

2013 SENATE APPROPRIATIONS

SB 2020

2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee

Harvest Room, State Capitol

SB 2020 - Upper Great Plains Transportation Institute

January 16, 2013

Job # 17274

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A BILL to provide an appropriation for defraying the expenses of the extension service.

Minutes:

Testimony attached # 1

Chairman Holmberg called the committee to order on SB 2020 to hear the report of the Upper Great Plains Transportation Institute (UGPTI). He announced the subcommittee for SB 202 will be **Senators Bowman, Erbele and O'Connell**.

He turned meeting over to **V.Chairman Bowman**.

Dr. Dean Breciani, President, North Dakota State University

Made comments and introduced the Upper Great Plains Transportation Institute. He said it's one of the best in the nation and is an attractive partner with other major research universities. He said because of the demands in the western part of the state, he's glad they have a mature outstanding nationally recognized program of this type. Without it, our state would be facing an even more substantial challenge - meaning our transportation infrastructure issues. The Federal Transportation Industry pulled all research funding back from universities because they realize some universities were no longer able to get the job done in an efficient and productive manner. They redistributed it to roughly half of the universities. NDSU Upper Great Plains Transportation Institute was one of the winners in that equation. This means they are in an even better position to be competitive on a national basis and be able to serve our state better. He introduced Dr. Denver Tolliver, who is a nationally recognized expert in the field of transportation.

Dr. Denver Tolliver, Director of the Upper Great Plains Transportation Institute.

Testified in favor of SB 2020

Testimony attached # 1

(12:20) **Senator O'Connell**: How is the GIS system working out and has that gotten to be a pretty detailed system? How long has it been in use? Are you satisfied with how the mapping system is going?

Dr. Tolliver: Yes, I am and we're continuing to invest a lot of time and resources in developing it. In our latest studies, we were able to predict traffic flows from agriculture and

energy related traffic in about 68,000 miles of county and townships roads that we had in our Geographic Information System. The network that we started with was the ND DOT hub. It's a very good network and we got things connected up so we could actually predict the flows over all the county and township roads. I think it needs some additional work. One of the things that we're absolutely missing, in terms of the GIS capabilities in county and township roads, is the lack of a linear referencing system. If you asked me a question about a state highway, US 2, I can say precisely between mile marker 100 and 105, this is the area we are talking about. We can't do that with county and township roads right now. We can show you that segment on the map, but we don't have the linear referencing system to be able to put it in that type of framework so that it matches up with the type of tables that the state DOT can generate.

I'm satisfied that our routing is very good. I'm satisfied with our models, but I do think we need to improve our GIS capabilities in the future and we do need a linear referencing system for county and township roads.

(14:20) **Senator O'Connell:** On the bridge formula for our trucks, did you look into a study if we should change our bridge formula for the wheel spacing and axle spacing? Have you given any consideration on these loads and also the speed?

Dr. Tolliver: In our road infrastructure studies, we model the legal weight of the trucks based on their axle configurations according to federal regulations. In addition, in our studies, we also consider the fact that not all trucks are legally loaded. To account for this, we did some detailed field analysis and we actually did a special study at the Williston weigh station. We concluded that about 25% of the trucks were overloaded and we also estimated the magnitude of the overload and included that in our infrastructure road models.

Senator O'Connell: Is there going to be a report out of what roads you think are most important, 1, 2, 3, in the segment? On your recommendation, is there a list of roads?

V.Chairman Bowman: I'll give you that one when we get done.

Dr. Tolliver: We have given a list of the roads, in descending order of the traffic forecast that we have on them, and given the list of our estimated needs by county. Then we had distributed between county and townships. But in response to your specific question, no, we do not rank individual road segments and say this should be funded.

(16:49) **Senator Wanzek:** Do you have a dollar number on how that 25% overweight impacts our roads? Can you do that?

Dr. Tolliver: We can do that. We did not do that as part of the study but if you're requesting that, we will absolutely analyze that.

(17:17) **Senator Mathern:** The research of the data you're referring to now, is that public? Can any citizen go to a site to get that information?

Dr. Tolliver: Yes, it had been public since the presentation to the budget section on September 20 and it's all on our webpage at a link. I'll be happy to circulate that link.

Senator Mathern: Does it include the cost numbers to bring the infrastructure to the level of a standard that is recognized for what should be in place for our industries?

Dr. Tolliver: That is the objective of the study is to give the legislature an estimate. We forecast out over two years, although our primary focus is the two year term biennium. We estimate what we think are there resurfacing and maintenance needs of all roads in the state - county and township roads, as well as tribal roads. It's all in that report.

(18:51) **V.Chairman Bowman:** One of the concerns that I have with the rapid growth and development is that it seems that the studies are always about three years behind time. I hear from constituents that live out there that you cannot believe what's going on. I'm scared to drive there anymore. We always have to study this and it always takes so much time to react. In the meantime, we may have 4-5 really bad accidents that take people's lives. That's what we hear and the reaction time between your study and the DOT making decisions, it seems we're a little slow at the wheel of being able to address the current needs to take care of the volume of business that we're seeing.

Dr. Tolliver: The production forecast that we used in the 2010 study, yes, they had been significantly increased. They were increased about six months after we did a study, so now the current study we have is operating off an estimate of about 45,000 wells being added between now and 2032. That estimate in itself, may be changed within the next six months. So you are correct. What we're doing in our models is - we're collecting data and then we're using the forecast. We're trying to update them as late as we can in the process, but once we get about halfway through it, we just have to go with the numbers we've got and we know that we're always behind.

I'm very appreciative of your comments about the safety and other issues. That's why we have focused on the road infrastructure studies. Those are very important considerations, not just motor carrier safety, but also on some of the two lane roads, the capacity and time people have to spend following longer heavy vehicles. Those are definitely issues that need to be analyzed in the future.

(21:16) **Senator O'Connell:** When you reported to the budget section, you said all counties reported to your survey. I can't remember how many townships; I think there are over 3,000 or 3500. Has the survey been more completed now that more townships are cooperating with you?

Dr. Tolliver: More are cooperating now, but we do need greater cooperation in the future in terms of the response for the study. We realize that in some cases, finding the person to talk to is not always an easy thing to do. That person is very multi-faceted and very busy, but yes, the response rate is increasing.

V.Chairman Bowman asked **Dr. Tolliver** if he was happy with budget request and he said they are (laughter). Take a 5 minute break and continue with the research stations.

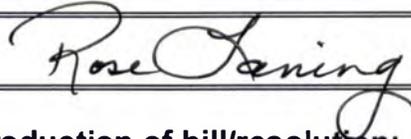
2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020 - Main Research Station
January 16, 2013
Job # 17303 and #17307

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A BILL to provide an appropriation for defraying the expenses of the main research station.

Minutes:

Testimony attached # 1 - 11

V.Chairman Bowman called the committee to order on SB 2020 to hear the reports from the main research centers.

Dean Bresciani, President, North Dakota State University

Proud of rural and agricultural industry. Ag is foundation of state and the state board of agricultural research. Rodney

Rodney Howe, Chairman, State Board of Agriculture Research and Education (SBARE)

He introduced attending board members and stated that SBARE is a grassroots legislation. Ten of the sixteen member board are actively engaged day to day in agriculture. We have two legislative representatives; currently is **Senator Jerry Klein** and **Representative Tracy Boe**. They're input is significant as to how we go forward and understand the process and make our case. Also on the board is **Ag Commissioner Doug Goehring**, **President Dean Bresciani** of NDSU, VP of Agriculture **Ken Grafton**, and the director of extension **Chris Boerboom**.

SBARE's legislative directive is to determine the needs and the potential solutions for ND agriculture. Coming in from last session, they had two directives. One was to come up with a more permanent funding mechanism for the Dickinson Research and Extension Center to address the declining oil revenues or the oil shortfall there. You will see that.

The other directive was to come back with a new recommendation and capital improvements, addressing the seed cleaning needs of some of our research and extension centers. We will propose that to you. In the two years since the last session, we've taken input from NDs ag stakeholders. We have toured most of the research and extension facilities. We have requested input from over 300 ag stakeholders and we've listened to those needs and we've listened to those solutions. We began in September of 2011 and went to February 2012, just listening and had over 70 presenters over those months telling us what problems they were running into, what good things they were running into and additionally, we've had over 30 written comments. We tried to put solutions into initiatives,

something that was practical, efficient with an efficient use of taxpayers' dollars. These boil down to 20 initiatives and requests for capital improvements. We have prioritized those initiatives and I think it's important for you to notice that we prioritized without dollar amounts. All are based on need. At the end of our process, we add the dollars, so it's a straight needs based budget. We made our list of priorities. We took them to the State Board of Higher Education and the State Board approved 3 of the 5 initiatives to go forward. We were a bit disappointed in that we felt that it discounted the legislative intent of SBARE. You weren't able to see all of it and it discounted our process. We also felt it diminished the perception of the value of agriculture, so we had some further discussions and the Board of Higher Education, along with **Duaine Espegard** and **Chancellor Shirvani** agreed that we should submit all five to you so you can see what the needs of agriculture are. But in your books, you're only seeing three because that's all that was approved. You will see all today, with permission.

It's important to invest in ND agriculture. In terms of economic impact, we know that agriculture is the state's number one industry and has been for a long time. As of October 2012, the value of the farm products on hand, the value of the farm gate receipts was \$11.7B. Using an economic multiplier of roughly 3 on that, agriculture's economic impact to the State of ND is about \$35B.

The return on investment in Ag research in ND, for every \$1 invested, there is a return to the state of anywhere from \$10-37. We're currently producing and increase of 1.75 % increase in food production through the world. The population is growing anywhere from 2.5% to 3% per year, so we're already lagging behind. There's a realistic possibility of food shortages as we go forward, so ND is perfectly positioned as you think about the future because we can produce. Think how precious our commodity will grow to be. What we decide today certainly affects the future for a long time to come and we ask that you consider funding the agronomy labs that are listed on our capital improvements. They're old granaries and don't have running water. Petri dishes are setting on office desks. We would hope you take a look at funding them. Thank you for your past funding support.

(15:28) Chris Boerboom - Director, NDSU Extension Service

Testified in favor of SB 2020

Testimony attached # 1 - ND Agricultural Experiment State and NDSU Extension Service.
(starting on page 3)

(19:35) Lindsey Novak, Wilton, ND

Testified in favor of SB 2020

Testimony attached # 2

Shared a few thoughts on her recent experience in the agent-in-training program she experienced in Stutsman County.

Chris Boerboom asked a 4-H member to share a few comments:

(31:30) Jenna Shaw, New Salem-Almont high school senior and 4-H member

Testified in favor of SB 2020

Jenna told of her experiences and growth as a 4-H member.

Chris Boerboom continued on page 67 with capital improvements.

Said they have 87 staff that live near or in oil patch in the western part of state.

(42:03) Ken Grafton, VP of Agriculture Affairs and Dean, College of Agriculture
Testified in favor of SB 2020
(Speaking from Testimony #1)

Mr. Grafton gave an overview of department (pages 21-36.) On page 24 - he updated the committee on initiatives and projects that were funded in 2011-13.

Pages 35-36 on developing and releasing varieties of crops and how there are economic impacts on the state. Told a story (58:15) about a durum they released last year called Carpio. It's a brand new variety which is high yielding, disease resistant and has excellent quality traits. Because it was unheard of, one of the largest pasta manufacturers in the world had a 'red dot' over the state of North Dakota. They would not buy anything, any durum wheat from ND. The reason they didn't buy was they thought it was poor quality wheat and didn't fit their need. The durum breeder and Mr. Grafton talked at length with those individuals and convinced them they high quality varieties and meet their demands and they would like them to try them. The durum breeder gave them samples of Carpio for them to test. Not only did they say they are not 'red', but they are 'green'. They said this particular variety is outstanding and now they want Carpio from ND.

(1:03:56) **Senator Mathern:** With all your years of research, how did we get into the position that the number one producer of pasta would put a red dot put over the state of ND? So who in the country beat us to figure out how not to be in that red spot? They were buying it from someplace.

Ken Grafton: The industry has changed its quality requirements to the point that previous grains are no longer acceptable. Our durum breeder knew this, but it takes 10-15 years to develop a variety. He identified this and knew it was a problem and went about fixing it, solving it and released several varieties as ultra-high quality durum cultivars.

Senator Mathern: As far as beating to get a red dot, is it that we didn't properly fund, research fast enough or why did some other state accomplish having a variety that the company would take? What did they do that we didn't?

Ken Grafton: We were aware there were changes. It's just that with our structure, it takes time to develop and release a variety. If I make a cross today, it may not be release until 2027. I always have to think about where the industry is going to be. We knew there were quality requirements. We had those varieties available but the fact that we were growing a variety that this company identified as substandard, when they saw that we were growing a variety that they didn't like, they just red flagged us for everything, regardless of any changes made.

Senator Mathern: Who was selling it to them? Answer - Canada.

Ken Grafton: They had product that was better than Mountrail - not superior to our new varieties, but better than Mountrail. And that was the key.

(1:07:42) **Senator Robinson** asked about 5 initiatives beginning on page 31. What is in the governor's budget recommendation and what is not?

Ken Grafton: If you turn to page 86, you'd see what was in the Governor's recommendation and compare that to the SBARE list. (He walked through the list.) The Extension Service comparison is on page 85.

(1:09:41) **Blaine G. Schatz, Director/Agronomist, Carrington Research Extension Center.**

Testified in favor of SB 2003

(Speaking from pages 37-39 in testimony #1)

(1:15:25) **Senator Warner:** Assuming we appropriate the money for the new laboratory, what would be the outcome of the old laboratory? Would it be torn down or re-purposed?

Blaine Schatz: The old facility, even though it's old, is an extremely sound facility. It's a potato warehouse. The proposal I have is to build a new agronomy laboratory right next door and to use the current facility primarily for some storage and extend the application of the new facility.

Senator Warner: Do you have an idea of the renovation costs of the old building?

Blaine Schatz: I think they'd be very minimal because we're talking about cold storage.

(1:16:41) **Senator Robinson:** When was last time a legislative committee visited the Carrington facility?

Blaine Schatz: Since 1996, since I've been director, I've not had an opportunity to host such a group.

Senator Robinson: I think we have a responsibility as a legislative assembly on a regular basis to get to these facilities. When we hear about inadequate outdated facilities, it's one thing to hear about them, but it's a whole different perspective to visit and to see that type of thing.

V.Chairman Bowman commented that he took the time to visit the Carrington Agronomy Lab and also at Hettinger. It was well worth it.

(1:19:02) **Bryan Neville, Director - Central Grasslands Research Extension Center - Streeter**

Testified in favor of SB 2020

(Speaking from pages 41-43 in testimony #1)

(1:24:15) **Kris Ringwall, Director, Dickinson Research Extension Center**

Testified in favor of SB 2020

(Speaking from pages 45-47, 85-86 in testimony #1)

Highlighted most needed SBARE projects

(1:28:49) **V.Chairman Bowman:** Heard they're having a major problem near Manning with dust control? Answer - Yes. He's looking at product from Kansas that may be an answer for this problem. Still getting information.

(1:32:05) **Senator Robinson:** Cost of living issues - what is the size of your staff and what do you do to retain and recruit?

Kris Ringwall: Our staff numbers are down. We're decreasing FTEs. The challenge is keeping people and hiring people. The salaries we pay for ground positions are above our permanent staff. As soon as you do that, you run into staffing issues. It's difficult to hire people, it's difficult to maintain people. We have not been advertising as the present time because we are waiting for the session. As soon as this session is done and you fund these, we will be hiring and then we'll see what happens.

(1:33:31) **Christopher (Chris) Shauer, Director, Hettinger Research Extension Center**
Testified in favor of SB 2020.
(Spoke from pages 49-51 in testimony #1)

Senator Robinson: How long have you been in Hettinger? Answer - since 2006.

(1:37:33) **Randy Mehlhoff, Director, Langdon Research Extension Center**
Testified in favor of SB 2020.
(Spoke from pages 53-55 in testimony #1)

(1:40:34) **Senator Warner:** He lost about 100 acres when the Makoti lake rose 10 feet in 2011. He's gotten about 30 acres back and will be able to farm it again, but asked about sodium reserves in flooded land and how fast does the land recover from flooding?

Randy Mehlhoff: Devils Lake dropped 3 feet last year, so some land is coming back into production. I would need more information, but a soils team will have a big role in looking at different strategies to get the land back into original production.

(1:44:03) **Jay Fischer, Director and District Extension Director, North Central Research Extension Center, Minot**
Testified in favor of SB 2020
(speaking from pages 57 -59 in testimony #1)

(1:47:20) **Senator Wanzek:** Reading #4 initiative under the experiment station - the risk management in trade in domestic and global markets. Targeting some of those crops - his brother says we're limited in our hedge options. Producers need risk management for PULSE crops that aren't traded. I never heard anyone put much emphasis on that initiative.

Jay Fischer: It happened to fall in this priority listing. It's critical, especially those that grown corn and beans. It's a priority listing and hopes they can dig deeper and fund those.

(1:50:15) **Jerry Bergman, Director, Williston Research Extension Center, Williston**
Testified in favor of SB 2020
(speaking from pages 61-63 in testimony #1)

Senator Robinson stressed the importance of agriculture and ag research. Said the extension has been phenomenal and all the presentations were great.

Start of Audio Recording # 17307

(0:37) Tom Teigen, Agronomy Seed Farm

Testified in favor of SB 2020

(speaking from pages 65-66 in testimony #1)

(3:35) Kayla Schafer, Government Affairs Manager with Kadrmas, Lee & Jackson, Bismarck, ND

Testified in favor of SB 2020

Testimony attached # 3

(4:40) Scott Rising, ND Soybean Growers Association

Testified in favor of SB 2020 in support of SBARE

Testimony attached # 4

(6:30) Mike Beltz, Vice Chair, State Board of Agricultural Research and Education

Testified in favor of SB 2020

No written testimony.

The way the system works now is that it's a collaborative deal. We have people that are hired by the universities; they're given a place to connect their research. The other half of that is the operating. The operating comes from the commodity groups represented behind me in this room. Without their support, this whole system wouldn't be what it is. It's that because they believe in what the mission is and what is accomplished. A closing thought I'll leave you with is, you're thinking "Can we afford to fund this? My thinking is can you afford not to fund this?"

(7:22) Dan Wogsland, Executive Director, ND Grain Growers Association

Testified in favor of SB 2020

Testimony attached # 5

(8:29) Neil Fisher, Administrator, ND Wheat Commission

Testified in favor of SB 2020

No written testimony.

The wheat commission would also like to register its support for the SBARE process and priorities that have been shared with you, and those that have not and we urge a favorable consideration.

(8:56) Julie Ellingson, North Dakota Stockmen's Association

Testified in favor of SB 2020

Testimony attached # 6.

(11:33) Jerry Doan, McKenzie, ND - Chairman of Advisory Board of Central Grasslands Research Extension Center

Testified in favor of SB 2020.

No attached testimony.

Described the facility at Central Grasslands and said they have a new advisory board that is excited. As the crop production prices have risen substantially, they're seeing a fair amount of native range broke up. Our livestock research centers are going to have to step up a bit and try to bring the livestock production model up to the crop production model to save that native range that we certainly don't want to lose in the state of North Dakota. Central Grasslands serves 44% of the state in that whole Coteau region. We have a huge base that we can work from there. We really do have a very minimal facility there and that agronomy laboratory is something that is very much needed. When we're counting plants or seeds, it's in the corner of the shop somewhere. We really don't have a facility to do that in. We don't have an extension presence. We've got producers that are yearning for the information and we're not getting it spread out to them. Those two pieces of the puzzle besides what the governor done would be a big help to the livestock industry and Central Grasslands. I know there are time constraints and I appreciate the opportunity.

(14:08) **Chairman Holmberg:** I hope you would inform your friends that I'm the only person in the Senate who was here and voted to purchase the land from Harry Iszler back in 1981 - or 1983.

(14:58) **Jeff Enger, Chairman, North Dakota Ag Coalition**
Testified in favor of SB 2020
Testimony attached # 7

(18:30) **Mark Weber, Director, Northern Crops Institute**
Testified in favor of SB 2020
Testimony attached # 8

(24:58) **Senator Warner** asked about gluten intolerance and people adopting it as a lifestyle choice. Is this an emerging threat or an emerging opportunity.

Mark Weber: It depends on who you talk to. There are more and more people with celiac disease. We have provided some training for those interested in incorporating non-gluten ingredients. An example would be soy flour. That is an issue out there.

V.Chairman Grinberg commented that hiring him was the right choice. Good job.

V.Chairman Bowman said this is just the beginning of the process. He closed the hearing on SB 2020

Additional testimony turned in:

Scott Rising, North Dakota Soybean Growers Association
In support of the Northern Crops Institute
Testimony attached # 9.

Tom Burau, Chairman, North Dakota State Soil Conservation Committee
Testimony attached # 10.

North Dakota Ag contacts list - attachment #11

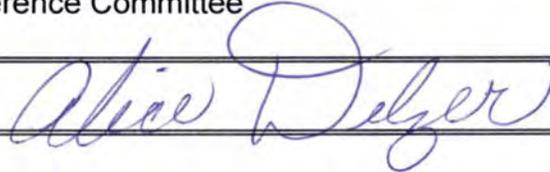
2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020 (Subcommittee)
01-28-2013
Job # 17854

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A Subcommittee Hearing for the NDSU Extension Service.

Minutes:

No testimony presented

Chairman Bowman called the sub-committee to order on Monday, January 28, 2013 at 4:00 pm in regards to SB 2020. Members present were Senator Erbele and Senator O'Connell. Brittani Reim, Legislative Council and Tammy R. Dolan, OMB were also present. Let the record show our committee is all present. We will be going through our AG research and Extension budget. After going through this budget quite a few times, we all know that Northern Crops improvement, wanted two items. Agronomy seed farm doesn't have any general fund money in it. It can't be a big issue, so we will basically be discussing the main research facility and the extension service. Have you had a chance to review the budget and look at the request over and above the budget?

Senator O'Connell: I went to the green sheets.

Senator Erbele: I would like to dig deeper into the request for the agronomy lines.

Chairman Bowman: During the testimony Streeter was not included. I haven't seen that facility. It seems if we are trying to get more research scientists my priority is to get the research updated and modernized. That being said, 4H camp is short about \$400,000 to finalize that project. There are 3 of the research facilities at Williston, Dickinson and Minot have a problem housing new individuals. They are major and they cost a lot of money over and above that's what been allocated. I can personally justify what I just talked about. If we invest in better research facilities, this return on investment will be seen in just a few years. This pays us back many times over.

Senator Erbele: I agree whole heartedly about research. My concern is are we always doing research to that station's area? I have some questions about what is the cooperation and collaboration between the stations.

Senator O'Connell Last session almost have clean facilities. But I agree with both of you that resources are important.

Chairman Bowman: When we are investing money we don't want to have to invest it in every facility if there is nothing in that area directly related to that facility. We want to expand that facility.

