($82,923)	$0	($82,923)
8. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Hettinger Research Center			
9. Reduces funding for salaries	($128,948)	$0	($128,948)
10. Increases funding for operating expenses	$42,344	$0	$42,344
11. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Langdon Research Center			
12. Reduces funding for salaries	($80,000)	$0	($80,000)
13. Increases funding for operating expenses	$28,353	$0	$28,353
14. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
North Central Research Center			
15. Reduces funding for salaries	($180,000)	$0	($180,000)
16. Increases funding for operating expenses	$104,822	$0	$104,822
17. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Williston Research Center			
18. Reduces funding for salaries	($24,760)	$0	($24,760)
19. Reduces funding for operating expenses	($84,107)	$0	($84,107)
20. Additional budget reduction and funding adjustment	($75,000)	$50,000	($25,000)
Carrington Research Center			
21. Reduces funding for salaries	($40,000)	$0	($40,000)
22. Reduces funding for operating expenses	($95,588)	$0	($95,588)
23. Additional budget reduction and funding adjustment	($103,620)	$50,000	($53,620)

Other Sections in Senate Bill No. 2020

Additional income appropriation - Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Employee accrued leave - Section 4 amends North Dakota Century Code Section 4-05.1-05 to clarify 12-month employees whose employment is not limited in duration shall accrue leave pursuant to Section 54-06-14.

Dickinson Research Extension Center mineral rights income - Section 6 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.

Williston Research Extension Center mineral rights income - Section 7 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium.

Transfer authority - Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.

FTE position adjustments - Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

Branch Research Centers - Budget No. 628
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	113.94	$18,483,636	$19,817,130	$38,300,766	113.94	$18,483,636	$19,817,130	$38,300,766
2017-19 Ongoing Funding Changes								
Base payroll changes		$196,347	$30,744	$227,091		$196,347	$30,744	$227,091
Salary increase				***0***				***0***
Health insurance increase		244,491	90,364	334,855		244,491	90,364	334,855
Employee portion of health insurance		***(128,079)***	***(47,338)***	***(175,417)***				***0***
Increases funding for capital bond payments		104		104		104		104
Adjusts funding for salaries and removal of FTE positions	(3.65)	(642,408)		(642,408)	(3.65)	(642,408)		(642,408)
Adjusts funding for operating expenses		(22,626)		(22,626)		(22,626)		(22,626)
Additional budget reductions and funding adjustments		(553,620)	350,000	(203,620)		(553,620)	350,000	(203,620)
Reduce appropriations by 3 percent		***(532,953)***		***(532,953)***		***(532,953)***		***(532,953)***
Total ongoing funding changes	(3.65)	($1,438,744)	$423,770	($1,014,974)	(3.65)	($1,310,665)	$471,108	($839,557)
One-time funding items								
No one-time funding items				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(3.65)	($1,438,744)	$423,770	($1,014,974)	(3.65)	($1,310,665)	$471,108	($839,557)
2017-19 Total Funding	110.29	$17,044,892	$20,240,900	$37,285,792	110.29	$17,172,971	$20,288,238	$37,461,209

Other Sections in Branch Research Centers - Budget No. 628

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Other Sections in Branch Research Centers - Budget No. 628

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Employee accrued leave		Section 4 clarifies that 12-month employees whose employment is not limited in duration shall accrue leave pursuant to North Dakota Century Code Section 54-06-14.
Dickinson Research Extension Center mineral rights income	Section 4 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.	Section 6 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.
Williston Research Extension Center mineral rights income	Section 5 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium.	Section 7 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium.
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.

Department 628 - Branch Research Centers

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$19,798,447	$275,000	$20,073,447
General fund reductions	(1,314,811)	0	(1,314,811)
Adjusted 2015-17 appropriations	$18,483,636	$275,000	$18,758,636
Dalrymple Executive Budget changes	(718,533)	(275,000)	(993,533)
2017-19 Dalrymple Executive Budget	$17,765,103	$0	$17,765,103

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for salaries and wages	($682,592)	$0	($682,592)
Reduce funding for operating expenses	(632,219)	0	(632,219)
Total reductions	($1,314,811)	$0	($1,314,811)
Percentage reduction to ongoing and one-time general fund appropriations	6.64%	0.00%	6.55%

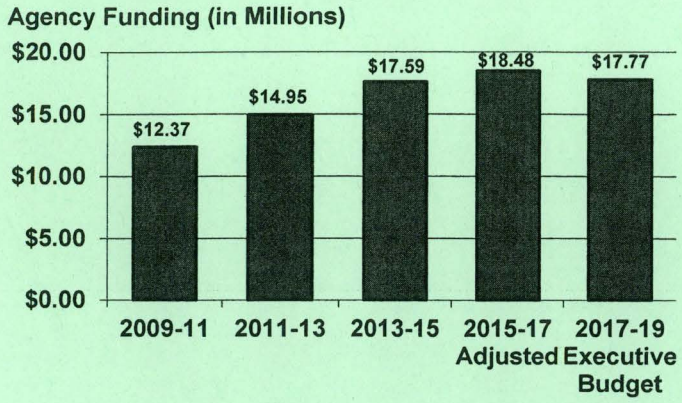
2017-19 Dalrymple Executive Budget Changes to the Original and Adjusted Base Budgets

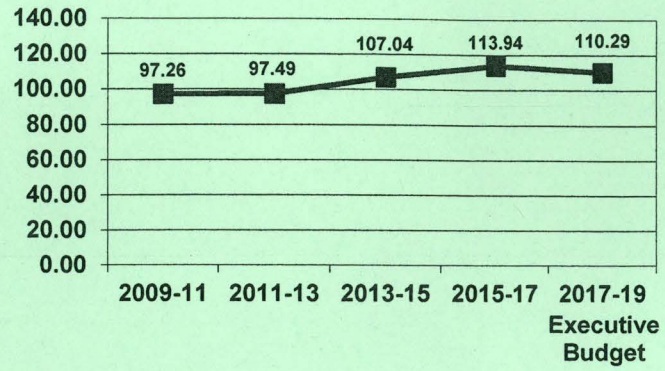
	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$196,347	$0	$196,347
Adds funding for recommended salary and benefit increases	303,670	0	303,670
Reduces funding for salaries, including removal of 3.65 FTE positions	(1,325,000)	682,592	(642,408)
Adjusts funding for operating expenses	(654,845)	632,219	(22,626)
Increases funding for capital bond payments	104	0	104
Additional budget reduction and funding adjustments	(553,620)	0	(553,620)
Total	($2,033,344)	$1,314,811	($718,533)

Department 628 - Branch Research Centers

Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11





Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Dalrymple Executive Budget
Ongoing general fund appropriations	$12,367,190	$14,945,208	$17,585,702	$18,483,636	$17,765,103
Increase (decrease) from previous biennium	N/A	$2,578,018	$2,640,494	$897,934	($718,533)
Percentage increase (decrease) from previous biennium	N/A	20.8%	17.7%	5.1%	(3.9%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	20.8%	42.2%	49.5%	43.6%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. Added funding for soil productivity and land management	$940,000
2. Added funding for infrastructure support	$100,000
3. Added funding to replace a reduction in oil-related revenue at the Dickinson Research Center	$800,000

2013-15 Biennium

1. Added funding for 4 FTE positions, one each at the Central Grasslands Research Center, Hettinger Research Center, North Central Research Center, and Carrington Research Center	$650,000
2. Increased funding for operating expenses (Enhancing Research Capacity Initiative)	$560,000
3. Added funding for variety testing, crop pathology, and dryland crop improvement (Crop Initiative)	$360,000

2015-17 Biennium (Original Amounts)

1. Added funding for 1 FTE animal science technical support position for the Hettinger Research Center	$130,000
2. Added funding for 2 FTE crop disease research positions at the Williston Research Center	$330,000
3. Increased funding for operating expenses (this item was affected by agency budget reductions)	$210,000
4. Increased funding for equipment over $5,000	$550,000

2017-19 Biennium (Dalrymple and Burgum Executive Budget Recommendations)

1. Reduces funding for salaries and wages, including the removal of 3.65 FTE positions	($642,408)
2. Additional budget reductions and funding adjustments	($553,620)
3. The Burgum budget reduced general fund appropriations by an additional 3 percent	($532,953)

Department 630 - NDSU Extension Service
Senate Bill No. 2020

Dalrymple Executive Budget Comparison to Prior Biennium Appropriations

	FTE Positions	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	252.98	$26,878,116	$26,768,589	$53,646,705
2015-17 Adjusted Legislative Appropriations[1,2]	263.91	27,837,062	25,826,708	53,663,770
Increase (Decrease)	(10.93)	($958,946)	$941,881	($17,065)

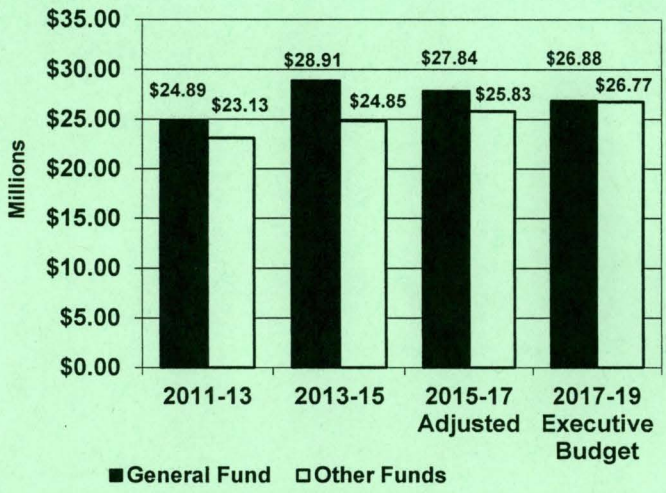
[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

[2]The number of FTE positions for the 2015-17 beinnium does not reflect an adjustment of 2.07 FTE positions, from 263.91 to 265.78, pursuant to Section 15 of 2015 House Bill No. 1020 and North Dakota Century Code Section 4-08-10 which authorizes the State Board of Higher Education to adjust FTE positions for the North Dakota State University (NDSU) Extension Service.

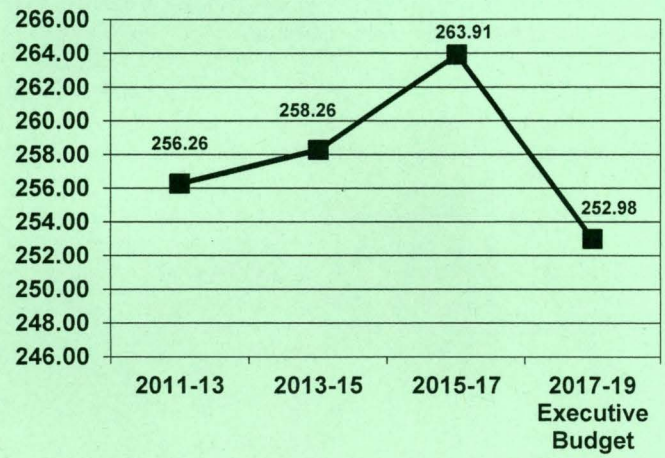
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Dalrymple Executive Budget	$26,878,116	$0	$26,878,116
2015-17 Adjusted Legislative Appropriations	27,824,562	12,500	27,837,062
Increase (Decrease)	($946,446)	($12,500)	($958,946)

Agency Funding



FTE Positions



Dalrymple Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	$26,878,116	$26,768,589	$53,646,705
2017-19 Base Level	27,824,562	25,826,708	53,651,270
Increase (Decrease)	($946,446)	$941,881	($4,565)

First House Action

Attached is a comparison worksheet detailing first house changes to base level funding and the executive budget.

Dalrymple and Burgum Executive Budget Highlights (With First House Changes in Bold)

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $192,092 is for salary increases and $779,440 is for health insurance increases. (The Burgum budget removed funding for salary increases and provided for employees to pay for a portion of health insurance.) **The Senate removed funding for the salary increases.**	$495,078	$476,454	$971,532
2. Reduces funding for salaries, including removal of 10.93 FTE positions	($1,619,206)	$200,000	($1,419,206)

3. Adjusts funding for operating expenses	$175,557	$0	$175,557
4. Reduces funding for equipment	($300,000)	$0	($300,000)
5. The Burgum budget reduced general fund appropriations by 3 percent	($806,343)	$0	($806,343)

Other Sections in Senate Bill No. 2020

Additional income appropriation - Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Employee accrued leave - Section 5 amends Section 4-08-10 to clarify 12-month employees whose employment is not limited in duration shall accrue leave pursuant to Section 54-06-14.

Transfer authority - Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.

FTE position adjustments - Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

House Bill No. 1231 - Repeals Section 12-12-12 to eliminates the requirement that the NDSU Extension Service place quarterly advertisements for agency programs in the county newspaper.

NDSU Extension Service - Budget No. 630
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	263.91	$27,824,562	$25,826,708	$53,651,270	263.91	$27,824,562	$25,826,708	$53,651,270
2017-19 Ongoing Funding Changes								
Base payroll changes		$302,125	$265,427	$567,552		$302,125	$265,427	$567,552
Salary increase				***0***				***0***
Health insurance increase		397,191	382,249	779,440		397,191	382,249	779,440
Employee portion of health insurance		***(208,071)***	***(200,244)***	***(408,315)***				***0***
Reduces funding for salaries	(10.93)	(1,619,206)	200,000	(1,419,206)	(10.93)	(1,619,206)	200,000	(1,419,206)
Adjusts funding for other operating expenses		175,557		175,557		175,557		175,557
Reduces funding for equipment		(300,000)		(300,000)		(300,000)		(300,000)
Reduce appropriations by 3 percent		***(806,343)***		***(806,343)***		***(806,343)***		***(806,343)***
Total ongoing funding changes	(10.93)	($2,058,747)	$647,432	($1,411,315)	(10.93)	($1,850,676)	$847,676	($1,003,000)
One-time funding items								
No one-time funding items				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(10.93)	($2,058,747)	$647,432	($1,411,315)	(10.93)	($1,850,676)	$847,676	($1,003,000)
2017-19 Total Funding	252.98	$25,765,815	$26,474,140	$52,239,955	252.98	$25,973,886	$26,674,384	$52,648,270

Other Sections in NDSU Extension Service - Budget No. 630

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Other Sections in NDSU Extension Service - Budget No. 630

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Employee accrued leave		Section 5 clarifies 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.

Department 630 - NDSU Extension Service

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$29,775,688	$12,500	$29,788,188
General fund reductions	(1,951,126)	0	(1,951,126)
Adjusted 2015-17 appropriations	$27,824,562	$12,500	$27,837,062
Dalrymple Executive Budget changes	(946,446)	(12,500)	(958,946)
2017-19 Dalrymple Executive Budget	$26,878,116	$0	$26,878,116

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for salaries and wages	($698,000)	$0	($698,000)
Reduce funding for NDSU Extension Service operating expenses	(1,173,688)	0	(1,173,688)
Reduce funding for Soil Conservation Committee operating expenses	(79,438)	0	(79,438)
Total reductions	($1,951,126)	$0	($1,951,126)
Percentage reduction to ongoing and one-time general fund appropriations	6.55%	0.00%	6.55%

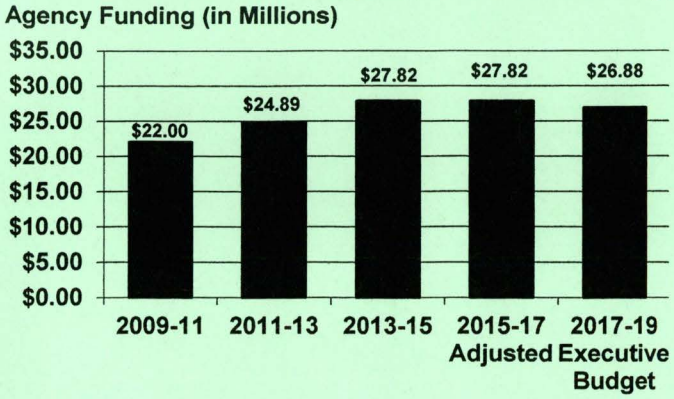
2017-19 Dalrymple Executive Budget Changes to the Original and Adjusted Base Budgets

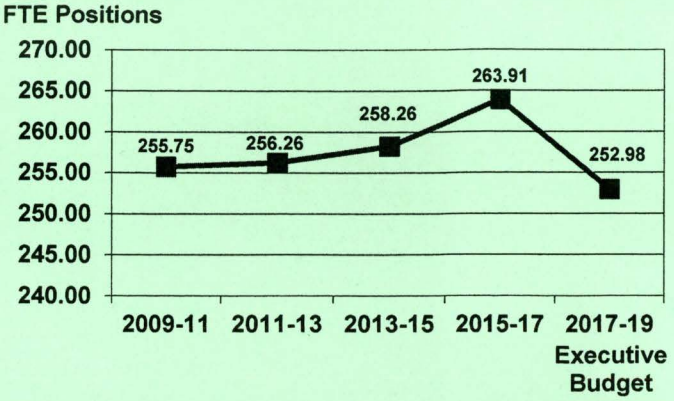
	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$302,125	$0	$302,125
Adds funding for recommended salary and benefits increases	495,078	0	495,078
Reduces funding for salaries, including removal of 10.93 FTE positions	(2,317,206)	698,000	(1,619,206)
Increases funding for NDSU Extension Service operating expenses	(956,289)	1,173,688	217,399
Reduces funding for Soil Conservation Committee operating expenses	(121,280)	79,438	(41,842)
Reduces funding for equipment	(300,000)	0	(300,000)
Total	($2,897,572)	$1,951,126	($946,446)

Department 630 - NDSU Extension Service

Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11





Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Dalrymple Executive Budget
Ongoing general fund appropriations	$22,000,412	$24,885,644	$27,824,265	$27,824,562	$26,878,116
Increase (decrease) from previous biennium	N/A	$2,885,232	$2,938,621	$297	($946,446)
Percentage increase (decrease) from previous biennium	N/A	13.1%	11.8%	0.0%	(3.4%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	13.1%	26.5%	26.5%	22.2%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. Added funding for State Board of Agricultural Research and Education priorities, including technical salary support, soil health and land management, and livestock stewardship	$1,390,000
2. Increased funding for soil conservation district grants to provide a total of $987,800	$250,000

2013-15 Biennium

1. Added funding for 1 FTE area livestock specialist position and 1 FTE crop protection technician position	$370,000
2. Added funding for the Rural Leadership North Dakota program	$125,000
3. Added funding for summer internships	$250,000
4. Increased funding for soil conservation district grants to provide a total of $1,137,800	$150,000
5. Added funding for operating support for livestock production economics	$150,000

2015-17 Biennium (original amounts)

1. Added funding for 1 FTE livestock specialist position at the Hettinger Research Extension Center	$240,000
2. Increased funding for soil conservation district grants to provide a total of $1,212,800 (this item was affected by agency budget reductions)	$75,000

2017-19 Biennium (Dalrymple and Burgum Executive Budget Recommendations)

1. Reduces funding for salaries, including removal of 10.93 FTE positions	($1,619,206)
2. Adjusts funding for operating expenses	$175,557
3. Reduces funding for equipment	($300,000)
4. The Burgum budget reduced general fund appropriations by an additional 3 percent	($806,343)

Department 638 - Northern Crops Institute
Senate Bill No. 2020

Dalrymple Executive Budget Comparison to Prior Biennium Appropriations

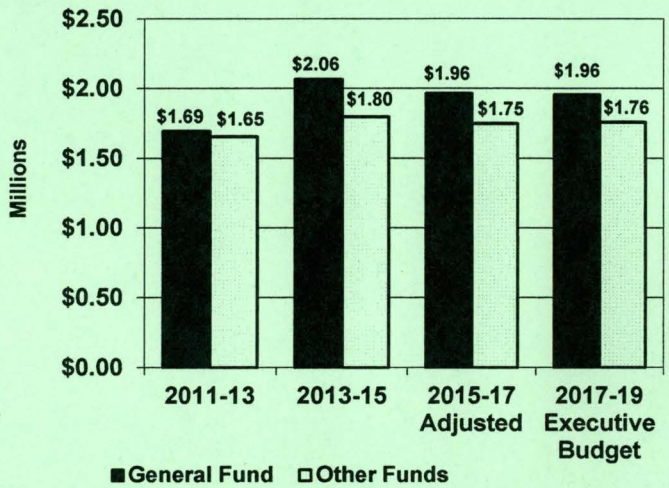
	FTE Positions	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	11.80	$1,955,702	$1,757,743	$3,713,445
2015-17 Adjusted Legislative Appropriations[1]	12.00	1,964,467	1,747,735	3,712,202
Increase (Decrease)	(0.20)	($8,765)	$10,008	$1,243

[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

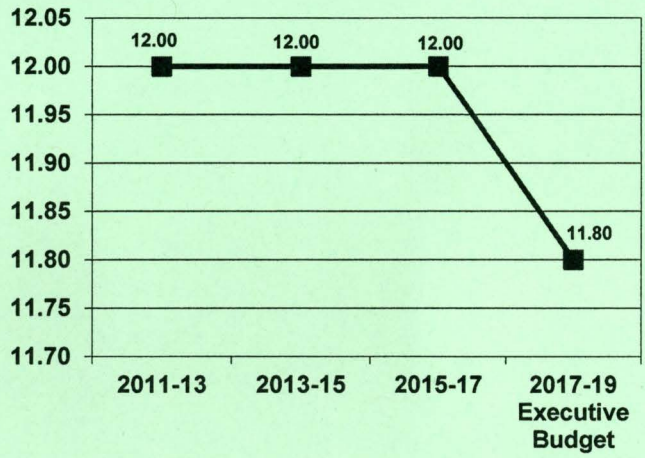
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Dalrymple Executive Budget	$1,955,702	$0	$1,955,702
2015-17 Adjusted Legislative Appropriations	1,964,467	0	1,964,467
Increase (Decrease)	($8,765)	$0	($8,765)

Agency Funding



FTE Positions



Dalrymple Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	$1,955,702	$1,757,743	$3,713,445
2017-19 Base Level	1,964,467	1,747,735	3,712,202
Increase (Decrease)	($8,765)	$10,008	$1,243

First House Action

Attached is a comparison worksheet detailing first house changes to base level funding and the executive budget.

Dalrymple and Burgum Executive Budget Highlights (With First House Changes in Bold)

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $9,865 is for salary increases and $34,344 is for health insurance increases. (The Burgum budget removed funding for salary increases and provided for employees to pay for a portion of health insurance.) **The Senate removed funding for the salary increases.**	$37,361	$6,848	$44,209
2. Reduces funding for equipment	($200,000)	$0	($200,000)
3. Restores funding for operating expenses	$137,691	$0	$137,691
4. The Burgum budget reduced general fund appropriations by 3 percent.	($58,371)	$0	($58,371)

Other Sections in Senate Bill No. 2020

Additional income appropriation - Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Transfer authority - Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.

FTE position adjustments - Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

Northern Crops Institute - Budget No. 638
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	12.00	$1,964,467	$1,747,735	$3,712,202	12.00	$1,964,467	$1,747,735	$3,712,202
2017-19 Ongoing Funding Changes								
Base payroll changes	(0.20)	$26,399	$3,160	$29,559	(0.20)	$26,399	$3,160	$29,559
Salary increase				***0***				***0***
Health insurance increase		29,024	5,320	34,344		29,024	5,320	34,344
Employee portion of health insurance		***(15,204)***	***(2,787)***	***(17,991)***				***0***
Reduces funding for equipment		(200,000)		(200,000)		(200,000)		(200,000)
Reduces funding for travel		(10,216)		(10,216)		(10,216)		(10,216)
Restores funding for operating expenses		137,691		137,691		137,691		137,691
Reduce appropriations by 3 percent		***(58,371)***		***(58,371)***		***(58,371)***		***(58,371)***
Total ongoing funding changes	(0.20)	($90,677)	$5,693	($84,984)	(0.20)	($75,473)	$8,480	($66,993)
One-time funding items								
No one-time funding items				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(0.20)	($90,677)	$5,693	($84,984)	(0.20)	($75,473)	$8,480	($66,993)
2017-19 Total Funding	11.80	$1,873,790	$1,753,428	$3,627,218	11.80	$1,888,994	$1,756,215	$3,645,209

Other Sections in Northern Crops Institute - Budget No. 638

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Other Sections in Northern Crops Institute - Budget No. 638

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute, and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute, and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.

Department 638 - Northern Crops Institute

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$2,102,158	$0	$2,102,158
General fund reductions	(137,691)	0	(137,691)
Adjusted 2015-17 appropriations	$1,964,467	$0	$1,964,467
Dalrymple Executive Budget changes	(8,765)	0	(8,765)
2017-19 Dalrymple Executive Budget	$1,955,702	$0	$1,955,702

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for operating expenses	($137,691)	$0	($137,691)
Total reductions	($137,691)	$0	($137,691)
Percentage reduction to ongoing and one-time general fund appropriations	6.55%	0.00%	6.55%

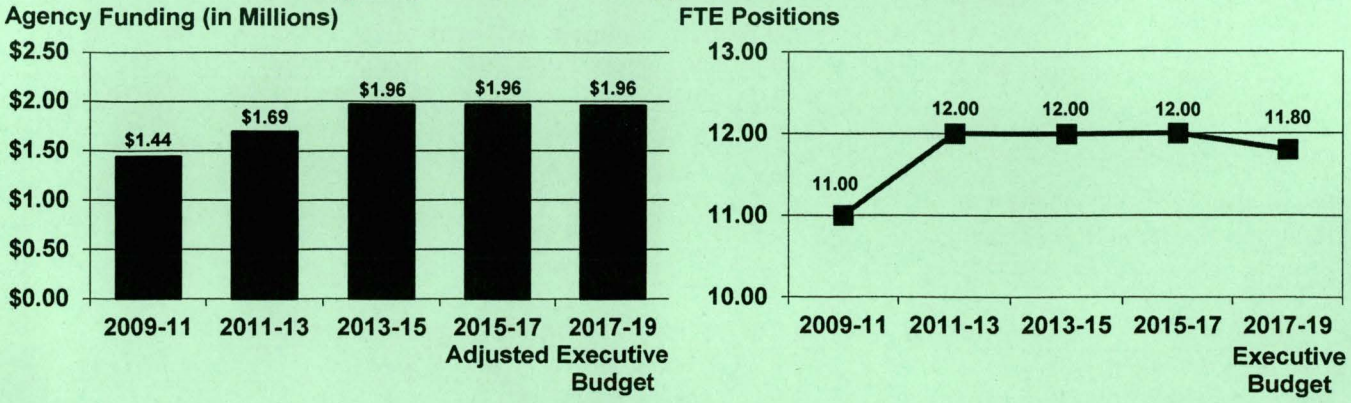
2017-19 Dalrymple Executive Budget Changes to the Original and Adjusted Base Budgets

	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$26,399	$0	$26,399
Adds funding for recommended salary and benefit increases	37,361	0	37,361
Reduces funding for equipment	(200,000)	0	(200,000)
Reduces funding for travel	(10,216)	0	(10,216)
Restores funding for operating expenses	0	137,691	137,691
Total	($146,456)	$137,691	($8,765)

Department 638 - Northern Crops Institute

Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11



Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Dalrymple Executive Budget
Ongoing general fund appropriations	$1,439,221	$1,692,582	$1,964,861	$1,964,467	$1,955,702
Increase (decrease) from previous biennium	N/A	$253,361	$272,279	($394)	($8,765)
Percentage increase (decrease) from previous biennium	N/A	17.6%	16.1%	0.0%	(0.4%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	17.6%	36.5%	36.5%	35.9%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. Adjusted the funding source of 1 FTE feed production center manager position	$202,321

2013-15 Biennium

1. Increased funding for equipment	$30,780

2015-17 Biennium

1. No major changes	$0

2017-19 Biennium (Dalrymple and Burgum Executive Budget Recommendations)

1. Reduces funding for equipment	($200,000)
2. Restores funding for operating expenses	$137,691
3. The Burgum budget reduced general fund appropriations by an additional 3 percent	($58,371)

Department 640 - NDSU Main Research Center
Senate Bill No. 2020

Dalrymple Executive Budget Comparison to Prior Biennium Appropriations

	FTE Positions	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	336.12	$51,329,311	$59,212,281	$110,541,592
2015-17 Adjusted Legislative Appropriations[1,2]	353.85	55,198,683	78,098,525	133,297,208
Increase (Decrease)	(17.73)	($3,869,372)	($18,886,244)	($22,755,616)

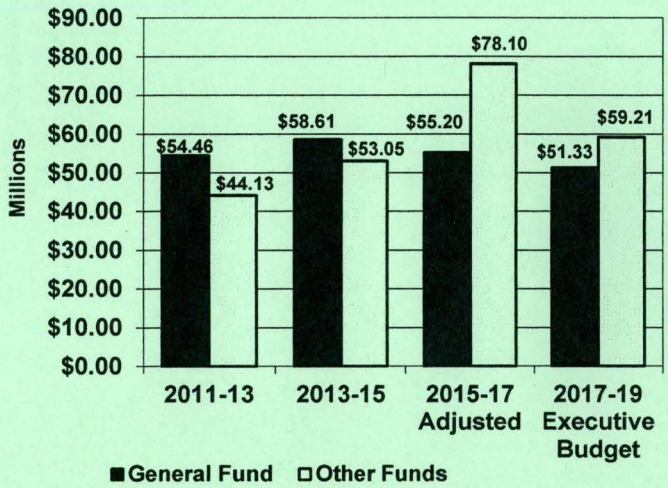
[1]The 2015-17 biennium agency appropriation amounts reflect general fund budget reductions made in August 2016.

[2]The number of FTE positions for the 2015-17 biennium does not reflect an adjustment of 7.27 positions, from 353.85 to 361.12, pursuant to Section 15 of 2015 House Bill No. 1020 and North Dakota Century Code Section 4-05.1-05, which authorizes the State Board of Higher Education to adjust FTE positions for the Main Research Center.

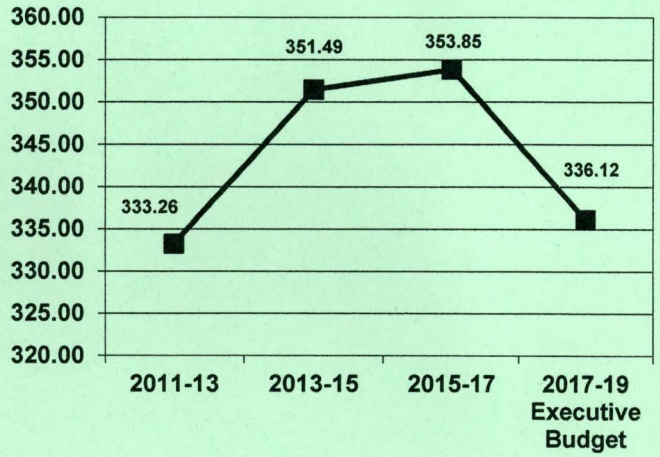
Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2017-19 Dalrymple Executive Budget	$51,329,311	$0	$51,329,311
2015-17 Adjusted Legislative Appropriations	53,581,255	1,617,428	55,198,683
Increase (Decrease)	($2,251,944)	($1,617,428)	($3,869,372)

Agency Funding



FTE Positions



Dalrymple Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	$51,329,311	$59,212,281	$110,541,592
2017-19 Base Level	53,581,255	56,948,525	110,529,780
Increase (Decrease)	($2,251,944)	$2,263,756	$11,812

First House Action

Attached is a comparison worksheet detailing first house changes to base level funding and the executive budget.

Dalrymple and Burgum Executive Budget Highlights (With First House Changes in Bold)

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $284,521 is for salary increases and $1,034,454 is for health insurance increases. (The Burgum budget removed funding for salary increases and provided for employees to pay for a portion of health insurance.) **The Senate removed funding for the salary increases.**	$851,324	$467,651	$1,318,975
2. Reduces funding for salaries and wages, including removal of 17.73 FTE positions	($1,946,615)	$0	($1,946,615)

3. Reduces funding for operating expenses	($355,589)	$0	($355,589)
4. Restores funding for equipment	$260,000	$0	$260,000
5. Additional budget reductions and funding adjustments	($1,700,000)	$1,600,000	($100,000)
6. The Burgum budget reduced general fund appropriations by 3 percent	($1,539,879)	$0	($1,539,879)

Other Sections in Senate Bill No. 2020

Additional income appropriation - Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Employee accrued leave - Section 4 amends Section 4-05.1-05 to clarify 12-month employees whose employment is not limited in duration shall accrue leave pursuant to Section 54-06-14.

Transfer authority - Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.

FTE position adjustments - Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.

Exemption - Section 11 allows the Main Research Center to continue unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

NDSU Main Research Center - Budget No. 640
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	353.85	$53,581,255	$56,948,525	$110,529,780	353.85	$53,581,255	$56,948,525	$110,529,780
2017-19 Ongoing Funding Changes								
Base payroll changes		$638,645	$196,105	$834,750		$638,645	$196,105	$834,750
Salary increase				***0***				***0***
Health insurance increase		667,682	366,772	1,034,454		667,682	366,772	1,034,454
Employee portion of health insurance		***(349,770)***	***(192,136)***	***(541,906)***				***0***
Increases funding for capital bond payments		291		291		291		291
Reduces funding for salaries and wages	(17.73)	(1,946,615)		(1,946,615)	(17.73)	(1,946,615)		(1,946,615)
Reduces funding for operating expenses		(355,589)		(355,589)		(355,589)		(355,589)
Restores funding for equipment		260,000		260,000		260,000		260,000
Additional budget reductions and funding adjustments		(1,700,000)	1,600,000	(100,000)		(1,700,000)	1,600,000	(100,000)
Reduce appropriations by 3 percent		***(1,539,879)***		***(1,539,879)***		***(1,539,879)***		***(1,539,879)***
Total ongoing funding changes	(17.73)	($4,325,235)	$1,970,741	($2,354,494)	(17.73)	($3,975,465)	$2,162,877	($1,812,588)
One-time funding items								
No one-time funding items				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(17.73)	($4,325,235)	$1,970,741	($2,354,494)	(17.73)	($3,975,465)	$2,162,877	($1,812,588)
2017-19 Total Funding	336.12	$49,256,020	$58,919,266	$108,175,286	336.12	$49,605,790	$59,111,402	$108,717,192

Other Sections in NDSU Main Research Center - Budget No. 640

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Other Sections in NDSU Main Research Center - Budget No. 640

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Employee accrued leave		Section 4 clarifies 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.
Exemption	Section 9 allows the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.	Section 11 allows the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.

Department 640 - NDSU Main Research Center

Appropriations Comparisons to the Original and Adjusted Base Budgets

General Fund Appropriations Adjustments

(As a result of the August 2016 General Fund Budget Reductions)

	Ongoing	One-Time	Total
2015-17 original general fund appropriations	$57,345,112	$1,722,500	$59,067,612
General fund reductions	(3,763,857)	(105,072)	(3,868,929)
Adjusted 2015-17 appropriations	$53,581,255	$1,617,428	$55,198,683
Dalrymple Executive Budget changes	(2,251,944)	(1,617,428)	(3,869,372)
2017-19 Dalrymple Executive Budget	$51,329,311	$0	$51,329,311

Summary of August 2016 General Fund Budget Reductions

	Ongoing	One-Time	Total
Reduce funding for salaries and wages	($2,374,935)	$0	($2,374,935)
Reduce funding for operating expenses	(1,128,922)	0	(1,128,922)
Reduce funding for equipment	(260,000)	0	(260,000)
Reduce funding for rural leadership project	0	(8,748)	(8,748)
Reduce funding for flooded lands study	0	(4,548)	(4,548)
Reduce funding for seed cleaning plants	0	(91,776)	(91,776)
Total reductions	($3,763,857)	($105,072)	($3,868,929)
Percentage reduction to ongoing and one-time general fund appropriations	6.56%	6.10%	6.55%

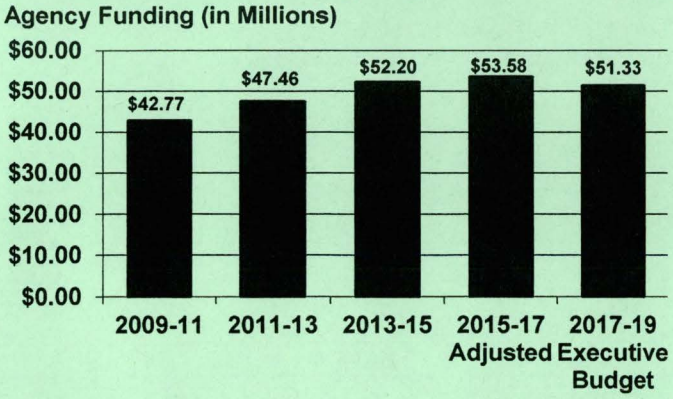
2017-19 Dalrymple Executive Budget Changes to the Original and Adjusted Base Budgets

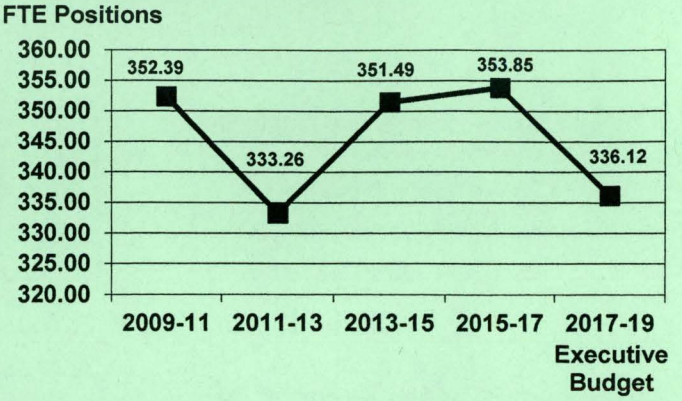
	Changes to Original Budget	Budget Reduction Adjustments	Changes to Adjusted Budget
Adds funding for base payroll changes	$638,645	$0	$638,645
Adds funding for recommended salary and benefits increases	851,324	0	851,324
Reduces funding for salaries and wages, including removal of 17.73 FTE positions	(4,321,550)	2,374,935	(1,946,615)
Reduces funding for operating expenses	(1,484,511)	1,128,922	(355,589)
Restores funding for equipment	0	260,000	260,000
Increases funding for capital bond payments	291	0	291
Additional budget reductions and funding adjustments	(1,700,000)	0	(1,700,000)
Total	($6,015,801)	$3,763,857	($2,251,944)

Department 640 - NDSU Main Research Center

Historical Appropriations Information

Ongoing General Fund Appropriations Since 2009-11





Ongoing General Fund Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Dalrymple Executive Budget
Ongoing general fund appropriations	$42,767,151	$47,464,748	$52,199,521	$53,581,255	$51,329,311
Increase (decrease) from previous biennium	N/A	$4,697,597	$4,734,773	$1,381,734	($2,251,944)
Percentage increase (decrease) from previous biennium	N/A	11.0%	10.0%	2.6%	(4.2%)
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	11.0%	22.1%	25.3%	20.0%

Major Increases (Decreases) in Ongoing General Fund Appropriations

2011-13 Biennium

1. Added funding and 2 FTE technician positions to improve animal productivity and livestock stewardship — $240,000
2. Added funding and 2 FTE positions to enhance canola crop development efforts — $210,000
3. Added funding for State Board of Agricultural Research and Education priorities, including greenhouse utilities, soil productivity and land management, and operations and infrastructure support — $2,543,622

2013-15 Biennium

1. Added funding for 3 FTE positions, including 1 nematologist, 1 nematology technician, and 1 crop development technician — $655,000

2015-17 Biennium (Original Amounts)

1. Added funding for 2 FTE bioinformatics positions — $800,000
2. Added funding for precision agriculture operating expenses and grants — $600,000
3. Increased funding for equipment (this item was affected by agency budget reductions) — $550,000

2017-19 Biennium (Dalrymple and Burgum Executive Budget Recommendations)

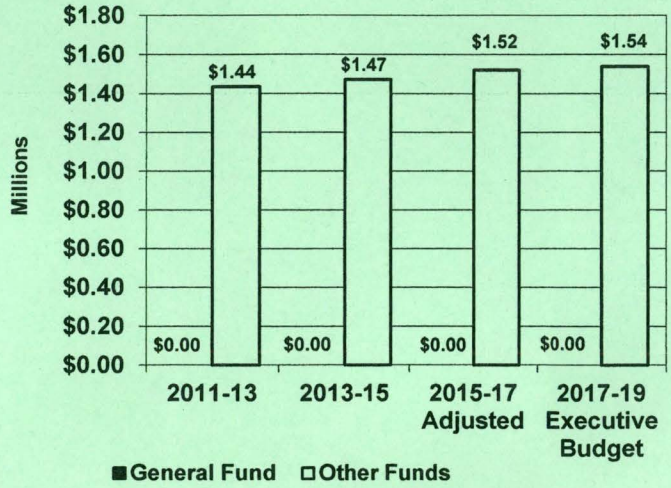
1. Reduces funding for salaries and wages, including removal of 17.73 FTE positions — ($1,946,615)
2. Reduces funding for operating expenses — ($355,589)
3. Restores funding for equipment — $260,000
4. Additional budget reductions and funding adjustments — ($1,700,000)
5. The Burgum budget reduced general fund appropriations by an additional 3 percent — ($1,539,879)

Department 649 - Agronomy Seed Farm
Senate Bill No. 2020

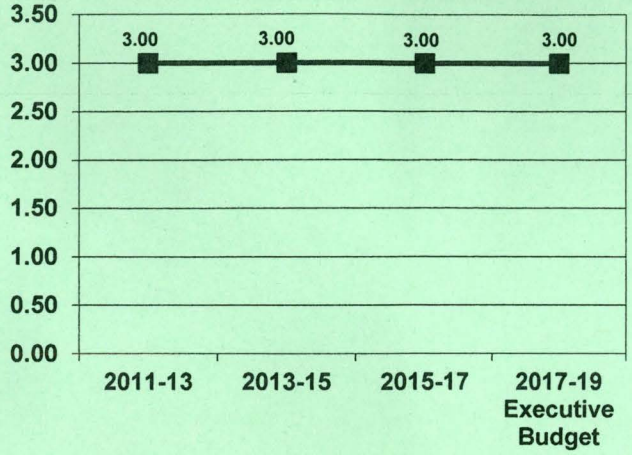
Dalrymple Executive Budget Comparison to Prior Biennium Appropriations

	FTE Positions	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	3.00	$0	$1,538,795	$1,538,795
2015-17 Adjusted Legislative Appropriations[1]	3.00	0	1,521,007	1,521,007
Increase (Decrease)	0.00	$0	$17,788	$17,788

Agency Funding



FTE Positions



Dalrymple Executive Budget Comparison to Base Level

	General Fund	Other Funds	Total
2017-19 Dalrymple Executive Budget	$0	$1,538,795	$1,538,795
2017-19 Base Level	0	1,521,007	1,521,007
Increase (Decrease)	$0	$17,788	$17,788

First House Action

Attached is a comparison worksheet detailing first house changes to base level funding and the executive budget.

Dalrymple and Burgum Executive Budget Highlights (With First House Changes in Bold)

	General Fund	Other Funds	Total
1. Provides funding for state employee salary and benefit increases, of which $2,044 relates to salary increases and $8,587 is for health insurance increases. (The Burgum budget removed funding for salary increases and provided for employees to pay for a portion of health insurance.) **The Senate removed funding for the salary increases.**	$0	$10,631	$10,631

Other Sections in Senate Bill No. 2020

Additional income appropriation - Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

FTE position adjustments - Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.

Unexpended general fund - Excess income - Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there are no significant audit findings for this agency.

Major Related Legislation

At this time, no major legislation has been introduced affecting this agency.

Agronomy Seed Farm - Budget No. 649
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	3.00	$0	$1,521,007	$1,521,007	3.00	$0	$1,521,007	$1,521,007
2017-19 Ongoing Funding Changes								
Base payroll changes			$7,157	$7,157			$7,157	$7,157
Salary increase				***0***				***0***
Health insurance increase			8,587	8,587			8,587	8,587
Employee portion of health insurance			***(4,498)***	***(4,498)***				***0***
Total ongoing funding changes	0.00	$0	$11,246	$11,246	0.00	$0	$15,744	$15,744
One-time funding items								
No one-time funding items				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	0.00	$0	$11,246	$11,246	0.00	$0	$15,744	$15,744
2017-19 Total Funding	3.00	$0	$1,532,253	$1,532,253	3.00	$0	$1,536,751	$1,536,751

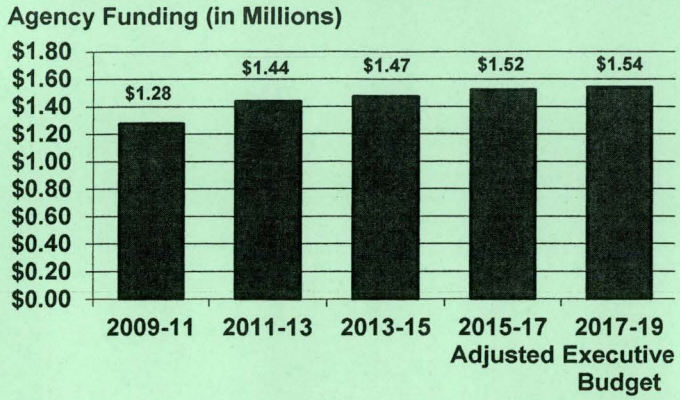
Other Sections in Agronomy Seed Farm - Budget No. 649

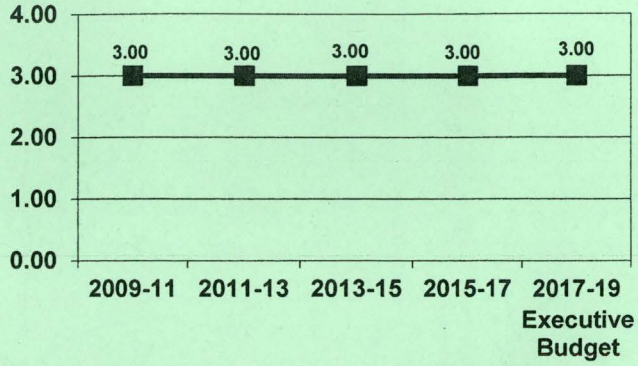
	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.

Department 649 - Agronomy Seed Farm

Historical Appropriations Information

Ongoing Other Funds Appropriations Since 2009-11





Ongoing Other Funds Appropriations					
	2009-11	2011-13	2013-15	2015-17 Adjusted	2017-19 Dalrymple Executive Budget
Ongoing other funds appropriations	$1,275,238	$1,435,168	$1,471,759	$1,521,007	$1,538,795
Increase (decrease) from previous biennium	N/A	$159,930	$36,591	$49,248	$17,788
Percentage increase (decrease) from previous biennium	N/A	12.5%	2.5%	3.3%	1.2%
Cumulative percentage increase (decrease) from 2009-11 biennium	N/A	12.5%	15.4%	19.3%	20.7%

Major Increases (Decreases) in Ongoing Other Funds Appropriations

2011-13 Biennium

1. Increased funding for equipment $127,000

2013-15 Biennium

1. No major changes $0

2015-17 Biennium

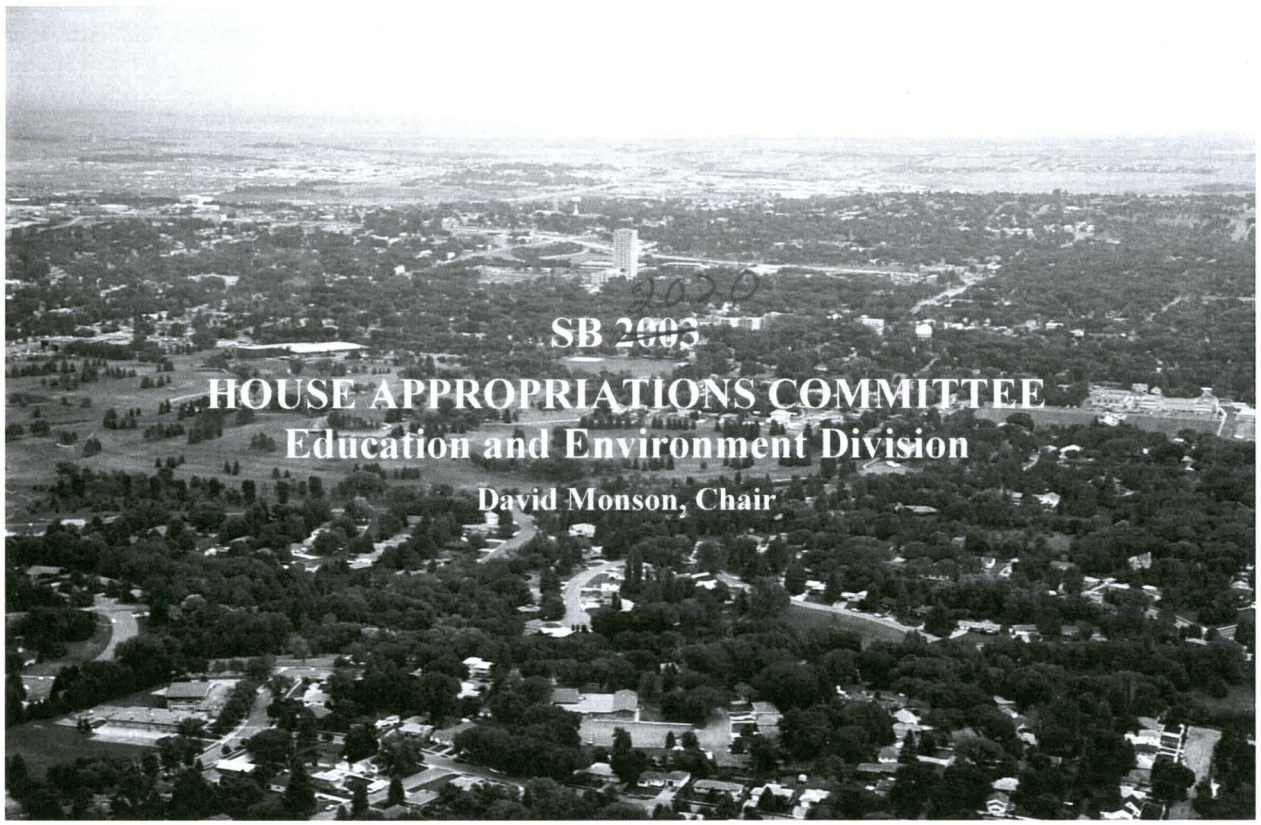
1. No major changes $0

2017-19 Biennium (Dalrymple and Burgum Executive Budget Recommendations)

1. No major changes $0

SB 2020 3.7.17
Att. 1

NDSU *North Dakota Forest Service*



Sustainable Forestry Programs

2017-2019 Biennial Budget Request

LARRY A. KOTCHMAN, STATE FORESTER
March 7, 2017

- Summary of Agency Services
- 2015-2017 Funding Reports
- 2017-2019 Funding Request – SB 2003/SB 2063
- Executive Budget Recommendations
  - Base Funding
  - 2017-2019 Capital Assets
- 2017-2019 Budget Summary

A Message from the State Forester

The NDSU-North Dakota Forest Service is organized under the North Dakota Board of Higher Education. The agency is administered by a state forester who reports to the president of North Dakota State University at Fargo, and supports the land grant mission in public service. The mission of the North Dakota Forest Service is to "**care for, protect and improve forest resources to enhance the quality of life for future generations.**"

This 2017-2019 Biennial Budget Request summary is intended to provide the information you need to determine funding levels for forestry programs benefiting communities, fire districts and private forest landowners. Please feel free to contact us at any time if you need additional information.

Larry A. Kotchman, State Forester

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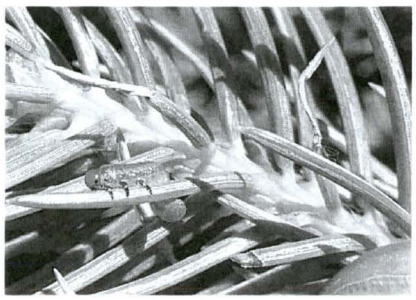
Summary of Agency Services

A wide variety of customers depend on the North Dakota Forest Service for technical, financial and educational forestry assistance. The state forester administers forestry programs serving communities, rural landowners, soil conservation districts, rural fire districts, schools and citizens of North Dakota. All the programs utilize a voluntary, educational and incentives-based approach to address natural resource needs and customer demands.

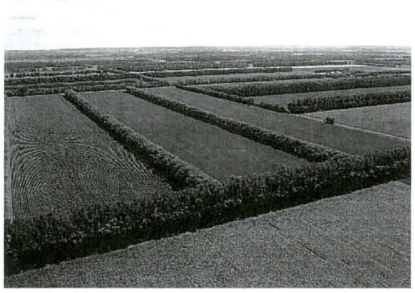
The agency also operates a nursery at Towner specializing in the annual production of one million conifer (evergreen) tree seedlings. The Towner State Nursery is the sole supplier of evergreen seedlings in North Dakota. The agency also owns and manages approximately 13,290 acres of state forest lands.

Community Forestry means conservation activities in city parks, tree-lined streets or other green spaces within the community. Most of North Dakota's residents live in 372 cities and towns. The Community Forestry Program served 236 communities benefiting 90 percent of North Dakota's residents. The agency administered $676,398 in financial assistance programs for tree planting and forestry development projects, as well as technical assistance for tree planting plans, management plans, shade tree ordinances, pest surveys and tree workshops. The Arbor Day Foundation's Tree City USA program recognized 51 North Dakota communities for enhancing the extent and health of their community forests. Two communities, Grand Forks and Mandan, celebrated their 40th Tree City USA anniversaries.

Fire Management ensures the protection of lives, property and natural resources by training, organizing and equipping North Dakota's 376 rural volunteer fire departments. A Cooperative Fire Protection Assistance Program provided departments $547,795 in financial assistance for organizing, training, planning, purchasing or repairing equipment. A companion program, the Federal Excess Personal Property (FEPP) program, loans nearly $9 million in surplus federal equipment to departments for enhancing firefighting capabilities. The Forest Service provided wildland firefighter training to 335 or 89 percent of rural fire departments. Community protection is improved through grants for wildfire hazard mitigation and "FireWise" landscape projects. Fire prevention is stressed through the distribution of Smokey Bear materials.



Forest Health ensures the productivity and growth of North Dakota's private, community and state forests. The North Dakota Forest Service conducted surveys to assess forest health conditions within 341,449 acres of forests and trains public and private land managers on insect and disease management. North Dakota participates in the Great Plains Tree and Forest Invasives Initiative to identify contingency measures for minimizing the threat of invasive species, such as emerald ash borer.



Forest Stewardship focuses on improving the management of our forest resources by educating and assisting non-industrial private landowners on how to better manage, protect and utilize their native and planted forest resources. This is accomplished through the development of a Forest Stewardship Plan. The agency provided landowners $709,972 in financial assistance for forest improvement practices. The agency also awarded $611,682 in ND Outdoor Heritage Windbreak Renovation Initiative funding to 117 landowners for renovating declining farmstead and field windbreaks.

Information and Education offers youth and adults the knowledge and skills they need to make wise decisions about the conservation and wise use of North Dakota's forest resources. The ND Forest Service, in conjunction with the NDSU Extension Forester, sponsored "Project Learning Tree" workshops and provided environment education to 1,454 teachers and youth leaders working with 25,909 students in grades K-12. The program also handles the daily requests for forestry information and the publication of educational materials.

Towner State Nursery produced 1,041,997 conifer (evergreen) seedlings in over thirty different species and stock types for distribution to landowners. The trees are used for farmstead, living snow fence, field windbreaks, wildlife, forestry and other conservation plantings. The nursery is a self-supporting operation, and since 1927 has sold over 83 million trees. The nursery also provides tree improvement services, such as testing, evaluation, selection and development of improved nursery stock for forestry and conservation plantings.

State Forests provide wildlife habitat, clean air and water, recreational opportunities, forest products, scenic beauty and other conservation benefits. The North Dakota Forest Service owns five state forests comprising approximately 13,290 acres. State Forests play an important role in the economic well-being of several rural communities by attracting hunters, hikers, campers, skiers, snowmobilers, tourists and other outdoor enthusiasts.

AGENCY PERFORMANCE MEASURES

The North Dakota Forest Service utilizes an accountability measures process to assess progress toward achieving long-range strategic goals, and ultimately the agency's mission. Accountability measures are linked to the long-range strategic planning process to document North Dakota Forest Service program outcomes. The North Dakota Forest Service developed twelve (12) accountability measures using the State Forester's goals and statutory authority. The State Forester's goals are directly linked to the authority granted under North Dakota Century Code 4-19, 18-10 and 57-57 to meet the forestry needs of the state. Performance indicators, units of measure and program accomplishment data are completed for each of the agency's 12 accountability measures beginning July 1 and ending June 30. A biennial accountability measures report is prepared by the agency. The State Forester's goals and accountability measures are as follows:

State Forester's Goals

1. To positively impact forest-based economic growth and sustainability of communities by promoting the wise use of natural resources.
2. To improve the protection of people, property and natural resources by enhancing interagency cooperation in wildfire management.
3. To support informed decision-making and foster individual responsibility in stewards of all ages by raising public awareness about natural resource values.
4. To meet the forest and conservation tree planting needs of private and public landowners by producing and marketing high quality nursery stock.
5. To meet current societal demands by ensuring the health, productivity and growth of private, community and state forests.

Accountability Measures

1. Assisted 12 percent of biomass and wood utilization businesses in utilizing forest and municipal wood waste for renewable energy resulting in the installation of a biomass heating system demonstration in the Bismarck State College Aquatic and Wellness Center.

2. Awarded $1,386,370 forestry-based economic benefits for forestry practices serving 89 percent of the financial assistance needs of communities, fire districts and private forest landowners. Practices include tree planting, community forestry development, fire protection and living snow fences.

3. Enhanced community wildfire protection resulting in the preparation of 17 County Wildfire Protection Plans encompassing 32 percent of North Dakota's counties.

4. Enhanced rural fire department capacity through wildland firefighter training provided to 335 or 89 percent of rural fire departments.

5. Provided wildland fire awareness and prevention programs including FireWise concepts to 53 or 100 percent of North Dakota's counties.

6. Raised public awareness through information and education programs and fostered individual responsibility for conserving forest resources by delivering environmental education to 1,454 K-12 teachers (20 percent) and 25,909 K-12 students (23 percent).

7. Promoted professionalism in the tree care industry through training provided to 45 arborists (35 percent) certified according to International Society of Arboriculture standards.

8. Supplied conservation tree planting needs from 99 percent of Towner State Nursery customers through the sale of 1,041,997 nursery seedlings.

9. Sustained North Dakota's natural resources through the active forest management and protection services for 73,348 acres or 14 percent of privately-owned forest lands.

10. Served 236 or 63 percent on North Dakota's communities benefiting 90 percent of the state's residents with sustainable community forestry programs, including the planting and care of street and park trees.

11. Ensured the health and sustainability of 341,449 acres of "at risk" forest resources through continuous surveys for damaging pests and agents.

12. Provided quality outdoor state forest experiences on 2,792 acres or 21 percent of the state forests under multiple use management.

ORGANIZATIONAL STRUCTURE

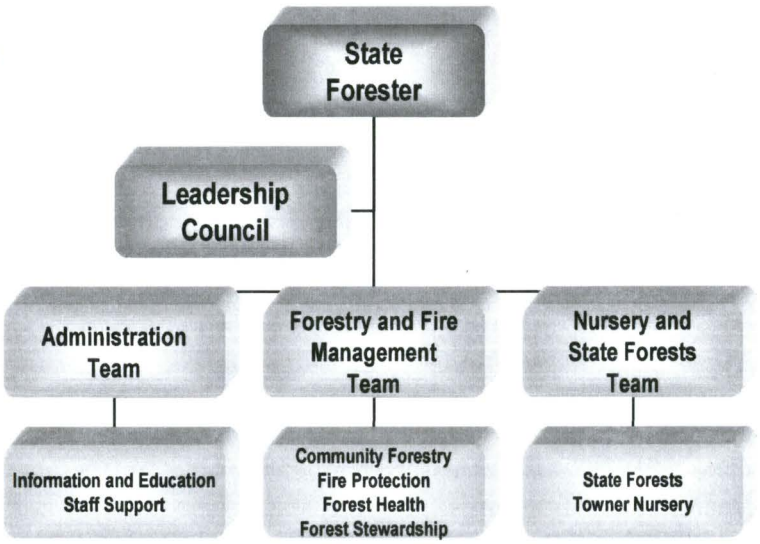
The North Dakota Forest Service organizational structure focuses on increasing program efficiencies, strengthening customer service, promoting teamwork and encouraging collaboration to address emerging natural resource issues.

The vision "***to ensure the relevancy and competitiveness of North Dakota to enhance public benefits from trees, forests and natural resources***" is guiding the agency's efforts.

The organization structure is composed of three leadership teams:

(a) Administration
(b) Forestry and Fire
(c) Nursery and State Forests

A Leadership Council advises the State Forester on the management of the agency.



The structure provides a unified team approach to ensure a coordinated focus toward the delivery of services and collaboration across organization boundaries. Teams composed of organizational unit representatives address issues brought to the Leadership Council. Teams deal with customer service improvements, communications, program efficiencies and joint partnership initiatives. Teams are responsible for focusing leadership and resources on landscape level natural resource issues. Teams are organized and monitored by the Council to ensure they fulfill the needs of the project and meet the goals of the agency.

FUNDING SOURCES

Appropriated funding for North Dakota's forestry programs is derived from three sources: the state general fund, income from the sale of nursery products, and contributions from the Trees for North Dakota Trust Fund.

2015-2017 Funding Appropriation

The 2015-2017 original appropriated budget for the Forest Service was $6,657,844, including $1,650,000 generated by estimated income from tree seedling sales and the Trees for North Dakota Trust Fund, and $5,007,844 in general funds. General fund authority was increased to $5,508,076.90 with $500,232.90 in carryover. Senate Bill 2379 provided for a $328,014 reduction of 2015-2017 biennium general fund authority, including the 4.05% budget allotment ordered by the Governor in February 2016, and the 2.5 % budget allotment ordered by the Governor in August 2016. The total 2015-2017 current appropriation for the Forest Service is $6,830,062.90, including $6,228,620 for operations, $101,210 for capital assets, and $500,232.90 in biennium carryover. The general fund appropriation is $5,180,062.90. Other funds are $1,650,000.

The 2015-2017 operations budget includes salaries and wages and operating expenses for 29 FTE and 45 seasonal positions that provide public forestry services.

- Operations
  - Salaries and Wages $4,678,913
  - Operating 1,549,707

  Total $6,228,620.00

The 2015-17 capital assets budget provides necessary repairs for 41 office, shop, storage and recreational buildings at Bottineau, Lisbon, Towner and Walhalla. The budget includes extraordinary repairs and equipment.

- Capital Assets
  - Extraordinary Repairs – State Forests and Towner State Nursery 44,962.00
  - Equipment 56,248.00

  Total $101,210.00

The 2013-2015 biennium carryover includes $500,232.90 in general funds. The funds are being expended for the following purposes:

- General Fund Carryover
  - Operating – Emerald Ash Borer Program $250,000.00
  - Operating – Ext. repairs, equipment and one-time operating expenses .. 250,232.90

Total $500,232.90

Total 2015-2017 Appropriation (General funds and other funds) $6,830,062.90

ALLOTMENT – SB 2379

Senate Bill 2379 provides for the reduction of the 2015-2017 biennium general fund authority enacted by the 64th Legislative Assembly for agencies and institutions. The amounts include the 4.05% budget allotment ordered by the Governor in February 2016, and the 2.5 % budget allotment ordered by the Governor in August 2016. The Forest Service 2015-2017 original general fund appropriation was $5,007,844 and its general fund reduction was $328,014.

The Forest Service reduced its operations line item by $328,014. The State Forester utilized the unobligated 2015-2017 biennial balance in the Forest Restoration Program's operating budget and savings from the vacant fire technician position (1.0 FTE) and the community forestry specialist position (1.0 FTE) to meet the required $328,014 (6.65%) reduction. This includes $184,119 in unexpended Forest Restoration operating funds and $143,895 in savings from the vacant fire technician position and community forestry specialist position (2.0 FTE).

Customer service impacts from eliminating the Forest Restoration Program will be minimized by assisting affected communities and private forest landowners with alternative funding sources for restoring trees and forests damaged by flooding. Since the Forest Restoration Program was initiated in 2013, an additional $1.8 million in financial assistance for private forest landowners has become available through the North Dakota Outdoor Heritage Fund, as well as $450,000 appropriated through the Trees for North Dakota Trust Fund. Both programs provide project grant funds to communities and private forest landowners for restoring trees and forests, as well as other needed conservation practices.

The Forest Service will hold the vacant fire technician position and community forestry specialist position (2.0 FTE) open for the remainder of the 2015-2017 biennium. If funds become available, the positions will be refilled in 2017-2019. The fire technician position duties, including assistance to rural fire departments, have been assigned to part-time emergency firefighter personnel to ensure the Fire Management Program has the necessary capacity to prevent and suppress wildfires that threaten lives and property. Community forestry position requests are being referred to three other full-time community forestry staff positions. Approximately 33 communities in southeastern North Dakota previously served by the vacant community forestry specialist will experience 30-90 day delays in service for technical assistance on tree planting and tree care.

Campus North Dakota Forest Service

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation 1/	Actual Expenditures Through 12/31/16	Anticipated Expenditures	Unexpended Remaining Balance 6/30/17
Operations:	$6,228,620	$3,808,019	$2,420,601	$0
Operations Funding Sources:				
General Fund	4,578,620	3,236,423	1,342,197	0
Other Funds (Revenue bonds, local, private, federal funds)	1,650,000	571,596	1,078,404	0
Total Funds	$6,228,620	$3,808,019	$2,420,601	$0
Capital Assets:				
Extraordinary repairs	44,962	29,093	15,869	0
Equipment	56,248	33,240	23,008	0
Total Capital Assets	$101,210	$62,333	$38,877	$0
Capital Assets Funding Sources:				
General Fund	101,210	62,333	38,877	0
Other Funds (Revenue bonds, local, private, federal funds)	-	-	-	
Total Funds	$101,210	$62,333	$38,877	$0

1/ Excludes carryover, as that is reported on separately.

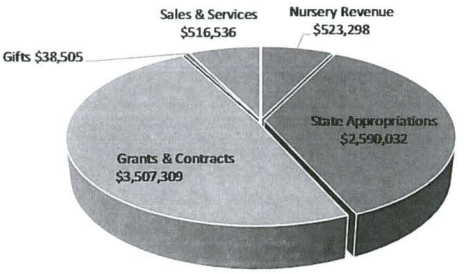
The City of Mandan celebrates its 40th Anniversary as Tree City USA. The recognition program is sponsored by the Arbor Day Foundation, US Forest Service and ND Forest Service.