Ken Grafton, VP for Ag Affairs: The research extension centers do have their own unique missions. There is a lot of collaboration, particularly the crop group. Sale of seed, moving seed, agronomy activities, carried out in Carrington, they have same kinds of needs. On the livestock side, we had questions raised whether or not there was collaboration in the livestock arena. Calves are raised at central grass lands. Could it be better? Our person in Hettinger has transformed that center from a good one to an excellent one. We are seeing some new areas of research, particularly in the areas that those centers are reflecting needs in that certain area.

Senator Erbele: Discuss in the central grass lands, the previous director was working with China connections. Is that still ongoing?

Ken Grafton: That is not as much as a major focus any more. It was a goal the previous director had. The activities in some areas of china are similar.

Chairman Bowman: Give us a list of every researcher in our system, what they do, and how long they've been there. I've always wondered in my mind, how much we have and how much is needed. When you discuss the new biennium, do you have your researchers collaborate and look where we are weak so we can make it stronger?

Ken Grafton: We'll provide that. Part of the SBARE process includes the department chairs and REC directors. They have ample opportunities to provide information on what is needed for their respective center. That input is brought forward by the department chairs after consultation with their faculty. We can get a list of the scientists.

Senator Erbele: Could you tell us a little about the vending process?

Ken Grafton: It's a simplistic process. We give our scientists a tremendous amount of latitude to carry out studies they think are important or have some potential ROI to the state. We give them lot of flexibility. A majority are carried out in conjunction with a commodity group or funding agency. If we are carrying out research on soybean, we do that based on operating funds approved by the ND Soybean Council. We have the scientists in place; we have minimal operating monies available.

Chris Boerboom, NDSU Extension Director: Governor's recommend two of the four. We would like to see them finished. Last session we had the money requested to finish the greenhouse. This time the number one need is the agronomy lab. Seed cleaning is number two on our list. Three quick options: stationary mills cleaning plants, and mobile mills. A bio informatics takes the DNA and sorts that into something that is usable. He can pass that on to the breeder to find certain genes. Australia has 40 bio bioinformatics in their Ag program and they need more. We have request for four bioinformatics people. We wanted to have one and show you and us what they can do. There were a couple livestock specialists. The governor's budget cut that to one. Of the two, one was approved.

Senator O'Connell: Is there something you would be willing to trade off?

Ken Grafton: I would say through the vending process, 20 or so items were brought forward by stakeholder groups. That was cut to 5 for each experiment station and extension service. I would say anything on that list is needed.

Rodney Howe, Chairman SBARE: The one element of the governor's budget from the extension side is the number one priority. We were requesting a salary pool for agents in training and summer internships and that got redefined as an internship with a one to one match and that doesn't fit our highest priority list. I would request taking a look at that.

Chairman Bowman: Was agents in training in the budget?

Howe: The two were agency training and summer internship program. The governor included in his budget \$250,000 just for internships. The agent in training program wasn't addressed at all and that doesn't work for us.

Chairman Bowman There's a lot of needs. We'll never get everything we want in a biennium so we can continue on expanding and growing needs in agriculture. If we funded all four agronomy labs, could we live with that in this budget over and above the bio research? We need to get these agronomy labs funded if it is the highest priority. I don't have anything against any of this, it is just a matter of how much can we go over the governor's budget and still be able to justify what we are doing.

Rodney Howe: I believe you are on track. The agronomy labs are in very poor shape. The agronomy lab is most important.

Senator Erbele: Looking at all the research centers, that's all in other funds. What are the sources of your funds?

Chairman Bowman would that be the funds you receive when you sell?

Ken Grafton Funds can be grants, commodity grants, sales from collection. You should also know the research extension centers have a revolving equipment fund of \$500,000 per biennium. The centers leverage that fund from the general fund by using funds from commodity groups and grants for equipment.

Chairman Bowman: Email those to me. Do a little study on that before we have our next meeting. We will have to figure out where we want to go. The investments we make in this budget are probably the best investments we'll make in the state of North Dakota.

Ken Grafton: Infrastructure is critical for us. Some of the discussions on the seed cleaning plants said it is not as high a priority at this time, simply because of location. There is a bill by Senator Krebsbach allowing the Ag Experiment station to sell land because of that and it wouldn't make sense for the stat to build a seed cleaning plant at north central.

Chairman Bowman I went up there and reviewed that place. We don't know that. The portable one would be more practical. Hopefully if we can get those buildings funded,

Carrington wants a livestock barn and Hettinger needs a working livestock. I haven't forgotten those things. If we are looking at the highest priorities now might be close to where we want to go.

Chairman Bowman We will close the hearing and reschedule when we have the information.

2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020 Subcommittee

02-11-2013

Job # 18742

Conference Committee

Committee Clerk Signature

Explanation or reason for introduction of bill/resolution:

A Subcommittee hearing in regards to NDSU Extension Service.

Minutes:

You may make reference to "attached testimony."

Chairman Bowman called the subcommittee to order on Monday, February 11, 2013 at 3:30 pm in regards to SB 2020. Senator Erbele and Senator O'Connell were present. Tammy R. Dolan from OMB and Brittani Reim from Legislative Council were also present. Our goal is try to fund everything we can for agriculture. The governor's budget was submitted to us we have a list of other priorities. The 4'H Camp needs money. The agronomy Lab in Langdon needs money. The Central Grasslands Agronomy Lab is in need. Dickinson Williston and Minot are having problems with housing allowances if they hire a new technician. Soil Conservation came in and asked for more than what is in the budget. We have an amendment to fund the rural leadership out of this fund. We have a concern about 1 part-time FTE taken out and moved into another part of the budget. We have another request for someone to do the research on the flood areas. Does anyone have other top priorities? One other request is to make sure the research shall go forward without modifications. Within the perimeters of what I laid out, could we all live with adding a few of these to this budget? Is there something in higher priority?

Rod Howe, Chairman of SBARE: We appreciate the considerations.

Chairman Bowman: If we can find a way to convince the governor that some of these other requests are important, and could get it in the budget, you would go along with that.

Rod Howe: With a few exceptions what you have mentioned follows the SBARE priority list. I can add to that list.

Chairman Bowman: I know there are FTE that are asked for but until the Agronomy labs get rebuilt, we can't get the researcher in. No one would dispute that.

Rod Howe: Others in the room may have some thoughts on this.

Chairman Bowman: The other two agronomy labs that aren't in this bill, Langdon and Central Grasslands, are they of equal importance?

Rod Howe: They were submitted as one line item. They are long past obsolete.

Duane Helk Past Director with the NDSU Extension Service: We appreciate your comments. We believe the project will give us an opportunity for camping with 4-H youth.

Senator O'Connell I would like to see the big plan for kids not just for 4-H kids.

Chairman Bowman: We will have discussion.

Senator Erbele: My achievements in 4-H are some of the highlights of my life. We need to look more to the urban areas.

(Unknown Speaker) The NDSU extension service has always prioritized our 4-H program. With your help we believe the ND 4-H program will be in good hands.

Chairman Bowman: The next item we will discuss the housing allowance for Dickinson, Williston, and Minot. What I would like to see is one individual researcher at each one of the three. We would allow \$1000 a month for two years. We can review the policy in the next biennium and see how well it is working. We do understand there is an important need and it's the housing that stops them from coming. If we subsidize the problem of \$1,000 a month would that make the difference of hiring that researcher for that facility?

Chris Boerboom Director of extension at NDSU: We worked out an option of how we could provide a cost of living allowance. You mentioned a dollar amount of \$1000 a month; we drafted a plan if funds were available. It would be less than that in areas that are heavily impacted by the oil. We can share that plan with you. It is a plan for areas that are impacted more, lower salaried staff, support staff, technicians, etc. that are under greater pressure compared to researchers or directors.

Chairman Bowman The problem we have is every budget that come in now is millions over what they were two years ago. We have to draw the line. We are discussing these so when we formulate, our ideas are what bill has the best chance of passing. That is what we are trying to do. I believe there is \$750,000 for the main station isn't there?

Chris Boerboom: On the extension side, we had asked for technical support for two technician positions in Fargo and one at the North Central Research Extension center. The governor's budget just had just one of those positions.

Chairman Bowman: I'd like both of these gentlemen to explain what their amendments would do.

Senator Erbele: We are looking for a home for the rural leadership program. We have been funding it. It has been a good program and very successful. I have an amendment here that would attach it to this budget. It would be putting \$125,000 towards the rural leader of North Dakota program. How it ties into SBARE I don't know.

Senator O'Connell: McHenry County has been trying to find funding for the flood control. I'm estimating that it will be 7 years before the ranchers will have a hay crop. This would put a person at the main station to study different grass lands and soils. The appropriation to get this land back into production is \$162,307 from the general fund.

Ken Graton, Vice President of Agricultural affairs, director of experiment station: What Senator O'Connell brought forward was a request from a number of farmers from the area by water holdings due to the flood problems in the Minot area. Senator O'Connell indicated the estimated loss of revenue is between 5 and 7 million dollars over the last year or two. There is circumstantial evidence near Towner, ND that they are producing far less hay bales. in 2012 they produced very little. This impacts negatively that rancher's ability to maintain his herd. Dr. Casey came up with a detailed plan that would bring forward expertise in soils and range management. We are not asking for any new FTE's in this request. It is primarily operating money, travel money, and graduate student support. \$162,000 would be the entire budget including graduate student stipends, travel, soil testing, surveys, soil analysis and hydraulic measurements and supplies.

Chairman Bowman: Isn't a lot of this information already been done. This isn't new in North Dakota.

Chris Boerboom: The concern is that over time it will be renovated as long as there is no additional flooding. The problem is the individuals are being impacted by floods and the water retention. One person had his land under water for about 5 months. It's a much larger issue than flooding and renovation.

Chairman Bowman: This would also be applicable to the land in Devil's Lake that we lost.

Senator O'Connell: It would help other states in the same situation.

Ken Graton: That is correct.

Chairman Bowman: Remind me of that position of the half FTE.

Ken Graton: On page 86 on the book that we submitted, it identifies the difference between the SBARE budget and the executive recommendation.

Senator Erbele: On Senator O'Connell's amendment the money for that, do you see that as completed in this biennium?

Ken Graton: The work would be completed as is described in terms of soil testing and range land surveys. The issue is trying to get some research initiated. Last session, the legislature was very supportive of the soil health initiative and this could be a component of the soil health activities as that program becomes more mature. It could blend in very nicely with our existing program once we get the baseline data.

Senator O'Connell: One rancher said he had 80 miles of fencing. This is a small step helping them out.

Ken Graton: On page 86, the first block under ND Agriculture experiment station, the Governor's recommended budget says to remove funding for the state data center and that is .52 FTEs and removes \$142,837 from the experiment station budget. If that position was retained by the experiment station, we could find a very good use by redirecting it to the animal science department to make a full position whole.

Chairman Bowman: Why did the governor take that out then?

Ken Graton: That was part of the state data center which was transferred over to the commerce department in January 2012 and we had an individual on the campus. That position is shared between the college of arts humanities and social sciences and the North Dakota Ag Experiment Station. By this action the Ag Experiment Station is affected negatively in terms of losing that portion of the position. The other portion of the position is retained by the university.

Tammy R. Dolan: At one point the former director of the state data center resigned from that position and at that point the decision was made the position would be better off in the commerce department. They hired a contractor and started that up. The reason we removed the funding and FTE was the duties were no longer being conducted by the Ag research. Now on the commerce side there is a request to add an FTE for that position so the net to the state is only a half of an increase between the two budgets.

Chairman Bowman: I don't want the governor to come after the budget. We will talk about that and find out what we can do.

Senator O'Connell: Basically we could take it from commerce and bring it back here.

Chairman Bowman except commerce might need that.

Senator Erbele: Do you want the whole one back?

Ken Graton: We are only requesting the .52 and the funding associated with the .52. That particular position shared with a different college and the station was identified as a joint position at that time. We had that position before the state data center was established in the early 80s.

Chairman Bowman: We will have to add up what we have talked about to find out if we can justify the spending. I can always argue on the point of the researcher that we see the results of good agriculture policies. It really benefits everyone in this state. I want to make sure I have everything in my mind so I can make the argument to this committee as a whole. We need to make the choices based on need first and we need to explain the justification that backs up that need.

Chris Boerboom: I understand your need to be very concerned about the cost. I have two items doesn't affect cost but would improve our effectiveness and efficiency. We requested the agents in training and a summer internship program. The executive recommendation was for an internship only program and a one for one dollar match of

\$250,000. If the language could be altered and adjusted to agent in training and internship program and if the dollar for dollar match was removed that would greatly increase our ability to meet the needs we have to develop new agents. For the third initiative, the recommendation has only one technician funded. The technical area is in weed science. If that could be adjusted to indicate the potato programs, it would be more effective for our staff for exertion.

Chairman Bowman: Are we rewriting this whole bill?

Senator Erbele: Talk about the central grasslands the FTE research request. Just for my information, is the former director counted in the FTE.

Ken Graton: She was identified as a half time position. She will be on for another year. Her position will be eliminated one year into the biennium.

Chairman Bowman: We will review all of the potential add ons that we have discussed here. We have to analyze what we are doing so that we are staying with our priorities.

Senator Erbele: I'm feeling that putting the situation of the rural Lead of ND into this budget has a lukewarm response. Do you want to talk the benefits or complications of that?

Mr. Howe: This did not come through the SBARE process so we didn't study it but from observations I know it has value. I can't answer how we would rank it in terms of priority if it would have been there.

Senator Erbele: You are willing to work with it in the future if it is this bill? Want to find a home for it.

Mr. Howe: Would you like it to have permanent funding? I believe it has value. Certainly we have a preference to go through SBARE so we can determine the needs. We just didn't have that opportunity. I'm not sure why.

Chairman Bowman: If I go home tonight, and go through the requests and itemize all the items, when we meet we will start as a group to discuss each one of these requests. We will close the hearing. We are well over the governor's budget. We'll do what we can. Thank you for coming. We'll try to get this budget out as quick as we can.

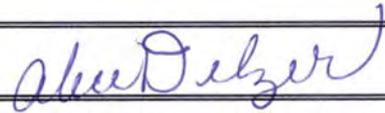
2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020 Subcommittee
02-15-2013
Job 19018

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A subcommittee hearing on the Extension Service (NDSU)

Minutes:

You may make reference to "attached testimony."

Chairman Bowman called the subcommittee to order at 8:00 on Friday, February 15, 2013 in regards to SB 2020. Let the record show that all committee members were present. Bowman, Erbele, O'Connell.

Brittani Reim- Legislative Council
Tammy R. Dolan -OMB

We went through the budget, we tried to max every dollar that we could with what we consider very important. Another amendment was offered for the soybean council. We can act on that right away. They want accountability. Senator Erbele moved and second by Senator O'Connell. Amendment needs to be done in amendment form. Testimony attached # 1.

Senator Erbele: My amendment is to put \$125,000 to this budget to be directed towards the rural leadership North Dakota program. The amendment is 13.8170.01003 and I move the amendment. #3.
Senator O'Connell 2nd passed.

Chairman Bowman lets go through the amendments being proposed in this budget starting with the first one on the list. All of us agreed the 4-H camp is important. It is a one-time funding bill of \$450,000.

Senator O'Connell: The way the wording in simply for remodeling.

Chairman Bowman: In the testimony they explained what they wanted to do. They have \$500,000 in that budget. The rest had to be raised by other funds. This will add an additional \$450,000 so that will add to the \$500,000. They have to raise the rest of money for the dormitories and kitchen. The chances are we will be talking about it in the next biennium.

The two other agronomy labs, Langdon and North Central Grasslands were left out of the budget. Researchers using this facility will have a better facility and hopefully turn out some better research which gives us more productivity to the producers. We included them in the budget for one time funding. The other amendment we put in was because we heard there was an impact in Williston, Minot, and Dickinson. We lump summed \$100,000 and stated this would go for signing bonuses and housing allowances. If it takes a bonus to get them there, it is a one time so in two years we will have a report on how this will work out. Maybe that should be written in there. A report before the next session on how this turned out would be good. The next amendment regards the governor taking out the half time FTE position and putting it in the commerce department because the data was no longer necessary. We were requested put the half FTE back in the budget so we left the \$140,000 in the commerce department and added \$140,000 plus that half time FTE back to the main station. Soil Conservation wanted about \$2 million. They will get just a little over a million dollars with the additional \$75,000 over what the governor gave them. We also talked about rural leadership operations.

Two additional amendments have no appropriation but it was requested that we move some thing around remove the section for requirement of agents in training and the money in the governor's budget is still in the budged. FTE and operating had a weed position in the budget but we were asked to put that into the potato research person. We transferred the weed to the potato and the money that was in the budget goes with the potato person.

Another big concern we have is with flooded land. We thought we should do some research to try to get the land back into production. The money is there but there is no FTE, but Mr. Grafton thought he would have people to do this. This costs the state between 4 and 5 million dollars a year for that loss of production. By making an investment in that, we are going to be paid many times over. That sums up all the amendments we are presenting. Do we need a numbered amendment to adopt these amendments or can we adopt and you can put it in the form?

Brittani Reim: It is specific enough you can pass them and I can draft it into an amendment.

Senator Erbele I would move the list we discussed this morning, 2nd by Senator O'Connell. All approved.

Chairman Bowman: Thank you for the work you did and the ideas you brought forward. Be ready to justify this extra expense over the governor's budget. I've done a lot of thinking on this and the total capital outlay including the governor's budget is \$6,879,000. That is petty cash because Agriculture is still the heart and soul of our state.

Senator O'Connell: Thank you Mr. Chairman for the hard work.

Chairman Bowman: Closed the hearing on SB 2020

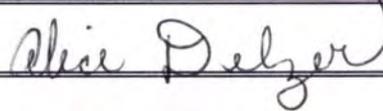
2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020
02-20-2013
Job # 19234

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A BILL for the Extension Service (NDSU)

Minutes:

Chairman Holmberg had Senator Bowman explain the amendments to the full committee.

Brady Larson -Legislative Council and Joe Morrissette-OMB were also present.

Vice Chairman Bowman explained the amendments numbered 13.8170.01007. Testimony attached # 1.

Vice Chairman Bowman moved his amendments. Seconded by Senator Erbele.

Chairman Holmberg - The bottom line is how much more general fund money over the governor's budget is there in this? I'm looking for the exact number.

Brady Larson - On page number 2 of the amendments, about half way down there is a summary of Senate action that provides a total bill action, at the very bottom there is a bill total for general funds, the increase \$2.67 million.

Chairman Holmberg - Then what is the increase for one time funding?

Brady Larson - I do not have that number.

Chairman Holmberg - Senator Bowman did elude to it, he's going to get some further information and that is we are a leadership because I note that there is \$125,000 put in here. I also noticed their expenses that are listed in a document that I got from Legislative Council there is an awful lot of money spent on international and travel around the United States, \$133,000 for international travel on a total budget expenses of \$6,000 and I know that about \$93,000 of their biennial money comes from tuitions essentially. (9:45)

Senator Warner - I don't have an answer in detail. I can give you a conceptual answer. Roughly a third of the funding for rural leadership comes from programs like we are dealing with in here. Roughly a third is what we term corporate contributions although that may be

Cooperatives and commodity groups and a third is what we might call skin in the game which comes from the particular participants most of which have a sponsor of some sort. I agree that the international travel piece was very expensive this year.

Brady Larson - Out of the \$2.67 million increase of that amount \$2.175 million is related to one time funding items. The remaining \$500,000 is ongoing funding.

Chairman Holmberg - We have a motion and a second. All in favor say aye.
Motion carried.

Chairman Holmberg closed the hearing.

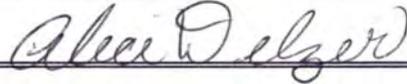
2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020
02-20-13
Job # 19239

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A BILL for the Extension Service at NDSU

Minutes:

Amendment and Vote

Chairman Holmberg called the committee to order on Wednesday, February 20, 2013. All committee members were present.

Brady Larson -Legislative Council
Joe Morissette - OMB

Vice Chairman Bowman has amendment, 13.8170.01007. Amendment attached 1. Explains the amendment, (1:12-5:10)

Senator O'Connell moved a do pass as amended.

Senator Erbele seconded the motion.

Roll Call Vote was taken: Yea: 13; Nay:0; Absent: 0

Vice Chairman Bowman will carry the bill.

The hearing was closed.

RB
2-20-13
1 of 3

PROPOSED AMENDMENTS TO SENATE BILL NO. 2020

Page 1, line 4, after the semicolon insert "to amend and reenact subsection 6 of section 4-05.1-19 of the North Dakota Century Code, relating to the duties of the state board of agricultural research and education;"

Page 1, remove lines 20 through 23

Page 2, replace line 1 with:

"Extension service	\$47,026,654	\$6,123,604	\$53,150,258
Soil conservation committee	<u>987,800</u>	<u>150,000</u>	<u>1,137,800</u>
Total all funds	\$48,014,454	\$6,273,604	\$54,288,058
Less estimated income	<u>23,128,810</u>	<u>1,858,604</u>	<u>24,987,414</u>
Total general fund	\$24,885,644	\$4,415,000	\$29,300,644"

Page 2, replace line 23 with:

"Total all funds	\$89,012,990	\$23,307,632	\$112,320,622"
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Page 2, replace lines 25 and 26 with:

"Total general fund	\$47,382,346	\$11,682,691	\$59,065,037
Full-time equivalent positions	349.01	2.98	351.99"

Page 3, replace lines 22 through 24 with:

"Grand total general fund	\$90,025,408	\$20,968,204	\$110,993,612
Grand total special funds	<u>104,997,261</u>	<u>15,067,926</u>	<u>120,065,187</u>
Grand total all funds	\$195,022,669	\$36,036,130	\$231,058,799"

Page 4, replace line 4 with:

"Agronomy laboratories		0	5,925,000"
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Page 4, after line 5, insert:

"Oil impact assistance		0	100,000"
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Page 4, replace lines 9 through 11 with:

"Total all funds		\$10,726,983	\$8,535,000
Total other funds		<u>2,852,931</u>	<u>950,000</u>
Total general fund		\$7,874,052	\$7,585,000"

Page 5, line 16, after "program" insert "and agents-in-training program"

Page 5, replace lines 17 and 18 with:

"SECTION 9. AMENDMENT. Subsection 6 of section 4-05.1-19 of the North Dakota Century Code is amended and reenacted as follows:

6. Develop a biennial budget request based on its prioritized needs list and submit that request to the president of North Dakota state university and

2 of 3

the state board of higher education, and forward its prioritized needs list and request without modification to the office of management and budget and the appropriations committees of the legislative assembly"

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Senate Action

	Executive Budget	Senate Changes	Senate Version
Transportation Institute			
Total all funds	\$25,353,629	\$0	\$25,353,629
Less estimated income	22,525,054	0	22,525,054
General fund	\$2,828,575	\$0	\$2,828,575
Branch Research Centers			
Total all funds	\$33,746,878	\$0	\$33,746,878
Less estimated income	16,021,866	0	16,021,866
General fund	\$17,725,012	\$0	\$17,725,012
NDSU Extension Service			
Total all funds	\$54,088,058	\$200,000	\$54,288,058
Less estimated income	25,437,414	(450,000)	24,987,414
General fund	\$28,650,644	\$650,000	\$29,300,644
Northern Crops Institute			
Total all funds	\$3,874,651	\$0	\$3,874,651
Less estimated income	1,800,307	0	1,800,307
General fund	\$2,074,344	\$0	\$2,074,344
Main Research Center			
Total all funds	\$110,293,322	\$2,027,300	\$112,320,622
Less estimated income	53,255,585	0	53,255,585
General fund	\$57,037,737	\$2,027,300	\$59,065,037
Agronomy Seed Farm			
Total all funds	\$1,474,961	\$0	\$1,474,961
Less estimated income	1,474,961	0	1,474,961
General fund	\$0	\$0	\$0
Bill total			
Total all funds	\$228,831,499	\$2,227,300	\$231,058,799
Less estimated income	120,515,187	(450,000)	120,065,187
General fund	\$108,316,312	\$2,677,300	\$110,993,612

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

	Executive Budget	Senate Changes	Senate Version
Extension Service	\$53,025,258	\$125,000	\$53,150,258
Soil Conservation Committee	1,062,800	75,000	1,137,800
Total all funds	\$54,088,058	\$200,000	\$54,288,058
Less estimated income	25,437,414	(450,000)	24,987,414
General fund	\$28,650,644	\$650,000	\$29,300,644
FTE	258.26	0.00	258.26

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

	Changes Funding Source for 4-H Camp¹	Increases Funding to Soil Conservation Committee²	Provides Funding to Rural Leadership North Dakota³	Total Senate Changes
Extension Service			\$125,000	\$125,000

Soil Conservation Committee		75,000		75,000
Total all funds	\$0	\$75,000	\$125,000	\$200,000
Less estimated income	(450,000)	0	0	(450,000)
General fund	\$450,000	\$75,000	\$125,000	\$650,000
FTE	0.00	0.00	0.00	0.00

¹The source of funding for the NDSU Extension Service 4-H camp project is changed to provide a total of \$1.9 million, \$950,000 of which is from the general fund and \$950,000 from special funds. The executive budget provided a total of \$1.9 million, of which \$500,000 is from the general fund and \$1.4 million from special funds.

²Funding to the soil conservation committee is increased to provide a total of \$150,000.

³Funding is provided for the Rural Leadership North Dakota program.

Section 8 is changed to remove the matching requirement for the summer internship program and to allow the funds to also be used for the agents-in-training program.

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

	Executive Budget	Senate Changes	Senate Version
Main Research Center	\$110,293,322	\$2,027,300	\$112,320,622
Total all funds	\$110,293,322	\$2,027,300	\$112,320,622
Less estimated income	53,255,585	0	53,255,585
General fund	\$57,037,737	\$2,027,300	\$59,065,037
FTE	351.49	0.50	351.99

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

	Provides Funding for Capital Projects ¹	Provides Funding for Oil-Impacted Centers ²	Adds Animal Science Position ³	Provides Funding for Flooded Lands Study ⁴	Total Senate Changes
Main Research Center	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
Total all funds	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
Less estimated income	0	0	0	0	0
General fund	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
FTE	0.00	0.00	0.50	0.00	0.50

¹One-time funding is added for replacing the agronomy laboratories at the Langdon and Central Grasslands Research Extension Center locations.

²A funding pool of \$100,000 is added for housing allowances or hiring bonuses for employees at the North Central, Dickinson, and Williston Research Extension Centers.

³Funding for a new .5 FTE animal science position is added.

⁴Funding is provided for conducting research relating to the recovery of grasslands affected by Souris River flooding.

This amendment adds a section relating to the State Board of Agricultural Research and Education needs-based budget request.

Date: 2-20-13

Roll Call Vote # 1

2013 SENATE STANDING COMMITTEE
ROLL CALL VOTES

BILL/RESOLUTION NO. 2020

Senate Appropriations Committee

Check here for Conference Committee

Legislative Council Amendment Number 13.8170.01007

Action Taken _____

Motion Made By Bowman Seconded By Erbele

Senators	Yes	No	Senator	Yes	No
Chairman Ray Holmberg			Senator Tim Mathern		
Co-Vice Chairman Bill Bowman			Senator David O'Connell		
Co-Vice Chair Tony Grindberg			Senator Larry Robinson		
Senator Ralph Kilzer			Senator John Warner		
Senator Karen Krebsbach					
Senator Robert Erbele					
Senator Terry Wanzek					
Senator Ron Carlisle					
Senator Gary Lee					

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

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

voice vote passed

Date: 2-20-13

Roll Call Vote # 2

2013 SENATE STANDING COMMITTEE
ROLL CALL VOTES

BILL/RESOLUTION NO. 2020

Senate Appropriations Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Pass as Amended

Motion Made By O'Connell Seconded By Erbele

Senators	Yes	No	Senator	Yes	No
Chariman Ray Holmberg	✓		Senator Tim Mathern	✓	
Co-Vice Chairman Bill Bowman	✓		Senator David O'Connell	✓	
Co-Vice Chair Tony Grindberg	✓		Senator Larry Robinson	✓	
Senator Ralph Kilzer	✓		Senator John Warner	✓	
Senator Karen Krebsbach	✓				
Senator Robert Erbele	✓				
Senator Terry Wanzek	✓				
Senator Ron Carlisle	✓				
Senator Gary Lee	✓				

Total (Yes) 13 No 0

Absent _____

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, 0 ABSENT AND NOT VOTING). SB 2020 was placed on the Sixth order on the calendar.

Page 1, line 4, after the semicolon insert "to amend and reenact subsection 6 of section 4-05.1-19 of the North Dakota Century Code, relating to the duties of the state board of agricultural research and education;"

Page 1, remove lines 20 through 23

Page 2, replace line 1 with:

"Extension service	\$47,026,654	\$6,123,604	\$53,150,258
Soil conservation committee	<u>987,800</u>	<u>150,000</u>	<u>1,137,800</u>
Total all funds	\$48,014,454	\$6,273,604	\$54,288,058
Less estimated income	<u>23,128,810</u>	<u>1,858,604</u>	<u>24,987,414</u>
Total general fund	\$24,885,644	\$4,415,000	\$29,300,644"

Page 2, replace line 23 with:

"Total all funds	\$89,012,990	\$23,307,632	\$112,320,622"
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Page 2, replace lines 25 and 26 with:

"Total general fund	\$47,382,346	\$11,682,691	\$59,065,037
Full-time equivalent positions	349.01	2.98	351.99"

Page 3, replace lines 22 through 24 with:

"Grand total general fund	\$90,025,408	\$20,968,204	\$110,993,612
Grand total special funds	<u>104,997,261</u>	<u>15,067,926</u>	<u>120,065,187</u>
Grand total all funds	\$195,022,669	\$36,036,130	\$231,058,799"

Page 4, replace line 4 with:

"Agronomy laboratories		0	5,925,000"
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Page 4, after line 5, insert:

"Oil impact assistance		0	100,000"
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Page 4, replace lines 9 through 11 with:

"Total all funds		\$10,726,983	\$8,535,000
Total other funds		<u>2,852,931</u>	<u>950,000</u>
Total general fund		\$7,874,052	\$7,585,000"

Page 5, line 16, after "program" insert "and agents-in-training program"

Page 5, replace lines 17 and 18 with:

"SECTION 9. AMENDMENT. Subsection 6 of section 4-05.1-19 of the North Dakota Century Code is amended and reenacted as follows:

6. Develop a biennial budget request based on its prioritized needs list and submit that request to the president of North Dakota state university and the state board of higher education, and forward its prioritized needs list and request without modification to the office of management and budget and the appropriations committees of the legislative assembly"

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Senate Action

	Executive Budget	Senate Changes	Senate Version
Transportation Institute			
Total all funds	\$25,353,629	\$0	\$25,353,629
Less estimated income	22,525,054	0	22,525,054
General fund	\$2,828,575	\$0	\$2,828,575
Branch Research Centers			
Total all funds	\$33,746,878	\$0	\$33,746,878
Less estimated income	16,021,866	0	16,021,866
General fund	\$17,725,012	\$0	\$17,725,012
NDSU Extension Service			
Total all funds	\$54,088,058	\$200,000	\$54,288,058
Less estimated income	25,437,414	(450,000)	24,987,414
General fund	\$28,650,644	\$650,000	\$29,300,644
Northern Crops Institute			
Total all funds	\$3,874,651	\$0	\$3,874,651
Less estimated income	1,800,307	0	1,800,307
General fund	\$2,074,344	\$0	\$2,074,344
Main Research Center			
Total all funds	\$110,293,322	\$2,027,300	\$112,320,622
Less estimated income	53,255,585	0	53,255,585
General fund	\$57,037,737	\$2,027,300	\$59,065,037
Agronomy Seed Farm			
Total all funds	\$1,474,961	\$0	\$1,474,961
Less estimated income	1,474,961	0	1,474,961
General fund	\$0	\$0	\$0
Bill total			
Total all funds	\$228,831,499	\$2,227,300	\$231,058,799
Less estimated income	120,515,187	(450,000)	120,065,187
General fund	\$108,316,312	\$2,677,300	\$110,993,612

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

	Executive Budget	Senate Changes	Senate Version
Extension Service	\$53,025,258	\$125,000	\$53,150,258
Soil Conservation Committee	1,062,800	75,000	1,137,800
Total all funds	\$54,088,058	\$200,000	\$54,288,058
Less estimated income	25,437,414	(450,000)	24,987,414
General fund	\$28,650,644	\$650,000	\$29,300,644
FTE	258.26	0.00	258.26

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

	Changes Funding Source for 4-H Camp ¹	Increases Funding to Soil Conservation Committee ²	Provides Funding to Rural Leadership North Dakota ³	Total Senate Changes
Extension Service			\$125,000	\$125,000
Soil Conservation Committee		75,000		75,000
Total all funds	\$0	\$75,000	\$125,000	\$200,000
Less estimated income	(450,000)	0	0	(450,000)
General fund	\$450,000	\$75,000	\$125,000	\$650,000
FTE	0.00	0.00	0.00	0.00

¹The source of funding for the NDSU Extension Service 4-H camp project is changed to provide a total of \$1.9 million, \$950,000 of which is from the general fund and \$950,000 from special funds. The executive budget provided a total of \$1.9 million, of which \$500,000 is from the general fund and \$1.4 million from special funds.

²Funding to the soil conservation committee is increased to provide a total of \$150,000.

³Funding is provided for the Rural Leadership North Dakota program.

Section 8 is changed to remove the matching requirement for the summer internship program and to allow the funds to also be used for the agents-in-training program.

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

	Executive Budget	Senate Changes	Senate Version
Main Research Center	\$110,293,322	\$2,027,300	\$112,320,622
Total all funds	\$110,293,322	\$2,027,300	\$112,320,622
Less estimated income	53,255,585	0	53,255,585
General fund	\$57,037,737	\$2,027,300	\$59,065,037
FTE	351.49	0.50	351.99

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

	Provides Funding for Capital Projects ¹	Provides Funding for Oil-Impacted Centers ²	Adds Animal Science Position ³	Provides Funding for Flooded Lands Study ⁴	Total Senate Changes
Main Research Center	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
Total all funds	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
Less estimated income	0	0	0	0	0
General fund	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
FTE	0.00	0.00	0.50	0.00	0.50

¹One-time funding is added for replacing the agronomy laboratories at the Langdon and Central Grasslands Research Extension Center locations.

²A funding pool of \$100,000 is added for housing allowances or hiring bonuses for employees at the North Central, Dickinson, and Williston Research Extension Centers.

³Funding for a new .5 FTE animal science position is added.

⁴Funding is provided for conducting research relating to the recovery of grasslands affected by Souris River flooding.

This amendment adds a section relating to the State Board of Agricultural Research and Education needs-based budget request.

2013 HOUSE APPROPRIATIONS

SB 2020

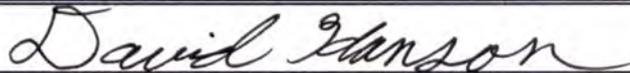
2013 HOUSE STANDING COMMITTEE MINUTES

House Appropriations Education and Environment Division
Roughrider Room, State Capitol

SB 2020
March 14, 2013
Job 19931

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation for defraying the expenses of the extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to provide for transfers; to provide an exemption; to amend and reenact subsection 6 of section 4-05.1-19 of the North Dakota Century Code, relating to the duties of the state board of agricultural research and education; and to declare an emergency.

Minutes:

Attachment 1.

Chairman Skarphol called the committee to order and opened the hearing on SB 2020.

Rodney Howe-Chairman of SBARE: Gave his testimony. Agriculture is North Dakota number one industry. Went requirements and responsibilities of their board.

Chris Boerboom-Director of NDSU Extension Service: Gave his testimony. Went over page 3 of attachment 1. Listed their staffing challenges in the western part of the state.

Roger Chinn-McKenzie County Commissioner: Gave his testimony. Went over his county's housing challenges. The county is currently having staffing challenges. Described the county's traffic situation.

Chairman Skarphol: We have heard many times the needs that are facing the oil patch and I appreciate what you are saying. The dilemma we face is if we allow special consideration salaries in the west, what does that do to the morale of those people that aren't in the west? If put a lot of money in place to subsidize housing, how about for the existing employees that already owned a home for the last twenty years? There's going to be a morale problem there too.

Chinn: There are a lot of challenges

Chairman Skarphol:

Boerboom: 20:30 Continued with his testimony. Attachment 1. Agent in training.

Lindsey Novak-Stutsman County Extension Agent: Shared about her beginnings in extension service. Explained her training. Became Stutsman County Extension Agent.

Boerboom: Continued with testimony. 34:35

Tanner Berger-4-H, Oliver County: Gave his testimony. Told about the benefits he received from 4-H. Gave an overview about his experience in 4-H. Became a part in communication arts and consumer choice judging at the state fair. It has helped in his communication and decision making skills. Talked about the camp in Washburn

Chairman Skarphol: How many kids go to the camp?

Berger: It varies at different camps.

Rep. Boe: His daughter told him that she attended camp at Washburn.

Chairman Skarphol: Apparently it does a good job. Both of them are nice young people.

Boerboom: The camp needs to be repaired and updated. A new building is being proposed for storm safety. It needs lodging and cabin renovations. Gave the dollar amount needed for the camp. Turn to page 97 for budget summary of extension. 44:35

Chairman Skarphol: Tell the committee about the utilization of that facility.

Boerboom: Gave an overview of the camps utilization.

Chairman Skarphol: How are the students going to be available when there's school going on?

Boerboom: We can do weekend programs and we also use the facility for other training for extension staff.

Vice Chair Monson: How many kids go through the camp?

Boerboom: This past camping season we had 425. We had about 700 for 4-H. As we make the renovations we can have more youth.

Ken Grafton-Director for the ND Ag Experiment Station: Gave his testimony. Page 21.

Chairman Skarphol: Explained the green sheets. 49:40

Grafton: Gave an overview of experiment station. Agency overview. Page 23-24. 54:40

Chairman Skarphol: I'm seeing 18 FTEs, but the green sheet only reflects an increase of 2. 56:15

Tammy-OMB: Explained the green sheet. 57:00

Grafton: If you would turn to page 93-94. Continued with his testimony. 1:00:00

Vice Chair Monson: Your green house will be completed this summer, correct?

Grafton: Yes.

Vice Chair Monson: Has industry been coming to you and paying to do research or is this all research that is done by the professors and their students?

Grafton: This is the facility we have been constructing in stages. We have a waiting list of on campus scientists. We have not made an offer for businesses to be involved in the facility. We have had the requests, but we've denied them.

Vice Chair Monson: I know at one time we thought that this facility could be used by the companies and they could pay royalties for the use.

Grafton: The benefit and royalties come back through the development and release of NDSU varieties. They go back to the programs. 1:03:45

Vice Chair Monson: You are right now using all of your level one. And is two being finished?

Grafton: All of level one is being used. Two has not been approved yet by the federal agencies. When we get it we can only use it for biosafety level two.

Chairman Skarphol: Have you removed those green houses in need of repair or are they in place?

Grafton: Three of the green houses have been removed last summer. We are determining the space needs right now.

Chairman Skarphol: What is the overall square footage that before construction of the facility compared to today's?

Grafton: We have about 65,000 sq. ft. of new green house space. It will be about 75,000 when it's all complete. We have removed approximately 10,000 sq. ft. of space. Continued with his testimony.

1:09:00 Vice Chair Monson: What were the sources of those other funds?

Grafton: They were donated by farmers, ranchers, and industry. We had a wide spread of industries in the state.

Vice Chair Monson: Was there any federal funding in that?

Grafton: In the initial stage of the facility we had small amount.

Chairman Skarphol: How much was raised in other funds?

Grafton: I believe it was over \$3 million, but a portion of that came through the development foundation and we needed to pay that off. We actually raised over \$5 million through two fundraising efforts. We raised about \$2.5 million by ourselves before we the development foundation became involved. Continued with his testimony. 1:13:15

Rep. Streyle: Why were the operating costs tied to oil production? Shouldn't that have been one time capital projects?

Grafton: That's a good question. We had this issue where the Dickinson Research Extension Center had, since the beginning of that oil well back in the 50's, used a portion of those moneys for the operating costs. 1:15:00

Vice Chair Monson: Is that oil well producing anything?

Grafton: I do know that it has been declining over the years. It is an older well.

Chairman Skarphol: If we are going to do this \$800,000 in an ongoing basis, what happens to the oil revenue? Does it still go to the station? And what happens if we have a new well? Are we anticipated to have to address this every session?

Tammy: The oil revenue would continue to come into the special funds. We would be able to see if it's tracking up or down.

Chairman Skarphol: Do we have to appropriate that money each session?

Tammy: It would be included in their special funds.

Chairman Skarphol: Is it pointed out in their budget presentation?

Tammy: They are required to report that revenue.

Chairman Skarphol: They can't spend that money without us appropriating it?

Tammy: That is correct.

Rep. Streyle: How much land has been leased?

Grafton: I can say that the Dickinson Research Center has land holdings near Manning. We don't own the mineral rights to that land. That is where there is a tremendous amount of activity.

Chairman Skarphol: I think each branch should tell us whether or not there are minerals on their facility.

Chairman Skarphol recessed the committee for five minutes.

Chairman Skarphol called the committee back to order.

Grafton: Continued with his testimony. 1:23:18

Chairman Skarphol: Tell me the number of FTEs in these two initiatives. It appears like it is seven. Is that correct?

Grafton: The number of FTEs for the Governor's recommendation is 2.5 for the main station 4 for the research extension centers.

Chairman Skarphol: Went through the green sheet.

Grafton: Explained the number of FTEs. 1:26:00

Chairman Skarphol: Are there 3 FTEs at the main station.

Grafton: Yes.

Chairman Skarphol: Why does it say two on the green sheet?

Tammy: Explained the Governor's recommendation.

Vice Chair Monson: Where was that proposal placed?

Tammy: That was added back in the animal science division.

Grafton: Continued with his testimony. 1:30:40

Chairman Skarphol: If you had complete flexibility to use a certain amount of money, would you use it the same way?

Grafton: I would probably spend it in the way it was identified. I would probably find some other areas, but I would spend it the way it was identified.

Grafton: Continued with his testimony. 1:32:25

Chairman Skarphol: Who are you identified that gives you that status?

Grafton: We had an independent study carried out by the Batelle Institute for the north central region. Also, the University of Arizona carried out a study and identified North Dakota Ag Experiment Station.

Chairman Skarphol:

Rep. Martinson: Asked if we should pool money rather than specifying which projects should be done.

Chairman Skarphol: Representative Martinson raises a good point. What if there was something innovative that wasn't brought out?

Grafton: I appreciate the question. Stated he supported the position additions in the governor's budget.

Chairman Skarphol: Asked what he would do if he given more flexibility.

Grafton: I do have that opportunity to work with SBARE and help identify needs. Talked about moving positions.

Chairman Skarphol: I appreciate your honesty.

Vice Chair Monson: Do you have the flexibility to hire this new position or move responsibilities?

Grafton: Yes. Continued with his testimony. 1:45:30

Chairman Skarphol: Is there any opportunity to have contractors help you?

Grafton: We can get by for a period of time. The problem with contracting small seed lots with a commercial grower is we can't insure that the unit is cleaned out sufficiently according to our standards. We can't afford to have a contamination that may not be identified; because that's a sampling issue once it gets into the field.

Chairman Skarphol: We are having problems that if we say that this station is going to cost so many dollars, it is going to cost that amount of dollars. Do you think you can provide all four of those facilities with a pool of money?

Grafton: I don't disagree with you. Explained the process of estimating and submitting the numbers. 1:49:27

Chairman Skarphol: Is it not conceivable that you could reduce the size of a couple of them and build them all?

Grafton: The legislature has the responsibility to not only fund it, but to provide the guidance.

Rep. Streyle: I agree that there should be a lump pool. And we should move away from allocating money to each project.

Chairman Skarphol: And I realize that if we were to do it this way it would probably delay the process for you. Because you would have to do specific work in advance. I'm not sure if that is where we are headed. 1:52:00

Blaine Schatz-Carrington Research Extension Center: The Carrington center plays an important role, because it is centrally located. Thanked the committee for its support.

Indicated his support for the executive budget. Explained what the bill would do for his center. 1:57:40

Bryan Neville-Central Grasslands Research Extension Center: Talked about the situations of Central Grasslands. Gave his support for the proposed extension specialist.

Chairman Skarphol: The dollars you generate for livestock sales, are they on a continuing appropriation? You can spend those dollars; they don't need to be appropriated?

Neville: That is correct.

Kris Ringwall-Dickinson Research Extension Center: Gave his testimony. 2:02:05
Told the committee the primary programs of his center. Highlighted the SBARE initiatives that affect his center. 2:04:27

Chairman Skarphol: Can you tell me the difference between the work you do in your rangeland and what Bryan does at his?

Ringwall: Explained the difference. 2:05:30

Chairman Skarphol: How many mineral acres does the station own?

Ringwall: I'm not sure, but I can get that to you.

Chris Schauer-Hettinger Research Extension Center: Gave an overview of his center. Gave an overview of the proposals for the Ag Experiment Station, the Animal Science Program, and the Agronomy Range Land. 2:11:35

Chairman Skarphol: Are you getting anything from your constituents about prairie dog problems?

Schauer: Ironically, North Dakota State is the lead institution on a new project in northern McGlaughlin south of Fort Yates. It was a multidiscipline grant. Without the soil health initiative and the multiple land use specialist that you helped fund, we would not have landed that grant. That allowed us to be able to answer some of those questions. 2:13:24

Randy Mehlhoff-Langdon Research Extension Center: Thanked the committee for their support. Gave an overview of what happened last session. Told about the immediate impacts the soils team is making. Explained how the executive budget would affect his center. 2:19:35

Jay Fisher-North Central Research Extension Center: Gave his testimony. Page 57-59. 2:22:50

Jerry Bergman-Williston Research Extension Center: Thanked the committee for their support. Listed the needs for his center. 2:24:50

Tom Teigen-NDSU Agronomy Seed Farm: This is a non-general fund budget. The budget is very adequate to fund us through the next biennium. We collaborate some of the other seed producing stations within our system.

Chairman Skarphol: The foundation seed that the center sells, does that money flow through your centers?

Teigen: We each keep our own. 2:27:25

Thomas Wheeler-Williston Research Extension Center: Stated that there is great need for a plant pathologist in the western part of the state.

Chairman Skarphol: Asked for more information from the centers.