NORTH DAKOTA FOREST SERVICE
FY 2016 REVENUES AND EXPENSES

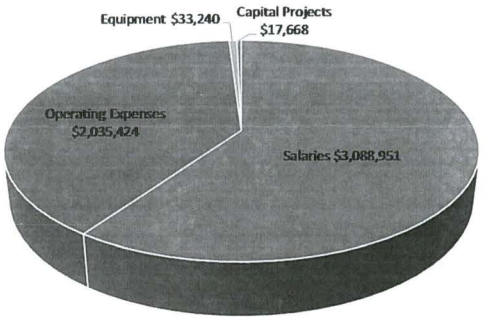
Revenues			
Nursery Revenue	$	523,298	7%
State Appropriations	$	2,590,032	36%
Grants & Contracts	$	3,507,309	49%
Gifts	$	38,505	1%
Sales & Services	$	516,536	1%
GT	$	7,175,680	

Expenses			
Salaries	$	3,088,951	60%
Operating Expenses	$	2,035,424	39%
Equipment	$	33,240	1%
Capital Projects	$	17,668	0%
GT	$	5,175,283	

North Dakota Forest Service
FY 2016 Revenues



North Dakota Forest Service
FY 2016 Expenditures



NORTH DAKOTA FOREST SERVICE
Status of 2015- 2017
Extraordinary Repairs, Equipment & Capital Projects

	Revised Budget 2015-17	Actual Expenses As Of 12/31/2016	Balance	% Remaining
Extraordinary Repairs				
Misc. Small Projects < $50,000	$44,962	$42,102	$2,860	
Total Extraordinary Repairs	$44,962	$42,102	$2,860	6.36%
Equipment Over $5,000				
Towner State Nursery & Field Offices	56,248	33,240	23,008	
Total Equipment	$56,248	$33,240	$23,008	40.90%
Total Capital Assets	$101,210	$75,342	$25,868	25.56%
Sources of Capital Funding				
General Fund	101,210	75,342	25,868	25.56%
Oil Trust Fund	0	0	0	0.00%
Special Funds	0	0	0	0.00%
Total Funding Sources	$101,210	$75,342	$25,868	25.56%

NORTH DAKOTA FOREST SERVICE
Status of 2013 - 2015 Carryover

	Revised Budget 2015-17	Actual Expenses As Of 12/31/2016	Balance	% Remaining
Operating				
Repairs/Supplies - Towner State Nursery	$250,233	$172,982	$77,251	
Emerald Ash Borer Program	250,000	36,546	213,454	
Total Operating	$500,233	$209,528	$290,705	58.11%
Total Carryover	$500,233	$209,528	$290,705	58.11%
Sources of Carryover				
General Fund	500,233	209,528	290,705	58.11%
Total Funding Sources	$500,233	$209,528	$290,705	58.11%

Status of 2013-2015 Carryover

Emerald Ash Borer Program

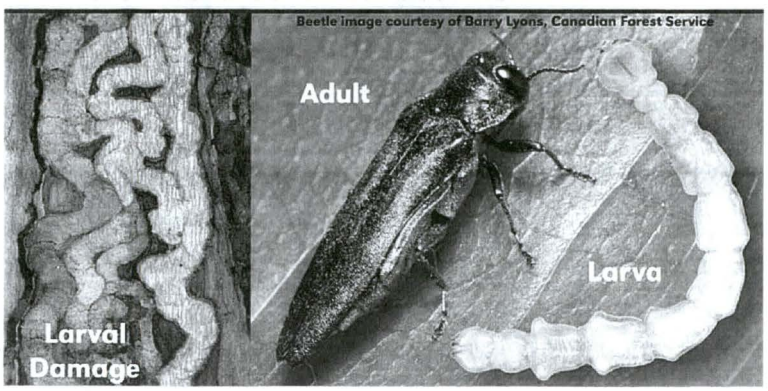
The 2011-13 original appropriation provided $250,000 in one-time general funds for the North Dakota Forest Service to help North Dakota communities eradicate emerald ash borer (EAB) when it arrives. The emerald ash borer is a highly invasive, exotic insect that attacks and kills all species of North American ash trees (green, white, black and blue ash). Emerald ash borer is now found in Minneapolis and St. Paul, Minnesota, and is likely to arrive somewhere in North Dakota soon. Since its introduction in Michigan in 2002, emerald ash borer has killed more than 50 million ash trees in 29 states and 2 Canadian provinces.

The Forest Service, in association with the North Dakota Community Forestry Council, established a framework to administer grants in the event emerald ash borer is discovered in North Dakota. The funding is available through the agency's Community Forestry Grant Program to assist communities with tree removal and replacement on a 1:1 match. To date, the highly invasive emerald ash borer has not been found in North Dakota and the funding remains available. The funds are not likely to be expended by June 30, 2017, unless there is a positive detection of emerald ash borer in North Dakota. The State Forester will request any unused funds as carryover during the 2017-18 annual budget process.

North Dakota is estimated to have 78 million ash trees. Ash is the most common tree planted in communities, reaching 60% of the tree population in some towns. Green ash represents a large percentage of the state's 55,000 miles of field and farmstead windbreaks.

The Forest Service is helping fight back against emerald ash borer by educating the public and training a network of over 300 first detectors to be alert to emerald ash borer; assisting community leaders with inventorying the number and location of ash trees, quantifying the potential impacts of tree losses and removing ash trees in poor condition; and, encouraging homeowners to take action by planting trees that are resistant to the borer.

Be Alert to Emerald Ash Borer!



2017-2019 Funding Request – Engrossed SB 2003

The 2017-2019 funding request for the North Dakota Forest Service in Engrossed SB 2003 is $15,082,774 including $14,964,046 for Operations and $118,728 for Capital Assets. The General Fund request is $4,432,026. Other funds are $10,650,748.

The 2017-2019 operations budget includes salaries and wages and operating expenses for 27.00 FTE and 45 seasonal positions that provide public forestry services.

- Operations $14,964,046

The 2017-2019 capital assets budget provides necessary repairs for 41 office, shop, storage and recreational buildings at Bottineau, Lisbon, Towner and Walhalla. The budget includes extraordinary repairs and equipment over $5,000.

- Capital Assets $118,728

Total Forest Service Request Engrossed SB 2003 (General funds & other funds) $15,082,774

Landowner thinning project to reduce wildfire hazards in the ponderosa pine forest in southwestern North Dakota.

Engrossed SB 2003 Recommendations

- ✓ Reduces the Forest Service general fund base request by $151,925 and includes reduction of 2.0 FTE.
- ✓ Restores health insurance decreases of $40,481.
- ✓ Provides $250,000 in other fund authority for Towner State Nursery revenue.

ND Forest Service
Comparison of SBHE General Fund Budget Request
To Revised Executive Recommendation to Engrossed SB2003

	(1)	(2)	(3)	
		ND Forest Service		
	SBHE 2017-19 GF Budget Request	Executive Recommendation	Governor Burgum's Budget Adjustments	Senate Adjustments
2015-17 Adjusted General Fund Appropriation	$ 5,508,077	$ 5,508,077	$ -	
Base Adjustments	(924,126)	(924,126)	-	
2015-17 Adjusted General Fund Appropriation, Net of Base Adjustments	4,583,951	4,583,951	4,564,602	$ 4,391,545
2017-19 Adjustments:			-	
2017-19 Health insurance increases(decreases)		77,274	(40,481)	40,481
1% salary/benefit increase in FY19		17,976	(17,977)	
General fund reduction		(114,599)	(114,599)	
Total Adjustments	-	(19,349)	(173,057)	40,481
Total Base General Fund Request & Recommendation	$ 4,583,951	$ 4,564,602	$ 4,391,545	$ 4,432,026

C:\Users\Larry.Kotchman\Documents\Budget 2017-2019\[Copy of 2017-19 Exec Recom Compared to Request RECON NDFS.xlsx]GF Compar-FS

2015-17 Original Special Fund Appropriation	$ 10,383,188	$ 10,383,188	$ 10,650,748.00	$ 10,650,748.00
Base Payroll adjustments	70,620	70,620	-	
Capital Projects		-	-	
One time funding				
Other changes in estimated income	250,000	250,000	-	
Remove prior biennium capital asset carryover		-	-	
Change in extraordinary repairs and special assessments	(29,753)	(29,753)	-	
Net change in base funding equipment over 5000	(23,307.00)	(23,307.00)	-	
2017-19 Adjusted Special Fund Appropriation	$ 10,650,748	$ 10,650,748	$ 10,650,748	$ 10,650,748
Executive Recommendation Base Increases (Decreases):				
Capital Projects				
Health insurance increases		-	-	-
1% salary/benefit increase in FY19	-	-	-	-
Total Adjustments	-	-	-	-
2017-19 Total Base Special Fund Request and Executive Recommendation - Special Funds	$ 10,650,748	$ 10,650,748	$ 10,650,748	$ 10,650,748

Base Funding Reductions

Base Funding Reduction	**$729,982**
Budget Reductions	
10% Base General Fund Budget Reduction	$500,784
2.5% General Fund Reduction - Operations	$114,599
2.5% General Fund Reduction - Operations	$114,599

The 2017-2019 budget guidelines called for all state agencies to submit 90 percent budget requests. The Forest Service's 10 percent reduction equals $500,784. The reduction includes $291,775 in salary and fringe for two foresters (2.0 FTE - natural physical science professionals) and $209,009 in operating expenses for the travel, equipment under $5,000, and other expenses for forestry project sub-awards. Governor Dalrymple's budget recommendations include another 2.5 percent or $114,599 general fund reduction in operations. Governor Burgum's budget recommendations removes an additional 2.5 percent or $114,599 general fund reduction in operations. This 5 percent reduction would eliminate operating expenses for repairs, supplies, utilities and buildings and grounds maintenance.

The 15.0 percent or $729,982 base budget reduction will impact the agency's capacity to provide essential public services, including 1) community forestry assistance for tree planting and forestry development projects; 2) fire management for the protection of lives, property and natural resources through training, organizing and equipping volunteer fire departments; 3) forest health protection including insect and disease surveys and training to minimize the threat of invasive species like emerald ash borer; 4) forest stewardship assistance for rural landowners to manage, protect and utilize their native and planted forest resources; 5) information and education outreach to teachers and K-12 students to make wise decisions about the conservation of trees and forests; 6) Towner State Nursery for the annual production of 1 million conservation tree seedlings; and, 7) state forests to provide wildlife habitat, clean air and water, recreational opportunities and forest products. Based on 2013-2015 program statistical data, it is estimated that a 15.0 percent reduction in forestry services may impact 8 counties, 50 fire departments, 35 communities, 294 landowners, 218 K-12 teachers and 3,886 K-students. The North Dakota Forest Service will minimize these impacts by increasing program efficiencies, strengthening customer service through technology, promoting teamwork and encouraging collaboration to address emerging natural resource issues. The agency provides a unified team approach to ensure a coordinated focus toward the delivery of services and collaboration across organization boundaries serving customers statewide.

2017-2019 Operations

The 2017-2019 general fund request in Engrossed SB 2003 is $4,432,026 including $4,313,298 for Operations. The funding supports public forestry services provided by the North Dakota Forest Service through field offices at Bismarck, Bottineau, Carrington, Fargo, Jamestown, Lisbon, Towner and Walhalla. Expenditures include travel, telephone and motor pool costs associated with servicing over 2,000 field forestry requests statewide each year. Operations fund tree production at the Towner State Nursery. Expenditures include utilities, repairs and supplies for seeding, weeding, irrigating, fertilizing, lifting, packing and shipping operations associated with both bare-root seedling and containerized tree production. Towner State Nursery provides essentially all of the conifer (evergreen) seedlings for conservation and forestry plantings in every county of North Dakota.

2017-19 Health Increases - $77,274

Engrossed SB 2003 provides $77,274 from the general fund for health insurance premium increases in the Forest Service base budget.

Annually teachers from across the state take part in professional development workshops to learn more about the social, environmental and economic benefits of trees and forests.

2017-2019 Capital Assets

Extraordinary Repairs and Equipment

Engrossed SB 2003 includes $118,728 for extraordinary repairs and equipment for the Forest Service. The Forest Service is responsible for maintaining buildings and facilities at four locations. Field offices at Bottineau, Lisbon and Walhalla deliver forestry services, while the Towner State Nursery provides tree seedlings to the citizens of North Dakota. Recreational improvements are also located on the State Forests. Capital assets consist of 41 office, shop and storage buildings. The buildings are valued at $3,824,145. Building ages vary from 1 to 81 years. The infrastructure associated with these facilities is valued at $3,462,390.

The budget recommendations include increased base funding for facilities and infrastructure repairs, equivalent to 15% of the OMB building and infrastructure formula. The Forest Service's portion of this request is $62,480. Base funding received for extraordinary repairs in 2015-17 is $44,962. The Extraordinary Repairs funding will be used for an interior finishes project at the Lisbon Field Office.

2017-2019 Capital Assets

Extraordinary Repairs	**$62,480**
Lisbon Field Office – interior finishes project	
Equipment	**$56,248**
Off-road 4x4 vehicle – Bottineau Field Office Chisel plow and disc – Towner State Nursery	
Total	**$118,728**

The budget recommendations also approve $56,248 in base funding for equipment over $5,000. An off-road 4x4 vehicle will provide essential maintenance for state forest lands. A chisel plow and tandem disc will be used by Towner State Nursery for crop production and field maintenance. The Forest Service Facility Master Plan identifies $662,300 in plant improvement needs at its Bottineau, Lisbon and Walhalla field offices, state forests and Towner State Nursery. The improvements include estimated deferred maintenance ($73,000), extraordinary repairs ($385,300) and ADA/safety projects ($204,000).

2017-2019 Capital Assets

Capital Project Request – None

State Forester Larry Kotchman presents NDSU President Dean Bresciani with a plaque from the Arbor Day Foundation for being the first university in North Dakota to achieve Tree Campus USA status.

NORTH DAKOTA FOREST SERVICE
2017-19 Extraordinary Repairs and Capital Projects

2017-19 Budget Request	
Extraordinary Repairs	$62,480
Capital Project	0
Total 2017-19 Capital Assets Request	$62,480
Funding Sources	
General Fund	62,480
Other Funds	0
Total 2017-19 Capital Assets Funding Sources	$62,480
2017-19 Executive Recommendation	
Capital Project	0
Extraordinary Repairs	62,480
Total 2017-19 Executive Recommendation	$62,480
Funding Sources	
General Fund	62,480
Other Funds	0
Total 2017-19 Capital Assets Funding Sources	$62,480

Extraordinary Repair Projects	
Misc. Small Projects less than $50,000	62,480
Mechanical and Electrical Upgrades	0
Utilities and Infrastructure	0
Building Exterior	0
Structural Repairs	0
Total Extraordinary Repairs Projects	$62,480

NORTH DAKOTA FOREST SERVICE
2017-2019 Budget Request

BASE BUDGET:	Operating	Capital Assets	Total	Gen Fund	Other Funds	Total Funds
2015-17 Appropriation Budget						
Operations	$6,556,634	$0	$6,556,634	$4,906,634	$1,650,000	$6,556,634
Capital Assets	-	101,210	101,210	101,210	-	101,210
Biennium Carryover	500,233	-	500,233	500,233	-	500,233
Total 2015-17 Appropriation	7,056,867	101,210	7,158,077	5,508,077	1,650,000	7,158,077
Less One-Time Allocations:						
Carryover	(500,233)	-	(500,233)	(500,233)	-	(500,233)
Total Adjusted 2015-17 Budget Base Budget	**$6,556,634**	**$101,210**	**$6,657,844**	**$5,007,844**	**$1,650,000**	**$6,657,844**
Base Budget Changes - Operating						
10% Base Budget Reduction	(500,784)	-	(500,784)	(500,784)	-	(500,784)
Continue FY 17 Salary Increase	54,877	-	54,877	54,877	-	54,877
Adjustments	9,005,244	-	9,005,244	4,496	9,000,748	9,005,244
Total Base Budget Budget Changes - Operating	8,559,337	-	8,559,337	(441,411)	9,000,748	8,559,337
Base Budget Changes - Capital Assets						
Capital Project 2017-19 (None)	-		-		-	-
Extraordinary Repairs - OMB 15% of Formula	-	17,518	17,518	17,518		17,518
Total Base Budget Budget Changes - Capital Assets	-	17,518	17,518	17,518	-	17,518
TOTAL 2017-19 BASE BUDGET REQUEST	**$15,115,971**	**$118,728**	**$15,234,699**	**$4,583,951**	**$10,650,748**	**$15,234,699**
Executive Recommendation						
2017-2019 Health Insurance Increases	77,274	-	77,274	77,274	-	77,274
1% Salary/Benefit Increase in FY19	17,976	-	17,976	17,976	-	17,976
General Fund Reduction	(114,599)	-	(114,599)	(114,599)	-	(114,599)
Total Adjustments	(19,349)	-	(19,349)	(19,349)	-	(19,349)
Governor Burgum's Budget Adjustments						
2017-2019 Health Insurance Increases	(40,481)	-	(40,481)	(40,481)	-	(40,481)
1% Salary/Benefit Increase in FY19	(17,977)	-	(17,977)	(17,977)	-	(17,977)
General Fund Reduction	(114,599)	-	(114,599)	(114,599)	-	(114,599)
Total Adjustments	(173,057)	-	(173,057)	(173,057)	-	(173,057)
Senate Adjustments						
2017-2019 Health Insurance Increases	40,481	-	40,481	40,481	-	40,481
Total Adjustments	40,481	-	40,481	40,481	-	40,481
Adjustments Over (Under) Budget Request	(151,925)	-	(151,925)	(151,925)	-	(151,925)
TOTAL 2017-19 Engrossed SB 2003	**$14,964,046**	**$118,728**	**$15,082,774**	**$4,432,026**	**$10,650,748**	**$15,082,774**

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SB 2020 3.7.17
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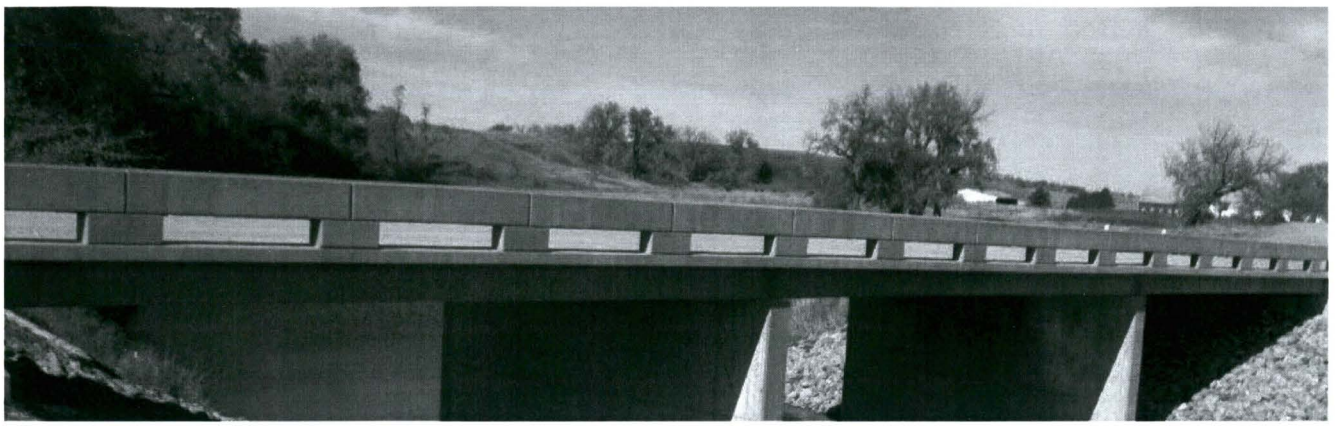
2017–19 BIENNIAL BUDGET REQUEST

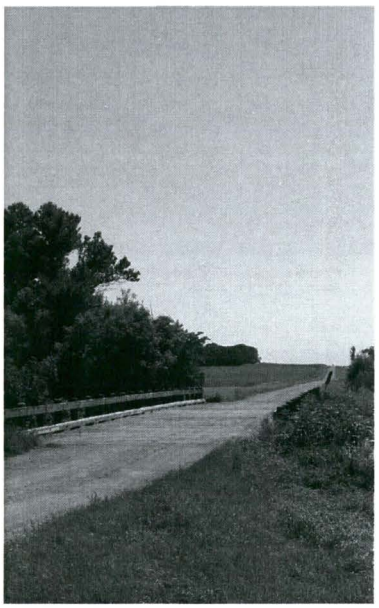
UPPER GREAT PLAINS TRANSPORTATION INSTITUTE – AGENCY 627
DENVER TOLLIVER, DIRECTOR

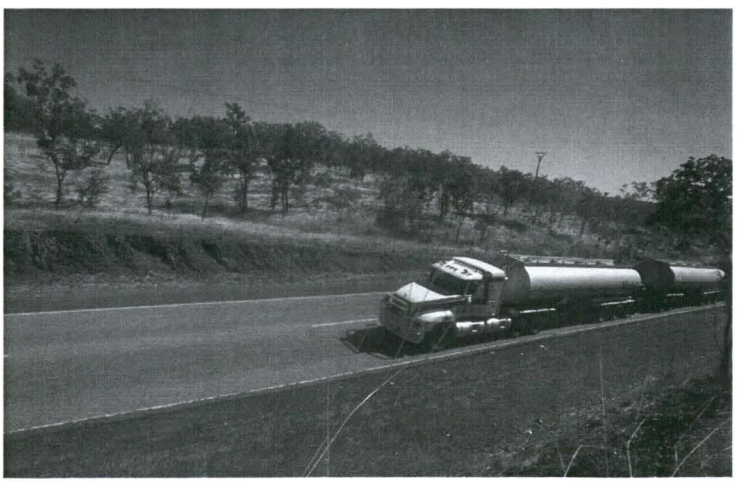
HOUSE APPROPRIATIONS COMMITTEE — Education and Environment Division
REPRESENTATIVE DAVID MONSON, CHAIRMAN

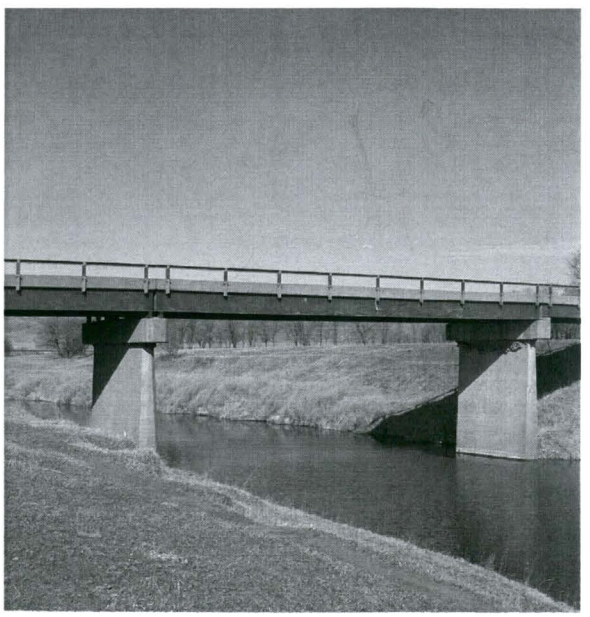
March 7, 2017

NDSU NORTH DAKOTA STATE UNIVERSITY









Base-Level Funding: Upper Great Plains Transportation Institute (UGPTI)

As shown in Figure 1, the Upper Great Plains Transportation Institute's funding base is comprised of roughly 18% general funds, 27% special funds, and 55% federal funds. Although most of UGPTI's funding base consists of federal and special funds, state general funds are essential to matching federal grants and maintaining continuity of effort and staff.

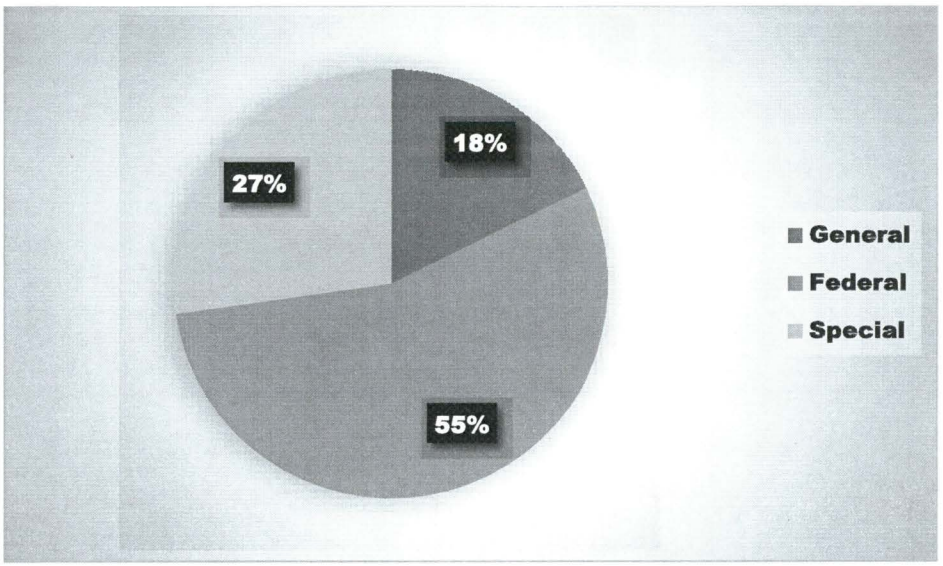


Figure 1. Sources of UGPTI's Base-Level Funding

Federal Funds. Most of the Upper Great Plains Transportation Institute's federal funding comes from the Office of the Secretary of Transportation and three agencies within the U.S. Department of Transportation: Federal Highway Administration, Federal Transit Administration, and Federal Motor Carrier Safety Administration. As shown in Table 1, the Upper Great Plains Transportation Institute is authorized to collect and spend roughly $12 million of federal funds in the 2015-17 biennium. This figure is an estimate of potential revenues made at the start of the biennium. However, forecasts of federal funds are uncertain. Actual receipts are affected by many factors, including fiscal conditions and competition for grants. Nevertheless, UGPTI expects to spend roughly $9.5 million of federal funds by June 30, 2017 (Table 1). Unspent federal funds will carry over to the next biennium, as most grants can be utilized over a multiyear time frame.

Table 1. Biennium Spending Compared to Adjusted 2015-17 Appropriations
Upper Great Plains Transportation Institute

Fund	Biennium Budget*	Actual Expenditures as of 12/31/2016	Anticipated Expenditures Through 06/30/217	Unexpended Balance As of 06/30/2017
Adjusted General Fund Base	$3,900,791	$2,528,958	$1,166,852	$204,981
Federal Funds	$12,162,945	$7,432,643	$2,084,901	$2,645,401
Special/Other Funds	$6,012,712	$3,660,824	$1,486,569	$865,319
* Senate Bill 2020				

Special Funds. Most of UGPTI's special funds consist of grants and contracts from the North Dakota Department of Transportation, the North Dakota Wheat Commission, and Metropolitan Planning Organizations. Additional grants are provided by private industry. As shown in Table 1, UGPTI expects to spend roughly $5.15 million of special funds by the end of the current biennium. The lower-than-expected level of expenditures is primarily a result of funding cuts experienced by state agencies such as the North Dakota Department of Transportation, which must cut its research and planning budget.

General Funds. As shown in Table 1, UGPTI's adjusted general fund base for the 2015-17 biennium is $3,900,791. Of these funds, UGPTI expects to spend $3,695,810 by June 30, 2017. UGPTI's general funds are used to match federal grants, most of which are multiyear awards with various start dates. Some carryover of general funds is necessary each biennium to continue matching federal grants that have been previously awarded, but whose time frames extend beyond the state's fiscal year.

One-Time Appropriation. In addition to the base-level funding shown in Table 1, UGPTI's original 2015-17 appropriation includes $750,000 of one-time funding to perform a comprehensive county and township road and bridge investment needs study, the results of which have been reported to the interim Transportation Committee. However, to implement the 2016 allotment, it was necessary to reduce the initial appropriation to $628,823. Although funding for the road and bridge study is a one-time appropriation, UGPTI has been provided with funds by the Legislature to undertake this study for last three bienniums. For all practical purposes, the study has become part of UGPTI's base effort. Each biennium, UGPTI has provided current estimates of road conditions and investment needs to the Legislature before the start of the legislative session. Over time, UGPTI has come to rely on this funding to maintain staff, regular data collection efforts, and outreach activities for these legislative efforts. The loss of this expected funding would be comparable to a reduction in base-level appropriations.

Budget Changes Recommended by Governors Dalrymple and Burgum

Governor Dalrymple's executive recommendation is the starting point for UGPTI's budget analysis. As shown in Table 2, Governor Dalrymple recommended reducing UGPTI's original 2015-17 general fund appropriation from $4,847,099 to $3,563,901, a 26.5% reduction. The Governor's recommendation included a 10% reduction in general fund appropriations, a 1% increase in salaries and benefits, and funds to offset expected increases in health insurance costs. Overall, Governor Dalrymple recommended reducing UGPTI's general fund budget to $3,563,901 and eliminating funding for the road and bridge study.

Table 2. Reductions to UGPTI's General Fund Budget from Governor Dalrymple's Executive Recommendation

Item	Amount
2015-17 General Fund Appropriation	$4,847,099
Less Recommended Reduction in General Fund Appropriation	−$1,283,198
Total 2017-19 Executive Recommendation – General Fund	$3,563,901
Percentage Change	−26.5%

As shown in Table 3, Governor Burgum's recommendation removes the compensation and health care adjustments included in Governor Dalrymple's budget. In addition, Governor Burgum reduces UGPTI's general fund budget by an additional 3% or $106,917. Altogether, Governor Burgum's recommendation cuts UGPTI's general fund budget by an additional $134,060, resulting in a 29% reduction from the original 2015-17 appropriation.

Table 3. Governor Burgum's Budget Adjustments to Governor Dalrymple's Executive Recommendation for the Upper Great Plains Transportation Institute	
Remove Compensation Adjustment of 1%	−$11,670
Remove 5% Health Insurance Cost Adjustment	−$15,473
Reduce General Funds by an Additional 3%	−$106,917
Total: Gov. Burgum's Adjustments to Executive Recommendation	−$134,060
Total: Gov. Burgum's General Fund Budget Recommendation	$3,429,841

Changes Made by the Senate to UGPTI's Base-Level Funding

The only difference between Governor Burgum's revised executive recommendation shown in Table 3 and the Senate's appropriations shown in Table 4 is that the Senate added $15,473 to cover an expected 5% increase in health insurance costs. Otherwise, Senate Bill 2020 agrees completely with Governor Burgum's executive recommendation for UGPTI. In addition, Table 4 shows UGPTI's appropriations for all funds, including federal and special funds.

Table 4. Changes to UGPTI's Base Level Made by the North Dakota Senate			
Item	**Adjusted Base Levels**	**Adjustments or Enhancements**	**Appropriation**
Total All Funds	$22,076,448	−$7,704	$22,068,744
Less Estimated Income	$18,175,657	447,773	18,623,430
Total General Fund	$3,900,791	−$455,477	$3,445,314
Source: Senate Bill 2020			

As shown in Table 4, the Senate reduced UGPTI's base funding by $455,477: from $3,900,791 to $3,445,314. At the same time, the Senate increased UGPTI's authority to collect federal and special funds to offset the general fund reduction. However, these adjustments are not comparable or offsetting. UGPTI is very likely to suffer significant reductions in special funds in the 2017-19 biennium because of lower levels of grant funding from other state agencies experiencing budget cuts. Moreover, the national outlook is uncertain. All federal agencies (including the U.S. DOT) are facing significant cuts to their research and planning budgets. For these reasons, the reduction in UGPTI's general funds made by the Senate should be interpreted as a stand-alone cut. The prospect of replacing lost general funds with other funds is bleak. This is not a valid inference from the table.

UGPTI's total adjusted appropriation base after the allotment was $4,529,614, including $3,900,791 of base-level funding and $628,823 of one-time funding. Although funding for the road infrastructure study has been requested, the Senate decided not to fund it in the 2017-19 biennium. The reduction in base-level funding called for in Senate Bill 2020, when combined with

the elimination of the road infrastructure study, reduces UGPTI's total general fund appropriation by 24% from its adjusted (previously reduced) base.

Impacts of Budget Cuts

The 24% reduction in total general funds reflected in Senate Bill 2020 would have a major impact on the Upper Great Plains Transportation Institute. One position has already been eliminated because of the allotment. In addition, funds for travel, training, and professional development have been curtailed. In some cases, affected researchers have been moved to existing federal grants. However, this is typically not a good solution, as federal grants require specific deliverables to meet national goals, as well as specific expertise and experience. A doctoral degree is typically required. For various reasons, there is not always a match between an employee who is displaced from general funds and the requirements of federal grants. Even when there is a correlation, everyone cannot be accommodated in this manner.

In addition to displaced employees, the cut in general funds will affect UGPTI's capability to match federal grants. As summarized below, there are many compelling reasons why UGPTI's general fund appropriation is important to the state.

1. **Match Is Needed for Federal Grants**. Almost all federal grants require matching contributions of non-federal funds. UGPTI has just been awarded two University Transportation Center grants that extend for 5 years but require substantial match. For example, the regional center (MPC) grant requires a dollar-for-dollar match. The size of the MPC grant has increased over time from $1.8 million to $2.75 million, requiring more matching funds. While UGPTI has been awarded these grants, the funds cannot be expended without the non-federal match.
2. **Continuity of Effort Should be Maintained.** During the last several biennia, UGPTI has developed new programs (and added depth to other programs) that directly benefit the state. In addition to the county road and bridge study, UGPTI is implementing a county road asset management system and providing essential research and analytical capabilities to the NDDOT and other state agencies. The asset management program will increase the ability to track the benefits of past legislative infrastructure investments. If UGPTI's base budget is permanently cut, it will be much harder to continue these efforts and keep expertise in place.
3. **Progress on Key Legislative Priorities Must Continue.** UGPTI has made a long-run commitment to develop and maintain a county road and bridge management system because of the increment in base funding provided by the 2015 legislature. Because this system is so important to the state, UGPTI will continue to develop it even if its budget is not fully restored. However, the pace and progress of implementation will be slowed. Some higher-level aspects of the asset management system may not be implemented for some time.

Benefits of the Road and Bridge Study to the State

For the last four biennia, the Upper Great Plains Transportation Institute has provided the Governor and Legislature with reports on essential investments in county, township, and tribal roads. With a growing and dynamic economy, it is important to continue these studies and provide up-to-date information and forecasts each biennium. Given North Dakota's dynamic economy, transportation demands and investment needs are likely to fluctuate over time, sometimes peaking and stabilizing

in different areas of the state at different times. If the road study is funded for the next biennium, UGPTI can continue to:

- Collect traffic and truck data (in partnership with the NDDOT) at locations on county and local roads throughout the state;
- Develop current estimates of the surface conditions of paved roads;
- Develop updated forecasts of truck traffic resulting from economic activity in the state; and
- Prepare reports and other information needed by the Governor and Legislature.

Continued UGPTI data collection and analysis are essential in monitoring the Legislature's investments in road infrastructure. For example, past data collection efforts have demonstrated that the state's investments have improved county and township roads. The PSR (a key indicator of serviceability) has increased from 3.02 in 2013 to 3.25 in 2016. Moreover, as shown in Table 5, the percentage of roads in poor condition has dropped from 22% in 2013 to 9% in 2016.

Table 5. Improvements in the Condition of Paved County Roads in North Dakota Derived from UGPTI's Studies for the Legislature

	Miles in Condition Category	
Condition	**2013**	**2016**
Good	33%	44%
Fair	45%	47%
Poor	22%	9%

Closing Remarks

Given the challenges facing the 65th Legislative Assembly, UGPTI is no longer pursuing the request made in the Senate to restore the base funding eliminated by the executive recommendations. Ultimately, the House may have little choice but to agree with the Senate's cuts to UGPTI's base budget. Nevertheless, UGPTI is asking the House to provide some funding to continue the county and township road and bridge study and soften the impact of a large loss of general funds in one session.

By postponing further tests of subgrade soils and eliminating special field studies, UGPTI can provide a robust study to the Legislature for $300,000. Through sampling, traffic data can be collected at key locations, estimates of current road conditions can be developed, and the forecasts of road and bridge investment needs from previous studies can be updated. Rather than requesting additional base funds (as was done in the Senate), $300,000 of one-time funding is being requested, in addition to the $3,445,314 of base-level funding included in Senate Bill 2020. The total general fund request (of $3,745,314) would reduce UGPTI's total general fund appropriation from the start of the 2015-17 biennium by 24%, a very deep cut for any agency.

SB 2020 3-7-17 Att. 2

CHAPTER 54-53
UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

54-53-01. Upper great plains transportation institute - Establishment.

There is hereby established an upper great plains transportation institute. Such institute must be administered by and in conjunction with the North Dakota state university of agriculture and applied science. The president and administration of the North Dakota state university of agriculture and applied science are responsible for the selection of personnel for and the administration of the institute.

54-53-02. Advisory transportation council - Composition.

1. There is established a transportation council that shall serve in an advisory capacity to the upper great plains transportation institute. The director of the institute shall serve as the executive secretary of the council. The council shall elect its own chairman. The council membership consists of one representative from and appointed by the following:
   a. The North Dakota chamber of commerce.
   b. The North Dakota public service commission.
   c. The North Dakota farmers union.
   d. The North Dakota grain growers association.
   e. The North Dakota wheat commission.
   f. The North Dakota department of commerce.
   g. The North Dakota grain dealers association.
   h. The North Dakota motor carriers association.
   i. The North Dakota aeronautics commission.
   j. The North Dakota department of transportation.
   k. The North Dakota department of agriculture.
   l. The associated general contractors of North Dakota.
   m. The North Dakota railway industry, appointed by the council.
   n. The North Dakota primary sector of manufacturing, appointed by the council.
   o. The North Dakota association of counties.
   p. The North Dakota league of cities.
   q. The lignite energy council.
   r. A North Dakota member of the dakota transit association.
   s. The North Dakota corn council.
2. Members of the council shall serve without pay, but they may receive reimbursement for actual and necessary expenses incurred in the performance of their duties, if authorized by the director.
3. The council shall consult with the institute in matters of policy affecting the administration of this chapter and in the development of transportation in the state of North Dakota. The council shall meet at the call of the chairman or director or upon the written request of three or more members of the council.

54-53-03. Purpose - Powers and duties.

The purpose of the institute must be to conduct and supervise research in the field of transportation and logistics in order to facilitate acquisition of a wider knowledge and understanding of marketing factors associated with the geographical location of the state of North Dakota and the upper great plains in the field of transportation and their influence on the socioeconomic systems of the state, region, and country. Research areas must include the study of commodity and other freight movements into and out of the state in order to better know and understand the various factors affecting the marketing of area products and services. The institute shall make public its findings and conclusions in regard thereto together with any suggested solutions. In the administration of its duties under this chapter, the institute shall consult and coordinate with various governmental and nongovernmental agencies, shipper and

producer groups, and carriers, in this state and in other states, interested in the field of transportation.

54-53-04. Gifts and grants.

In order to carry out its duties under this chapter, the institute may contract for and accept private contributions and gifts and grants-in-aid from the federal government and other sources.

SB 2020 3.7.17 Att. 3

HOUSE APPROPRIATIONS - EDUCATION & ENVIRONMENT COMMITTEE
March 7, 2017 – 10:15 a.m. – Roughrider Room

North Dakota Department of Transportation (NDDOT)
Steve Salwei, P.E. – Transportation Programs Director

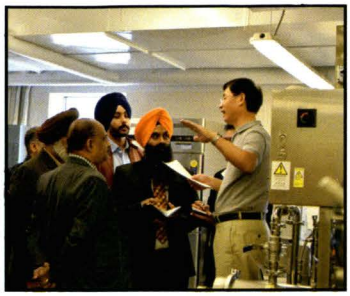
SB 2020

Mr. Chairman, members of the committee. I'm Steve Salwei, and I serve as the Transportation Programs Director for the North Dakota Department of Transportation (DOT). I'm here today to support the Upper Great Plains Transportation Institute's section of Senate Bill 2020.

The DOT has utilized Upper Great Plains Transportation Institute (UGPTI) as a resource to assist in conducting research and special studies in areas where the Department lacks expertise, such as traffic modeling, preparing needs analysis, determining economic impacts and providing analysis on various transportation related topics. The services UGPTI provides are valuable to the State's Transportation industry.

Mr. Chairman, that concludes my testimony and I will be happy to answer any questions the committee may have.

SB 2020 3-7-2017 att 1



NCI

Northern Crops Institute

NORTH DAKOTA STATE UNIVERSITY

2017-2019 BIENNIAL BUDGET

ND HOUSE APPROPRIATIONS COMMITTEE

Representative David Monson, Chairman
Education and Environmental Division

11 a.m., Tuesday, March 7, 2017

SB 2020

NORTHERN CROPS INSTITUTE
Budget No. 638

Mark F. Weber, Director
Northern Crops Institute
Keith Peltier, Chairman
Northern Crops Council
Dean L. Bresciani, Ph.D., President
North Dakota State University
Ken Grafton, Ph.D., Vice Pres. of Agriculture
North Dakota State University

www.ndsu.edu/legislators

Northern Crops Institute

Northern Crops Institute (NCI) is an international meeting and learning center that brings together customers, commodity traders, technical experts, agricultural producers, and food and industrial processors for education, discussion and technical services. A cooperative effort between North Dakota, Minnesota, Montana and South Dakota, we work to support the promotion, market development and expanded sales of crops grown in this four-state region.

Some of our accomplishments are highlighted in these materials. NCI continues to focus on education and technical services as mandated in the NDCC.

Prior to the 2015 legislative session we evaluated our current funding and found it to be adequate and therefore we did not request or receive any new general fund initiatives. The budget cuts approved by the August 2016 special emergency legislative session reduced NCI's state appropriations by $137,691. We responded quickly with an ambitious marketing effort to generate more fee income from industry for our processing, baking, and analytical laboratory services that we provide. We did not raise our fee structure, but instead we brought in more business.

We also identified three areas to cut back expenditures including overseas travel to deliver educational programs and technical assistance, food and feed safety training programs, and new equipment purchases. Through aggressive marketing efforts of our technical services we hope to continue bringing in additional fee income to cover these areas and additional operating expenses.

At the conclusion of this biennium ending June 30, 2017, it is anticipated that the NCI will have a zero ending balance in general appropriations. The majority of general appropriations covers 10 FTE's with the remaining two FTE's covered from other funds.

Engrossed Senate Bill 2020 lowers state appropriations to the NCI further from the 2016 emergency legislative session and is reflective of the budget cuts as advocated by Governor Burgum. State appropriations to the NCI are $1,888,994 under engrossed SB 2020, an additional drop of $75,473 from the 2016 emergency session. Engrossed SB 2020 also includes a reduction from 12 FTE's to 11.8 FTE's. If engrossed SB 2020 is approved the NCI will make cuts in three areas previously mentioned: overseas travel, food and feed safety training programs and new equipment. With less state appropriations available we will rely on soft funding to pay for our part-time technical director consultant. For the 2017-19 biennium we are not seeking any one-time initiatives.

NCI continues to receive regional funding. However, without the support of the North Dakota Legislature, we would not be able to continue the level of work documented here. We appreciate your continued interest and support of the Northern Crops Institute.

Submitted by,
Mark F. Weber, Director
Northern Crops Institute
www.northern-crops.com
701-231-7736

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Northern Crops Institute

AGENCY STATUTORY AUTHORITY

North Dakota Century Code Chapter 4-14.2.

AGENCY DESCRIPTION

The Northern Crops Institute (NCI) is a cooperative effort between North Dakota, Minnesota, Montana and South Dakota to support the promotion and market development of crops grown in this four-state region. NCI brings together customers, commodity traders, technical experts, agricultural producers, and food and industrial processors for education, discussion and technical services. NCI provides technical and marketing assistance through specialized training courses and technical services that facilitate domestic and international market development and expanded sales of northern grown crops. Representatives from more than 135 countries have visited NCI since its inception. Northern Crops Institute is located on the campus of North Dakota State University.

AGENCY MISSION STATEMENT

Northern Crops Institute supports regional agriculture and value-added processing by conducting educational and technical programs that expand and maintain domestic and international markets for northern-grown crops.

AGENCY VISION STATEMENT

Northern Crops Institute will be the international meeting and learning center to promote the northern-grown crops of the United States.

AGENCY PERFORMANCE MEASURES

NCI provides status reports to the Northern Crops Council three times annually at Council meetings (per NDCC Section 4-14.2-02 and 4-14.2-03).

Minutes and financial reports of the following meetings of the Northern Crops Council for the 2015-2017 biennium are on file at the NCI office and with NCC members. The dates of the meetings are as follows:

June 23, 2015
November 19, 2015
March 22, 2016
June 21, 2016
November 22, 2016
Next scheduled meeting is tentatively set for March 21, 2017

Staff reports on educational courses, technical support of industry, future strategic plans, funding situation, and collaborative efforts with NCI's partners are given at each meeting.

The NCI also provides regular status reports on NCI accomplishments to other agencies and regional commodity groups that provide special (other) funds when requested. Those groups include: South Dakota and Minnesota Legislatures, Minnesota Department of Agriculture, and the commodity groups from the four-state region.

AGENCY FUTURE CRITICAL ISSUES

Since its inception, the Northern Crops Institute has achieved remarkable success by evolving into a first-class facility recognized throughout the world. Our region is exploding with opportunities where our farmers are in a strategic position to supply many world markets due to our logistics, climate, and crop quality characteristics. North Dakota has witnessed prolific growth in soybean, corn and pulse production the last two decades. Soybean production has increased ten-fold and corn has increased five-fold. While our farmers lead the nation in production of at least 12 crops, they are shifting to more alternative, specialty and identity-preserved crops. Buyers continue to seek northern-grown crops for their high quality and versatility, and the Northern Crops Institute is responding by providing increased services in quality evaluation, education, processing, and technical expertise.

Asia's exploding population, rising middle class incomes, and demand for more protein and better diets will dramatically change the current global food industry. It is predicted that Asian diets will adopt the U.S. trend of eating foods prepared outside the home, requiring a tremendous amount of education to the food industry in crop quality and utilization. The NCI will have the opportunity to demonstrate crop quality and functional characteristics as well as how to incorporate our crops into traditional and innovative products. The snack food market continues to grow in those markets and the NCI is increasing its efforts in teaching snack food extrusion processes.

We must communicate to our global audience that our producers not only are reliable suppliers, but we have the safest food supply on the planet. The NCI is committed to providing leadership in educating small regional companies on how to comply with the Food Safety Modernization Act (FSMA).

The dynamic commodity markets have renewed the interest from foreign buyers to better understand the latest in risk management tools so that they can become more efficient buyers of U.S. commodities. Incorporating NDSU's impressive new state-of-the-art electronic commodity trading room at Barry Hall into future NCI procurement courses is a tremendous learning experience for our customers.

Our farmers have relied on national commodity check-off groups, along with matching Foreign Agriculture Service funds, to promote our crops in overseas markets. Federal funding for those programs continues to decline and our region's producers can no longer rely on these traditional efforts. The market is increasing its demand for crops with very specific quality characteristics grown under certain climatic conditions. Showcasing our unique crop characteristics by increasing regional cooperative efforts with the ND Department of Agriculture and ND Trade Office and others will be necessary to expand future markets.

Cooperation is the key to any future success. The Northern Crops Institute is partnering up with the Wheat Marketing Center in Portland, Oregon, and the International Grains Program at Kansas State University to deliver educational programming in food safety, risk management, milling, and extrusion processing. An important partnership was formed in 2015 when NCI contracted with the Assistant Director of the International grains program at Kansas State University to train an NCI employee to be the flour mill manager. Because of this effort the NCI is seeing increased utilization of the flour mill. The NCI has also landed an important educational course for soybeans that has previously been held at the University of Illinois the past 25 years. The course will be held in June of 2017 and a portion of the course will be taught at South Dakota State University to take advantage of their expertise.

The Northern Crops Institute looks forward to meeting these challenges in cooperation with our valuable partners including the grower commodity check-off groups from the four-state region who provide significant funding for our programs, and the Departments of Cereal and Food Science, Plant Sciences, Agribusiness and Applied Economics and other departments at North Dakota State University, University of Minnesota, South Dakota State University, and Montana State University who provide valuable expertise to our educational programming. The Northern Crops Institute appreciates state funding support provided from the states of North Dakota, South Dakota, and Minnesota.

UPDATE ON NCI INITIATIVES IN 2015-2017

NCI did not seek any new initiatives in 2015-2017.

UPDATE ON NCI INITIATIVES FUNDED IN 2013-2015

Enhancing Feed Markets with Improved Services **$100,000 (one-time request)**

In 2014, Northern Crops Institute completed a major equipment upgrade to the NCI Feed Production Center. The upgrade includes the installation of a new mixer, a new automation system, and the facility's first micro-ingredient system. The nearly $800,000 project was funded by a collaboration of funds from several sources, including the $100,000 appropriation from the State of North Dakota, the feed industry, and the North Dakota soybean and corn commodity groups. Approximately 80% of the costs were donated.

The Feed Center hosts feed training courses for participants from around the world and serves as a training facility for regional undergraduate and graduate students. In addition, the center is a working feed mill, producing livestock feed for the university's animal units as well as research projects. With the upgrade, the feed center assumes an increased importance in NCI's programming. Expanding NCI's educational efforts in feed manufacturing will reap benefits for the region's farmers for many years to come.

Twenty participants from China attended the Feed Manufacturing Technology course in 2014, which was the first course to use the newly updated NCI Feed Center. The course was co-sponsored by the soybean commodity groups in Minnesota, North Dakota, and South Dakota.

We recently landed a very large educational course for soybeans previously held the past 25 years at the University of Illinois. The course is designed to teach practical processing methods and innovative applications of soybean ingredients in meat, beverages, baking, traditional soy foods, and animal feed products. Our enhanced feed mill will play a significant teaching role in this course. A major nutrition-based equipment company is installing a feed extruder for the NCI's use to assist in our teaching mission.

Ensuring NCI Expertise in the World's Changing Food Market **$135,000 (1.25 FTE)**

NCI interacts regularly with buyers and processors from all over the globe, and it is critical that our staff maintain the level of excellence that our customers have come to expect. Therefore, NCI requested permanent funding for 1.25 FTE <u>current</u> positions.

With this long-term commitment by the North Dakota Legislature, NCI now has less reliance on commodity groups for staff salaries. This also allows the commodity groups to use more of their funds on market development activities.

The Food Technologist Position (1 FTE) is a specialist in baking with wheat and other regional crops. This position regularly interacts with the international and domestic food industry, demonstrating crop quality and functional characteristics and how to incorporate crops into traditional and innovative products, conducting laboratory analyses on crops, and assisting with pilot-scale processing.

The Crop Quality Specialist (.25 FTE) promotes soybeans, pulses and other oilseed crops and provides technical solutions to food manufacturers when they have problems related to quality and utilization. This person conducts promotional activities, seminars , and courses throughout the world, helping food companies develop new information and products, thereby increasing utilization of these crops.

COMPARISON OF 2015-2017 APPROPRIATION AND ESTIMATED SPENDING

	2015-17 Original Appropriation	Current Appropriation	Expenditures	Remaining Appropriation
Total Expenditures	$3,849,893	$3,712,202	$2,328,437	$1,383,765
Expenditures by Funding Source				
General	$2,102,158	$1,964,467	$1,328,768	$635,699
Special	$1,747,735	$1,747,735	$999,669	$748,066
Total	**$3,849,893**	**$3,712,202**	**$2,328,437**	**$1,383,765**

Source: PeopleSoft through Nov. 30, 2016.
Note: NCI does not receive Federal Formula Funds. No change expected.

Northern Crops Institute

North Dakota University System
Northern Crops Institute
Major Components for current base level

Salaries	$2,577,115
Operating	$785,087
Equipment	$350,000
Capital Projects	-
Total Budget	**$3,712,202**

Funding:	
Federal Fund	-
General Fund	$1,964,467
Special Fund	$1,747,735
Total Funding	**$3,712,202**

Source:IBARS 2015-17, Agency Submitted, less 6.55% allotment

Northern Crops Institute

2017-2019 Needs-Based Budget
"Reconciliation of 2015-17 Original General Fund Appropriation to 2017-19 SB 2020"

General Fund	NCI
2015-17 Original General Fund Appropriation	**$2,102,158**
Reduction for 6.55% of allotment	**$(137,691)**
2015-17 Adjusted GF Appropriation	**1,964,467**
Base Adjustments:	
Less reduction in Base Funding for Equipment over $5000	(200,000)
Base Payroll adjustments	26,399
2015-17 Adjusted Appropriation, Less Base Adjustments	**1,790,866**
SB 2020 Base Increases (Decreases):	
Health Insurance premium increases	29,024
Reduces travel	(10,216)
3% reduction	(58,371)
Restores operating	137,691
2017-19 SB 2020 Base General Fund Increases(Decreases)	**98,128**
2017-19 SB 2020 Recommendation - General Fund	**1,888,994**
Increase (Decrease) From 2015-17 Adjusted Appropriation, Less Base Adjustments	**$(75,473)**
Other Funds:	
2015-17 Original Other Fund Appropriation	**$1,747,735**
Base Payroll adjustments	3,160
2017-19 Adjusted Other Fund Appropriation	**$1,750,895**
Legislative Recommendation Base Increases (Decreases):	
Health Insurance premium increases	5,320
Total SB 2020 Increases	**5,320**
2017-19 SB 2020 - Other Funds	**$1,756,215**

Impact

Crops produced on the Northern Great Plains of the U.S. are among the finest in the world. The mission of Northern Crops Institute (NCI) is to tell global crop buyers about our crops' quality characteristics through technical education and services. NCI is the prime source of technical education about the region's wheat, feed grains, soybeans, pulses and oilseeds, and their value-added products. Demand continues to increase for our programs and services. This is a reflection of the success of our activities to date and the credibility of the information provided through our programs.

Results from educational programs are long-term. We provide information on marketing and technical utilization of northern-grown commodities for both domestic and export markets. This service increases the possibilities of buyers using northern-grown commodities in the future. Often purchases occur several years after educational efforts when conditions become optimal for the buyers.

Crops grown in the northern tier of the U.S. are valued by discriminating customers around the globe. Since 1983, NCI has hosted crop buyers, technical experts, commodity traders, processors and producers from more than 132 nations. They come to learn more about crop quality and availability. NCI does not buy or sell crops. We teach people how to use our crops in their food and feed products and how to buy them through the U.S. grain marketing system.

In 2015 and 2016, NCI trained more than 395 professionals from 46 countries in our educational programs, with 24 scheduled short courses and customized courses. Another important part of our educational program is our activity with trade teams. In the last two years, NCI hosted 163 international visitors from 17 countries representing trade missions. The total number of countries visiting NCI in 2015 and 2016 was 63. In addition, NCI's staff often participates in domestic and overseas programs reaching more than 1000 buyers and processors in the last two years alone. Our website (www.northern-crops.com) lists information and photos on our recent programs and trade teams, and the 2016 Annual Update is included at the end of this report.

State and Regional Impact

Agriculture is the economic backbone in the states of North Dakota, Minnesota, Montana and South Dakota. NCI conducts programs that focus on building relationships and developing markets for our high quality crops and value added products. Agricultural exports are extremely important to the North Dakota economy with $4.1 billion exported in 2015 (USDA ERS). Agricultural related jobs continue to be an important share of employment in all four states. The combined value of the four-state exports of agricultural products in 2015 was $15.3 billion, accounting for 12% of the total U.S. exports. (http://www.ers.usda.gov/Data-products/state-export-data).

Success Story

In 2015, the NCI was informed that several feed companies in Canada using U.S. imported DDGs were experiencing reduced pellet production and pellet quality. Rather than blame the problem on poor DDGs quality and lose future U.S. sales into Canada, NCI responded quickly. NCI feed mill director Kim Koch personally visited those facilities and discovered some necessary equipment adjustments in the paddle mixer, steam pipes, and conditioner. As a result, feed production quality and output increased significantly in those feed mills and today they continue to import high quality U.S. DDGS!

The NCI's South Asia Contracting for Wheat Value course has been instrumental in changing the minds of buyers toward a preference for U.S. Hard Red Spring Wheat (HRSW). Some of the world's fastest grow-ing wheat buyers attended the course where they learned the advantages of this region's HRSW. Vietnam Flour Mills verified that the course persuaded them to buy more HRSW. They increased HRSW purchases from 9,600 MT in 2012 to 78,000 MT in 2014, an estimated value of $19 million according to their publically made purchase records.

Recent Facility Improvements and Capabilities

Major funding for these projects came from industry, regional commodity groups, technical service and education course fees.

Feed Mill

In 2014, a major system upgrade at the NCI Feed Production Center included the installation of a new mixer, automation system and the facility's first micro-ingredient system. The 2014 North Dakota Legislature provided the initial seed money for this effort with the majority of the funding coming from industry.

Twin Screw Extruder

In the summer of 2015, NCI upgraded the twin-screw extruder that added a loss-in weight feeder and changed the extrusion barrel to steam and cold water.

Fluid Bed Dryer

In November 2015, NCI completed installation of a state of the art Buhler fluid bed dryer to compliment NCI's Wenger twin-screw extruder. The combination extruder and fluid bed dryer replicates processing capabilities for commercial operations.

Soy milk and Tofu Production Equipment

In 2016, NCI installed a pilot scale soy milk and tofu production system. The system will have the capability to perform soy foods product development activities with commercial-grade technology.

NCI has also purchased oil cold press equipment, we have access to a hexane oil press and we have made improvements in our Baking Lab.

Major Accomplishments

- **International business depends on personal relationships.** Offering courses at NCI remains the best means of connecting potential customers to our state and region. The hospitality displayed in our region by NCI staff, course lecturers, regional farmers and hosts for field trips to hotel, restaurant and retail personnel create positive connections to our state and region. For many international buyers of crops, developing a relationship with the producers and visiting their farms is essential.

- **Overseas seminars and service:** In 2015 and 2016, NCI staff attended twenty-three international seminars, events or provided technical support in Canada, China, Colombia, Costa Rica, Guatemala, India, Indonesia, Japan, Malaysia, Morocco, Myanmar, Philippines, Singapore, South Korea, Taiwan, Thailand, Turkey and Vietnam.

- **Wheat and soybean procurement training:** In 2015-16, NCI educated 211 crop buyers from 29 countries at four procurement courses. These courses teach grain merchandisers how to make more effective U.S. crop purchases while managing their risk. The Procurement Courses continue to utilize the NDSU electronic Commodity Trading Room (CTR), which is a high-technology room with live information feeds for financial information including equities and credit, plus commodity market information such as agriculture, energy and biofuels.

- **NCI is planning a wheat producers workshop in March 2017** for regional wheat commissioners from four states to learn more about the wheat quality characteristics that end-users need. The workshop is designed to enhance farmer leaders as international ambassadors for the wheat industry.

- **Technical services to processors and users of regional commodities:** Food companies, small to large, regional to multinational, use NCI's processing capabilities to develop new or modified food products and to evaluate ingredients and processing parameters under proprietary conditions. In 2016, NCI conducted in-house processing, baking investigations, and analytical testing projects for 40 food companies.

- **Continued demand for pasta courses:** NCI's pasta manufacturing courses are very unique. In fact, there are no other U.S. organization that offers pasta processing courses. Pasta courses remain in demand by U.S. and international pasta companies. In 2015 and 2016, three pasta courses were offered that attracted 38 participants from 11 countries.

- **NCI Feed Center activities:** In fiscal 2015, the NCI Feed Center made 1,579 tons of feed – 1,366 tons for teaching animals and 213 tons for research animals. In Fiscal 2016, the center made 1,649 tons – 1,425 for teaching animals and 224 for research animals. So far in Fiscal 2017, we have made 559 tons of feed – 537 tons for teaching animals and 22 for research animals.

- **Food and feed safety education:** Feed Production Center Manager Kim Koch, Ph.D., is a Trainer of Trainers and a Lead Instructor for Human and Animal Food Preventive Controls and serves on several national committees of the Food Safety Preventive Controls Alliance – the organization charged with the implementation of the training programs in support of the current Good Manufacturing Practice, Hazard Analysis and Risk Based Preventive Controls for Human Food 21 CFR 117 and Animal Food 21 CFR 507 set forward in the Food Safety Modernization Act. Trainings began in 2016 and Koch has provided training for five Human Food courses and two Animal Food courses.

Major Accomplishments (continued)

- **Overseas risk management courses:** To reach an even broader audience, NCI conducted four risk management courses in 2015-16 in Singapore, Jakarta, Bangkok, and Manila. The course is designed to help grain and oilseed buyers understand why risk management is essential to their business success when experiencing commodity price and margin volatility. There were127 total number of participants.

- **Learning about nutritional benefits of soy and soy flour procurement.** Twenty participants from Thailand, Guatemala, Myanmar, Malaysia, Burkina Faso, Cote d'Ivoire, Senegal and Uganda, learned about using soy protein in baked products and how to buy soy flour in three soy courses in 2015-16. The World Initiative for Soy in Human Health (WISHH), co-sponsored the courses. WISHH is a program of the American Soybean Association that brings the nutritional benefits of U.S. soybeans protein to people in developing nations.

- **Teaching the HRSW quality advantage to foreign buyers**: Twenty-three foreign flour millers and bakers from six countries have attended the three contracting for wheat value courses at the NCI in 2015-16. At the NCI's Baking Laboratory they test their own flours procured from other countries against this region's hard red spring wheat (HRSW) varieties in breads, cakes and other baked goods for functionality and quality. In side by side comparative baking trials HRSW from this region wins every time.

- **Pulses: dry beans, peas, and lentils.** Production of these crops has seen tremendous growth. To promote these markets, NCI offered four courses in 2015-16 which addressed their utilization, functionality, and quality characteristics. NCI staff has also been featured speakers for the pulse crops at national and international seminars. Bean and lentil production continues to expand significantly in Western North Dakota and Eastern Montana.

- **Teaching the soy advantage:** The program, in addition to providing trade and technical information, emphasized the U.S. soybeans advantage to importers in terms of its sustainable production, efficient transportation, transparent prices, better consistency and quality and importance of valuing U.S. soybeans against South American soybeans in terms of protein quality as opposed to crude protein.

- **Barley craft malting initiatives:** According to the Brewers Association website, the growing U.S. craft malting industry accounted for 11% of the total domestic malt production in 2014. NCI collaborated with NDSU Plant Sciences and the Institute of Barley and Malt Sciences on two courses teaching craft malsters to understand malt processing and effectively interpreting barley and malt analyses. There were a total of 47 participants that attended the courses in the past two years.

Partnerships and Leadership

- Northern Crops Institute provides leadership in North Dakota and the nation, and in return
- receives collaborative assistance from many companies, regional universities, organizations and individuals. Without these partnerships, NCI could not do its work.

- Educational courses are offered in partnership with American Association of Cereal Chemists (AACC), American Feed Industry Association (AFIA), American Society for Brewing Chemists (ASBC), American Soybean Association International Marketing (ASAIM), Ameriflax, Association of Oil Chemists Society (AOCS), International Association of Operative Millers (IAOM), National Grain and Feed Association (NGFA), NDSU Extension Service, U.S. Grains Council (USGC), U.S. Soybean Export Council (USSEC), World Initiative for Soy in Human Health (WISHH), U.S. Wheat Associates (USW), USA Dry Pea and Lentil Council (USADPLC), U.S. Dry Bean Council (USDBC), the USDA/FAS Cochran Program, and others. These groups assist in identifying possible participants and often provide other resources.

- Regional universities, particularly North Dakota State University, South Dakota State University, University of Minnesota, and Montana State University, make important contributions to NCI's programs through technical, scientific, and practical applications for the use of crops in food and feed processing. Significant contributions by the NDSU Departments of Agribusiness and Applied Economics, Agricultural and Biosystems Engineering, Cereal and Food Sciences, Plant Sciences, and the use of the electronic Commodity Trading Room in NDSU's Barry Hall allow NCI to offer programs with the most sophisticated information and research.

- Commodity check-off groups and their producer members in North Dakota, South Dakota, Minnesota, and Montana continue to be major partners and supporters of Northern Crops Institute. NCI staff identify new market opportunities for regional producers and design courses to focus on wheat, soybeans, corn, barley, pulses and other specialty crops.

- The Northern Crops Council, NCI's governing board of directors, continues to provide regional four-state leadership for NCI's programs and strategic planning. NCI's Industry Advisory Board, drawn from the four-state agricultural supply and processing industries and the grain trade, provides advice, lecturers, tours, and resources for NCI programs and initiatives.

63 Nations Learn More About Northern-Grown Crops

In 2015 and 2016, NCI staff taught short course participants, hosted trade teams and visitors, and consulted with companies from the following 63 countries.

Algeria
Angola
Argentia
Belgium
Bolivia
Brazil
Bulgaria
Burkina Faso
Canada
Chile
China
Colombia
Costa Rica
Cote d'Ivoire
Dominican Republic
Ecuador
Egypt
El Salvador
France
Germany
Ghana
Guyana
Guatemala
Haiti
Honduras
India
Indonesia
Italy
Israel
Jamaica
Japan
Jordan
Kuwait
Lebanon
Malta
Malaysia
Mexico
Morocco
Myanmar
Netherlands
Nigeria
Panama
Peru
Philippines
Poland
St. Vincent
Saudi Arabia
Senegal
Singapore
South Africa
South Korea
Spain
Switzerland
Taiwan
Thailand
Trinidad
Tunisia
Uganda
UAE
UK
USA
Venezuela
Vietnam

17.0528.02000

Sixty-fifth
Legislative Assembly
of North Dakota

FIRST ENGROSSMENT

ENGROSSED SENATE BILL NO. 2020

Introduced by

Appropriations Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to amend and reenact sections 4-05.1-05 and 4-08-10 of the North Dakota Century Code, relating to main research center experiment station and extension service position adjustments; and to provide an exemption.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the purpose of defraying the expenses of the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the biennium beginning July 1, 2017, and ending June 30, 2019, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	Base Level	Adjustments or Enhancements	Appropriation
Extension service	$52,517,908	($961,158)	$51,556,750
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,003,000)	$52,648,270

Less estimated income	25,826,708	847,676	26,674,384
Total general fund	$27,824,562	($1,850,676)	$25,973,886
Full-time equivalent positions	263.91	(10.93)	252.98

Subdivision 2.

NORTHERN CROPS INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Northern crops institute	$3,712,202	($66,993)	$3,645,209
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
Total general fund	$1,964,467	($75,473)	$1,888,994
Full-time equivalent positions	12.00	(0.20)	11.80

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Upper great plains transportation institute	$22,076,448	($7,704)	$22,068,744
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
Total general fund	$3,900,791	($455,477)	$3,445,314
Full-time equivalent positions	54.98	(11.10)	43.88

Subdivision 4.

MAIN RESEARCH CENTER

	Base Level	Adjustments or Enhancements	Appropriation
Main research center	$110,529,780	($1,812,588)	$108,717,192
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
Total general fund	$53,581,255	($3,975,465)	$49,605,790
Full-time equivalent positions	353.85	(17.73)	336.12

Subdivision 5.

BRANCH RESEARCH CENTERS

	Base Level	Adjustments or Enhancements	Appropriation
Dickinson research extension center	$6,996,678	($167,861)	$6,828,817
Central grasslands research extension center	3,531,779	(105,667)	3,426,112
Hettinger research extension center	5,086,767	(108,523)	4,978,244
Langdon research extension center	3,045,836	(79,363)	2,966,473
North central research extension center	5,044,213	(87,451)	4,956,762
Williston research extension center	5,267,400	(145,037)	5,122,363
Carrington research extension center	9,328,093	(145,655)	9,182,438
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238
Total general fund	$18,483,636	($1,310,665)	$17,172,971
Full-time equivalent positions	113.94	(3.65)	110.29

Subdivision 6.

AGRONOMY SEED FARM

	Base Level	Adjustments or Enhancements	Appropriation
Agronomy seed farm	$1,521,007	$15,744	$1,536,751
Total special funds	$1,521,007	$15,744	$1,536,751
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	Base Level	Adjustments or Enhancements	Appropriation
Grand total general fund	$105,754,711	($7,667,756)	$98,086,955
Grand total other funds	124,036,762	3,953,658	127,990,420
Grand total all funds	$229,791,473	($3,714,098)	$226,077,375

SECTION 2. ONE-TIME FUNDING. The following amounts reflect the one-time funding items approved by the sixty-fourth legislative assembly as adjusted for the 2015-17 biennium:

One-Time Funding Description	2015-17	2017-19
Agronomy laboratories	$150,000	$0
Rural leadership project	141,252	0
Seed cleaning plants	4,408,224	0
Upper great plains transportation institute road study	628,823	0
Junior master gardener program	12,500	0
Veterinary diagnostic laboratory	18,000,000	0
Dust issues technical support	100,000	0
Land purchase - Langdon	350,000	0
Flooded lands study	67,952	0
Total all funds	$23,858,751	$0
Total other funds	21,325,000	0
Total general fund	$2,533,751	$0

SECTION 3. ADDITIONAL INCOME - APPROPRIATION. In addition to the amount included in the grand total other funds appropriation line item in section 1 of this Act, any other income, including funds from federal acts, private grants, gifts, and donations, or from other sources received by the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, except as otherwise provided by law, is appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 4. AMENDMENT. Section 4-05.1-05 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-05. North Dakota state university main research center position adjustments - Budget section report.

The North Dakota state university main research center must be located on the campus of North Dakota state university of agriculture and applied science. The center is the administrative location of the agricultural experiment station. The center shall conduct research and coordinate all research activities of the agricultural experiment station. The research must have, as a

purpose, the development and dissemination of technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research must provide for an enhancement of the quality of life, sustainability of production, and protection of the environment. Subject to the availability of funds, the station director may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the agricultural experiment station. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full or partial positions must be separate from North Dakota state university. Annually, the station director shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section. The center may conduct baseline research, including production and processing in conjunction with the research and extension centers of the state, regarding industrial hemp and other alternative industrial use crops. The center may collect feral hemp seed stock and develop appropriate adapted strains of industrial hemp which contain less than three-tenths of one percent tetrahydrocannabinol in the dried flowering tops. The agriculture commissioner shall monitor the collection of feral hemp seed stock and industrial hemp strain development and shall certify appropriate stocks for licensed commercial cultivation.

SECTION 5. AMENDMENT. Section 4-08-10 of the North Dakota Century Code is amended and reenacted as follows:

4-08-10. Extension agent to submit monthly account of expenditures - Position adjustments - Budget section report.