Grafton: I'd be happy to provide that information.

Chairman Skarphol: You mentioned your status among your peers. I'm interested the budget comparison to theirs.

Grafton: Explained that the general funds provide base support for the scientists and technical support staff, but the ability of the individuals to go and get the money to actually carry out their research is what is generated from the other funds.

Chairman Skarphol: It would be useful if you provide us a single page summary of that.

Grafton: SBARE works with the experiment station and ag research. They have been helpful in identifying needs.

Vice Chair Monson: You said you be embarrassed by the funding compared to other stations.

Grafton: Their funding is very high compared to ours, but on a per capita basis we stand head and shoulders.

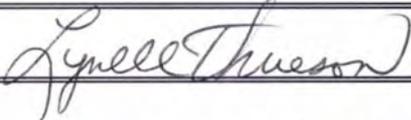
Chairman Skarphol recessed the committee until 2:00PM.

2013 HOUSE STANDING COMMITTEE MINUTES

House Appropriations Education and Environment Division
Roughrider Room, State Capitol

SB 2020
March 14, 2013
Job 19953

Conference Committee



Explanation or reason for introduction of bill/resolution:

A BILL for an act to provide an appropriation for defraying the expenses of the extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to provide for transfers; to provide an exemption; to amend and reenact subsection 6 of section 4-05.1-19 of the North Dakota Century Code, relating to the duties of the state board of agricultural research and education; and to declare an emergency.

Minutes:

Attachment 1, 2, 3, 4, 5, 6, 7, 8, 9

Chairman Skarphol called the committee back to order.

00:45 Jerry Dohn, Chairman of the Advisory Board of the Central Grasslands Research and Extension Center, McKenzie: Gave his testimony. We need the new agronomy lab facility. Talked about cover crops and grasslands being healthy for us.

3:48 Chairman Skarphol: Do we need this size of a facility? Is it plausible to build half that much now? I realize we have a lot of cash, but there are other bills that do need our recognition.

Dohn: We have to be concerned about the dollars we spend.

6:40 Neal Fisher, Administrator of the North Dakota Wheat Commission: Gave his testimony. Is in support of SB 2020. The Wheat Commission is a producer funded entity that works on market development, research, policy, etc. One core program is research. This investment benefits everyone in the state in many ways.

08:25 Scott Rising, North Dakota Soybean Growers Association: See attachment 2. We are supporting the priorities set out in the SBARE submission. Funding of the SBARE Needs Based Priorities.

13:20 Representative Streyle: With the pooling you can get more projects done quickly and efficiently.

Fisher: When you add money to something the expectation is more for either the same or less.

14:44 Chairman Skarphol: Talked about the oil industry and Ag industry. What are the benefits vs. cost to the state?

Fisher: There are big differences. If the prices aren't good in ND, or something isn't working as well in ND as somewhere else, I can't roll up the dirt and go someplace else.

16:22 Representative Streyle: I think we need some Ag impact grant fund.

17:20 Jessie Bateman, Administrator for the North Dakota Ag Coalition: See attachment 3. We urge continuous support of research and extension. These programs provide information, education, and tools for the state's producers.

19:24 Dan Wogsland, Executive Director, North Dakota Grain Growers: See attachment 4. This is an investment in our future, the state's number one economic engine, and is necessary and vital to continue that engine moving forward.

20:44 Mark Weber, Director, Northern Crops Institute: Gave testimony. See attachment 5. Gave background about NCI. We teach our customers about crop quality attributes, how we utilize the crops, and their products through educational programming and technical support. We are not a research facility.

23:07 Vice Chair Monson: I missed your percentages, is it 50% funding from the commodity groups?

Weber: Traditionally it's been a 50/50 match.

23:53 Vice Chair Monson: You don't have a continuing appropriation? Do we have to appropriate this money that you get from the commodity groups?

Weber: That would be the other funds in the numbers.

24:20 Vice Chair Monson: You wouldn't be able to spend it.

Weber: Yes. We can generate the funds from the commodity groups but if the authorization wasn't granted we can't go over that.

24:47 Chairman Skarphol: How often have you gone over your estimated revenue?

25:15 Tammy, OMB: Went over section three of the bill.

Chairman Skarphol: Do we require them to report any funds in excess of what was anticipated?

Tammy: Not to my knowledge.

26:30 Representative Grande: Stated she was in the Middle East and talked with people who have been in ND.

Chairman Skarphol: In regard to the excess income or unexpected general funds and the ability to carry them forward, can you tell me how much is carried forward?

Tammy: I don't have that with me.

27:44 Weber: My team here says that we don't carry any monies forward.

28:07 Neal Fisher: This is a very well-coordinated marketing effort.

30:39 Denver Tolliver, Director, Upper Great Plains Transportation Institute, NDSU: Gave testimony. This is a specialized institute created by the legislature in 1967 to analyze the transportation issues that are important to the state. Summarized the changes that happened at the Federal level. See attachment 6.

35:25 Vice Chairman Monson: Do other states have an upper great plains agency?

Tolliver: Texas has one, as does Minnesota and a couple of others.

36:56 Chairman Skarphol: Is your competition primarily from other universities? Is your skill different than what the universities can provide?

Tolliver: We have unique skills that no other transportation institute does, except maybe Texas.

37:33 Chairman Skarphol: How much money has been typically available to fund all those?

Tolliver: It was at one time. It's dropped a little since then. The sources of funding are Federal and State.

38:03 Chairman Skarphol: In regard to Texas, how much do they get by comparison to you in Federal dollars? Are you familiar with what the other entities in the other states get?

Tolliver: I don't have the numbers, maybe rank in the top 5.

Chairman Skarphol: Your Federal funding has gone down some, how much?

Tolliver: It's gone down about 20%.

38:34 Chairman Skarphol: Your options would be? What's required to get Federal grants? Is it competitive, need matching money, how does that all work?

Tolliver: They are all extremely competitive. There are not more congressional funding opportunities. Told about match funding efforts.

39:56 Chairman Skarphol: So is the potential source of those matched dollars are us? Potential for a private sector is non-existent?

Tolliver: They have to be non-Federal. It's very small.

42:29 Vice Chair Monson: This is a lot more than just Federal correct?

Tolliver: Yes. Went over attachment 6.

45:11 Chairman Skarphol: So you need an additional 1.377 million to match? How much do we need?

Tolliver: Those were our requests to the state board. In addition to the 1.377 million we will be internalizing 1.5 million in the new grant and we will have to match that.

46:34 Vice Chair Monson: Do we really need to chase those federal dollars? Are these projects that we could live without?

Tolliver: Our theme for the universities transportation centers program and these federal grants in state of repair of roads and bridges, is directly related to the major issues we are facing in ND.

48:22 Chairman Skarphol: You would populate a database at DOT with the money? They would have the information you would garner with this research money?

Tolliver: The data would be for anyone that wanted it.

50:33 Representative Streyle: On the report in September in 2012, page 3, reported on page 44, is very basic. Why wasn't there a more detailed report?

Tolliver: For most counties, they don't have the resources or staff to develop, keep, and maintain the type of database that the NDDOT does. We go to paper files if we ask them questions.

Rep. Streyle: Do you know how many counties have a professional engineer? Why wouldn't we require a sign-off or create a more detailed one to have a professional engineer to look at this?

53:44 Tolliver: We would like to analyze that type of collector system that you are talking about. This is one thing we would do under the new Federal grant. The cost that we used in the study was actual costs from the NDDOT that came from construction cost over a 12 month period.

55:48 Representative Streyle: What would it cost to get a professional opinion?

Tolliver: We would contract with specialized engineering firms and use methods to tell us the information we need.

58:40 Chairman Skarphol: The price tag to do that was \$585,000 dollars and was in Section 6.

Tolliver: That was correct.

59:15 Representative Streyle: For half a million dollars we can get what I said earlier, we are not going to do that, we are going to throw a billion or 2 out there without this information?

59:31 Chairman Skarphol: You are pretty much correct. That was Section 6 of HB 1358.

59:33 Representative Streyle: If we don't have the data then we are just wasting money.

1:01:04 Chairman Skarphol: The requirements we put in place on any roads built with the revenue from 1358 are such that there needs to be sufficient analysis done to ensure that the substructure does meet the needs for 155 road.

1:02:10 Representative Streyle: Referred to Page 44.

Tolliver: Went over the infrastructure issues.

Chairman Skarphol: With this money you would do the entire state?

Tolliver: Yes.

1:06:45 Steve Salwei, Transportation Programs Director, ND Department of Transportation: See attachment 7. Supporting the Upper Great Plains Transportation Institutes section of SB 2020.

1:08:43 Chairman Skarphol: Are you suggesting to us that you are in support of us giving them the additional dollars to meet this Federal match and find the value more than sufficient?

Salwei: The grants that Upper Great Plains acquires, when funded, we can leverage those grants for the work they do for us.

1:09:34 Chairman Skarphol: With the dollars we provide to oil counties, does the department have a responsibility to ensure that those roads are properly built?

1:09:53 Salwei: We oversee the expenditure of those roadways.

Chairman Skarphol: How do we change that language to ensure that that's going to happen?

Salwei: If you want those roads to design for 1055, you are probably going to want to spell that out.

1:12:19 Representative Streyle: I think developing a plan I don't think every county road needs that.

Chairman Skarphol: All major roads must be built to support 100,500 pounds year round.

1:13:32 Representative Dosch: Are we talking county roads or state roads?

Salwei: We have a 5 tier system in a data base.

1:15:34 Representative Streyle: The Great Plains took a look and access where we're at as far as damage to these roads due to the excess travel.

Chairman Skarphol: This is county roads. They wanted to gather better information.

1:18:13 Scott Rising, Soybean Growers Association: We appreciate all the work that is done.

Chairman Skarphol closed the hearing on SB 2020.

2013 HOUSE STANDING COMMITTEE MINUTES

House Appropriations Education and Environment Division
Roughrider Room, State Capitol

SB 2020
April 1, 2013
Job 20714

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation for defraying the expenses of the extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to provide for transfers; to provide an exemption; to amend and reenact subsection 6 of section 4-05.1-19 of the North Dakota Century Code, relating to the duties of the state board of agricultural research and education; and to declare an emergency.

Minutes:

Chairman Skarphol called the committee to order to consider SB 2020.

Chairman Skarphol: Explained his intentions for this meeting. 0:55

Vice Chair Monson: Wanted to begin with 4-H.

Jerry Doen-4-H camp steering committee: Explained the Senate actions. The condition of the camp is the same as it was when he attended camp when he was younger. The lodges are in tattered condition.

Chairman Skarphol: There are multiple units that you are going to fix?

Chris Boerboom-NDSU Extension: There are three cabins that were built in the late 1960's and the plan is to renovate those cabins. Gave an estimate that it would take to renovate a single cabin. There would be a loss of some sleeping space with the renovation. The multipurpose building would help replace some of the lodging space.

Boerboom: That multipurpose building would have some lodging in it, activity space, and provide a storm shelter. 5:19

Chairman Skarphol: How confident are you that you are going to raise the rest?

Boerboom: We are pretty confident that we are going to be able to get our goal.

Vice Chair Monson: Asked about the governor's proposed budget.

Boerboom: Stated that what was needed was in the governor's budget.

Vice Chair Monson: The Senate decided to move some of the special over to the general.

Doen: Our intent was always to raise half, but the governor backed that out, then we would have had a shortfall, so we made our case with the Senate and they reinstated that.

Vice Chair Monson: The camping season is coming up; you won't be able to get anything done until the summer of 2014. Correct?

Boerboom: If we were funded by the end of the camp season we would like to start work by this fall.

Vice Chair Monson: After the camps are done in the summer you are planning to start in the fall. Realistically, when the camps are going on you aren't going to be able to do much. So, what Representative Skarphol was suggesting was maybe give you enough to get started for the next couple of years. 9:26

Boerboom: During the time we were in the Senate we discussed about doing a two phase approach And in terms of doing the fundraising in a two phase approach seemed real challenging. 10:30

Vice Chair Monson: Sometimes taking smaller bites can be more doable than doing it all at once.

Boerboom: Some of the donors have indicated that they are providing the difference in their donation, expecting that the state will come through with what was proposed. 10:56

Doen: Last session this proposal was much bigger; this year it was scaled back.

Chairman Skarphol: With the multipurpose building housing, will it be about the same as it is now?

Boerboom: Yes. It will maintain capacity.

Chairman Skarphol: Do you have any comments on the increased funding to the soil conservation committee?

Boerboom: I've seen the level of requests that they are receiving from the soil conservation districts across the state. The requests are greater than the funds they have available. 12:45

Chairman Skarphol: The funds they have available is that primarily generated with the mill levy they have?

Brian Johnston-NDSCD: Gave an overview of the funds. 14:13

Chairman Skarphol: Chris referred to a million dollars. Is that what is raised by the mill levies that the various entities have or are there some other dollars that they receive as well?

Johnston: No the million from the grant is what I think he is referring to. They also would have the additional mill levies that they could raise too.

Vice Chair Monson: The governor proposed to increase that base? Or was that the Senate action?

Johnston: I believe the governor added some and the Senate added more.

Chairman Skarphol: How do you apportion the money out?

Johnston: There is a ranking process. 16:25

Vice Chair Monson: How do you end up with 55 districts when there are 53 counties?

Johnston: There are a couple of them in a couple of counties. Thought that distance might be the reason for 55 districts. 17:26

Chairman Skarphol: Asked about the rural leadership program and if it was all new money.

Boerboom: The money that was added by the Senate would be new money that would be for the rural leadership North Dakota program. I believe back in the 2009 biennium there was \$100,000 of support for the rural leadership North Dakota program that was added at that time. That would be in addition to that state support.

Doen: Last biennium there was money added to rural leadership North Dakota that came through the Industrial Commission from profits from the State Mill. 20:40

Vice Chair Monson: We were wondering if this was new money and where it was from. This would be new to the General Fund. Was it all special before?

Tammy-OMB: The \$100,000 that they received in 2009 was General Fund dollars and that's part of the base budget. The grant that they received in the current biennium would've been from special funds or through the Industrial Commission.

Chairman Skarphol: That went away and which would actually amount to an increase from what you have in this biennium.

Boerboom: Exactly.

Chairman Skarphol: Asked about Section 8 of the bill. 22:30

Boerboom: Coming through the Senate, they maintained the funding similar to what the governor had, but added back in the language for the agent in training program and removed the matching requirement. So, it's much more effective for us this way. 23:37

Chairman Skarphol: Can you talk about the origin of the \$600,000?

Tammy: They received funding from other resources; different special fund dollars in federal money and that is the origin of the \$600,000.

Dave Ruhland-Director of Ag Budget Office: Removing the \$600,000 is mostly the product of the way the budget was submitted. In the past specific equipment may not have been readily identified. 25:46

Chairman Skarphol: The \$600,000 was a number that was in your budget that wasn't being utilized because there was no revenue being generated to do it?

Ruhland: Correct.

Chairman Skarphol: Has it ever been utilized in the past. Have you ever been able to generate any kind of special fund revenue for that type of use?

Ruhland: I would have to look at the specifics. I don't know if the equipment purchases have been at that 600,000 level, but there's been equipment purchased.

Vice Chair Monson: In number five this is onetime funding and it's IT equipment. What kind of equipment?

Boerboom: These are the interactive video and network systems and we have these systems on at the research extension centers on the main campus and also in several county offices and it allows us to do educational programs like pesticide applicator training, farm transition programs, etc. We have a total of fourteen systems that are truly obsolete, if they go down there is no replacement for them. Those all need to be replaced. 27:50

Vice Chair Monson: And every research station has an IVEN capability?

Boerboom: Correct.

Vice Chair Monson: This isn't to upgrade what you've got.

Boerboom: This is sustaining what we have. This isn't expanding at all.

Vice Chair Monson: I was looking through your NDSU Extension book, and your initiatives on # 2 after agents in training was livestock development. That one has two FTEs associated with it and I know we saw some FTEs being switched, but I'm not sure which budget it was on.

Boerboom: In the second initiative for SBARE livestock development there were two FTEs for area livestock specialists that were requested. In the executive budget there was only funding for one. That is the way it passed through the Senate.

Vice Chair Monson: Here on the green sheet it says it adds one FTE area livestock specialist position, but somewhere there was another half FTE.

Chairman Skarphol: That's in the research part.

Vice Chair Monson: So, that has nothing to do with your extension budget?

Boerboom: Correct. 31:28

Chairman Skarphol: Asked about section 4 of the bill. You have always had that authority to transfer have you not?

Ken Grafton: That is correct.

Chairman Skarphol: Asked about section 6 of the bill. Why the reference to the 15/17 Biennium? We are letting you carry unexpended funds forward, but why that far?

Grafton: I can't answer that question.

Tammy: It is giving them carryover authority in advance.

Chairman Skarphol: Did we do it this time?

Tammy: I believe that's been in the bill.

Chairman Skarphol: On the greenhouse we have carry forward authority on any unexpended funds on the greenhouse, but I had the impression that it's likely going to be used up before the end of the biennium or am I incorrect?

Grafton: It is very close. It's going to be a timing issue. If we run into some problems in finishing it up we might delay until the beginning of the next biennium. But we hope that it will be completed before the biennium is completed.

Vice Chair Monson: On the green house 34:55

Grafton: That is correct.

Vice Chair Monson: If there is money left over then you would be able to carry that forward with section 7 in there?

Grafton: We have been very diligent in managing the money appropriately. 35:44

Brittany-Legislative Council: This current biennium's bill for the Ag Research does contain a forward biennium; it has it for the upcoming biennium for 13/15 from 11/13.

Chairman Skarphol: I've just never seen us provide for carryover for the biennium after the next. I find that a little out of the ordinary.

Tammy: It's because they are a part of higher education that they can do that. Because higher education can carry forward their funds if they don't spend them.

Chairman Skarphol: What is the threat if we were to remove it?

Grafton: I think the only scenario that I can come up with is a lot of are staff competes for multiyear grants and they compete with special funds. Those could span a couple biennium. That's the only thing I could think of.

Rep. Boe: Is there a risk of a scenario you wouldn't seek out the best possible place to send this money, because you are up against a timeline?

Chairman Skarphol: We are going to meet again before this even takes effect. It is General Fund appropriations.

Vice Chair Monson: If you take it out it might provide incentive to it quicker and better or it might be the opposite. 41:07

Tammy: If you would remove that from this bill, we would need to make sure that we add a similar section to the bill next time.

Chairman Skarphol: I'm not going to lose any sleep over this. I was just curious about that. But when you don't have anything to do during the interim you can check it out and see the history of it. (Laughter)
Asked about section 9.

Grafton: This language was inserted at the request of the Ag Coalition. 43:30

Chairman Skarphol: They attempted to limit it, but it was not limited?

Grafton: The Ag Coalition met with Mr. Espgaard, Chancellor Shirvani, and Kirsten Diederich and after that meeting the Chancellor indicated that we could submit and discuss all five items for both Experiment Station and Extension Service.

Rep. Boe: I am the newest member yet to attend the meeting, but I did go online and look at there minutes of SBARE you will see a more completed list than what made it to the book. My personal opinion is If SBARE is going to do the duties that it is charged with, if we send it through and its edited than what is the purpose.

Vice Chair Monson: I remember that there used to be ten or fourteen listed. 45:35

Grafton: The full list that was discussed is not in the book. SBARE took pains to develop a conservative needs based budget; these are the most critical needs that we have for both Experiment Station and Extension Service. 46:35

Rodney Howe-Chairman of SBARE: Gave a background of the budget submission process that they did. 48:15

Vice Chair Monson: Asked what the Ag Coalition's involvement might be.

Howe: Reemphasized that this is a conservative budget request

Chairman Skarphol: Asked about the two centers' labs and how they might be paid for. 50:55

Grafton: We came in with what we felt were conservative figures relative to each of the projects. In 2009 this body provided for the agronomy lab at the Williston Research Extension Center. 53:30

Chairman Skarphol: Asked about the square footage.

Grafton: Gave the square footage for each of center's labs. We have some diagrams of the proposed structures on pages 76 and 77 in our budget book. 54:33

Chairman Skarphol: Went through the green sheet. 56:00

Vice Chair Monson: Why are they moving the data center position?

Grafton: Back in 2011 the state data center moved from NDSU to the Department of Commerce.

Vice Chair Monson: That transfer already happened?

Grafton: That transfer did not happen; it would require your approval to allow that to happen.

Tammy: The function of the center was moved to Commerce and is functioning there right now. The FTE and the dollars remained in the Research budget for the biennium. Only the legislature has the authority to move it from one place to another. Part of the budget request includes the dollars and the FTE to Commerce.

Vice Chair Monson: If Commerce has already been doing this, I imagine they are paying the person, they've been doing it from their own budget. By removing this is this transferring it to Commerce?

Tammy: It is not an exact transfer. You will see if you look at the Commerce budget that there is a request to add an FTE for the data center and funding requested for that position and some contracting dollars. It's not a literal transfer.

Grafton: Explained the FTE position. 1:01:25

Chairman Skarphol: Asked about the flooding aspect. 2:13

Grafton: My understanding that the problems that those folks are having are that it's not necessarily a short term flooding situation. Several individuals have indicated that in a worst case scenario they've had water that was standing on their land throughout the summer. 1:03:56

Rep. Williams: How long can water stand before the physics of the soil change?

Grafton: I'm not a soil physicist, so I can't really answer that question.

Chairman Skarphol: What do think will be accomplished with money?

Grafton: When they plant crops or grass seed, even after they do till it, the germination rate is extremely low. It could be for various different reasons. The goal would be to try to find what the problem is that is causing these issues.

Vice Chair Monson: You already have another soil project. Could that cover this?

Grafton: This is just one time money and we full anticipate that any future efforts would be handled through that soil health initiative.

Chairman Skarphol: Can you give me a better idea where this is? Is it in a new area as a result of the 2011 flood?

Grafton: It that area that you are talking about to the best of my knowledge. 1:08:18

Chairman Skarphol: Referred to the green sheet on #9. Asked what that was for

Grafton: This would be anything from tractors and combines to ultracentrifuges and gas chromatographs.

Chairman Skarphol: Where does the money come from?

Grafton: Grants.

Chairman Skarphol: What kind of grants?

Grafton: Grants from commodity groups from USDA to NSF.

Tammy: Explained the bond payments. 1:09:52

Chairman Skarphol: This just the reduction?

Tammy: This is an adjustment required by our budget system. So, we have to take it out and then we put the full amount back in.

Chairman Skarphol: Where do you put it back in?

Tammy: There is another adjustment, but it isn't reflected on the green sheet. 1:11:18

Chairman Skarphol: Asked to give a background of the branch research centers.

Grafton: Some of those operating monies are focused on crop development issues.
1:12:54

Vice Chair Monson: This is a standard every year or is this an enhancement?

Grafton: A lot of those efforts are funded by grants from commodity groups and this provides a base level of funding for our crop testing and development efforts.

Vice Chair Monson: What did you have before?

Grafton: It has basically been a support staff position. 15:00

Chairman Skarphol: Last session there was an amount of money that provided to hire temps. Is this a continuation of that?

Grafton: No. This is not the same. What we asked for last session were graduate research assistants for graduate students. 16:45

Chairman Skarphol: Did that get added to your baseline?

Grafton: That is correct. 1:17:37

Vice Chair Monson: I would like to go back those temporary employees.

Grafton: They were non-benefitted employees.

Vice Chair Monson: The green sheet shows that you had an increase about seven and a half last time.

Grafton: The branch stations received funding for the various positions. 21:40

Vice Chair Monson: So, these are now all part of the baseline?

Grafton: At the branch stations

Chairman Skarphol: Just touch on the special funds aspect.

Grafton: The special fund aspect would be scientists or the director at their respective center receiving funds from a commodity group or from a federal agency or an industry group.

Chairman Skarphol: So, it's not sales from the center?

Grafton: No.

Discussed the equipment requests from the branch centers 1:25:37

Chairman Skarphol recessed for fifteen minutes.

Chairman Skarphol: Let's have a discussion on the Upper Great Plains Transportation Institute. 1:33:49

Chairman Skarphol: Asked if the two FTEs are part of the General Fund increase?

Tammy: The two FTEs were federal funds authority, so I'm not sure why they are reflected like that on the green sheet.

Brittany: I'll check into that.

Rep. Streyle moved to reconfigure the monies and seconded by Vice Chair Monson motion carried on a voice vote. 1:37:33

Clarified what was being changed. 1:39:30

Motion carried on a voice vote.

Chairman Skarphol: I'm still puzzled on 4 and 5 on the green sheet.

Brittany: Those are federally funded. They are in the wrong column.

Vice Chair Monson: So, we don't need a motion to make that change? That was just a technical error?

Brittany: There would be no explanation, unless someone was looking at the green sheet.

Vice Chair Monson: So, it's just 4 and 5 on the green sheet that would move into the other funds column.

Brittany: That's correct. 1:41:30

Clarification of the green sheet. 1:43:08

Chairman Skarphol: Asked if the committee there was anything else to address in the Upper Great Plains portion. What are the committee's thoughts with Senate action on Extension where they switched money from the General Fund on the building project, so that is half and half?

Rep. Martinson: I'm in favor of that.

Chairman Skarphol: I've had people tell me that it is well utilized facility that needs some work. Do we want to make sure they have the match before they get all the state money?

Vice Chair Monson: I see no problem with it.

Rep. Martinson: When is their camp? Is it all summer? I kind of like the idea we've been doing with some of these that if they can get a start on the building season to at least put some of that into emergency and let them start working on it.

Rep. Grande: My thought too is if we can let them get started on this; this is a 4-H camp, maybe these kids want to help build and be a part of the project.

Chairman Skarphol: There is an emergency clause on the bill for the labs and for the 4-H center. 46:20 Read the green sheet. 1:47:08

Vice Chair Monson: Will these be changed if the House's salary package goes forth or will those numbers be static?

Chairman Skarphol: Maybe the bigger question is will they be part salary line item next time?

Rep. Streyle: How are they funded now; federal money that went away again?

Tammy: Yes. Those two positions are grant money. That money is going away.

Vice Chair Monson: We are being asked to pick up part of the salary now? 48:44

Rep. Dosch: This is funded through the grants and then when money runs out they switch them over to the General Fund. We see this happen every session and I just can't support it.

Rep. Dosch moved to remove lines 8, 9, 10 on the green sheets and seconded by Rep. Streyle.

Vice Chair Monson: Is 10 federally funded?

Tammy: No. 10 relates to the grants for the Soil Conservation Committee that we were discussing earlier and that would be additional general funds for technical assistance grants.

Discussion on line 10 and the Senate actions. 1:52:20

Motion carried 8-0-0.

Vice Chair Monson: They would like flexibility in potato program.

Chairman Skarphol: Don't they have sufficient flexibility to do what they need to do in that regard?

Vice Chair Monson: Boerboom said that the Senate had talked about making that change and for some reason it didn't happen.

Vice Chair Monson moved to make sure there is flexibility for potato program and seconded by Rep. Streyle. Motion carried on a voice vote.

Vice Chair Monson: I would like an explanation on the four FTEs and right below it says the amount shown reflects the addition of 5.55 FTEs.

Tammy: The Ag Research and Experiment Station have the authority to add or delete FTEs based on funding available.

Chairman Skarphol: Are any of the positions in the branch research centers that are being authorized, currently being funded with grant dollars?

Tammy: No.

Rep. Grande: I'm looking at Dickinson Research Center 1 and 2.

Chairman Skarphol: Over the last several bienniums, since the oil well was drilled in Dickinson, as the oil revenue fluctuated we give them one time money to hold them constant at some number. 1:59:23

Rep. Grande: Is this us promising them this money no matter happens to their oil?

Chairman Skarphol: Yes. It's added to their baseline it becomes a guaranteed level of revenue.

Rep. Streyle: Let's put language that any new revenue is one time funding only; not for operational costs.

Chairman Skarphol: Any new oil revenue over and above the revenue produced in fiscal year 2013?

Rep. Streyle: Correct.

Rep. Streyle made a motion and seconded by Rep. Monson.

Discussion on the motion. 2:04:10

Motion carried on a voice vote.

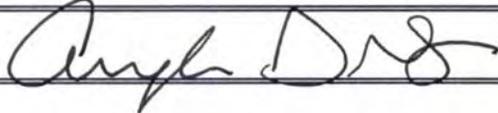
Chairman Skarphol recessed the committee until after the floor session.

2013 HOUSE STANDING COMMITTEE MINUTES

House Appropriations Education and Environment Division
Roughrider Room, State Capitol

SB 2020
April 1, 2013
Job 20732

Conference Committee



Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation for defraying the expenses of the extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to provide for transfers; to provide an exemption; to amend and reenact subsection 6 of section 4-05.1-19 of the North Dakota Century Code, relating to the duties of the state board of agricultural research and education; and to declare an emergency.

Minutes:



Chairman Skarphol called the committee back to order.

Chairman Skarphol: As far as the buildings, the laboratories, the Senate has \$5,925,000 for those 4 buildings. We discussed the possibility of pooling that money and allowing them to build all 4, depending on their proposal. It would be about \$210 per square foot.

Rep. Dosch: If we do anything it should be with a required local match.

Vice Chair Monson: I like the idea if they can raise some local money. The one in my area, Langdon, has raised a lot of local money over the years to build their education center. I don't have any problem putting in some kind of a match. I don't know if this is the time to build all of them or not. I'm willing to let them use their discretion.

Rep. Grande: How much money is in the budget to put these 4 buildings online?

Chairman Skarphol: The original budget, as it came from the Governor's office, had \$4.3 million to build Carrington and Hettinger research centers. The Senate added \$1.625 to build Langdon and Central Grasslands.

Rep. Boe: I'm not opposed to giving them some money and allowing them to do some revenue raising, but I would like to see that amount of match to be minimal enough that we're still running the bus. I would hate to see us forcing anyone into a position where they would have to take on projects that they didn't see prioritized by the university versus the guy with the checkbook.

Chairman Skarphol: In other words, a one to one match you think would be a little unreasonable. I agree with your assessment on that. What we're endeavoring to do is get away from attaching a dollar amount to a building. If we allow for a pooling and allow them to manage the money, maybe they can do it a little more efficiently dollar-wise.

Vice Chair Monson: By having some ability to raise local funds, they can still get their full-blown building. If they can find a little savings some place, that is the incentive. I move that we take out the \$100,000 for the oil impact center, take the Souris River flooding project down to \$82,000, and reduce #3 to \$5 million. But they have the ability to raise funds locally. Do we need to specify a certain amount? Let's go up to \$1 million.

Rep. Dosch: Just to clarify, 20% has to be locally matched?

Vice Chair Monson: It wouldn't have to be, but they would have the ability to do that. We would cut the \$5,925,000 down to \$5 million. They would have the ability to try to raise funds locally if they decided they still wanted to have a more elaborate lab than what they could build with the \$5 million.

Rep. Dosch: But then there's nothing to prevent them from saying they are still going to build 2 nice centers and forget about the other 2.

Vice Chair Monson: We could put in something that says not to exceed the amount presented to us in the original in any one station.

Rep. Dosch: There again, they can just say they are going to fund 2 of them.

Chairman Skarphol: Should we say this money should be used for all 4 stations?

Vice Chair Monson: That would be my intent. If we need to tighten it up to restrict it to that. No one center can exceed the amount that was proposed in their original budget. Does that do it?

Chairman Skarphol: And all 4 stations must be built?

Rep. Dosch: I hate to tell them they have to build it.

Vice Chair Monson: I trust that they wouldn't spend it all on one or two. The other thing I would like to include in this motion is that we remove the .5 FTE for the livestock. He said they didn't really need that .5 FTE. That's #4 on the front page of this Dept. 640.

Chairman Skarphol: That already deletes the money.

Vice Chair Monson: That deletes the money but it actually moves the money.

Chairman Skarphol: The money is reinstated in a commerce department. Brittany, does it delete the FTE as well?

Brittany-Legislative Council: That funding and FTE is deleted.

Vice Chair Monson: But didn't they say they added the money into their livestock program?

Brittany: The Senate did add a .5 FTE animal science position.

Chairman Skarphol: That's #3, so that \$140,000 is connected with the FTE you're seeing.

Vice Chair Monson: He said they don't actually need the .5 FTE, but they need the money, so we could eliminate the .5 FTE in #3 on the back sheet.

Rep. Boe: Could you read that back?

Vice Chair Monson: On the back sheet of the green, remove the \$100,000 for the oil impact centers, sub-set #2. On #3, we leave the money, but take out the .5 FTE. On #4, we cut that down to \$82,000. On Capital Projects, we pool it together so they can build 4 with \$5 million pooled and we give them the ability to raise locally \$1 million. Our intention is that the cost of each of those cannot exceed what they presented to the committee.

Rep. Boe: Would it be helpful if we put in, for the cost of the buildings, a plus or minus 8%, 10% of the submitted proposal?

Vice Chair Monson: I hate to say plus or minus. I'd like to see it go down a little and save some money.

Rep. Boe: Second.

Roll Call Vote: Yes: 8, No: 0, Absent: 0. Motion carried.

Rep. Dosch: I think we need to take out the 4 FTEs for the branch research centers. I make that motion.

Rep. Grande: Second.

Rep. Dosch: So 4 FTEs and \$650,000.

Chairman Skarphol: I suspect we'll have a discussion on this in conference committee.

Rep. Boe: (0:28:50) I would resist that one. I would hate to say that they can build the research labs and then take away the people they need to work in those labs. They probably aren't going to have space to work until those new buildings are built which will be at least a year from now.

Rep. Streyle: Every one of these budgets where there are multiple locations, it's just automatically equal. And there's no way that's the case. I would support the motion.

Roll Call Vote: Yes: 4, No: 4, Absent: 0. Motion failed.

Rep. Martinson: I move that we add \$25,000 to the Burleigh County extension service to hire 2 interns for the next 2 summers to work on the master gardener's program. That has become quite popular with young kids and 2 interns would help them.

Rep. Monson: I'll second.

Roll Call Vote: Yes: 5, No: 3, Absent: 0. Motion passed.

Rep. Monson: I think we may have already done this. On the 630, the NDSU extension, we gave them the weed science and potato program, correct?

Chairman Skarphol: Let's make a motion if we want, overall, on this budget and we'll review the amendments.

Rep. Monson: I move a Do Pass as Amended subject to reviewing what we have.

Rep. Boe: Second.

Roll Call Vote: Yes: 5, No: 3, Absent: 0. Motion passed.

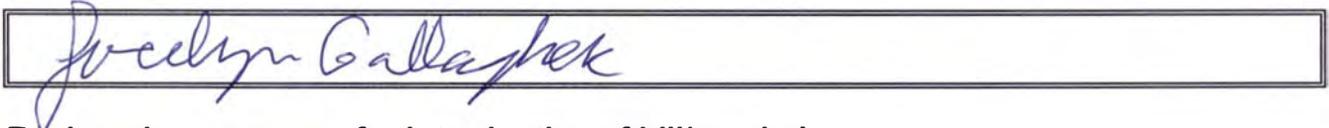
Chairman Skarphol adjourned the committee.

2013 HOUSE STANDING COMMITTEE MINUTES

House Appropriations Education and Environment Division
Roughrider Room, State Capitol

SB 2020
April 8, 2013
Job 20983

Conference Committee



Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation for defraying the expenses of the extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to provide for transfers; to provide an exemption; to amend and reenact subsection 6 of section 4-05.1-19 of the North Dakota Century Code, relating to the duties of the state board of agricultural research and education; and to declare an emergency.

Minutes:



Chairman Skarphol called the committee to order to consider. Clerk noted everyone was present.

Chairman Skarphol: Rep. Monson pointed out something on the Ag research budget, 2020. When we pooled that money and set up the match we put more dollars in than what the Senate had as far as dollars. We're wondering if we should reconsider our action on that, take it out so it matches the Senate rather than explain it on the floor.

Vice Chair Monson moved to reconsider SB 2020 and seconded by Rep. Martinson. Motion carried on a voice vote.

Rep. Monson: When we pooled all the money for the labs at the branch stations, I did it off the cuff and it didn't add up in the end. We put in 75,000 more than they would be able to spend. We put language in there that said that no project can exceed what their original architect plan had indicated. We provided more than what those total. **I move we reduce that down to the same total amount of money and remove the extra.**

Chairman Skarphol: Second from Rep. Martinson. Further discussion? Voice vote, motion carries.

Rep. Monson: I move a do pass as amended on SB 2020, **second by Rep. Boe.**

Chairman Skarphol: Any discussion? Clerk will take the roll. **8-0-0**

2013 HOUSE STANDING COMMITTEE MINUTES

House Appropriations Committee Roughrider Room, State Capitol

SB 2020
4/9/13
Job # 21050

Conference Committee

Committee Clerk Signature



Minutes:

Proposed amendment #.2002

Chairman Delzer: Opened the meeting on SB 2020.

Rep. Monson: Senate Engrossed Bill 02000 Using Amendment .02002 is the amendment we want to discuss. The amendment was distributed. Started with the extension service which is budget 630, page 5 of amendment .02002 and went through the changes. 03:07 - 08:45 I did the green sheet and the amendment at the same time.

Rep. Nelson: What was the \$75,000 for the soil conservation committee operations? Did the Senate add that funding? What was that intended to do, and why did you remove it?

Rep. Monson: I believe that was for their operating; we didn't see that there was a need for it, so we returned to the governor's level of funding.

Rep. Nelson: They did not have a particular project they were working on with all the CRP that is coming out in the state?

Rep. Monson: I don't recall much discussion. 09:42 - 10:30 Went through budget 638.

Chairman Delzer: On 630 the last time it came in with some pre-K stuff in there. There is nothing like that in there this time.

Rep. Monson: There is nothing like that.

Rep. Skarphol: That was moved to DPI in this session and we took it out in the House and I don't know the status in the Senate.

Rep. Monson: Upper Great Plain Institute: Next is budget 627 on the amendment and green sheet. We did the salary package here. The Senate had made no changes to this. Net increase over the last biennium is about 9 ½ % and no new FTE s and no continuing appropriations. 11:08 - 11:55

Chairman Delzer: What will UGPTI's federal grants do for us? Obviously we're spending \$2M to match those federal grants. I would like to know what they are going to do for the state.

Rep. Monson: They test all the roads for the whole state and the bridges.

Chairman Delzer: This is for the thumping test?

Rep. Skarphol: Yes, and the bridges, for the whole state.

Rep. Monson: The Main Research Station: Next is budget 640. Went over the proposed amendment. 12:45 - 15:24

Chairman Delzer: They show two new FTE's.

Rep. Monson: The Branch Research Station is next: budget 628 16:33 - 18:35 The Senate made no changes to this. We did make some one-time items in Dickinson. They can't use it for operations and this will keep it out of their base budget. They are the only branch station that has oil well revenue. This is section 4 of the bill if you are looking at the amendment. Quite a bite of funding is one-time equipment over \$5,000. There is a 4 FTE increase in branch research, I believe.

Rep. Monson: The Agronomy Seed Farm budget 649; The Senate made no changes. This is 100% special funding. 19:04 **Rep. Monson moved amendment 02002. Seconded by Rep. Skarphol.**

Discussion:

Chairman Delzer: Did you have any discussion about splitting this into more than one bill?

Rep. Monson: We did not.

Chairman Delzer: This is an awful lot to go through in one bill with one amendment and understand what you are doing in all of these.

Rep. Skarphol: I agree this is a lot to go through but the entities like the seed farm there is nothing there it is all special funds. The Upper Great Plains is virtually all federally funded. Northern Crops is pretty much a special funded entity that does one thing. I understand your concern. My issue would be whether branch research and main research should be one and extension could go with the other three. You would not want them all to be individual, that would be a nuisance.

Rep. Nelson: On department 627, you mentioned there were no FTEs, but I see two. Are they not funded by general funds?

Rep. Monson: Yes, there are, on the amendment we did not add or subtract any. It looks like it is all general funds. Yes on the green sheets it actually is.

Rep. Skarphol: That's a mistake on the green sheet, they are federally funded positions

Chairman Delzer: Is that short term, or they'll go away when the federal money runs out?

Rep. Monson: We didn't talk about that prospect. These are for all practical purposes long-term. We'll have to look at it if the federal money runs out.

Rep. Skarphol: On the money we did the match for, they have a \$1.377 M grant and they have been told they are going to get a grant for a little over \$600,000 that would put them over the \$2M mark. They do solicit other matching funds.

Chairman Delzer: Is that all grant money?

Rep. Skarphol: There was \$750,000; we added \$1.250M general fund, and there is in excess of \$2M federal funds to do all that work.

Chairman Delzer: You expanded the federal funding for the new grant that they are expecting?

Rep. Skarphol: We give the money to match up with the federal grant they are expecting. It is a \$1-\$1 match that is required.

Chairman Delzer: Did you give them authority to accept that grant?

Rep. Monson: I don't see that we did that we did that?

Rep. Skarphol: If that needs to be done it can be done in conference committee.

Rep. Bellew: Should this general fund be one time funding or continual?

Rep. Monson: It could be one-time funding. We did not specify it as general funding.

Chairman Delzer: Further discussion on motion to amend?

Voice vote carried.

24:40 Rep. Skarphol moved to further amend to designate the money that we put into Upper Great Plains as one time funding for the purpose of the match. Seconded by Rep. Bellew.

Britani Reim, OMB: I believe section 3 of the bill covers that in the additional income appropriation line.

Voice vote carries.

Chairman Delzer: When we look at the bill there two unexpended general fund exemptions. Six and seven of the bill as it sets before us; both allows them the spend anything they have as carry over and I don't know how long that has been a practice. I don't have a problem with them carrying forward money, but I think they should always come to the next legislative assembly and explain why they need to carry that over.

Rep. Monson: We did talk about that. By the end of this biennium they expect it would all be gone.

Chairman Delzer: If that's the case why do we want to leave that language in the bill?

Rep. Monson: For this biennium, I guess.

Rep. Skarphol: Section 7 is applicable to the green house. By the end of this current biennium, the money should be spent. I believe the project is on the verge of completion.

Tammy Dolan, OMB: The only thing I would add is that they do expect the project completed by the end of this biennium but due to project closeout costs etc. sometime take a while to finish up the very end of a project and some might carry over to the next biennium.

Chairman Delzer: Would they be limited so that, if they had excess funding after the project costs were done are they limited so they can't spend that one something else?

Tammy Dolan: This section refers only to capitol project funding and can be only spent on that.

Chairman Delzer: That's section 7; what about section 6?

Rep. Skarphol: I want OMB to explain section 6.

Tammy Dolan: It does go to the next biennium. There has been a similar section in their bill for as long as I'm aware. It provides carryover authority in advance for the unexpended money from the 13-15 biennium. It came as part of the roundtable; there is a similar section in higher Ed bill and these are a part of higher Ed.

Chairman Delzer: I think we should get this out of here. This is four years out.

Rep. Brandenburg: Will this have to with greenhouse stuff?

Chairman Delzer: This would not do anything to the greenhouse issue. It is general fund expenditures for this biennium that is carried forward for four years.

Rep. Monson: We questioned why; we did not change it. It has been in the bill all the time as it is in higher Ed.

Chairman Delzer: It makes me wonder why we have it in higher end four years out. I can see it two years out.

Rep. Skarphol: We asked the question and we still aren't clear why there is a need for that?

Rep. Kempenich: I think it has to do with the way they operate on some of the income side of the coin.

Chairman Delzer: The whole budget is granted through 2017.

Rep. Glassheim: If you get a three year federal grant, would you need to make assurances that you could do it?

Chairman Delzer: This isn't just the federal, it's the whole budget.

Rep. Monson: We questioned it; there may be cases where it is needed, but we couldn't really see any reason why it couldn't come out of there either.

Rep. Kempenich moved amend and remove Section 6 of the engrossed bill which is the excess income general fund authority through 17; Seconded by Rep. Thoreson.

Rep. Skarphol: In response to Rep. Glassheim if you read the Section it is general funds only or any excess income.

Chairman Delzer: It would be everything.

Rep. Hawken: Perhaps this is something that should wait for conference committee so there could be some specifics as to if there are projects there what they would effect as opposed to just yanking it out.

Chairman Delzer: The problem with that is if we don't take it out it should not be a discussion point in conference because the Senate has passed it this way. If we passed it this way it would not be supposed to be an issue.

Rep. Hawken: And we never do that?

Chairman Delzer: But we try not to.

Rep. Hawken: I just don't think it is smart to do actions that we are not positive are in the benefit of one of the best things we have going in the State of North Dakota.

Chairman Delzer: I certainly agree extension does a fine job, but anything they needed to extend four years out they would have the next session simply to come in and tell us that they need to extend it.

34:35 Rep. Skarphol: To address the concerns of Rep. Hawken and Glassheim I will offer a substitute motion that would remove only the general fund appropriation authority and leave any excess income received by entities. That would incorporate a need for a change to bring it to the conference committee and potentially hold harmless any federal grants that would be out there. Rep. Monson seconded

Rep. Monson: I think it's a good idea because there could be cases that some agencies that are 100% special funded could get funding at the end of 2015.

Voice vote carries. 35:55

Rep. Bellew: I would like to see this set up in 2-3 separate budgets. That is probably not a good motion.

Chairman Delzer: We can maybe take care of that in budget section.

Do Pass As Amended Motion Made by Rep. Monson; Seconded by Rep. Skarphol

Vote: 20 Yes 0 No 2 Absent Carrier: Rep. Monson

Closed.