The extension agent shall submit monthly an accurate itemized account of all expenditures incurred by the agent in the regular conduct of duties to the North Dakota state university extension service for examination and audit. When charges are made by an extension agent for money expended in the performance of official duties, all items of one dollar or more expended and charged for must be covered by a subvoucher or receipt that must be signed by the person to whom the money was paid. The subvoucher or receipt must show at what place, on what date, and for what the money expended was paid. The extension agent shall forward the subvouchers or receipts with the bill, claim, account, or demand against the county. When charges are made for transportation expenses, they may not exceed the amounts provided by section 11-10-15, and must be in itemized form showing the mileage traveled, the days when

and how traveled, and the purpose thereof, verified by affidavit. The account must be transmitted and recommended for payment by the North Dakota state university extension service which shall audit the same and which may approve or disallow any expense item therein. The state board of agricultural research and education and the president of North Dakota state university shall control and administer the North Dakota state university extension service subject to the supervision of the state board of higher education. Funds appropriated to the North Dakota state university extension service may not be commingled with funds appropriated to North Dakota state university. An appropriation request to defray expenses of the North Dakota state university extension service must be separate from an appropriation request to defray expenses of North Dakota state university. Subject to the availability of funds, the director of the North Dakota state university extension service may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the extension service. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full- or part-time positions must be separate from North Dakota state university. Annually, the director of the North Dakota state university extension service shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section.

SECTION 6. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 7. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME - REPORT. The Williston research extension center shall report to the sixty-sixth legislative assembly on amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2015, and ending June 30, 2017, and the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 8. TRANSFER AUTHORITY. Upon approval of the state board of agricultural research and education and appropriate branch research center directors, the director of the main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of

section 1 of this Act. Any amounts transferred must be reported to the director of the office of management and budget.

SECTION 9. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS. The state board of higher education may adjust or increase full-time equivalent positions as needed for the entities in section 1 of this Act, subject to availability of funds. All full-time or part-time positions must be separate from North Dakota state university. Annually, the board shall report to the office of management and budget and to the budget section any adjustments made pursuant to this section.

SECTION 10. UNEXPENDED GENERAL FUND - EXCESS INCOME. Any unexpended general fund appropriation authority to and any excess income received by entities listed in section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or revenues are available and may be expended by those entities, during the biennium beginning July 1, 2019, and ending June 30, 2021.

SECTION 11. EXEMPTION. The amounts appropriated for the veterinary diagnostic laboratory and the seed cleaning plants contained in subdivision 4 of section 1 of chapter 20 of the 2015 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2017, and ending June 30, 2019.

Northern Crops Institute
Annual Update

2016

Northern Crops Institute supports regional agriculture and value-added processing by conducting educational and technical programs that expand and maintain domestic and international markets for northern-grown crops.

Connecting in the Global Marketplace

NCI NORTHERN CROPS INSTITUTE

Director Report

Mark Weber

We are positioning NCI for the future and we have engaged some of this region's leading agri-business leaders to help us lay out a strategic plan that capitalizes on our strengths while increasing future marketing opportunities for our high quality crops. They include:

Weber

NCI Chairman Keith Peltier of the Arthur Companies and Proseed, West Fargo, N.D.; Roger Hipwell, MGI Grain Processing, East Grand Forks, Minn.; Mike Krueger, The Money Farm, Fargo, N.D.; Vance Taylor, North Dakota State Mill, Grand Forks, N.D.; Eric Bartsch, AGT Foods, Bismarck, N.D.; Bob Sinner, SB & B Foods, Casselton, N.D.; Bob Majkrzak, Red River Commodities, West Fargo, N.D.; Dave Katzke, General Mills, Minneapolis, Minn.; John Crabtree, assistant NCI director; and myself.

We have identified several opportunities that we will build on in the near future. Understanding that there is growing uncertainty in future legislative budgets, we will continue to reach out to industry to generate additional fee income for flour milling, food extrusion and processing, baking, analytical, and other technical services that our energetic and experienced team of food technicians and scientists provide.

We have built an aggressive industry marketing effort promoting our technical services. The effort is paying off as we see demand for those services escalating.

We continue to expand our breadth of educational short course offerings teaching customers world-wide how to utilize our northern grown crops in their food and feed products. Even as these opportunities intensify, we have not added any new staff in six years. Future staff retirements will require different skill sets in response to changing demand for services from our customers. As we look into the future we see a need for additional expertise in the areas of risk management, animal nutrition and food processing.

Any business that expects to survive and prosper must embrace change and respond to market conditions quickly. We are responding to new challenges and opportunities in the same way through the help of those dedicated individuals volunteering their time away from their own business in serving the NCI and our mission.

An Interview with the NCC Chair

Keith Peltier, West Fargo, N.D. — Proseed

How do you anticipate NCI will continue to promote crops while commodity prices are low and with the current state of over supply?

NCI is committed to promoting crops grown in our region. When prices are low that is when promotion is the most important. NCI will encourage more use in current situations along with advocating and testing for new uses of our northern crops.

Peltier

How will NCI strengthen partnerships with organizations such as USSEC, U.S. Grains Council, U.S. Wheat Associates and four state commodity organizations etc. to promote our crops?

We are reaching out to our partners to seek new courses to promote our crops and to see if we can encourage new people to attend our courses. We are actively seeking new testing parameters that would promote new uses of the crops we promote.

What are some new and innovative ways, from both an educational and technical services standpoint, that NCI will be able to promote our crops?

We have been utilizing the Commodity Trading room in our classes. This is one of the premiere teaching tools in the country if not the world. We have been able to leverage our relationship with NDSU to be able to offer this opportunity. In addition, our equipment for testing is state of the art and mirrors the latest in technological developments.

Do you believe diversity in our crops along with their unique traits will help with long-term goals? If so, how?

The diversity of our crops in this region is one of our strengths. Just the fact that the farmer can have so many choices is good for everybody in the long run.

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NCI Thanks Outgoing NCC Members for Their Service

NCC Chairman Keith Peltier (left) and NCI Director Mark Weber (right) thanked outgoing NCC board members for their service on the Northern Crops Council (NCC) by presenting them with an engraved clock at the June 2016 meeting. Roger Hipwell (middle), Golden Valley, Minn., represented the MGI Grain Processing LLC, serving one term. Beau Anderson (not pictured), Williston, N.D., finished one term on the NCC by representing the Northern Pulse Growers. Thank you for your service!

2017 COURSE SCHEDULE

April 18-20
Pasta Production and Technology

June 5-10
NCI-INTSOY

September 11-20
Grain Procurement Management for Importers

Other courses will be added to our schedule as the year progresses. Please check our website www.northern-crops.com for the most up-to-date information.

Connect with us!

Did you know you can connect with NCI in more places than just northern-crops.com? Keep current with what is happening by following, liking and sharing NCI on Facebook, Twitter and YouTube.

2016-17 Northern Crops Council (NCC)

Keith Peltier, Chair
West Fargo, N.D.
Proseed

John Bartsch
Maple Grove, Minn.
Kelley Bean

Dean Bresciani, Ph.D.
Fargo, N.D.
North Dakota State University

Anthony Chavez
Minneapolis, Minn.
Buhler Inc.

Chet Edinger
Mitchell, S.D.
S.D. Wheat Commission

Doug Goehring
Commissioner of Agriculture
N.D. Department of Agriculture

Ken Grafton, Ph.D.
VP Agricultural Affairs
North Dakota State University

Justin Halvorson
Sheldon, N.D.
N.D. Corn Growers

Randy Hinebauch
Chinook, Mont.
Mont. Wheat & Barley Committee

Dave Katzke
Minneapolis, Minn.
General Mills

Greg Kessel, Vice Chair
Belfield, N.D.
N.D. Barley Council

Dwight Mork
Bellingham, Minn.
Minn. Corn Research and Promotion Council

Perry Ostmo
Sharon, N.D.
N.D. Soybean Council

Drew Parsley
Warroad, Minn.
Minn. Soybean R&P Council

Todd Sinner
Casselton, N.D.
SB&B Foods

Greg Svenningsen
Valley City, N.D.
N.D. Wheat Commission

Vance Taylor
Grand Forks, N.D.
North Dakota Mill and Elevator

Chris Westergard
Dagmar, Mont.
Northern Pulse Growers Association

Arnold Woodbury
Wyndmere, N.D.
N.D. Oilseed Council

Thank You to All Who Supported NCI Programs and Activities in 2016

North Dakota State University
- Agribusiness and Applied Economics
  - Frayne Olson, Ph.D.
  - William Wilson, Ph.D.
- Cereal and Food Sciences
  - Clifford Hall, Ph.D.
- Plant Sciences
  - John Barr
  - Paul Schwarz
  - Elias Elias, Ph.D.
  - Rich Horsley, Ph.D.
  - Frank Manthey, Ph.D.
  - Juan Osorno, Ph.D.
  - Senay Simsek, Ph.D.
  - DeLane Olsen
  - Kristin Whitney

Abbiamo Pasta Company
- Jim Gibbens

Alton Grain Terminal
- Cory Tryan
- Mark Wild

Ag Processing, Inc. (AGP)
- Chris Schaffer

AGT Foods U.S.A.
- Mehmet Tulbek
- Eric Bartsch

Axor America, Inc.
- Al Lucia

Benson-Quinn Co.
- Thomas Lahey

Brushvale Seed Inc.
- Paul Holmen
- Jon Miller

BNSF Railway Inc.
- Brandon Mortensen

Buhler, Inc.
- Michael Ehr
- Aidin Milani
- Jenni Harrington

Bush Brothers
- Nathan Kuenkel

Cargill, Inc.
- Wayne Koester
- Katie Jorgenson

CHS, Inc.
- Ryan Caffrey
- Mike Klein
- Greg Oberle
- Dick Carlson

Columbia Grain
- Darren Bjornson
- Mike Brinda

Dakota Growers Pasta
- Alexis Freier-Johnson

Dakota Specialty Milling
- Robert Meyer

Austin Damiani, Commodity Trader

De Mari Pasta Dies
- Gabriele Cannata

Duluth Seaway Port Authority
- Kate Ferguson
- Adele Yorde

EGT, LLC
- Matt Kerrigan

Fargo Brewing Company
- Chris Anderson

Global Innovative Solutions
- Gene Griffin

Bill Hejl Farm, Amenia, N.D.

Hunter Grain Company
- Paul Skarnagel

Radwan Ibrahim, Consultant

InfraReady Products Ltd.
- Mark Pickard

Kansas State University
- International Grains Program
  - Jay O'Neil

Kelly Bean
- John Bartsch

Malteurop North America
- Mary-Jane Maurice

Martinson Ag Risk Management
- Randy Martinson

Minneapolis Grain Exchange
- Joe Albrecht

Montana State University

North Dakota Barley Council
- Steve Edwardson

North Dakota Grain Inspection Service
- Pat Kehoe

North Dakota Mill
- Travis Devlin
- Vance Taylor

North Dakota Soybean Council
- Diana Beitelspacher
- Kendall Nichols
- Stephanie Sinner

North Dakota Wheat Commission
- Neal Fisher
- Erica Olson
- Jim Peterson

Northarvest Bean Growers

Northern Pulse Growers Association
- Shannon Berndt

Philadelphia Macaroni Company
- Tony Pierce

Port of Grays Harbor
- Leonard Barnes
- Kayla Dunlap

Rahr Malting Co.
- Jesse Theis

Ryan Richard Farm, Horace, N.D.

Richland Organics Inc.
- Matt Bohn
- Rick Brandenburger

SB&B Foods Inc.
- Robert Sinner
- Scott Sinner
- Todd Sinner

SK Food International
- Aaron Skyberg
- Joel Owen

South Dakota Soybean Processors
- Rodney Fenske

South Dakota State University
- Department of Economics
  - Lisa Elliot, Ph.D.

SunOpta, Inc.
- Mark Halvorson

Greg Svenningsen Farm, Valley City, N.D.

The Money Farm, Fargo, N.D.
- Mike Krueger
- Luke Swenson

USA Dry Pea and Lentil Council

USDA FAS Cochran Fellowship Program

USDA/GIPSA/ FGIS
- Noah Brook

U.S. Dry Bean Council
- Rebecca Bratter
- Randy Duckworth

U.S. Grains Council

U.S. Soybean Export Council
- Budi Tangendjaja, Ph.D.
- Basalisa Reas, DVM
- Tim Loh
- Ratan Sharma

U.S. Wheat Associates
- Roy Chung
- Matt Weimar
- Joe Sowers
- Steve Wirsching

University of Illinois
- Dept. of Animal Sciences
  - Hans Stein, Ph.D.

University of Minnesota

Wenger Manufacturing
- Gerry Hertzel

Wheat Value Consulting
- John Oades, Ph.D.

The NCI-INTSOY Course - June 5-10, 2017

The Northern Crops Institute (NCI) announces that it will host the 2017 NCI-INTSOY course at its facilities located on the campus of North Dakota State University during the week of June 5-10, 2017. National Soybean Research Laboratory (NSRL) at the University of Illinois has organized and hosted this successful course for many years and is pleased to cooperate with NCI as we take on this new role. NCI will utilize NSRL's expertise as part of the program. The course's educational mission will also essentially remain the same — to expand soybeans in the international marketplace.

Participants can expect to begin the week long course in Minneapolis, Minnesota. They will travel through farm country and visit commercial soymilk and livestock feed processing facilities. Participants will also visit a soybean farm on their trip to NCI and after two days of hands-on labs and lectures at NCI, the group will travel to South Dakota State University in Brookings, South Dakota for an additional day and a half of training and demonstrations. Also included are tours of an innovative aqua-feed research center and a soybean crushing plant. The program concludes with a drive through Minnesota's heartland including an overnight stay and additional site visits on the way back to Minneapolis where participants will depart.

More information including course fee and recommendations will be announced on our website at northern-crops.com in January 2017.

Thank You

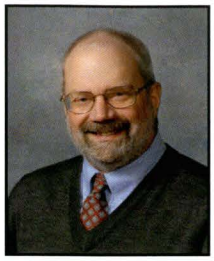
2016 Agribusiness Sponsors!

AGT Foods USA
Ameriflax
Askegaard Organic Farm
Bay State Milling Company
Brushvale Seed Inc.
Colfax Farmers Elevator
Columbia Grain
Dakota Growers Pasta Co., Inc.
Dakota Specialty Milling
Sue and Dave Katzke
Minnesota Corn Growers Association
North Dakota Corn Utilization Council
North Dakota Farmers Union
North Dakota Grain Dealers Association
North Dakota Grain Growers Association
North Dakota Mill and Elevator
Northern Plains Potato Growers Association
Northern Pulse Growers Association
Proseed
Red River Commodities
Red River Valley Sugarbeet Growers Association
Richland IFC, Inc.
SB&B Foods, Inc.
SK Food International
Summit Brewing Company
U.S. Durum Growers Association
Weber Farms

A Special Thank You to Our 2016-2017 Funding Partners

Minnesota Department of Agriculture
Minnesota Soybean Research and Promotion Council
Minnesota Wheat Research and Promotion Council
Montana Wheat and Barley Committee
State of North Dakota
North Dakota Barley Council
North Dakota Soybean Council
North Dakota Wheat Commission
Northarvest Bean Growers
Northern Food Grade Soybean Association
Northern Pulse Growers Association
State of South Dakota
South Dakota Soybean Research and Promotion Council
South Dakota Wheat Commission

Food Safety Modernization Act (FSMA)



Koch

FSMA was enacted to enable the FDA to better protect public health by strengthening the nation's food safety system. Implementation of FSMA regulations for the nation's food and feed production systems have begun and are continuing with greater frequency as 2016 wraps up and 2017 begins.

The tables, to the right, are broken into Small Business, General and Very Small Business compliance dates. These are FSMA's compliance dates as of June 2016 for animal/human food facilities that manufacture, process, package or hold food intended for consumption by animals or humans in the U.S.

For more information and updates on FSMA, please go to www.fda.gov/Food/GuidanceRegulation/FSMA/.

FDA FOOD SAFETY MODERNIZATION ACT

Small Business Compliance Dates

Rule	Small Business Definition	Compliance Date
Preventative Controls for Human Food 21-CFR 117	<500 full-time equivalent (FTE) employees	9-18-17
Preventative Controls for Animal Feed 21-CFR 507	<500 FTE employees	9-18-17 for cGMPs and 9-17-18 for PCs
Foreign Supplier Verification Program	N/A	1-26-19
Sanitary Transportation	<500 FTE employees, except that for certain motor vehicle carriers the definition is less than $27,500,000 in annual receipts	4-6-18

General Compliance Dates

Rule	Compliance Date
Preventative Controls for Human Food 21-CFR 117	9-19-16 (and 3-17-17 for supply chain program
Preventative Controls for Animal Feed 21-CFR 507	9-19-16 for cGMPs, 9-18-17 for PCs (except for some suppliers under the supply chain program)
Foreign Supplier Verification Program	Implementation will occur after issuance of Model Accreditation Standards
Sanitary Transportation	4-6-17

Very Small Business Compliance Dates

Rule	Very Small Business Definition	Compliance Date
Preventative Controls for Human Food 21-CFR 117	<$1M in sales+market value of food manufactured/processed/packed/held without sale	9-17-15
Preventative Controls for Animal Feed 21-CFR 507	<2.5M in slaes+market value of food manufactured/processed/packed/held without sale.	9-17-18 for cGMPs and 9-17-19 for PCs
Foreign Supplier Verification Program	<$1M	1-26-19

NCI Technical Staff Attended Baking Courses in Bangkok, Thailand

NCI's Food Technologist Sam Briss and Food Scientist Natsuki Fujiwara attended separate courses at the UFM Baking and Cooking School in Bangkok, Thailand.

Briss attended and completed the six week Baking Science & Technology Course, No. 38. The coursework consisted of group lab practical, exams and dough doctoring workshops in which the instructor created scenarios that could occur in a manufacturing setting and participants found the solution to the baking issue.

Fujiwara attended and completed a two week U.S. Wheat Frozen Dough Course. Participants learned how to produce different types of frozen dough for different bakery products.

Briss holds a recently baked loaf of bread with another participant from the six week Baking Science & Technology Course, No. 38.

Fujiwara (far right) shows recently baked goods with other participants from the two week U.S. Wheat Frozen Dough Course.

New MASE Soymilk and Tofu Production Equipment Will Assist in the Promotion of Northern Grown Soybeans Worldwide

Zach Liu, Ph.D., CFS

Soymilk and tofu are widely consumed in the Orient and are the most recognized soy foods in western countries. North Dakota is a global leader in producing top-quality food-grade soybeans for the world market. Recently, Northern Crops Institute (NCI) installed a pilot-scale soymilk and tofu processing system to promote northern grown soybeans by demonstrating their versatility and quality to international course participants. The system, designed by NCI, consists of several pieces of equipment which are made in Japan, China, India and the U.S. This state-of-the-art system is flexible in its ability to produce soymilk and tofu which are compatible with the differing tastes and cultures from Japan, China and other areas around the world.

The new soymilk and tofu production equipment is best described as a scaled down mimic of large commercial production equipment. It requires only 2 kilograms of soybeans for making tofu and 1.5 kilograms of soybeans for making soymilk. This system will be used for evaluating soybean quality and demonstrating soymilk and tofu production to visitors and international short-course participants. The system will also be used to develop new products and processes for assisting customers of northern grown soybeans.

Soybean foods (including beverages) are becoming popular because of their well-known health benefits. These benefits include, but are not limited to, preventing heart disease, reducing cancer risk, helping with obesity, aiding bone density and alleviating menopausal symptoms.

Due to these well-known health benefits, global soymilk production has grown rapidly. Traditional soymilk has been described as having a beany flavor. In China, Korea and most Southeast Asian countries, people prefer this flavor. But, in other countries such as India and Japan this beany flavor is a big barrier to consumer acceptance of soymilk. With the new processing equipment, our food scientists now have the capability to make both beany-flavor soymilk and non-beany flavor soymilk.

To explain exactly what soymilk is and how it is processed, it is best to start with the simple definition of what soymilk is. It is a water extract of soybeans. To process soybeans into soymilk the procedure is quite simple. First, dried soybeans need to be soaked in water for several hours. Then, the soaked soybeans are ground with water and the resultant slurry is cooked. Finally, the slurry is filtered to get cooked soymilk.

Tofu is a product based on soymilk. To make tofu, the cooked soymilk needs to be coagulated by mixing with coagulant or curdling agent such as calcium sulfate. The resultant curd can be directly consumed as pudding or silken tofu. To make regular and firm tofu, the curd needs to be broken and then transferred to a forming box where tofu is firmed and shaped by pressing. Tofu-making was first recorded in the Chinese Han dynasty some 2,000 years ago. There are many different types of tofu and tofu-derived products. With NCI's new system, their food scientists will now have the capability to make all types of tofu products.

NCI and its staff would like to thank the North Dakota Soybean Council and Northern Food Grade Soybean Association for their generous financial and overall support for the purchase and installation of the system. This collaborative effort will assist in expanding northern grown soybeans in the international marketplace.

In September, the North Dakota Soybean Council visited and toured the NCI. On the tour, Zach Liu, Ph.D., demonstrated the new soymilk and tofu machine.

Pasta Production and Technology

Canada, USA • April 12-14, 2016

This short course introduces the fundamental and applied aspects of manufacturing extruded and sheeted pasta products. Participants had the opportunity to process pasta on a hands-on pilot-scale and then they took part in cooking the processed pasta to evaluate the final product. Group activities included an exercise in identifying pasta defects and processing causes and they also had a field trip to a local pasta manufacturer.

U.S. Agribusiness Partnership Program

Indonesia, Philippines, Thailand, Vietnam • June 13-17, 2016

The program, in addition to providing trade and technical information, emphasized the U.S. Soy Advantage to importers in terms of its sustainable production, efficient and reliable logistic and transportation system,transparent and reliable trade practices, better consistency and quality of product, better value for the dollar, and importance of valuing soy against amino acid and metabolizable energy values as opposed to crude protein.

The course was sponsored by:

- USSEC
- United Soybean Board
- American Soybean Association
- Qualified State Soybean Boards - Minnesota, North Dakota, South Dakota and Kentucky

Utilization of U.S. Wheat Classes in Pasta Production

Angola, Cote d'Ivoire, Ecuador, Haiti, Honduras, Mexico, Nigeria, Panama, Peru, South Africa, USA • July 18-22, 2016

NCI's customized pasta production course assisted pasta processors in creating the right blend of wheat to meet their pasta specifications. Hands-on pasta processing and cooking quality evaluations supplemented course lecture topics which included U.S. wheat supply and price outlook, wheat quality evaluation, and quality tests for flour and semolina.

The seminar was sponsored by:

- U.S. Wheat Associates

South Asian Contracting for Wheat Value

Philippines, Singapore, Thailand, Vietnam • August 1-5, 2016

Quality control and purchasing personnel from South Asia attended the course. At the course, wheat buyers learned how to better manage supply chains and how to write contracts that accurately specify the wheat they want to purchase. The participants learned about wheat quality testing and procurement through lectures and end-product evaluations.

The course was sponsored by:

- U.S. Wheat Associates

Grain Procurement Management for Importers

Algeria, China, Ecuador, Egypt, Italy, Kuwait, Morocco, Panama, Peru, Philippines, Poland, Saudi Arabia, Singapore, United Arab Emirates, USA, Venezuela • September 12-21, 2016

NCI welcomed 25 participants from 16 countries to the Grain Procurement Management for Importers Course. The course highlights how companies can make effective purchases while managing their financial risk.

The course was sponsored by:

- U.S. Wheat Associates
- U.S. Grains Council
- U.S. Department of Agriculture FAS Cochran Fellowship Program

Dry Edible Beans as Food Ingredients

Argentina, Brazil, India, Indonesia, Italy, Malaysia, Philippines, Singapore, Thailand, Vietnam • September 19-20, 2016

NCI welcomed 22 participants from 10 countries for the Dry Edible Beans as Food Ingredients Course in mid-September. There was a broad range of course topics including industrial processing of canned beans and processing beans into flour to enhance pulse snack extrusion, baking and pasta applications.

The course was sponsored by:

- U.S. Dry Bean Council

Barley & Malt Quality: Field to Brewhouse Perspective

United States • October 3-6, 2016

Barley and Malt Quality: Field to Brewhouse Perspective course was held at NCI in October. NDSU Plant Sciences and Institute of Barley and Malt Sciences coordinated the course. There were lectures, discussion sessions and laboratory demonstrations that provided participants with knowledge to understand malt processing and to effectively interpret barley and malt analyses.

Soybean Procurement Management for Importers

India, South Korea • October 10-14, 2016

NCI hosted the Soybean Procurement Management for Importers Course to provide food grade soybean buyers with the latest risk management tools for procuring food grade soybeans from this region, and a better understanding of food grade soybeans as it relates to handling, storage, transportation and quality characteristics.

The course was sponsored by:

- Minnesota Soybean Research and Promotion Council
- North Dakota Soybean Council
- Northern Food Grade Soybean Association
- U.S. Soybean Export Council

Applications of U.S. Pulse Ingredients

United States • October 17-21, 2016

This customized course focused on major applications of using pulses as an ingredient. Emphasis was placed on bakery products, pasta and both extruded and fried snacks. Nutritional properties were also highlighted during the course.

The course was sponsored by:

- USA Dry Pea & Lentil Council

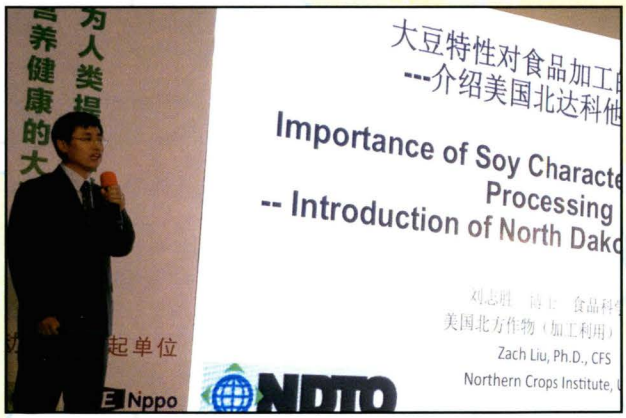
Algeria...Angola
Argentina...Brazil...Canada
China...Colombia...Cote d'Ivoire...Ecuador
Egypt...Honduras...India...Indonesia...Italy...Japan
Kuwait...Malaysia...Mexico...Morocco

Buyers from 37 Nations Educated by NCI in 2016

Myanmar...Nigeria...Panama...Peru
Philippines...Poland...Saudi Arabia...Singapore
South Africa...South Korea...Taiwan...Thailand
United Arab Emirates...United States
Venezuela...Vietnam

Morocco | March 6-11, 2016

Feed Production Center Manager Kim Koch, Ph.D. was in Morocco to attend the "Third USSEC Poultry Round Table for the Feed Industry of the Maghreb (North Africa)." There were approximately 60 people that attended the meeting. The picture above is of Kim Koch, Ph.D. and Khalid Benabdeljelin, contractor, North Africa for the U.S. Soybean Export Council (USSEC).

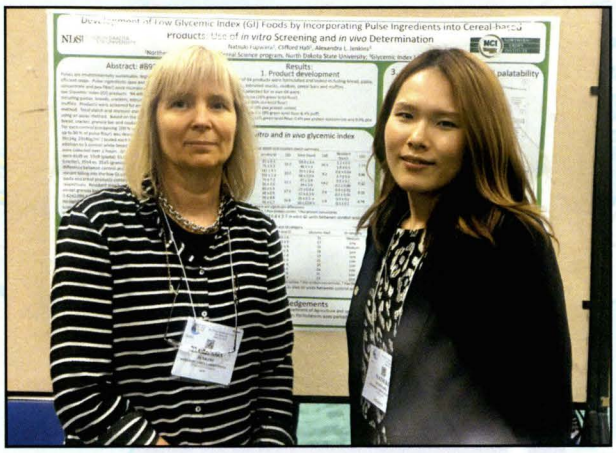


China | April 11-15, 2016

Food Scientist Zach Liu, Ph.D., CFS attended the 6th Annual China International Exhibition for Soyfood Processing Technology and Equipment and also the 4th Annual China International Soyfood Industry Development Conference held in Shanghai, China. During the conference Dr. Liu successfully delivered a one hour presentation titled "Importance of Soy Characteristics in Soyfood Processing - Introduction of North Dakota IP Soybeans." Dr. Liu represented NCI through the 2016 China Trade Mission group organized by the North Dakota Trade Office.

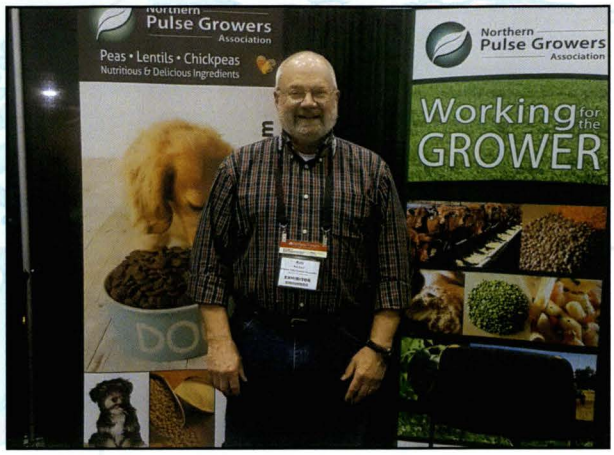
Guatemala | April 18-22, 2016

Natsuki Fujiwara attended a "Value-Added Foods with Bean Derivatives" seminar along with a hands-on baking demonstration in Guatemala City on April 19-20. It was hosted by the US Dry Bean Council. Participants from Central America learned about value-added applications of beans and also spent a day in the kitchen making products with bean flour.



USA | April 2-6, 2016

Natsuki Fujiwara attended the Experimental Biology Conference 2016 in San Diego, Calif. The conference brought together approximately 20,000 professionals and exhibitors. Fujiwara presented her poster, "Development of low glycemic index foods by incorporating pulse Ingredients into cereal-based products: Use of in vitro screening and in vivo determination." Alexandra Jenkins from Glycemic Index Laboratory, Inc., is listed as a coauthor and was also at the conference.



USA | April 21, 2016

Feed Production Center Manager Kim Koch, Ph.D. was in Kansas City, Missouri at the Pet Food Forum. He assisted the Northern Pulse Growers Association in their booth with technical questions. There were a record number of attendees and exhibitors at the Forum and the exhibition space sold out for the third year in a row.

Myanmar | May 14-21, 2016

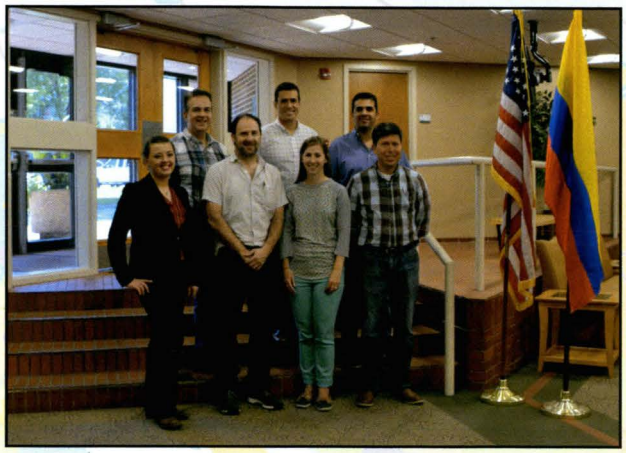
Food Scientist Zach Liu, Ph.D., CFS traveled to Myanmar to promote the use of U.S. food grade soybean protein ingredients. During the trip he visited three local companies that are currently producing or interested in producing soy-based beverages. Dr. Liu also delivered a 90 minute presentation at the Food Science Technology Association of Myanmar (FOSTA).The trip was organized by World Initiative for Soy in Human Health (WISHH/American Soybean Association) and was also financially supported by the North Dakota Soybean Council.

Southeast Asia | May 23-31, 2016

Dr. Frayne Olson, NDSU Department of Agribusiness & Applied Economics Crops Economist & Marketing Specialist was in Jakarta, Indonesia, Bangkok, Thailand and Manila, Philippines as part of the "Managing Risk and Profitability from Field to Food" meeting series. The meeting series was sponsored in part by NCI, Minnesota Soybean and the North Dakota Soybean Council. The program participants were buyers of U.S. soybeans and soybean meal. Most were soybean processors, feed millers and feed merchandisers. The meeting series focused on understanding the U.S. grain marketing system, with special emphasis on price risk management (i.e. futures markets, hedging and options).

Africa | June 20, 2016

NCI welcomed the Regional African Trade and U.S. Quality Assessment Team to NCI in June. Participants were from Ghana, Nigeria and South Africa. The team was hosted by the North Dakota Wheat Commission and Minnesota Association of Wheat Growers. They were at NCI to hear presentations and then the next day they toured a country elevator (the North Dakota Mill and Elevator) and they also toured the Alton Grain Terminal near Hillsboro, N.D.



Colombia | July 25, 2016

In July, NCI welcomed a Colombian Wheat Trade Mission Team. The team members were comprised of high level executives of the major flour, cookie and pasta groups from Colombia. The team was sponsored by U.S. Wheat Associates and USDA's Foreign Agricultural Service (FAS) and in cooperation with the North Dakota Wheat Commission along with many other state's wheat groups.

Singapore | August 13-20, 2016

NCI's Food Scientist Zach Liu, Ph.D., CFS presented at the South East Asia Soymilk Workshop organized by U.S. Soybean Export Council (USSEC) in Singapore. Zach presented on soybean variety, composition and storage. There were approximately 40 attendants who were from soymilk and tofu manufacturers in South East Asia. Dr. Liu's successful presentation and consultation lasted approximately 100 minutes and there many questions from the participants of the workshop.

Indonesia | August 18, 2016

In August, NCI welcomed the Indonesian Trade Team. The team was sponsored by U.S. Wheat Associates and hosted by North Dakota Wheat Commission.

Myanmar | August 25, 2016

At the end of August, NCI welcomed the Myanmar Trade Team sponsored by the American Soybean Association and WISHH. The team consisted mainly of oilseed processors. They also visited a soybean farm and a grain elevator, attended a session at NCI and also participated in the Global Trade Exchange in Indianapolis, Indiana.

India | August 25 - September 2, 2016

Feed Production Center Manager Kim Koch, Ph.D. was one of three lead instructors for the Center for Executive Education's "FSPCA Preventative Controls or Human Food Course sponsored by Cornell University - College of Agriculture and Life Sciences. Dr. Koch reported that it was well attended with 21 participants in the first part of the week and 30 participants towards the end of the week.

Japan, South Korea, Taiwan | September 12, 2016

In September, NCI welcomed the Food Barley Trade Team. The trade team was from Japan, South Korea and Taiwan. They were hosted by the North Dakota Barley Council.

Tunisia | September 26, 2016

We had a group of agriculture officials sponsored by the University of Minnesota Extension that were visiting from Tunisia. They took a tour of NCI and then they also visited other agricultural places of interest in the Fargo, N.D. area.

Philippines | October 4, 2016

The North Dakota Wheat Commission brought the Philippine Foremost Team to NCI for a tour of the facility. After the tour, the team headed to the Bagg Bonanza Farm in Mooreton, N.D. and also had a farm visit and tour.

Japan | October 26, 2016

NCI welcomed the Japanese Trade Team Showa Sangyo to our facility at the end of October. The trade team was sponsored by the North Dakota Wheat Commission.

Japan, South Korea, Taiwan | November 7-11, 2016

Food Scientist Natsuki Fujiwara traveled to Japan, South Korea and Taiwan in the beginning of November to assess the market potential for food barley. The team met with key staff in each company.

Colombia | November 14-18, 2016

Food Scientist Natsuki Fujiwara spoke at educational seminars for health professionals as a means to increase bean consumption in Bogota, Colombia. Fujiwara also had a technical seminar in Medellin, Colombia for culinary and technical professionals.

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North Dakota State University
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Fargo, ND 58108-6050

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2016 Annual Update

Offering Technical Services and Educational Opportunities

Educational Courses:

- Value-enhanced uses
- Grain standards and inspection
- Procurement, risk management
- Quality, processing and milling
- Extrusion technology
- Pasta processing
- Feed milling and manufacturing
- Customized seminars

Technical Services:

Pilot-Scale Processing

- Milling
- Baking
- Pasta processing
- Oilseed cold pressing
- Extrusion
- Post-extrusion
- Feed
- Industrial

NCI Provides:

- Skilled staff
- Up-to-date information
- Fully-equipped labs
- Hands-on experience
- Extrusion
- Confidential environment
- Network of resources

NCI Staff

Mark Weber, director
John Crabtree, assistant director
Linda Briggs, office manager
Betsy Armour, communications/public relations manager
Janel Brooks, account technician
Neil C. Doty, Ph.D., technical director (consultant)
Kim Koch, Ph.D., feed production center manager
Natsuki Fujiwara, food scientist
Rachel Carlson, food technologist
Sam Briss, food technologist
Rilie Morgan, process project manager
Zhisheng (Zach) Liu, Ph.D., CFS, food scientist

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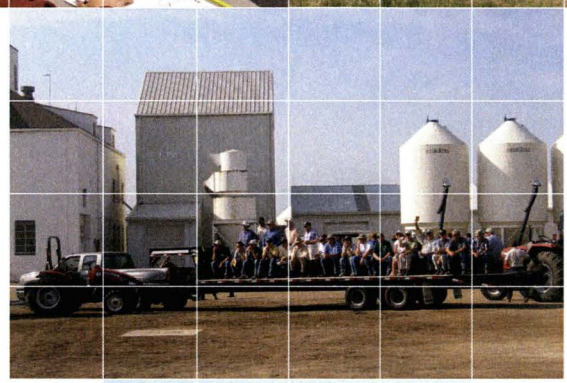
SB 2020 3.7.17
Att. 1 cover page



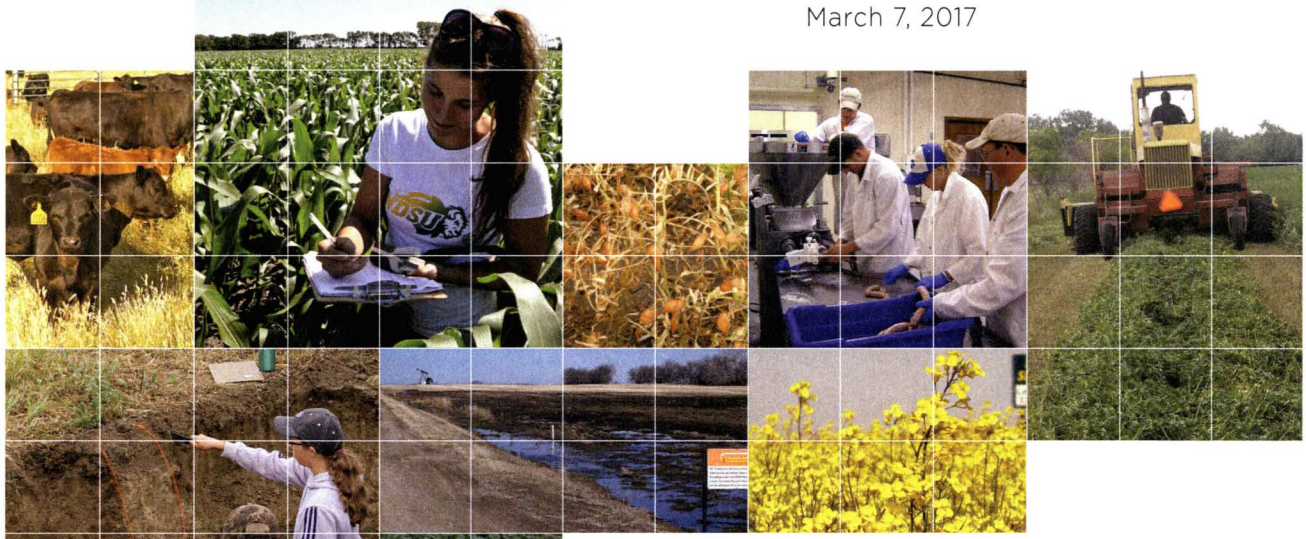
NORTH DAKOTA STATE UNIVERSITY

North Dakota Agricultural Experiment Station

NDSU Extension Service

2017-2019 Biennial Budget Request

Senate Bill 2020
House Education and Environment Division
Representative David Monson, chair
March 7, 2017



NDSU NORTH DAKOTA STATE UNIVERSITY

NDSU Extension Service - Budget No. 630
North Dakota Agricultural Experiment Station
- Main Station - Budget No. 640
- Branch Research Extension Centers - Budget No. 628
- Agronomy Seed Farm - Budget No. 649

Dean L. Bresciani – President, North Dakota State University
Mike Beltz – Chair, State Board of Agricultural Research and Education
Ken Grafton – Vice President, Dean and Director for Agricultural Affairs, NDSU
Chris Boerboom – Director, NDSU Extension Service
Kris Ringwall – Director, Dickinson Research Extension Center
Kevin Sedivec – Interim Director, Central Grasslands Research Extension Center
Chris Schauer – Director, Hettinger Research Extension Center
Randy Mehlhoff – Director, Langdon Research Extension Center
Shana Forster – Director, North Central Research Extension Center
Jerry Bergman – Director, Williston Research Extension Center
Blaine Schatz – Director, Carrington Research Extension Center
Brian Otteson – Director, Agronomy Seed Farm

www.ndsu.edu/agforlegislators

Agency Overview

NDSU Extension Service

Agency Statutory Authority

North Dakota Century Code Chapter 4-08.

Agency Description

The North Dakota State University (NDSU) Extension Service is part of a nationwide, university-based educational system that provides research-based educational programs to citizens in all 53 counties and four American Indian reservations in North Dakota. Programs focus on selected needs and issues affecting the state's agriculture, youth, families, communities and natural resources. The staff is located at state, area and local/county offices. The NDSU Extension Service combines funding from federal, state, county and grant sources to specifically address local concerns.

Agency Mission Statement

The purpose of the NDSU Extension Service is "to create learning partnerships that help youth and adults enhance their lives and communities." This purpose is accomplished through the dissemination of research-based information and the implementation of educational programs geared to the changing needs of North Dakotans. Major program areas include agriculture and natural resources; youth development; family and consumer sciences; and community economic development and leadership.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19, the State Board of Agricultural Research and Education (SBARE) presents a status report to the budget section of the Legislative Council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the Legislative Council office.

Agency Future Critical Issues

North Dakotans who were involved in 11 community forums in 2015 prioritized eight areas of concern related to the economic sector: struggling agricultural economy, public disconnect with agriculture, energy development, farm and business transition, labor force, natural resource protection, regulations, and rural communities. They also prioritized six areas of concern related to families and communities: health and wellness, civic engagement, successful families, infrastructure, crime and safety, and education. North Dakota is a great state in which to live, but residents experience frustrations and clearly see the potential for enhancements.

Forum participants recognized that these issues are complex, difficult issues without a single, simple solution. To make progress, multiple agencies and partners may be involved in different aspects of the issue. Because the NDSU Extension Service's mission is to provide research-based information to improve the quality of life of North Dakotans, we lead or collaborate on numerous programs across the state and within local communities that address many of the identified concerns. For instance, Extension cannot solve low commodity prices, but we provide tools for farmers to make better marketing decisions. We cannot create successful families alone, but we provide training to parents so they have better parenting skills.

NDSU EXTENSION SERVICE

To continue these relevant, community-driven programs, NDSU Extension needs sustained program support in agriculture, nutrition and wellness, leadership and civic engagement, and 4-H and youth development. Upon review of the issues from the community forums and other stakeholder needs, the State Board of Agricultural Research and Education (SBARE) prioritized the restoration of the NDSU Extension base budget as the most critical Extension need to maintain existing capacity to address state issues.

Prior to the proposed budget reduction, SBARE identified Extension's top need was increased operating funds to increase capacity to respond to the unmet needs identified during the community forums. In a manner similar to the internal grants program funded by the Legislature for precision agricultural research in the last session, Extension proposes to capitalize on existing specialists and agents to develop fixed-term projects, which target needs identified in the community forums. The need to increase Extension's delivery via media technologies must also be enhanced to support the growing demands of different generations of Extension users.

Ongoing state needs that Extension is not able to provide adequate educational programs are in the areas of farm safety, farm financial management, water quality, value added cropping systems, and pollinator management.

NDSU Extension Service

2015-2017 Legislation that Included Reporting Requirements to 2017 Appropriation Committees

HB1020 (NDSU Research & Extension, & Agronomy Seed Farm)

SECTION 2. ONE-TIME FUNDING — EFFECT ON BASE BUDGET — REPORT TO SIXTY-FIFTH LEGISLATIVE ASSEMBLY. The following amounts reflect the one-time funding items approved by the sixty-third legislative assembly for ... the 2015-17 one-time funding items included in the appropriation in section 1 of this Act:

One-Time Funding Description
Extension master gardener internships — $12,500

The 2015-17 one-time funding amounts are not a part of the entity's base budget for the 2017-19 biennium. The main research center shall report to the appropriations committees of the sixty-fifth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2015, and ending June 30, 2017.

Status: $12,500 received; funds allocated. 3 summer interns hired.

NDSU Extension Service

Update of Extension Initiatives Funded in 2013-2015 Budget

- **Costs to continue FY2013 salary increases**
  $540,528 received and allocated July 1, 2013

- **Agents-in-training and summer internship program**
  $250,000 received (no fte), salary pools for two 12- to 18-month agent-in-training positions and three 8-to 12-week summer student internships, hired

- **Livestock development**
  $370,000 received
  - $220,000 salary and fringe benefits and operating, 1.0 FTE Area Livestock Specialist hired in Extension livestock programs at CGREC
  - $150,000 operating support, livestock production economics; allocated and program initiated

- **Crop and resource protection**
  $150,000 received, salary and fringe benefits, 1.0 FTE technical support hired for the weed science or potato programs

- **Rural leadership North Dakota program**
  $125,000 received and allocated

- **Junior master gardener program**
  $25,000 received, 2 interns Burleigh county extension; funds allocated

- **State Soil Conservation Committee**
  $150,000 received and added to previous funding
  Additional funding received to fund grants to Soil Conservation Districts as well as help landowners reduce soil erosion/ improve water quality; and enhance tree plantings, grazing lands and wildlife habitat.

- **Video conference equipment**
  $110,000 received, funding allocated

- **North Dakota 4-H camp**
  $950,000 general funds, $1,650,000[1] other funds; construction completed

Additional Item

NDSU Extension Service received $10,500 from the general fund pool appropriated to the Office of Management and Budget (OMB) for needs resulting from energy development. This amount was paid to employees in oil impacted communities.

[1]March 12, 2014, Budget Section authorized $700,000 additional Other Funds spending for the North Dakota 4-H camp project increasing total Other Funds from $950,000 to $1,650,000.

NDSU Extension Service

Update of Extension Initiatives Funded in 2015-2017 Budget

- **Costs to continue FY2015 salary increases**
  $272,281 received and allocated July 1, 2015

- **Agricultural programs and capacity**
  $247,972 received
  - $207,972 salary and fringe benefits and operating, 1.0 FTE Area Livestock Extension Specialist hired — Hettinger REC
  - $40,000 operating support; allocated

- **Junior master gardener program,** one-time funding
  $12,500 received; funds allocated. 3 summer interns hired.

- **State Soil Conservation Committee**
  $75,000 received and added to previous funding
  Additional funding received to fund grants to Soil Conservation Districts as well as help landowners reduce soil erosion/ improve water quality; and enhance tree plantings, grazing lands and wildlife habitat.

NDSU EXTENSION SERVICE

2017-19 Program Initiatives as Ranked by SBARE

1 Restore Budget to 2015-17 Original Appropriation

Need: Restoration of 10 percent budget cut - $2,977,569

2 Enhancing Extension Infrastructure

Situation: This initiative to enhance Extension's infrastructure is centered on increasing annual operational support for Extension programs to address new and emerging issues that warrant immediate attention. This initiative will be innovative, invest in North Dakota citizens and regularly inform stakeholders on the impacts made through Extension programs. Funding to provide operational support for NDSU Extension's infrastructure will provide long-term assistance to respond to critical issues affecting North Dakota. This initiative will:

- Innovate - Enhance the needs assessment process and the support to act on suggestions from the public, and provide a flexible and nimble response to enhance engagement through applied projects and educational programs
- Invest - Develop a competitive funding process to meet new and emerging issues in a timely manner and provide short-term investment in areas of high potential for success
- Inform - Provide impact reports upon completion of the projects that were funded through the competitive process and prioritize the development of enhanced access to NDSU Extension project data and research, as well as results and recommendations to the public through an improved web presence, searchable databases and smartphone applications

Need: Operating - $900,000

3 Farm Safety Education

Situation: This specialist will launch a new statewide farm safety educational program to reduce agricultural and related on-farm accidents, which kill and injure too many North Dakotans. Multi-faceted educational programs will target farmers and youth.

The farm safety initiative responds to a dire need of agriculture in North Dakota. Farm accidents have been increasing steadily in the Midwest. About 374 farmers and 113 youth (age 16 to 19) die each year from farm-related accidents. Approximately 167 workers suffer from farming-related injury every day. North Dakota is not immune to these statistics. Most farmers in North Dakota have experienced or know of someone who lost a life or was injured in a farm accident. The most common accident is tractor rollover. ATV, grain bin and electrical accidents also are common. Farm safety education is effective in reducing farm accidents in other states. Leadership is needed to develop a comprehensive, persistent educational program, which can be delivered in conjunction with Extension agents to create a culture of safety on the farm.

Need: Farm Safety Education Specialist (1.0 FTE) - $240,000; operating - $60,000

2017-19 Program Initiatives as Ranked by SBARE (continued)

4 Enhancing the Agricultural Economy

Situation: Extension Farm Financial Management Specialist – This specialist will develop and deliver Extension programs that enhance the financial management skills of farmers, ranchers and agricultural professionals, and increase the likelihood of maintaining successful farm and ranch enterprises. • Farm profitability is a priority issue in agriculture today. Low crop prices, declining livestock prices and high production costs have created an environment in which the financial condition of many farms is deteriorating rapidly. This is especially affecting the younger generation of farmers. Financial management education, including investment analysis (using your money wisely), risk analysis (how much could be lost), financial structuring (financial sources and terms) and business strategy (can the enterprise mix be improved), is a critical need. A farm financial management specialist will be able to improve the financial management skills of farmers and agricultural professionals and increase the efficiency of operations.

Need: Extension Farm Financial Management Specialist (1.0 FTE) - $240,000; operating - $60,000

Situation: Extension Water Quality Specialist – This specialist will provide statewide education on water quality and quantity related to human and livestock use, energy production, nutrient management, etc. The water quality specialist was a ranked SBARE need in the last two legislative sessions. • Water is a critical element to life in our state. Science-based answers are needed on topics such as water quality for human and livestock consumption, impacts of saltwater spills, and best management practices to prevent nutrient movement to surface water. Educational programs and information are needed to assist land owners and citizens in making informed decisions when using and protecting our precious water resources. The water quality educational program will work in cooperation with agricultural and conservation groups and state regulatory agencies.

Need: Extension Water Quality Specialist (1.0 FTE) - $240,000; operating - $60,000

Situation: Extension Value-added Cropping Specialists – These specialists will develop programs to build the management skills of new and existing farmers to overcome the unique production challenges of these crops and systems. This will build the capacity of North Dakota to meet opportunities in the marketplace. Positions will be located at the Dickinson and Carrington Research Extension Centers to service the state. • The lagging agricultural economy highlights the need and opportunity for diversification, including value-added crops and production systems. Many value-added crops and production systems have high rates of return. The industry is aggressively seeking farmers to fill these increasing demands. North Dakota agriculture can aggressively pursue and invest in alternative crops and productions systems to increase the profitability of its producers. Value-added cropping specialists can educate farmers on the specialized management that is needed to produce these crops and transition into these production systems successfully.

Need: Extension Value-added Cropping Specialists (2.0 FTE) - $400,000; operating - $120,000

Situation: Extension Pollinator Specialist – This specialist will provide leadership for statewide education on best management practices for beekeepers and other pollinators. These educational efforts will support the North Dakota Pollinator Plan. • Pollinators, most often honey bees, are beneficial to the production of many of North Dakota's crops. In addition, North Dakota leads the nation in honey production, which has a value of $84 million. Unfortunately, beekeepers are suffering significant colony losses from a multitude of factors. Extension can provide educational programs on best management practices for beekeepers and education on the North Dakota Pollinator Plan for the mutual benefit of the honey industry, commercial agriculture and North Dakota residents.

Need: Extension Pollinator Specialist (1.0 FTE) - $240,000; operating - $60,000

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa.ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request. 701-231-7881.

DETAILS:
2017-2019 Program Initiatives as Ranked by SBARE

NDSU Extension Service

1. Restore Budget to 2015-2017 Original Appropriation

2. Enhancing Extension Infrastructure

Operating **$900,000**

This initiative to enhance Extension's infrastructure is centered on increasing annual operational support for Extension programs to address new and emerging issues that warrant immediate attention. This initiative will be innovative, invest in North Dakota citizens and regularly inform stakeholders on the impacts made through Extension programs. Funding to provide operational support for NDSU Extension's infrastructure will provide long-term assistance to respond to critical issues affecting North Dakota. This initiative will:

- **Innovate** — Enhance the needs assessment process and the support to act on suggestions from the public, and provide a flexible and nimble response to enhance engagement through applied projects and educational programs
- **Invest** — Develop a competitive funding process to meet new and emerging issues in a timely manner and provide short-term investment in areas of high potential for success
- **Inform** — Provide impact reports upon completion of the projects that were funded through the competitive process and prioritize the development of enhanced access to NDSU Extension project data and research, as well as results and recommendations to the public through an improved web presence, searchable databases and smartphone applications

3. Farm Safety Education

1.0 FTE Farm safety education specialist **$240,000**
Operating **$160,000**

This specialist will launch a new statewide farm safety educational program to reduce agricultural and related on-farm accidents, which kill and injure too many North Dakotans. Multi-faceted educational programs will target farmers and youth.

The farm safety initiative responds to a dire need of agriculture in North Dakota. Farm accidents have been increasing steadily in the Midwest. About 374 farmers and 113 youth (age 16 to 19) die each year from farm-related accidents. Approximately 167 workers suffer from farming-related injury every day. North Dakota is not immune to these statistics. Most farmers in North Dakota have experienced or know of someone who lost a life or was injured in a farm accident. The most common accident is tractor rollover. ATV, grain bin and electrical accidents also are common. Farm safety education is effective in reducing farm accidents in other states. Leadership is needed to develop a comprehensive, persistent educational program, which can be delivered in conjunction with Extension agents to create a culture of safety on the farm.

4. Enhancing the Agricultural Economy

1.0 FTE Farm financial management specialist **$240,000**
Operating **$60,000**

This specialist will develop and deliver Extension programs that enhance the financial management skills of farmers, ranchers and agricultural professionals, and increase the likelihood of maintaining successful farm and ranch enterprises.

Farm profitability is a priority issue in agriculture today. Low crop prices, declining livestock prices and high production costs have created an environment in which the financial condition of many farms is deteriorating rapidly. This is especially affecting the younger generation of farmers. Financial management education, including investment analysis (using your money wisely), risk analysis (how much could be lost), financial structuring (financial sources and terms) and business strategy (can the enterprise mix be improved), is a critical need. A farm financial management specialist will be able to improve the financial management skills of farmers and agricultural professionals and increase the efficiency of operations.

1.0 FTE Water quality specialist **$240,000**
Operating **$60,000**

This specialist will provide statewide education on water quality and quantity related to human and livestock use, energy production, nutrient management, etc. The water quality specialist was a ranked SBARE need in the last two legislative sessions.

Water is a critical element to life in our state. Science-based answers are needed on topics such as water quality for human and livestock consumption, impacts of saltwater spills, and best management practices to prevent nutrient movement to surface water. Educational programs and information are needed to assist land owners and citizens in making informed decisions when using and protecting our precious water resources. The water quality educational program will work in cooperation with agricultural and conservation groups and state regulatory agencies.

2.0 FTE Value-added cropping specialists **$400,000**
Operating **$120,000**

These specialists will develop programs to build the management skills of new and existing farmers to overcome the unique production challenges of these crops and systems. This will build the capacity of North Dakota to meet opportunities in the marketplace. Positions will be located at the Dickinson and Carrington Research Extension Centers to service the state.

The lagging agricultural economy highlights the need and opportunity for diversification, including value-added crops and production systems. Many value-added crops and production systems have high rates of return. The industry is aggressively seeking farmers to fill these increasing demands. North Dakota agriculture can aggressively pursue and invest in alternative crops and productions systems to increase the profitability of its producers. Value-added cropping specialists can educate farmers on the specialized management that is needed to produce these crops and transition into these production systems successfully.

1.0 FTE Pollinator specialist **$240,000**
Operating **$60,000**

This specialist will provide leadership for statewide education on best management practices for beekeepers and other pollinators. These educational efforts will support the North Dakota Pollinator Plan.

Pollinators, most often honey bees, are beneficial to the production of many of North Dakota's crops. In addition, North Dakota leads the nation in honey production, which has a value of $84 million. Unfortunately, beekeepers are suffering significant colony losses from a multitude of factors. Extension can provide educational programs on best management practices for beekeepers and education on the North Dakota Pollinator Plan for the mutual benefit of the honey industry, commercial agriculture and North Dakota residents.

NDSU EXTENSION SERVICE

2015 Community Forums

STATEWIDE REPORT

327

PARTICIPANTS

GENDER

- **51%** Male
- **49%** Female

AGE

- **2%** Younger than 20
- **8%** 20 to 29
- **13%** 30 to 39
- **17%** 40 to 49
- **27%** 50 to 59
- **22%** 60 to 69
- **11%** Older than 69

OCCUPATION

- **14%** Education
- **20%** Government
- **27%** Farming/agriculture
- **13%** Business
- **11%** Retired
- **15%** Other

ETHNICITY

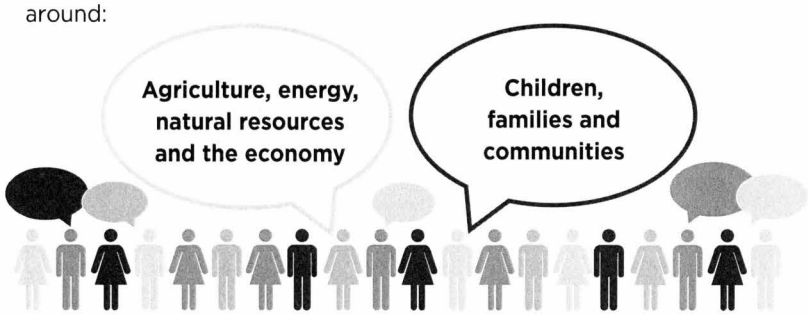
- **97%** White
- **3%** American Indian or Alaska Native

LIVED IN COMMUNITY

- **3%** Less than 1 year
- **12%** 1-5 years
- **6%** 6-10 years
- **11%** 11-20 years
- **35%** More than 20 years
- **33%** All of my life

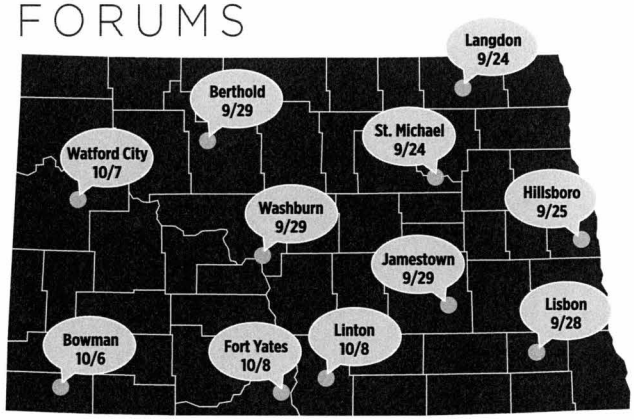
The NDSU Extension Service is listening. NDSU Extension staff recognize that to be most effective, they need to listen to local stakeholders and regularly ask about crucial issues and challenges affecting each region.

Community forums during the fall of 2015 provided an opportunity to listen to North Dakotans across the state as they shared concerns around:



Thank you to the more than 300 people who participated in the 11 community forums. The information will help shape NDSU Extension's strategic planning efforts during the next three to five years and help us create the Extension programs that will most strongly align with the needs and priorities of North Dakota residents.

COMMUNITY FORUMS



EXTENDING KNOWLEDGE. CHANGING LIVES.

Agriculture, Energy, Natural Resources and the Economy

NDSU EXTENSION SERVICE

Priority Issues of Concern to Community Forum Participants

AG ECONOMY

Agriculture is critical to the North Dakota economy. Fluctuations in the agricultural economy bring challenges to farmers, especially in these lean times. More agricultural diversification and value-added products are needed to help farm families and communities.

PUBLIC DISCONNECT WITH AGRICULTURE

We say we can feed the world, yet there is a growing lack of general understanding about where food comes from. Farm-to-table consumer education programs about local foods and food production are needed for all ages.

ENERGY DEVELOPMENT

Fluctuating oil prices can cause dramatic shifts in North Dakota's economy, creating uncertainty. Additional areas of challenge in energy development include protecting natural resources in the Oil Patch Region, developing necessary infrastructure and preparing communities for changing dynamics.

FARM AND BUSINESS TRANSITION

As North Dakota ages, barriers to effectively enter and exit farming operations and other businesses need to be overcome to ensure a successful transition from one generation to the next.

LABOR FORCE

Recruiting and retaining an effective workforce across the state is a growing challenge. Adequate wages and benefits, and options for worker flexibility are two key factors. Retention of a young and vital workforce also requires affordable housing, good-quality child care and local community amenities.

NATURAL RESOURCES PROTECTION

Adequate water supplies, good-quality air and water, soil health and tree renovation are concerns. Being good stewards of the state's natural resources and using green technology, such as wind and other renewables, is recommended, as is expansion of local recycling programs.

REGULATIONS

Sustaining industry is viewed as difficult because of existing and proposed regulations in energy development and agriculture. One-size-fits-all federal agency regulations don't take into consideration variables that are unique to location. Oversight or flexibility at the state or local level is preferred.

RURAL COMMUNITIES

Keeping main streets viable through succession planning for businesses, economic development and updates to infrastructure are essential to sustain rural communities. Quality-of-life amenities are needed to attract and keep people in rural North Dakota.

Children, Families and Communities

NDSU EXTENSION SERVICE

Priority Issues of Concern to Community Forum Participants

HEALTH AND WELLNESS

Awareness education about chemical and other addictions, mental health issues and physical health is needed. Access to and quality of health care is a major concern, particularly in rural areas where medical personnel and emergency medical services volunteers are limited or not available. Also of concern is the increase of unhealthy lifestyles, and ongoing inaccessibility to nutritious foods and exercise programs or facilities.

CIVIC ENGAGEMENT

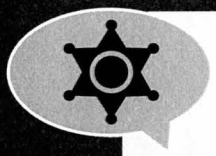
Gaps exist in participation and commitment at the local level. Positive changes in communities happen when adults and youth are engaged civically as volunteers and leaders. Successful community involvement and volunteerism hinges on the development of leadership skills and mentoring.

SUCCESSFUL FAMILIES

Many families are struggling. Families today are bombarded with competing priorities that are changing family dynamics. Frequently heard are that youth are overscheduled, changing cultures and technology are limiting family time, good-quality child care can't be found, and morals and ethics are on the decline. Financial security also is a major concern with an increase in poverty and the difficult challenges it causes.

INFRASTRUCTURE

Improvement to infrastructure is needed for the long-term development and resiliency of North Dakota. Housing, roads, child-care facilities, schools and public buildings need attention for safety reasons and because a lack of sufficient infrastructure impedes the recruitment and retention of the rural workforce.



CRIME AND SAFETY

Sex trafficking, drug and alcohol abuse, burglaries, sex offenders and an increase in crime are huge concerns, especially in western North Dakota. Ranking just as high, however, is Internet, social media and texting safety, and the increasing prevalence of cyber-bullying and sexting, especially among youth.

EDUCATION

Additional support is needed for pre-K through 12th-grade education systems, including more teachers and programs in many areas. Overcrowding of schools in some communities and declining enrollments in others is creating unique challenges, with discussion of regional collaboration more important than ever in some areas.

EXTENDING KNOWLEDGE. CHANGING LIVES.

NDSU Extension Service
Responds with Transformational Education

Extension's educational mission is to provide research-based information to improve the quality of life of North Dakotans. We achieve that outcome using a combination of four educational strategies, which are illustrated below. This matrix has two dimensions with process on one axis and content on the other.

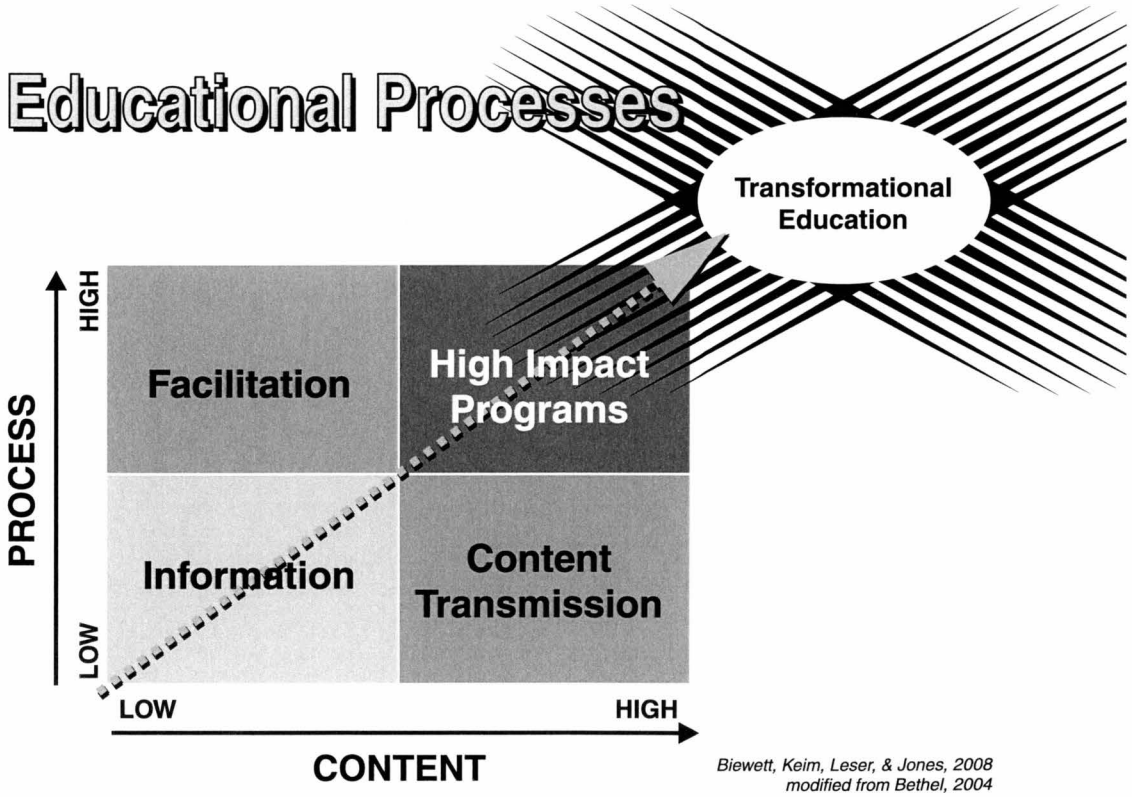
The **low process/low content** cell is identified as "information" or "service" and represents straightforward, non-problem solving items such as soil testing, insect identification, coordinating meetings, or conducting 4-H achievement days.

The **high process/low content** cell is called "facilitation" and represents an important function, especially in contentious group settings. Extension staff frequently provide facilitation, which is a highly valued element in many projects.

The **high content/low process** cell is identified as "content transmission." This function could also be labeled "technology transfer" and represents the dominant function of providing answers to people's problems.

Finally, the **high content/high process** cell called "high impact programs" is seen as the most powerful approach to transforming people as they struggle with solving problems. Engagement at this level is when Extension provides its strongest programs and impacts.

This educational model is **FOUNDATIONAL** to our mission as Extension specialists and agents.



Biewett, Keim, Leser, & Jones, 2008
modified from Bethel, 2004

Examples of NDSU Extension programs in the Transformational Education Model

HIGH IMPACT PROGRAMS (Transformational Education)

Design Your Succession Plan
North Dakota will experience a major turnover in farm management as boomers retire. Research indicates the main obstacle is not learning about financial/legal tools, but rather the communications among family members. During sessions key roadblocks and open communication methods are reviewed, and participants compile a file of critical documents that will prepare them to meet with financial/legal professionals.