VK
 4/10/13
 1 of 9

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

Page 1, remove lines 22 through 24

Page 2, replace lines 1 and 2 with:

"Extension service	\$47,026,654	\$3,306,689	\$50,333,343
Soil conservation committee	987,800	75,000	1,062,800
Accrued leave payments	<u>0</u>	<u>1,716,289</u>	<u>1,716,289</u>
Total all funds	\$48,014,454	\$5,097,978	\$53,112,432
Less estimated income	<u>23,128,810</u>	<u>1,431,810</u>	<u>24,560,620</u>
Total general fund	\$24,885,644	\$3,666,168	\$28,551,812"

Page 2, replace lines 8 through 10 with:

"Northern crops institute	\$3,347,307	\$444,213	\$3,791,520
Accrued leave payments	<u>0</u>	<u>42,195</u>	<u>42,195</u>
Total all funds	\$3,347,307	\$486,408	\$3,833,715
Less estimated income	<u>1,654,725</u>	<u>127,614</u>	<u>1,782,339</u>
Total general fund	\$1,692,582	\$358,794	\$2,051,376"

Page 2, replace lines 16 through 18 with:

"Upper great plains transportation institute	\$24,069,961	\$2,052,462	\$26,122,423
Accrued leave payments	<u>0</u>	<u>241,627</u>	<u>241,627</u>
Total all funds	\$24,069,961	\$2,294,089	\$26,364,050
Less estimated income	<u>22,150,333</u>	<u>166,272</u>	<u>22,316,605</u>
Total general fund	\$1,919,628	\$2,127,817	\$4,047,445"

Page 2, replace lines 24 through 27 with:

"Main research center	\$89,012,990	\$19,234,128	\$108,247,118
Accrued leave payments	<u>0</u>	<u>2,561,394</u>	<u>2,561,394</u>
Total all funds	\$89,012,990	\$21,795,522	\$110,808,512
Less estimated income	<u>41,630,644</u>	<u>11,841,303</u>	<u>53,471,947</u>
Total general fund	\$47,382,346	\$9,954,219	\$57,336,565
Full-time equivalent positions	349.01	2.48	351.49"

Page 3, replace lines 1 through 10 with:

"Dickinson research center	\$5,588,562	\$487,453	\$6,076,015
Central grasslands research center	2,865,847	341,369	3,207,216
Hettinger research center	3,373,175	1,261,401	4,634,576
Langdon research center	2,378,807	433,988	2,812,795
North central research center	4,399,821	162,575	4,562,396
Williston research center	3,410,089	316,898	3,726,987
Carrington research center	7,126,488	718,896	7,845,384
Accrued leave payments	<u>0</u>	<u>503,916</u>	<u>503,916</u>
Total all funds	\$29,142,789	\$4,226,496	\$33,369,285
Less estimated income	<u>14,997,581</u>	<u>963,849</u>	<u>15,961,430</u>
Total general fund	\$14,145,208	\$3,262,647	\$17,407,855"

Page 3, replace lines 16 and 17 with:

"Agronomy seed farm	\$1,435,168	\$23,681	\$1,458,849
Accrued leave payments	<u>0</u>	<u>5,741</u>	<u>5,741</u>
Total special funds	\$1,435,168	\$29,422	\$1,464,590"

Page 3, replace lines 23 through 25 with:

"Grand total general fund	\$90,025,408	\$19,369,645	\$109,395,053
Grand total special funds	<u>104,997,261</u>	<u>14,560,270</u>	<u>119,557,531</u>
Grand total all funds	\$195,022,669	\$33,929,915	\$228,952,584"

Page 4, after line 4, insert:

"Upper great plains transportation institute state match for federal funds"	0	1,250,000
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Page 4, remove line 7

Page 4, replace lines 11 through 13 with:

"Total all funds	\$10,726,983	\$9,685,000
Total other funds	<u>2,852,931</u>	<u>1,950,000</u>
Total general fund	\$7,874,052	\$7,735,000"

Page 4, after line 25, insert:

"SECTION 4. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend revenues received from mineral royalties, leases, or easements only for one-time items and not for ongoing operational expenses, for the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 5, after line 4, insert:

"SECTION 7. EXTENSION SERVICE - NEW TECHNICAL SUPPORT FULL-TIME EQUIVALENT POSITION. The North Dakota state university extension service may utilize the new full-time equivalent technical support position recommended in the 2013-15 executive budget and included in subdivision 1 of section 1 of this Act, in either the weed science or potato program during the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 5, line 5, remove "GENERAL FUND -"

Page 5, line 5, remove "unexpended"

Page 5, line 6, remove "general fund appropriation authority to and any"

Page 5, line 8, remove "from these appropriations"

Page 5, line 16, remove "MATCHING FUNDS"

Page 5, line 27, replace "\$4,300,000" with "\$5,925,000"

Re-number accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of House Action

	Executive Budget	Senate Version	House Changes	House Version
Transportation Institute				
Total all funds	\$25,353,629	\$25,353,629	\$1,010,421	\$26,364,050
Less estimated income	22,525,054	22,525,054	(208,449)	22,316,605
General fund	\$2,828,575	\$2,828,575	\$1,218,870	\$4,047,445
Branch Research Centers				
Total all funds	\$33,746,878	\$33,746,878	(\$377,593)	\$33,369,285
Less estimated income	16,021,866	16,021,866	(60,436)	15,961,430
General fund	\$17,725,012	\$17,725,012	(\$317,157)	\$17,407,855
NDSU Extension Service				
Total all funds	\$54,088,058	\$54,288,058	(\$1,175,626)	\$53,112,432
Less estimated income	25,437,414	24,987,414	(426,794)	24,560,620
General fund	\$28,650,644	\$29,300,644	(\$748,832)	\$28,551,812
Northern Crops Institute				
Total all funds	\$3,874,651	\$3,874,651	(\$40,936)	\$3,833,715
Less estimated income	1,800,307	1,800,307	(17,968)	1,782,339
General fund	\$2,074,344	\$2,074,344	(\$22,968)	\$2,051,376
Main Research Center				
Total all funds	\$110,293,322	\$112,320,622	(\$1,512,110)	\$110,808,512
Less estimated income	53,255,585	53,255,585	216,362	53,471,947
General fund	\$57,037,737	\$59,065,037	(\$1,728,472)	\$57,336,565
Agronomy Seed Farm				
Total all funds	\$1,474,961	\$1,474,961	(\$10,371)	\$1,464,590
Less estimated income	1,474,961	1,474,961	(10,371)	1,464,590
General fund	\$0	\$0	\$0	\$0
Bill total				
Total all funds	\$228,831,499	\$231,058,799	(\$2,106,215)	\$228,952,584
Less estimated income	120,515,187	120,065,187	(507,656)	119,557,531
General fund	\$108,316,312	\$110,993,612	(\$1,598,559)	\$109,395,053

Senate Bill No. 2020 - Transportation Institute - House Action

	Executive Budget	Senate Version	House Changes	House Version
Upper Great Plains Trans. Institute	\$25,353,629	\$25,353,629	\$768,794	\$26,122,423
Accrued leave payments			241,627	241,627
Total all funds	\$25,353,629	\$25,353,629	\$1,010,421	\$26,364,050
Less estimated income	22,525,054	22,525,054	(208,449)	22,316,605
General fund	\$2,828,575	\$2,828,575	\$1,218,870	\$4,047,445
FTE	53.75	53.75	0.00	53.75

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

	Adjusts State Employee Compensation and Benefits Package ¹	Removes Separate Line Item for Accrued Leave Payments ²	Increases Funding for Matching Grants ³	Total House Changes
Upper Great Plains Trans. Institute	(\$239,579)	(\$241,627)	\$1,250,000	\$768,794
Accrued leave payments		241,627		241,627
Total all funds	(\$239,579)	\$0	\$1,250,000	\$1,010,421
Less estimated income	(208,449)	0	0	(208,449)
General fund	(\$31,130)	\$0	\$1,250,000	\$1,218,870
FTE	0.00	0.00	0.00	0.00

- ¹ This amendment adjusts the state employee compensation and benefits package as follows:
- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
 - Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
 - Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$42,266) and from other funds (\$199,361) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment increases funding to match new federal grants received by the agency to provide a total of \$2 million, all of which is from the general fund. This increase of \$1.25 million added by the House is one-time funding.

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

	Executive Budget	Senate Version	House Changes	House Version
Dickinson Research Center	\$6,231,325	\$6,231,325	(\$155,310)	\$6,076,015
Central Grasslands Research Center	3,297,559	3,297,559	(90,343)	3,207,216
Hettinger Research Center	4,746,234	4,746,234	(111,658)	4,634,576
Langdon Research Center	2,886,763	2,886,763	(73,968)	2,812,795
North Central Research Center	4,661,679	4,661,679	(99,283)	4,562,396
Williston Research Center	3,869,023	3,869,023	(142,036)	3,726,987
Carrington Research Center	8,054,295	8,054,295	(208,911)	7,845,384
Accrued leave payments			503,916	503,916
Total all funds	\$33,746,878	\$33,746,878	(\$377,593)	\$33,369,285
Less estimated income	16,021,866	16,021,866	(60,436)	15,961,430
General fund	\$17,725,012	\$17,725,012	(\$317,157)	\$17,407,855
FTE	107.04	107.04	0.00	107.04

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total House Changes
Dickinson Research Center	(\$68,302)	(\$87,008)	(\$155,310)
Central Grasslands Research Center	(38,980)	(51,363)	(90,343)
Hettinger Research Center	(47,485)	(64,173)	(111,658)
Langdon Research Center	(32,828)	(41,140)	(73,968)
North Central Research Center	(39,332)	(59,951)	(99,283)
Williston Research Center	(64,653)	(77,383)	(142,036)
Carrington Research Center	(86,013)	(122,898)	(208,911)
Accrued leave payments		503,916	503,916
Total all funds	(\$377,593)	\$0	(\$377,593)
Less estimated income	(60,436)	0	(60,436)
General fund	(\$317,157)	\$0	(\$317,157)
FTE	0.00	0.00	0.00

- ¹ This amendment adjusts the state employee compensation and benefits package as follows:
- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
 - Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for

the first year of the biennium only.

- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$407,680) and from other funds (\$96,236) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees for each branch center as follows:

Branch Research Centers	General Fund	Estimated Income	Total
Dickinson Research Center	(\$70,391)	(\$16,617)	(\$87,008)
Central Grasslands Research Center	(41,554)	(9,809)	(51,363)
Hettinger Research Center	(51,917)	(12,256)	(64,173)
Langdon Research Center	(33,283)	(7,857)	(41,140)
North Central Research Center	(48,502)	(11,449)	(59,951)
Williston Research Center	(62,604)	(14,779)	(77,383)
Carrington Research Center	(99,429)	(23,469)	(122,898)
Accrued leave payments	407,680	96,236	503,916

A section is added providing that the Dickinson Research Extension Center may only spend revenue from mineral royalties, leases, or easements for one-time items and not for operations during the 2013-15 biennium.

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

	Executive Budget	Senate Version	House Changes	House Version
Extension Service	\$53,025,258	\$53,150,258	(\$2,816,915)	\$50,333,343
Soil Conservation Committee	1,062,800	1,137,800	(75,000)	1,062,800
Accrued leave payments			1,716,289	1,716,289
Total all funds	\$54,088,058	\$54,288,058	(\$1,175,626)	\$53,112,432
Less estimated income	25,437,414	24,987,414	(426,794)	24,560,620
General fund	\$28,650,644	\$29,300,644	(\$748,832)	\$28,551,812
FTE	258.26	258.26	0.00	258.26

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Partial Salary Support ³	Reduces Funding for Soil Conservation Committee ⁴	Provides Funding for Burleigh County Extension Service Summer Internships ⁵	Total House Changes
Extension Service	(\$865,626)	(\$1,716,289)	(\$260,000)		\$25,000	(\$2,816,915)
Soil Conservation Committee				(75,000)		(75,000)
Accrued leave payments		1,716,289				1,716,289
Total all funds	(\$865,626)	\$0	(\$260,000)	(\$75,000)	\$25,000	(\$1,175,626)
Less estimated income	(426,794)	0	0	0	0	(426,794)
General fund	(\$438,832)	\$0	(\$260,000)	(\$75,000)	\$25,000	(\$748,832)
FTE	0.00	0.00	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for

- the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$852,203) and from other funds (\$864,086) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes funding included in the executive budget to provide partial general fund salary support for the following existing positions:

- Integrated pest management and plant diagnostic laboratory coordinator.
- State water quality specialist.

⁴ This amendment removes funding added by the Senate for Soil Conservation Committee operations.

⁵ This amendment provides funding for salaries and wages for a Junior Master Gardener internship program through the Burleigh County Extension Service for the summer of 2013 and the summer of 2014.

This amendment provides the NDSU Extension Service flexibility to use the new FTE technical support position, recommended in the executive budget, in either the weed science or potato program.

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

	Executive Budget	Senate Version	House Changes	House Version
Northern Crops Institute	\$3,874,651	\$3,874,651	(\$83,131)	\$3,791,520
Accrued leave payments			42,195	42,195
Total all funds	\$3,874,651	\$3,874,651	(\$40,936)	\$3,833,715
Less estimated income	1,800,307	1,800,307	(17,968)	1,782,339
General fund	\$2,074,344	\$2,074,344	(\$22,968)	\$2,051,376
FTE	12.00	12.00	0.00	12.00

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total House Changes
Northern Crops Institute	(\$40,936)	(\$42,195)	(\$83,131)
Accrued leave payments		42,195	42,195
Total all funds	(\$40,936)	\$0	(\$40,936)
Less estimated income	(17,968)	0	(17,968)
General fund	(\$22,968)	\$0	(\$22,968)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.

- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$37,172) and from other funds (\$5,023) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

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

	Executive Budget	Senate Version	House Changes	House Version
Main Research Center	\$110,293,322	\$112,320,622	(\$4,073,504)	\$108,247,118
Accrued leave payments			2,561,394	2,561,394
Total all funds	\$110,293,322	\$112,320,622	(\$1,512,110)	\$110,808,512
Less estimated income	53,255,585	53,255,585	216,362	53,471,947
General fund	\$57,037,737	\$59,065,037	(\$1,728,472)	\$57,336,565
FTE	351.49	351.99	(0.50)	351.49

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Oil-Impacted Centers ³	Reduces Funding for Flooded Lands Study ⁴	Adjusts Funding for Capital Projects ⁵	Removes Animal Science Position ⁶
Main Research Center	(\$1,331,810)	(\$2,561,394)	(\$100,000)	(\$80,300)		
Accrued leave payments		2,561,394				
Total all funds	(\$1,331,810)	\$0	(\$100,000)	(\$80,300)	\$0	\$0
Less estimated income	(783,638)	0	0	0	1,000,000	0
General fund	(\$548,172)	\$0	(\$100,000)	(\$80,300)	(\$1,000,000)	\$0
FTE	0.00	0.00	0.00	0.00	0.00	(0.50)

	Total House Changes
Main Research Center	(\$4,073,504)
Accrued leave payments	2,561,394
Total all funds	(\$1,512,110)
Less estimated income	216,362
General fund	(\$1,728,472)
FTE	(0.50)

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$1,748,140) and from other funds (\$813,254) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes the funding added by the Senate for oil-impacted research extension centers for housing allowances or hiring bonuses.

⁴ This amendment reduces the funding added by the Senate for the research relating to the recovery of grasslands affected by Souris River flooding to provide a total of \$82,000, all of which is from the general fund.

⁵ This amendment:

- Provides a total of \$5,925,000 for replacement of agronomy laboratories, the same as the Senate version and \$1,625,000 more than the executive budget.
- Reduces funding from the general fund for the replacement of agronomy laboratories to provide a total of \$4,925,000, \$1,000,000 less than the Senate version but \$625,000 more than the executive budget.
- Provides authority for the agency to raise funds from the private industry of up to \$1 million for all of the agronomy laboratory projects. Neither the Senate nor the executive budget included other funds for the projects.

⁶ The .5 FTE animal science position added by the Senate is removed. The funding of \$140,000 from the general fund added by the Senate relating to the position is not changed.

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

	Executive Budget	Senate Version	House Changes	House Version
Agronomy Seed Farm	\$1,474,961	\$1,474,961	(\$16,112)	\$1,458,849
Accrued leave payments			5,741	5,741
Total all funds	\$1,474,961	\$1,474,961	(\$10,371)	\$1,464,590
Less estimated income	1,474,961	1,474,961	(10,371)	1,464,590
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 State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total House Changes
Agronomy Seed Farm	(\$10,371)	(\$5,741)	(\$16,112)
Accrued leave payments		5,741	5,741
Total all funds	(\$10,371)	\$0	(\$10,371)
Less estimated income	(10,371)	0	(10,371)
General fund	\$0	\$0	\$0
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from other funds (\$5,741) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

Senate Bill No. 2020 - Other Changes - House Action

Section 8 is amended to remove the general fund carryover authority.

Date: 4-1-13
Roll Call Vote #: 1

2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

House Education and Environment Division Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Streyle Seconded By Rep. Monson

Representatives	Yes	No	Representatives	Yes	No
Chairman Robert Skarphol			Rep. Clark Williams		
Vice Chairman David Monson			Rep. Tracy Boe		
Rep. Bob Martinson					
Rep. Roscoe Streyle					
Rep. Mark Dosch					
Rep. Bette Grande					

Total (Yes) _____ No _____

Absent passed on voice vote

Floor Assignment _____

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

1.5 increase

2 million line two

Date: 4-1-13
Roll Call Vote #: 3

**2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020**

House Education and Environment Division Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Monson Seconded By Rep Streyle

Representatives	Yes	No	Representatives	Yes	No
Chairman Robert Skarphol			Rep. Clark Williams		
Vice Chairman David Monson			Rep. Tracy Boe		
Rep. Bob Martinson					
Rep. Roscoe Streyle					
Rep. Mark Dosch					
Rep. Bette Grande					

Total (Yes) _____ No _____

Absent passed on voice vote

Floor Assignment _____

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

Flexibility for potatoe program

Date: 4-1-13
Roll Call Vote #: 4

2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

House Education and Environment Division Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Streyle Seconded By Rep. Monson

Representatives	Yes	No	Representatives	Yes	No
Chairman Robert Skarphol			Rep. Clark Williams		
Vice Chairman David Monson			Rep. Tracy Boe		
Rep. Bob Martinson					
Rep. Roscoe Streyle					
Rep. Mark Dosch					
Rep. Bette Grande					

Total (Yes) _____ No _____

Absent Passed on a voice vote

Floor Assignment _____

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

*Relating to oil revenue from the
Dickinson Research Center.*

Date: 4-1-13
Roll Call Vote #: 2

2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

House Education and Environment Division Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Dosch Seconded By Rep. Grande

Representatives	Yes	No	Representatives	Yes	No
Chairman Robert Skarphol	X		Rep. Clark Williams		X
Vice Chairman David Monson		X	Rep. Tracy Boe		X
Rep. Bob Martinson	X	X			
Rep. Roscoe Streyle	X				
Rep. Mark Dosch	X				
Rep. Bette Grande	X				

Total (Yes) 4 No 4

Absent 0

Floor Assignment _____

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

Remove 4 FTEs

Date: 4-1-13
 Roll Call Vote #: 3

**2013 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 2020**

House Education and Environment Division Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Martinson Seconded By Rep. Monson

Representatives	Yes	No	Representatives	Yes	No
Chairman Robert Skarphol		X	Rep. Clark Williams	X	
Vice Chairman David Monson	X		Rep. Tracy Boe	X	
Rep. Bob Martinson	X				
Rep. Roscoe Streyle	X				
Rep. Mark Dosch		X			
Rep. Bette Grande		X			

Total (Yes) 5 No 3

Absent 0

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:
\$ 25,000 for two interns at Burliegh

Date: 4-1-13
Roll Call Vote #: 4

2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

House Education and Environment Division Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Monson Seconded By Rep. Boe

Representatives	Yes	No	Representatives	Yes	No
Chairman Robert Skarphol	X		Rep. Clark Williams	X	
Vice Chairman David Monson	X		Rep. Tracy Boe	X	
Rep. Bob Martinson	X				
Rep. Roscoe Streyle		X			
Rep. Mark Dosch		X			
Rep. Bette Grande		X			

Total (Yes) 5 No 3

Absent 0

Floor Assignment Rep. Monson

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

Date: 4-8-13
Roll Call Vote #: 1

2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

House Education and Environment Division Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Monson Seconded By Rep. Martinson

Representatives	Yes	No	Representatives	Yes	No
Chairman Robert Skarphol			Rep. Clark Williams		
Vice Chairman David Monson			Rep. Tracy Boe		
Rep. Bob Martinson					
Rep. Roscoe Streytle					
Rep. Mark Dosch					
Rep. Bette Grande					

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

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

Reconsider. SB 2020

Date: 4-8-13
Roll Call Vote #: 2

**2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020**

House Education and Environment Division Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Monson Seconded By Rep. Martinson

Representatives	Yes	No	Representatives	Yes	No
Chairman Robert Skarphol			Rep. Clark Williams		
Vice Chairman David Monson			Rep. Tracy Boe		
Rep. Bob Martinson					
Rep. Roscoe Streyle					
Rep. Mark Dosch					
Rep. Bette Grande					

Total (Yes) _____ No _____

Absent Voice vote carries

Floor Assignment _____

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

Decrease \$

Date: 4-4-13
 Roll Call Vote #: 3

**2013 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 2020**

House Education and Environment Division Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Monson Seconded By Rep. Boe

Representatives	Yes	No	Representatives	Yes	No
Chairman Robert Skarphol	X		Rep. Clark Williams	X	
Vice Chairman David Monson	X		Rep. Tracy Boe	X	
Rep. Bob Martinson	X				
Rep. Roscoe Streytle	X				
Rep. Mark Dosch	X				
Rep. Bette Grande	X				

Total (Yes) 8 No 0

Absent 0

Floor Assignment _____

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

Date: 4/9/13
Roll Call Vote #: 1

2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

House Appropriations Committee

Check here for Conference Committee

Legislative Council Amendment Number .02002

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment

Rerefer to Appropriations Reconsider

Motion Made By Rep. Monson Seconded By Rep. Skarphol

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer			Rep. Streyle		
Vice Chairman Kempenich			Rep. Thoreson		
Rep. Bellew			Rep. Wieland		
Rep. Brandenburg					
Rep. Dosch					
Rep. Grande			Rep. Boe		
Rep. Hawken			Rep. Glassheim		
Rep. Kreidt			Rep. Guggisberg		
Rep. Martinson			Rep. Holman		
Rep. Monson			Rep. Williams		
Rep. Nelson					
Rep. Pollert					
Rep. Sanford					
Rep. Skarphol					

Total Yes _____ No _____

Absent _____

Floor Assignment _____

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

Voice vote carried

Date: 4/9/13
Roll Call Vote #: 2

**2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020**

House Appropriations Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Skarphol Seconded By Rep. Bellew

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer			Rep. Streyle		
Vice Chairman Kempenich			Rep. Thoreson		
Rep. Bellew			Rep. Wieland		
Rep. Brandenburg					
Rep. Dosch					
Rep. Grande			Rep. Boe		
Rep. Hawken			Rep. Glassheim		
Rep. Kreidt			Rep. Guggisberg		
Rep. Martinson			Rep. Holman		
Rep. Monson			Rep. Williams		
Rep. Nelson					
Rep. Pollert					
Rep. Sanford					
Rep. Skarphol					

Total Yes _____ No _____

Absent _____

Floor Assignment _____

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

*designate money into UGPTI one-time
for purpose of the match*

voice vote carries

Date: 4/9/13
Roll Call Vote #: 3

2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

House Appropriations Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Kempenich Seconded By Rep. Thoreson

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer			Rep. Streyle		
Vice Chairman Kempenich			Rep. Thoreson		
Rep. Bellew			Rep. Wieland		
Rep. Brandenburg					
Rep. Dosch					
Rep. Grande			Rep. Boe		
Rep. Hawken			Rep. Glassheim		
Rep. Kreidt			Rep. Guggisberg		
Rep. Martinson			Rep. Holman		
Rep. Monson			Rep. Williams		
Rep. Nelson					
Rep. Pollert					
Rep. Sanford					
Rep. Skarphol					

Total Yes _____ No _____

Absent _____

Floor Assignment _____

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

remove section 6 of engrossed bill

substitute motion

Date: 4/9/13
 Roll Call Vote #: 4

**2013 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 2020**

House Appropriations Committee

Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Skarphol Seconded By Rep. Monson

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer			Rep. Streyle		
Vice Chairman Kempenich			Rep. Thoreson		
Rep. Bellew			Rep. Wieland		
Rep. Brandenburg					
Rep. Dosch					
Rep. Grande			Rep. Boe		
Rep. Hawken			Rep. Glassheim		
Rep. Kreidt			Rep. Guggisberg		
Rep. Martinson			Rep. Holman		
Rep. Monson			Rep. Williams		
Rep. Nelson					
Rep. Pollert					
Rep. Sanford					
Rep. Skarphol					

Total Yes _____ No _____

Absent _____

Floor Assignment _____

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

*remove only general fund appropriation authority
 in section 6
 voice vote carries*

Date: 4/9/13
Roll Call Vote #: 5

2013 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2020

House Appropriations Committee

Check here for Conference Committee

Legislative Council Amendment Number 13.8176.02003

Action Taken: Do Pass Do Not Pass Amended Adopt Amendment
 Rerefer to Appropriations Reconsider

Motion Made By Rep. Monson Seconded By Rep. Skarphol

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer	X		Rep. Streyle	X	
Vice Chairman Kempenich	X		Rep. Thoreson	X	
Rep. Bellew	X		Rep. Wieland	X	
Rep. Brandenburg	X				
Rep. Dosch	X				
Rep. Grande	X		Rep. Boe		
Rep. Hawken	X		Rep. Glassheim	X	
Rep. Kreidt	X		Rep. Guggisberg	X	
Rep. Martinson	X		Rep. Holman	X	
Rep. Monson	X		Rep. Williams	X	
Rep. Nelson	X				
Rep. Pollert					
Rep. Sanford	X				
Rep. Skarphol	X				

Total Yes 20 No 0

Absent 2

Floor Assignment Rep. Monson

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

REPORT OF STANDING COMMITTEE

SB 2020, as engrossed: Appropriations Committee (Rep. Delzer, Chairman)
 recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends
DO PASS (20 YEAS, 0 NAYS, 2 ABSENT AND NOT VOTING). Engrossed SB 2020
 was placed on the Sixth order on the calendar.