Soil Health
Soil salinity reduces crop productivity on about 6 million acres of N.D. farmland. An educational program was developed by a team of Extension agents and specialists using Twitter, Facebook, webinars, videos, cafe talks, field demonstrations, conference meetings, soil pits and more. Participating farmers have formed "user" or "soil health support" groups to exchange ideas. The number of farmers adopting cover crops and soil salinity management practices increases each year.

Rural Leadership North Dakota
This 18 month leadership development program is designed for people interested in becoming strong leaders. Each seminar features a mix of personal development, leadership study and location-related subject matter. Graduates are strengthening the agricultural community, their local communities and the state of N.D.

4-H Beef Project
In this project, 4-H members can select either raising a breeding animal or a market animal. Youth first learn the basic knowledge about the animals and then put the information to practice as they raise the animal, keep financial and feeding records, and display their end product in an exhibit.

CONTENT TRANSMISSION

Agricultural Outlook and Ag Lender Conferences
Extension specialists provide the current situation, immediate outlook and long-range agricultural economic forecasts to ag lenders. Specialists provide trend analysis of domestic and foreign production, and markets for crops and livestock.

4-H Drone Program
Members gather in educational settings to learn about drones as part of National Science Day and other project opportunities, but they do not get the supplies to build a drone or practice the aeronautical concepts needed to actually fly the drone.

Lead Local
This is a one day training for aspiring, elected and appointed leaders to feel better prepared to serve on a board, council or committee. The training covers understanding personality types, managing conflict, ethical leadership, parliamentary procedure and organizational management.

FACILITATION

Nutrient Best Management Practices
An Extension soil fertility specialist guided a committee of state agencies and commodity interests to develop a series of best management practices to protect surface waters of North Dakota.

McKenzie County Suicide Prevention Task Force
A significant rise in suicide was noted by many groups in McKenzie County. The local FCS agent was asked to facilitate a community task force to address concerns regarding increased suicides in the county. The group developed a roadmap for the county to follow.

Bringing Together Landowners and Oil Companies
Extension staff convened two community meetings in Watford City and Williston that allowed for concerns from both sides of a difficult issue to be heard. Information was shared on reclamation processes, communication and negotiation strategies between parties.

INFORMATION

NDSU Pest Management App
An information content system combines select information from the Weed Control Guide, Fungicide Guide and Crop Insect Management Guide into an app for easy access by smart phone or tablet. Producer access to the app is available for free on Google Play and the iTunes App Store.

Public Speaking Basics
A web-based collection of public speaking information, pointers and tips help 4-H members prepare for public speaking contests.

NDSU EXTENSION SERVICE

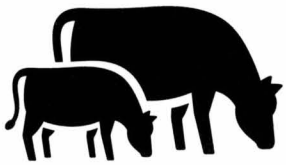
Extension helping North Dakota through **agriculture and natural resources**: A SNAPSHOT

Agriculture is critical to the economy of North Dakota and routinely accounts for approximately 30 percent ($9.1B in 2015) of all business activity in the state. Extension Agriculture and Natural Resources' (ANR) specialists and county based agents work to ensure that the latest research based information is available to all who seek it. These same specialists and agents continually probe and listen for agriculture's next "need", and develop innovative educational programs and field studies to meet those needs as fast as possible.

Approximately **15,000** **producers** attended Extension **farm bill education meetings**

90% of respondents used the **Extension-developed farm bill decision aid tool** when making their final decision with FSA; of these respondents, **83% used the decision tool for ALL** of their acres

6,100 **downloads** of the Extension **Pest Management App** since 2014, combining the Extension Plant Disease Management, Insect Control and Weed Control guides into a digital form



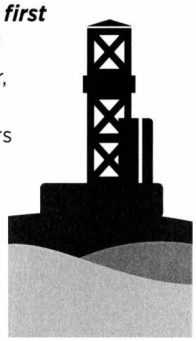
78% of respondents indicated a **$15,500** **increase in whole herd value** per operation after participation in the Extension **artificial insemination (AI) breeding education program**

92%

of responding **gardeners** plan to change their gardening practices after participating in the 2015 online **Spring Fever Garden Forums**

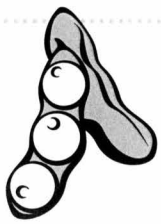
More than **150** landowners, community members and oil company representatives **increased their understanding** of their rights, the land reclamation process, and how to communicate and negotiate at Extension-led workshops

"This was long overdue. This should have happened when the oil industry first came to town."
Thomas Wheeler,
Vice-President
NW Land Owners
Association



Over **2,860** **samples processed** at the self-funded NDSU **Plant Diagnostic Laboratory** in 2015 resulted in **informed pesticide use decisions and economic savings** for North Dakotans

3X **more soil samples** were tested for **soybean cyst nematode (SCN)** since 2013 because of county Extension office test kit distribution



Estimated **$160** **per acre value** for SCN detection and management

Since 2014, **275** North Dakota families **evaluated 110 home garden varieties** resulting in over 1,000 analyzed trials

85% of responding families reported **more productive gardens**

76% **of children** in responding families who grew vegetables **improved their diets**

For more information on these and other impacts of the NDSU Extension Service, go to www.ag.ndsu.edu/extension or contact Charlie Stoltenow at 701.231.7171 or charles.stoltenow@ndsu.edu.

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NDSU EXTENSION SERVICE

Extension helping North Dakota through **4-H**: A SNAPSHOT

4-H prepares youth for success and the challenges that face North Dakota. It contributes to the development of new leaders, encourages innovation and entrepreneurship, teaches good stewardship, and helps youth acquire important life skills that prepare them to be career- and work-ready.

Current priorities include helping youth develop science interests, skills and abilities in the areas of agriculture, energy, environmental stewardship and technology. Youth learn the importance of food access, where their food comes from, and how to make healthful food choices and live healthy lives. They develop leadership skills and understand the importance of giving back to their communities and society.

Youth throughout the U.S., including North Dakota, participated in research to define and measure positive youth development (Source: Lerner and Lerner 2011). **Compared with their peers, youth involved in 4-H programs are:**

2X **more likely to participate in STEM activities**

98% of youth who attended GEAR-Tech-21 camp reported they would feel comfortable **teaching robotics** to others

75% of youth participants in the Drone Discovery/National Youth Science Day Experiment reported it made them **more interested in science**

2X **more likely to make healthier choices**

90% of youth participating in the Healthy Camp Challenge said they planned to continue to **practice healthful activities**

28 4-H clubs with **433** youth earned the designation of **Healthy 4-H Club** in 2016

2X **more likely to be civically active**

76% of youth attending **Civic U** reported an increased effort to allow everyone to have a voice in **decision making**

1,000+ **youth** demonstrate **leadership skills** through 4-H club offices, 4-H Ambassadors, or special projects

4X **more likely to give back to their communities**

777 **volunteer service hours** contributed to the state by North Dakota 4-H Ambassadors

49 **blankets made and donated** to the Project Linus program by youth attending the Extension Youth Conference

North Dakota 4-H Camp

record **558** youth at North Dakota 4-H Camp near Washburn

86% of campers reported learning **new skills**

89% of campers **made new friends**

59% of campers demonstrated **more independence**

50% of campers are **more willing to participate** in other activities

50% of campers improved in **problem solving**

19% 4-H enrollment increase in past five years

North Dakota 4-H in 2015-16

29,306 youth participants

6,247 enrolled 4-H members

1,007 youth in 4-H camping programs

2,534 volunteers

342 youth volunteers

For more information on these and other impacts of the NDSU Extension Service, go to www.ag.ndsu.edu/extension or contact Brad Cogdill at 701.231.7259 or brad.cogdill@ndsu.edu.

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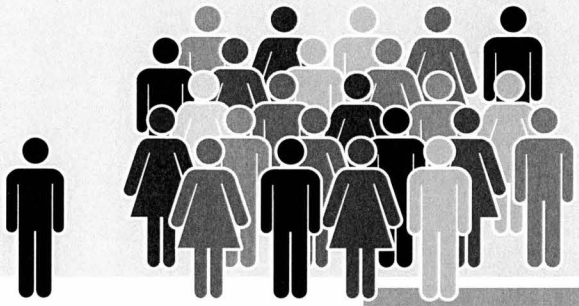
NDSU EXTENSION SERVICE

Extension helping North Dakota through **leadership and civic engagement**: A SNAPSHOT

NDSU Extension is working to meet the demand for leadership and civic engagement by helping new and existing leaders build their skills, confidence and willingness to lead through cohort groups and local training sessions. Here are some of those programs:



Lead Local is a training for aspiring, elected and appointed officials to help them feel better prepared to serve as an effective board, council or committee member.

283+ volunteer groups had members participate in Lead Local and become engaged civically in their communities

89% understand their board member tasks

77% feel comfortable handling conflict during a meeting

89% feel prepared to serve on a board, council or committee

Lead Local for Youth and **Civic U** give junior and senior high youth an opportunity to become familiar with civic responsibility, service and parliamentary procedure during day-long programs.

For more information on these and other impacts of the NDSU Extension Service, go to www.ag.ndsu.edu/extension/ccv or contact Lynette Flage at 701.231.7782 or lynette.flage@ndsu.edu.

Rural Leadership North Dakota (RLND) is an 18-month leadership development program designed to strengthen agriculture, local communities and the state for the future.

$4 million acquired by participants to complete local projects

19 participants have run for office; three were elected during the last election cycle

Stronger Economies Together (SET) enhances the capacity of people in rural communities to implement an economic development blueprint that builds on the region's emerging economic strengths. SET has:

- Strengthened **communication and partnerships** between health-care administrations
- Raised **$60,000+ in scholarship support** for students who will return to the region in a health-related career
- **Initiated critical conversations** regarding local foods and started groundwork to facilitate change for entrepreneurs at a federal level
- Cultivated **civically engaged youth** by encouraging participation in community planning and training them to be effective board, council or committee members
- Created a **unified tourism vision** for the region

(Funded and in collaboration with USDA Rural Development)

North Dakota Leadership by the numbers:

8,314
North Dakota nonprofit organizations and governmental units requiring people to serve in leadership roles

1 in 24
people age 18 and older needed to meet the leadership demand

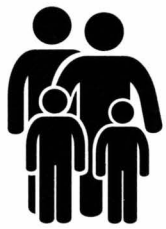
County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa@ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.

NDSU EXTENSION SERVICE

Extension helping North Dakota through **family and consumer sciences**: A SNAPSHOT

Health and wellness are among North Dakota's biggest challenges. An individual's quality of life can quickly change because of chronic disease, financial hardships and family issues. Preventing these life challenges in many cases can be done by identifying key factors and responding with targeted educational programs.

To help ensure the state has healthy people and communities, NDSU Extension's family and consumer sciences (FCS) programs focus on three key areas: personal and family finance, human development and family science, and nutrition, food safety and health. Programming in these areas prevent future problems and evidence indicates these programs are making a difference. As a result of FCS programs:



82%
of parents completing the Gearing Up for Kindergarten program rated the program as **very/extremely useful**

(Nearly half of all Kindergarten students are not prepared for success when entering school.)

79% of seniors in the Stepping On program **reduced falling hazards** at home

(Falls are the number one reason for elderly having to leave their homes.)

94%
of farmers/ranchers in the Design Your Succession Plan program **are prepared to meet with professional**

"It gave me a road map of what I want to do."
David Miller, Donnybrook-area producer

8.5% of all North Dakota households are food insecure. 14.5% of all North Dakota children live in poverty, 31.3% of school-enrolled children receive free and reduced meals and 15% of children are obese (source RWJF 2011). Extension's FCS programs are making a difference:

83%
of participants in the Expanded Food and Nutrition Education Program **improved at least one nutrition practice**

and

47%
improved at least one food safety practice

63%
of adults in the Family Nutrition Program **spend their food budget more wisely**

62%
of youth in On the Move to Better Health **increased their daily physical activity**

58%
of youth in On the Move to Better Health chose **more healthful snacks**

and

54% **ate more fruits and vegetables**

For more information on these and other impacts of the NDSU Extension Service, go to www.ag.ndsu.edu/extension or contact Deb Gebeke at 701.231.9688 or debra.gebeke@ndsu.edu.

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa@ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.

Main Research Station

North Dakota Agricultural Experiment Station

Agency Statutory Authority

ND Constitution Article XIX; North Dakota Century Code Chapter 4-05.1.

Agency Description

The North Dakota State University Main Research Station is located on the campus of the North Dakota State University of Agriculture and Applied Science. The station is the administrative location of the North Dakota Agricultural Experiment Station. The station conducts research and coordinates all research activities of the Agricultural Experiment Station. The purpose of the research is the development and dissemination of technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research provides for an enhancement of economic development, quality of life, sustainability of production, and protection of the environment. The Main Research Station keeps detailed records of all activities and publishes the information that will be of value to the residents of this state.

Agency Mission Statement

The agricultural experiment station shall develop and disseminate technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research must provide for an enhancement of the quality of life, sustainability of production, and protection of the environment.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

Agency Future Critical Issues

The NDAES continues to focus on developing its infrastructure to effectively conduct research needed by the agricultural sector in the state. Shortfalls occur in laboratory research facilities, especially those for plant-based field research laboratories at the Main Station. Cereal and grain quality laboratories, critical to maintaining and enhancing quality parameters for new crop varieties, are in desperate need of renovation/replacement. Developing separate laboratories for quality evaluation of novel experimental breeding lines also is required, due to the separation of transgenic material required by Federal policies on transgenic material. Laboratory space at the Main Station needs to be renovated/enhanced in order to carry out both applied and fundamental research on crops and livestock.

The Meat Science laboratory, built in the 1950's and last renovated in the 1970's, is in very poor condition. A new facility is needed to allow our scientists to conduct cutting-edge research in meat quality, meat science, muscle biology, and physiology. Such a facility would enhance our ability to

carry out much-needed research for the livestock sector on end-use quality traits. As with other newer facilities, such as the new agronomy labs at the RECs, as well as the AES greenhouse and the animal research complex at the Main Station, a new Meat Science laboratory would have strong positive impacts on the ability of NDAES scientists to carry out high quality research in these state-of-the-art facilities.

New technologies in crop development will provide novel methodology to incorporate disease, insect, and environmental stress resistance, thereby improving the overall adaptation of our many crops grown in the state. Technology is changing almost daily, and we are developing the appropriate public-private partnerships with technology providers to ensure that our scientists have access to the best technologies available for their research programs.

Our scientists travel farther each year in the state to conduct site-specific research to control wheat and barley scab (an ongoing problem) and other important yield-limiting diseases of crop commodities grown in the state. Addressing new issues, such as wheat stem sawfly, new races of existing diseases for which there is little resistance, and identifying and responding to livestock producer concerns over outbreaks of zoonotic diseases are fundamental to the mission of the NDAES. The NDAES has insufficient laboratory space to meet the needs of 21st Century agriculture.

North Dakota is becoming increasingly urban, and urban populations require some products and services that are different than those needed by livestock and crop producers. Continual efforts to improve horticultural research are occurring, and NDAES is actively evaluating new research and demonstration programs in this area. Enhanced efforts in areas including, but not limited to, food security, food safety, natural resources management, and new bioproducts (including fuel) need to continue in order to allow NDAES to serve this segment of agriculture. Similarly, a systems approach (from conception to consumption) for livestock research has been implemented to better serve this important and growing sector of North Dakota agriculture.

Our strength is in our scientists and staff, but they are too few to cover all of the critical issues facing North Dakota agriculture, and the lack of adequate numbers precludes important scientific achievement. Reductions in numbers of scientists to comply with existing state revenues will further hamper our ability to provide unbiased, science-based information to our stakeholders and to one of the pillars of the state's economy.

North Dakota Agricultural Experiment Station

2015-2017 Legislation that Included Reporting Requirements to 2017 Appropriation Committees

HB1020 (NDSU Research & Extension, & Agronomy Seed Farm)

SECTION 2. ONE-TIME FUNDING — EFFECT ON BASE BUDGET — REPORT TO SIXTY-FIFTH LEGISLATIVE ASSEMBLY. The following amounts reflect the one-time funding items approved by the sixty-third legislative assembly for ... the 2015-17 one-time funding items included in the appropriation in section 1 of this Act:

One-Time Funding Description
Agronomy laboratories - $150,000
Rural leadership project - $150,000
Dust issues technical support - $100,000
Seed cleaning plants - $4,500,000
Veterinary diagnostics laboratory - $18,000,000 (SIIF funds)
Souris River flooding - $72,500

The 2015-17 one-time funding amounts are not a part of the entity's base budget for the 2017-19 biennium. The main research center shall report to the appropriations committees of the sixty-fifth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2015, and ending June 30, 2017.

- Agronomy laboratories (CGREC) - $550,000
  Status: $400,000 received GF carryover from 2013-15
  $150,000 OF authorized 2015-17
  Construction underway - estimated completion Spring of 2017
  (See Central Grasslands REC forage agronomy lab facilities page 29)

- Rural leadership project
  Status: $150,000 received for leadership program. Includes the following leadership projects:

  1) Igniting Legendary Leaders Conference – April 27-28, 2016
     - 120 individuals from North Dakota attended.
     - 17 speakers shared stories of how they "ignited" an idea and turned it into action
     - Key points for conference attendees included:
       - Be more involved in your community.
       - Jump in and get involved.
       - Rethink current processes for engaging with others.
       - Think outside the box and share your story.

  2) Inspiring Legendary Leaders Conference – April 11, 2017
     - Speakers will focus on leadership stories about how to take action on ideas you are passionate about.
     - The conference will be held at the Heritage Center in Bismarck.
     - Ignite speakers will include individuals who are working on projects in their community.

- Dust issues technical support
  Status: $100,000 operating support received; allocated. Extensive data gathered summer of 2016 on soil disturbance and dust from truck traffic. Data is currently being analyzed.

- Seed Cleaning
  Status: Seed cleaning projects underway at Carrington REC and North Central REC

  Carrington REC ($750,000 General Fund, $1,500,000 Other Fund authorization)
  A 40ft x 75ft with 30ft sidewall building has been constructed to house seed cleaning equipment. The floor is cement at a minimum depth of 7 inches. Equipment bid out and on order include air screen, indent separator, and gravity table. Additional items in the process of requesting bids include seed transfer equipment (grain legs; belt, vibratory and auger conveyors), elevated stands, and platform for mounting equipment.

  North Central REC ($750,000 General Fund, $1,500,000 Other Fund authorization)
  Fundraising is underway and a site is being selected for a seed cleaning facility. Equipment expected to be purchased by June 2017, with construction complete by fall 2017.

- Souris River flooding - $72,500
  Status: (See Souris river research report page 43)

- Veterinary Diagnostics Laboratory - $18,000,000 (SIIF funds)
  Status: (See pages 27-28)

SECTION 5 APPROPRIATION — LANGDON RESEARCH EXTENSION CENTER. There is appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, the sum of $175,000, and from special funds, the sum of $175,000, or so much of the sum as may be necessary, to the Langdon research extension center for the purpose of purchasing the real property described in section 4 of this Act, for the period beginning with the effective date of this section, and ending June 30, 2017. The funding provided in this section is considered a one-time funding item.

Status: The land was purchased for $350,000

SECTION 11 DICKINSON RESEARCH EXTENSION CENTER — MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2015-17 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2015, and ending June 30, 2017.

Status: Oil Revenue received July 1, 2015 to November 30, 2016 - $123,819

SECTION 12 WILLISTON RESEARCH EXTENSION CENTER — MINERAL RIGHTS INCOME. The Williston research extension center shall report to the sixty-fifth legislative assembly on the amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2013, and ending June 30, 2015 and the biennium beginning July 1, 2015, and ending June 30, 2017.

Status: July 1, 2013 to June 30, 2015 - Amounts received $491,230; Amounts spent $0
July 1, 2015 to November 30, 2016 - Amounts received $132,048; Amounts spent $571,788

SECTION 19. EXEMPTION. The amounts appropriated for the agronomy laboratories contained in subdivision 4 of section 1 of chapter 51 of the 2013 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2015, and ending June 30, 2017.

Agronomy Lab Carryover Status

Project	GF carryover	Amount spend 12/31/2016
Langdon	$33,457.86	$33,457.86
Carrington	$101,024.58	$101,024.58
Central Grasslands	$365,654.33	$365,654.33

North Dakota Agricultural Experiment Station

Update of NDAES Initiatives Funded in 2013-2015 Budget

- **Costs to continue FY2013 salary increases**
  $1,142,646 received and allocated July 1, 2013

- **Crop initiative-Enhancing crop development and protection efforts**
  $1,815,000 received
  - $1,160,000 Increased operating support: barley, corn, pulse, soybean, wheat, canola, cereal diseases, dry bean and pulse diseases - Main Station, crop pathology - CREC, variety testing - LREC, dryland crop improvement - DREC; allocated
  - $355,000 salary and fringe benefits, 2.0 FTE, Nematologist and technician; hired at Main Station
  - $300,000 NDAWN support
    - $120,000 salary and fringe benefits, 1.0 FTE technical support; hired
    - $80,000 increased operating ; allocated
    - $100,000 software and hardware; allocated

- **Enhancing research capacities at RECs**
  $1,210,000 received
  - $560,000 operating support - LREC, CGREC, NCREC, WREC, HREC, CREC, DREC; allocated
  - $200,000 salary and fringe benefits, 1.0 FTE to focus on chemical and cultural control of weeds and plant pathogens in western ND - HREC; hired
  - $450,000 salary and fringe benefits, 3.0 FTE technical support - CGREC, NCREC, CREC; hired

- **Agronomy laboratories**
  $5,925,000 received for the following:
  - CREC - $2,500,000
  - HREC - $1,800,000
  - LREC - $1,225,000
  - CGREC - $400,000

  Construction completed for Carrington, Hettinger, and Langdon

  Central Grasslands project carryover to FY 2015-17
  $400,000 received:
  - CGREC - ($400k General, $150k Other)

  Construction underway - estimated completion Spring of 2017

- **Equipment — vet diagnostic lab**
  $400,000 received
  The NDSU Veterinary Diagnostic Lab purchased a liquid chromatography/mass spectrometer to expand forage testing for harmful mycotoxins occurring in moldy storage feedstuffs, additional spectrophotometers to expand livestock water testing for potentially toxic chemicals, a stereo microscope to identify harmful blue-green algae in livestock water samples, and a steam sterilizer to maintain uniform sterile testing requirements.

- **Permanent oil tax trust fund (Dickinson REC)**
  $800,000 received and allocated

- **Grasslands recovery: Souris river flooding research funding**
  $82,000 received; Post doc hired

- **Animal science position**
  $140,000 received; hired

Additional Item

The RECs received $14,500 (DREC $4,750, HREC $1,750, NCREC $3,750, WREC $4,250) from the general fund pool appropriated to the Office of Management and Budget (OMB) for needs resulting from energy development. These amounts were paid to employees at the previously listed RECs.

North Dakota Agricultural Experiment Station

Update of NDAES Initiatives Funded in 2015-2017 Budget

SBARE ranked/unranked initiatives:

- **Costs to continue FY2015 salary increases**
  $741,779 received and allocated July 1, 2015

- **Bioinformatics**
  $800,000 received; salary and fringe benefits, 2.0 FTE bioinformaticists; hired

- **Precision ag**
  $600,000 received; operating support — Internal grant committee formed; 25 proposals totaling $1.8M submitted; funding allocated to 9 projects (see precision ag initiative impacts preliminary results page 41)

- **Enhancing research infrastructure for greater research efficiencies and effectiveness**
  $1,100,000 received operating support- revolving equipment fund; allocated

- **Enhancing research capacities at RECs**
  $670,000 received
  - $130,000 salary and fringe benefits , 1.0 FTE Animal Science technical support staff — HREC; position descriptions being developed
  - $330,000 salary and fringe benefits , 2.0 FTE plant pathologist and technical support — WREC; hired
  - $210,000 operating support — LREC, CGREC, NCREC, WREC, HREC, CREC, DREC; allocated

Capital and one-time funding:

- **Veterinary diagnostic lab replacement**
  $18,000,000 received; Construction underway — estimated completion Summer of 2017

- **Seed cleaning facilities**
  $4,500,000 received ($1.5M General, $3M Other)
  - Carrington REC ($750,000 General Fund, $1,500,000 Other Fund authorization)
    A 40ft x 75ft with 30ft sidewall building has been constructed to house seed cleaning equipment. The floor is cement at a minimum depth of 7 inches. Equipment bid out and on order include air screen, indent separator, and gravity table. Additional items in the process of requesting bids include seed transfer equipment (grain legs; belt, vibratory and auger conveyors), elevated stands, and platform for mounting equipment.
  - North Central REC ($750,000 General Fund, $1,500,000 Other Fund authorization)
    Fundraising is underway and a site is being selected for a seed cleaning facility. Equipment expected to be purchase by June 2017, with construction complete by fall 2017.

- **Dust Issues technical support**

  $100,000 operating support received; allocated. Extensive data gathered summer of 2016 on soil disturbance and dust from truck traffic. Data is currently being analyzed.

- **Grasslands recovery: Souris river flooding research funding**

  $72,500 received and allocated
  (See Souris river research report page 43)

- **Land purchase — LREC**

  $350,000 received ($175k General, $175k Other); purchased

- **Leadership program**

  Status: $150,000 received for leadership program. Includes the following leadership projects:

  1) Igniting Legendary Leaders Conference - April 27-28, 2016
     - 120 individuals from North Dakota attended.
     - 17 speakers shared stories of how they "ignited" an idea and turned it into action
     - Key points for conference attendees included:
       - Be more involved in your community.
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       - Rethink current processes for engaging with others.
       - Think outside the box and share your story.

  2) Inspiring Legendary Leaders Conference - April 11, 2017
     - Speakers will focus on leadership stories about how to take action on ideas you are passionate about.
     - The conference will be held at the Heritage Center in Bismarck.
     - Ignite speakers will include individuals who are working on projects in their community.

Capital and one-time funding:

- **Agronomy laboratories**

  $400,000 received
  - CGREC ($400k General, $150k Other)

  Construction underway, estimated completion Spring 2017.

North Dakota Agricultural Experiment Station

Veterinary Diagnostic Lab

FACILITIES

A new and modern facility to house the veterinary diagnostic laboratory (VDL) should be a minimum of 20,000 square feet and be designed to allow cost effective addition of laboratory space, as needed, to meet future testing demands (i.e. meat testing, analysis of feed and animal samplesfor petroleum residues, international export testing). The facility should include adequate laboratory and office space for sample receiving, toxicology, serology, information technology, administration, clinical pathology, gross pathology, histology, quality assurance, bacteriology/mycology, virology and molecular diagnostic sections.

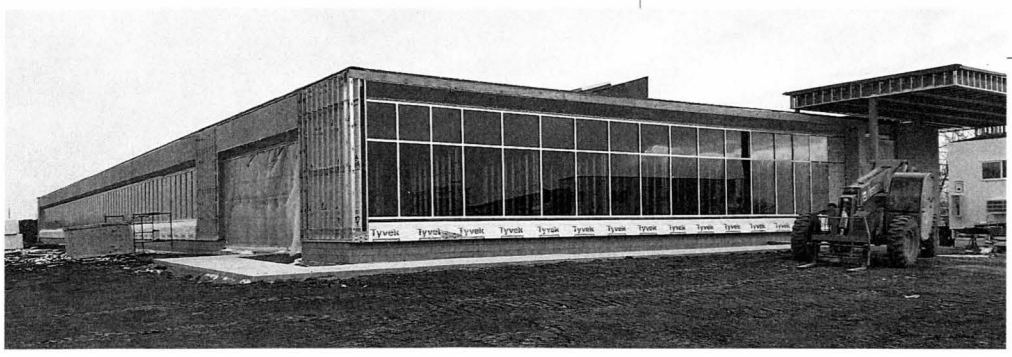
This was SBARE's #1 ranked Capital Project for the 2015-17 Legislative Session. The Legislature provided $18,000,000 from the Strategic Investment and Improvements Fund (SIIF).

Timeline:

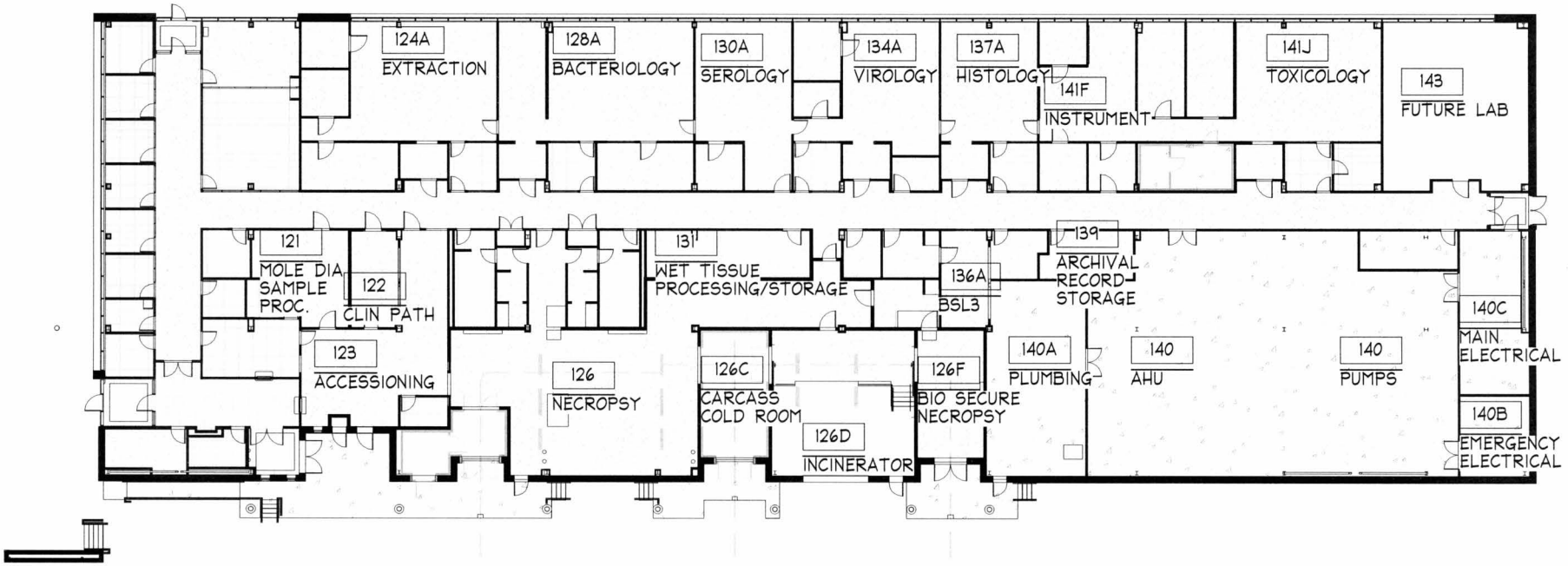
- April 2015 — HB 1020 Passed, including $18,000,000 for new VDL, which is declared to be an emergency measure
- Summer 2015 — Architects are interviewed and hired
- Fall 2015 - Jan. 2016 — Architects design building
- January 2016 — Project is bid, low bids accepted
- Spring 2016 — Construction begins
- November 2016 — Building is enclosed
- Summer 2017 — estimated completion

Architectural Design:

November 2016 view:



Floor plan of the veterinary diagnostic laboratory



Central Grasslands REC Forage Agronomy Lab

FACILITIES

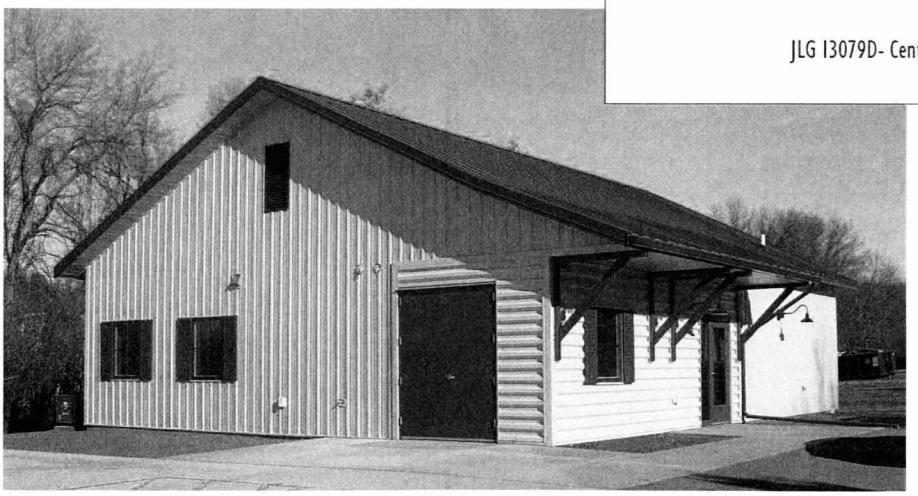
Central Grasslands REC Forage Agronomy Lab
$550,000 Project ($400,000 GF, $150,000 OF)
Construction underway, estimated completion Spring 2017.

Timeline:

- May 2013 — Legislature authorized funding as requested $400,000 in SB 2020, General Funds
- Fall/Winter 2013 — Project design
- Feb. 2014 — Project was bid and came in significantly over budget
- Spring 2015 — Additional Authorization of $150,000 in Other Funds included in HB 1020
- Fall 2015 — Addition design work completed
- Feb. 2016 — Successful bid opening
- Spring 2016 — Construction began
- Spring 2017 — Estimated completion

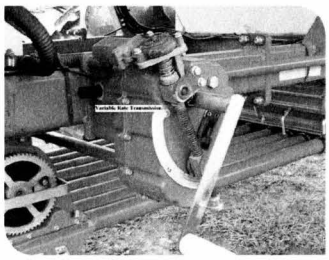
Architectural Design:

November 2016 view:



NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

2017-19 Program Initiatives as Ranked by SBARE



1 Restore Budget to 2015-17 Original Appropriation

Need: Restoration of 10 percent budget cut:

Branch RECs	$1,979,845
Main Station	$5,734,511
Total AES	$7,714,356

2 Oakes Irrigation Site

Situation: The Oakes Irrigation Site has been funded through the Garrison Conservancy District. This funding no longer will be available in the near future (as committed funding) due to reallocation to other projects. The facility has been supervised by the Carrington REC; salaries, operating and equipment are entirely grant supported. Stakeholders in the region have made commitments to providing support for the center; one commitment was a gift of 40 acres to increase the research footprint. State resources would be used for operating support. The facility conducts research on irrigated, high-value crops for the southeastern region of North Dakota.

Need: Operating - $600,000

3 Enhancing Research Infrastructure for Greater Research Efficiencies and Effectiveness

Situation: Graduate student funding (Increase pool of funds for additional graduate research assistantships) Graduate research assistantships are critical to ongoing, vibrant research programs. These students are hard-working, intelligent and driven to succeed. They carry out research under the supervision of scientists at the Main Station and RECs, and these research topics broaden the overall research agenda of AES projects. The students work for approved research programs in the AES, attend classes to improve their understanding of their respective disciplines and carry out their individual research topics (all part of educating and training the next generation of scientists). Access to a small pool of funding to increase the number of students in Agriculture has been very successful, not only in terms of enhancing research activities but also by leveraging funds from other sources to increase the number of students. In 2011-13, the AES was provided funds for 20 students; departments and individual scientists were able to leverage these funds to increase the number of students to 36. Of these 36 students, 33 were from the state (23) or region (10). Because of the importance of agriculture in North Dakota, jobs are plentiful and many students will remain in the state upon graduation. This request is to provide funds for an additional 20 research assistantships.

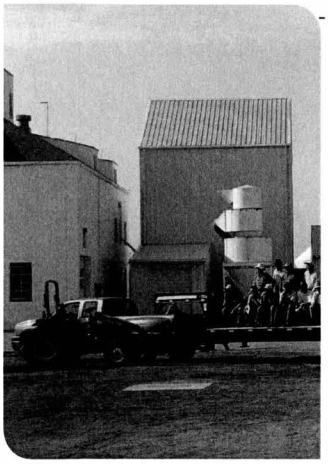
Need: Graduate Research Assistantships (20 @ $20,000/year) - $800,000

Situation: Operating Funds

The NDAES received $600,000 last biennium for precision agriculture research. These funds were used as a grants pool for research/Extension programs, with scientists in the AES and specialists in Extension eligible for funding. The call for proposals resulted in 25 proposals addressing issues in precision ag ranging from economics, crops issues (management, pest control) and livestock production to engineering. Of these proposals, which totaled $1.8 million in requests, nine were funded. Increasing the total funding available through the competitive program will allow more projects to be carried out in this important and rapidly changing area of agriculture. The activity and output of important programs such as the Soil Health Initiative, wheat improvement, pulse pathology and weed-resistance research could benefit from increased operating funds. Impacts on soil by the oil industry in western North Dakota have been reported. Many of these may have long-term impacts on land quality, which may reduce agricultural productivity. Brine spills and soil compaction have reduced land quality and crop productivity in western North Dakota. The Center for Ag Policy and Trade Studies, which is the premier agricultural policy center in the region, evaluates state, domestic and international policies that affect demand-supply of grains and net farm income. Identifying ways to enhance operations support for all programs in the AES would address increased costs of materials, supplies and small equipment, and allow scientists to increase their scope of work.

Need: Operating support for precision ag - $600,000
- Soil Health Initiative - $80,000
- Wheat improvement - $80,000
- Pulse pathology - $50,000
- Weed resistance research - $50,000
- Land reclamation and soil restoration due to oil impacts - $80,000
- Center for Ag Policy and Trade Studies (CAPTS) - $80,000

2017-19 Program Initiatives as Ranked by SBARE (continued)



4 Enhancing Research Infrastructure at RECs

Situation: REC Operating support - Operating costs for research activities continue to increase. At the RECs, despite very high levels of funding obtained by scientists through grants, other costs, such as state motor pool costs, new project development, equipment repairs and supplies, and new issues facing the state's agricultural sector, continue to impact their ability to carry out their mission to serve their area of the state. A portion of the requested amount for increased operating funds for the RECs was authorized in the 2015-17 session and is greatly appreciated. This request is to provide the remainder of the requested amount.

Need: Operating funds (7 @ $30,000/biennium) - $210,000

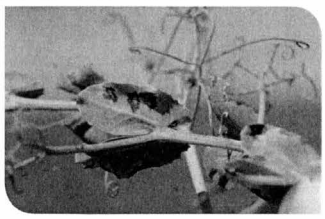
Situation: The salary and fringe benefits of the director's position at the North Central Research Extension Center were paid equally by the center (AES) and Extension. Upon the retirement of the previous director, the Extension Service reduced its salary support to that (5 percent) for other REC directors. This results in a shortfall of salary and fringe benefits funds for the next director. The request is to stabilize the funding line for this important position.

Need: Stabilizing salary line (and fringe benefits) for NCREC director - $95,000

5 Enhancing Research Capacity in Plant Virology and Pulse Pathology

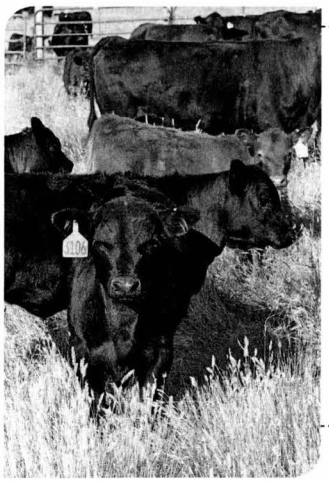
Situation: Virologist - North Dakota has a highly diverse crop agriculture sector, producing more than 40 crop commodities and leading the nation in the production of 15 commodities. Many of these crops are impacted by diseases caused by plant viruses. Also, recent reports of new (for this area) virus diseases have occurred. Cereals, pulse crops and other broad-leafed crops such as soybean, potato and sugar beet can have virus problems. Potato and pulses, in particular, have a number of virus diseases that are present in the state. Efforts to study the cause, spread and elimination of virus diseases at NDSU have been hampered by the lack of a dedicated virologist position that can focus on these unique diseases. Viruses can be spread by insect pests; increased numbers of insect vectors can spread the virus disease rapidly. Working with entomologists, geneticists and plant breeders, the virologist position will fill a critical void in reducing damage caused by disease.

Need: Scientist (1.0 FTE) - $355,000; Operating - $200,000; TOTAL - $555,000



Situation: Pulse Pathology Technical Support Staff - The Pulse Pathology program is responsible for carrying out research and finding solutions to disease problems affecting pulse crops. The program focuses on a wide range of diseases affecting dry edible bean, pea, lentil and chickpea. Each of these crops is affected by different diseases, and many diseases for each crop are of economic concern to growers in North Dakota. The wide breadth of this program is in need of additional technical support.

Need: Pulse Crop Technical Support (1.0 FTE, Main Station) - $180,000



6 Harnessing the Microbiome for Improved Plant, Animal and Soil Health

Situation: Microbiome Initiative (operating support) – The microbiome is the ecological community of organisms that can be beneficial (symbiotic), neutral (commensalistic) or antagonistic (pathogenic) to other organisms, including humans, animals and plants. Microbiome research is most advanced in humans – impacts on human health and phenotype have been reported widely – and the genomic interactions of microbes in the body and human DNA play a role in a wide number of phenotypic and human health-related issues, including diabetes, obesity and cardiac issues. Similarly, plants and animals have their respective microbiomes that affect health and productivity of the higher organism. Understanding the microbiome will aid in improved nutrition, and the disease and environmental impact of animal and crop production, ultimately benefitting human health. In addition, understanding the soil microbiome may allow for improving and maintaining soil health.

Need: Operating for improving microbiome in plant, animals, food and soils - $600,000

NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa.ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.

DETAILS:
2017-2019 Program Initiatives as Ranked by SBARE

North Dakota Agricultural Experiment Station

1. Restore Budget to 2015-2017 Original Appropriation

2. Oakes Irrigation Site

Operating **$600,000**

The Oakes Irrigation Site has been funded through the Garrison Conservancy District. This funding no longer will be available in the near future (as committed funding) due to reallocation to other projects. The facility has been supervised by the Carrington REC; salaries, operating and equipment are entirely grant supported. Stakeholders in the region have made commitments to providing support for the center; one commitment was a gift of 40 acres to increase the research footprint. State resources would be used for operating support. The facility conducts research on irrigated, high-value crops for the southeastern region of North Dakota.

3. Enhancing Research Infrastructure for Greater Research Efficiencies and Effectiveness

Graduate research assistantships (20 @ $20,000/year) **$800,000**

Graduate student funding (Increase pool of funds for additional graduate research assistantships) — Graduate research assistantships are critical to ongoing, vibrant research programs. These students are hard-working, intelligent and driven to succeed. They carry out research under the supervision of scientists at the Main Station and RECs, and these research topics broaden the overall research agenda of AES projects. The students work for approved research programs in the AES, attend classes to improve their understanding of their respective disciplines and carry out their individual research topics (all part of educating and training the next generation of scientists). Access to a small pool of funding to increase the number of students in Agriculture has been very successful, not only in terms of enhancing research activities but also by leveraging funds from other sources to increase the number of students. In 2011-13, the AES was provided funds for 20 students; departments and individual scientists were able to leverage these funds to increase the number of students to 36. Of these 36 students, 33 were from the state (23) or region (10). Because of the importance of agriculture in North Dakota, jobs are plentiful and many students will remain in the state upon graduation. This request is to provide funds for an additional 20 research assistantships.

Operating support for precision ag	**$600,000**
Soil Health Initiative	$80,000
Wheat improvement	$80,000
Pulse pathology	$50,000
Weed resistance research	$50,000
Land reclamation and soil restoration due to oil impacts	$80,000
Center for Ag Policy and Trade Studies (CAPTS)	$80,000

Operating Funds — The NDAES received $600,000 last biennium for precision agriculture research. These funds were used as a grants pool for research/Extension programs, with scientists in the AES and specialists in Extension eligible for funding. The call for proposals resulted in 25 proposals addressing issues in precision ag ranging from economics, crops issues (management, pest control) and livestock production to engineering. Of these proposals, which

totaled $1.8 million in requests, nine were funded. Increasing the total funding available through the competitive program will allow more projects to be carried out in this important and rapidly changing area of agriculture. The activity and output of important programs such as the Soil Health Initiative, wheat improvement, pulse pathology and weed-resistance research could benefit from increased operating funds. Impacts on soil by the oil industry in western North Dakota have been reported. Many of these may have long-term impacts on land quality, which may reduce agricultural productivity. Brine spills and soil compaction have reduced land quality and crop productivity in western North Dakota. The Center for Ag Policy and Trade Studies, which is the premier agricultural policy center in the region, evaluates state, domestic and international policies that affect demand-supply of grains and net farm income. Identifying ways to enhance operations support for all programs in the AES would address increased costs of materials, supplies and small equipment, and allow scientists to increase their scope of work.

4. Enhancing Research Infrastructure at RECs

Operating funds (7 @ $30,000/biennium) **$210,000**

REC Operating support — Operating costs for research activities continue to increase. At the RECs, despite very high levels of funding obtained by scientists through grants, other costs, such as state motor pool costs, new project development, equipment repairs and supplies, and new issues facing the state's agricultural sector, continue to impact their ability to carry out their mission to serve their area of the state. A portion of the requested amount for increased operating funds for the RECs was authorized in the 2015-17 session and is greatly appreciated. This request is to provide the remainder of the requested amount.

Stabilizing salary line (and fringe benefits) for NCREC director **$95,000**

The salary and fringe benefits of the director's position at the North Central Research Extension Center were paid equally by the center (AES) and Extension. Upon the retirement of the previous director, the Extension Service reduced its salary support to that (5 percent) for other REC directors. This results in a shortfall of salary and fringe benefits funds for the next director. The request is to stabilize the funding line for this important position.

5. Enhancing Research Capacity in Plant Virology and Pulse Pathology

1.0 FTE Virologist	**$355,000**
Operating	**$200,000**
Total	$555,000

Virologist — North Dakota has a highly diverse crop agriculture sector, producing more than 40 crop commodities and leading the nation in the production of 15 commodities. Many of these crops are impacted by diseases caused by plant viruses. Also, recent reports of new (for this area) virus diseases have occurred. Cereals, pulse crops and other broad-leafed crops such as soybean, potato and sugar beet can have virus problems. Potato and pulses, in particular, have a number of virus diseases that are present in the state. Efforts to study the cause, spread and elimination of virus diseases at NDSU have been hampered by the lack of a dedicated virologist position that can focus on these unique diseases. Viruses can be spread by insect pests; increased numbers of insect vectors can spread the virus disease rapidly. Working with entomologists, geneticists and plant breeders, the virologist position will fill a critical void in reducing damage caused by disease.

1.0 FTE Pulse pathology technical support staff **$180,000**

Pulse Pathology Technical Support Staff — The Pulse Pathology program is responsible for carrying out research and finding solutions to disease problems affecting pulse crops. The program focuses on a wide range of diseases affecting dry edible bean, pea, lentil and chickpea. Each of these crops is affected by different diseases, and many diseases for each crop are of economic concern to growers in North Dakota. The wide breadth of this program is in need of additional technical support.

6. Harnessing the Microbiome for Improved Plant, Animal and Soil Health

Operating **$600,000**

The microbiome is the ecological community of organisms that can be beneficial (symbiotic), neutral (commensalistic) or antagonistic (pathogenic) to other organisms, including humans, animals and plants. Microbiome research is most advanced in humans – impacts on human health and phenotype have been reported widely – and the genomic interactions of microbes in the body and human DNA play a role in a wide number of phenotypic and human health-related issues, including diabetes, obesity and cardiac issues. Similarly, plants and animals have their respective microbiomes that affect health and productivity of the higher organism. Understanding the microbiome will aid in improved nutrition, and the disease and environmental impact of animal and crop production, ultimately benefitting human health. In addition, understanding the soil microbiome may allow for improving and maintaining soil health.

2015-2017 IMPACTS

- Artificial insemination (AI) offers beef producers the potential to make genetic progress within their herd at a fraction of the cost it would require to purchase herd bulls of equivalent genetic value. Research conducted by NDAES scientists indicates that the value of replacement heifers can be increased by over $500 per head through the use of artificial insemination. If an additional 10% of the 375,000 replacement heifers maintained in North Dakota were generated from AI breeding, the net increase in their value would be over $18 million annually.
- Research efforts on the nutrient requirements for beef cattle have impacts on production and economic efficiencies for all beef cattle in North Dakota. The product of this NDAES research was the text, '2016 Nutrient Requirements of Beef Cattle'. This text is utilized around the world by livestock producers, nutritionists, and scientists to more accurately formulate beef cattle diets. Conservative estimates in North Dakota indicate that a 5% improvement in feed efficiency by using more precise nutrient recommendations could save North Dakota beef cattle producers over $25 million in feed costs annually.
- Research related to the interactions between reproduction and nutrition, and research concerning regulation of ovarian, uterine, and placental functions in non-pregnant and pregnant domestic animals, have identified selected mechanisms critical for reproductive efficiency that may ultimately improve fertility and embryo survival. A 1% increase in pregnancy rate in North Dakota livestock would potentially result in more than $10 million in increased revenue for North Dakota ranchers annually.
- North Dakota currently operates with four active mines which produce approximately 32 million tons of coal annually. Reclamation is required on nearly 2,000 acres of land each year to begin the 10-year bond release process. NDAES scientists are working with industry to improve both reclamation practices using native plant species and efficiencies, as well as reduce soil compaction. The average cost to reclaim is $60,000/ac. or $120 million per year.
- Soil health is of primary concern for farmers and ranchers in the state. Salinity or sodicity may affect nearly 25% of North Dakota's soils to some degree. Nearly 2 million acres in the Red River Valley are impacted by salt contents that reduce yields significantly. NDAES scientists, in collaboration with Extension and many commodity groups, are identifying ways to reduce the negative impacts of salinity and sodicity in our northern Plains production area. These programs have helped producers adopt management practices that help improve long-term soil productivity, such as managing soil salinity.

NDAES scientists, in collaboration with Extension and many commodity groups, are identifying ways to reduce the negative impacts of salinity and sodicity in our northern Plains production area.

- Fertilizer is one of the highest input costs that farmers require each year. Proper use and application is critical to ensure maximum yield while maintaining the environment. NDAES scientists are identifying methods to optimize nutrient use efficiencies for various commodities (e.g. wheat, corn, sugarbeet, specialty crops, wheat, soybeans) for our extreme northern production system. Based on fertilizer tonnage sales in ND, it is estimated that improving fertilizer efficiency by just 5% would save ND farmers $25 million annually.
- Cooperative work with wheat, barley, soybean, potato, and other breeding programs at NDSU has resulted in the development of disease-resistant germplasm and varieties for North Dakota. The genetic resistance in accepted cultivars grown on wide acreage saves producers tens to hundreds of millions of dollars in disease losses and in fungicide applications each year.

Cooperative work with wheat, barley, soybean, potato, and other breeding programs at NDSU has resulted in the development of disease-resistant germplasm and varieties for North Dakota.

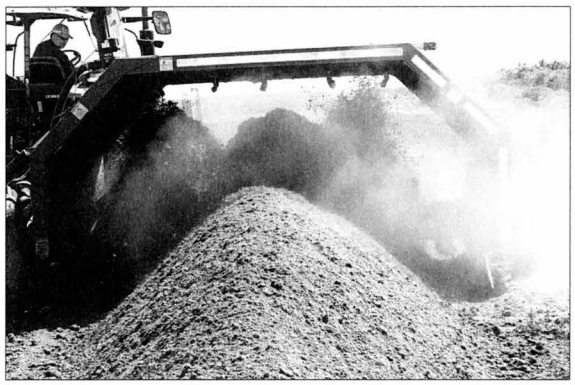
- For crops or situations where fungicides are a necessary disease management tool, our research helps determine optimum timing for and rates of fungicide applications and helps identify new fungicide chemistries to control diseases. This work also assists North Dakota in obtaining Section 18 emergency exemptions that increases fungicide options for producers. Proper and judicial use of fungicides has saved North Dakota producers tens of millions of dollars per year through disease control.
- Disease forecasting systems that were developed, maintained, improved, and/or made accessible to the public by NDAES scientists are important tools for managing a variety of important diseases on several crops such as wheat, barley, sugarbeet, potato, and canola. These systems help producers make "spray or no spray" decisions with regards to fungicide applications throughout the growing season. The timely application of fungicides is necessary to achieve disease control when and where needed. Equally important, the decision to not apply fungicides when they are not needed saves producers significant input costs.
- NDAES microbiologists are helping producers to meet requirements of the Food Safety Modernization Act (FSMA). As an example, FSMA requires flaxseed processors to implement controls to reduce the levels of microbial pathogens. Research has shown that treatment with steam at sub-atmospheric pressures reduces the numbers of bacterial pathogens on flaxseed without affecting product quality, and can therefore be used by producers to help meet FSMA requirements. North Dakota produces 95% of the U.S. flaxseed with an estimated value of between $50 and $80 million.
- The use of legume cover crops planted after wheat reduces the need for nitrogen (N) fertilization in corn following in the rotation by 100 lbs N/acre/year. With an N credit of only 50 lbs N/acre, the economic value of reducing the fertilization of the 2.66 million acres of corn in North Dakota is $39.8 million per year.
- NDAES agronomists found that canola grown in narrower row widths generated higher grow revenue per acre (nearly $100/acre) than when grown in conventional row widths. If applied to all acres of canola sown in North Dakota (1,400,000 acres in 2015), the economic impact of proper row spacing would be $140 million.
- Research carried out on herbicide-resistant weeds identified genes and mutations responsible for resistance. Based on their results, NDAES scientists have identified strategies to minimize the occurrence of herbicide-resistant weeds, which are estimated to cost $10 to $40 more per acre to control than non-resistant weeds.

- Leafy spurge has been reduced from 1.5 million to less than 800,000 acres due to research carried out by the NDAES. The annual savings to the state from reduced leafy spurge infestation is estimated to be $13.9 million in direct costs including increased grazing land for cattle, increased hay production and decreased negative environmental impact.
- On average North Dakota produces over 60% of the durum in the United States and over 90% of the ND durum acreage is sown with varieties developed by the NDAES durum wheat breeding program. Varieties developed by this program generate over $400 million directly to producers annually. Carpio and Joppa, two new varieties developed by the NDAES durum breeding program are quickly being adopted by producers and have high yield and excellent quality potential.
- In 2015, 53% North Dakota's spring wheat acreage was sown to varieties developed by the NDAES. According to NDAES Ag Economist Dr. William Wilson, a variety released from the NDSU spring wheat breeding program has an estimated economic impact to the state ranging from $69 to $284 million over the period it remains in the marketplace, when compared to other competitive varieties.
- Based on a 2015 survey done by the American Malting Barley Association on barley varieties grown in North Dakota, about 50% of the North Dakota acres sown to two-rowed barley were done so with varieties developed by the NDAES. Changes in the malting and brewing industries in the US are resulting in an increased demand for two-rowed barley. In 2015, approximately 25% of North Dakota's 1.12 million barley acres were sown to two-rowed barley. Assuming 50% of these acres were sown with NDAES varieties and a $0.25 per bushel premium for two-rowed barley over six-rowed barley, growers across the state realized an additional $2.24 million in revenue from growing NDAES-developed two-rowed varieties.
- North Dakota is the leading producer of dry beans in the U.S. Based on the grower surveys in the MIN-DAK region from the last three years (2013-2015), approximately 90% of the black bean acreage, 10% of the navy bean acreage, and 30% of the pinto bean acreage is sown with varieties developed by the NDAES dry bean breeding program. Assuming an average grower price of $0.35/lb across the different market classes, these varieties contributed approximately $93 million per year to the state's economy during the last three years. This means that theoretically, for every dollar invested in the dry bean breeding program, there is an approximate return of $375 each year.

NDAES Ag Engineers provided statewide leadership in applied research and education on UAS application in agriculture

- NDAES Ag Engineers provided statewide leadership in applied research and education on UAS application in agriculture by bringing industries from across the country and around the world to North Dakota on economic development projects where industry investment amounted to many million dollars. The NDAES is working with state departments, the economic development commission, industries, farmers and rural cooperatives to address the precision agriculture needs of the state and to bring economic prosperity.
- An NDAES Ag Engineer is determining drawbar power requirements for chisel plowing under different calcium-based surface amendments. Subsurface drainage practices on sodic soil will help establish best management practices for soil surface amendments and drainage for improving soil health in sodic soils. Over 18,000,000 acres of saline/sodic soils in North and South Dakota may be at risk of conversion to sodic soils due to resumption/initiation of tillage and installation of subsurface drainage, and could benefit from this research.

- NDAES research on livestock manure and waste management helps develop new knowledge to develop and implement best management practices to mitigate environmental concerns from livestock facilities. NDAES researchers were instrumental in helping producers with bird flu incidence to put down and compost the birds to avoid further spread the disease.



NDAES research on livestock manure and waste management helps develop new knowledge to develop and implement best management practices to mitigate environmental concerns from livestock facilities.

- Technology in agriculture is changing very rapidly and it is essential to partner with technology developers and end-users. The reason is simply to be assured that the state-of-the-art technology is accessible to North Dakota growers. NDAES researchers are working as a multi-disciplinary team to identify and create technology partnerships. Two commercial partnerships have been created, and there are three that are near fruition, in addition to a research/educational partnership. The partnerships with technology providers and major end-users involves joint research, simultaneous access to technology, and funding.

- NDAES researchers are studying the use of optical sensing data collected via unmanned aerial systems for the detection and management of crop stress, such as nutrient deficiency and disease of several major crops grown in North Dakota. Other researchers are measuring the adoption rates of precision agriculture technologies, especially the adoption of automatic section control (including row control) for planting and spraying, in different regions of the state. It is envisaged that this technology could substantially improve input use efficiency for farmers with the irregular field shapes and large numbers of in-field obstacles typical of the Prairie Pothole Region.
- The Center for Agricultural Policy and Trade Studies is completing research on evaluating the importance of commodity programs, the conservation reserve program, and crop insurance on farm income, efficiency, and productivity for the new Farm Bill. The Center also is evaluating the importance of the structure of farm programs on agriculture production functions and efficiency using farm level Agricultural Resource Management Survey (ARMS) data.

North Dakota Agricultural Experiment Station
Main Research Station

Precision Ag Initiative Impacts Report

Approved projects

1. Delineation of Chlorosis in Soybean Fields Using Unmanned Aerial Systems; PI:John Nowatzki, Agricultural and Biosystems Engineering
2. Drone-based Remote Sensing to Predict Sugarbeet in Season Nitrogen Demand and Yield; PI:Amitava Chatterjee, SNRS — Soil Sciences
3. Identification and Mapping of Resistant Weeds and Herbicide Drift Injury with High Resolution UAS Images; PI:Sreekala Bajwa, Agricultural and Biosystems Engineering
4. Increasing UAV Related Research Capacity at the Carrington Research Extension Center; PI:Paulo Flores, Carrington Research Extension Center
5. Optimizing Barley Quality Across a pH and Organic Matter Gradient; PI:Mike Ostlie, Carrington Research Extension Center
6. Precision Application of Herbicides for Sustainable Crop Systems; PI:Kirk Howatt, Plant Sciences
7. Use of Electronic Monitoring Systems for Precision Management of Cow/Calf and Cattle Feeding Enterprises; PI:Carl Dahlen, Animal Sciences
8. Using Crop Growth Models to Incorporate Temporal Variability into Precision Farming; PI:Joel Ransom, Plant Sciences
9. Whole-farm Analysis of the Decision to Invest in Automatic Section and Row Control Tech for planting and spraying in ND; PI:David C. Roberts, Agribusiness and Applied Economics

Preliminary Results

- Preliminary research indicates that efforts to control spray drift through the use of pulse-width modulation sprayers may result in less effective weed control than spraying with more conventional droplet sizes.
- Interest in Unmanned Arial Systems (UAS) is growing rapidly. Preliminary research conducted at the Carrington REC indicates that UAS technology can be used to predict soybean relative maturity and to assess the level of leaf disease on barley.
- Research conducted by the NDSU Agricultural and Biosystems Engineering Department indicates that UAS technology may be a useful tool for estimating the prevalence of herbicide resistant weeds and potentially allow for earlier detection of weed infestations.
- NDSU research using UAS to measure iron deficiency chlorosis may lead to better systems of matching varietal selection to field conditions for improvement of overall yield response in soybean fields.

North Dakota Agricultural Experiment Station
Main Research Station

Souris River Research Report

Current research on the Souris River flood impacts project builds on the work accomplished in Phase I. Soil, vegetation and seed bank analysis revealed differences among sampling locations. However, differences were not consistent with macro-scale elevations and distances from the river. Given that, we have broken down the current investigations into two components::

1. Subtle topographical differences in the landscape create micro watersheds that effectively holding water for different times. To determine where these locations are on the landscape we are using DEM (digital elevation models) and LIDAR (light detection and ranging) maps to overlay soil and vegetation data with more accurate elevations. With this we can identify basin and sinks to determine flood duration and better utilize the existing soil chemistry and vegetation from the previous project. Thus far, we have downloaded the appropriate data layers and started to overlay existing data within ArcGIS.
2. Following the initial flooding, the majority of exiting vegetation was killed by extended ponded water. After flood waters receded, much of the subsequent standing vegetation and seed bank was exotic grass and yellow sweet clover. Greenhouse trials revealed that as yellow sweet clover (a biennial) dies, nitrogen is released into the soil (Figure 1). Kentucky bluegrass was able to uptake the available nitrogen more readily than native plants which evolved under limited, rather than excess soil nitrogen (Figures 2 and 3). Understanding the vegetation dynamics existing after flood events can help predict where management actions will be required. Further, when combined with regional elevation and soils maps, vegetation data enables us to make tailored restoration/recovery recommendations to the broader region.

Figure 1

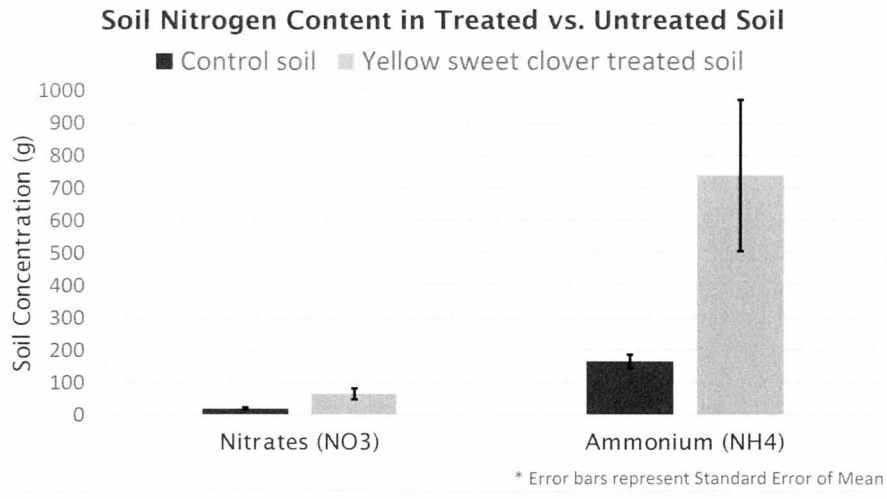


Figure 2

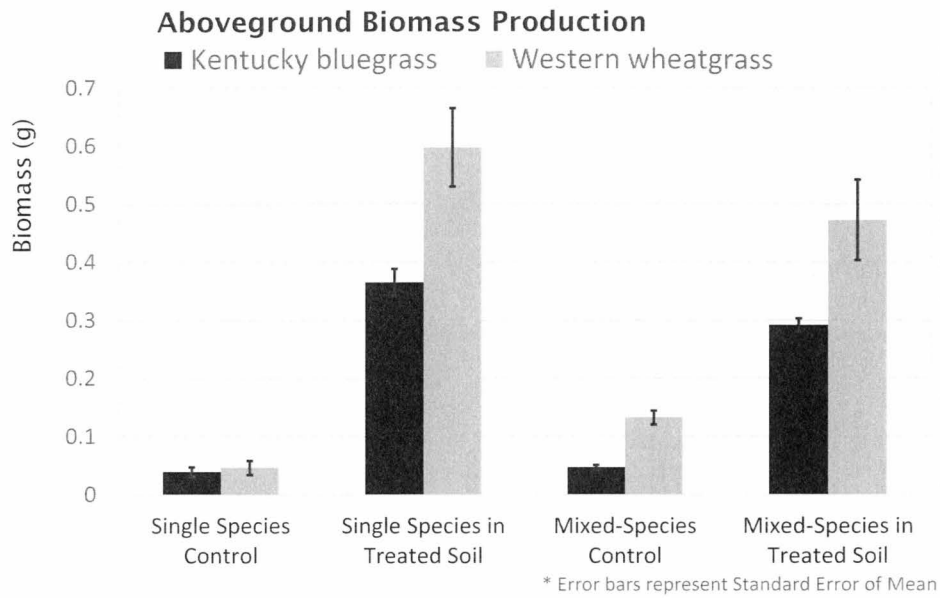
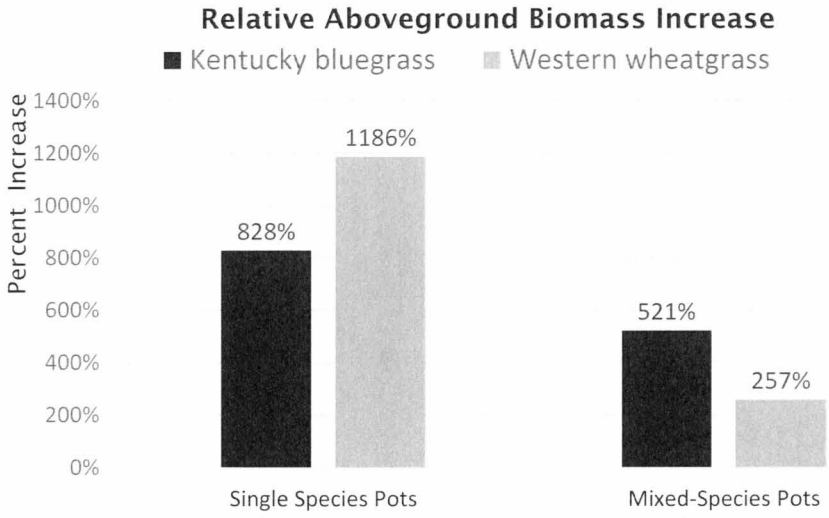


Figure 3



Carrington Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutor Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Carrington Research Extension Center (CREC) was established in 1960. CREC operates on a land base of around 1,940 acres where the majority of acreage is managed as traditional dryland and is utilized primarily for field crop research activities and foundation seed production. CREC has infrastructure to irrigate about 270 acres with center-pivot systems and to mist or micro-irrigate 55 acres with hand-set systems.

The research effort at the CREC focuses on these general program areas: traditional crop variety evaluation, crop production and management, plant disease management, crop fertility and soil management, cropping systems, alternative crop development, beef cattle nutrition, intensive cow/calf production, feedlot management, integration of crop and livestock production, livestock waste and nutrient management, irrigation, northern hardy fruit production, and foundation seedstocks production. Through these efforts, the CREC research program has gained a national reputation for its ability to investigate a broad base of agricultural challenges that benefit both producers and the agriculture based businesses that support them.

CREC maintains a strong Extension program as five extension specialists base their educational programming from the center. The extension program emphasis areas addressed by these specialists include: agronomy, livestock, plant pathology, and livestock waste - nutrient management.

Agency Mission Statement

The Carrington Research Extension Center conducts research that will lead to the enhancement of agriculture and improve the quality of life across the central region of North Dakota. Specifically, the Carrington Center conducts research on both dryland and irrigated crop production methods and systems, improved crop cultivars, feeding of beef cattle, cow/calf nutrition, sustainable agricultural production, and produces foundation seedstocks. The objective is to discover the balance between farm enterprise profitability and conservation of the natural resource base. The results of these studies are disseminated to the entire state through an on-going extension educational program.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- A secure (owned or long-term leases) land base is critical to sustain the current and future research mission of the Carrington Center. The diverse and broad based programs of the CREC operate on a relatively small land base. The Carrington REC operates on a land base of around 1,940 acres with the state owning around 840 acres. The 1,100 acres not secured by state ownership must be sourced by annual rental agreements with multiple landlords. This heavy reliance upon a willing group of land owners to annually rent a significant portion of the minimum amount of acres the CREC requires is risky at best. If any one parcel of rented land were not made available in a given year, the CREC would be forced to greatly reduce or eliminate program contributions that are depended upon by North Dakota producers and are basic to our department mission.
- The 2015 ND Legislative Assembly provided $750,000 from the general fund for a seed cleaning plant at the CREC and an additional $1,500,000 of authorization. The CREC is using the appropriation to purchase the primary conditioning equipment (e.g. air screen, indent, gravity table and spiral separator) and other funds to construct a basic building to house this equipment. Additional funding will be required to complete the integration of the equipment to make it a functional seed conditioning facility.
- The beef research unit needs a multi-use 'feedlot research support facility'. This facility would expand the scope of research capabilities, assist in sustaining IACUC compliance, address worker protection challenges, and reduce maintenance costs for equipment. An associated need for this program is an additional set of feedlot pens that would include a subset placed within a hoop structure. Current pens are fully utilized and feedlot research projects are often backlogged. An additional set of pens would allow the CREC to conduct at least one additional experiment per feedout period. Alternatively, these pens would allow more treatments or replications within other studies, thereby expanding research capacity and quality. Any feedlot pen expansion must include associated waste containment facilities to remain compliant with regulations.
- It is important that grant fund opportunities continue to be widely available in future years. Funds that support crop and livestock production or agricultural related issues in general are needed to leverage public funding. The CREC research programs must continue to have a diversity of opportunities to compete for grant funds that, when successful, allow us to most effectively empower current research programs.
- The programs of the CREC are supported by a diversity of facilities that include not only the primary buildings like headquarters and laboratory but also feedlot pens, feed and seed storage, animal shelters, water supply features, storage buildings, parking lots, roadways and waste containment. Current support for maintenance of these facilities is fully inadequate to address the current deferred maintenance costs.