Page 1, remove lines 22 through 24

Page 2, replace lines 1 and 2 with:

"Extension service	\$47,026,654	\$3,306,689	\$50,333,343
Soil conservation committee	987,800	75,000	1,062,800
Accrued leave payments	0	<u>1,716,289</u>	<u>1,716,289</u>
Total all funds	\$48,014,454	\$5,097,978	\$53,112,432
Less estimated income	<u>23,128,810</u>	<u>1,431,810</u>	<u>24,560,620</u>
Total general fund	\$24,885,644	\$3,666,168	\$28,551,812"

Page 2, replace lines 8 through 10 with:

"Northern crops institute	\$3,347,307	\$444,213	\$3,791,520
Accrued leave payments	0	<u>42,195</u>	<u>42,195</u>
Total all funds	\$3,347,307	\$486,408	\$3,833,715
Less estimated income	<u>1,654,725</u>	<u>127,614</u>	<u>1,782,339</u>
Total general fund	\$1,692,582	\$358,794	\$2,051,376"

Page 2, replace lines 16 through 18 with:

"Upper great plains transportation institute	\$24,069,961	\$2,052,462	\$26,122,423
Accrued leave payments	0	<u>241,627</u>	<u>241,627</u>
Total all funds	\$24,069,961	\$2,294,089	\$26,364,050
Less estimated income	<u>22,150,333</u>	<u>166,272</u>	<u>22,316,605</u>
Total general fund	\$1,919,628	\$2,127,817	\$4,047,445"

Page 2, replace lines 24 through 27 with:

"Main research center	\$89,012,990	\$19,234,128	\$108,247,118
Accrued leave payments	0	<u>2,561,394</u>	<u>2,561,394</u>
Total all funds	\$89,012,990	\$21,795,522	\$110,808,512
Less estimated income	<u>41,630,644</u>	<u>11,841,303</u>	<u>53,471,947</u>
Total general fund	\$47,382,346	\$9,954,219	\$57,336,565
Full-time equivalent positions	349.01	2.48	351.49"

Page 3, replace lines 1 through 10 with:

"Dickinson research center	\$5,588,562	\$487,453	\$6,076,015
Central grasslands research center	2,865,847	341,369	3,207,216
Hettinger research center	3,373,175	1,261,401	4,634,576
Langdon research center	2,378,807	433,988	2,812,795
North central research center	4,399,821	162,575	4,562,396
Williston research center	3,410,089	316,898	3,726,987
Carrington research center	7,126,488	718,896	7,845,384
Accrued leave payments	0	<u>503,916</u>	<u>503,916</u>
Total all funds	\$29,142,789	\$4,226,496	\$33,369,285
Less estimated income	<u>14,997,581</u>	<u>963,849</u>	<u>15,961,430</u>
Total general fund	\$14,145,208	\$3,262,647	\$17,407,855"

Page 3, replace lines 16 and 17 with:

"Agronomy seed farm	\$1,435,168	\$23,681	\$1,458,849
Accrued leave payments	0	<u>5,741</u>	<u>5,741</u>
Total special funds	\$1,435,168	\$29,422	\$1,464,590"

Page 3, replace lines 23 through 25 with:

"Grand total general fund	\$90,025,408	\$19,369,645	\$109,395,053
Grand total special funds	<u>104,997,261</u>	<u>14,560,270</u>	<u>119,557,531</u>
Grand total all funds	\$195,022,669	\$33,929,915	\$228,952,584"

Page 4, after line 4, insert:

"Upper great plains transportation institute state match for federal funds"	0	1,250,000
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Page 4, remove line 7

Page 4, replace lines 11 through 13 with:

"Total all funds	\$10,726,983	\$9,685,000
Total other funds	<u>2,852,931</u>	<u>1,950,000</u>
Total general fund	\$7,874,052	\$7,735,000"

Page 4, after line 25, insert:

"SECTION 4. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend revenues received from mineral royalties, leases, or easements only for one-time items and not for ongoing operational expenses, for the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 5, after line 4, insert:

"SECTION 7. EXTENSION SERVICE - NEW TECHNICAL SUPPORT FULL-TIME EQUIVALENT POSITION. The North Dakota state university extension service may utilize the new full-time equivalent technical support position recommended in the 2013-15 executive budget and included in subdivision 1 of section 1 of this Act, in either the weed science or potato program during the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 5, line 5, remove "GENERAL FUND -"

Page 5, line 5, remove "unexpended"

Page 5, line 6, remove "general fund appropriation authority to and any"

Page 5, line 8, remove "from these appropriations"

Page 5, line 16, remove "MATCHING FUNDS"

Page 5, line 27, replace "\$4,300,000" with "\$5,925,000"

Re-number accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of House Action

	Executive Budget	Senate Version	House Changes	House Version
Transportation Institute				
Total all funds	\$25,353,629	\$25,353,629	\$1,010,421	\$26,364,050

Less estimated income	22,525,054	22,525,054	(208,449)	22,316,605
General fund	\$2,828,575	\$2,828,575	\$1,218,870	\$4,047,445
Branch Research Centers				
Total all funds	\$33,746,878	\$33,746,878	(\$377,593)	\$33,369,285
Less estimated income	16,021,866	16,021,866	(60,436)	15,961,430
General fund	\$17,725,012	\$17,725,012	(\$317,157)	\$17,407,855
NDSU Extension Service				
Total all funds	\$54,088,058	\$54,288,058	(\$1,175,626)	\$53,112,432
Less estimated income	25,437,414	24,987,414	(426,794)	24,560,620
General fund	\$28,650,644	\$29,300,644	(\$748,832)	\$28,551,812
Northern Crops Institute				
Total all funds	\$3,874,651	\$3,874,651	(\$40,936)	\$3,833,715
Less estimated income	1,800,307	1,800,307	(17,968)	1,782,339
General fund	\$2,074,344	\$2,074,344	(\$22,968)	\$2,051,376
Main Research Center				
Total all funds	\$110,293,322	\$112,320,622	(\$1,512,110)	\$110,808,512
Less estimated income	53,255,585	53,255,585	216,362	53,471,947
General fund	\$57,037,737	\$59,065,037	(\$1,728,472)	\$57,336,565
Agronomy Seed Farm				
Total all funds	\$1,474,961	\$1,474,961	(\$10,371)	\$1,464,590
Less estimated income	1,474,961	1,474,961	(10,371)	1,464,590
General fund	\$0	\$0	\$0	\$0
Bill total				
Total all funds	\$228,831,499	\$231,058,799	(\$2,106,215)	\$228,952,584
Less estimated income	120,515,187	120,065,187	(507,656)	119,557,531
General fund	\$108,316,312	\$110,993,612	(\$2,598,559)	\$109,395,053

Senate Bill No. 2020 - Transportation Institute - House Action

	Executive Budget	Senate Version	House Changes	House Version
Upper Great Plains Trans. Institute	\$25,353,629	\$25,353,629	\$768,794	\$26,122,423
Accrued leave payments			241,627	241,627
Total all funds	\$25,353,629	\$25,353,629	\$1,010,421	\$26,364,050
Less estimated income	22,525,054	22,525,054	(208,449)	22,316,605
General fund	\$2,828,575	\$2,828,575	\$1,218,870	\$4,047,445
FTE	53.75	53.75	0.00	53.75

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

	Adjusts State Employee Compensation and Benefits Package ¹	Removes Separate Line Item for Accrued Leave Payments ²	Increases Funding for Matching Grants ³	Total House Changes
Upper Great Plains Trans. Institute	(\$239,579)	(\$241,627)	\$1,250,000	\$768,794
Accrued leave payments		241,627		241,627
Total all funds	(\$239,579)	\$0	\$1,250,000	\$1,010,421
Less estimated income	(208,449)	0	0	(208,449)
General fund	(\$31,130)	\$0	\$1,250,000	\$1,218,870
FTE	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile

- of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$42,266) and from other funds (\$199,361) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment increases funding to match new federal grants received by the agency to provide a total of \$2 million, all of which is from the general fund. This increase of \$1.25 million added by the House is one-time funding.

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

	Executive Budget	Senate Version	House Changes	House Version
Dickinson Research Center	\$6,231,325	\$6,231,325	(\$155,310)	\$6,076,015
Central Grasslands Research Center	3,297,559	3,297,559	(90,343)	3,207,216
Hettinger Research Center	4,746,234	4,746,234	(111,658)	4,634,576
Langdon Research Center	2,886,763	2,886,763	(73,968)	2,812,795
North Central Research Center	4,661,679	4,661,679	(99,283)	4,562,396
Williston Research Center	3,869,023	3,869,023	(142,036)	3,726,987
Carrington Research Center	8,054,295	8,054,295	(208,911)	7,845,384
Accrued leave payments			503,916	503,916
Total all funds	\$33,746,878	\$33,746,878	(\$377,593)	\$33,369,285
Less estimated income	16,021,866	16,021,866	(60,436)	15,961,430
General fund	\$17,725,012	\$17,725,012	(\$317,157)	\$17,407,855
FTE	107.04	107.04	0.00	107.04

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total House Changes
Dickinson Research Center	(\$68,302)	(\$87,008)	(\$155,310)
Central Grasslands Research Center	(38,980)	(51,363)	(90,343)
Hettinger Research Center	(47,485)	(64,173)	(111,658)
Langdon Research Center	(32,828)	(41,140)	(73,968)
North Central Research Center	(39,332)	(59,951)	(99,283)
Williston Research Center	(64,653)	(77,383)	(142,036)
Carrington Research Center	(86,013)	(122,898)	(208,911)
Accrued leave payments		503,916	503,916
Total all funds	(\$377,593)	\$0	(\$377,593)
Less estimated income	(60,436)	0	(60,436)
General fund	(\$317,157)	\$0	(\$317,157)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$407,680) and from other funds (\$96,236) for permanent employees' compensation and benefits is reallocated to an

accrued leave payments line item for paying annual leave and sick leave for eligible employees for each branch center as follows:

Branch Research Centers	General Fund	Estimated Income	Total
Dickinson Research Center	(\$70,391)	(\$16,617)	(\$87,008)
Central Grasslands Research Center	(41,554)	(9,809)	(51,363)
Hettinger Research Center	(51,917)	(12,256)	(64,173)
Langdon Research Center	(33,283)	(7,857)	(41,140)
North Central Research Center	(48,502)	(11,449)	(59,951)
Williston Research Center	(62,604)	(14,779)	(77,383)
Carrington Research Center	(99,429)	(23,469)	(122,898)
Accrued leave payments	407,680	96,236	503,916

A section is added providing that the Dickinson Research Extension Center may only spend revenue from mineral royalties, leases, or easements for one-time items and not for operations during the 2013-15 biennium.

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

	Executive Budget	Senate Version	House Changes	House Version
Extension Service	\$53,025,258	\$53,150,258	(\$2,816,915)	\$50,333,343
Soil Conservation Committee	1,062,800	1,137,800	(75,000)	1,062,800
Accrued leave payments			1,716,289	1,716,289
Total all funds	\$54,088,058	\$54,288,058	(\$1,175,626)	\$53,112,432
Less estimated income	25,437,414	24,987,414	(426,794)	24,560,620
General fund	\$28,650,644	\$29,300,644	(\$748,832)	\$28,551,812
FTE	258.26	258.26	0.00	258.26

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Partial Salary Support ³	Reduces Funding for Soil Conservation Committee ⁴	Provides Funding for Burleigh County Extension Service Summer Internships ⁵	Total House Changes
Extension Service	(\$865,626)	(\$1,716,289)	(\$260,000)		\$25,000	(\$2,816,915)
Soil Conservation Committee				(75,000)		(75,000)
Accrued leave payments		1,716,289				1,716,289
Total all funds	(\$865,626)	\$0	(\$260,000)	(\$75,000)	\$25,000	(\$1,175,626)
Less estimated income	(426,794)	0	0	0	0	(426,794)
General fund	(\$438,832)	\$0	(\$260,000)	(\$75,000)	\$25,000	(\$748,832)
FTE	0.00	0.00	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$852,203) and from other funds (\$864,086) for permanent employees' compensation and benefits is reallocated to an

accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes funding included in the executive budget to provide partial general fund salary support for the following existing positions:

- Integrated pest management and plant diagnostic laboratory coordinator.
- State water quality specialist.

⁴ This amendment removes funding added by the Senate for Soil Conservation Committee operations.

⁵ This amendment provides funding for salaries and wages for a Junior Master Gardener internship program through the Burleigh County Extension Service for the summer of 2013 and the summer of 2014.

This amendment provides the NDSU Extension Service flexibility to use the new FTE technical support position, recommended in the executive budget, in either the weed science or potato program.

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

	Executive Budget	Senate Version	House Changes	House Version
Northern Crops Institute	\$3,874,651	\$3,874,651	(\$83,131)	\$3,791,520
Accrued leave payments			42,195	42,195
Total all funds	\$3,874,651	\$3,874,651	(\$40,936)	\$3,833,715
Less estimated income	1,800,307	1,800,307	(17,968)	1,782,339
General fund	\$2,074,344	\$2,074,344	(\$22,968)	\$2,051,376
FTE	12.00	12.00	0.00	12.00

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total House Changes
Northern Crops Institute	(\$40,936)	(\$42,195)	(\$83,131)
Accrued leave payments		42,195	42,195
Total all funds	(\$40,936)	\$0	(\$40,936)
Less estimated income	(17,968)	0	(17,968)
General fund	(\$22,968)	\$0	(\$22,968)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$37,172) and from other funds (\$5,023) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

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

	Executive Budget	Senate Version	House Changes	House Version
Main Research Center Accrued leave payments	\$110,293,322	\$112,320,622	(\$4,073,504) 2,561,394	\$108,247,118 2,561,394
Total all funds	\$110,293,322	\$112,320,622	(\$1,512,110)	\$110,808,512
Less estimated income	53,255,585	53,255,585	216,362	53,471,947
General fund	\$57,037,737	\$59,065,037	(\$1,728,472)	\$57,336,565
FTE	351.49	351.99	(0.50)	351.49

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Oil-Impacted Centers ³	Reduces Funding for Flooded Lands Study ⁴	Adjusts Funding for Capital Projects ⁵	Removes Animal Science Position ⁶
Main Research Center Accrued leave payments	(\$1,331,810)	(\$2,561,394) 2,561,394	(\$100,000)	(\$80,300)		
Total all funds	(\$1,331,810)	\$0	(\$100,000)	(\$80,300)	\$0	\$0
Less estimated income	(783,638)	0	0	0	1,000,000	0
General fund	(\$548,172)	\$0	(\$100,000)	(\$80,300)	(\$1,000,000)	\$0
FTE	0.00	0.00	0.00	0.00	0.00	(0.50)

	Total House Changes
Main Research Center Accrued leave payments	(\$4,073,504) 2,561,394
Total all funds Less estimated income	(\$1,512,110) 216,362
General fund	(\$1,728,472)
FTE	(0.50)

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$1,748,140) and from other funds (\$813,254) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes the funding added by the Senate for oil-impacted research extension centers for housing allowances or hiring bonuses.

⁴ This amendment reduces the funding added by the Senate for the research relating to the recovery of grasslands affected by Souris River flooding to provide a total of \$82,000, all of which is from the general fund.

⁵ This amendment:

- Provides a total of \$5,925,000 for replacement of agronomy laboratories, the same as the Senate version and \$1,625,000 more than the executive budget.
- Reduces funding from the general fund for the replacement of agronomy laboratories to provide a total of \$4,925,000, \$1,000,000 less than the Senate version but \$625,000 more than the executive budget.
- Provides authority for the agency to raise funds from the private industry of up to \$1 million for all of the agronomy laboratory projects. Neither the Senate nor the executive budget included other funds for the projects.

⁶ The .5 FTE animal science position added by the Senate is removed. The funding of \$140,000 from the general fund added by the Senate relating to the position is not changed.

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

	Executive Budget	Senate Version	House Changes	House Version
Agronomy Seed Farm	\$1,474,961	\$1,474,961	(\$16,112)	\$1,458,849
Accrued leave payments			5,741	5,741
Total all funds	\$1,474,961	\$1,474,961	(\$10,371)	\$1,464,590
Less estimated income	1,474,961	1,474,961	(10,371)	1,464,590
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 State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total House Changes
Agronomy Seed Farm	(\$10,371)	(\$5,741)	(\$16,112)
Accrued leave payments		5,741	5,741
Total all funds	(\$10,371)	\$0	(\$10,371)
Less estimated income	(10,371)	0	(10,371)
General fund	\$0	\$0	\$0
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from other funds (\$5,741) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

Senate Bill No. 2020 - Other Changes - House Action

Section 8 is amended to remove the general fund carryover authority.

2013 CONFERENCE COMMITTEE

SB 2020

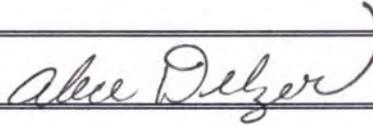
2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020
04-18-2013
Job # 21280

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A Conference Committee hearing on the Extension Service

Minutes:

You may make reference to "attached testimony."

Senator Bowman called the Conference Committee hearing to order on Thursday, April 18, 2013 at 3:30 pm in the Harvest Room in regards to SB 2020. Roll call was taken. All conferees were present.

SENATE: Senators: Bill Bowman (chair) Robert Erbele, David O'Connell
HOUSE: Representatives: David Monson (Chair); Robert Skarphol, Tracy Boe

Brittani Reim - Legislative Council
Tammy R. Dolan - OMB

Brittani Reim presented Statement of Purpose Testimony attached # 1.

Vice Chairman Bowman Asked the House to go through the changes.

Representative Monson: Exclude salaries. #1 and 2 will be taken care of when we finish the salary package.

Transportation Institute: We increased the general fund expenditure by \$1.25M over the Governor's increase. He had \$750,000 and we increased it to \$2M total in general funds. That is to match new federal grants that are being received. Many other budgets, Commerce had money, 1358, everybody that had road testing, the Upper Great Plains Transportation Institute do the testing, that is why we increased it. That is our first change. Two FTE's, we found it was a typo on the green sheet, they were under general funds, they are actually federal funds.

Branch Research Centers # 3, we tightened up the language for Dickinson Oil money for one time items, not for operations, keep it out of their base budget. As that money has been decreasing we were finding we had to kick in more money to shore that up, we made the amount \$800,000 part of the base budget, we took out the equivalent of oil money, it is going down \$640,000.

Skarphol We have a handout.

Representative Monson I did have a discussion with Chris Ringwald he is concerned about the definition of one time, because the definition of one time can sometimes be confusing, it wasn't our intention to make it so it would not be flexible.

Vice Chairman Bowman We will have to discuss that, but when we started funding that, through general fund dollars it was because the loss of oil revenues went down, we had to supplement that to keep them whole. It's been a wonderful thing. We got a lot of good research done with that oil.

Representative Monson That is Section 4 of the bill. Next is Extension Service. It starts with the salary. We left most of your changes there to the 4-H camp, \$75,000 for soil conservation, we left that, and we removed \$75,000 of the \$150,000 for soil conservations.

Vice Chairman Bowman Why?

Representative Monson I guess we just went back to the governor's recommendation of \$75,000. Nobody ever said that they needed that extra \$75,000.

Vice Chairman Bowman If you look at the request, they were asking for \$1 M more dollars than what the governor's budget was, and have always tried give them a little more because of what they do out there. They are the most underfunded group in this capitol.

Representative Monson Historically, we know that they run on a shoe string. Even with the \$75,000, the governor's recommendation is \$75,000 over what they had last time. We left the change on rural leadership from the state mill and elevator, in general fund, we left that. We kind of like having things run through the general fund.

We left the change for the match program for the summer internship program. We did add \$25,000 for the Junior Master Gardener internships for Burleigh Co Extension, we were told they kind of run this for the state, other counties kind of work with them somewhat. I know Morton Co was advertising. That is for summer salaries to work with the gardener program.

Remove funding in executive budget to provide partial general fund salaries support for the following existing positions: Integrated Pest Management and Plant Diagnostic Lab Coordinator, and State Water Quality Specialist. We will have to back more. One livestock specialist and crop protection tech II, we gave them the flexibility to go from the potato and weed program. We didn't take the money out, but we wanted it clear if they needed someone in the potatoes they can do that without our blessing.

We did remove \$260,000 from the Executive recommendation for partial general fund salary support, (12.05) and we did remove the funding for that too. We have to go back and look at our thought process.

Next is Northern Crops Institute, nothing, but the salary package there.