Carrington Research Extension Center

2015-2017 IMPACTS

- Established UAV flight capacity to assess producer applications of this new technology for management of weed, fertility, disease and cultural issues.
- Conditioned and sold foundation grade seed of 29 varieties and nine crops to a diversity of seedsman.
- Evaluated the use of corn ethanol co-products as sources of phosphorus for crop nutrition.
- Provided producers with data to quantify their cattle performance in the feedlot with the Dakota Feeder Calf Show Feedout and the North Dakota Angus University.
- Trained producers and crop consultants in weed identification, nitrogen application techniques, soybean management and more resulting in an estimated value to participants of $10/acre.
- Provided data on summer confinement beef cow production to producers throughout the Midwest.
- Improved Sclerotinia disease control and soybean yield by delaying fungicide application to the R2 growth stage.

The CREC trained producers and crop consultants in weed identification, nitrogen application techniques, soybean management and more resulting in an estimated value to participants of $10/acre.

Agency Overview

Central Grasslands Research Extension Center – Streeter

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Central Grasslands Research Extension Center (CGREC) conducts research for the Coteau region of North Dakota, an area bounded by the Missouri River on the west and the James River on the east and extends from Divide and Burke counties in northwestern North Dakota in a southeasterly direction through Dickey County.

Research objectives must increase the range-carrying capacity of native range emphasizing conservation and preservation, stabilize grass production to compensate for the vagaries of the weather and precipitation as it influences forage production in the dryland agriculture, identify the impact of different management systems upon beef production in the central region and explore the increased use of crop residues and byproducts for the maintenance of the cow herd. CGREC's primary focus is management of grassland acreage which occupies about one-third of the agricultural land in the state and aims to improve production and increase returns to cattle producers.

Agency Mission Statement

The legislated mission of the CGREC is as follows: The CGREC shall conduct research designed to fulfill needs within an area bounded by the Missouri River on the west and the James River on the east with research objectives as follows:

1. To increase the range-carrying capacity of native range with emphasis on conservation.
2. Stabilization of grass production to determine how to best compensate for the variability of the weather as it influences forage production.
3. Identification of different management systems on beef production in the central region of the state.
4. Exploration of increased use of crop residues and by-products for the maintenance of the cow herd.
5. To disseminate research results and information for the benefit of the state of North Dakota.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

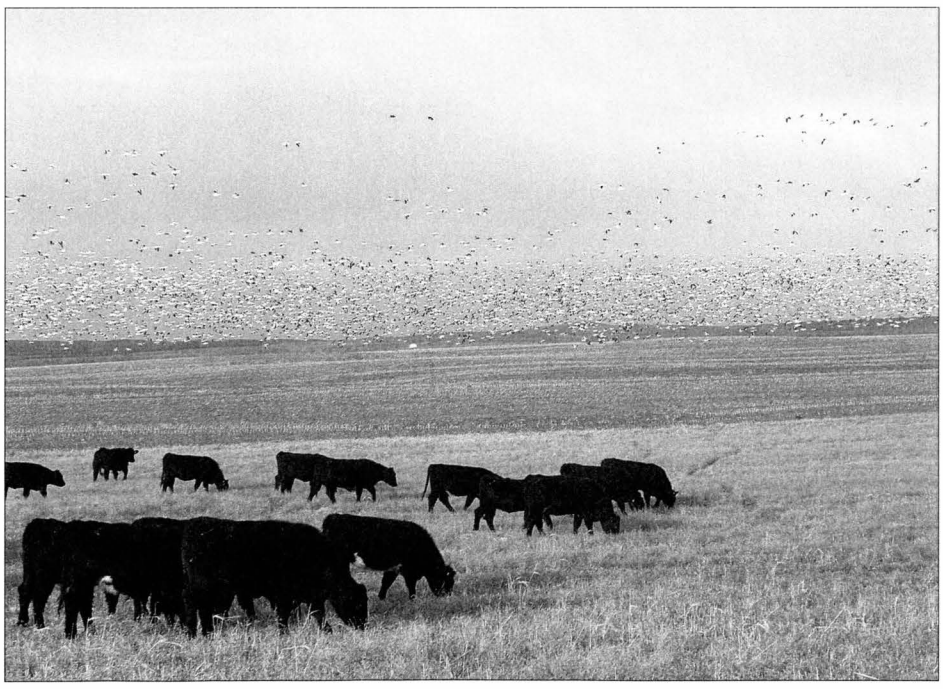
Agency Future Critical Issues

- Livestock facilities continue to be deficient and impede potential research. Improvements to livestock handling and feeding facilities including replicated drylot pens, feed storage, and a new working barn are needed to allow for growth of the animal science research program.
- Significant improvements or replacement of the director's residence is needed as the current residence has water, mold, and foundational issues in the basement.
- Deferred maintenance and other repairs that affect both safety and use of facilities continue to be a critical issues.

Central Grasslands Research Extension Center - Streeter

2015-2017 IMPACTS

- Continued research on control of invasive grass species through early intensive grazing study and prescribed burning.
- Concluded 26 year grazing project evaluating the impacts of stocking rate on plant species composition.
- Expanded winter grazing research to include grazing of corn residues, cover crops, and bale grazing projects.
- Conducted research exploring the impacts of stocking rate and advancing season of forage intake of grazing beef cattle.
- Continued to expand on collaborative research efforts evaluating the impacts of management on reproductive performance of beef cattle.
- Hosted first annual Winter Grazing Workshop in collaboration with NDSU Extension Service.



The CGREC conducted research exploring the impacts of stocking rate and advancing season of forage intake of grazing beef cattle.

Agency Overview

Dickinson Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The NDSU Dickinson Research Extension Center (DREC) has an established record of service to the people in the 13-county region south and west of the Missouri River. The DREC operates 6,506 acres of owned land within the region as well as annual land leases needed to accommodate ongoing projects. The land base provides opportunities for a broad perspective in evaluating various agricultural systems that can serve as engines for economic development. This is a continuation of what has taken place for over 100 years. Currently, the DREC assists agricultural producers in solving production problems with agronomy, animal science and range science, while integrating new developments. Five major areas are served: agronomy, beef management, bio-security, range management, and sustainable agricultural practices. Faculty and staff are committed to engaging people of the region and to the identification of current economic opportunities, while sustaining natural resources for future generations as directed by the mission statement and advisory board. Research data and producer ideas are continually considered so the DREC can leverage the latest knowledge to best benefit the people of North Dakota.

Agency Mission Statement

The Dickinson Research Extension Center must be located at or near Dickinson in Stark County. The Center shall conduct research on increasing the carrying capacity of native rangeland, with emphasis on conservation and preservation for future generations. The Center shall conduct research on grass production to determine how to best compensate for the vagaries of the weather as it influences forage production in the dry land agriculture of western North Dakota. The Center shall conduct research at the ranch location in Dunn County with beef cattle breeding, feeding, management and disease control for the benefit of livestock producers of western North Dakota and the entire state. The Center shall conduct research designed to increase productivity of all agricultural products of the soil by maintaining or improving the soil resource base in the dry land agricultural region of southwestern North Dakota by the identification of adapted crop species and superior crop cultivars; propagation and distribution of selected seed stock; and development of profitable cropping systems that achieve the necessary balance between profitability and conservation of all natural resources. The Center shall disseminate research results and information for the benefit of this state.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- Sustainable and Integrated Beef Systems — Expandable, hopefully, more sustainable systems need to be evaluated to assess current trends. In the future, all avenues for additional compensation need to be explored, to enhance the economic viability for beef producers and the rural areas associated with beef production. This compensation may come from not only beef but synergistic crop production. For example, small grain production systems that integrate rotational cropping practices, high residue management and annual forages, with attention to wildlife habitat enhancement, could be used to diversify income while opening the door to other value-added opportunities for beef production in concert with crop production.

  The Dickinson Research Extension Center, as part of North Dakota State University, takes serious the need for sustainable beef systems. Currently, the Center is striving to develop sustainable and integrated production strategies that match conditions of western North Dakota and surrounding regions. The inclusion of forages into traditional cropping systems can provide the resources necessary for the development of integrated production strategies that increase sustainability and profitability.

  There is a need to develop agro-ecosystems that optimize the balance between forage-based and grain-based crop/livestock systems reflective of the many individual ecosystems. These integrated systems must be synergistic to, or enhance the native and agronomic plant communities, thus providing the base for future beef production. In addition, enhanced value for commodities produced from forage-based systems is key. As the general population requires protein, a need met by meat and high protein crops, meeting this demand is a unique opportunity that a forage based system integrated with crop production can respond to, in addition to current crop land use. These thoughts are changing how the Dickinson Research Extension Center addresses the future.

  Previous work has certainly set baseline production for high residue cropping systems, grassland systems and livestock systems. However further definition, integration and refinement of these system efforts is critical. Beef production needs to think outside the box and the Center also needs to do the same. Challenging the limits of conventional thinking by linking the components of agricultural management systems with value added opportunities ensuring long term sustainability of beef and cropping systems within the environment is critical. In response, a new approach needs to be embraced, a concept of integrated agricultural systems that truly entwines crop, beef and forage production as a working unit for betterment of all.

- Deferred Maintenance Increase — Deferred maintenance funding continues to be an important issue at the DREC. Updates and repairs to facilities that enhance worker safety and productivity are needed. The DREC, specifically, has maintenance issues with the main public use and cattle working facility at the ranch. The facility needs major roof repair and 1,800 square feet of additional cattle working space.

- Soil reclamation and dust issues in western ND — Soil disturbance and dust created by the extensive truck traffic servicing the oil industry in western ND has led to a number of potential soil reclamation, cropping and livestock issues. Subsequent productivity of disturbed soil, establishment of cropping systems following disturbance and the reduction of dust is critical. Production impacts may include reduced yields for both crop and forage production. The result is that soil disturbance and dust is creating an undocumented and potentially negative effect on crop and livestock enterprises. Research to assist livestock and crop producers is necessary to identify ways to document and minimize any adverse effect on soil and the agricultural industry in this region of the state.

Dickinson Research Extension Center

2015-2017 IMPACTS

- Continued work in agronomic, beef and range agricultural practices and developed managerial options reported in the Center's annual report located on the Center's web page https://www.ag.ndsu.edu/DickinsonREC.
- Continued and expanded work regarding soil disturbance and dust created by the extensive truck traffic servicing the oil industry in western ND.
- Shifted to explore new forage and cattle resources and inputs that shifts from a grain-based beef production model to a grass-based beef production model.
- Studied various management techniques involving grass cultivars, soil mineral nitrogen, prairie ecosystems, grassland restoration, grazing systems with the integration of beef cattle.
- Investigated conventional and organic agronomic systems, tillage systems, cropping systems, pest control systems, variety development, cover crops and the integration of beef cattle.

The Dickinson Research Extension Center continues work on integrated crop and livestock systems research.

Agency Overview

Hettinger Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Hettinger Research Extesnion Center (HREC) is a semi-arid site located in southwest North Dakota, providing the most southerly NDSU location in the non-glaciated portion of North Dakota as a site for its agricultural research programs. Research at HREC involves the disciplines of animal science, range science, wildlife science, agronomy, and weed science. The HREC conducts research in both sheep and cattle production and management systems, serving as the only REC in the ND Agricultural Experiment Station system with sheep. Livestock research is focused on feedlot nutrition and management, as well as enhancing reproductive efficiency in ruminants. Additionally, the HREC is located in a region where much of the land base is in the Conservation Reserve Program or has been recently removed from it, which has resulted in additional research evaluating potential changes in the CRP program and how these changes may affect upland native and game bird populations while enhancing livestock grazing opportunities. Agronomic and Weed Science research is focused on conducting variety and weed control trials in a no-till, semi-arid production system that is prone to drought. Collaboration is with Main Station scientists; Branch Station scientists; U.S. Forest Service; grazing associations; university scientists from WY, SD, and MT; and USDA research entities in these research disciplines to improve productivity of livestock, grazing, and cropping systems, and to improve economic development of the region.

Agency Mission Statement

The Hettinger Research Extension Center, an outreach of North Dakota State University, provides applied research and education in agriculture and environmental sciences that will enrich the lives of North Dakotans and support economic development.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

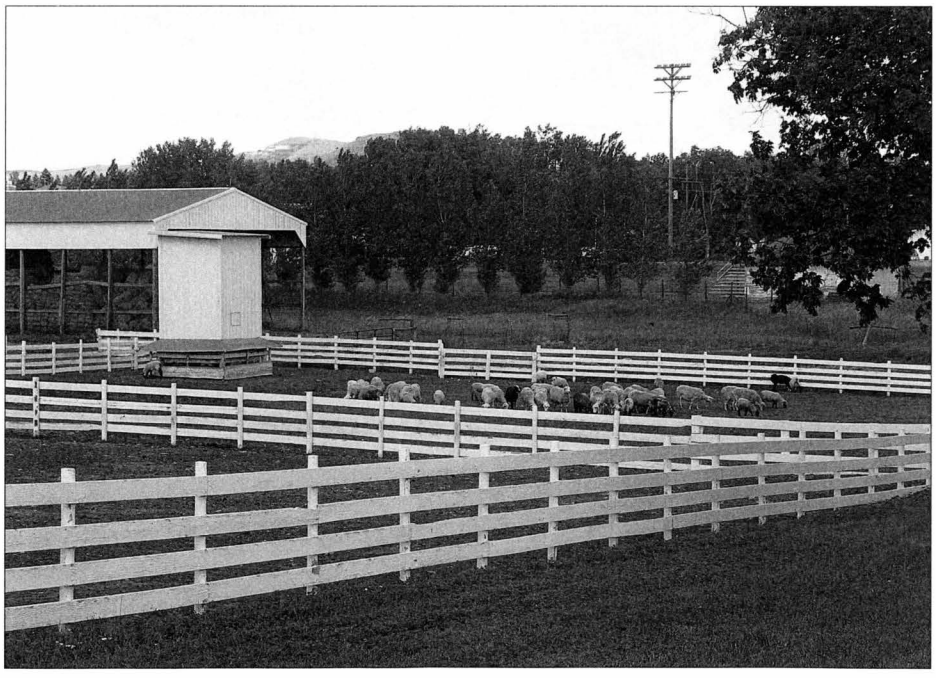
Agency Future Critical Issues

- Technical support for the livestock research program is dependent on restoration of the base budget. This position is needed to meet the research needs of producers in SW North Dakota.
- A modern livestock processing and research support facility is needed to enhance both quality and quantity of research by our sheep and cattle research programs. The current facility is a 16' x 32' lean-to, with no ability to utilize today's modern technology, such as web access, in our research program.
- A Sheep Feed Efficiency Research Facility for the evaluation of feed efficiency is needed for the sheep producers of ND to remain competitive. The ND Lamb and Wool Producers Association continues to support such a facility at the Hettinger REC.
- Housing of graduate students and technicians is needed for a nationally competitive program, and continues to be a struggle in western ND. Permanent housing, in a bunkhouse format, is needed to ensure the HREC program can continue to recruit these valuable members of our team on an annual basis.
- Deferred maintenance and safety issues will likely reach $1,000,000 by the end of the current biennium. Specifically, due to a past wet cycles and heavier than normal traffic, the road to the office is unstable and needs to be replaced. The most recent inspection by the Fire Marshall indicated that the 1970's-era bunkhouse needs to be renovated to maintain its use as a housing facility, due to fire and safety concerns. Additional needs include mechanical system renovation of the 1992 office, and parking lot re-paving.

Hettinger Research Extension Center

2015-2017 IMPACTS

- Evaluated new varieties and technologies to grow drought tolerant crops and new and emerging bio-fuels.
- Conducted multiple land use research evaluating: the nest ecology of an indicator species (sharp-tailed grouse) on National Grasslands, grazing strategies to complement pheasant habitat concerns, and native prairie restoration techniques on less productive farmland in the badlands.
- Collaborated with Sitting Bull College on the Standing Rock Sioux Reservation, USDA-ARS, NDSU, and SDSU on a multi-agency project evaluating the reclamation of lands degraded by prairie dogs.
- Conducted a nationally recognized sheep research program evaluating alternative technologies for increasing reproductive efficiency in both males and females and feedlot nutrition.
- Established a new Weed Science research program to evaluate weed control in dryland no-till cropping systems and control of invasive weeds of pasture and rangeland.
- Established a new Livestock Extension program.
- Completed the 8,000 sq. ft. Agronomy and Range Research Laboratory funded the previous biennium.



The HREC conducts a nationally recognized sheep research program evaluating alternative technologies for increasing reproductive efficiency in both males and females and feedlot nutrition.

Agency Overview

Langdon Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Langdon Research Extension Center (LREC) is located one mile east of Langdon on US highway five. The agricultural land base at the station consists of 549 owned acres and an additional 206 acres under lease agreement. The LREC serves a nine-county region located in northeast North Dakota. It has North Dakota's highest precipitation rates, coolest temperatures, and richest productive soils. The climate supports diverse crop production and recurring disease problems.

The LREC has a strong tradition of assisting the region's producers to meet agricultural production challenges throughout the course of its existence since 1909. In 1993, the LREC redirected much of its research programming to focus on the significant increase of disease and insect pressure associated with its climate. This redirected applied research programming has provided producers with information regarding disease minimizing cultural farming practices and trusted information regarding chemical applications and other inputs that minimize disease and insect pressures that give growers the best return on investment.

Recently, the LREC has significantly enhanced its overall agricultural research programming with an increase in the foundation seed stocks program, the addition of a crop protection scientist, farm business management instructor, Extension specialist in agronomy and an Extension specialist in soil health. New infrastructure additions in the past 12 years include a full service agricultural based learning center/headquarters building constructed in 2004, agronomy/pathology laboratory in 2015 and a 25 acre field tiling project completed in 2014. The NDSU LREC with its recent personnel and infrastructure additions and improvements will insure that growers can depend on research data that will improve their bottom line for the next 100 years.

Agency Mission Statement

The Langdon Research Extension Center will conduct applied agricultural research that enhances the quality of life for the region's citizens with a responsive, flexible and accessible overall agricultural based research program. This programming will combine the concepts of agricultural research, information technology and community/economic development while conserving the region's natural resources.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- The number one issue currently for the NDSU Langdon Research Extension Center is to maintain a level budget through the 2017/19 biennium based on the 2015/17 budget. This is needed to support the research and extension programming that has grown based on growers needs the past several years.
- In 1962, a seed cleaning plant was constructed at Langdon to provide local seedsmen and producers the ability to purchase and grow the highest quality seed available (foundation grade seed). The region's seedsmen and producers have come to depend on this program to supply them with foundation grade seed. Langdon still uses the same facility and equipment that was constructed in 1962. The inefficiencies associated with the plant forces Langdon's seed cleaners to run individual lots of dirty seed through the plant two to five times to achieve foundation grade seed. Because of this and the ability to only clean 20 to 30 bushels of seed per hour, Langdon does not complete its seed cleaning operation until the start of the growing season beyond the prime time for producers to acquire seed. In addition, numerous safety violations have been identified that can only be resolved with a new seed cleaning plant.

Langdon Research Extension Center

2015-2017 IMPACTS

- Continue to build and foster strong research and extension partnerships with commodity groups, regional crop improvement associations, area growers, and others associated with the ag industry in ND. These partnerships allow us to identify and address critical production issues as quickly as possible to protect growers' investment in their operations.
- Produced and distributed NDSU varieties of foundation grade seed of the major crops grown in our region. Our region is the number one producing region of HRSW in ND and 50 percent of the HRSW grown here is an NDSU variety originating from the NDSU foundation seed stocks program.
- Concluded successful negotiations with an absentee landowner to purchase 160 acres of crop land adjacent to Langdon REC land for research and extension purposes at fair market value. The state provided $175,000 of the funding and the other $175,000 was raised locally.
- Provided dependable support for main station crop breeding programs and other cropping system research programs based at the main station in Fargo at NDSU.
- Continue to foster and strengthen two new Extension Specialists outreach programs in agronomy and soil health that fills a vital educational need for growers in our region. They have also been very helpful mentoring several new extension agent hires recently in our region.

Center staff produced and distributed NDSU varieties of foundation grade seed of the major crops grown in our region.

Agency Overview

North Central Research Extension Center – Minot

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The North Central Research Extension Center (NCREC) was established in 1945 and is located one mile south of Minot on Highway 83. The 1,200-acre center specializes in crop research and extension education activities and foundation seed production. Approximately 1,500 owned, rented, and contracted acres are planted for foundation seed production each year. The NCREC evaluates conventional and new crops for production in the region and explores weed management and cropping systems to improve the economic potential of crop production in the north central region. The NCREC is a leader in North Dakota on production and disease research of canola, pea, lentil, and chickpea crops, in addition to the conventional crops of hard red spring and durum wheat, barley, flax, sunflower, and oats. The NCREC works closely with business and economic development leaders in the region to improve the economic vitality of north central North Dakota.

Agency Mission Statement

The North Central Research Extension Center conducts research to increase agricultural productivity in north central North Dakota. The center serves agricultural producers in a 12- county region surrounding Minot through crop research, foundation seed production and dissemination, and extension education programs in crop and livestock production. Studies at the center focus on crop variety and new germplasm evaluation, weed control, cropping systems, crop pest management, reduced tillage, and soil fertility. Research is conducted on cereal grains, oilseeds, legumes, forages, and new specialty crops.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- Increased base funding to support research and extension efforts
- Additional technical support
- Increased operating funds
- Equipment replacement
- Removal of old seedhouse
- Drain tile NCREC yard
- Encroachment from city of Minot
- Sale and purchase of additional land for seed production

North Central Research Extension Center - Minot

2015-2017 IMPACTS

- Produced, conditioned, and distributed foundation seed of nine crops grown in the region consisting of 24 unique varieties.
- Assisted in development of new varieties of economically important crops and evaluated production strategies for alternative crops such as carinata, fava bean, and energy beets.
- Researched crop production products in order to improve efficiencies and maximize economic return for minor and major acreage crops grown in ND.
- Provided extension education in the areas of livestock, soil health, crop protection, and cropping systems.
- Conducted residue trials with the USDA IR-4 program that lead to registration of new pesticides to control weeds, diseases, and insects in minor acreage crops important to ND agriculture.

Center staff assisted in development of new varieties of economically important crops and evaluated production strategies for alternative crops such as fava bean.

Agency Overview

Williston Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1

Agency Description

The Williston Research Extension Center (WREC), established in 1907 and relocated to the present site in 1954, is an 800-acre rain-fed farm located in northwest North Dakota near the city of Williston. In 2001, an additional 160 acres were purchased in the Nesson Valley 23 miles northeast of Williston and an irrigated research and development project was established. In 2012 an additional 1,100 acres of land were leased from the North Dakota Game and Fish Department for pure seed production and dryland research. WREC research studies are conducted on crop variety evaluation, herbicide performance and other cultural management research, plant disease control and management research in cropping systems, soil and water conservation practices, pipeline reclamation, and horticulture.

WREC research is intended to increase the producer's net profit, support crop diversification and encourage more intensive cropping and irrigation development. Research on soil and crop management systems for sprinkler irrigation, on alternative irrigated high value and value-added crops and on western malting barley programs are conducted. WREC also conducts variety development research on safflower, winter wheat, and durum and variety evaluations in cooperation with NDSU Main Station scientists. WREC produces and supplies foundation seed to area farmers of new and old varieties adapted to the region.

Agency Mission Statement

The Williston Research Extension Center conducts research to increase agricultural productivity in the semi-arid region for northwestern North Dakota while achieving a necessary balance between profitability and conservation of natural resources. Research on soil and crop management systems for sprinkler irrigation and alternative irrigated high-value/value-added crop production at the Nesson Valley site are conducted in cooperation with the Montana State University Eastern Agricultural Research Center at the USDA-ARS Northern Plains Agricultural Research Laboratory in Sidney, Montana and other cooperating NDSU and University of Minnesota scientists.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 27, 2016. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agency Future Critical Issues

- Increasing operating costs and higher labor costs for research activities continue to impact WREC abilities to carry out our research programs vital to the improvement of the economic and environmental performance of our agricultural lands. A high priority need is the request to restore the 2015-2017 WREC budget to the 100% funding level. Deferred maintenance funding also continues to be an important need for WREC to maintain its facilities.
- The switch from a strict small grain-fallow rotation to a more intensive no-till diversified cropping system has resulted in northwest North Dakota farmers growing more than 20 different crops on over an additional million acres of previously fallowed land increasing the demand for pure seed of varieties of pulse crops and other fragile specialty seeds. The WREC seed conditioning plant built in 1954 is antiquated and was designed to only handle cereal crops and does not have the capability of cleaning peas, lentils, chickpeas, and other fragile seeds that are in high demand by our farmers. The outdated seed conditioning plant also poses considerable safety issues. A horizontal seed conditioning plant with optical color sorter and higher bushel per hour capacity is needed to allow WREC to condition Foundation seed of a wide array of new crop varieties to provide pure seed to growers.
- An additional equipment storage building is needed for WREC farm and plot research equipment to allow all WREC high cost farm and research equipment to be stored indoors from the elements.
- A greenhouse is needed for the new WREC Plant Pathology Program and the Horticulture Program to allow these programs to conduct plant disease and horticulture research during the winter months.
- Increased state operating costs due to state fleet rate/policy change.

Williston Research Extension Center

2015-2017 IMPACTS

- Continued a multi-disciplinary team long term dryland cropping system research project to evaluate and develop diversified cropping systems recommendations for improving soil health, water use efficiency, crop performance, and economic and environmental sustainability.
- The WREC Foundation Seed Program in 2015 produced over 50,000 bushels of Foundation seed of 21 varieties of small grains and broadleaf crops as a result of an acquired lease of 1,184 acres from the North Dakota Game and Fish Department that increased the WREC land base for Foundation seed program.
- New plant pathologist research program assembled a WREC plant pathology laboratory, established collaborations with USDA-ARS, Hettinger Research Extension Center, and NDSU Plant Pathologists, initiated plant pathology investigations on peas, lentils, durum, barley, and sugarbeets and obtained grant funding for a pulse crop pest scout to serve northwest North Dakota.
- WREC has developed and utilized a 160-acre irrigated site in its tenth year of research to identify improved irrigated cropping systems, tillage systems, and best management practices to improve water use efficiency, soil health, crop management systems, and economic and environmental sustainability.
- Evaluated the performance and adaption of new and established dryland and irrigated crop cultivars and crop cultural practices to improve productivity of agricultural products.
- Initiated a new long-term pipeline reclamation research project on WREC land to assess the economic impact of the disturbed soils on crop performance and to demonstrate reclamation treatments to restore crop yields and soil health.
- Horticultural program initiated high tunnel research with vegetable crops and cut flowers.
- Organized and assisted with outreach programming opportunities in the region: National Hard Red Spring Wheat Show, Irrigation Workshop, Pulse Days, offstation trials and tours, field day events, and MonDak Ag Showcase.
- Established a new reclamation research and demonstration project to reclaim a saline seep area on WREC land in collaboration with the Montana Salinity Control Association.

The WREC Foundation Seed Program in 2015 produced over 50,000 bushels of foundation seed of 21 varieties of small grains and broadleaf crops.

Agency Overview

Agronomy Seed Farm

North Dakota Agricultural Experiment Station

Agency Statutory Authority

North Dakota Century Code Chapter 4-05.1.

Agency Description

The Agronomy Seed Farm (ASF) is a 590 acre farm located near Casselton, which has been a part of the North Dakota Agriculture Experiment Station (NDAES) since it was gifted to the state in 1950. It was the result of a fund drive conducted by the North Dakota Crop Improvement Association, which solicited farmers, seed companies and many others throughout the state to help establish a farm whose main purpose is to increase seed of new varieties as they are developed by the plant breeding and supporting departments of the NDAES. The ASF also propagates seed of older but still desirable varieties for the seedsmen of the area.

Agency Mission Statement

To produce an adequate supply of foundation-grade seed for the seedsmen of the state and area at a reasonable price and to support the varietal development research of the NDAES.

Agency Performance Measures

Per North Dakota Century Code 4-05.1-19, the State Board of Agricultural Research and Extension (SBARE) presents a status report to the Budget Section of the Legislative Council. SBARE's most recent presentation to the Budget Section was on June 27, 2016. The report provided the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the Legislative Council office.

Agency Future Critical Issues

The critical issues facing the ASF are a continued demand for foundation-grade seed, favorable weather for growing seed and a good supply of varieties that are in demand by the seed industry. If these three conditions are present and good commodity prices accompany them, the future of the ASF is secure.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

Agronomy Seed Farm

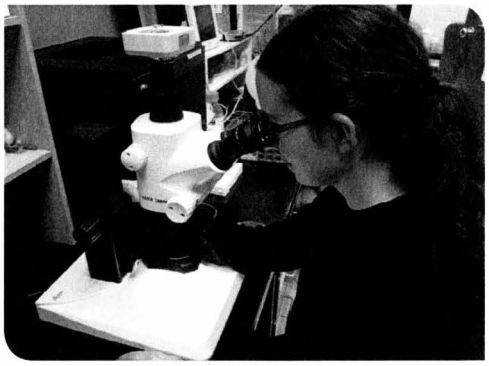
2015-2017 IMPACTS

- Produced 35,000 to 50,000 bushels of seed for availability to the seed industry annually.
- Conditioned 35,000 to 50,000 bushels of seed for availability to the seed industry annually.

The Agronomy Seed Farm's main purpose is to increase seed of new varieties as they are developed by the plant breeding and supporting departments of the NDAES.

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

2017-19 Capital Improvement and One-time Requests as Ranked by SBARE



1. Seed Cleaning Facilities – CREC, LREC, NCREC, WREC

(Priority No. 2 capital improvement request in 2013-15 and No. 3 in 2015-17 request)

Seed cleaning facilities at the CREC, LREC, NCREC and WREC need to be replaced. Current facilities are antiquated, lack reliable capability to ensure high-quality seed, and are slow and inefficient. Current facilities were designed to handle cereal crops and have limited/no capability of cleaning pulse crops and other fragile seed that are in high demand. These facilities pose considerable worker safety issues. Partial funding ($1,500,000) was received to purchase equipment for the Carrington and North Central REC seed cleaning plants, along with authorization to raise $3,000,000 in other funds for building construction. Difficulties in the farm economy reduce the opportunities to raise funds for building construction. No funding was received for the Williston or Langdon REC. - $3,750,000

2. Animal Science Meats Research Facility – Main Station

(Priority No. 2 capital improvement request in 2015-17)

A new/upgraded facility is needed urgently. The current Meats Lab was built in the 1950s and no longer serves the needs of modern meat science research. Annual repair and maintenance costs to the current facility continue to increase. Additionally, the lab continues to struggle to meet the U.S. Department of Agriculture inspection requirements for safe meat handling and processing. A new facility is necessary because opportunities to grow the state's livestock industries are tied to the knowledge of the end product and how that product meets the needs of national and international consumers. - $7,600,000

3. Agronomic, Pathology and Soils Field Lab Facility

(Waldron Hall replacement)

Waldron Hall was built in the mid-1950s to house the field laboratories for the wheat breeding programs in the Department of Agronomy. An addition was built in the mid-1960s to house approximately another 16 scientists from the Departments of Agronomy and Plant Pathology. The building now houses field labs and wet labs for nearly 40 scientists at the Main Station involving a number of disciplines. Many of these labs are shared, and the seed drying, cleaning and storage facilities needed by our scientists are grossly insufficient and a health hazard to anyone working in the facility. A new facility is needed to provide our scientists with a safe environment to conduct their research, as well as process, clean and store seed. - $39,000,000

4. Deferred Maintenance Increase

Deferred maintenance funding continues to be an important issue. Updates and repairs to facilities that enhance worker safety and productivity are needed across the AES. Various and ongoing issues exist at the Main Station and all RECs, primarily with respect to facility updates and repairs. - $1,440,465

5. Equipment Storage Sheds

Expensive purchased and/or leased field equipment is an investment that the AES needs to protect. Storing expensive research plot equipment, such as tractors, seeders and combines, outdoors reduces the life of the machines and can compromise the sophisticated electronics typically used on equipment. - 8 @ $306,250 = $2,450,000

One-time Requests:

1. **Utility Costs of Main Station AES Greenhouse** - $400,000
2. **Assessments for Road Improvement** - TBD

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DETAILS:
2017-2019 Capital Improvement and One-time Requests as Ranked by SBARE

ND Agricultural Experiment Station

1. Seed Cleaning Facilities **$3,750,000**

(Priority No. 2 capital improvement request in 2013-15 and No. 3 in 2015-17 request)

Seed cleaning facilities at the CREC, LREC, NCREC and WREC need to be replaced. Current facilities are antiquated, lack reliable capability to ensure high-quality seed, and are slow and inefficient. Current facilities were designed to handle cereal crops and have limited/no capability of cleaning pulse crops and other fragile seed that are in high demand. These facilities pose considerable worker safety issues. Partial funding ($1,500,000) was received to purchase equipment for the Carrington and North Central REC seed cleaning plants, along with authorization to raise $3,000,000 in other funds for building construction. Difficulties in the farm economy reduce the opportunities to raise funds for building construction. No funding was received for the Williston or Langdon REC.

2. Animal Science Meats Research Facility **$7,600,000**

(Priority No. 2 capital improvement request in 2015-17)

A new/upgraded facility is needed urgently. The current Meats Lab was built in the 1950s and no longer serves the needs of modern meat science research. Annual repair and maintenance costs to the current facility continue to increase. Additionally, the lab continues to struggle to meet the U.S. Department of Agriculture inspection requirements for safe meat handling and processing. A new facility is necessary because opportunities to grow the state's livestock industries are tied to the knowledge of the end product and how that product meets the needs of national and international consumers.

3. Agronomic, Pathology and Soils Field Lab Facility **$39,000,000**

(Waldron Hall replacement)

Waldron Hall was built in the mid-1950s to house the field laboratories for the wheat breeding programs in the Department of Agronomy. An addition was built in the mid-1960s to house approximately another 16 scientists from the Departments of Agronomy and Plant Pathology. The building now houses field labs and wet labs for nearly 40 scientists at the Main Station involving a number of disciplines. Many of these labs are shared, and the seed drying, cleaning and storage facilities needed by our scientists are grossly insufficient and a health hazard to anyone working in the facility. A new facility is needed to provide our scientists with a safe environment to conduct their research, as well as process, clean and store seed.

4. Deferred Maintenance Increase **$1,440,465**

Deferred maintenance funding continues to be an important issue. Updates and repairs to facilities that enhance worker safety and productivity are needed across the AES. Various and ongoing issues exist at the Main Station and all RECs, primarily with respect to facility updates and repairs.

5. Equipment Storage Sheds

8 @ $306,250 **= $2,450,000**

Expensive purchased and/or leased field equipment is an investment that the AES needs to protect. Storing expensive research plot equipment, such as tractors, seeders and combines, outdoors reduces the life of the machines and can compromise the sophisticated electronics typically used on equipment.

One-time Funding Requests

1. Utility Costs of Main Station AES Greenhouse - $400,000
2. Assessments for Road Improvement - TBD

17.0528.01000

Sixty-fifth
Legislative Assembly
of North Dakota

SENATE BILL NO. 2020

Introduced by

Appropriations Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the purpose of defraying the expenses of the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the biennium beginning July 1, 2017, and ending June 30, 2019, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	Base Level	Adjustments or Enhancements	Appropriation
Extension service	$52,517,908	$0	$52,517,908
Soil conservation committee	1,133,362	0	1,133,362
Total all funds	$53,651,270	$0	$53,651,270
Less estimated income	25,826,708	0	25,826,708
Total general fund	$27,824,562	$0	$27,824,562
Full-time equivalent positions	263.91	0.00	263.91

Subdivision 2.

NORTHERN CROPS INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Northern crops institute	$3,712,202	$0	$3,712,202
Total all funds	$3,712,202	$0	$3,712,202
Less estimated income	1,747,735	0	1,747,735
Total general fund	$1,964,467	$0	$1,964,467
Full-time equivalent positions	12.00	0.00	12.00

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Upper great plains transportation institute	$22,076,448	$0	$22,076,448
Total all funds	$22,076,448	$0	$22,076,448
Less estimated income	18,175,657	0	18,175,657
Total general fund	$3,900,791	$0	$3,900,791
Full-time equivalent positions	54.98	0.00	54.98

Subdivision 4.

MAIN RESEARCH CENTER

	Base Level	Adjustments or Enhancements	Appropriation
Main research center	$110,529,780	$0	$110,529,780
Total all funds	$110,529,780	$0	$110,529,780
Less estimated income	56,948,525	0	56,948,525
Total general fund	$53,581,255	$0	$53,581,255
Full-time equivalent positions	353.85	0.00	353.85

Subdivision 5.

BRANCH RESEARCH CENTERS

	Base Level	Adjustments or Enhancements	Appropriation
Dickinson research extension center	$6,996,678	$0	$6,996,678
Central grasslands research extension center	3,531,779	0	3,531,779
Hettinger research extension center	5,086,767	0	5,086,767
Langdon research extension center	3,045,836	0	3,045,836
North central research extension center	5,044,213	0	5,044,213
Williston research extension center	5,267,400	0	5,267,400
Carrington research extension center	9,328,093	0	9,328,093
Total all funds	$38,300,766	$0	$38,300,766
Less estimated income	19,817,130	0	19,817,130
Total general fund	$18,483,636	$0	$18,483,636
Full-time equivalent positions	113.94	0.00	113.94

Subdivision 6.

AGRONOMY SEED FARM

	Base Level	Adjustments or Enhancements	Appropriation
Agronomy seed farm	$1,521,007	$0	$1,521,007
Total special funds	$1,521,007	$0	$1,521,007
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	Base Level	Adjustments or Enhancements	Appropriation
Grand total general fund	$105,754,711	$0	$105,754,711
Grand total other funds	124,036,762	0	124,036,762
Grand total all funds	$229,791,473	$0	$229,791,473

SECTION 2. ONE-TIME FUNDING. The following amounts reflect the one-time funding items approved by the sixty-fourth legislative assembly as adjusted for the 2015-17 biennium:

One-Time Funding Description	2015-17	2017-19
Agronomy laboratories	$150,000	$0
Rural leadership project	141,252	0
Seed cleaning plants	4,408,224	0
Upper great plains transportation institute road study	628,823	0
Junior master gardener program	12,500	0
Veterinary diagnostic laboratory	18,000,000	0
Dust issues technical support	100,000	0
Land purchase - Langdon	350,000	0
Flooded lands study	67,952	0
Total all funds	$23,858,751	$0
Total other funds	21,325,000	0
Total general fund	$2,533,751	$0

SECTION 3. ADDITIONAL INCOME - APPROPRIATION. In addition to the amount included in the grand total other funds appropriation line item in section 1 of this Act, any other income, including funds from federal acts, private grants, gifts, and donations, or from other sources received by the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, except as otherwise provided by law, is appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 4. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 5. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME - REPORT. The Williston research extension center shall report to the sixty-sixth legislative assembly on amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2015, and ending June 30, 2017, and the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 6. TRANSFER AUTHORITY. Upon approval of the state board of agricultural research and education and appropriate branch research center directors, the director of the main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of section 1 of this Act. Any amounts transferred must be reported to the director of the office of management and budget.

SECTION 7. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS. The state board of higher education may adjust or increase full-time equivalent positions as needed for the entities in section 1 of this Act, subject to availability of funds. All full-time or part-time positions must be separate from North Dakota state university. Annually, the board shall report to the office of management and budget and to the budget section any adjustments made pursuant to this section.

SECTION 8. UNEXPENDED GENERAL FUND - EXCESS INCOME. Any unexpended general fund appropriation authority to and any excess income received by entities listed in section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or revenues are available and may be expended by those entities, during the biennium beginning July 1, 2019, and ending June 30, 2021.

Sixty-fifth
Legislative Assembly
of North Dakota

SENATE BILL NO. 2080

Introduced by

Appropriations Committee

(At the request of the Governor)

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; and to provide an exemption.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the purpose of defraying the expenses of the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the biennium beginning July 1, 2017, and ending June 30, 2019, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	Base Level	Adjustments or Enhancements	Appropriation
Extension service	$52,517,908	$37,277	$52,555,185
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($4,565)	$53,646,705
Less estimated income	25,826,708	941,881	26,768,589

Total general fund	$27,824,562	($946,446)	$26,878,116
Full-time equivalent positions	263.91	10.93	252.98

Subdivision 2.

NORTHERN CROPS INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Northern crops institute	$3,712,202	$1,243	$3,713,445
Total all funds	$3,712,202	$1,243	$3,713,445
Less estimated income	1,747,735	10,008	1,757,743
Total general fund	$1,964,467	($8,765)	$1,955,702
Full-time equivalent positions	12.00	(0.20)	11.80

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Upper great plains transportation institute	$22,076,448	$145,575	$22,222,023
Total all funds	$22,076,448	$145,575	$22,222,023
Less estimated income	18,175,657	482,465	18,658,122
Total general fund	$3,900,791	($336,890)	$3,563,901
Full-time equivalent positions	54.98	(11.10)	43.88

Subdivision 4.

MAIN RESEARCH CENTER

	Base Level	Adjustments or Enhancements	Appropriation
Main research center	$110,529,780	$11,812	$110,541,592
Total all funds	$110,529,780	$11,812	$110,541,592
Less estimated income	56,948,525	2,263,756	59,212,281
Total general fund	$53,581,255	($2,251,944)	$51,329,311
Full-time equivalent positions	353.85	(17.73)	336.12

Subdivision 5.

RESEARCH CENTERS

	Base Level	Adjustments or Enhancements	Appropriation
Dickinson research center	$6,996,678	($48,789)	$6,947,889
Central grasslands research center	3,531,779	(40,136)	3,491,643
Hettinger research center	5,086,767	(29,081)	5,057,686
Langdon research center	3,045,836	(25,004)	3,020,832
North central research center	5,044,213	(18,626)	5,025,587
Williston research center	5,267,400	(45,697)	5,221,703
Carrington research center	9,328,093	(18,220)	9,309,873
Total all funds	$38,300,766	($225,553)	$38,075,213
Less estimated income	19,817,130	492,980	20,310,110
Total general fund	$18,483,636	($718,533)	$17,765,103
Full-time equivalent positions	113.94	(3.65)	110.29

Subdivision 6.

AGRONOMY SEED FARM

	Base Level	Adjustments or Enhancements	Appropriation
Agronomy seed farm	$1,521,007	$17,788	$1,538,795
Total special funds	$1,521,007	$17,788	$1,538,795
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	Base Level	Adjustments or Enhancements	Appropriation
Grand total general fund	$105,754,711	($4,262,578)	$101,492,133
Grand total other funds	124,036,762	4,208,878	128,245,640
Grand total all funds	$229,791,473	($53,700)	$229,737,773

SECTION 2. ONE-TIME FUNDING. The following amounts reflect the one-time funding items approved by the sixty-fourth legislative assembly for the 2015-17 biennium:

One-Time Funding Description	2015-17	2017-19
Agronomy laboratories	$150,000	$0
Rural leadership project	141,252	0
Seed cleaning plants	4,408,224	0
Upper great plains transportation institute road study	628,823	0
Junior master gardener program	12,500	0
Veterinary diagnostic laboratory	18,000,000	0
Dust issues technical support	100,000	0
Land purchase - Langdon	350,000	0
Flooded lands study	67,952	0
Total all funds	$23,858,751	$0
Total other funds	21,325,000	0
Total general fund	$2,533,751	$0

SECTION 3. ADDITIONAL INCOME - APPROPRIATION. In addition to the amount included in the grand total special funds appropriation line item in section 1 of this Act, any other income, including funds from federal acts, private grants, gifts, and donations, or from other sources received by the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, except as otherwise provided by law, is appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 4. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 5. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Williston research extension center shall report to the sixty-sixth legislative assembly on amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2015, and ending June 30, 2017, and the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 6. TRANSFER AUTHORITY. Upon approval of the state board of agricultural research and education and appropriate branch research center directors, the director of the main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of section 1 of this Act. Any amounts transferred must be reported to the director of the office of management and budget.

SECTION 7. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS. The board of higher education may adjust or increase full-time equivalent positions as needed for the entities in section 1 of this Act, subject to availability of funds. The board shall report any adjustments to the office of management and budget prior to the submission of the 2019-21 budget request.

SECTION 8. UNEXPENDED GENERAL FUND - EXCESS INCOME. Any unexpended general fund appropriation authority to and any excess income received by entities listed in section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or revenues are available and may be expended by those entities, during the biennium beginning July 1, 2019, and ending June 30, 2021.

SECTION 9. EXEMPTION. The amounts appropriated for the veterinary diagnostic laboratory and the seed cleaning plants contained in subdivision 4 of section 1 of chapter 20 of the 2015 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2017, and ending June 30, 2019.

17.0528.02000

Sixty-fifth
Legislative Assembly
of North Dakota

FIRST ENGROSSMENT

ENGROSSED SENATE BILL NO. 2020

Introduced by

Appropriations Committee

A BILL for an Act to provide an appropriation for defraying the expenses of the North Dakota state university extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to amend and reenact sections 4-05.1-05 and 4-08-10 of the North Dakota Century Code, relating to main research center experiment station and extension service position adjustments; and to provide an exemption.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. APPROPRIATION. The funds provided in this section, or so much of the funds as may be necessary, are appropriated out of any moneys in the general fund in the state treasury, not otherwise appropriated, and from special funds derived from federal funds and other income, to the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the purpose of defraying the expenses of the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, for the biennium beginning July 1, 2017, and ending June 30, 2019, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	Base Level	Adjustments or Enhancements	Appropriation
Extension service	$52,517,908	($961,158)	$51,556,750
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,003,000)	$52,648,270

Less estimated income	25,826,708	847,676	26,674,384
Total general fund	$27,824,562	($1,850,676)	$25,973,886
Full-time equivalent positions	263.91	(10.93)	252.98

Subdivision 2.

NORTHERN CROPS INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Northern crops institute	$3,712,202	($66,993)	$3,645,209
Total all funds	$3,712,202	($66,993)	$3,645,209
Less estimated income	1,747,735	8,480	1,756,215
Total general fund	$1,964,467	($75,473)	$1,888,994
Full-time equivalent positions	12.00	(0.20)	11.80

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	Base Level	Adjustments or Enhancements	Appropriation
Upper great plains transportation institute	$22,076,448	($7,704)	$22,068,744
Total all funds	$22,076,448	($7,704)	$22,068,744
Less estimated income	18,175,657	447,773	18,623,430
Total general fund	$3,900,791	($455,477)	$3,445,314
Full-time equivalent positions	54.98	(11.10)	43.88

Subdivision 4.

MAIN RESEARCH CENTER

	Base Level	Adjustments or Enhancements	Appropriation
Main research center	$110,529,780	($1,812,588)	$108,717,192
Total all funds	$110,529,780	($1,812,588)	$108,717,192
Less estimated income	56,948,525	2,162,877	59,111,402
Total general fund	$53,581,255	($3,975,465)	$49,605,790
Full-time equivalent positions	353.85	(17.73)	336.12

Subdivision 5.

BRANCH RESEARCH CENTERS

	Base Level	Adjustments or Enhancements	Appropriation
Dickinson research extension center	$6,996,678	($167,861)	$6,828,817
Central grasslands research extension center	3,531,779	(105,667)	3,426,112
Hettinger research extension center	5,086,767	(108,523)	4,978,244
Langdon research extension center	3,045,836	(79,363)	2,966,473
North central research extension center	5,044,213	(87,451)	4,956,762
Williston research extension center	5,267,400	(145,037)	5,122,363
Carrington research extension center	9,328,093	(145,655)	9,182,438
Total all funds	$38,300,766	($839,557)	$37,461,209
Less estimated income	19,817,130	471,108	20,288,238
Total general fund	$18,483,636	($1,310,665)	$17,172,971
Full-time equivalent positions	113.94	(3.65)	110.29

Subdivision 6.

AGRONOMY SEED FARM

	Base Level	Adjustments or Enhancements	Appropriation
Agronomy seed farm	$1,521,007	$15,744	$1,536,751
Total special funds	$1,521,007	$15,744	$1,536,751
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	Base Level	Adjustments or Enhancements	Appropriation
Grand total general fund	$105,754,711	($7,667,756)	$98,086,955
Grand total other funds	124,036,762	3,953,658	127,990,420
Grand total all funds	$229,791,473	($3,714,098)	$226,077,375

SECTION 2. ONE-TIME FUNDING. The following amounts reflect the one-time funding items approved by the sixty-fourth legislative assembly as adjusted for the 2015-17 biennium:

One-Time Funding Description	2015-17	2017-19
Agronomy laboratories	$150,000	$0
Rural leadership project	141,252	0
Seed cleaning plants	4,408,224	0
Upper great plains transportation institute road study	628,823	0
Junior master gardener program	12,500	0
Veterinary diagnostic laboratory	18,000,000	0
Dust issues technical support	100,000	0
Land purchase - Langdon	350,000	0
Flooded lands study	67,952	0
Total all funds	$23,858,751	$0
Total other funds	21,325,000	0
Total general fund	$2,533,751	$0

SECTION 3. ADDITIONAL INCOME - APPROPRIATION. In addition to the amount included in the grand total other funds appropriation line item in section 1 of this Act, any other income, including funds from federal acts, private grants, gifts, and donations, or from other sources received by the North Dakota state university extension service, the northern crops institute, the upper great plains transportation institute, the main research center, branch research centers, and agronomy seed farm, except as otherwise provided by law, is appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 4. AMENDMENT. Section 4-05.1-05 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-05. North Dakota state university main research center position adjustments - Budget section report.

The North Dakota state university main research center must be located on the campus of North Dakota state university of agriculture and applied science. The center is the administrative location of the agricultural experiment station. The center shall conduct research and coordinate all research activities of the agricultural experiment station. The research must have, as a

purpose, the development and dissemination of technology important to the production and utilization of food, feed, fiber, and fuel from crop and livestock enterprises. The research must provide for an enhancement of the quality of life, sustainability of production, and protection of the environment. Subject to the availability of funds, the station director may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the agricultural experiment station. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full or partial positions must be separate from North Dakota state university. Annually, the station director shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section. The center may conduct baseline research, including production and processing in conjunction with the research and extension centers of the state, regarding industrial hemp and other alternative industrial use crops. The center may collect feral hemp seed stock and develop appropriate adapted strains of industrial hemp which contain less than three-tenths of one percent tetrahydrocannabinol in the dried flowering tops. The agriculture commissioner shall monitor the collection of feral hemp seed stock and industrial hemp strain development and shall certify appropriate stocks for licensed commercial cultivation.

SECTION 5. AMENDMENT. Section 4-08-10 of the North Dakota Century Code is amended and reenacted as follows:

4-08-10. Extension agent to submit monthly account of expenditures - Position adjustments - Budget section report.

The extension agent shall submit monthly an accurate itemized account of all expenditures incurred by the agent in the regular conduct of duties to the North Dakota state university extension service for examination and audit. When charges are made by an extension agent for money expended in the performance of official duties, all items of one dollar or more expended and charged for must be covered by a subvoucher or receipt that must be signed by the person to whom the money was paid. The subvoucher or receipt must show at what place, on what date, and for what the money expended was paid. The extension agent shall forward the subvouchers or receipts with the bill, claim, account, or demand against the county. When charges are made for transportation expenses, they may not exceed the amounts provided by section 11-10-15, and must be in itemized form showing the mileage traveled, the days when

and how traveled, and the purpose thereof, verified by affidavit. The account must be transmitted and recommended for payment by the North Dakota state university extension service which shall audit the same and which may approve or disallow any expense item therein. The state board of agricultural research and education and the president of North Dakota state university shall control and administer the North Dakota state university extension service subject to the supervision of the state board of higher education. Funds appropriated to the North Dakota state university extension service may not be commingled with funds appropriated to North Dakota state university. An appropriation request to defray expenses of the North Dakota state university extension service must be separate from an appropriation request to defray expenses of North Dakota state university. Subject to the availability of funds, the director of the North Dakota state university extension service may adjust or increase full-time equivalent positions in order to carry out activities to accomplish the mission of the extension service. Twelve-month employees whose employment is not limited in duration must accrue leave pursuant to provisions of section 54-06-14. All full- or part-time positions must be separate from North Dakota state university. Annually, the director of the North Dakota state university extension service shall report to the office of management and budget and to the budget section any adjustments or increases made pursuant to this section.

SECTION 6. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend up to $755,000 of revenues received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 7. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME - REPORT. The Williston research extension center shall report to the sixty-sixth legislative assembly on amounts received and spent from mineral royalties, leases, or easements in the biennium beginning July 1, 2015, and ending June 30, 2017, and the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 8. TRANSFER AUTHORITY. Upon approval of the state board of agricultural research and education and appropriate branch research center directors, the director of the main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of

section 1 of this Act. Any amounts transferred must be reported to the director of the office of management and budget.

SECTION 9. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS. The state board of higher education may adjust or increase full-time equivalent positions as needed for the entities in section 1 of this Act, subject to availability of funds. All full-time or part-time positions must be separate from North Dakota state university. Annually, the board shall report to the office of management and budget and to the budget section any adjustments made pursuant to this section.

SECTION 10. UNEXPENDED GENERAL FUND - EXCESS INCOME. Any unexpended general fund appropriation authority to and any excess income received by entities listed in section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or revenues are available and may be expended by those entities, during the biennium beginning July 1, 2019, and ending June 30, 2021.

SECTION 11. EXEMPTION. The amounts appropriated for the veterinary diagnostic laboratory and the seed cleaning plants contained in subdivision 4 of section 1 of chapter 20 of the 2015 Session Laws, are not subject to the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or related revenues are available and may be expended during the biennium beginning July 1, 2017, and ending June 30, 2019.

Extension Service, Main, and Branch Research Centers
Reconciliation of 2015-17 Original General Fund Appropriation to 2017-19 Executive Recommendation (SB 2020 /2080) to Senate Version SB 2020

	Extension Service	Main Research Center	Branch Research Centers
2015-17 Original General Fund Appropriation	**$ 29,788,188**	**$ 59,067,612**	**$ 20,073,447**
Reduction of 6.55% for Allotment	**$ (1,951,126)**	**$ (3,868,929)**	**$ (1,314,811)**
	27,837,062	**55,198,683**	**18,758,636**
Less: Capital and One-time	(12,500)	(1,617,428)	(275,000)
2015-17 Adjusted Appropriation	**27,824,562**	**53,581,255**	**18,483,636**
2017-19 Changes in Executive Recommendation (SB 2080)			
Adjustment between Allotment and Gov. Guidelines (10% Gov vs. 6.55% Allotment)	(1,026,443)	(1,970,656)	(665,035)
Base payroll adjustment	302,125	596,490	181,396
1% salary/benefit increase FY19 and 2018-19 health insurance increases	495,078	851,324	303,670
Change in Bond payments	-	42,448	15,056
Funding change GF to Special	(200,000)	(1,600,000)	(350,000)
Equipment Reduction	-	(100,000)	(175,000)
Reduction in Health Insurance for decreased FTE	(37,206)	(71,550)	(28,620)
Further Reduction	(480,000)	-	-
Total Changes	(946,446)	(2,251,944)	(718,533)
Executive Recommendation	**$ 26,878,116**	**$ 51,329,311**	**$ 17,765,103**
Gov. Burgum Proposed Adjustments:			
Remove compensation adjustment 1%	(97,887)	(183,642)	(59,179)
Remove 5% Health Insurance	(208,071)	(349,770)	(128,079)
Reduction of 3% General Fund	(806,343)	(1,539,879)	(532,953)
Total Proposed Adjustments	(1,112,301)	(2,073,291)	(720,211)
Gov. Burgum Adjustments included by Senate:			
Remove Compensation	$ (97,887)	$ (183,642)	$ (59,179)
Reduction	$ (806,343)	$ (1,539,879)	$ (532,953)
Total	**$ (904,230)**	**$ (1,723,521)**	**$ (592,132)**
Appropriation	**$ 25,973,886**	**$ 49,605,790**	**$ 17,172,971**

No optional items submitted were funded in the Executive Recommendation

Reconciliation of 2015-17 Original Other Fund Appropriation to 2017-19 Executive Recommendation (SB 2020 / 2080) to Senate Version SB 2020

2015-17 Original Other Fund Appropriation	**$ 25,826,708**	**$ 78,098,525**	**$ 19,992,130**
Remove Capital Project	-	(21,150,000)	(175,000)
2015-17 Adjusted Other Fund Appropriation / SB 2020 Appropriation	**$ 25,826,708**	**$ 56,948,525**	**$ 19,817,130**
2017-19 Changes in Executive Recommendation (SB 2080)			
Base Payroll adjustments	265,427	196,105	30,744
1% salary/benefit increase FY19 and 2018-19 health insurance increases	476,454	467,651	112,236
Other changes in estimated income	200,000	1,600,000	350,000
SB 2080 Other Fund changes	**941,881**	**2,263,756**	**492,980**
Executive Recommendation - Other Funds	**$ 26,768,589**	**$ 59,212,281**	**$ 20,310,110**
Gov. Burgum Proposed Adjustments:			
Remove compensation increase 1%	(94,205)	(100,879)	(21,872)
Remove 5% Health Insurance	(200,244)	(192,136)	(47,338)
Total Proposed Adjustments	(294,449)	(293,015)	(69,210)
Gov. Burgum Reductions included by Senate:			
Remove Compensation increase	(94,205)	(100,879)	(21,872)
Appropriation, Other Funds	$ 26,674,384	$ 59,111,402	$ 20,288,238
Total All Funds	$ 52,648,270	$ 108,717,192	$ 37,461,209

Branch Research Centers Detail
Reconciliation of 2015-17 Original General Fund Appropriation to 2017-19 Executive Recommendation (SB 2020 / 2080) to Senate Version SB 2020

	Dickinson REC	Central Grasslands REC	Hettinger REC	Langdon REC	North Central REC	Williston REC	Carrington REC	Total
2015-17 Original General Fund Appropriation	**$ 3,992,095**	**$ 2,302,107**	**$ 2,510,254**	**$ 2,004,271**	**$ 2,179,057**	**$ 3,155,573**	**$ 3,930,090**	**$ 20,073,447**
Reduction of 6.55% for Allotment	**$ (261,483)**	**$ (150,788)**	**$ (164,421)**	**$ (131,280)**	**$ (142,728)**	**$ (206,690)**	**$ (257,421)**	**$ (1,314,811)**
	3,730,612	**2,151,319**	**2,345,833**	**1,872,991**	**2,036,329**	**2,948,883**	**3,672,669**	**18,758,636**
Less: Capital and One-time	(100,000)			(175,000)				(275,000)
2015-17 Adjusted Appropriation	**3,630,612**	**2,151,319**	**2,345,833**	**1,697,991**	**2,036,329**	**2,948,883**	**3,672,669**	**18,483,636**
2017-19 Changes in Executive Recommendation (SB 2080)								
Adjustment between Allotment and Gov. Guidelines (10% Gov vs. 6.55% Allotment)	(127,727)	(79,423)	(86,604)	(51,647)	(75,178)	(108,867)	(135,588)	(665,034)
Base payroll adjustment	34,610	27,255	22,330	16,560	29,819	24,560	41,212	196,346
1% salary/benefit increase FY19 and 2018-19 health insurance increases	48,089	39,584	43,101	29,528	31,079	48,007	64,283	303,671
Change in Bond payments	-	40	-	-	64	-	-	104
Funding change GF to Special	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	(350,000)
Equipment Reduction	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)	(25,000)	(175,000)
Reduction in Health Insurance for decreased FTE	(5,724)	(4,293)	(2,862)	(2,862)	(4,293)	(2,862)	(5,724)	(28,620)
Total Changes	(125,752)	(91,837)	(99,035)	(83,421)	(93,509)	(114,162)	(110,817)	(718,533)
Executive Recommendation	**3,504,860**	**2,059,482**	**2,246,798**	**1,614,570**	**1,942,820**	**2,834,721**	**3,561,852**	**17,765,103**
Gov. Burgum Adjustments included by Senate:								
Remove compensation increase	(11,292)	(7,036)	(7,285)	(5,403)	(6,705)	(8,013)	(13,445)	(59,179)
Additional 3% Reduction	(106,591)	(58,625)	(69,284)	(47,965)	(58,625)	(85,272)	(106,591)	(532,953)
Total Reductions - Gov. Burgum / Senate	(117,883)	(65,661)	(76,569)	(53,368)	(65,330)	(93,285)	(120,036)	(592,132)
Appropriation	**$ 3,386,977**	**$ 1,993,821**	**$ 2,170,229**	**$ 1,561,202**	**$ 1,877,490**	**$ 2,741,436**	**$ 3,441,816**	**$ 17,172,971**

No optional items submitted were funded in the Executive Recommendation

Reconciliation of 2015-17 Original Other Fund Appropriation to 2017-19 Executive Recommendation (SB 2020 / 2080) to Senate Version SB 2020

2015-17 Original Other Fund Appropriation	**$ 3,366,067**	**$ 1,380,460**	**$ 2,740,933**	**$ 1,522,845**	**$ 3,007,884**	**$ 2,318,517**	**$ 5,655,424**	**$ 19,992,130**
Adjustments				(175,000)				**(175,000)**
2015-17 Adjusted Other Fund / SB 2020 Appropriation	**3,366,067**	**1,380,460**	**2,740,933**	**1,347,845**	**3,007,884**	**2,318,517**	**5,655,424**	**19,817,130**
Executive Recommendation Increases (Decreases):								
Base Payroll adjustments	21,220	2,045	10,347	6,692	1,548	3,366	(14,474)	30,744
1% salary/benefit increase FY19 and 2018-19 health insurance increases	9,471	1,666	9,987	2,625	22,051	13,999	52,437	112,236
Estimated income increase	50,000	50,000	50,000	50,000	50,000	50,000	50,000	350,000
SB 2080 Other Fund changes	**80,691**	**53,711**	**70,334**	**59,317**	**73,599**	**67,365**	**87,963**	**492,980**
Executive Recommendation - Other Funds	**3,446,758**	**1,434,171**	**2,811,267**	**1,407,162**	**3,081,483**	**2,385,882**	**5,743,387**	**20,310,110**
Gov. Burgum Reductions included by Senate:								
Remove compensation increase	(4,918)	(1,880)	(3,252)	(1,891)	(2,211)	(4,955)	(2,765)	(21,872)
Total Other Funds	3,441,840	1,432,291	2,808,015	1,405,271	3,079,272	2,380,927	5,740,622	20,288,238
Total All Funds	**$ 6,828,817**	**$ 3,426,112**	**$ 4,978,244**	**$ 2,966,473**	**$ 4,956,762**	**$ 5,122,363**	**$ 9,182,438**	**$ 37,461,209**

NDSU Extension Service - 630

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total General Fund Appropriation	**$27,837,061**	**20,608,774**	**7,228,287**	**No major variances. Balance will be drawn down for expenditures by end of biennium.**

Source: January 2017 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Main Research Station - 640

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total General Fund Appropriation	*** $55,698,821**	**$38,394,862**	**17,303,959**	**No major variances. Balance will be drawn down for expenditures by end of biennium.**

Source: January 2017 Appropriation Status Report

Note: uncertain changes expected to Federal funding levels.

NDSU Dickinson Research Center- 641

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total General Fund Appropriation	$ 3,730,612	$ 2,614,030	1,116,582	**No major variances. Balance will be drawn down for expenditures by end of biennium.**

Source: January 2017 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Central Grasslands Research Center- 642

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total General Fund Appropriation	$ 2,151,319	$ 1,685,027	466,292	**No major variances. Balance will be drawn down for expenditures by end of biennium.**

Source: January 2017 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Hettinger Research Center- 643

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total General Fund Appropriation	**$ 2,345,833**	**$ 1,938,755**	**407,078**	**No major variances. Balance will be drawn down for expenditures by end of biennium.**

Source: January 2017 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Langdon Research Center- 644

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total General Fund Appropriation	**$ 1,872,991**	**$ 1,432,178**	**440,813**	**No major variances. Balance will be drawn down for expenditures by end of biennium.**

Source: January 2017 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU North Central Research Center- 645

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total General Fund Appropriation	**$ 2,036,329**	**$ 1,460,420**	**575,909**	**No major variances. Balance will be drawn down for expenditures by end of biennium.**

Source: January 2017 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Williston Research Center- 646

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total General Fund Appropriation	**$ 2,948,883**	**$ 2,213,492**	**735,391**	**No major variances. Balance will be drawn down for expenditures by end of biennium.**

Source: January 2017 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Carrington Research Center- 647

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total General Fund Appropriation	**$ 3,672,669**	**$ 2,618,565**	**1,054,104**	**No major variances. Balance will be drawn down for expenditures by end of biennium.**

Source: January 2017 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

NDSU Agronomy Seed Farm- 649

Comparison of 2015-17 Appropriation and Estimated Spending

	2015-17 Appropriation	Actual Expenditures Through 01/31/17	Remaining Balance	Comments
Total Appropriation	**$ 1,521,007**	**$ 1,024,024**	**496,983**	

Source: January 2017 Appropriation Status Report

Note: No significant changes anticipated in federal formula funds or federal grants

640 - Main Research Center

"Original 2015-17 budget and the effects of the budget reductions approved August 2016"

Total Budget

	Original Appropriations	Reductions	Adjusted Appropriations
Total all funds	$137,166,137	($3,868,929)	$133,297,208
Less estimated income	78,098,525	0	78,098,525
Total general fund	$59,067,612	($3,868,929)	$55,198,683

One-Time, General Fund

Original One-time items	Original Appropriations	Reductions	Adjusted Appropriations
Rural leadership project	$150,000	($8,748)	$141,252
Flooded lands study	72,500	($4,548)	67,952
Seed cleaning plants	1,500,000	($91,776)	1,408,224
Total	$1,722,500	($105,072)	$1,617,428

Ongoing, General Fund

Programs	Original Ongoing Appropriations	Ongoing Appropriation Reductions	Adjusted Ongoing Appropriations
Main Research Center	$57,345,112	($3,763,857)	$53,581,255

Effects of the allotment:

The Main Station addressed the allotment with a combination of operating and position cuts. Positions are frozen as they become vacant. If a position is deemed critical, a recruitment may take place. A Voluntary Separation Incentive Program was initiated and resulted in a reduction of 7.53 FTE with annual Main Station salaries totaling $605,671. Operating allocations were reduced by 10% in FY 2017. Equipment funds were reduced.

630 - NDSU Extension Service

"Original 2015-17 budget and the effects of the budget reductions approved August 2016"

Total Budget

	Original Appropriations	Reductions	Adjusted Appropriations
Extension service	$54,402,096	($1,871,688)	$52,530,408
Soil conservation committee	1,212,800	(79,438)	1,133,362
Total all funds	$55,614,896	($1,951,126)	$53,663,770
Less estimated income	25,826,708	0	25,826,708
Total general fund	$29,788,188	($1,951,126)	$27,837,062

One-Time, General Fund

One-time items	Original Appropriations	Reductions	Adjusted Appropriations
Burleigh Co Junior Master Gardener Program	$12,500		$12,500
Total	$12,500	$0	$12,500

Ongoing, General Fund

Programs	Original Ongoing Appropriations	Ongoing Appropriation Reductions	Adjusted Ongoing Appropriations
Extension service	$28,562,888	($1,871,688)	$26,691,200
Soil conservation committee	$1,212,800	($79,438)	$1,133,362

Effects of the allotment:

The NDSU Extension Service addressed the allotment with a combination of operating and position cuts. Positions are frozen as they become vacant. If a position is deemed critical, a recruitment may take place. A Voluntary Separation Incentive Program was initiated and resulted in a reduction of 5.27 FTE with annual NDSU Extension Service salaries totaling $385,462. Operating allocations were reduced by 10% in FY 2017.

628 - Branch Research Centers

"Original 2015-17 budget and the effects of the budget reductions approved August 2016"

Total Budget

Line item	Original Appropriations	Reductions	Adjusted Appropriations
Dickinson REC	$7,358,161	($261,483)	$7,096,678
Central Grasslands REC	3,682,567	(150,788)	3,531,779
Hettinger REC	5,251,188	(164,421)	5,086,767
Langdon REC	3,527,116	(131,280)	3,395,836
North Central REC	5,186,941	(142,728)	5,044,213
Williston REC	5,474,090	(206,690)	5,267,400
Carrington REC	9,585,514	(257,421)	9,328,093
Total all funds	$40,065,577	($1,314,811)	$38,750,766
Less estimated income	19,992,130	0	19,992,130
Total general fund	$20,073,447	($1,314,811)	$18,758,636

One-Time, General Fund

One-time items	Original Appropriations	Reductions	Adjusted Appropriations
Dust issues tech support - DREC	$100,000		$100,000
Cavalier County property purchase	175,000		175,000
Total	$275,000	$0	$275,000

Ongoing, General Fund

Programs	Original Ongoing Appropriations	Ongoing Appropriation Reductions	Adjusted Ongoing Appropriations
Dickinson research center	$3,892,095	($261,483)	$3,630,612
Central grasslands research center	$2,302,107	($150,788)	$2,151,319
Hettinger research center	$2,510,254	($164,421)	$2,345,833
Langdon research center	$1,829,271	($131,280)	$1,697,991
North central research center	$2,179,057	($142,728)	$2,036,329
Williston research center	$3,155,573	($206,690)	$2,948,883
Carrington research center	$3,930,090	($257,421)	$3,672,669
	$19,798,447	($1,314,811)	$18,483,636

Effects of the allotment:

The Branch Stations addressed the allotment with a combination of operating and position cuts. Positions are frozen as they become vacant. If a position is deemed critical, a recruitment may take place. A Voluntary Separation Incentive Program was initiated and resulted in a reduction of 3.0 FTE with annual Branch Station salaries totaling $151,021. Operating allocations were reduced by 10% in FY 2017. Equipment funds were reduced.

The 10% adjustment necessary to meet the Governor's Budget request guideline was entered into IBARS via Change Package AA1 and described as follows:

NDSU Extension Service

The Governor's budget guidelines called for all state agencies to submit a 90 percent budget request. The 10 percent reduction equals $2,977,569 for Extension. To meet this amount, Extension would eliminate 10 positions ($1.6M) in administration, state specialist, area specialist, county, technician, and support staff positions. The budget for new equipment purchases would be reduced by $300,000 and operating budgets would be reduced by $956,289. Extension program areas in agriculture, 4-H, family and consumer sciences, and agricultural communications would be affected.

Funding for Soil Conservation Committee assistance would be reduced by 10% ($121,280).

Branch RECs

The Governor's budget guidelines called for all state agencies to submit a 90 percent budget request. The Directors of the REC collectively proposed a reduction strategy that was approved by SBARE on August 2, 2016. The plan calls for a reduction of General Funded posiitons, reduced State Fleet vehicles, reduced travel, and a shifting of expenses from General Fund to Other Funds.

Between elimination and shifting to Other Fund sources (if available), General Fund FTE are estimated to be reduced as follows:
DREC 2.0 FTE up to $330,000 biennial impact
CGREC 1.0 FTE up to $120,000 biennial impact
HREC 1.5 FTE up to $200,000 biennial impact
LREC 1.0 FTE up to $80,000 biennial impact
NCREC 1.5 FTE up to $180,000 biennial impact
WREC 1.0 FTE up to $165,000 biennial impact
CREC 2.0 FTE up to $250,000 biennial impact
Total 10.0 FTE up to $1,325,000 biennial impact
The remaining $654,845 reduction is from operating expenses.

Main Station

The Governor's budget guidelines called for all state agencies to submit a 90 percent budget request. The 10 percent reduction equals $5,734,511 for the Main Station. To meet this amount, the Main Station would eliminate 25 FTE ($4.25 M) in administrative, faculty, technical, and support staff positions. Operating budgets would be reduced by $1,484,511 through strategic program cuts and/or closures, as approved by the State Board of Agricultural Research and Education.

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Transmittal Letter

March 14, 2016

The Honorable Jack Dalrymple, Governor

Members of the North Dakota Legislative Assembly

State Board of Higher Education

Dr. Dean Bresciani, President, North Dakota State University

We are pleased to submit this audit of North Dakota State University for the biennium ended June 30, 2015. This audit resulted from the statutory responsibility of the State Auditor to audit or review each state agency once every two years. The same statute gives the State Auditor the responsibility to determine the contents of these audits.

In determining the contents of the audits of state agencies, the primary consideration was to determine how we could best serve the citizens of the state of North Dakota. Naturally we determined financial accountability should play an important part of these audits. Additionally, operational accountability is addressed whenever possible to increase efficiency and effectiveness of state government.

The in-charge auditor for this audit was Cory Wigdahl, CFE. Robyn Hoffmann, CPA was the audit manager. Inquiries or comments relating to this audit may be directed to the audit manager by calling (701) 239-7291. We wish to express our appreciation to President Bresciani and his staff for the courtesy, cooperation, and assistance they provided to us during this audit. Respectfully submitted,

Robert R. Peterson
State Auditor

Executive Summary

Introduction

North Dakota State University is distinctive as a student-focused, land-grant, Research University, ranked by the Carnegie Commission on Higher Education among the top 108 public and private universities in the country. NDSU is in the elite category of "Research Universities/Very High Research Activity," with several programs ranked in the Top 100 by the National Science Foundation. NDSU is fully accredited as an institution by the Higher Learning Commission of the North Central Association of Colleges and Secondary Schools.

The Legislative Audit and Fiscal Review Committee (LAFRC) requests that certain items be addressed by auditors performing audits of state agencies. Those items and the Office of the State Auditor's responses are noted below.

Responses to LAFRC Audit Questions

1 . *What type of opinion was issued on the financial statements?*
The financial statements for North Dakota State University were included in the Annual Financial Report of the North Dakota University System; an unmodified opinion was issued on the annual financial report of the North Dakota University System.

2. *Was there compliance with statutes, laws, rules, and regulations under which the agency was created and is functioning?*

   Other than our findings addressing "Noncompliance with Public Improvement Bidding" (page 23), North Dakota State University was in compliance with significant statutes, laws, rules, and regulations under which it was created and is functioning.

3. *Was internal control adequate and functioning effectively?* Yes.

4. *Were there any indications of lack of efficiency in financial operations and management of the agency?*

   Yes, there was one reportable indication of a lack of efficiency in financial operations and management of North Dakota State University addressing "Noncompliance with Public Improvement Bidding" (page 23).

5. *Has action been taken on findings and recommendations included in prior audit reports?* Yes,

   all prior findings were implemented.

6. *Was a management letter issued? If so, provide a summary below, including any recommendations and the management responses.*

   Yes, a management letter was issued and is included on page 26 of this report, along with management's response.

LAFRC Audit Communications

7. *Identify any significant changes in accounting policies, any management conflicts of interest, any contingent liabilities, or any significant unusual transactions.*

   In fiscal year 2015, North Dakota State University changed accounting policies related to pensions by adopting Statement No. 68, *Accounting and Financial Reporting for Pensions.* There were no management conflicts of interest or significant unusual transactions noted.

8. *Identify any significant accounting estimates, the process used by management to formulate the accounting estimates, and the basis for the auditor's conclusions regarding the reasonableness of those estimates.*

   The most significant accounting estimates used by North Dakota State University include useful lives of capital assets and allowance for uncollectible receivables. Estimated useful lives are used to compute depreciation on capital assets and are based on industry standards and experience. Management's estimate of the allowance is based on aging categories and past history. We evaluated the key factors and assumptions used to develop the estimated useful lives and allowances in determining that they are reasonable in relation to the financial statements taken as a whole.

9. *Identify any significant audit adjustments.*

   There were no significant audit adjustments.

10. *Identify any disagreements with management, whether or not resolved to the auditor's satisfaction relating to a financial accounting, reporting, or auditing matter that could be significant to the financial statements.* None.

11. *Identify any serious difficulties encountered in performing the audit.* None.

12. *Identify any major issues discussed with management prior to retention.*

    This is not applicable for audits conducted by the Office of the State Auditor.

13. *Identify any management consultations with other accountants about auditing and accounting matters.* None.

14. *Identify any high-risk information technology systems critical to operations based on the auditor's overall assessment of the importance of the system to the agency and its mission, or whether any exceptions identified in the six audit report questions to be addressed by the auditors are directly related to the operations of an information technology system.*

    ConnectND Finance, Human Resource Management System (HRMS), and Campus Solutions are high-risk information technology systems critical to North Dakota State University. No exceptions related to the operations of an information technology system were noted.

Audit Objectives, Scope, and Methodology

Audit Objectives

The objectives of this audit of North Dakota State University for the biennium ended June 30, 2015 were to provide reliable, audited financial statements and to answer the following questions:

1. What are the highest risk areas of North Dakota State University's operations and is internal control adequately designed in these areas?
2. What are the significant and high-risk areas of legislative intent applicable to North Dakota State University and are they in compliance with these laws?
3. Are there areas of North Dakota State University's operations where we can help to improve efficiency or effectiveness?

Audit Scope

This audit of North Dakota State University is for the biennium ended June 30, 2015. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives,

North Dakota State University's main campus is in Fargo, with Extension Service and Research Experiment Station locations all across the state. All locations were included in the audit scope.

Audit Methodology

To meet the objectives outlined above, we:

- Prepared condensed financial statements from the fiscal years 2015 and 2014 annual financial reports of the North Dakota University System and developed a discussion and analysis of the financial statements.
- Performed detailed analytical procedures including computer-assisted auditing techniques. These procedures were used to identify high-risk transactions and potential problem areas for additional testing.
- Tested internal control and compliance with laws and regulations which included selecting representative samples to determine if laws were being followed consistently. Non-statistical sampling was used and the results were projected to the population. Where applicable, populations were stratified to ensure that particular groups within a population were adequately represented in the sample, and to improve efficiency by gaining greater control on the composition of the sample.
- Tested potential improvements to operations.
- Reviewed segregation of duties in all program areas.
- Interviewed appropriate agency personnel.
- Queried the ConnectND (PeopleSoft) system. Significant evidence was obtained from ConnectND.
- Observed North Dakota State University's processes and procedures.

In aggregate there were no significant limitations or uncertainties related to our overall assessment of the sufficiency and appropriateness of audit evidence.

Discussion and Analysis

The accompanying financial statements have been prepared in a condensed form to present North Dakota State University's financial position and results of operations in a manner similar to that used for financial reporting in the private sector. Also, the related note disclosures have not been included in this report. Accordingly, the accompanying financial statements are not intended to be presented in accordance with generally accepted accounting principles (GAAP).

For the biennium ended June 30, 2015, operations of North Dakota State University were primarily supported by appropriations from the state's general fund. This is supplemented by federal funding and fees credited to the agency's operating fund.

Financial Summary

Assets increased $65 million in fiscal year 2015 due to:

- Accounts receivable increased $3.6 million due to recording a receivable for the Minard Hall settlement for $3 million;
- Due from the state general fund increase of $5 million was due to the timing of the state distribution of funds; and
- Capital assets increase of $57 million due to construction in progress additions of $23 million for the Sanford Health Athletic Complex, $14 million for the STEM building, and an increase in building additions of $19 million for Minard Hall, and $5 million for the Research building.

Liabilities increased $31 million in fiscal year 2015 due to:

- NDSU recorded $23 million pension liability because of the implementation of GASB 68, *Accounting and Financial Reporting for Pensions*;
- Accounts payable increased $5 million for an increase in payments to vendors for work done on the Sanford Health Athletic Complex and the STEM building; and
- Due to others increased $3 million because of an increase in bonds payable.

Revenues increased $35 million in fiscal year 2015 due to:

- $4.3 million increase in student tuition and fees reflects a 4.23% increase approved by the Board of Higher Education;
- $15.6 million increase in state appropriations-capital asset reflects the timing of drawdowns for the STEM building ($9.4 million), AES Beef Research facility ($4 million), and various capital improvements of $2.9 million; and
- $15 million increase in capital grants and gifts reflects funding received from the Foundations for the Sanford Health Athletic Complex.

Total expenses for North Dakota State University were $405,483,852 for the year ended June 30, 2015, as compared to $387,003,390 for the prior year. The increase in total expenses for the audited period reflects primarily salaries and wages ($13.6 million) and operating expenses ($5.8 million), which also account for 89% of total expenses in both years. The increase in salaries and wages was primarily due to an average increase of $3.1% in fiscal year 2015. The increase in operating expenses reflects an overall increase in utilities and repairs.
All other expenses remained fairly constant.

Analysis of Significant Changes in Operations

There were no significant changes in operations.

Analysis of Significant Variances - Budgeted and Actual Expenditures

There were no significant variance between budgeted and actual expenses.

North Dakota University System
Extension Service, Main & Branch Research Centers, and Agronomy Seed Farm
Major Components of current base level

	630 Extension	640 Main Station	641 Dickinson	642 Central Grasslands	643 Hettinger	644 Langdon	645 North Central	646 Williston	647 Carrington	649 Agronomy Seed Farm
Salaries	$ 44,764,402	$ 67,429,797	$ 3,484,657	$ 1,742,228	$ 2,513,421	$ 1,651,900	$ 2,757,304	$ 3,419,229	$ 4,960,666	$ 538,519
Operating	8,336,868	38,309,983	2,512,021	1,389,551	2,223,346	1,143,936	1,736,909	1,348,171	3,117,427	672,488
Equipment	550,000	4,790,000	1,000,000	400,000	350,000	250,000	550,000	500,000	1,250,000	310,000
Capital Projects	-	-	-	-	-	-	-	-	-	-
Total Budget	$ 53,651,270	$ 110,529,780	$ 6,996,678	$ 3,531,779	$ 5,086,767	$ 3,045,836	$ 5,044,213	$ 5,267,400	$ 9,328,093	$ 1,521,007
Funding:										
Federal Fund	$ 7,740,790	$ 8,419,260	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
General Fund	27,824,562	53,581,255	3,630,611	2,151,319	2,345,834	1,697,991	2,036,329	2,948,883	3,672,669	-
Special Fund	18,085,918	48,529,265	3,366,067	1,380,460	2,740,933	1,347,845	3,007,884	2,318,517	5,655,424	1,521,007
Total Funding	$ 53,651,270	$ 110,529,780	$ 6,996,678	$ 3,531,779	$ 5,086,767	$ 3,045,836	$ 5,044,213	$ 5,267,400	$ 9,328,093	$ 1,521,007

Source: IBARS 2015-17, Agency Submitted, less 6.55% allotment

North Dakota Agricultural Experiment Station

NDSU Extension Service

2017-2019
Biennial Budget Request

Senate Bill 2020
House Education and Environment Division
Representative David Monson, chair
March 7, 2017

NDSU NORTH DAKOTA STATE UNIVERSITY

County commissions, North Dakota State University and U.S. Department of Agriculture cooperating. NDSU does not discriminate in its programs and activities on the basis of age, color, gender expression/identity, genetic information, marital status, national origin, participation in lawful off-campus activity, physical or mental disability, pregnancy, public assistance status, race, religion, sex, sexual orientation, spousal relationship to current employee, or veteran status, as applicable. Direct inquiries to Vice Provost for Title IX/ADA Coordinator, Old Main 201, NDSU Main Campus, 701-231-7708, ndsu.eoaa.ndsu.edu. This publication will be made available in alternative formats for people with disabilities upon request, 701-231-7881.

SB 2020
3.7.2017
Att. 2

Dawson Schefter
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Langdon, ND 58249
(701) 370-3709
dawson.schefter@gmail.com

Chairman Monson and Members of the House Approp. Education and Environment Section:

I humbly offer my support for the preservation of current funding levels for the NDSU Extension Service as outlined in SB2020. Throughout my work with the NDSU Extension Service, I have come to hold their role in our communities, both large and small, to be of significant value. Extension Service programs are often born as a result of research and data collected by the agency. In addition, these programs frequently come to fruition as the result of partnerships between both public and private sector professionals who work in tandem to address a specific community need.

"Building Tomorrow's Leaders, Today" is one such program which I had the great pleasure of developing with the Cavalier County Extension Service. This program, targeted toward middle and high school students, focused on the importance of civic engagement and leadership principles. This program was born as a result of data collected by Community Forums which were hosted by the NDSU Extension Service in 2015. Throughout the development of the program, we consistently consulted the data collected by the agency relevant to ethical leadership and youth engagement in our communities. This data coupled with partners in local business and government fostered the development of a program which addressed a clearly defined lack of youth engagement and ethical leadership in Cavalier County and North Dakota as a whole. The program successfully certified twenty-four participants at no cost to the Extension Service as a result of generous private sector partnerships. Those twenty-four participants overwhelmingly responded with positive feedback; with 88% even responding that they felt better prepared to serve in a leadership role.

Without staffed Extension offices across the state and the resources to fund Extension response programs which are crafted after careful review of research and data collection, programs such as this would not exist; essentially diminishing the purpose of sound research efforts. The "Building Tomorrow's Leaders, Today" program is just one example of many researched-based programs available to schools, students, and communities alike throughout North Dakota. I strongly urge you to consider the impact of such programs when structuring the budget for the 2017-19 biennium.

Respectfully,

Dawson Schefter

SB 2020 3-7-2017 att 1

Carrington Research Extension Center
Central Grasslands Research Extension Center
Dickinson Research Extension Center
Hettinger Research Extension Center
Langdon Research Extension Center
North Central Research Extension Center
Williston Research Extension Center
Agronomy Seed Farm

Testimony to North Dakota House Appropriations Committee: SB 2020
March 7, 2017
North Dakota State University
NDSU Agriculture Research Extension Centers

Good afternoon, my name is Blaine Schatz, I am the director of the Carrington Research Extension Center. Representative Monson and House Appropriations Committee members, I thank you for the opportunity to address your committee. The CREC is dynamic part of NDSU agriculture's research and extension capacity that is responsible for supporting a major economic industry in the state, agriculture. There are times when the public under-estimates the significance of agriculture in the state, not realizing the tremendous crop diversity that exists, the opportunities presented by livestock enterprises, and the many businesses that provide services and processing of the crops and livestock we produce. However, agriculture is a challenging business and the sheer diversity of North Dakota's agriculture presents a wide array of issues that must be addressed to allow our producers to remain economically viable and competitive in the marketplace. Farmers and ranchers across the state are currently working through challenging economic times. The Agriculture Experiment Station and our Extension Service are really the front line of defense for addressing the challenges of our diverse agriculture and bringing guidance and new knowledge to the forefront for farmers and ranchers.

I began by stating that the CREC is an important part of NDSU Agriculture. Thanks to the foresight of the ND legislature over the years, SBARE and that of other decision makers including NDSU leadership, the CREC is positioned to address many of the challenges facing this diverse agriculture. The CREC's agronomy, pathology, soils, livestock and foundation seedstock programs continue to work on behalf of the many sectors of agriculture to answer new production problems. We are researching ways to reduce input costs or to use products and practices more efficiently. We are working with our Fargo based plant breeders to help identify improved crop varieties and then increase those through our foundation seedstocks program. The CREC listens closely to our advisory board and other constituent feedback to conduct a relevant research program addressing the traditional diversity of our agriculture. However, we also work hard to stay on the forefront of emerging issues and new agricultural opportunities. I recently redirected the efforts of one of my scientists to focus on issues related to precision agriculture, including the use of unmanned aerial system technologies. The many research projects and diversity of issues the CREC addresses would not be as effective if it were not for the presence of our Extension Specialists both at Carrington and across the state. Before I conclude I wish the extend my appreciation to this committee and the legislature last session which provided some funding toward improving the foundation seed conditioning infrastructure at Carrington and Minot. At Carrington we have used that funding to purchase new equipment, build a basic structure and now are implementing some of the electrical features and are preparing for installation of that equipment.

As I conclude, I wish to reiterate that NDSU Agriculture is well structured to support the agriculture industry in the state. We are on the frontlines to address the challenging economic times we now face and the new opportunities that are being presented for the future. I certainly understand the state is facing challenging economic times and we respect the difficult decisions your committee must make in the months ahead. I would ask that you positively consider the needs of NDSU Agriculture, just as you have in the past. The #1 SBARE priority has been discussed and I ask you to support that to the extent possible. You are aware that there are other issues that have been identified as SBARE priorities. These other priorities reflect the fact there are other important issues our constituency believe NDSU needs to address. Ultimately your determinations will define how well we are positioned to support agriculture in the years ahead. We appreciate your support and know that whatever budget results, will be used to the best of our ability to support the farmers, ranchers and agricultural industries across the state.

Blaine G. Schatz, Director
Carrington Research Extension Center
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Carrington, ND 58421-0219

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SB 2020 3-7-2017 att: 2

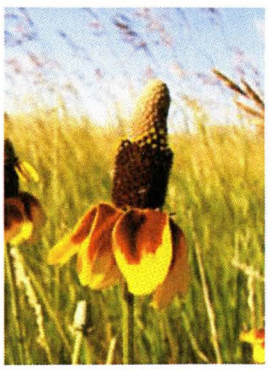
NDSU Central Grasslands Research Extension Center
Legislative Report – Senate Appropriations – SB 2020
March 7, 2017

Central Grasslands REC: 2015 – 2017 Extension Program

- Area Livestock Systems Specialist prioritized and taught three programmatic strategies while enhancing the visibility of the Center.
  - *Demonstration projects*
    - Engaged four ranchers to study effects of winter-time bale grazing. Designed to reduce input costs and use of fossil fuels, enhance land value by double use, enhance soil health
  - *Intense 2-day workshop on late-season grazing options in North Dakota*
    - Conducted within the Center's mission area in Jamestown – almost 100 ranchers attended
  - *Extension agent training workshops*
    - Helped teach 4 in-service training programs on determining pasture carrying capacity, pasture monitoring techniques, plant identification, and demonstrated late-season grazing strategies
    - Co-authored two extension publications and develop the Center's first newsletter distributed to our local ranchers and land managers

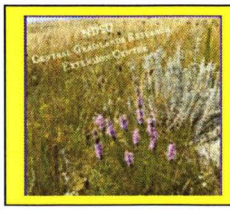
Central Grasslands REC: 2017 – 2019 Extension Program

- The Livestock Systems Specialist departed for a new job. She had the opportunity to go back home and work for Oregon State University
  - *The Center will lose this position without restoration of funds to the NDSU Extension budget*

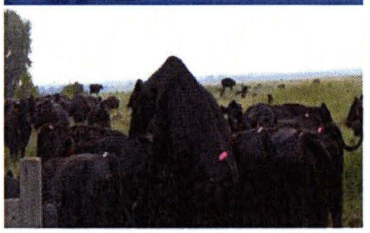


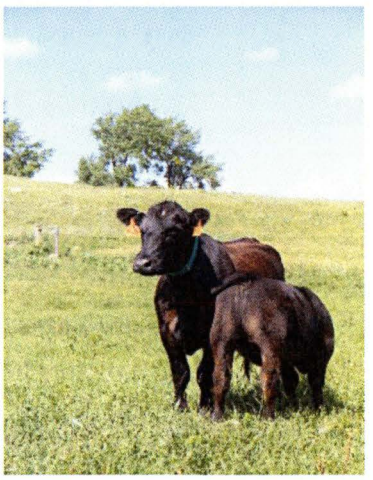
Central Grasslands REC Advisory Board Meeting: November 9, 2016

- Restored budget to 2015 – 2017 appropriations as ranked #1 for the NDSU Agricultural Experiment Station and NDSU Extension Service by the State Board of Agricultural Research and Education (SBARE)
- Hire vacancy positions (3 positions) at the Center
  - *#1 ranking – Range Scientist*
  - *#2 ranking – Extension Livestock Systems Specialist*



NDSU Central Grasslands Research Extension Center
Legislative Report: Senate Appropriations – SB 2020
March 7, 2017





Central Grasslands REC: 2015 – 2017 Update

- Completed Range and Forage Research laboratory. Partially funded (72 %) during 2013 – 2015 Legislative Session

Central Grasslands REC: 2015 – 2017 Research Programs

- Late-season grazing options to enhance value to cropland.
  - *Grazing corn residue with and without cover crop mixture*
  - *Bale grazing using selected supplements compared to traditional drylot winter feeding strategies*
    - Impacts on livestock performance and herd health.
    - Feeding efficiency
    - Soil health
- Enhancing reproductive efficiency of beef cows using new synchronized breeding program
  - *Allows for shorter calving season – increasing performance and adding value to the land*
  - *Allows for superior selection of breeding stock, improving herd genetics and long-term economic return to the rancher*
  - *Testing pre-breeding vaccines and injectable trace mineral supplements to improve herd health*
- Using new reproductive techniques through embryo transfer to enhance genetic traits of the cow herd

Central Grasslands REC: 2017 – 2019 Research Programs

- Implement an innovative strategy to support range research in times of reduced funding. Create four new applied range studies in 2017 to address grazing and disturbance ecology to enhance economic value to the land for ranchers, control invasive plants, create pollinator habitat, and develop higher quality habitat for wildlife
  - *Determine best stocking density to achieve optimum grazing efficiency*
  - *Study different disturbances, including grazing to reduce invasive plants, increase native plant diversity modify grazing distribution, improve soil health, and create sustainable cow herd on a limited land base*

SB 2020 3-7-2017 att: 3

NDSU | DICKINSON RESEARCH EXTENSION CENTER

Caring for People and Resources Since 1905

Research and Extension education opportunities

We are bringing the discussion to you! One-on-one presentations designed and developed to assist with management decisions.

Producer outcomes:

- Improved soil health
- More diversity per acre
- More pounds of forage per acre
- More pounds of beef per acre
- More dollars per acre

A Professional Partnership with Producers

Forage Alternatives
Doug Landblom
701-456-1109
douglas.landblom@ndsu.edu
Integrated crop and beef cattle research.

Cropping Systems
Ryan Buetow
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Area extension specialist working with producers.

Range Science
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Biologically effective grazing management.

Beef Management
Kris Ringwall, Ph. D.
701-456-1103
kris.ringwall@ndsu.edu
Beeftalk columnist and extension specialist.

Dickinson Research Extension Center

1041 State Avenue • Dickinson, ND 58601 • 701-456-1100

www.ag.ndsu.edu/DickinsonREC/

NDSU | DICKINSON RESEARCH EXTENSION CENTER

Our Mission . . .

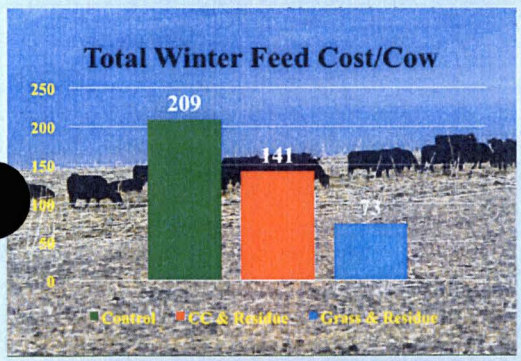
... at or near Dickinson in Stark County. The Center shall conduct research on native rangeland, beef cattle, and agricultural products of the soil with emphasis on conservation and preservation for future generations.

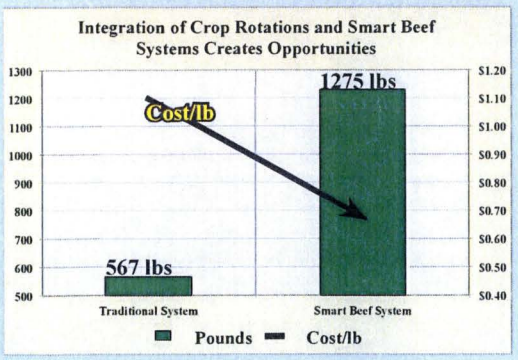
Crop and Forage Production

Cropping system solutions that improve soil health, increase grain/forage production and decrease cost.

Smart Beef Production

Integrating cropping systems research to more efficiently grow beef and increase value.





Sources: Dickinson Reearch Extension Center Annual Reports
•• Effect of Grazing Cover Crops, Stockpiled Improved Grass, and Crop Residues on Cow Wintering Performance, Economics, and Calving Rate -- Şentürklü S. and D. Landblom
•• Effect of Beef Cattle Frame Score, Forage Grazing Sequence, and Delayed Feedlot Entry on Yearling Steer Grazing and Feedlot Performance, Carcass Trait Measurements, and Systems Economics -- Şentürklü S. and D. Landblom, et. al

Continuing our commitment to North Dakota seeking answers that are needed to help agriculture and protect our natural resources!

Producer outcomes:

- **Improved soil health**
  Quantify impact through research
- **More diversity per acre**
  Establish crop rotations including cover crops
- **More pounds of forage per acre**
  Produce more biomass, grain, grass and hay
- **More pounds of beef per acre**
  Extend conventional marketing of beef from 567 pounds to 1275 pounds
- **More dollars per acre**
  Decrease costs and increase new revenue stream

Smart Beef Impact in Pounds of Beef

420,360 steer calves X 708 lbs = 297,614,880 lbs

Smart Beef, Crop and Forage Production

Growing North Dakota's Economy and Adding Value

Thank You for Your Support of the State Board of Agricultural Research and Education

SB 2020 3-7-2017 att. 4

Testimony for the NDSU Hettinger Research Extension Center
Submitted by Christopher Schauer, Director Hettinger Research Extension Center
House Appropriations Hearing – SB2020
March 7, 2017

Thank you for your support during the last legislative session. We have hired a new Area Livestock Extension Specialist, Dr. Janna Kincheloe, and she is putting the groundwork in developing a new livestock extension program for southwest North Dakota. Due to the budget allotments of the current biennium, we were unable to hire the livestock research technician that was funded in the last session, and currently have an open agronomy research technician position due to the early retirement buyout and the budget allotments.

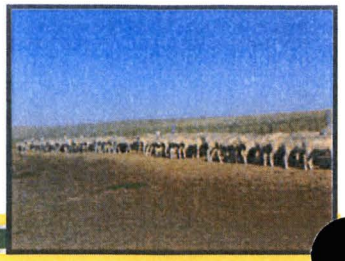
Moving forward, the top issues facing the HREC, and supported by our Advisory Board, is restoration the funding to the HREC back to the 2015-2017 base budget to as much of an extent as possible. The priority of the HREC Advisory Board and myself over the past 10 years has been to build a team of scientists that can answer a diversity of research and extension questions, and I believe we have accomplished that goal. We currently have 4 disciplines of research at the HREC; Animal Science (Dr. Christopher Schauer), Range and Wildlife Science (Dr. Ben Geaumont), Weed Science (Dr. Caleb Dalley), and Agronomy (John Rickersten), as well as the new Area Livestock Extension Specialist (Dr. Janna Kincheloe). This team of Research and Extension personnel are poised to tackle the downturn in the agricultural economy through diverse research and extension. Increasing production on a decreasing land base is one goal, but our team also has the ability to address the larger needs society has placed on agriculture. Examples of these needs include: improving pollinator habitat, maintaining a diverse ecosystem for wildlife, maintaining and improving grasslands for livestock production, finding new varieties of crops that can thrive in SW ND, and minimizing the impact of dangerous and invasive weeds on our cropping systems. Some highlights of our team's research are:

- Preliminary data indicating sheep grazing winter wheat during the spring for 30 days had no impact on subsequent winter wheat yields. This project also includes incorporating cover crops and sheep grazing into a cropping winter wheat rotation – a novel concept in SW ND. This project incorporates all 4 disciplines of research and extension at the HREC, and is an example of the team approach to research we are utilizing.
- Dried distiller's grain with solubles appears to negatively impact male fertility in growing ram lambs when fed at high levels of the diet (30% of the diet or more).
- 51% of the spring wheat varieties planted in SW ND were new varieties tested at the HREC in the past 5 years.

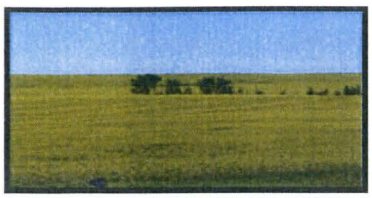
However, a team of scientists is limited by the technicians they have in place to conduct the field research. Maintaining a technician for each research scientist is essential to continue to provide the research that the producers of ND expect from the HREC. Any progress towards a budget based on the 2015-2017 base budget will allow us to consider hiring the 2 technicians that have been cut from our program the past 2 years. Additionally, the importance of equipment funds that have increased to $150,000 per biennium cannot be understated. With the down turn in the agriculture commodity sector, rental tractors will become less available, and the funds required to replace older tractors will become more important, not less important than in the past.

In closing, I support the SBARE priority list and hope I have provided additional information to support the restoration of the 2015-2017 base budget. Thank you.

NORTH DAKOTA **AGRICULTURE EXPERIMENT STATION**



Hettinger Research Extension Center



Hettinger REC Research in Brief

- Integrated crops, livestock, and range research and extension
- Variety, herbicide, and crop production research
- Lamb and beef feedlot nutrition and management
- Reproductive management of fall, winter, and spring lambing ewes
- Multiple-land use management including cropping systems, livestock, and wildlife as potential outputs
- Range monitoring techniques

Director: Christopher Schauer

Email:
NDSU.Hettinger.REC@ndsu.edu

Web address:
http://www.ag.ndsu.edu/HettingerREC/

PO Box 1377
102 Hwy 12 W
Hettinger, ND 58639

Tel: 701-567-4323
Fax: 701-567-4327

The Hettinger Research Extension Center (HREC) was established from a gift of 160 acres by the residents of Adams County and the city of Hettinger in 1909. Original work at the HREC involved converting native prairie to farm land for the purpose of agronomic research. In 1912, through cooperation with the United States Department of Agriculture, a dry land farming trial began. In 1913 a herd of Guernsey and Jersey cows and bulls was purchased to aid local producers in the production of replacement dairy cattle. Following a brief closure during the Depression, the HREC continued to grow the research programs, focusing on agronomy and sheep breeding. In 1947, an option was secured for the purchase of an extra quarter of land to continue and expand sheep and agronomy research. In the 1980's the research programs were solidified with the addition of land bringing the total owned land to 1130 acres, and the hiring of an agronomist.

The HREC is a semi-arid site located in southwest North Dakota, providing the most southerly NDSU location in the non-glaciated portion of North Dakota as a site for its agronomy research program. The HREC also is located at the center of the North Dakota sheep industry, the focus of one of its animal research programs. Furthermore, the HREC is located in an area of rapidly growing livestock feeding ventures, another focus of animal research at the HREC. Additionally, the HREC is located in a region where much of the land base is in the Conservation Reserve Program and Forest Service lands, which has resulted in additional research evaluating potential changes in the CRP program and how these changes may affect upland native and game bird populations. A new research program evaluating low-cost rangeland monitoring strategies on U.S. Forest Service lands has resulted in a significant increase in the quantity of rangeland, livestock, and wildlife interaction research conducted at the HREC throughout the western Dakotas. Research at HREC involves the disciplines of animal science, range and wildlife science agronomy, and weed science. Collaboration is with Main Station scientists, Branch Station scientists, U.S. Forest Service, grazing associations, university scientists from WY, SD, and MT, and USDA research entities in these research disciplines to improve the productivity of livestock and cropping systems and economic development of the region. Through these efforts, the center's research program has gained a national reputation for its involvement with sheep production systems as well as a strong regional and state reputation for its research in agronomy, multiple-land use, and calf backgrounding.

AGRONOMY and WEED SCIENCE

- Conducted crop variety and hybrid yield trials for 21 different crops at Hettinger along with off-station small grains trials at 4 locations. The 2016 ND spring wheat variety survey shows 51 percent of the acres in southwest ND were planted to varieties released in the past five years. The HREC variety testing program is an excellent source of unbiased information on new varieties to help farmers determine the optimal crop cultivars to plant.
- Evaluation of carinata, an oilseed mustard like canola, for adaptation to western ND for use biofuel production. This crop looks promising with yields of carinata being competitive with hybrid canola and having fewer problems with seed shatter.
- Conducted crop production studies including planting date and seeding rate on soybean, planting date and zinc fertilization to reduce cadmium uptake in durum wheat, and a study looking at the management of root rots in field peas with crop rotation
- Evaluation of new herbicides for crop safety and weed control in crops important to SW ND.
- Evaluation of herbicides for weed control on rangelands and their impact on the growth and establishment of desirable forages.

RANGE and LIVESTOCK SCIENCE

- Collaboration with the USDA-ARS evaluating the effects of woody cover and Kentucky Blue Grass encroachment on bird and butterfly abundance.

HREC Crops, Weeds, Livestock, and Range

- Evaluation of rangeland restoration and wildlife habitat opportunities on the Elkhorn Ranch near Medora, ND.
- Evaluate the ecological effects of integrating livestock herbivory and annual forages into a winter wheat cropping system.
- Evaluate alternative land management options on expiring CRP lands that integrate livestock, wildlife, and fire.

- Evaluated supplementation strategies during pregnancy and their effect on embryonic death loss, fetal development, and potential feedlot and reproductive performance of offspring.
- Continued research in "Value Added Animal Production"; a research program focused on evaluating forage, grain, byproduct, and marketing alternatives in calf backgrounding and lamb finishing.
- Evaluation of feeding and supplementation strategies that impact ram fertility.
- Conduct the Dakota Fall Performance Ram Test; a 140 day Rambouillet Certificate of Merit program, one of three Rambouillet Ram Tests in the nation.

OUTREACH and EXTENSION

- Contributed to NDSU Weed Control Guide.
- Conduct annually the HREC Beef Day, Sheep School, Shearing School, Wool Classing School, Carcass Ultrasound School, Crops Tours, Crops Day, and Soil Health and Wildlife Workshops.
- Published NDSU Sheep Research Report and Hettinger Crops Day Report and contributed to NDSU Beef and Range Report and Weed Research Report.
- Hired a new Area Livestock Extension Specialist who is developing a new Extension program for SW North Dakota focusing on cattle production systems.

HREC Research Faculty

Dr. Christopher Schauer, Director & Animal Scientist
christopher.schauer@ndsu.edu

Mr. John Rickertsen, Agronomist
john.rickertsen@ndsu.edu

Dr. Benjamin Geaumont, Wildlife and Range Scientist
benjamin.geaumont@ndsu.edu

Dr. Caleb Dalley, Research Weed Scientist
caleb.dalley@ndsu.edu

Dr. Janna Kincheloe, Area Livestock Extension Specialist
janna.kincheloe@ndsu.edu

NDSU | HETTINGER RESEARCH EXTENSION CENTER

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SB2020 3-7-2017 att:5

NDSU Langdon Research Extension Center Legislative Report — House Appropriations

March 7, 2017

Langdon REC 2015—17 Update

- Purchase of 160 acres of land. Total acres farmed for research is now 755 acres.

Langdon REC AES Research Programs

- Agronomy research programming on all crops grown in our region.
- Applied research emphasis on canola.
- Significant new crop research in industrial hemp, faba beans and others.
- Plant Pathology research program focuses on diseases of ALL crops in North Dakota. The NE ND climate is the epicenter of crop disease incidence making Langdon an ideal disease research site.
- Foundation Seed production provides regional growers with superior NDSU crop varieties.
- Support main station development of new technologies such as new variety development with NDSU crop breeders to maximize state tax dollars ROI.

Langdon REC Extension Program

- Agronomy Area Specialist prioritizing agent training, grower questions and IPM surveys in northeast ND.
- Soil Health Area Specialist prioritizing agent training, soil health education, and grower questions. In 2015 Langdon completed a groundwater management tiling project 100% funded by the ag industry and is assisting growers to maximize field tiling ROI.

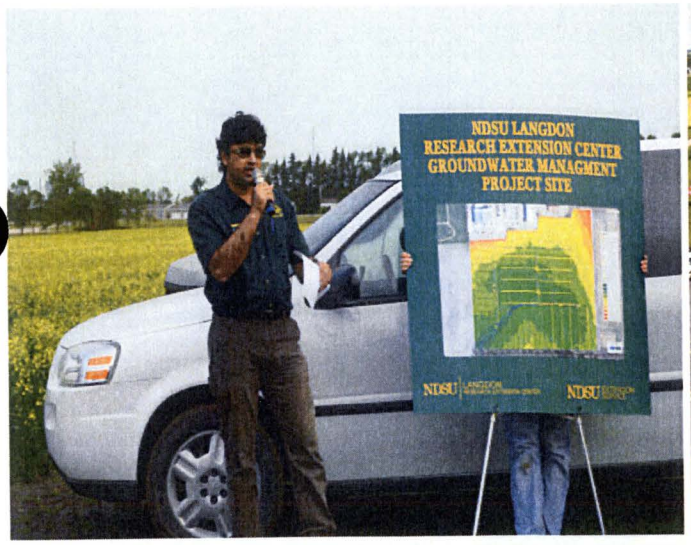
NDSU Langdon Research Extension Center
Legislative Priorities — 2017/19 Biennium

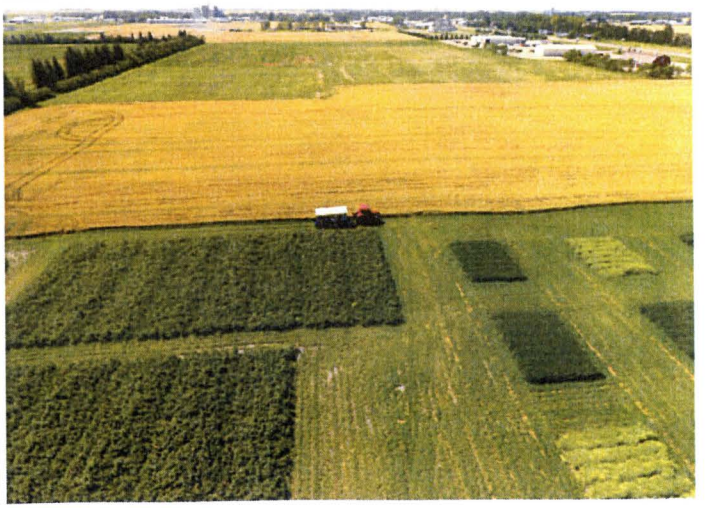
Langdon REC Advisory Council Meeting—December 9, 2016

1) Restoration of 2015/17 Base Budget
2) Support SBARE Ranking of NDSU Agricultural Experiment Station Needs Based Budget.
3) Support SBARE Ranking of NDSU Extension Service Needs Based Budget.

Capital Requests

1) Support SBARE Ranking of Capital Projects (Seed Cleaning Plant Renovation Number 1).





SB 2020 3-7-2017 att: 6

Testimony to North Dakota House Appropriations Committee: SB 2020
North Dakota State University
North Central Research Extension Center, Minot, ND
March 2017

Mr. Chairman and Members of the Committee: Thank you for the opportunity to address this committee. I am Shana Forster, director of the NDSU North Central Research Extension Center located in Minot, ND. I am relatively new to this position, having assumed this role in April 2016. I have been a dedicated member of the team at the NCREC since 2008.

The state of ND has an estimated 5.8 million acres of soil (roughly the size of Vermont) that are considered saline. The 2011-2013 ND Legislature established the NDSU Soil Health Initiative, which will continue to address this issue and provide long-term benefits to ND. The NCREC received funding for an Extension soil health specialist and has provided the people of ND valuable research and extension information on how to best manage saline/sodic soils in order to make them more productive. Efforts at the NCREC include on-farm demonstrations, field tours, and research trials using a team approach to increase the efficiency of our number one resource, our soil.

NCREC's no-till, precision planter was funded by the ND Legislature, in support of the upgrade of research equipment at RECs. This planter consists of four, adjustable row-spacing options and has the same technology that ND producers are currently using. Upgrading our small plot research equipment is necessary in order to maintain our relevance and relatability with ND production agriculture.

The people of ND own the largest seed company in the US. The NCREC Foundation Seed effort is one of several such efforts in the AES system to maintain foundation class seed for distribution to the ND agricultural industry. Our current seed cleaning equipment at the NCREC is no longer operational. The 2015-2017 ND Legislature provided the NCREC $750K in order to purchase seed conditioning equipment. We are currently seeking approval to complete this process and move forward with a fundraising campaign thru the NDSU Foundation. We hope to purchase seed conditioning equipment to continue to provide the best, pure genetics to ND producers. Currently, SBARE has ranked upgrading the REC's seed cleaning facilities as their #1 capital project.

Most of the projects conducted at the NCREC are long-term. New, updated equipment is consistently necessary to perform our duties effectively. The restoration of the budget to 2015-2017 levels will enable us to maintain the projects to which we are committed and invested. In addition, the ability to complete the NCREC seed conditioning facility will enable us to provide quality seed to the producers of ND.

I extend my thank you to this committee and the entire North Dakota Legislature for your support of the NCREC, NDAES, ND Extension Service, and SBARE Initiatives. Also, thank you for your continued support of SB 2020.

Shana M. Forster, Director
North Central Research Extension Center
5400 Hwy 83 S (701) 857-7679
Minot, ND 58701 shana.forster@ndsu.edu

SB 2020 3-7-2017 att: 7

March 6, 2017

Chairman Monson and Members of the House Appropriations Subcommittee,

I am Jerry Bergman, Director of the NDSU Williston Research Extension Center. I support the SBARE Recommendations for the North Dakota Ag Experiment Station, NDSU Extension Service, and Research Extension Center budget and SBARE's highest priority capital improvement one-time funding request for seed cleaning facilities at the Williston Research Extension Center, Langdon Research Extension Center, Carrington Research Extension Center, and North Central Research Extension Center.

Our current seed cleaning facility built in 1954 is antiquated and outdated with low seed cleaning capacity and not designed to condition pulse crops and other crops requiring gentle handling and conditioning. Our land base and yield potential for pure seed production was dramatically increased in 2012 through a land lease with North Dakota Game and Fish Department of 1,184 acres of bottom land rich in organic matter and having high water holding capacity. A new seed cleaning facility with optical sorting technology will not only improve our seed cleaning efficiency but allow us to handle and condition pulse crops and other specialty crop varieties of high economic importance to western North Dakota. Consideration for authorization to raise up to $1.5 million for a new seed plant at WREC is requested.

Dr. Audrey Kalil, our new WREC Plant Pathologist, has initiated a new plant pathology program to evaluate the efficacy of fungicides, crop rotations, tillage practices and other IPM management techniques on reducing disease and pathogen populations. One area of her focus will be the effect of different management practices on the naturally occurring beneficial organisms and the use of advanced molecular techniques to precisely quantify populations of soil-borne pathogens. Audrey was successful in obtaining grant funding for a pulse crop pest scout to serve northwest North Dakota, has assembled a new WREC plant pathology laboratory, and established collaborations with pathologists at the USDA-ARS, Montana State University, NDSU, and other REC's.

The Nesson Valley Irrigation Research Program continues to identify best soil and crop management options to enhance irrigated crop production, improve water use efficiencies, soil health, water quality, and best integrated pest management practices and cropping systems to manage crop diseases.

The WREC Horticultural Research Program has initiated research on hops production and in the use of season extending high tunnels to expand local specialty crop opportunities for vegetables and cut flowers.

Other new projects include (1) a long-term pipeline reclamation project on WREC land to assess the economic input of the disturbed soils on crop performance and to demonstrate best reclamation treatments to restore crop yields and soil health in the disturbed soils and (2) a saline seep reclamation project in collaboration with the Montana Salinity Control Association to identify the recharge area and utilize salt tolerant grass mixes and alfalfa to reclaim the saline seep area.
WREC also established a cooperative partnership with the Williams County Soil Conservation District to construct a 60 x 100 cold storage/ equipment building at WREC for storing tree and nursery stock for spring plantings with space not needed to be used by WREC.

I thank you for your past state funding support for the Ag Experiment Station, the Extension Service and the Research Extension Centers and your consideration of SBARE priority funding requests.

Kind Regards,
Jerald Bergman
WREC Director

SB 2020 3-7-2017 att:1

NDSU AGRONOMY SEED FARM
LEGISLATIVE REPORT-HOUSE APPROPRIATIONS COMMITTEE
Testimony by Brian Otteson, Director
Budget No. 649
MARCH 7, 2017

- **MISSION**
  - To provide an adequate supply of Foundation Seed to the seed producers of North Dakota
  - Provide support to the NDSU Main Station scientists
  - Support research and outreach efforts that focus on the evaluation and development of new crop varieties
- **LAND USE**
  - Approximately 1300 acres of seed production and research land maintained by the seed farm
  - Provides land preparation assistance to NDSU research projects at Casselton, Prosper and Fargo
- **COOPERATIVE EFFORTS**
  - NDSU Foundation Seedstocks Project
  - ND State Seed Department
  - ND Crop Improvement Association
- **SEED PRODUCTION**
  - Wheat, barley, oat and soybean varieties
  - Typically grow between 20-25 varieties per year
  - Maintain inventory of an additional 15 varieties from previous years
  - Directly involved with the initial increase of new public varieties
- **PERSONNEL**
  - Three FTE's
  - Occasional seasonal help as needed
- **FINANCES**
  - Completely self-supportive through seed sales and crop revenues
  - Unique in that no general fund money is used
- **2017-19 BUDGET**
  - Continue operating as in the past within our appropriated budget
  - Replace aging equipment as needed

Agronomy Seed Farm
Reconciliation of 2015-17 Original Other Fund Budget Appropriation to 2017-19 Revised Exec. Budget to Senate Version SB 2020

	Agronomy Seed Farm
2015-17 Original Other Fund Appropriation	**$ 1,521,007**
Less: Capital and One-time	
Adjusted Other Fund Appropriation	**$ 1,521,007**
Executive Recommendation Base Increases (Decreases):	
Base Payroll adjustments	$ 7,157
1% salary/benefit increase FY19 and 2018-19 health insurance increases	10,631
Other changes in estimated income	
Total Executive Recommendation Increases	**17,788**
2017-19 Total Executive Recommendation - Other Funds	**$ 1,538,795**
Governor Burgum's Budget Adjustments:	
Remove Compensation adjustment 1%	$ (2,044)
Remove 5% Health Insurance	(4,498)
Total Governor Burgum's Other Fund Adjustements to Executive Recommendation	(6,542)
Total - Governer Burgum's Other Fund Budget Recommendation	1,532,253
Senate Adjustments	
Add 5% Health Insurance	4,498
Senate Total Special Funds Engrossed SB2020	**1,536,751**

SB 2020 3-7-2017 att 2

U.S. Durum Growers Association

PROMOTING THE PRODUCTION AND MARKETING OF DURUM AND SEMOLINA

P.O. Box 1091 • Bismarck, ND 58502 • (701) 214-3203
office@durumgrowers.com • www.durumgrowers.com

Testimony of Blake Inman
USDGA Director
In Support of SB 2020

Chairman Monson and members of the Committee:

My name is Blake Inman, and I farm near Berthold and am the owner of a seed company that conditions and sells certified seed. I am here today as a director of the U.S. Durum Growers Association in support of SB 2020 as we recognize the significant importance of ag research and extension to the future of agriculture in North Dakota.

Ag research and extension is an essential tool for the state's producers, and there is a high rate of return to the state's economy for money invested in ag research and breeding programs. Restoring the funding for ongoing research is essential as quality breeding programs, such as those that have been established at NDSU, take decades to establish and, therefore, can't just be turned on and off. North Dakota produces 60 percent of the nation's durum, and NDSU's durum breeding program is essential as no significant private breeding programs exist. The program is known around the nation, if not the world. Research, especially for scab management and resistance and quality management in durum, is also of utmost importance.

USDGA also supports the one-time funding for seed cleaning facilities as these facilities are extremely important for producers statewide. They provide new and pure genetics that have contributed to increased revenue. They are also an income generator for the research centers through the sale of foundation and registered seed. The cost of not building new plants is high for producers. The delay of Carpio durum by two years had a significant impact on reduced yields and quality. The new facilities would have equipment that could have caught the contamination early and corrected it.

We understand the budget constraints being faced in the upcoming biennium. However, agriculture is and will continue to be the foundation of our state's economy. Even in times of low commodity prices, our families will continue to be here buying groceries, patronizing local businesses and contributing to the state's economy.

We appreciate your past support and urge your continued support of ag research and extension.

SB 2020 3-7-2017 att 3

North Dakota Grain Growers Association

Your voice for wheat and barley. www.ndgga.com

North Dakota Grain Growers Association
Testimony on SB 2020
House Appropriations Committee
Education and Environment Division
March 7, 2017

Chairman Monson, members of the House Appropriations Committee's Education and Environment division, for the record my name is Dan Wogsland, Executive Director for the North Dakota Grain Growers Association (NDGGA). Through our contracts with the North Dakota Wheat Commission and the North Dakota Barley Council our Association engages in domestic policy issues on behalf of North Dakota wheat and barley farmers. NDGGA appears before you today in support of SB 2020 and respectfully requests that you restore the 13.5 percent cut in this budget as it comes before you from the Senate.

Chairman Monson, members of the House Appropriations Committee's Education and Environment division, you are all very much aware that agriculture is one of the backbones of the North Dakota economy. Through thick and thin our state's farmers, ranchers and agribusinesses have stood strong providing the economic engine that propels our state. NDSU Agricultural Research and the ability to share that research through NDSU Extension is the lifeblood of the agriculture economic engine in North Dakota. In today's global economy it is impossible for North Dakota farmers and ranchers to be competitive if they aren't provided the latest and greatest in research and extension which will help to make them successful. It takes adequate funding to provide for that success; thus you have SB 2020 before you today.

Mr. Chairman, Committee members, SB 2020 is an investment it North Dakota's economic future. As stated before NDGGA is in support of the bill with one caveat; our Association feels it critical the 13.5 percent reductions instituted earlier to the NDSU Research and Extension budgets be restored in this legislative proposal. Additionally NDGGA believes that NDSU Research and Extension be given the ability to adjust spending within the limits of the legislative appropriations set forth by the North Dakota Legislative Assembly.

Phone: 701-282-9361 | Fax: 701-239-7280 | 1002 Main Ave W. #3 West Fargo, N.D. 58078

Research and extension funding pays huge dividends for our state. Whether its new commodity variety development, improved pesticide use, soil health initiatives, leadership training, economic analysis, marketing training, or outreach NDSU Research and Extension have been on the front lines of agriculture's success in our state. It isn't by accident that North Dakota leads the nation in the production of 10 to 14 different crops annually. It isn't by accident that North Dakota farmers are leaders nationally in pesticide compliance. It isn't by accident that NDSU economists are leaders in agriculture analysis in the world. It is the quality of people carrying out the research and extension efforts who are allowed to perform through the funding of the North Dakota Legislature that makes their efforts possible. That said, without that funding support we risk diminishing success in a pillar of our economy.

Chairman Monson, Committee members, I would be remiss if I did not mention one essential program in particular which deserves your attention and support; namely the Center for Ag Policy and Trade Studies (CAPTS). CAPTS provides essential state specific Ag policy analysis; this analysis will be critical in the upcoming new Farm Bill debate. Farm policy is just as important to North Dakota farmers and ranchers as weather and prices. Having the ability to call on CAPTS for independent analysis of policies impacting our state can be the difference between success or failure of the North Dakota farm community.

Chairman Monson, members of the House Appropriations Committee's Education and Environment division, NDGGA respectfully requests your favorable consideration of restoring the cuts to SB 2020 and then we ask for your favorable recommendation regarding the legislation.

SB 2020 3-7-2017 att 4

December 28, 2016

To: Senate Appropriations Committee, Senator Ray Holmberg, Chairman

RE: Seed Cleaning Plant at NDSU Williston Research Extension Center

Greetings,

On behalf of The Joint Williston Research Extension Center and Eastern Agricultural Research Center Joint Advisory Committee: I express our unanimous support for funding the seed cleaning plant at the NDSU Williston Research Extension Center.

1. The existing plant is limited in capabilities and totally not designed to prepare pulse crop or specialty crop seeds.
2. Cropping patterns in the region have exploded with diversity in the last 10-20 years. The recent 5 years has demonstrated a phenomenal increase of cropping diversity.
3. New and adapted varieties offer grain producers improving opportunities to enhance soil health and increased profitability. The total dollar impact needs to be estimated by professionals other than our committee.
4. Increased volume of specialty and traditional seeds will add tremendous income to the WREC. A private seed business would consider going in debt to build this profit center.
5. WREC has the oldest seed cleaning plant out of all other research extension centers and cleans approximately 40,000 bushels of seed each year (please see attachments).

Thank you for your careful attention.

Regards,

Wayne Berry

Wayne Berry
Chairman, WREC-EARC Joint Advisory Committee

January 10, 2017

To whom it may concern,

We are writing in support of a return to full funding for agricultural research in North Dakota and particularly North Dakota State University's Williston Research and Extension Center (WREC). While we fully understand the need to cut back budgets to reflect the decline in the Bakken oil development, the proposed across-the-board cuts do nothing to adequately (or fairly) address those shortfalls when they target programs, such as agricultural research, that provide **large, long-term, net returns to the ND economy and its citizenry**. As evidence, a recent study by NDSU economists indicated a $25 return for every dollar invested, while a third-party analysis by the University of Minnesota found an even higher **return of $38 for every tax dollar invested**. Other studies also show positive returns at the federal level including a Cornell University study showing a minimum return of $10 for every $1 of federal tax dollars invested, with other studies showing even higher returns.

Given the support agricultural research provides to the number one industry in ND, it just doesn't make sense to unilaterally make cuts in the program. And frankly, in this part of the world (western ND and eastern MT) we suspect the aforementioned positive returns are even higher because of our shared partnership between WREC, Montana State University's Eastern Ag Research Center (EARC) in Sidney, MT and our own USDA Agricultural Research Service laboratory, also in Sidney. Our **MonDak "Agricultural Research Triangle"** allows us to leverage expertise and equipment from all three entities for various individual projects as well as conducting joint research efforts. This three-way partnership also helps avoid duplication of research efforts and state researchers have also pointed to the partnership as **an important factor in successful grant applications** for new equipment and programs at state facilities.

This long standing partnership has led to significant advances for producers in the region and continues today with joint research efforts, most recently a 3-year study between Sidney ARS and WREC initiated to investigate the effect of crop rotation on *Rhizoctonia solani* AG 2-2 soil populations. Collaboration with the new WREC Plant Pathologist, Dr. Audrey Kalil, has also been initiated on economically important diseases of pulse crops and Fusarium Head Blight, a critically important disease of durum, wheat, and barley.

Our ARS Customer Focus Group in Sidney includes **more than 80 farmers and ranchers and representatives from various ag industries and organizations from all across the two-state region**, as well as local, state and federal agencies. Several of our members also serve on advisory groups for WREC and EARC. We recognize the value of agricultural research to our industry and to the economies of our respective states. In particular, we recognize the very real need for agricultural research in this part of the country where **semiarid climates mean very narrow operating margins for producers**. Those margins drastically limit area producers' opportunities (assuming they have the expertise) to "experiment" on their own operations to identify new crops, cropping rotations, and weed and disease management options as well as techniques to improve and protect water quality, soil health and fertility, all of which are **needed to ensure a successful, sustainable operation**. And as historically high commodity prices have dropped to new lows, producers need more help than ever to stay afloat. Cutting ag research just doesn't make economic sense under these circumstances.

Consequently, we respectfully request that you **restore funding for the Williston Research Extension Center to the original 2015-17 levels**. As you can see, the benefits of doing so far outweigh the costs.

Respectfully submitted on behalf of the Sidney ARS Customer Focus Group by:

Connie Iversen

Connie Iversen, President and MonDak Area farmer/rancher
406-798-7770, nji@midrivers.com

TO: North Dakota Senate Appropriations Committee
FROM: NDSU Williston Research Extension Center/MSU Eastern Ag Research Center Advisory Board

The joint NDSU Williston Research Extension Center (WREC)/Montana State University Eastern Agricultural Research Center (EARC) Advisory Board on December 6, 2016 unanimously passed the following resolutions in support of the North Dakota State Board of Research and Extension Budget Priorities

Resolution #1
The joint NDSU Williston Research Extension Advisory Board strongly endorses and supports the funding of new Seed Cleaning Facilities at WREC, LREC, NCREC and CREC as the number one priority for 2017-19 Capital Improvement projects. No funding was received from the 2013-2015 North Dakota Legislative Assembly for the Williston REC seed cleaning facilities that were built in 1954 and are the oldest (and very antiquated) REC seed cleaning facilities that pose considerable worker safety issues, of low seed cleaning capacity, and lacking in capability of cleaning pulse crops and other fragile seeds that are of economic importance to western North Dakota

Resolution #2
The Joint NDSU Williston Research Extension Center (WREC)/Montana State University Eastern Agricultural Research Center (EARC) Advisory board strongly supports and endorses the North Dakota State Board of Research and Education's # 1 priority for Program Initiatives to restore the North Dakota Agricultural Experiment Station, Research Extension Centers, and the North Dakota Extension Service to 2015-2017 Original Appropriations.

If the budget is not restored to 100 % of the 2015-2017 original appropriations and the 10% cut as proposed by the Governor is approved by the legislative assembly the budget reduction will reduce the Ag budget by $5.8 million to the main station, $2 million to the Research Extension Centers and $3 million to the Extension Service. This will result in the loss of 35 main station research positions and 10 Research Extension Center positions that will negatively impact agricultural research and research outcomes to improve the economic and environmental benefits to North Dakota crop and livestock producers and North Dakota

Justification for A New WREC Seed Cleaning Facility

The current foundation seed conditioning facility was built in 1954, making it the oldest and most outdated seed cleaning facility at the Research Extension Centers. The area designated to load and unload trucks only accommodates small single axle trucks. Grain legs that move the dirty and clean grain are worn out and need replacement. WREC asked two companies to give bids to replace the grain legs, however, upon inspection of the seed cleaning facility, neither company supplied a bid because the legs run through four floor levels and the companies found it would be very difficult to replace the legs, and it would not cost effective. With this outdated facility, WREC is limited to cleaning a maximum of 35 bushels per hour. Equipment for the distribution and conditioning of grain is currently located on five different floor levels in the building, requires constant stair climbing during seed cleaning operations and is not designed to readily accommodate air exchange and dust control mechanical features to address worker safety concerns. The conditioning plant is necessarily cleaned thoroughly at every floor level between each crop variety that is conditioned to insure seed purity for Foundation Seed. This is a task that takes two people approximately ten hours to complete and occurs about 15 times each season. The vertical seed cleaning plant at the research extension center is not suitable for cleaning pulse crops and other crops that require both soft handling equipment and horizontal seed cleaning equipment.

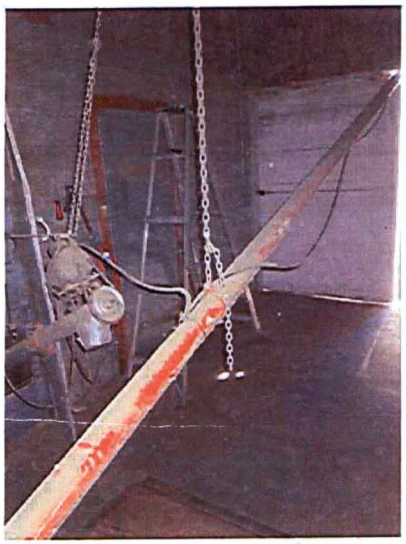
New seed cleaning technologies and superior horizontal systems are now available for the seed cleaning of pure genetics and include optical (color) sorters. Optical sorters at WREC would enhance both seed purity and germination by sorting out unwanted material, diseased and insect damaged seeds, unwanted seed types, etc. and result in more bushels of pure seed meeting foundation seed standards.

WREC plays a key role in distribution of pure seed of new varieties to foundation seed growers and to many producers in our cropping district usually in smaller quantities to quickly reach and provide economic benefits from new seed varieties our producers in North Dakota. The importance of this effort cannot be over emphasized to increase farm gate income and economic returns to ND. With the increase of transgenic and identity preserved traits in the crops and crop varieties grown in North Dakota, the role of the research extension centers in pure seed increase of both transgenic and conventional crops will increase not diminish provided available seed cleaning facilities are available to efficiently clean and process more seed varieties during the winter months. Based on the manpower demands and time available to condition seed varieties, it is justified to have permanent stationary facilities at WREC to provide genetically pure seed supplies of breeder seed to the foundation seed producers and reputable producers and certified throughout our region to quickly transfer the economic benefit to the farm gate, producers, and the state of North Dakota.

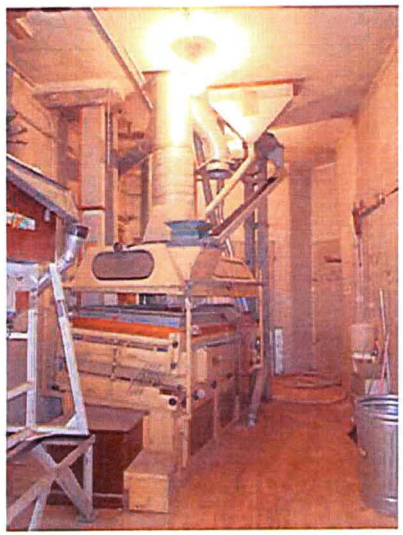
The Williston Research Extension Center is an 800-acre rain-fed farm. In 2001, an additional 160 acres were purchased in the Nesson Valley 23 miles northeast of Williston and an irrigated research and development project was established. In 2012, an additional 1,100 acres of highly productive bottom land were leased from the North Dakota Game and Fish Department for pure seed production.

Because of its semi-arid climate, and its increased land base, WREC with new seed cleaning equipment technologies and superior seed handling facilities would be able to supply a high number of bushels of high-quality pure seed of small grains, pulse crops, oil seed crops, and specialty crops to North Dakota growers.

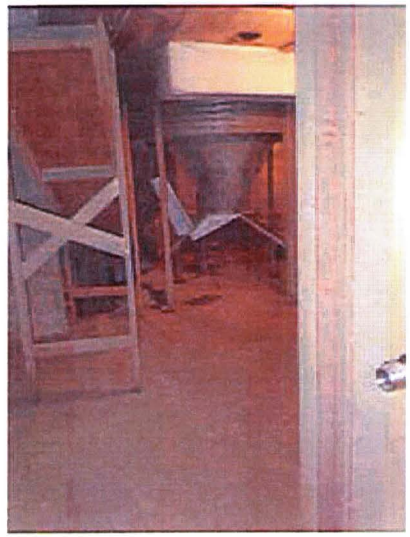
Williston Research Extension Center
Seed Cleaning Facility
Built in 1954



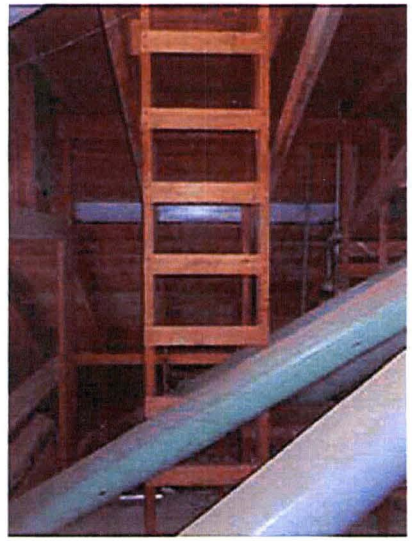
Driveway -Only auger to remove cleaned seed



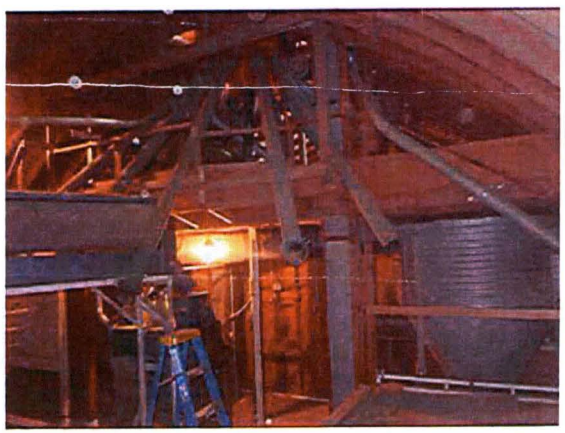
Main Floor-Gravity table-Screen separator-Note duct tape on legs



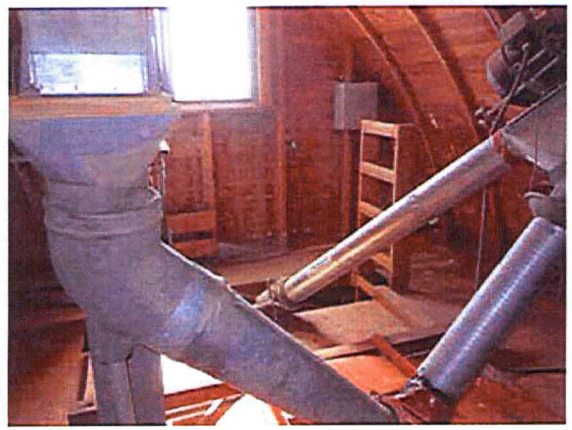
Basement-Only accessible by stairs



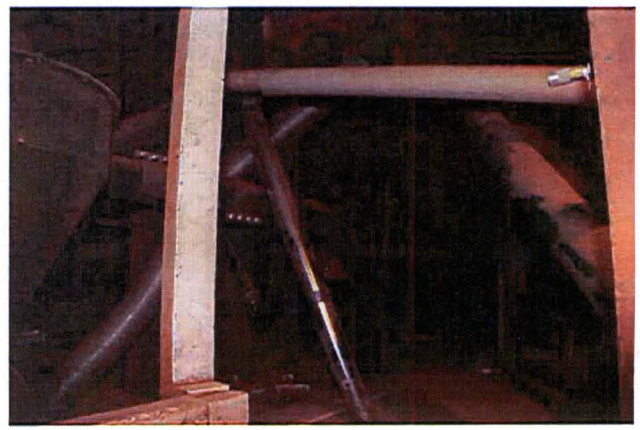
Ladder from 4th to 5th floor



3rd Floor-Disk mill indent cylinder



5th Floor-Main leg-Top of distributor-Accessible only by ladder-Note duct tape on legs



4th Floor-Patch work floor-Crowded overhead pipes; need to crawl to get to 5th floor ladder

Willston
Economic Development

January 13, 2017

Senator Ray Holmberg
Chairman
Senate Appropriations Committee
600 E. Boulevard Avenue
Bismarck, North Dakota 58505

RE: Support for Legislative approval of providing funds for a new seed cleaning facility at the NDSU Williston Research Extension Center

There is a critical need for the NDSU Williston Research Extension Center to receive funding to build a new seed cleaning facility with superior horizontal handling and seed cleaning equipment including optical (color) sorters to condition and distribute pure seed of new value added small grain, pulse crop, oilseed and other specialty crop varieties to our western North Dakota producers.

The current pure seed conditioning facility at WREC was built in 1954, making it the oldest and most outdated seed cleaning facility at the Research Extension Centers and limits WREC to cleaning only a maximum of 35 bushels per hour. It also is not suitable for cleaning pulse crops and other crops that require gentle handling and horizontal seed cleaning equipment and lines.

Because of their increased land base of 2,000 acres, WREC will be able to produce an estimated 40,000 bushels of high-quality pure seed of new and superior value added crop varieties including pulse crops and other specialty crops with a new seed cleaning facility and support more value added processing facilities in our region. This is a prime time to fund this capital improvement at WREC to support more value added production and manufacturing in western North Dakota.

I thank you for your special attention and consideration to provide one-time funding for a new WREC seed cleaning facility.

Sincerely,

Shawn Wenko
Executive Director
Williston Economic Development

Williston Economic Development 113 4th Street East Williston, ND 58801 (701)-577-8110

Ben Larson | Safflower Technologies International | Fairview, MT
Cell 406.480.1638 | blarson@safflowertech.com

January 6, 2016

RE: WREC New Seed Cleaning Plant

To Whom It May Concern,

Safflower Technologies International (STI) is in the business of contracted seed production in North Dakota, South Dakota, Montana and other western states. One of the primary sources of high quality specialty seed has been the Williston Research Extension Center. The cleaning abilities needed to adequately and safely clean some of the specialty crops that WREC has production lately requires additional cleaning equipment and a change in grain flow.

As a consistent buyer of seed from WREC, STI is strongly in favor of any and all improvements that can be made to the seed cleaning operation at WREC.

Sincerely,

Ben Larson

Ben Larson
STI Agronomist

Safflower Technologies International
626 S. Montana Ave. | P.O. Box 485 | Fairview, MT 59221
Phone | 701.844.4797 | Fax 701.844.5972 | www.safflowertech.com

From: Jerald Bergman
To: Kelly Stehr
Subject: FW: Letter of support from Pulse USA for NDSU WREC Seed Cleaning Facility
Date: Friday, January 13, 2017 5:01:43 PM

-----Original Message-----
From: Duane Pool [mailto:duane@pulseusa.com]
Sent: Friday, January 13, 2017 4:44 PM
To: Kyle Dragseth; Jerald Bergman
Cc: Byron
Subject: Letter of support from Pulse USA for NDSU WREC Seed Cleaning Facility

Dear Mr. Bergman,

We (Pulse USA) are writing in support of NDSU WREC and the value a new seed cleaning plant will contribute to WREC and the private sector agricultural companies and growers that work with them. Seed growers and seed companies rely on facilities like WREC for seed multiplication and expansion to commercialize new and highly competitive varieties and they are an important link making seed accessible to North Dakota growers. These efforts contribute to the competitiveness of North Dakota growers and seed companies.

The current facility is antiquated, inefficient and labor intensive. A more efficient and better quality facility will further WREC's endeavor to self fund significant portions of their agricultural services. The current cleaning capacity of 35 bushels per hour is insufficient for the scale of operations WREC supports. This antiquated plant and design is also more damaging to sensitive crops like peas, lentils and other pulses.

We support and are committed to continuing to work with WREC on high pedigree seed multiplication and the funding of a new plant would allow us to contract WREC to do even more work with our varieties. Research stations have a long history supporting innovative agriculture. NDSU WREC also helps bring the best technology to North Dakota growers and companies which increases their competitiveness and profitability. The continued updating of WREC and other NDSU research facilities is critical to advancing our industry and promoting the use of the forefront of agronomic practices and varieties.

Best Regards,

Byron Lannoye, General Manager
and
Duane Pool, Assistant General Manager

Pulse USA
2002 Northern Plains Dr.
Bismarck, ND 58506
701-530-0735
Duane@pulseusa.com

PULSEUSA

2200 Northern Plains Drive Bismarck, ND 58504 *Phone: 888-530-0734* *Fax: 701-530-1826*

January 13, 2017

North Dakota State Senate
Senate Appropriations Committee

Honorable Chairman and members,

We (Pulse USA) are writing in support of NDSU WREC and the value a new seed cleaning plant will contribute to WREC and the private sector agricultural companies and growers that work with them. Seed growers and seed companies rely on facilities like WREC for seed multiplication and expansion to commercialize new and highly competitive varieties and they are an important link making seed accessible to North Dakota growers. These efforts contribute to the competitiveness of North Dakota growers and seed companies.

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Best Regards,

Duane Pool, Assistant General Manager,
and
Byron Lannoye, General Manager

Cc: Jerrald Bergman
Kyle Dragseth

Cahill Seeds

669 Hwy 5 • Flaxville, MT 59222

Phone 406-783-5510
Fax 406-783-5515
info@cahillseeds.com

March 6, 2017

Honorable North Dakota Legislative members and staff,

This letter is in support of Williston Research Center to build a new seed cleaner for the research farm.

I am a Montanan producer from Scobey. I also own and operate Cahill Seeds which is a regional retail and wholesale seed facility. The Eastern Montana and Western North Dakota area, which we locally call MonDak, is served by the research and services from both of the extension facilities at Williston and Sidney. Each provides great service for our local producers.

One of the services provided by Williston Research Center is Foundation Seed Stock to producers for certified seed production. For many years Williston Research Center has been the essential link between plant breeders and North Dakota and Montana producers for the seed stock to provide the MonDak producers the best genetics to compete on a global scale. This cannot be underestimated; our genetics is one of the greatest assets we have for our agricultural sector.

After the production of the genetics (the seed), the ability to clean the seed and keep its genetic integrity is paramount for the system to work properly. Part of that system is a high quality grain cleaning system. The current grain cleaning system in Williston does not meet those needs.

A letter can never truly express an opinion as well as a conversation; if any members of the committee or the staff would like to visit with me about the needs of Williston Research Center, I would be glad to assist.

Jerry Bergman and Kyle Dragseth and other staff at Williston are great assets to our regional producers. I fully believe that providing the staff at the Williston Research Center better tools to achieve their mission would serve our region and the great state of North Dakota.

Sincerely,

Charlie Cahill

Scobey, Montana

January 11, 2017

To: Senate Appropriations Committee, Senator Ray Holmberg, Chairman

RE: Seed Cleaning Facility at NDSU Williston Research Extension Center

Greetings,

I am a local farmer that purchases Foundation Seed from the Williston Research Extension Center on an annual basis. I would like to extend my support for funding a new seed cleaning plant with a color sorter at the Williston Research Extension Center. They have the oldest seed cleaning facility out of all the research extension centers and have a high volume of seed that needs to be cleaned each season. The Williston Research Extension Center is limited in the type of crops they are able to clean with the current seed cleaning plant. With the numerous types of crops produced and harvested at the Williston Research Extension Center, a new seed cleaning facility is certainly needed and justified.

Kind Regards,

Robert Kostek

Robert Kostek

January 6, 2017

The Williams County Crop Improvement Association strongly supports for the WREC to receive funding for a new seed cleaning facility.

1. The WREC provides the Williams County Crop Improvement Association with Foundation seed of the newest NDSU varieties to our farmers and seedsmen.
2. In 1956 the WREC cleaned less than 10,000 bushels and is now conditioning well over 40,000 bushels.
3. A new seed conditioning facility with larger capacity, modern technology, horizontal equipment layout, and an adequate dust ventilation system is needed to replace the existing seed cleaning equipment and facility.
4. The existing seed cleaning facility built in 1955 consists of multiple levels, stairs and even ladders. The capacity of the existing plant is only 35 bushels an hour. The new seed facility would be on one floor to reduce contamination, provide safe operation to employees, increase cleaning capacity upwards of 200-300 bushels an hour, and allow cleaning of pulse crops and other specialty crops that require gentle handling and conditioning.
5. We thank you in advance for your consideration to fund a new seed conditioning facility at the WREC.

Thank You

Danielle Steinhoff

Williams County Crop Improvement Association

Testimony of Del Gates

NDCISA President

In Support of SB 2020

Chairman Monson and members of the Committee:

My name is Del Gates, and I farm near Mohall and I grow, condition and sell Certified Seed. I am President of the North Dakota Crop Improvement and Seed Association, here today in support of SB 2020 as we recognize the significant importance of ag research and extension to the future of agriculture in North Dakota.

Ag research and extension is an important tool for the state's producers, the results that producers receive from ag research translates into higher yields and better quality and more income for the farmers. Breeding and research programs are multiyear commitments. They cannot be successful if funded and then reduced. It operates like turning them on and off. The breeding and research programs look to the Extension Centers, as they are agricultures main street. No city will exist without its main street.

In the fall of 2015 I contacted each Extension Center, Langdon, Carrington, Williston and Minot. I asked the Director of each site what they needed for Capital Projects, they all responded with stationary cleaning facilities. With that request NDCISA also supports the one-time funding for seed cleaning facilities, as these facilities are extremely important for producers statewide. NDCISA has been instrumental in working with SBARE to include funding for this investment into agricultures future in this state. We have seen grass roots support for the construction of these facilities because of the increased benefit from new and improved genetics. These facilities are also income generating and I must stress "income generating" for the research centers and will become more important in the future as crop diversity continues to grow in the state. The current facilities are either not functioning or are inadequate to handle all of the diverse crops that are now grown and do not contain the technology that is needed to do a proper job of conditioning new generation seed. Without these facilities, you are tremendously short changing the research and the breeding programs.

We understand that there are budget constraints to worry about, but we feel that there is a difference between and investment and an expense. We need to continue to make investments into agriculture as

we always have. The most futuristic investments have come, when what looks to be the worst of times. The dividends will pay down the road. Agriculture is and always will be the backbone of our state's economy and we need to insure that agriculturalists are given all of the tools they need to continue to be successful.

This is information on the value of money going into ag research at NDSU and the pay back compiled by Dr. Bill Wilson, NDSU Ag economist.

Major results from this study for ND are:

- The benefit-cost ratio for state level research and extension for ND is 37.3. This compares to 21 for the US. This result implies that for every dollar spent on research in this state, $37 is returned to the economy of the state. It also indicates;
- The internal rate of return for research an extension in ND is 23.8% vs., 18.9% for the country;
- Both of these indicate that returns to research and extension in ND exceed that of the country.

Suggest invest money in Ag would be a good investment for the Ag industry of ND and the future budget of North Dakota.

We appreciate your past support and urge your continued support of ag research and extension.

Thank you,

Del Gates

205 Lawndale St.

Mohall, ND. 58761

701-240-6804

SB 2020 3-7-2017 Att 6

Testimony for the NDSU Hettinger Research Extension Center
Submitted by: Hettinger Research Extension Center Advisory Board, Kat Weinert Chairwoman
Senate Appropriations Hearing – SB2020
March 7, 2017

Thank you for your support during the last legislative session. The HREC has hired a new Area Livestock Extension Specialist, Dr. Janna Kincheloe, and she is preparing her program for western ND. As a local producer, I am excited to see her begin her extension and applied research programming, and to see her be utilized by SW ND producers during this time of fluctuating markets.

The #1 priority for the Hettinger REC Advisory Board is the restoration of the 2015-2017 base budget. The Advisory Board and the staff at the HREC have spent the last 10 years developing the team of scientists and technicians needed to address the issues of today's agricultural producers. We finally feel like we have the team in place that was envisioned in 1907 when the HREC was founded by a group of local producers.

The 2015-2017 base budget included the funding necessary for each scientist to have a research technician. With the current biennium allotments, and the potential reductions for this biennium, 2 of the 4 scientists will not have a research technician. In order for our HREC scientists to continue the quality of research and outreach, a technician is needed to oversee grant writing, maintain lab equipment, and help facilitating research projects. In today's research environment additional time is required to maintain research budgets, therefore, having research scientists without technicians is not an efficient use of time or resources, and more importantly, will decrease the amount of research and outreach that is conducted in SW North Dakota. The challenging times in the agriculture sector require more, not less, research and outreach to assist local producers in finding efficiencies in their production systems to maintain profitability. Please consider restoring as much of the base budget from 2015-2017 as possible.

In closing, we support the SBARE priority list and hope we have provided additional information to support the need of maintaining funding for the Hettinger REC and producers it serves. Thank you.

Sincerely,

Hettinger Research Extension Center Advisory Board
Kat Weinert, Chairwoman

SB 2020 3-7-2017 Att. 7

North Dakota Stockmen's Association
Testimony on SB 2020
March 7, 2017

Good morning, Mr. Chairman and House Appropriations Committee members. My name is Julie Ellingson, and I represent the North Dakota Stockmen's Association.

Before I begin my comments, I want to express our organization's appreciation to the North Dakota Legislature for all of its support of beef industry priorities over the years – most notably the Veterinary Diagnostics Laboratory, which was approved last session. I am happy to report that the new lab is well on its way to completion and will fortify our industry for many years to come by identifying disease, preventing outbreaks and protecting our financial investments. Thank you for recognizing this and other important needs and bringing them to fruition.

We rise in support of SB 2020 and the critical programs it represents.

We recognize the fiscal reality facing our state and the incredibly challenging task on your shoulders as you prioritize needs and allocate funds for the next biennium. As you weigh those important decisions, we ask you to keep in mind the state's return-on-investment when you invest in ag research and Extension. Instead of being part of the problem, this bill can be part of the solution, as it will help bolster the state's primary economic driver; leverage matching dollars from industry and private investors; and generate more tax dollars that will result from agriculture's prosperity.

Unfortunately, the budget allotment process has already taken a toll on livestock industry people and programming across the state, from Hettinger to Carrington and points in between, creating or leaving vacancies in areas important to cattle ranchers. Coupled with additional reductions, gaps in livestock program areas will be further exposed.

We respectfully request that you do all that you can to restore this budget, so we don't lose ground on the research and Extension progress we have made.

We also request that you afford these institutions the flexibility they need to make strategic hires so they can utilize the available dollars where they make the most impact, instead of being forced into accepting vacancies as they occur and that may leave critical programs vulnerable or lopsided.

Thank you for your consideration and for all you have done to keep agriculture strong.

SB 2020 3-7-2017 att: 8

Testimony
North Dakota State Soil Conservation Committee
Senate Bill 2020
Appropriations – Education and Environment Division

Chairman and Members of the Appropriations – Education and Environment Division, my name is Dennis Renner. I am the Chairman of the North Dakota State Soil Conservation Committee.

The Soil Conservation Districts are charged by the North Dakota Century Code with the conservation of soil and soil resources of the State. For the control and prevention of soil erosion, and to preserve the States natural resources, control floods, prevent impairment of dams and reservoirs, assist in the navigability of rivers, preserve wildlife, protect the tax base, protect public lands, protect and promote the health, safety and general welfare of the people of North Dakota.

With the responsibility given it is important for the continued financial support within the NDSU Extension Service budget.

The State Soil Conservation Committee appreciates the funding assistance provided by the State for the Soil Conservation District Assistance Program. The Soil Conservation Districts need this funding assistance. The funding provided by the Legislative Assembly assist Soil Conservation Districts in helping landowners reduce soil erosion, improve water quality and enhance tree plantings, grazing lands and wildlife habitat. The funding helps create and maintain jobs in rural North Dakota. Soil Conservation Districts are working hard to get landowners signed up, plans and designs developed and approved. The installation of conservation practices by participating Soil Conservation Districts has had a significant impact on North Dakota's Natural Resources.

During the current biennium the State Soil Conservation Committee allocated $1,212,800 appropriated to 49 local Soil Conservation Districts, who in turn, utilized the funds to strengthen the conservation programs determined by the soil conservation districts annual plan of work as reflected in their application to sustain the productivity of our natural resources. Projects and activities have include shelterbelt and windbreak tree planting, crop rotation, grazing systems, rangeland management and promotion of reduced tillage systems to name a few. The State funds have allowed more soil conservation districts to provide longer lasting career opportunities in rural communities.

The State Soil Conservation Committee has received 51 applications from Soil Conservation Districts requesting $1,953,000 for the 2017-2019 Biennium.

As this legislative session proceeds the State Soil Conservation Committee would appreciate your support for the Soil Conservation Districts Assistance Program. In addition to the conservation of the natural resources, the economic viability of local communities will be enhanced with this funding.

Thank You for your support.

Att 9
SB 2020
3-7-17

North Dakota AG COALITION

P.O Box 1091
Bismarck, ND 58502
(701) 355-4458
FAX (701) 223-4645

VOTING MEMBERS

Ameriflax
Independent Beef Association of ND
Milk Producers Association of ND
Minn-Dak Farmers Cooperative
ND Ag Aviation Association
ND Agricultural Assn.
ND Ag Consultants
ND Agri-Women
ND Barley Council
ND Corn Growers Association
ND Corn Utilization Council
ND Crop Improvement & Seed Association
ND Dairy Coalition
ND Dry Bean Council
ND Dry Edible Bean Seed Growers Association
ND Elk Growers
ND Ethanol Council
[redacted]rm Credit Council
[redacted]rmers Union
ND Grain Dealers Association
ND Grain Growers Association
ND Irrigation Association
ND Lamb & Wool Producers
ND Oilseed Council
ND Pork Producers Council
ND Soybean Growers Association
ND Stockmen's Association
ND Wheat Commission
Northern Canola Growers Association
Northern Plains Potato Growers
Northern Pulse Growers Association
Northwest Landowners Association
Red River Valley Sugarbeet Growers
U.S. Durum Growers Association

NON-VOTING MEMBERS

BNSF Railway Company
Ellingson Companies
Garrison Diversion Conservancy District
ND Association of Ag Educators
ND Association of Soil Conservation Districts
[redacted]Beef Commission
[redacted]epartment of Ag
ND Soybean Council
ND State Seed Commission
NDSU Agricultural Affairs

Testimony of Jim Bahm
ND Ag Coalition Executive Committee
SB 2020

Chairman Monson and members of the committee, my name is Jim Bahm, and I am here today as a member of the ND Ag Coalition executive Committee in favor of SB 2020.

The Ag Coalition has provided a unified voice for North Dakota agricultural interests for over 30 years. Today, we represent more than 40 statewide organizations and associations that represent specific commodities or have a direct interest in agriculture. Through the Ag Coalition, our members seek to enhance the climate for North Dakota's agricultural producers.

The Ag Coalition takes a position on a limited number of issues, brought to us by our members, that have significant impact on North Dakota's agriculture industry. The Ag Coalition supports the funding of the 2017-19 SBARE priorities for the NDSU Extension Service and the North Dakota Agricultural Experiment Station, as ag research and extension continue to be one of the top priorities for North Dakota's crop and livestock producers. We recognize the current budget restraints, but ask your favorable consideration in reinstating any funding possible to ensure these programs are available as they provide valuable information, education, and tools for the state's producers. They have been, and will continue to be, the driving force in the future of North Dakota's agriculture industry.

We encourage your support of SB 2020.

NORTH DAKOTA
Farmers Union

Att: 10
SB 2020
3-7-17

March 7, 2017

SB 2020
House Appropriations—Education and Environment Division

Chair Monson and members of the committee,

My name is Kayla Pulvermacher; I am testifying on behalf of the members of North Dakota Farmers Union. We support SB 2020.

We urge the North Dakota Legislature and the Governor to support the funding of agricultural research. Recognizing the adverse economic condition the state is currently in, we agree that enhancements to the budget are not possible; however, we do respectfully ask for the committee to restore the 10 percent budget to 2015-17 original appropriations.

Agricultural research is vital for the industry. According to an NDSU study done 2 years ago, the return on investment for agricultural research is huge: $25 of return for every dollar invested. This investment helps to combat crop and animal diseases, create better plant breeds, and to find new crops that will help North Dakota's producers diversify.

Thank you for the opportunity to testify. I can take any questions you may have.

3-21-2017 SB 2020 att: 1

Upper Great Plains Transportation Institute - Budget No. 627
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	54.98	$3,900,791	$18,175,657	$22,076,448	54.98	$3,900,791	$18,175,657	$22,076,448	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes	(9.80)	$56,508	($388,117)	($331,609)	(9.80)	$56,508	($388,117)	($331,609)				$0
Salary increase				***0***				***0***				***0***
Health insurance increase		29,537	87,805	117,342		29,537	87,805	117,342				0
Employee portion of health insurance		***(15,473)***	***(45,997)***	***(61,470)***				***0***		***15,473***	***45,997***	***61,470***
Removes FTE positions and reduces funding for salaries and wages and operating expenses	(1.30)	(213,402) 4.3 mil		(213,402)	(1.30)	(213,402)		(213,402)				0
Adjusts funding for operating expenses and grants		(21,203)	601,085	579,882		(21,203)	601,085	579,882				0
Reduces funding for equipment			(53,000)	(53,000)			(53,000)	(53,000)				0
Adjusts funding sources		(200,000)	200,000	0		(200,000)	200,000	0				0
Reduce appropriations by 3 percent		***(106,917)***		***(106,917)***		***(106,917)***		***(106,917)***				***0***
Total ongoing funding changes	(11.10)	($470,950)	$401,776	($69,174)	(11.10)	($455,477)	$447,773	($7,704)	0.00	$15,473	$45,997	$61,470
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(11.10)	($470,950)	$401,776	($69,174)	(11.10)	($455,477)	$447,773	($7,704)	0.00	$15,473	$45,997	$61,470
2017-19 Total Funding	43.88	$3,429,841	$18,577,433	$22,007,274	43.88	$3,445,314	$18,623,430	$22,068,744	0.00	$15,473	$45,997	$61,470

Other Sections in Upper Great Plains Transportation Institute - Budget No. 627

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Other Sections in Upper Great Plains Transportation Institute - Budget No. 627

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.

Branch Research Centers - Budget No. 628
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	113.94	$18,483,636	$19,817,130	$38,300,766	113.94	$18,483,636	$19,817,130	$38,300,766	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes		$196,347	$30,744	$227,091		$196,347	$30,744	$227,091				$0
Salary increase				***0***				***0***				***0***
Health insurance increase		244,491	90,364	334,855		244,491	90,364	334,855				0
Employee portion of health insurance		***(128,079)***	***(47,338)***	***(175,417)***				***0***		***128,079***	***47,338***	***175,417***
Increases funding for capital bond payments		104		104		104		104				0
Adjusts funding for salaries and removal of FTE positions	(3.65)	(642,408)		(642,408)	(3.65)	(642,408)		(642,408)				0
Adjusts funding for operating expenses		(22,626)		(22,626)		(22,626)		(22,626)				0
Additional budget reductions and funding adjustments		(553,620)	350,000	(203,620)		(553,620)	350,000	(203,620)				0
Reduce appropriations by 3 percent		***(532,953)***		***(532,953)***		***(532,953)***		***(532,953)***				***0***
Total ongoing funding changes	(3.65)	($1,438,744)	$423,770	($1,014,974)	(3.65)	($1,310,665)	$471,108	($839,557)	0.00	$128,079	$47,338	$175,417
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(3.65)	($1,438,744)	$423,770	($1,014,974)	(3.65)	($1,310,665)	$471,108	($839,557)	0.00	$128,079	$47,338	$175,417
2017-19 Total Funding	110.29	$17,044,892	$20,240,900	$37,285,792	110.29	$17,172,971	$20,288,238	$37,461,209	0.00	$128,079	$47,338	$175,417
										0.8%	0.2%	0.5%

Other Sections in Branch Research Centers - Budget No. 628

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Other Sections in Branch Research Centers - Budget No. 628

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Employee accrued leave		Section 4 clarifies that 12-month employees whose employment is not limited in duration shall accrue leave pursuant to North Dakota Century Code Section 54-06-14.
Dickinson Research Extension Center mineral rights income	Section 4 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.	Section 6 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.
Williston Research Extension Center mineral rights income	Section 5 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium.	Section 7 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium.
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.

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NDSU Extension Service - Budget No. 630
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	263.91	$27,824,562	$25,826,708	$53,651,270	263.91	$27,824,562	$25,826,708	$53,651,270	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes		$302,125	$265,427	$567,552		$302,125	$265,427	$567,552				$0
Salary increase				***0***				***0***				***0***
Health insurance increase		397,191	382,249	779,440		397,191	382,249	779,440				0
Employee portion of health insurance		***(208,071)***	***(200,244)***	***(408,315)***				***0***		***208,071***	***200,244***	***408,315***
Reduces funding for salaries	(10.93)	(1,619,206)	200,000	(1,419,206)	(10.93)	(1,619,206)	200,000	(1,419,206)				0
Adjusts funding for other operating expenses		175,557		175,557		175,557		175,557				0
Reduces funding for equipment		(300,000)		(300,000)		(300,000)		(300,000)				0
Reduce appropriations by 3 percent		***(806,343)***		***(806,343)***		***(806,343)***		***(806,343)***				***0***
Total ongoing funding changes	(10.93)	($2,058,747)	$647,432	($1,411,315)	(10.93)	($1,850,676)	$847,676	($1,003,000)	0.00	$208,071	$200,244	$408,315
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(10.93)	($2,058,747)	$647,432	($1,411,315)	(10.93)	($1,850,676)	$847,676	($1,003,000)	0.00	$208,071	$200,244	$408,315
2017-19 Total Funding	252.98	$25,765,815	$26,474,140	$52,239,955	252.98	$25,973,886	$26,674,384	$52,648,270	0.00	$208,071	$200,244	$408,315
										0.8%	0.8%	0.8%

Other Sections in NDSU Extension Service - Budget No. 630

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
Employee accrued leave		Section 5 clarifies 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Other Sections in NDSU Extension Service - Budget No. 630

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.

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Northern Crops Institute - Budget No. 638
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	12.00	$1,964,467	$1,747,735	$3,712,202	12.00	$1,964,467	$1,747,735	$3,712,202	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes	(0.20)	$26,399	$3,160	$29,559	(0.20)	$26,399	$3,160	$29,559				$0
Salary increase				***0***				***0***				***0***
Health insurance increase		29,024	5,320	34,344		29,024	5,320	34,344				0
Employee portion of health insurance		***(15,204)***	***(2,787)***	***(17,991)***				***0***		***15,204***	***2,787***	***17,991***
Reduces funding for equipment		(200,000)		(200,000)		(200,000)		(200,000)				0
Reduces funding for travel		(10,216)		(10,216)		(10,216)		(10,216)				0
Restores funding for operating expenses		137,691		137,691		137,691		137,691				0
Reduce appropriations by 3 percent		***(58,371)***		***(58,371)***		***(58,371)***		***(58,371)***				***0***
Total ongoing funding changes	(0.20)	($90,677)	$5,693	($84,984)	(0.20)	($75,473)	$8,480	($66,993)	0.00	$15,204	$2,787	$17,991
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(0.20)	($90,677)	$5,693	($84,984)	(0.20)	($75,473)	$8,480	($66,993)	0.00	$15,204	$2,787	$17,991
2017-19 Total Funding	11.80	$1,873,790	$1,753,428	$3,627,218	11.80	$1,888,994	$1,756,215	$3,645,209	0.00	$15,204	$2,787	$17,991
										0.8%	0.2%	0.5%

Other Sections in Northern Crops Institute - Budget No. 638

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Other Sections in Northern Crops Institute - Budget No. 638

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute, and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute, and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.

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NDSU Main Research Center - Budget No. 640
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	353.85	$53,581,255	$56,948,525	$110,529,780	353.85	$53,581,255	$56,948,525	$110,529,780	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes		$638,645	$196,105	$834,750		$638,645	$196,105	$834,750				$0
Salary increase				***0***				***0***				***0***
Health insurance increase		667,682	366,772	1,034,454		667,682	366,772	1,034,454				0
Employee portion of health insurance		***(349,770)***	***(192,136)***	***(541,906)***				***0***		***349,770***	***192,136***	***541,906***
Increases funding for capital bond payments		291		291		291		291				0
Reduces funding for salaries and wages	(17.73)	(1,946,615)		(1,946,615)	(17.73)	(1,946,615)		(1,946,615)				0
Reduces funding for operating expenses		(355,589)		(355,589)		(355,589)		(355,589)				0
Restores funding for equipment		260,000		260,000		260,000		260,000				0
Additional budget reductions and funding adjustments		(1,700,000)	1,600,000	(100,000)		(1,700,000)	1,600,000	(100,000)				0
Reduce appropriations by 3 percent		***(1,539,879)***		***(1,539,879)***		***(1,539,879)***		***(1,539,879)***				***0***
Total ongoing funding changes	(17.73)	($4,325,235)	$1,970,741	($2,354,494)	(17.73)	($3,975,465)	$2,162,877	($1,812,588)	0.00	$349,770	$192,136	$541,906
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(17.73)	($4,325,235)	$1,970,741	($2,354,494)	(17.73)	($3,975,465)	$2,162,877	($1,812,588)	0.00	$349,770	$192,136	$541,906
2017-19 Total Funding	336.12	$49,256,020	$58,919,266	$108,175,286	336.12	$49,605,790	$59,111,402	$108,717,192	0.00	$349,770	$192,136	$541,906
										0.7%	0.3%	0.5%

Other Sections in NDSU Main Research Center - Budget No. 640

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
Employee accrued leave		Section 4 clarifies 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Other Sections in NDSU Main Research Center - Budget No. 640

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Transfer authority	Section 6 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.
Exemption	Section 9 allows the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.	Section 11 allows the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.

Agronomy Seed Farm - Budget No. 649
Senate Bill No. 2020
Base Level Funding Changes

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)				Senate Version				Senate Changes to Revised Executive Budget Increase (Decrease) - Executive Budget			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	3.00	$0	$1,521,007	$1,521,007	3.00	$0	$1,521,007	$1,521,007	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes			$7,157	$7,157			$7,157	$7,157				$0
Salary increase				***0***				***0***				***0***
Health insurance increase			8,587	8,587			8,587	8,587				0
Employee portion of health insurance			***(4,498)***	***(4,498)***				***0***			***4,498***	***4,498***
Total ongoing funding changes	0.00	$0	$11,246	$11,246	0.00	$0	$15,744	$15,744	0.00	$0	$4,498	$4,498
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	0.00	$0	$11,246	$11,246	0.00	$0	$15,744	$15,744	0.00	$0	$4,498	$4,498
2017-19 Total Funding	3.00	$0	$1,532,253	$1,532,253	3.00	$0	$1,536,751	$1,536,751	0.00	$0	$4,498	$4,498
										N/A	0.3%	0.3%

Other Sections in Agronomy Seed Farm - Budget No. 649

	Burgum Executive Budget Recommendation (Changes to Dalrymple Budget in Bold)	Senate Version
Additional income appropriation	Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
FTE position adjustments	Section 7 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 8 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.

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STATE
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Seed Department Budget and Activity Report

February 2017

North Dakota State Seed Department
Budget and Activity Report

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Ken Bertsch
ND State Seed Commissioner
February, 2017

Mr. Chairman and members of the Appropriations Committee: For the record, my name is Ken Bertsch and I serve as State Seed Commissioner and Administrator of the State Seed Department. I appreciate the opportunity to present, on behalf of the State Seed Commission, a report to the committee on activities of the ND State Seed Department (NDSSD).

This report is an overview of agency activities as required by NDCC Chapter 4.1-52-11. Legislative Council, with the advice of committee chairmen, asked that this report be presented in written form.

Department Activities

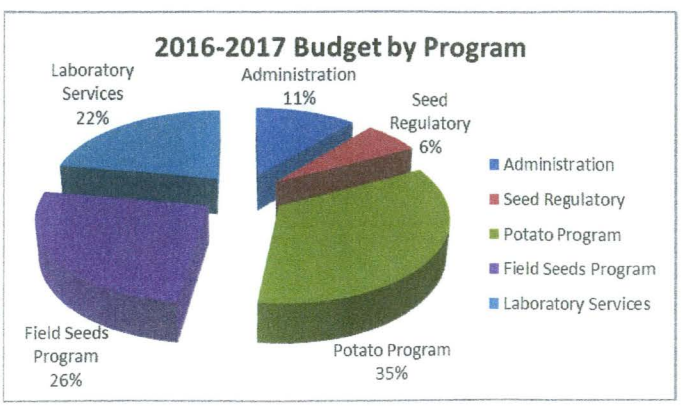
The North Dakota State Seed Department is the state-designated authority for seed certification, seed regulatory and laboratory testing services to North Dakota producers and the agriculture industry. As a self-funded agency of government, the ND State Seed Department derives its revenues from fees for services provided.

A nine-member commission, which serves as a board of directors by setting policy guidelines, approving budgets, approving major program changes, and appointing the Seed Commissioner, governs the Department. The Seed Commission is comprised of members from various industries the Department serves, and represents a broad cross-section of agricultural commodities grown in this state and region.

The Department is unique among its counterparts in the United States, in that all seed related matters are accomplished by one entity. In other states, seed certification is often performed by private associations and/or university programs. Seed regulatory enforcement is usually the responsibility of a division of the state department of agriculture. The NDSSD is one of only two programs in the nation that certifies all field crops and potatoes, and the only program performing seed regulatory duties along with certification and testing.

The agency's main offices, laboratories and tissue culture/greenhouse are located in Fargo on the campus of North Dakota State University. A regional office is located in Grafton and is primarily associated with potato certification programs. 25-28 FTE's and 30-40 temporary/seasonal staff provides field and crop inspection, laboratory testing, potato seed production and support services to the industry.

The NDSSD operates five major programs: Administration, Seed Regulatory, Field Seed Certification, Potato Certification and Laboratory Services. The current operating budget for these program areas is shown below:



Administration	$375,000
Seed Regulatory	$213,100
Field Seed Program	$856,750
Potato Program	$1,149,550
Laboratory Services	$738,600
Total	**$3,333,000**

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Administration (NDCC Chapter 4.1-52)

The Administration program line item outlines overall program support for legal, fiscal, technology, equipment, facilities and resource management for the agency. Administrative and support salaries are allocated to program operation areas of the Department.

Seed Regulatory (NDCC Chapter 4.1-53)

The Regulatory program enforces state and federal seed laws through a process of sampling and examination of seed lots offered for sale throughout the state. The NDSSD utilizes full and part-time inspectors to obtain samples from facilities throughout the state, which are subsequently tested in NDSSD laboratories to determine accuracy of label claims and compliance with state and federal labeling requirements.

Agency regulatory, certification and laboratory staff work cooperatively to ensure the integrity and quality of seed marketed in the state. Approximately 1500-2500 regulatory samples are acquired by regulatory staff and tested in our laboratories on an annual basis. Additionally, Department personnel work closely with public institutions and private variety owners to protect intellectual property through enforcement of Plant Variety Protection Act (PVPA).

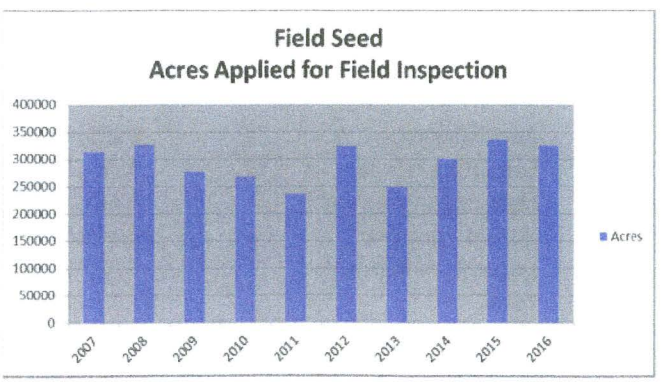
Field Seed Certification (Authority, NDCC Chapter 4.1-53)

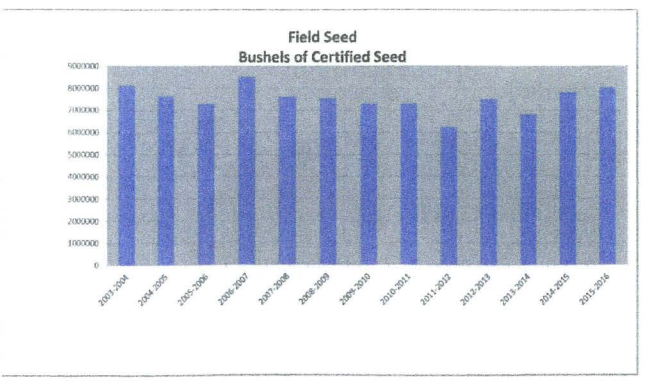
The NDSSD also serves as the state's designated authority for certification of all field crops including cereals, oilseeds, pulses and other specialty crops produced in North Dakota. Program staff (full-time and temporary) inspects, on average, over 300,000 acres of these crops for over 500 individual producers and dozens of seed companies. Seed fields are inspected visually under strict field standards for the presence of disease, genetic purity and other standards established by administrative rule for each crop.

Approximately 7-8 million bushels of seed is approved for final certification in the state each year. The second part of seed certification requires that all certified seed samples are analyzed under standards set forth in administrative rule to determine final certification status. The Department also provides inspection and certification of seed conditioning facilities statewide to ensure that varietal identity and purity of seed is maintained throughout the conditioning and handling process.

Our certification programs collaborate externally with partner organizations to maintain North Dakota's position as a leader in the industry. Field Seed program staff assumes leadership roles in the Association of Official Seed Certifying Agencies (AOSCA), which is the national/international governing body for seed certification, and affect seed certification and quality standards developed by the organization. The North Dakota Crop Improvement Association and NDSU breeding programs are high-profile and valuable in-state partners.

The Field Seed program also provides seed Quality Assurance, Identity Preserved and other customized inspection/audit programs for producers and seed companies





The NDSSD Field Seed Program continues to hold its position as the largest field crop certification program of its kind in the United States.

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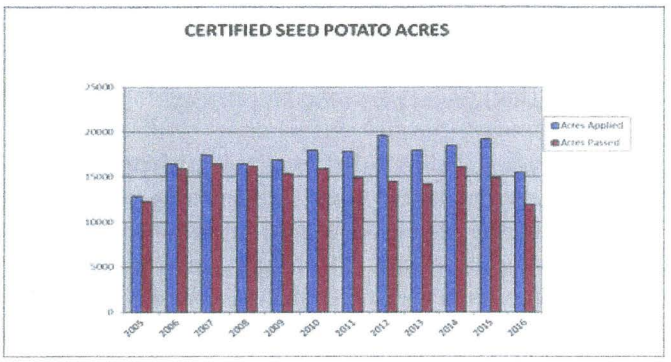
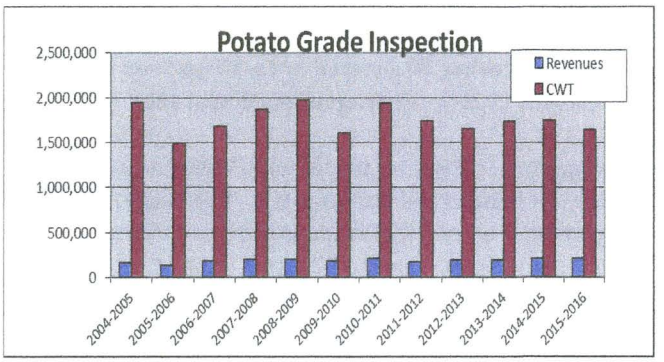
Potato Certification (NDCC Chapter 4.1-55)

The Potato Program is the state's designated authority for the certification of potato seed. NDSSD's six full-time staff inspects 15-20,000 acres of certified seed potatoes annually. Generally speaking, field inspection of potato is a more labor and training-intensive process by comparison to field crop inspection. Potato seed (as a perishable product) is prone to infection by numerous pathogens and diseases that impact seed quality, and ultimately lead to field or storage loss of commercial production. Potato seed production is high-risk at the grower level, and similarly high-risk in legal terms for the certification agent; hence the need for highly trained and experienced inspectors.

NDSSD also operates under a cooperative agreement with USDA to provide shipping point (grade) inspections of the physical quality of seed, commercial and tablestock potatoes at warehouses, processing and wash plants in many areas of the state. NDSSD inspects, on average, 175-200 million hundredweight of potatoes annually.



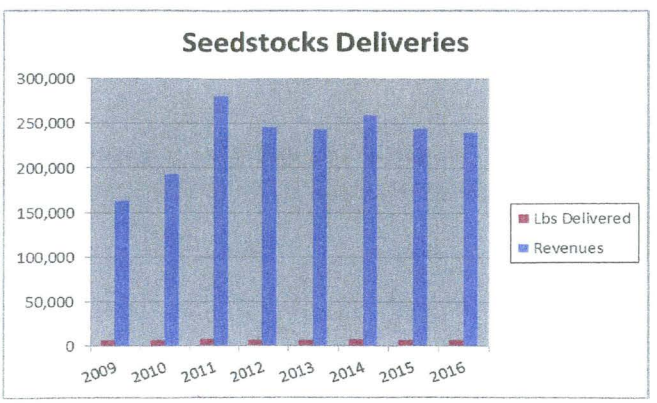


The NDSSD program continues to rank as the second-largest potato certification agency in the United States.

Potato Program personnel are actively involved at the national level with National Potato Council and United States Potato Board seed certification and seed export committees. Staff also works closely with North Dakota Certified Seed Potato Growers Association and Northern Plains Potato Growers Association to the benefit of seed growers and the seed industry.

Additionally, the Potato Program produces nuclear (lowest) generation potato seed in our Fargo facility. The agency operates a tissue culture laboratory, where stem cuttings of potato plantlets are performed in a quarantine environment, multiplied and transferred to our on-site greenhouse for production of potato mini-tubers. Most of the commercial potatoes produced in North Dakota originate from tissue culture performed in our facilities.

The NDSSD tissue culture bank serves as the official repository for all potato varieties developed by the NDSU Potato Breeding Program and released by the NDSU Research Foundation. Our bank houses hundreds of other varieties and clones from around the U.S., which are used by ND seed potato growers to supply the state and regional potato industry.



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Lastly, the NDSSD operates a Wholesale Potato Dealers license program, which bonds and licenses approximately 35-40 wholesale potato dealers to ensure financial stability of businesses purchasing and selling potatoes in North Dakota. The authority for this licensing program is found in NDCC Chapter 4.1-57.

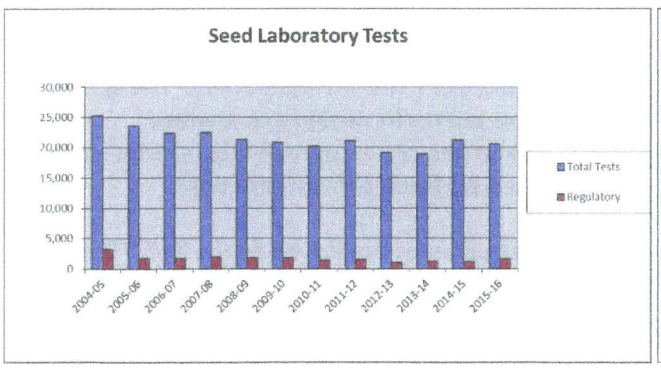
Laboratory Services

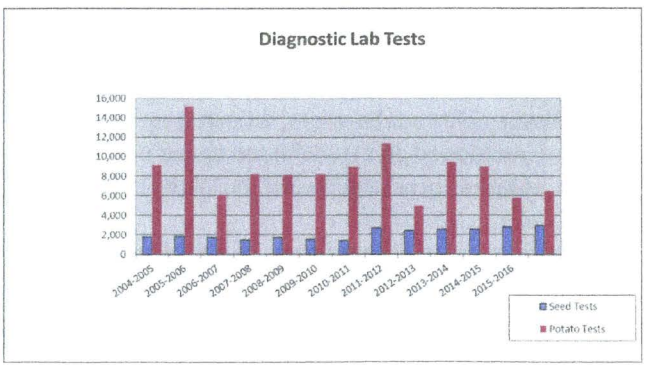
The NDSSD operates two separate laboratories, staffed by highly-trained seed analysts who perform testing on a wide range of seed quality issues.

The State Seed Laboratory performs 20-25,000 tests on samples submitted for final certification through the NDSSD certification program and service samples for growers requesting analysis for germination, purity, herbicide tolerance and several other quality factors. The seed laboratory also analyzes samples for the Regulatory program to determine conformance with labeling claims. The seed laboratory is staffed by 4 full-time seed analysts who have, or are in the process of achieving, Registered or Certified Seed Analyst (RST, CSA) accreditation by the Society of Commercial Seed Technologists (SCST), Association of Official Seed Analysts (AOSA) along with several part-time employees.

The Diagnostic Laboratory performs 2-3,000 tests annually on a diverse range of seed health, trait and genetic issues primarily on pulse crops and soybean. The diagnostic laboratory also performs variety identification testing on all spring wheat, barley and field peas grown in the certification program, utilizing both seed protein-electrophoresis and DNA testing tools for variety ID testing depending on the crop and technology available. The diagnostic laboratory also provides a full range of disease and virus testing for potato certification and is the primary pathology support unit for the Potato Program. The diagnostic laboratory is staffed by two full-time and one half-time technicians. Our laboratory manager has achieved Registered Genetic Technologist (RGT) accreditation and is considered a national expert in variety identification testing technologies.

The NDSSD Laboratory Services Program is one of the few public laboratory entities operating (on a large scale) in this region. NDSSD also performs service tests a large number of service samples coming here from Minnesota, South Dakota, Montana, Wyoming and Colorado.





This is a brief outline of activities in the major program areas of the agency. A complete 2016-2017 line item budget as approved by the Seed Commission (with comparative budget and actual spending from previous years) is provided in the last page of this report.

Thank you for the opportunity to report to the Committee. Please direct any questions on program, operating or fiscal issues to me and I will provide additional information or appear before the Committee at your request.

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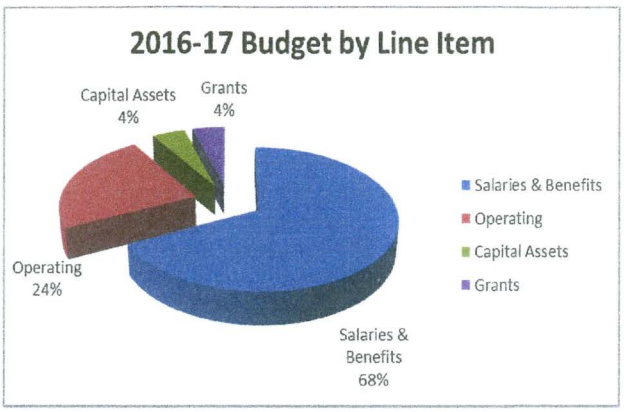
Statement of Revenues and Expenditures

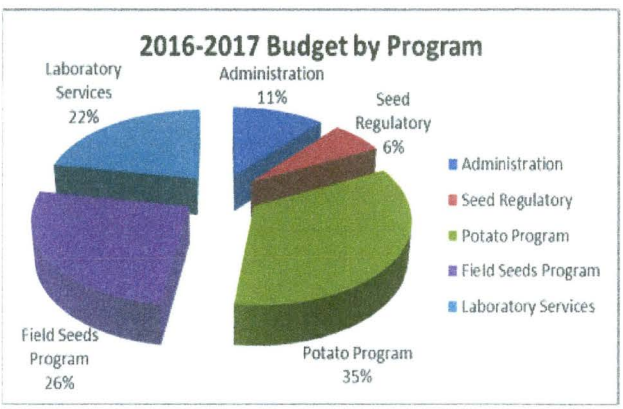
With the passage of HB 1027 in the 2011 Session, the Legislature directed agency funds to be appropriated on a continuing basis.

The following information provides actual expenditures and revenue for the July 1, 2015 to June 30, 2016 fiscal year and budget for the 2016-2017 fiscal year.

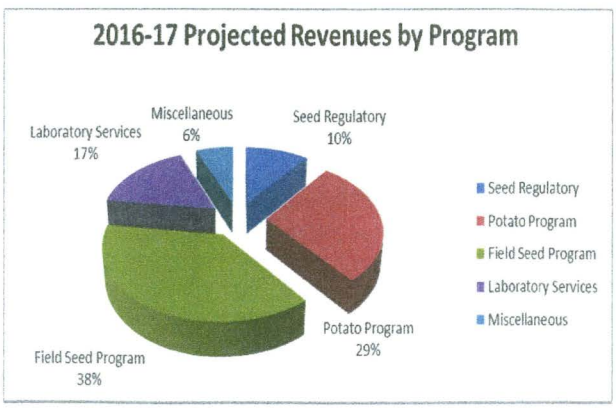
	2015-16 Actual	2016-17 Budget
Expenditures by Line		
Salaries & Benefits	2,101,592	2,254,550
Operating	645,760	783,450
Capital Assets	197,054	150,000
Grants	159,644	145,000
Total	3,104,050	3,333,000



	2015-16 Actual	2016-17 Budget
Expenditures by Program		
Administration	388,966	375,000
Seed Regulatory	196,572	213,100
Potato Program	1,096,186	1,149,550
Field Seed Program	767,209	856,750
Laboratory Services	655,116	738,600
Total	3,104,049	3,333,000



	2015-16 Actual	2016-17 Budget
Revenues by Program		
Seed Regulatory	355,524	320,000
Potato Program	858,887	877,000
Field Seed Program	1,360,767	1,150,000
Laboratory Services	515,452	510,000
Miscellaneous	247,789	187,720
Total	3,338,419	3,044,720



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NORTH DAKOTA STATE SEED DEPARTMENT - DEPARTMENT 616

	Budget 7/16-6/17	Budget 7/15-6/16	Actual 7/15-6/16	Budget 7/14-6/15	Actual 7/14-6/15	Actual 7/13-6/14	Actual 7/12-6/13
REVENUES							
PROGRAM RELATED	2,857,000	2,775,000	3,090,631	2,756,625	3,149,675	2,848,041	2,508,334
RESEARCH FEES	100,000	100,000	134,339	98,000	107,221	94,049	108,495
INTEREST	7,000	7,000	8,351	7,000	9,664	7,465	9,073
GRANT INCOME	75,000	100,000	99,378	82,000	97,433	81,331	
RENTAL INCOME/MISC	5,720	5,720	5,720	5,720	5,720	5,720	5,720
TOTAL REVENUES	**3,044,720**	**2,987,720**	**3,338,419**	**2,949,345**	**3,369,713**	**3,036,606**	**2,631,622**
EXPENDITURES							
SALARIES							
FULL-TIME	1,421,350	1,362,836	1,333,341	1,273,189	1,257,364	1,196,201	1,185,474
TEMP/OT	176,500	185,000	146,302	185,500	166,602	168,998	171,288
BENEFITS	656,700	672,354	621,949	571,585	564,523	517,107	479,748
TOTAL SALARIES	**2,254,550**	**2,220,190**	**2,101,592**	**2,030,274**	**1,988,489**	**1,882,307**	**1,836,510**
OPERATING EXPENSES							
DIRECT (Program related)							
TRAVEL	183,500	180,500	169,150	186,575	171,670	154,089	167,552
PROFESSIONAL SUPPLY	44,750	37,900	41,407	38,200	44,156	35,060	21,830
MISC SUPPLY	1,050	0	444	0	2,200	0	0
OFFICE SUPPLIES	17,200	19,500	13,354	20,100	12,096	26,328	10,843
POSTAGE	29,800	29,000	29,636	25,750	25,751	21,604	23,816
PRINTING	18,650	20,000	15,414	20,100	12,079	18,666	14,142
IT EQUIPMENT UNDER $5000	15,300	6,750	2,598	6,500	0	2,768	95
EQUIPMENT-UNDER $5,000	10,200	10,700	0	10,600	2,646	3,535	7,056
TELECOM-ISD	17,800	17,650	15,255	17,100	13,793	14,658	14,797
PROFESSIONAL DEV	35,400	30,000	32,239	29,330	30,923	21,603	25,405
PROFESSIONAL SVCS	62,500	65,150	52,520	63,950	50,158	52,927	58,110
MEDICAL,DENTAL,OPT(LAB SUPPLY)	43,000	46,000	37,859	42,000	31,815	34,425	32,850
TOTAL DIRECT	**479,150**	**463,150**	**409,875**	**460,205**	**397,287**	**385,663**	**376,497**
INDIRECT (Allocated to Programs)							
IT-SOFTWARE/SUPPLIES	10,500	10,800	4,649	8,350	11,899	5,775	9,037
BLDG,GRNDS	10,200	11,600	3,258	32,000	24,727	23,079	9,520
UTILITIES	103,500	110,000	94,788	116,500	92,839	102,481	90,418
INSURANCE	8,900	8,000	8,235	10,100	5,142	8,029	9,156
LEASE/RENT-EQUIPMENT	9,600	12,000	7,439	11,600	9,305	11,038	10,946
REPAIRS	52,500	59,000	29,112	45,800	28,005	39,639	11,703
DATA PROCESSING	7,000	7,000	697	8,000	5,852	5,887	5,177
IT-CONTRACT	34,600	36,600	16,559	26,025	29,407	17,957	19,213
OPERATING FEES & SVC	67,500	73,926	71,148	58,600	44,615	43,682	29,603
TOTAL INDIRECT	**304,300**	**328,926**	**235,885**	**316,975**	**251,793**	**257,567**	**194,767**
TOTAL OPERATING	**783,450**	**792,076**	**645,760**	**777,180**	**649,079**	**643,230**	**571,263**
TOTAL SALARIES AND OPERATING	**3,038,000**	**3,012,265**	**2,747,352**	**2,807,454**	**2,637,568**	**2,525,537**	**2,407,773**
GRANTS	**70,000**	**70,000**	**70,000**	**70,000**	**70,000**	**70,000**	**70,000**
GRANTS - PCN PROJECT	**75,000**	**100,000**	**89,644**	**82,000**	**97,583**	**81,331**	
NET PROFIT(LOSS)From Operations	**(138,280)**	**(194,545)**	**431,423**	**(10,109)**	**564,562**	**359,738**	**153,849**
CAPITAL EXPENDITURES							
EQUIPMENT	20,000	20,000	0	35,000	0	0	0
CAPITAL ASSETS	100,000		197,054		0	0	0
IT EQUIP/SFTWR OVER $5000	30,000	10,000	0	10,000	0	0	89,426
TOTAL CAPITAL EXPENDITURES	**150,000**	**30,000**	**197,054**	**45,000**	**0**	**0**	**89,426**
CONTINGENCIES	0	0	0	0	0	0	
TOTAL EXPENDITURES	**3,333,000**	**3,212,265**	**3,104,049**	**3,004,454**	**2,805,151**	**2,676,868**	**2,567,199**

3-24-2017 SB 2020 att 1

Rep. Monson,

After our session yesterday, I visited with Scott Hochhalter, our specialist that manages the State Soil Conservation Committee. I learned many more details which may make a simple "fix" much more complicated and perhaps the big fix already happened. In light of this information, I'd like to visit with you more before a plan is proposed. Here's some additional information:

There was already a major administrative streamlining in the 1990's under Gov. Schaffer. The staffing from the state soil conservation program went from 4 FTEs (executive director, budget specialist, secretary, and program specialist) to 1.4 FTE (Scott and part-time support). So, some of the reinventing government already happened. Can there be more?

Scott's responsibilities are far more than a grants administrator. He really serves as the administrator of the 54 soil conservation districts in the state to ensure they are compliant with state law. He provided this estimate of his efforts:

- Grant administration
  - 55-60%
  - Involves coordinating the state soil conservation committee's solicitation, ranking, and dispersement of about 49 grants. The grants are currently paid on a monthly reimbursement basis. Scott ensures the accountability of the proper use of the funds.
- SCD law oversight
  - 10%
  - Ensure districts are following the law by helping the SCDs with their mill levies, board election materials, and that the board officers are completing and filing their oaths of office
- SCD management
  - 15%
  - Assist SCD with human resource service (hiring issues), insurance issues, financial liability coverage, building and grounds issues, assist districts with consolidations when that happens
- SCD meetings, communications, other
  - 10-15%
  - District meeting attendance
  - Oversight of coal land reclamation projects to protect landowner interests (1-2 bond releases per year)

I inserted a more formal summary of the position description at the end of this note.

Other background information

- The grants program is used entirely for salary of SCD employees (the salary of the young man you mentioned in your district may be paid by these funds)
- All of the grant payments are routed through the NDSU Ag Budget office so state auditing is also taken care of.

Soil Conservation Coordinator

Summary of Position Responsibilities

The Soil Conservation Coordinator of the NDSU Extension Service works directly with the State Soil Conservation Committee. The duties of the Soil Conservation Coordinator are to direct the work of the State Soil Conservation Committee according to the policies of the Committee and the laws of the State of North Dakota. This will include administering the Soil Conservation Districts Law, Agency Budget, Surface Mining Reports Law, Soil Conservation District Assistance Program, other laws and agreements that are applicable to the Committee. The Soil Conservation Coordinator provides oversight of and assistance to all Soil Conservation Committee activities. Provides advice and technical assistance for mining applications and reclamation plans under the requirements of the Surface Mining and Reclamation Operations Law.

Additional responsibilities of the Soil Conservation Coordinator include assisting district supervisors throughout the state in all maters of soil conservation, speak before interest groups and disseminate other information for use by district supervisors, other government agencies, organizations and the general public. Ability to express ideas clearly and concisely, both verbally and in writing.

3-24-2017 SB 2020 att 2

Prepared by the Legislative Council staff
for House Appropriations - EE
March 24, 2017

SENATE BILL NO. 2020
LISTING OF PROPOSED CHANGES TO ENGROSSED VERSION

Departments - UGPTI, Branch Research Centers, NDSU Extension Service, NCI, Main Research Center, Agronomy Seed Farm

Proposed funding changes: Description	FTE	General Fund	Special Funds	Total
1 Reduce funding for health insurance		($99,110)	($68,185)	($167,295)
Department - Upper Great Plains Transportation Institute (UGPTI)				
2 Add one-time funding for a road and bridge asset management system. Special funds are from county 2-1 match		$100,000	$200,000	$300,000
Department - Branch Research Centers				
3 Add special funds authority for the Williston Research Extension Center to begin raising funds for a new seed cleaning plant		$0	$1,500,000	$1,500,000
Department - NDSU Extension Service				
4 Add one-time funding for the Burleigh County Extension Service Junior Master Gardener program		$37,500	$0	$37,500
5 Remove FTE and reduce funding for soil conservation committee	(1.00)	($125,000)	$0	($125,000)
Department - Northern Crops Institute (NCI)				
6 No additional financial changes proposed		$0	$0	$0
Department - NDSU Main Research Center				
7 No additional financial changes proposed		$0	$0	$0
Department - Agronomy Seed Farm				
8 No additional financial changes proposed		$0	$0	$0
Total proposed funding changes	(1.00)	($86,610)	$1,631,815	$1,545,205

Other proposed changes:

1 Discuss the potential to repeal the State Board of Agricultural Research and Education.

2 Discuss Sections 4 and 5, which were added by the Senate, relating to employee accrued leave changes.

3 Discuss budget changes affecting the Agricultural Products Utilization Commission (APUC).

4 Add section to provide for 2-1 match from counties for UGPTI road and bridge asset management system.

3-24-2017 SB 2020 att 1

Program Activity Reported by NDSU Extension Service Staff in 2015 and 2016

	2016										
	County Staff		State and Area Staff		Total Face-to-face Contacts[2]						
		All Direct[1]		All Direct[1]				American			
Program	FTE	Contacts	FTE	Contacts	White	Black	Hispanic	Indian	Asian	Male	Female
Community Vitality	3.5	23,611	4.72	10,765	18,112	72	76	460	47	8075	10,692
Livestock Management	6.34	32,880	6.57	28,070	30,328	168	270	503	160	22,719	8,710
Farm Business Management	5.38	30,418	3.89	15,109	26,218	14	55	72	747	19332	7,774
Crop Management	12.55	68,350	19.83	171,813	109,718	394	408	554	176	92,418	18,832
Natural Resources Management	3.17	21,459	3.79	12,293	16,274	134	151	403	106	9699	7,369
Family Economics	1.64	25,663	0.41	495	4,236	56	92	216	23	1,873	2,750
4-H Youth Development	31.37	226,585	6.04	14,686	117,640	1,467	1,203	16,402	642	60896	76,458
Human Development and Family Science	8.56	26,350	2.5	3,242	14,177	456	395	1,011	109	4,519	11,629
Nutrition, Food Safety & Health	22.12	134,768	4.0	10,376	63,729	3,639	3,624	11,577	1,587	36056	48,100
Horticulture and Forestry	7.7	62,986	3.4	29,512	31,172	293	282	3,991	90	12,990	22,838
Totals	**102.34**	**653,070**	**55.16**	**296,361**	**431,604**	**6,693**	**6,556**	**35,189**	**3,687**	**268,577**	**215,152**

	2015										
	County Staff		State and Area Staff		Total Face-to-face Contacts[2]						
		All Direct[1]		All Direct[1]				American			
Program	FTE	Contacts	FTE	Contacts	White	Black	Hispanic	Indian	Asian	Male	Female
Community Vitality	4.08	28,363	5.82	11,039	20,639	102	131	403	51	9,459	11,867
Livestock Management	4.99	28,425	7.25	31,565	33,596	102	305	294	102	23,436	10,963
Farm Business Management	7.16	33,232	4.85	17,406	34,454	50	68	140	148	21,935	12,925
Crop Management	12.84	85,299	18.61	169,799	118,412	365	528	739	131	99,218	20,957
Natural Resources Management	3.18	19,896	3.9	9,794	14,075	88	186	226	36	9,716	4,895
Family Economics	1.3	6,009	1.0	971	3,964	102	59	120	15	1,632	2,628
4-H Youth Development	30.4	172,247	3.98	13,043	109,487	951	869	10,908	491	54,339	68,367
Human Development and Family Science	5.93	16,643	4.25	6,008	13,216	223	205	545	164	3,592	10,761
Nutrition, Food Safety & Health	25.18	126,309	3.15	8,016	67,535	4,895	4,419	14,226	2,380	39,305	54,150
Horticulture and Forestry	9.03	53,891	3.31	30,818	31,521	101	133	2,069	247	13,697	20,374
Totals	**104.1**	**570,314**	**56.11**	**298,459**	**446,899**	**6,979**	**6,903**	**29,670**	**3,765**	**276,329**	**217,887**

[1] *Direct contacts: Face-to-face, telephone, email, correspondence, online conversation, interactive video or web conferencing.*

[2] *Face-to-face contacts: Two or more individuals participating in an educational experience or conducting extension-related business face to face. Interactive video or web conferencing contacts included only when race and gender of all participants can be identified.*

3-24 -2017 SB 2020 att 2

NDSU Extension Service
FTE by Program Area

	General Funds	Special Funds	Total	% of total
Administration	10.3	3.8	14.1	5.3%
Ag Comm	12.7	10.6	23.3	8.7%
Ag & Natural Resources	65.7	72.6	138.3	51.8%
4-H	13.8	16.0	29.8	11.2%
Family & Consumer Sciences	17.0	37.6	54.6	20.4%
Community Vitality	4.6	2.3	6.9	2.6%
Total	124.1	142.9	267.0	100.0%

Prepared by the Legislative Council staff
for House Appropriations - EE
March 28, 2017

SENATE BILL NO. 2020
LISTING OF PROPOSED CHANGES TO ENGROSSED VERSION

Departments - UGPTI, Branch Research Centers, NDSU Extension Service, NCI, Main Research Center, Agronomy Seed Farm

Proposed funding changes:	**FTE**	**General Fund**	**Special Funds**	**Total**
Description				
1 Reduce funding for health insurance		($99,110)	($68,185)	($167,295)
Department - Upper Great Plains Transportation Institute (UGPTI)				
2 Add one-time funding for a road and bridge asset management system. Special funds are from county 2-1 match		$100,000	$200,000	$300,000
Department - Branch Research Centers				
3 Add special funds authority for the Williston Research Extension Center to begin raising funds for a new seed cleaning plant		$0	$1,500,000	$1,500,000
Department - NDSU Extension Service				
4 Add one-time funding for the Burleigh County Extension Service Junior Master Gardener program		$37,500	$0	$37,500
5 Remove FTE and reduce funding for soil conservation committee	(1.00)	($191,612)	$0	($191,612)
Department - Northern Crops Institute (NCI)				
6 No additional financial changes proposed		$0	$0	$0
Department - NDSU Main Research Center				
7 No additional financial changes proposed		$0	$0	$0
Department - Agronomy Seed Farm				
8 No additional financial changes proposed		$0	$0	$0
Total proposed funding changes	(1.00)	($153,222)	$1,631,815	$1,478,593

Other proposed changes:

1 Discuss the potential to repeal the State Board of Agricultural Research and Education.

strike 2 Discuss Sections 4 and 5, which were added by the Senate, relating to employee accrued leave changes.

drop ~~3~~ Discuss budget changes affecting the Agricultural Products Utilization Commission (APUC).

Remove 4 Add section to provide for 2-1 match from counties for UGPTI road and bridge asset management system.

5 Direct the State Board of Agricultural Research and Education to study the NDSU Extension Service to improve efficiency and effectiveness.

6 Study or discuss the potential to repeal of the state soil conservation committee.

3-28-17
SB 2020

25,973,436 22.5

3-28-2017 SB 2020 att 2

Program Activity Reported by NDSU Extension Service Staff in 2015 and 2016

2016

Program	County Staff FTE	County Staff All Direct[1] Contacts	State and Area Staff FTE	State and Area Staff All Direct[1] Contacts	Total Face-to-face Contacts[2] White	Black	Hispanic	American Indian	Asian	Male	Female
Community Vitality	3.5	23,611	4.72	10,765	18,112	72	76	460	47	8075	10,692
Livestock Management	6.34	32,880	6.57	28,070	30,328	168	270	503	160	22,719	8,710
Farm Business Management	5.38	30,418	3.89	15,109	26,218	14	55	72	747	19332	7,774
Crop Management	12.55	68,350	19.83	171,813	109,718	394	408	554	176	92,418	18,832
Natural Resources Management	3.17	21,459	3.79	12,293	16,274	134	151	403	106	9699	7,369
Family Economics	1.64	25,663	0.41	495	4,236	56	92	216	23	1,873	2,750
4-H Youth Development	31.37	226,585	6.04	14,686	117,640	1,467	1,203	16,402	642	60896	76,458
Human Development and Family Science	8.56	26,350	2.5	3,242	14,177	456	395	1,011	109	4,519	11,629
Nutrition, Food Safety & Health	22.12	134,768	4.0	10,376	63,729	3,639	3,624	11,577	1,587	36056	48,100
Horticulture and Forestry	7.7	62,986	3.4	29,512	31,172	293	282	3,991	90	12,990	22,838
Totals	**102.34**	**653,070**	**55.16**	**296,361**	**431,604**	**6,693**	**6,556**	**35,189**	**3,687**	**268,577**	**215,152**

2015

Program	County Staff FTE	County Staff All Direct[1] Contacts	State and Area Staff FTE	State and Area Staff All Direct[1] Contacts	Total Face-to-face Contacts[2] White	Black	Hispanic	American Indian	Asian	Male	Female
Community Vitality	4.08	28,363	5.82	11,039	20,639	102	131	403	51	9,459	11,867
Livestock Management	4.99	28,425	7.25	31,565	33,596	102	305	294	102	23,436	10,963
Farm Business Management	7.16	33,232	4.85	17,406	34,454	50	68	140	148	21,935	12,925
Crop Management	12.84	85,299	18.61	169,799	118,412	365	528	739	131	99,218	20,957
Natural Resources Management	3.18	19,896	3.9	9,794	14,075	88	186	226	36	9,716	4,895
Family Economics	1.3	6,009	1.0	971	3,964	102	59	120	15	1,632	2,628
4-H Youth Development	30.4	172,247	3.98	13,043	109,487	951	869	10,908	491	54,339	68,367
Human Development and Family Science	5.93	16,643	4.25	6,008	13,216	223	205	545	164	3,592	10,761
Nutrition, Food Safety & Health	25.18	126,309	3.15	8,016	67,535	4,895	4,419	14,226	2,380	39,305	54,150
Horticulture and Forestry	9.03	53,891	3.31	30,818	31,521	101	133	2,069	247	13,697	20,374
Totals	**104.1**	**570,314**	**56.11**	**298,459**	**446,899**	**6,979**	**6,903**	**29,670**	**3,765**	**276,329**	**217,887**

[1] *Direct contacts: Face-to-face, telephone, email, correspondence, online conversation, interactive video or web conferencing.*

[2] *Face-to-face contacts: Two or more individuals participating in an educational experience or conducting extension-related business face to face. Interactive video or web conferencing contacts included only when race and gender of all participants can be identified.*

3-31-2017 SB 2020 att 1

17.0528.02005
Title.
Fiscal No. 2

Prepared by the Legislative Council staff for
Representative Monson
March 30, 2017

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

Page 1, line 3, remove "to amend"

Page 1, remove line 4

Page 1, line 5, replace "research center experiment station and extension service position adjustments" with "to provide for a legislative management study; to provide for a budget section report"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	$52,517,908	($1,493,531)	$51,024,377
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,535,373)	$52,115,897
Less estimated income	25,826,708	819,981	26,646,689
Total general fund	$27,824,562	($2,355,354)	$25,469,208
Full-time equivalent positions	263.91	(11.93)	251.98"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	$3,712,202	($69,481)	$3,642,721
Total all funds	$3,712,202	($69,481)	$3,642,721
Less estimated income	1,747,735	8,095	1,755,830
Total general fund	$1,964,467	($77,576)	$1,886,891"

Page 2, replace lines 17 through 21 with:

"Upper great plains transportation institute	$22,076,448	$283,794	$22,360,242
Total all funds	$22,076,448	$283,794	$22,360,242
Less estimated income	18,175,657	641,411	18,817,068
Total general fund	$3,900,791	($357,617)	$3,543,174"

Page 2, replace lines 27 through 30 with:

"Main research center	$110,529,780	($1,887,537)	$108,642,243
Total all funds	$110,529,780	($1,887,537)	$108,642,243
Less estimated income	56,948,525	2,136,303	59,084,828
Total general fund	$53,581,255	($4,023,840)	$49,557,415"

Page 3, replace lines 5 through 15 with:

"Dickinson research extension center	$6,996,678	($171,127)	$6,825,551
Central grasslands research extension center	3,531,779	(108,155)	3,423,624
Hettinger research extension center	5,086,767	(111,634)	4,975,133
Langdon research extension center	3,045,836	(81,229)	2,964,607
North central research extension center	5,044,213	(90,561)	4,953,652
Williston research extension center	5,267,400	1,351,490	6,618,890
Carrington research extension center	9,328,093	(152,602)	9,175,491

Total all funds	$38,300,766	$636,182	$38,936,948
Less estimated income	19,817,130	1,964,561	21,781,691
Total general fund	$18,483,636	($1,328,379)	$17,155,257"

Page 3, replace lines 21 and 22 with:

"Agronomy seed farm	$1,521,007	$15,122	$1,536,129
Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($8,142,766)	$97,611,945
Grand total other funds	124,036,762	5,585,473	129,622,235
Grand total all funds	$229,791,473	($2,557,293)	$227,234,180"

"**SECTION 2. HEALTH INSURANCE INCREASE.** The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	37,500"

Page 4, replace lines 12 through 15 with:

"Flooded lands study	67,952	0
Road and bridge asset management system	0	300,000
Total all funds	$23,858,751	$1,837,500
Total other funds	21,325,000	1,700,000
Total general fund	$2,533,751	$137,500

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The upper great plains transportation institute, main and branch research centers, and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 4, remove lines 24 through 31

Page 5, remove lines 1 through 31

Page 6, remove lines 1 through 17

Page 6, line 24, after the second "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"SECTION 11. UPPER GREAT PLAINS TRANSPORTATION INSTITUTE - ROAD AND BRIDGE ASSET MANAGEMENT SYSTEM MATCHING FUNDS. Subdivision 3 of section 1 of this Act includes $100,000 from the general fund for a road and bridge asset management system, which may be spent only to the extent the upper great plains transportation institute provides two dollars of matching funds from nonstate sources for each one dollar provided from the general fund for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 12. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE. During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 13. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the office of the governor, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section by March 31, 2018."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of House Action

	Base Budget	Senate Version	House Changes	House Version
Transportation Institute				
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242
Less estimated income	18,175,657	18,623,430	193,638	18,817,068
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174
Branch Research Centers				
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257
NDSU Extension Service				
Total all funds	$53,651,270	$52,648,270	($532,373)	$52,115,897
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689
General fund	$27,824,562	$25,973,886	($504,678)	$25,469,208
Northern Crops Institute				
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721
Less estimated income	1,747,735	1,756,215	(385)	1,755,830
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891
Main Research Center				
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415

Agronomy Seed Farm				
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129
Less estimated income	1,521,007	1,536,751	(622)	1,536,129
General fund	$0	$0	$0	$0
Bill total				
Total all funds	$229,791,473	$226,077,375	$1,156,805	$227,234,180
Less estimated income	124,036,762	127,990,420	1,631,815	129,622,235
General fund	$105,754,711	$98,086,955	($475,010)	$97,611,945

Senate Bill No. 2020 - Transportation Institute - House Action

	Base Budget	Senate Version	House Changes	House Version
Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	$291,498	$22,360,242
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242
Less estimated income	18,175,657	18,623,430	193,638	18,817,068
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174
FTE	54.98	43.88	0.00	43.88

Department No. 627 - Transportation Institute - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Road and Bridge Asset Management System[2]	Total House Changes
Upper Great Plains Trans. Institute	($8,502)	$300,000	$291,498
Total all funds	($8,502)	$300,000	$291,498
Less estimated income	(6,362)	200,000	193,638
General fund	($2,140)	$100,000	$97,860
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] One-time funding of $300,000, of which $100,000 is from the general fund and $200,000 is from county matching funds is added for a road and bridge asset management system.

This amendment also adds sections to:

- Identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Provide matching fund requirements relating to the road and bridge asset management system.

Senate Bill No. 2020 - Branch Research Centers - House Action

	Base Budget	Senate Version	House Changes	House Version
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551
Central Grasslands Research	3,531,779	3,426,112	(2,488)	3,423,624

Center				
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257
FTE	113.94	110.29	0.00	110.29

Department No. 628 - Branch Research Centers - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Seed Cleaning Plant[2]	Total House Changes
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - NDSU Extension Service - House Action

	Base Budget	Senate Version	House Changes	House Version
Extension Service	$52,517,908	$51,556,750	($532,373)	$51,024,377
Soil Conservation Committee	1,133,362	1,091,520		1,091,520
Total all funds	$53,651,270	$52,648,270	($532,373)	$52,115,897
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689
General fund	$27,824,562	$25,973,886	($504,678)	$25,469,208
FTE	263.91	252.98	(1.00)	251.98

Department No. 630 - NDSU Extension Service - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for State Soil Conservation Committee[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total House Changes
Extension Service	($56,473)	($213,400)	($300,000)	$37,500	($532,373)
Soil Conservation Committee					
Total all funds	($56,473)	($213,400)	($300,000)	$37,500	($532,373)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($213,400)	($300,000)	$37,500	($504,678)
FTE	0.00	(1.00)	0.00	0.00	(1.00)

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] Funding of $213,400 from the general fund and 1 FTE position relating to the state soil conservation committee are removed. After this reduction, $25,000 remains for paying per diem and other expenses reimbursable to the state soil conservation committee members.

[3] Funding of $300,000 from the general fund is removed.

[4] One-time funding of $37,500 from the general fund is added for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section 4-08-10 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service.
- Adds a new section to provide for a Legislative Management study of the state soil conservation committee.

Senate Bill No. 2020 - Northern Crops Institute - House Action

	Base Budget	Senate Version	House Changes	House Version
Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721
Less estimated income	1,747,735	1,756,215	(385)	1,755,830
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891
FTE	12.00	11.80	0.00	11.80

Department No. 638 - Northern Crops Institute - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
General fund	($2,103)	($2,103)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.

Senate Bill No. 2020 - Main Research Center - House Action

	Base Budget	Senate Version	House Changes	House Version
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415
FTE	353.85	336.12	0.00	336.12

Department No. 640 - Main Research Center - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section

4-05.1-05 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - Agronomy Seed Farm - House Action

	Base Budget	Senate Version	House Changes	House Version
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129
Less estimated income	1,521,007	1,536,751	(622)	1,536,129
General fund	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00

Department No. 649 - Agronomy Seed Farm - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.

Att #1 SB 2020 3/31/17

17.0528.02005
Title.
Fiscal No. 2

Prepared by the Legislative Council staff for
Representative Monson
March 30, 2017

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

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Full-time equivalent positions	263.91	(11.93)	251.98"

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Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($8,142,766)	$97,611,945
Grand total other funds	124,036,762	5,585,473	129,622,235
Grand total all funds	$229,791,473	($2,557,293)	$227,234,180"

"**SECTION 2. HEALTH INSURANCE INCREASE.** The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	37,500"

Page 4, replace lines 12 through 15 with:

"Flooded lands study	67,952	0
Road and bridge asset management system	0	300,000
Total all funds	$23,858,751	$1,837,500
Total other funds	21,325,000	1,700,000
Total general fund	$2,533,751	$137,500

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The upper great plains transportation institute, main and branch research centers, and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 4, remove lines 24 through 31

Page 5, remove lines 1 through 31

Page 6, remove lines 1 through 17

Page 6, line 24, after the second "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"SECTION 11. UPPER GREAT PLAINS TRANSPORTATION INSTITUTE - ROAD AND BRIDGE ASSET MANAGEMENT SYSTEM MATCHING FUNDS. Subdivision 3 of section 1 of this Act includes $100,000 from the general fund for a road and bridge asset management system, which may be spent only to the extent the upper great plains transportation institute provides two dollars of matching funds from nonstate sources for each one dollar provided from the general fund for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 12. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE. During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 13. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the office of the governor, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section by March 31, 2018."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of House Action

	Base Budget	Senate Version	House Changes	House Version
Transportation Institute				
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242
Less estimated income	18,175,657	18,623,430	193,638	18,817,068
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174
Branch Research Centers				
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257
NDSU Extension Service				
Total all funds	$53,651,270	$52,648,270	($532,373)	$52,115,897
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689
General fund	$27,824,562	$25,973,886	($504,678)	$25,469,208
Northern Crops Institute				
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721
Less estimated income	1,747,735	1,756,215	(385)	1,755,830
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891
Main Research Center				
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415

Agronomy Seed Farm				
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129
Less estimated income	1,521,007	1,536,751	(622)	1,536,129
General fund	$0	$0	$0	$0
Bill total				
Total all funds	$229,791,473	$226,077,375	$1,156,805	$227,234,180
Less estimated income	124,036,762	127,990,420	1,631,815	129,622,235
General fund	$105,754,711	$98,086,955	($475,010)	$97,611,945

Senate Bill No. 2020 - Transportation Institute - House Action

	Base Budget	Senate Version	House Changes	House Version
Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	$291,498	$22,360,242
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242
Less estimated income	18,175,657	18,623,430	193,638	18,817,068
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174
FTE	54.98	43.88	0.00	43.88

Department No. 627 - Transportation Institute - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Road and Bridge Asset Management System[2]	Total House Changes
Upper Great Plains Trans. Institute	($8,502)	$300,000	$291,498
Total all funds	($8,502)	$300,000	$291,498
Less estimated income	(6,362)	200,000	193,638
General fund	($2,140)	$100,000	$97,860
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] One-time funding of $300,000, of which $100,000 is from the general fund and $200,000 is from county matching funds is added for a road and bridge asset management system.

This amendment also adds sections to:

- Identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Provide matching fund requirements relating to the road and bridge asset management system.

Senate Bill No. 2020 - Branch Research Centers - House Action

	Base Budget	Senate Version	House Changes	House Version
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551
Central Grasslands Research	3,531,779	3,426,112	(2,488)	3,423,624

Center				
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257
FTE	113.94	110.29	0.00	110.29

Department No. 628 - Branch Research Centers - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Seed Cleaning Plant[2]	Total House Changes
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - NDSU Extension Service - House Action

	Base Budget	Senate Version	House Changes	House Version
Extension Service	$52,517,908	$51,556,750	($532,373)	$51,024,377
Soil Conservation Committee	1,133,362	1,091,520		1,091,520
Total all funds	$53,651,270	$52,648,270	($532,373)	$52,115,897
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689
General fund	$27,824,562	$25,973,886	($504,678)	$25,469,208
FTE	263.91	252.98	(1.00)	251.98

Department No. 630 - NDSU Extension Service - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for State Soil Conservation Committee[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total House Changes
Extension Service	($56,473)	($213,400)	($300,000)	$37,500	($532,373)
Soil Conservation Committee					
Total all funds	($56,473)	($213,400)	($300,000)	$37,500	($532,373)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($213,400)	($300,000)	$37,500	($504,678)
FTE	0.00	(1.00)	0.00	0.00	(1.00)

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

[2] Funding of $213,400 from the general fund and 1 FTE position relating to the state soil conservation committee are removed. After this reduction, $25,000 remains for paying per diem and other expenses reimbursable to the state soil conservation committee members.

[3] Funding of $300,000 from the general fund is removed.

[4] One-time funding of $37,500 from the general fund is added for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section 4-08-10 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service.
- Adds a new section to provide for a Legislative Management study of the state soil conservation committee.

Senate Bill No. 2020 - Northern Crops Institute - House Action

	Base Budget	Senate Version	House Changes	House Version
Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721
Less estimated income	1,747,735	1,756,215	(385)	1,755,830
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891
FTE	12.00	11.80	0.00	11.80

Department No. 638 - Northern Crops Institute - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
General fund	($2,103)	($2,103)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.

Senate Bill No. 2020 - Main Research Center - House Action

	Base Budget	Senate Version	House Changes	House Version
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415
FTE	353.85	336.12	0.00	336.12

Department No. 640 - Main Research Center - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.
- Removes a section added by the Senate to amend North Dakota Century Code Section

4-05.1-05 to provide that 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.

Senate Bill No. 2020 - Agronomy Seed Farm - House Action

	Base Budget	Senate Version	House Changes	House Version
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129
Less estimated income	1,521,007	1,536,751	(622)	1,536,129
General fund	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00

Department No. 649 - Agronomy Seed Farm - Detail of House Changes

	Adjusts Funding for Health Insurance Increases[1]	Total House Changes
Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums.

A+H#2 SB2020
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Prepared by the Legislative Council staff for
Representative Streyle
March 29, 2017

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

Page 1, line 4, after "sections" insert "4-05.1-02, 4-05.1-04,"

Page 1, line 4, after "4-05.1-05" insert ", 4-05.1-20,"

Page 1, line 4, after "Code" insert "and sections 11-38-12, 15-12.1-02, 15-12.1-04, and 15-12.1-18 of the North Dakota Century Code, as created by Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly"

Page 1, line 5, after "adjustments" insert "and the state board of agricultural research and education; to repeal sections 4-05.1-16, 4-05.1-17, 4-05.1-18, 4-05.1-19, and 4-05.1-21 of the North Dakota Century Code and sections 15-12.1-14, 15-12.1-15, 15-12.1-16, 15-12.1-17, and 15-12.1-19 of the North Dakota Century Code, as created by Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, relating to the state board of agricultural research and education"

Page 4, after line 23, insert:

"**SECTION 4. AMENDMENT.** Section 4-05.1-02 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-02. Agricultural experiment station.

The ~~state board of agricultural research and education and the~~ president of North Dakota state university shall control and administer the North Dakota agricultural experiment station subject to the supervision of the state board of higher education. Funds appropriated to the agricultural experiment station may not be commingled with funds appropriated to North Dakota state university. Appropriation requests to defray expenses of the agricultural experiment station must be separate from appropriation requests to defray expenses of North Dakota state university.

SECTION 5. AMENDMENT. Section 4-05.1-04 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-04. Reports.

Each center director shall submit an annual report to the station director ~~as directed by the state board of agricultural research and education~~. Each report must set forth in detail the investigations and experiments made during the preceding year, recommendations for the welfare of the center, the financial condition of the center, how all moneys have been expended, and the results of experiments. The station director shall submit these reports, with a report of the North Dakota state university main research center~~, to the state board of agricultural research and education~~ and the state board of higher education on or before the first day of September of each year."

Page 5, after line 17, insert:

"**SECTION 7. AMENDMENT.** Section 4-05.1-20 of the North Dakota Century Code is amended and reenacted as follows:

4-05.1-20. Agricultural research fund ~~- Continuing appropriation~~.

The agricultural research fund is a special fund in the state treasury. The moneys in the fund must be expended for purposes of agricultural research. ~~Any interest earned by the fund is appropriated to the state board of agricultural research and education.~~"

Page 6, line 4, overstrike "state board of agricultural research and education and the"

Page 6, after line 17, insert:

"**SECTION 9. AMENDMENT.** Section 11-38-12 of the North Dakota Century Code, as created by section 6 of Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, is amended and reenacted as follows:

11-38-12. Administration - Position adjustments - Budget section report.

The ~~state board of agricultural research and education and the~~ president of North Dakota state university shall control and administer the North Dakota state university extension service subject to the supervision of the state board of higher education. Funds appropriated to the North Dakota state university extension service may not be commingled with funds appropriated to North Dakota state university. An appropriation request to defray expenses of the North Dakota state university extension service must be separate from an appropriation request to defray expenses of North Dakota state university. Subject to the availability of funds, the director of the North Dakota state university extension service may adjust or increase full-time or part-time equivalent positions to carry out the mission of the extension service. All full-time or part-time positions must be separate from North Dakota state university. Annually, the director of the North Dakota state university extension service shall report to the office of management and budget and to the budget section any adjustments or increases made under this section.

SECTION 10. AMENDMENT. Section 15-12.1-02 of the North Dakota Century Code, as created by section 8 of Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, is amended and reenacted as follows:

15-12.1-02. Agricultural experiment station.

The ~~state board of agricultural research and education and the~~ president of North Dakota state university shall control and administer the North Dakota agricultural experiment station subject to the supervision of the state board of higher education. Funds appropriated to the agricultural experiment station may not be commingled with funds appropriated to North Dakota state university. Appropriation requests to defray expenses of the agricultural experiment station must be separate from appropriation requests to defray expenses of North Dakota state university.

SECTION 11. AMENDMENT. Section 15-12.1-04 of the North Dakota Century Code, as created by section 8 of Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, is amended and reenacted as follows:

15-12.1-04. Reports.

Each center director shall submit an annual report to the station director. Each report must set forth in detail the investigations and experiments made during the preceding year, recommendations for the welfare of the center, the financial condition

of the center, how all moneys have been expended during the preceding year, and the results of all experiments that have been completed during the preceding year. By September first of each year, the station director shall submit these reports, with a report of the North Dakota state university main research center, to the ~~state board of agricultural research and education and the~~ state board of higher education.

SECTION 12. AMENDMENT. Section 15-12.1-18 of the North Dakota Century Code, as created by section 8 of Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly, is amended and reenacted as follows:

15-12.1-18. Agricultural research fund - Continuing appropriation.

The agricultural research fund is a special fund in the state treasury. Moneys in the fund are appropriated ~~to the state board of agricultural research and education~~ for purposes of agricultural research. Any interest earned by the fund must be returned to the fund."

Page 7, after line 18, insert:

"**SECTION 19. REPEAL.** Sections 4-05.1-16, 4-05.1-17, 4-05.1-18, 4-05.1-19, and 4-05.1-21 of the North Dakota Century Code are repealed.

SECTION 20. REPEAL. Sections 15-12.1-14, 15-12.1-15, 15-12.1-16, 15-12.1-17, and 15-12.1-19 of the North Dakota Century Code, as created by Senate Bill No. 2026, as approved by the sixty-fifth legislative assembly are repealed."

Renumber accordingly

SB 2020 Conf.
4-11-17
#1

Upper Great Plains Transportation Institute - Budget No. 627
Senate Bill No. 2020
Base Level Funding Changes

	Senate Version				House Version				House Changes to Senate Version Increase (Decrease) - Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Position	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	54.98	$3,900,791	$18,175,657	$22,076,448	54.98	$3,900,791	$18,175,657	$22,076,448	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes	(9.80)	$56,508	($388,117)	($331,609)	(9.80)	$56,508	($388,117)	($331,609)				$0
Health insurance increase		29,537	87,805	117,342		27,397	81,443	108,840		(2,140)	(6,362)	(8,502)
Removes FTE positions and reduces funding for salaries and wages and operating expenses	(1.30)	(213,402)		(213,402)	(1.30)	(213,402)		(213,402)				0
Adjusts funding for operating expenses and grants		(21,203)	601,085	579,882		(21,203)	601,085	579,882				0
Reduces funding for equipment			(53,000)	(53,000)			(53,000)	(53,000)				0
Adjusts funding sources		(200,000)	200,000	0		(200,000)	200,000	0				0
Reduce appropriations by 3 percent		(106,917)		(106,917)		(106,917)		(106,917)				0
Total ongoing funding changes	(11.10)	($455,477)	$447,773	($7,704)	(11.10)	($457,617)	$441,411	($16,206)	0.00	($2,140)	($6,362)	($8,502)
One-time funding items												
Add funding for road and bridge asset management system				0		100,000	200,000	300,000		100,000	200,000	300,000
Total one-time funding changes	0.00	$0	$0	$0	0.00	$100,000	$200,000	$300,000	0.00	$100,000	$200,000	$300,000
Total Changes to Base Level Funding	(11.10)	($455,477)	$447,773	($7,704)	(11.10)	($357,617)	$641,411	$283,794	0.00	$97,860	$193,638	$291,498
2017-19 Total Funding	43.88	$3,445,314	$18,623,430	$22,068,744	43.88	$3,543,174	$18,817,068	$22,360,242	0.00	$97,860	$193,638	$291,498

Other Sections in Upper Great Plains Transportation Institute - Budget No. 627

	Senate Version	House Version
Employee health insurance premiums		Section 2 identifies the amount included in Section 1 of the bill for employee health insurance premium increases.

Other Sections in Upper Great Plains Transportation Institute - Budget No. 627

	Senate Version	House Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 4 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Upper Great Plains Transportation Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
FTE position adjustments	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.	Section 8 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Upper Great Plains Transportation Institute and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.	Section 9 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute into the 2019-21 biennium.
Road and bridge asset management system matching funds		Section 11 identifies the general fund appropriation for the road and bridge asset management system is available only to the extent $2 of matching funds have been raised for every $1 from the general fund.

SB 2020 Conference
4-11-17
#2

Branch Research Centers - Budget No. 628
Senate Bill No. 2020
Base Level Funding Changes

	Senate Version				House Version				House Changes to Senate Version Increase (Decrease) - Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	113.94	$18,483,636	$19,817,130	$38,300,766	113.94	$18,483,636	$19,817,130	$38,300,766	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes		$196,347	$30,744	$227,091		$196,347	$30,744	$227,091				$0
Health insurance increase		244,491	90,364	334,855		226,777	83,817	310,594		(17,714)	(6,547)	(24,261)
Increases funding for capital bond payments		104		104		104		104				0
Adjusts funding for salaries and removal of FTE positions	(3.65)	(642,408)		(642,408)	(3.65)	(642,408)		(642,408)				0
Adjusts funding for operating expenses		(22,626)		(22,626)		(22,626)		(22,626)				0
Additional budget reductions and funding adjustments		(553,620)	350,000	(203,620)		(553,620)	350,000	(203,620)				0
Reduce appropriations by 3 percent		(532,953)		(532,953)		(532,953)		(532,953)				0
Total ongoing funding changes	(3.65)	($1,310,665)	$471,108	($839,557)	(3.65)	($1,328,379)	$464,561	($863,818)	0.00	($17,714)	($6,547)	($24,261)
One-time funding items												
Add funding for Williston Research Extension Center seed cleaning plant				0			1,500,000	1,500,000			1,500,000	1,500,000
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$1,500,000	$1,500,000	0.00	$0	$1,500,000	$1,500,000
Total Changes to Base Level Funding	(3.65)	($1,310,665)	$471,108	($839,557)	(3.65)	($1,328,379)	$1,964,561	$636,182	0.00	($17,714)	$1,493,453	$1,475,739
2017-19 Total Funding	110.29	$17,172,971	$20,288,238	$37,461,209	110.29	$17,155,257	$21,781,691	$38,936,948	0.00	($17,714)	$1,493,453	$1,475,739

Other Sections in Branch Research Centers - Budget No. 628

	Senate Version	House Version
Employee health insurance premiums		Section 2 identifies the amount included in Section 1 of the bill for employee health insurance premium increases.
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 4 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Other Sections in Branch Research Centers - Budget No. 628

	Senate Version	House Version
Employee accrued leave	Section 4 clarifies that 12-month employees whose employment is not limited in duration shall accrue leave pursuant to North Dakota Century Code Section 54-06-14.	The House removed this section.
Dickinson Research Extension Center mineral rights income	Section 6 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.	Section 5 authorizes the Dickinson Research Extension Center to spend up to $755,000 of revenue received during the 2017-19 biennium from mineral royalties, leases, or easements for ongoing operational expenses. Any revenues received in excess of $755,000 may be spent only for one-time expenditures for the 2017-19 biennium.
Williston Research Extension Center mineral rights income	Section 7 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium.	Section 6 directs the Williston Research Extension Center to report to the 66th Legislative Assembly on amounts received and spent from mineral royalties, leases, or easements in the 2015-17 biennium and the 2017-19 biennium.
Transfer authority	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	Section 7 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.	Section 8 authorizes the State Board of Higher Education to adjust or increase FTE positions for the branch research centers and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.	Section 9 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2019-21 biennium.

SB 2020 Conference
4-11-17
#3

NDSU Extension Service - Budget No. 630
Senate Bill No. 2020
Base Level Funding Changes

	Senate Version				House Version				House Changes to Senate Version Increase (Decrease) - Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	263.91	$27,824,562	$25,826,708	$53,651,270	263.91	$27,824,562	$25,826,708	$53,651,270	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes		$302,125	$265,427	$567,552		$302,125	$265,427	$567,552				$0
Health insurance increase		397,191	382,249	779,440		368,413	354,554	722,967		(28,778)	(27,695)	(56,473)
Reduces funding for salaries	(10.93)	(1,619,206)	200,000	(1,419,206)	(10.93)	(1,619,206)	200,000	(1,419,206)				0
Adjusts funding for other operating expenses		175,557		175,557		175,557		175,557				0
Reduces funding for equipment		(300,000)		(300,000)		(300,000)		(300,000)				0
Reduces appropriations by 3 percent		(806,343)		(806,343)		(806,343)		(806,343)				0
Removes funding for state soil conservation committee				0	(1.00)	(238,400)		(238,400)	(1.00)	(238,400)		(238,400)
Restores funding for state soil conservation committee				0		25,000		25,000		25,000		25,000
Reduces general fund appropriation				0		(300,000)		(300,000)		(300,000)		(300,000)
Total ongoing funding changes	(10.93)	($1,850,676)	$847,676	($1,003,000)	(11.93)	($2,392,854)	$819,981	($1,572,873)	(1.00)	($542,178)	($27,695)	($569,873)
One-time funding items												
Adds funding for Burleigh County junior master gardener program				0		37,500		37,500		37,500		37,500
Total one-time funding changes	0.00	$0	$0	$0	0.00	$37,500	$0	$37,500	0.00	$37,500	$0	$37,500
Total Changes to Base Level Funding	(10.93)	($1,850,676)	$847,676	($1,003,000)	(11.93)	($2,355,354)	$819,981	($1,535,373)	(1.00)	($504,678)	($27,695)	($532,373)
2017-19 Total Funding	252.98	$25,973,886	$26,674,384	$52,648,270	251.98	$25,469,208	$26,646,689	$52,115,897	(1.00)	($504,678)	($27,695)	($532,373)

Other Sections in NDSU Extension Service - Budget No. 630

	Senate Version	House Version
Employee health insurance premiums		Section 2 identifies the amount included in Section 1 of the bill for employee health insurance premium increases.

Other Sections in NDSU Extension Service - Budget No. 630

	Senate Version	House Version
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 4 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the NDSU Extension Service, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
Employee accrued leave	Section 5 clarifies 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.	The House removed this section.
Transfer authority	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	Section 7 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, NDSU Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.	Section 8 authorizes the State Board of Higher Education to adjust or increase FTE positions for the NDSU Extension Service and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.	Section 9 authorizes the continuation of any unexpended general fund appropriation and excess income received by the NDSU Extension Service into the 2019-21 biennium.
State soil conservation committee study		Section 12 provides for a Legislative Management study of the state soil conservation committee.
SBARE study - NDSU Extension Service		Section 13 directs the State Board of Agricultural Research and Education to study the duties and responsibilities of the NDSU Extension Service.

SB 2020 Conference
4-11-17
#4

Northern Crops Institute - Budget No. 638
Senate Bill No. 2020
Base Level Funding Changes

	Senate Version				House Version				House Changes to Senate Version Increase (Decrease) - Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	12.00	$1,964,467	$1,747,735	$3,712,202	12.00	$1,964,467	$1,747,735	$3,712,202	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes	(0.20)	$26,399	$3,160	$29,559	(0.20)	$26,399	$3,160	$29,559				$0
Health insurance increase		29,024	5,320	34,344		26,921	4,935	31,856		(2,103)	(385)	(2,488)
Reduces funding for equipment		(200,000)		(200,000)		(200,000)		(200,000)				0
Reduces funding for travel		(10,216)		(10,216)		(10,216)		(10,216)				0
Restores funding for operating expenses		137,691		137,691		137,691		137,691				0
Reduce appropriations by 3 percent		(58,371)		(58,371)		(58,371)		(58,371)				0
Total ongoing funding changes	(0.20)	($75,473)	$8,480	($66,993)	(0.20)	($77,576)	$8,095	($69,481)	0.00	($2,103)	($385)	($2,488)
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(0.20)	($75,473)	$8,480	($66,993)	(0.20)	($77,576)	$8,095	($69,481)	0.00	($2,103)	($385)	($2,488)
2017-19 Total Funding	11.80	$1,888,994	$1,756,215	$3,645,209	11.80	$1,886,891	$1,755,830	$3,642,721	0.00	($2,103)	($385)	($2,488)

Other Sections in Northern Crops Institute - Budget No. 638

	Senate Version	House Version
Employee health insurance premiums		Section 2 identifies the amount included in Section 1 of the bill for employee health insurance premium increases.
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 4 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Northern Crops Institute, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.

Other Sections in Northern Crops Institute - Budget No. 638

	Senate Version	House Version
Transfer authority	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.	Section 7 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute, and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute, and provides that any adjustments be reported to the Office of Management and Budget.	Section 8 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Northern Crops Institute, and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.	Section 9 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Northern Crops Institute into the 2019-21 biennium.

SB 2020 Conference
4-11-17

#5

NDSU Main Research Center - Budget No. 640
Senate Bill No. 2020
Base Level Funding Changes

	Senate Version				House Version				House Changes to Senate Version Increase (Decrease) - Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	353.85	$53,581,255	$56,948,525	$110,529,780	353.85	$53,581,255	$56,948,525	$110,529,780	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes		$638,645	$196,105	$834,750		$638,645	$196,105	$834,750				$0
Health insurance increase		667,682	366,772	1,034,454		619,307	340,198	959,505		(48,375)	(26,574)	(74,949)
Increases funding for capital bond payments		291		291		291		291				0
Reduces funding for salaries and wages	(17.73)	(1,946,615)		(1,946,615)	(17.73)	(1,946,615)		(1,946,615)				0
Reduces funding for operating expenses		(355,589)		(355,589)		(355,589)		(355,589)				0
Restores funding for equipment		260,000		260,000		260,000		260,000				0
Additional budget reductions and funding adjustments		(1,700,000)	1,600,000	(100,000)		(1,700,000)	1,600,000	(100,000)				0
Reduce appropriations by 3 percent		(1,539,879)		(1,539,879)		(1,539,879)		(1,539,879)				0
Total ongoing funding changes	(17.73)	($3,975,465)	$2,162,877	($1,812,588)	(17.73)	($4,023,840)	$2,136,303	($1,887,537)	0.00	($48,375)	($26,574)	($74,949)
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	(17.73)	($3,975,465)	$2,162,877	($1,812,588)	(17.73)	($4,023,840)	$2,136,303	($1,887,537)	0.00	($48,375)	($26,574)	($74,949)
2017-19 Total Funding	336.12	$49,605,790	$59,111,402	$108,717,192	336.12	$49,557,415	$59,084,828	$108,642,243	0.00	($48,375)	($26,574)	($74,949)

Other Sections in NDSU Main Research Center - Budget No. 640

	Senate Version	House Version
Employee health insurance premiums		Section 2 identifies the amount included in Section 1 of the bill for employee health insurance premium increases.
Additional income appropriation	Section 3 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 4 provides that in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Main Research Center, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
Employee accrued leave	Section 4 clarifies 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14.	The House removed this section.

Other Sections in NDSU Main Research Center - Budget No. 640

	Senate Version	House Version
Transfer authority	Section 8 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.	Section 7 authorizes the transfer of appropriation authority between the Main Research Center, the branch research centers, North Dakota State University Extension Service, and Northern Crops Institute and provides that any transfers be reported to the Office of Management and Budget.
FTE position adjustments	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.	Section 8 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Main Research Center and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.	Section 9 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Main Research Center into the 2019-21 biennium.
Exemption	Section 11 allows the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.	Section 10 allows the Main Research Center to continue any unexpended general or special funds appropriation authority relating to the veterinary diagnostics laboratory and the seed cleaning plants from the 2015-17 biennium to the 2017-19 biennium.

SB 2020 Conference
4-11-17 #6

Agronomy Seed Farm - Budget No. 649
Senate Bill No. 2020
Base Level Funding Changes

	Senate Version				House Version				House Changes to Senate Version Increase (Decrease) - Senate Version			
	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total	FTE Positions	General Fund	Other Funds	Total
2017-19 Biennium Base Level	3.00	$0	$1,521,007	$1,521,007	3.00	$0	$1,521,007	$1,521,007	0.00	$0	$0	$0
2017-19 Ongoing Funding Changes												
Base payroll changes			$7,157	$7,157			$7,157	$7,157				$0
Health insurance increase			8,587	8,587			7,965	7,965			(622)	(622)
Total ongoing funding changes	0.00	$0	$15,744	$15,744	0.00	$0	$15,122	$15,122	0.00	$0	($622)	($622)
One-time funding items												
No one-time funding items				$0				$0				$0
Total one-time funding changes	0.00	$0	$0	$0	0.00	$0	$0	$0	0.00	$0	$0	$0
Total Changes to Base Level Funding	0.00	$0	$15,744	$15,744	0.00	$0	$15,122	$15,122	0.00	$0	($622)	($622)
2017-19 Total Funding	3.00	$0	$1,536,751	$1,536,751	3.00	$0	$1,536,129	$1,536,129	0.00	$0	($622)	($622)

Other Sections in Agronomy Seed Farm - Budget No. 649

	Senate Version	House Version
Employee health insurance premiums		Section 2 identifies the amount included in Section 1 of the bill for employee health insurance premium increases.
Additional income appropriation	Section 3 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.	Section 4 provides that, in addition to the amount appropriated as other funds, any other income from federal acts, private grants, gifts, and donations, or from other sources received by the Agronomy Seed Farm, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2017-19 biennium.
FTE position adjustments	Section 9 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.	Section 8 authorizes the State Board of Higher Education to adjust or increase FTE positions for the Agronomy Seed Farm and provides that any adjustments be reported to the Office of Management and Budget.
Unexpended general fund - Excess income	Section 10 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.	Section 9 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2019-21 biennium.

ROCKY BATEMAN
4780 County Road 84
New Salem, ND 58563

April 12, 2017

SB 202 Conference Com.
4-14-17
#1

Dear Senator Bowman:

As a Morton County Soil Conservation District supervisor and the Area 4 representative on the ND Association of Soil Conservation Districts board of directors, I am writing to ask you to please reconsider the amendment to SB 2020. This amendment eliminates the position currently held by Scott Hochalter on the ND State Soil Conservation Committee. This Committee and its one full time employee (FTE) are all that remain of an entire state agency that was eliminated by the Legislature in 1997 and that is now housed under the umbrella of the NDSU Extension Service.

Looking back, I agree that the change made in 1997 was the right thing to do. However, in the current discussion, the tremendous value of this FTE to the Soil Conservation Districts across the state has been lost or, in part, intentionally ignored by the Extension Service leadership as well as the House of Representatives. Over 50 soil conservation districts across our state have Scott Hochalter on speed dial to help them with a whole host of issues ranging from human resources to finances to rules and regulations and more. He is constantly traveling across the state helping Soil Conservation Districts do things correctly and keeping our groups out of trouble. Our boards are made up of very well-intentioned volunteers, but these volunteers lack knowledge of county, state and federal laws that are constantly changing. The districts do not have the resources to hire human resource specialists or lawyers to help us do our jobs. Scott is the one person that the state gives us to fill that need and every Soil Conservation District in the state uses him and values this resource greatly.

Should this position be eliminated, every single Soil Conservation District will have to pay to hire the expertise he provides. The level of inefficiency and inconsistency that will result throughout the Soil Conservation Districts due to a move like this will set programs back in untold ways. This is not progress and this is certainly not a good example of how state government programs should operate. From a legislative perspective, if you continue down the road of eliminating this position, you most certainly should have a fiscal note to base your decision on. This should quantify the unfunded mandate costs that would be pushed back to the local Soil Conservation Districts as well as looking at the future costs to the ND Insurance Reserve Fund which all Soil Conservation District are covered by. Without the consistent guidance and direction currently provided by Scott Hochalter to keep our districts out of trouble, the need for this coverage will definitely increase as the potential for law suits will increase greatly.

I urge the House members of this conference committee as well as the members of the House of Representatives to reconsider their position on this amendment. The short term gain that will be added to the effort of balancing the budget surely will not be worth the long term cost.

Respectfully,

Rocky Bateman

Former Representative Rocky Bateman

SB2020 Conference
4-19-17

17.0528.02006
Title.
Fiscal No. 2

Prepared by the Legislative Council staff for
Senator Bowman
April 19, 2017

#1

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

That the House recede from its amendments as printed on pages 1256-1263 of the Senate Journal and pages 1480-1487 of the House Journal and that Engrossed Senate Bill No. 2020 be amended as follows:

Page 1, line 5, after "adjustments" insert "; to provide for a legislative management study; to provide for a budget section report"

Page 1, line 5, remove the second "and"

Page 1, line 6, after "exemption" insert "; and to provide an expiration date"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	$52,517,908	($1,326,919)	$51,190,989
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,368,761)	$52,282,509
Less estimated income	25,826,708	819,981	26,646,689
Total general fund	$27,824,562	($2,188,742)	$25,635,820
Full-time equivalent positions	263.91	(10.93)	252.98"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	$3,712,202	($69,481)	$3,642,721
Total all funds	$3,712,202	($69,481)	$3,642,721
Less estimated income	1,747,735	8,095	1,755,830
Total general fund	$1,964,467	($77,576)	$1,886,891"

Page 2, replace lines 17 through 21 with:

"Upper great plains transportation institute	$22,076,448	$133,794	$22,210,242
Total all funds	$22,076,448	$133,794	$22,210,242
Less estimated income	18,175,657	541,411	18,717,068
Total general fund	$3,900,791	($407,617)	$3,493,174"

Page 2, replace lines 27 through 30 with:

"Main research center	$110,529,780	($1,887,537)	$108,642,243
Total all funds	$110,529,780	($1,887,537)	$108,642,243
Less estimated income	56,948,525	2,136,303	59,084,828
Total general fund	$53,581,255	($4,023,840)	$49,557,415"

Page 3, replace lines 5 through 15 with:

"Dickinson research extension center	$6,996,678	($171,127)	$6,825,551
Central grasslands research extension center	3,531,779	(108,155)	3,423,624
Hettinger research extension center	5,086,767	(111,634)	4,975,133
Langdon research extension center	3,045,836	(81,229)	2,964,607

North central research extension center	5,044,213	(90,561)	4,953,652
Williston research extension center	5,267,400	1,351,490	6,618,890
Carrington research extension center	9,328,093	(152,602)	9,175,491
Total all funds	$38,300,766	$636,182	$38,936,948
Less estimated income	19,817,130	1,964,561	21,781,691
Total general fund	$18,483,636	($1,328,379)	$17,155,257"

Page 3, replace lines 21 and 22 with:

"Agronomy seed farm	$1,521,007	$15,122	$1,536,129
Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($8,026,154)	$97,728,557
Grand total other funds	124,036,762	5,485,473	129,522,235
Grand total all funds	$229,791,473	($2,540,681)	$227,250,792

SECTION 2. HEALTH INSURANCE INCREASE. The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	12,500"

Page 4, replace lines 12 through 15 with:

"Flooded lands study	67,952	0
Road and bridge asset management system	0	150,000
Total all funds	$23,858,751	$1,662,500
Total other funds	21,325,000	1,600,000
Total general fund	$2,533,751	$62,500

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The upper great plains transportation institute, main and branch research centers, and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 6, line 24, after "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"SECTION 13. UPPER GREAT PLAINS TRANSPORTATION INSTITUTE - ROAD AND BRIDGE ASSET MANAGEMENT SYSTEM MATCHING FUNDS.

Subdivision 3 of section 1 of this Act includes $50,000 from the general fund for a road and bridge asset management system which may be spent only to the extent the upper great plains transportation institute provides two dollars of matching funds from nonstate sources for each one dollar provided from the general fund for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 14. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE. During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 15. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the office of the governor, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section of the legislative management by March 31, 2018.

SECTION 16. EXPIRATION DATE. Sections 5 and 6 of this Act are effective through June 30, 2019, and after that date are ineffective."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Transportation Institute						
Total all funds	$22,076,448	$22,068,744	$141,498	$22,210,242	$22,360,242	($150,000)
Less estimated income	18,175,657	18,623,430	93,638	18,717,068	18,817,068	(100,000)
General fund	$3,900,791	$3,445,314	$47,860	$3,493,174	$3,543,174	($50,000)
Branch Research Centers						
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
NDSU Extension Service						
Total all funds	$53,651,270	$52,648,270	($365,761)	$52,282,509	$52,115,897	$166,612
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($338,066)	$25,635,820	$25,469,208	$166,612
Northern Crops Institute						
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
Main Research Center						
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0

Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
Agronomy Seed Farm						
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
Bill total						
Total all funds	$229,791,473	$226,077,375	$1,173,417	$227,250,792	$227,234,180	$16,612
Less estimated income	124,036,762	127,990,420	1,531,815	129,522,235	129,622,235	(100,000)
General fund	$105,754,711	$98,086,955	($358,398)	$97,728,557	$97,611,945	$116,612

Senate Bill No. 2020 - Transportation Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	$141,498	$22,210,242	$22,360,242	($150,000)
Total all funds	$22,076,448	$22,068,744	$141,498	$22,210,242	$22,360,242	($150,000)
Less estimated income	18,175,657	18,623,430	93,638	18,717,068	18,817,068	(100,000)
General fund	$3,900,791	$3,445,314	$47,860	$3,493,174	$3,543,174	($50,000)
FTE	54.98	43.88	0.00	43.88	43.88	0.00

Department No. 627 - Transportation Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Road and Bridge Asset Management System[2]	Total Conference Committee Changes
Upper Great Plains Trans. Institute	($8,502)	$150,000	$141,498
Total all funds	($8,502)	$150,000	$141,498
Less estimated income	(6,362)	100,000	93,638
General fund	($2,140)	$50,000	$47,860
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $150,000, of which $50,000 is from the general fund and $100,000 is from county matching funds is added for a road and bridge asset management system. The Senate version did not increase funding for the road and bridge asset management system. The House version included $300,000 of one-time funding for the road and bridge asset management system, of which $100,000 was from the general fund and $200,000 was from county matching funds.

This amendment also adds sections to:

- Identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provide matching fund requirements relating to the road and bridge asset management system, the same as the House version.

Senate Bill No. 2020 - Branch Research Centers - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551	$6,825,551	
Central Grasslands Research Center	3,531,779	3,426,112	(2,488)	3,423,624	3,423,624	
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133	4,975,133	
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607	2,964,607	
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652	4,953,652	
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890	6,618,890	
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491	9,175,491	
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
FTE	113.94	110.29	0.00	110.29	110.29	0.00

Department No. 628 - Branch Research Centers - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Seed Cleaning Plant[2]	Total Conference Committee Changes
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Amends a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - NDSU Extension Service - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Extension Service	$52,517,908	$51,556,750	($365,761)	$51,190,989	$51,024,377	$166,612
Soil Conservation Committee	1,133,362	1,091,520		1,091,520	1,091,520	
Total all funds	$53,651,270	$52,648,270	($365,761)	$52,282,509	$52,115,897	$166,612
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($338,066)	$25,635,820	$25,469,208	$166,612
FTE	263.91	252.98	0.00	252.98	251.98	1.00

Department No. 630 - NDSU Extension Service - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for Operating Expenses[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total Conference Committee Changes
Extension Service	($56,473)	($21,788)	($300,000)	$12,500	($365,761)
Soil Conservation Committee					
Total all funds	($56,473)	($21,788)	($300,000)	$12,500	($365,761)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($21,788)	($300,000)	$12,500	($338,066)
FTE	0.00	0.00	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] Funding of $21,788 from the general fund is removed. The House version removed $213,400 and 1 FTE position relating to the state soil conservation committee.

[3] Funding of $300,000 from the general fund is removed, the same as the House version.

[4] One-time funding of $12,500 from the general fund is added for the Burleigh County junior master gardener program. The Senate version did not include funding for the Burleigh County junior master gardener program. The House version included one-time funding of $37,500 from the general fund for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Amends a section added by the Senate to amend North Dakota Century Code Section 4-08-10 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service, the same as the House version.
- Adds a new section to provide for a Legislative Management study of the state soil conservation committee, the same as the House version.

Senate Bill No. 2020 - Northern Crops Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
FTE	12.00	11.80	0.00	11.80	11.80	0.00

Department No. 638 - Northern Crops Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
General fund	($2,103)	($2,103)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Senate Bill No. 2020 - Main Research Center - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
FTE	353.85	336.12	0.00	336.12	336.12	0.00

Department No. 640 - Main Research Center - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)

FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Amends a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - Agronomy Seed Farm - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00	3.00	0.00

Department No. 649 - Agronomy Seed Farm - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

SB 2020 Conf. Com.
4-20-17

17.0528.02007
Title.
Fiscal No. 3

Prepared by the Legislative Council staff for
Representative Monson
April 20, 2017

#1

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

That the House recede from its amendments as printed on pages 1256-1263 of the Senate Journal and pages 1480-1487 of the House Journal and that Engrossed Senate Bill No. 2020 be amended as follows:

Page 1, line 5, after "adjustments" insert "; to provide for a legislative management study; to provide for a budget section report"

Page 1, line 5, remove the second "and"

Page 1, line 6, after "exemption" insert "; and to provide an expiration date"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	$52,517,908	($1,314,419)	$51,203,489
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,356,261)	$52,295,009
Less estimated income	25,826,708	819,981	26,646,689
Total general fund	$27,824,562	($2,176,242)	$25,648,320
Full-time equivalent positions	263.91	(10.93)	252.98"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	$3,712,202	($69,481)	$3,642,721
Total all funds	$3,712,202	($69,481)	$3,642,721
Less estimated income	1,747,735	8,095	1,755,830
Total general fund	$1,964,467	($77,576)	$1,886,891"

Page 2, replace lines 17 through 21 with:

"Upper great plains transportation institute	$22,076,448	($16,206)	$22,060,242
Total all funds	$22,076,448	($16,206)	$22,060,242
Less estimated income	18,175,657	441,411	18,617,068
Total general fund	$3,900,791	($457,617)	$3,443,174"

Page 2, replace lines 27 through 30 with:

"Main research center	$110,529,780	($1,887,537)	$108,642,243
Total all funds	$110,529,780	($1,887,537)	$108,642,243
Less estimated income	56,948,525	2,136,303	59,084,828
Total general fund	$53,581,255	($4,023,840)	$49,557,415"

Page 3, replace lines 5 through 15 with:

"Dickinson research extension center	$6,996,678	($171,127)	$6,825,551
Central grasslands research extension center	3,531,779	(108,155)	3,423,624
Hettinger research extension center	5,086,767	(111,634)	4,975,133
Langdon research extension center	3,045,836	(81,229)	2,964,607

North central research extension center	5,044,213	(90,561)	4,953,652
Williston research extension center	5,267,400	1,351,490	6,618,890
Carrington research extension center	9,328,093	(152,602)	9,175,491
Total all funds	$38,300,766	$636,182	$38,936,948
Less estimated income	19,817,130	1,964,561	21,781,691
Total general fund	$18,483,636	($1,328,379)	$17,155,257"

Page 3, replace lines 21 and 22 with:

"Agronomy seed farm	$1,521,007	$15,122	$1,536,129
Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($8,063,654)	$97,691,057
Grand total other funds	124,036,762	5,385,473	129,422,235
Grand total all funds	$229,791,473	($2,678,181)	$227,113,292

SECTION 2. HEALTH INSURANCE INCREASE. The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	25,000"

Page 4, replace lines 13 through 15 with:

"Total all funds	$23,858,751	$1,525,000
Total other funds	21,325,000	1,500,000
Total general fund	$2,533,751	$25,000

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The main and branch research centers and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 6, line 24, after "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"**SECTION 13. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE.** During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the

committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 14. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the governor's office, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section of the legislative management by March 31, 2018.

SECTION 15. EXPIRATION DATE. Sections 5 and 6 of this Act are effective through June 30, 2019, and after that date are ineffective."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Transportation Institute						
Total all funds	$22,076,448	$22,068,744	($8,502)	$22,060,242	$22,360,242	($300,000)
Less estimated income	18,175,657	18,623,430	(6,362)	18,617,068	18,817,068	(200,000)
General fund	$3,900,791	$3,445,314	($2,140)	$3,443,174	$3,543,174	($100,000)
Branch Research Centers						
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
NDSU Extension Service						
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
Northern Crops Institute						
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
Main Research Center						
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
Agronomy Seed Farm						
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
Bill total						
Total all funds	$229,791,473	$226,077,375	$1,035,917	$227,113,292	$227,234,180	($120,888)
Less estimated income	124,036,762	127,990,420	1,431,815	129,422,235	129,622,235	(200,000)
General fund	$105,754,711	$98,086,955	($395,898)	$97,691,057	$97,611,945	$79,112

Senate Bill No. 2020 - Transportation Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	($8,502)	$22,060,242	$22,360,242	($300,000)
Total all funds	$22,076,448	$22,068,744	($8,502)	$22,060,242	$22,360,242	($300,000)
Less estimated income	18,175,657	18,623,430	(6,362)	18,617,068	18,817,068	(200,000)
General fund	$3,900,791	$3,445,314	($2,140)	$3,443,174	$3,543,174	($100,000)
FTE	54.98	43.88	0.00	43.88	43.88	0.00

Department No. 627 - Transportation Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Upper Great Plains Trans. Institute	($8,502)	($8,502)
Total all funds	($8,502)	($8,502)
Less estimated income	(6,362)	(6,362)
General fund	($2,140)	($2,140)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Senate Bill No. 2020 - Branch Research Centers - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551	$6,825,551	
Central Grasslands Research Center	3,531,779	3,426,112	(2,488)	3,423,624	3,423,624	
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133	4,975,133	
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607	2,964,607	
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652	4,953,652	
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890	6,618,890	
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491	9,175,491	
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
FTE	113.94	110.29	0.00	110.29	110.29	0.00

Department No. 628 - Branch Research Centers - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Seed Cleaning Plant[2]	Total Conference Committee Changes
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - NDSU Extension Service - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Extension Service	$52,517,908	$51,556,750	($353,261)	$51,203,489	$51,024,377	$179,112
Soil Conservation Committee	1,133,362	1,091,520		1,091,520	1,091,520	
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
FTE	263.91	252.98	0.00	252.98	251.98	1.00

Department No. 630 - NDSU Extension Service - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for Operating Expenses[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total Conference Committee Changes
Extension Service	($56,473)	($21,788)	($300,000)	$25,000	($353,261)
Soil Conservation Committee					

Total all funds	($56,473)	($21,788)	($300,000)	$25,000	($353,261)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($21,788)	($300,000)	$25,000	($325,566)
FTE	0.00	0.00	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] Funding of $21,788 from the general fund is removed. The House version removed $213,400 and 1 FTE position relating to the state soil conservation committee.

[3] Funding of $300,000 from the general fund is removed, the same as the House version.

[4] One-time funding of $25,000 from the general fund is added for the Burleigh County junior master gardener program. The Senate version did not include funding for the Burleigh County junior master gardener program. The House version included one-time funding of $37,500 from the general fund for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-08-10 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service, the same as the House version.
- Adds a new section to provide for a Legislative Management study of the state soil conservation committee, the same as the House version.

Senate Bill No. 2020 - Northern Crops Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
FTE	12.00	11.80	0.00	11.80	11.80	0.00

Department No. 638 - Northern Crops Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
	($2,103)	($2,103)

General fund		
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Senate Bill No. 2020 - Main Research Center - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
FTE	353.85	336.12	0.00	336.12	336.12	0.00

Department No. 640 - Main Research Center - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - Agronomy Seed Farm - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00	3.00	0.00

Department No. 649 - Agronomy Seed Farm - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

SB 2020 Conf

17.0528.02008
Title.
Fiscal No. 4

Prepared by the Legislative Council staff for 4-21-17
Conference Committee
April 21, 2017

#1

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

That the House recede from its amendments as printed on pages 1256-1263 of the Senate Journal and pages 1480-1487 of the House Journal and that Engrossed Senate Bill No. 2020 be amended as follows:

Page 1, line 5, after "adjustments" insert "; to provide for a legislative management study; to provide for a budget section report"

Page 1, line 5, remove the second "and"

Page 1, line 6, after "exemption" insert "; and to provide an expiration date"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	$52,517,908	($1,314,419)	$51,203,489
Soil conservation committee	1,133,362	(41,842)	1,091,520
Total all funds	$53,651,270	($1,356,261)	$52,295,009
Less estimated income	25,826,708	819,981	26,646,689
Total general fund	$27,824,562	($2,176,242)	$25,648,320
Full-time equivalent positions	263.91	(10.93)	252.98"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	$3,712,202	($69,481)	$3,642,721
Total all funds	$3,712,202	($69,481)	$3,642,721
Less estimated income	1,747,735	8,095	1,755,830
Total general fund	$1,964,467	($77,576)	$1,886,891"

Page 2, replace lines 17 through 21 with:

"Upper great plains transportation institute	$22,076,448	$283,794	$22,360,242
Total all funds	$22,076,448	$283,794	$22,360,242
Less estimated income	18,175,657	641,411	18,817,068
Total general fund	$3,900,791	($357,617)	$3,543,174"

Page 2, replace lines 27 through 30 with:

"Main research center	$110,529,780	($1,887,537)	$108,642,243
Total all funds	$110,529,780	($1,887,537)	$108,642,243
Less estimated income	56,948,525	2,136,303	59,084,828
Total general fund	$53,581,255	($4,023,840)	$49,557,415"

Page 3, replace lines 5 through 15 with:

"Dickinson research extension center	$6,996,678	($171,127)	$6,825,551
Central grasslands research extension center	3,531,779	(108,155)	3,423,624
Hettinger research extension center	5,086,767	(111,634)	4,975,133
Langdon research extension center	3,045,836	(81,229)	2,964,607

North central research extension center	5,044,213	(90,561)	4,953,652
Williston research extension center	5,267,400	1,351,490	6,618,890
Carrington research extension center	9,328,093	(152,602)	9,175,491
Total all funds	$38,300,766	$636,182	$38,936,948
Less estimated income	19,817,130	1,964,561	21,781,691
Total general fund	$18,483,636	($1,328,379)	$17,155,257"

Page 3, replace lines 21 and 22 with:

"Agronomy seed farm	$1,521,007	$15,122	$1,536,129
Total special funds	$1,521,007	$15,122	$1,536,129"

Page 3, replace lines 28 through 30 with:

"Grand total general fund	$105,754,711	($7,963,654)	$97,791,057
Grand total other funds	124,036,762	5,585,473	129,622,235
Grand total all funds	$229,791,473	($2,378,181)	$227,413,292

SECTION 2. HEALTH INSURANCE INCREASE. The appropriation in section 1 of this Act includes the sum of $2,141,727, of which $1,268,815 is from the general fund, for increases in employee health insurance premiums from $1,130 to $1,241 per month."

Page 4, line 1, after "**FUNDING**" insert "**- EFFECT ON BASE BUDGET - REPORT TO THE SIXTY-SIXTH LEGISLATIVE ASSEMBLY**"

Page 4, line 2, after "biennium" insert "and the 2017-19 biennium one-time funding items included in the appropriation in section 1 of this Act"

Page 4, replace line 6 with:

"Seed cleaning plants	4,408,224	1,500,000"

Page 4, replace line 8 with:

"Junior master gardener program	12,500	15,000"

Page 4, replace lines 12 through 15 with:

"Flooded lands study	67,952	0
Road and bridge asset management system	0	300,000
Total all funds	$23,858,751	$1,815,000
Total other funds	21,325,000	1,700,000
Total general fund	$2,533,751	$115,000

The 2017-19 biennium one-time funding amounts are not a part of the entity's base budget for the 2019-21 biennium. The upper great plains transportation institute, main and branch research centers, and North Dakota state university extension service shall report to the appropriations committees of the sixty-sixth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2017, and ending June 30, 2019."

Page 6, line 24, after "the" insert "appropriations committees of the"

Page 7, after line 18, insert:

"SECTION 13. UPPER GREAT PLAINS TRANSPORTATION INSTITUTE - ROAD AND BRIDGE ASSET MANAGEMENT SYSTEM MATCHING FUNDS.

Subdivision 3 of section 1 of this Act includes $100,000 from the general fund for a road and bridge asset management system which may be spent only to the extent the upper great plains transportation institute provides two dollars of matching funds from nonstate sources for each one dollar provided from the general fund for the biennium beginning July 1, 2017, and ending June 30, 2019.

SECTION 14. LEGISLATIVE MANAGEMENT STUDY - STATE SOIL CONSERVATION COMMITTEE. During the 2017-18 interim, the legislative management shall study the state soil conservation committee. The study must include a review of the duties, responsibilities, and related costs and efficiencies of the committee and related North Dakota state university extension service staff, the needs of the soil conservation districts, and the necessity to continue the state soil conservation committee. The legislative management shall report its findings and recommendations, together with any legislation required to implement the recommendations, to the sixty-sixth legislative assembly.

SECTION 15. STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION - NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE STUDY - BUDGET SECTION REPORT. During the 2017-18 interim, the state board of agricultural research and education, in consultation with the governor's office, shall study the duties and responsibilities of the North Dakota state university extension service. The study must include a review of the mission, existing programs, the efficiency and effectiveness of the delivery methods for existing programs, and potential program changes. The state board of agricultural research and education shall report its findings and recommendations to increase the efficiency and effectiveness of the North Dakota state university extension service to the budget section of the legislative management by March 31, 2018.

SECTION 16. EXPIRATION DATE. Sections 5 and 6 of this Act are effective through June 30, 2019, and after that date are ineffective."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Transportation Institute						
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242	$22,360,242	$0
Less estimated income	18,175,657	18,623,430	193,638	18,817,068	18,817,068	0
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174	$3,543,174	$0
Branch Research Centers						
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
NDSU Extension Service						
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
Northern Crops Institute						
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
Main Research Center						
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0

Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
Agronomy Seed Farm						
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
Bill total						
Total all funds	$229,791,473	$226,077,375	$1,335,917	$227,413,292	$227,234,180	$179,112
Less estimated income	124,036,762	127,990,420	1,631,815	129,622,235	129,622,235	0
General fund	$105,754,711	$98,086,955	($295,898)	$97,791,057	$97,611,945	$179,112

Senate Bill No. 2020 - Transportation Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Upper Great Plains Trans. Institute	$22,076,448	$22,068,744	$291,498	$22,360,242	$22,360,242	
Total all funds	$22,076,448	$22,068,744	$291,498	$22,360,242	$22,360,242	$0
Less estimated income	18,175,657	18,623,430	193,638	18,817,068	18,817,068	0
General fund	$3,900,791	$3,445,314	$97,860	$3,543,174	$3,543,174	$0
FTE	54.98	43.88	0.00	43.88	43.88	0.00

Department No. 627 - Transportation Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Road and Bridge Asset Management System[2]	Total Conference Committee Changes
Upper Great Plains Trans. Institute	($8,502)	$300,000	$291,498
Total all funds	($8,502)	$300,000	$291,498
Less estimated income	(6,362)	200,000	193,638
General fund	($2,140)	$100,000	$97,860
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $300,000, of which $100,000 is from the general fund and $200,000 is from county matching funds is added for a road and bridge asset management system, the same as the House version.

This amendment also adds sections to:

- Identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provide matching fund requirements relating to the road and bridge asset management system, the same as the House version.

Senate Bill No. 2020 - Branch Research Centers - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Dickinson Research Center	$6,996,678	$6,828,817	($3,266)	$6,825,551	$6,825,551	
Central Grasslands Research Center	3,531,779	3,426,112	(2,488)	3,423,624	3,423,624	
Hettinger Research Center	5,086,767	4,978,244	(3,111)	4,975,133	4,975,133	
Langdon Research Center	3,045,836	2,966,473	(1,866)	2,964,607	2,964,607	
North Central Research Center	5,044,213	4,956,762	(3,110)	4,953,652	4,953,652	
Williston Research Center	5,267,400	5,122,363	1,496,527	6,618,890	6,618,890	
Carrington Research Center	9,328,093	9,182,438	(6,947)	9,175,491	9,175,491	
Total all funds	$38,300,766	$37,461,209	$1,475,739	$38,936,948	$38,936,948	$0
Less estimated income	19,817,130	20,288,238	1,493,453	21,781,691	21,781,691	0
General fund	$18,483,636	$17,172,971	($17,714)	$17,155,257	$17,155,257	$0
FTE	113.94	110.29	0.00	110.29	110.29	0.00

Department No. 628 - Branch Research Centers - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Adds One-Time Funding for a Seed Cleaning Plant[2]	Total Conference Committee Changes
Dickinson Research Center	($3,266)		($3,266)
Central Grasslands Research Center	(2,488)		(2,488)
Hettinger Research Center	(3,111)		(3,111)
Langdon Research Center	(1,866)		(1,866)
North Central Research Center	(3,110)		(3,110)
Williston Research Center	(3,473)	1,500,000	1,496,527
Carrington Research Center	(6,947)		(6,947)
Total all funds	($24,261)	$1,500,000	$1,475,739
Less estimated income	(6,547)	1,500,000	1,493,453
General fund	($17,714)	$0	($17,714)
FTE	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] One-time funding of $1.5 million from special funds, including donated funds and other funds, is appropriated for a seed cleaning plant at the Williston Research Extension Center, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend North Dakota Century Code Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - NDSU Extension Service - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Extension Service	$52,517,908	$51,556,750	($353,261)	$51,203,489	$51,024,377	$179,112
Soil Conservation Committee	1,133,362	1,091,520		1,091,520	1,091,520	
Total all funds	$53,651,270	$52,648,270	($353,261)	$52,295,009	$52,115,897	$179,112
Less estimated income	25,826,708	26,674,384	(27,695)	26,646,689	26,646,689	0
General fund	$27,824,562	$25,973,886	($325,566)	$25,648,320	$25,469,208	$179,112
FTE	263.91	252.98	0.00	252.98	251.98	1.00

Department No. 630 - NDSU Extension Service - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Reduces Funding for Operating Expenses[2]	Reduces Funding from the General Fund[3]	Adds One-Time Funding for the Burleigh County Junior Master Gardener Program[4]	Total Conference Committee Changes
Extension Service	($56,473)	($21,788)	($290,000)	$15,000	($353,261)
Soil Conservation Committee					
Total all funds	($56,473)	($21,788)	($290,000)	$15,000	($353,261)
Less estimated income	(27,695)	0	0	0	(27,695)
General fund	($28,778)	($21,788)	($290,000)	$15,000	($325,566)
FTE	0.00	0.00	0.00	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

[2] Funding of $21,788 from the general fund is removed. The House version removed $213,400 and 1 FTE position relating to the State Soil Conservation Committee.

[3] Funding of $290,000 from the general fund is removed. The House version removed $300,000 from the general fund.

[4] One-time funding of $15,000 from the general fund is added for the Burleigh County junior master gardener program. The Senate version did not include funding for the Burleigh County junior master gardener program. The House version included one-time funding of $37,500 from the general fund for the Burleigh County junior master gardener program.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-08-10 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.
- Adds a new section to direct the State Board of Agricultural Research and Education, in consultation with the Governor's office, to study the duties and responsibilities of the North Dakota State University Extension Service, the same as the House version.
- Adds a new section to provide for a Legislative Management study of the State Soil Conservation Committee, the same as the House version.

Senate Bill No. 2020 - Northern Crops Institute - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Northern Crops Institute	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	
Total all funds	$3,712,202	$3,645,209	($2,488)	$3,642,721	$3,642,721	$0
Less estimated income	1,747,735	1,756,215	(385)	1,755,830	1,755,830	0
General fund	$1,964,467	$1,888,994	($2,103)	$1,886,891	$1,886,891	$0
FTE	12.00	11.80	0.00	11.80	11.80	0.00

Department No. 638 - Northern Crops Institute - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Northern Crops Institute	($2,488)	($2,488)
Total all funds	($2,488)	($2,488)
Less estimated income	(385)	(385)
General fund	($2,103)	($2,103)
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.

Senate Bill No. 2020 - Main Research Center - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Main Research Center	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	
Total all funds	$110,529,780	$108,717,192	($74,949)	$108,642,243	$108,642,243	$0
Less estimated income	56,948,525	59,111,402	(26,574)	59,084,828	59,084,828	0
General fund	$53,581,255	$49,605,790	($48,375)	$49,557,415	$49,557,415	$0
FTE	353.85	336.12	0.00	336.12	336.12	0.00

Department No. 640 - Main Research Center - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Main Research Center	($74,949)	($74,949)
Total all funds	($74,949)	($74,949)
Less estimated income	(26,574)	(26,574)
General fund	($48,375)	($48,375)

FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also:

- Adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.
- Provides an expiration date for a section added by the Senate to amend Section 4-05.1-05 to provide that, for the 2017-19 biennium only, 12-month employees whose employment is not limited in duration accrue leave pursuant to Section 54-06-14. The House version removed the section.

Senate Bill No. 2020 - Agronomy Seed Farm - Conference Committee Action

	Base Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Agronomy Seed Farm	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	
Total all funds	$1,521,007	$1,536,751	($622)	$1,536,129	$1,536,129	$0
Less estimated income	1,521,007	1,536,751	(622)	1,536,129	1,536,129	0
General fund	$0	$0	$0	$0	$0	$0
FTE	3.00	3.00	0.00	3.00	3.00	0.00

Department No. 649 - Agronomy Seed Farm - Detail of Conference Committee Changes

	Adjusts Funding for Health Insurance Increases[1]	Total Conference Committee Changes
Agronomy Seed Farm	($622)	($622)
Total all funds	($622)	($622)
Less estimated income	(622)	(622)
General fund	$0	$0
FTE	0.00	0.00

[1] Funding for employee health insurance is adjusted to reflect the updated premium amount of $1,241 per month, the same as the House version.

This amendment also adds a new section to identify the amount of funding included in the bill for the increase in employee health insurance premiums, the same as the House version.