Main Research Center, we added one time funding. We pooled the money. This is probably where we made the biggest changes. You guys had funded Langdon and Streeter for new

labs. We left them with \$1M less, we took that out and gave them a match requirement or the ability up to the \$1M for a match, they can't exceed the money that was in there for the buildings but we did pool all the money so they could maybe scale back on buildings and save us a little money or when they say it's going to cost \$1.2 M, so by underfunding it a bit, it forces them to bid it a little bit less, we are hoping we can save a little money on the bidding. Or maybe they got the ability to raise some local funds. I know Langdon has raised money on various projects and they have been very willing to chip in.

Vice Chairman Bowman I wanted to get them funded, 2 years ago they were all on it so I looked at their condition. I drove to Carrington, and to Hettinger, so I was prepared to justify what we did. They are also outdated, they don't have any of the newer technology. They don't have heating and air conditioning so the researchers can do the best job. As we hire technicians as they go in these we should get better technology and better results from the research, and have the kind of facility that they need. I thought this was the best time to do it. This is going to bring the 4 campuses up to date, so for the next 40 to 50 years, we are up to date.

Representative Monson: I can vouch for Langdon's lab, much of it is a unheated barn converted into storage. I can't disagree, but we did leave \$4.925M in there is a possibility they won't get them all going anyway. That is our thought process behind that.

Representative Monson Agronomy seed farm - no changes.

Senator O'Connell: On \$80,300 for a flooded land study, why was that cut in half?

Representative Monson: No one said what they were going to do with it. We know about the floods, it will flood again we took \$80,000 out there.

Vice Chairman Bowman When we added that money to it, there was also testimony the amount of loss that we have that's under water, being we didn't have to hire any FTE's, they can use the ones in their system. We thought this is the time to get a return back. Do you remember the dollar figure? **Senator O'Connell** \$160,000. **Vice Chairman Bowman** But the return back, was it \$3+ M or something, they figured they would get back.

Senator O'Connell That could be research done all over the US and the world, if they are going to dike up, which native grasses will do better, a lot of that rangeland is out of production 5 to 7 years, this was for test spots for native grasses. The ranchers have been left out both upstream and downstream from Minot. (20.18) This research could be used for the whole US.

Representative Monson We didn't have a lot of information. We left half of it in there, roughly and we would have something to talk about.

Remove the funding for the oil impacted centers. We realize that employees that they will hire in the oil country will have higher costs, in every budget that you have seen, how do you keep good morale, all the budgets that the House has had, we have done this, we have took it out in every budget we had.

Representative Skarphol. There is a pool that is being created to address those oil related needs, more likely in OMB. Entities that are affected will have an opportunity to make a request and be given some dollars. The fear from the House's perspective is if we appropriate a fair amount of money, it will get spent. With the number of housing units coming into play, in Williston we're talking about 5,000 housing units coming on line in the spring. We anticipate the cost of rent would come down we want some kind of control in the situation.

Vice Chairman Bowman The only thing is, if the rent doesn't go down, and the rent continues to go up, for what these people get paid, are you going to get anybody to go out there?

Representative Skarphol The money will be there, we believe. **Vice-chairman Bowman** If its' in another fund that is fine with me.

Representative Skarphol: We realize it's a nuisance, but we also don't want to be paying those costs that aren't appropriated if rents begin to decline rather dramatically. Because in the little community in which I live there are going to be 400 apartments coming on line this spring. That's a lot of apartments in a town of 2000 people.

Representative Monson: That pool, the people that are employees in this budget already own their own home, and aren't going to see that big impact. Maybe in other budgets they will hire a bunch of new people that will come in and they'll be the ones that are going to get hit by that. So, by having that pool there they can apply for that pool as needed.

Vice Chairman Bowman This would be for new FTE's. That is where the problem is, my thinking was give it to the main research facilities to take care of what they need, but if there is funding in another bill and it passes, that takes care of my concerns.

Representative Monson: That is what our thought was, that it would be a pool for all agencies, all state employees as needed to apply.

Representative Skarphol: Will you talk to the higher up to see whether or not they are coming to some kind of consensus?

Representative Monson, We took out the statement the .5 FTE. They have the flexibility. They had a dated, it's just a matter, the money is still there, they can add if they need, they have the same ability as higher education.

Representative Skarphol The \$755,000 written down there, that is the projected amount that the Dickinson Research Extension Center Oil Revenue, Testimony attached # 2. The money must be used for one thing. The Williston has minerals, and with the development out there, there could be some money. We need to be careful how we treat our entities because we don't want them competing against each other. We need to develop a policy that is consistent.

Vice Chairman Bowman What did you say you did with the 4 H camp because that was a big deal?

Representative Monson We left that, it was the same.

Vice Chairman Bowman We will continue at another time. Close the hearing.

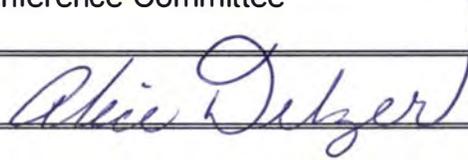
2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020
04-19-2013
Job # 21340

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A Conference Committee for the NDSU Extension Service

Minutes:

Senator Bowman called the Conference Committee to order on Friday, April 19, 2013 at 2:30 pm in the Harvest Room in regards to SB 2020. Let the record show that all conferees are present.

SENATE: Senators: Bill Bowman (Chair) Robert Erbele, David O'Connell
HOUSE: Representatives: David Monson, Robert Skarphol, Tracy Boe

Brittani Reim - Legislative Council
Tammy R. Dolan - OMB

Senator Bowman asked Representative Monson if he would like to explain the final changes.

Representative Monson: I think we covered about everything in the previous meeting. The agronomy seed farm we made no changes. The only change we made was the salary package changes. The branch research had no change from what was discussed. We could discuss Dickinson because we have come up with some changes there.

Rep. Skarphol: He referred to a sheet he had handed out and explained. We talked about putting language in the bill that would say that anything in the excess of \$750,000 must be used for one time expenditures. We agreed to a permanent \$800,000 to put into their base to offset their costs. They felt strongly that it tied up these dollars if we did not make such a provision. It is our intent to try to do that with oil revenue coming in at Williston too.

Senator Bowman: Where has the problem been the way we've been doing it? Dickinson is kind of different than the rest of the branches because of the oil revenue. Since we started adding the \$800,000 that was the last I heard of a problem in Dickinson. I don't see that there is going to be a big increase of revenue.

Representative Skarphol: The issue that we have had every biennium is trying to figure out how much money to put in to offset the declining revenue. It is our understanding that the \$800,000 was agreed upon and intended to be the number and we wouldn't need to continue to negotiate every biennium. If you would agree to that being a good assumption than \$750,000 would add up to \$1.5M, which would approximate what they have been getting from their oil revenue plus whatever we appropriated the last two biennium's. We are trying to get stability there so we don't have to keep calculating it.

Senator Bowman: You want it in current language that everything over that \$750,000 has to go to one time funding at Dickinson every biennium.

Representative Skarphol: Yes.

Senator Bowman: We will think about that. There is some merit in that.

Representative Skarphol: Williston Experiment Station just found out they have 40 mineral acres in McKenzie County.

Senator Bowman: That would be good. He asked why one time?

Representative Monson: In our discussion and reasoning for calling it one time came from discussion with Chris Ringwell, who felt that we were tying his hands because he couldn't use it in operating. Rep. Skarphol's statement was to do \$750,000 that could be used for operating and anything over that would be the onetime.

Senator Bowman: In the Upper Great Plains Transportation the governor's budget had \$700,000 and that is what they needed to match. We have heard that there might be other money.

Representative Skarphol: They received a \$1.377M grant that they have to match, and they have applied for and expect that they are getting another. This would bring them to about \$2M that they need to match. It would be there intent to do every road and bridge in the state of ND with the latest state of the art testing and provided that information to every county. They would have that resource avail to know what needs to be done on the county road. This is the only funding for upper great plain for this purpose. Everything else has been cut and gone away.

Representative Monson: I am not sure if it is dollar for dollar, what came out of other budgets, but it is close.

Senator Bowman: Is the soil conservation a big issue. It is the most underfunded budget. I have an interest in it.

Representative Monson: I agree with you they run on a shoestring.

Discussion followed on the Soil Conservation budget, Master gardening program, and the budget. They clarified what was in the governor's budget and what the Senate had added.

Representative Monson: On that same line, one of the thoughts I was having, not every county is equal, I would venture to say that almost every district has seen their property increase so that mill levy should be growing as well.

Senator Bowman: There is increased cost. They do have extra expenditures. Continuing on, the rural leadership funding is fine. Why would you pool the money for the agronomy labs, the college building funds? Will that cause a dilemma when we need bids for building projects?

Representative Monson: By underfunding these we may see some bids come in a little bit lower.

Discussion on rational for college building fund (18:03). There was disagreement on how this would work.

Senator O'Connell asked how the House felt on the flooded land study.

Representative Monson: We haven't gotten into that in a lot of detail.

Representative Skarphol: There are other issues.

Senator O'Connell There are problems and losses and he explained.

Representative Monson: I realize there is a problem and we will be discussing that.

Senator Bowman: Another concern we have is that we want to pool the money for the impact areas that we set up for housing. We haven't seen the pool or how it is going to be distributed, so until that happens we have to try to figure out which way is the best way to go.

Representative Monson: This budget is contingent upon two major things happening: Salaries getting solved in another budget and then this pool. These two have to be solved in other budgets before this one can fall together. I think our differences outside of those areas are very solvable.

Senator Bowman: I would suggest we leave the \$75,000 in, the \$25,000 for Master Gardening, and further discuss the rest.

Representative Skarphol asked for a report of what goes to the Soil Conservation District.

Senator Bowman adjourned.

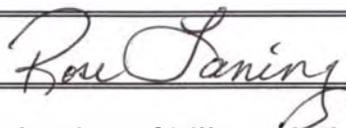
2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020 conference committee
April 22, 2013
Job # 21418

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

This is a conference committee on the Extension Service.

Minutes:

Testimony attached # 1 - 4

Legislative Council - Brittani Reim
OMB - Tammy Dolan

Senator Bowman called the conference committee to order on SB 2020. **Senators Erbele and O'Connell** were present as well as **Representatives Monson Skarphol and Boe**.

Senator Bowman wants to try and look at the differing issues.

- 1) Oil revenue for Dickinson Experiment Station - \$755,000 of oil revenue to use for operating and anything over that would be one time plus the \$800,000 in the general fund.

Rep. Skarphol: That would be operating.

Senator Erbele: Are there any projections of what could be the excess over and above? Is there a fair amount of flexibility and what is the definition of onetime?

Rep. Skarphol: As far as the potential, I can't speak to that, but obviously the revenue has been declining. If the Tyler Formation were to be productive, it could result in some fairly substantial money. Our intent was for it to be one-time spending - and meant for Dickinson. Williston could be in a more unusual situation because of the mineral ownership they recently found out that they have. We'd like the same provisions be made there because we've always had an issue with the oil money declining. We'd like for them to have some operating, but the majority of it would go for one-time.

Rep. Monson: Would it be your intention that you would leave a little of that money for operating?

Rep. Skarphol: In the case of Williston, I'd leave it as going for one-time for now simply because we don't want them to start utilizing any potential revenue in advance of us knowing how much it's going to be. If it has to go into a fund to be held for one-time

expenditures for the next two years, I don't think that will cause any hardship because we are appropriating what they need for this upcoming biennia.

Senator Bowman: My concern with Dickinson, is that revenue up to \$755,000 - but what if it's only \$425,000? Will they be way short of operating.

Rep. Skarphol: That's why we put the \$800,000 in their baseline. If the \$755,000 goes down, then they will already be covered by the \$800,000 we put in - plus the oil revenue too.

Senator Bowman said he'd accept a motion to make that part of this conference committee.

Rep. Skarphol moved that the Dickinson Experiment station shall retain any money in excess of \$755,000 in oil revenue in a one-time expenditure fund to be appropriated next biennia.

Rep. Monson seconded the motion.

**A roll call vote was taken. Yea: 6 Nay: 0 Absent: 0
Motion carried.**

2) Williston Experiment Station -

Rep. Skarphol moved that any revenue generated from mineral interests for the Williston experiment station be deposited into a fund for one-time expenditures to be appropriated next biennia. That includes lease money or oil royalties.

Rep. Monson seconded the motion.

Discussion:

Rep. Skarphol said they don't currently have oil royalties coming in, but on the 7th of May, there will be 40 mineral acres that are going to be auctioned at the state auction that the experimental station has possession of. There will be money coming in but we don't know how much. It's the same provisions with Williston as they had with Dickinson.

Senator Bowman: This is a new approach to minerals that we haven't really dealt with before. **We want to make sure it's clear that this will be adjusted if this comes true in the next legislative session so there is no question that this needs to be looked at again in two years. This would be part of the motion.**

**A roll call vote was taken. Yea: 6 Nay: 0 Absent: 0
Motion carried.**

3) Soil conservation -

Senator Bowman researched from two years ago and they received an additional \$150,000. The governor added \$75,000 and we added \$75,000 which puts it back to where it was two years ago. It doesn't add any extra money. Most of the money goes to the counties and this is to assist them so they can do their projects. There are some

counties that have a lot of money coming in - probably with a smaller mill levy because their valuations are so high. This fund will offset that.

Brittani Reim, Legislative Council: handed out two documents -

Attachment #1- State Soil Conservation Committee

Attachment #2 - Soil Conservation District Mill Levy Amounts

The \$987,800 is how the money was appropriated in the current biennium. The other handout is the mill levy amounts that had been collected in 2010 & 2011 and distributed to the districts.

They discussed the varying amounts. **Senator Erbele** said some of the most rural counties that really need to do the conservation programs the most have the least amount of money being generated. His home county has 30 plus projects this last season that weren't funded or they couldn't do.

Rep. Monson was interested in the rationale as to why some counties get so much more than others.

Brittani Reim: I was told by the Soil Conservation Association that they apply for the funding and they get what they apply for. Some counties or districts only apply for what they have going on.

Rep. Monson moved to approve the \$75,000 for soil conservation districts which restores it to \$150,000.

Rep. Skarphol seconded

**A roll call vote was taken. Yea: 6 Nay: 0 Absent: 0
Motion carried.**

4) Gardening - \$25,000

Rep. Monson said this is an SBARE priority but it didn't make the cut.

Senator Bowman: We've funded this in the past.

Rep. Skarphol: What was the request from SBARE? Couldn't find the rating number. Wasn't on their optional list either?

Discussed the SBARE listing and priorities.

Senator Bowman: How is this money going to be distributed and where does it go?

Rep. Skarphol: It was designed to go to Burleigh County. It was suggested that they have an active program in Burleigh and Morton County.

Senator Bowman said he'd entertain a motion to put \$25,000 in the bill for gardening and **Rep. Skarphol** said he thought it was already in the bill - in the House version as it came over from the House.

5) Pool for agronomy labs -

Senator Bowman mentioned the pool for the agronomy labs. Handed out different scenarios dealing with the four labs - see attached # 1 and # 2)

Discussed whether they could fund 2 of the 4 agronomy labs. He asked if it was the House's intent to reduce the funding for only 2 labs.

Rep. Skarphol said the original request was for 2 labs and for \$4.3M - the Senate added the other two.

Rep. Monson: It was \$4,925,000 is what the House passed out and Senator Bowman's notes were \$4,250,000.

Discussed the labs and possible matching money because funding all five would be \$5,925,000. If they funded them at \$5,425,000, that would be splitting the difference between the House and Senate version. That would allow for a 10% match.

They will think about it.

Meeting recessed.

2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

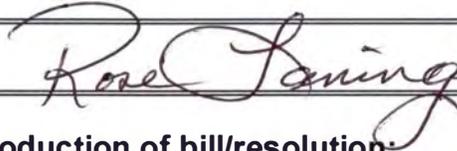
SB 2020 conference committee

April 23, 2013

Job # 21444

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

This is a conference committee on the Extension Service.

Minutes:

Testimony attached # 1

Legislative Council - Brittani Reim
OMB - Tammy Dolan

Senator Bowman called the conference committee to order on SB 2020. **Senators Erbele and O'Connell** were present as well as **Representatives Monson Skarphol and Boe**.

Senator Bowman

1) **Master Gardening:** The Ag Department has \$625,000 for grants for gardening.

I am going to make a proposal for some upfront money for the 4 research facilities. The cost and the matching money would be at 5%. At 5% everyone would be treated the same because I don't think it is good policy to pick and choose. That amounts to: Carrington would have to raise \$125,000; Langdon \$61,250; Hettinger \$90,000 & Central Grasslands \$20,000. That is something that I could live with if you guys could live with it. If you hit them too much, they won't be able to raise it.

Rep. Monson: What would the total of state funds be?

Senator Bowman: \$5,000,727 and if you add \$296,000 that comes to \$5,925,000 which was the cost of all the buildings. I thought it was fair proposal and they'd have skin in the game.

2) **Pay package:** The House amendments changed the pay scale and he explained that these agencies are part of the university system and are not part of the state classification. This needs to be corrected on the salary package. He presented language from Fargo.

Rep. Monson: The pay package for Higher Ed will be the one we use?

Senator Bowman: Right. Because of concerns we will hold this until we know if leadership agrees with this.

Rep. Skarphol: I'd like to go back to the buildings. With your matching funds proposal we are still over the governor's budget.

Senator Bowman replied that his recommendation was for 2 buildings. Explained the reasoning for adding the other two (6:45). Reducing the funding for the other two is another option.

Senator Erbele: If we only do two, the 5% savings will be more than eaten up in building costs for the other two when we come back and try to do them later.

Think on that.

3) Impact dollars into OMB for Research dollars

Rep. Skarphol: It is my understanding that there is a \$10M pool of money in OMB for oil impact. \$8.5M was the last number but we don't have the final number.

Vice Chairman Bowman: We need to get the final version of that and there is language there to have OMB help fund those positions out in the west. I believe that was the intent.

Brittani Reim, Legislative Council: As of yesterday, it has been \$8.5 in OMB and all agencies have to go through an application process.

Rep. Skarphol: Have they taken the numbers that we've removed from each.

Brittani Reim said she will find that out for the next meeting.

4) Partial funding for two positions.

Vice Chairman Bowman: You said that you left the money in but took the two FTEs out. I am referring to the memorandum sent by Dr. Grafton.

Tammy Dolan, OMB: The \$260,000 that you are talking about is on page 5 of the amendments. Those were existing positions that were funded with soft dollars that are no longer available. The amendment didn't take out any FTEs. It just removed the general funds that had been provided to replace the soft funds in the budget.

Rep. Monson: In our appropriation committee, we have heartburn over replacing federal money with state money. Especially money that was one-time. We said no.

Rep. Skarphol: We are looking at page 5 of the amendment (02003). He explained. (16:00). Was this federal dollars?

Tammy Dolan: Federal dollars.

5) Souris River Flooding

Senator O'Connell: (Handed out Souris River Flooding - attachment # 1) There's about 32,000 acres up near Souris that won't be in production for another 5 to 7 years. You heard testimony on it.

Rep. Skarphol: If we leave it at \$160,000 how does that change the 5-7 year loss? Why is it the state's responsibility and not the landowners? If this is to do research, I am not sure this problem of production loss for 5-7 years will do that.

Senator O'Connell: This is a project that can be done statewide and information used state and national. It also gives the students the chance to work with the ranchers.

Vice Chairman Bowman: I think this is why we have ag research. It seems to me to be a perfect fit for what ag research does.

Discussion followed on the cost of the study, other options, and there was further discussion on Master Gardening program.

Rep. Skarphol: There's a \$20M general fund enhancement in this budget. Could we get a document that gives us a side by side comparison between the House and the Senate version?

Vice Chairman Bowman: It's one of the most important budgets for Agriculture in the state of ND. They adjourned.

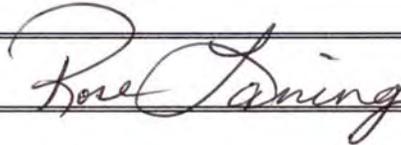
2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

SB 2020 conference committee
April 24, 2013
Job 21493

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation for defraying the expenses of the 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 - Brittani Reim
OMB - Tammy Dolan

Senator Bowman called the conference committee to order on SB 2020. **Senators Erbele and O'Connell** were present as well as **Representatives Monson Skarphol and Boe**.

He asked Legislative Council to go over the items agreed to.

Brittani Reim summarized what the conference committee has agreed on:

Salary package

Oil revenue for Williston & Dickinson

Jr. Masters Gardening

Soil Conservation committee, with a total of \$150,000

Brittani Reim, Legislative Council explained summary of 2013-2015, Executive Recommendation and Senate & House Amendment to SB 2020. **Attachment #1**

Senator Bowman: It is fine with me to leave the \$100,000 in the pool in OMB budget.

All agreed.

Senator Bowman: We need to make a decision on the Water Research projects up north, are we going to fund it and then at what level?

Rep. Skarphol: Would the committee be agreeable in making this a one-time project for this biennium to see how this goes and then look at it again?

Senator Bowman: This isn't a new program. There are no FTEs in this program. They'll utilize some of the specialist that they already have that work in this area.

Senator Erbele: It would be a new area of study with current staff.

Senator Bowman: What was the recommended funding level?

Rep. Monson: There is a Soil health program that was a broad general study that SBARE brought it in a biennium or two back and we funded it and it is an ongoing program. They could probably expand that to cover this project in the Souris. The Senate had \$162,300 in your budget. This was not a part of the governor's budget and not in SBARE priorities. Maybe they could access funds through the Heritage Fund. The House is thinking of an appropriation of \$40,000.

Senator O'Connell: It's a different type of study and it is more with native grasses. He explained why they needed this and the lack of funding for it.

Dr. Ken Grafton, VP, Agricultural Affairs and Dean of Experiment Station gave his prospective from a research stand point. This was brought forward by an individual in that region. When this came to our attention it was onetime funding and not continual beyond this biennium. He explained the structure and stated that they could do without the graduate student. We can bring this into the soils health initiative, the only problem is that their funds have been accounted for.

Senator Bowman: What we need is assurance that it will be taken care of.

Dr. Ken Grafton: We honestly don't know how much it's going to cost us. This can be reduced to a certain extent and then we could expand it. I would be happy to visit with both appropriation committees.

Senator Bowman: Language can be written into the bill after we decide how much we will fund this.

Dr. Ken Grafton: I am not suggesting that we would come back in and ask for additional money. I am suggesting that we would provide a report to the appropriations committees and ag committees to discuss this and talk about the issues as they exist.

Senator O'Connell: We should have an emergency clause to get it into this season.

Senator Bowman: I think we could all agree that this could be in language, in statue, that this will be ongoing, after we get the results of the preliminary study. What's the bottom line?

Dr. Ken Grafton: If we could get a base amount of support and then get some through the Heritage Fund.

Senator O'Connell: We could subtract the graduate student salary from the \$162,300.

Rep. Skarphol said that he wasn't in total agreement. He asked Dr. Grafton about the process involved for the building projects of the labs? What is the cost of the blue print?

Dr. Ken Grafton explained the process (25:45).

Rep. Skarphol: What happens if we appropriate X amount of dollars and you get the blueprints and get bids, what if the bids come in higher?

Dr. Ken Grafton: We have to get State Board of Higher Ed approval first.

Rep. Skarphol: Who sets policy?

Dr. Ken Grafton: My understanding is that it is board policy not state policy.

Rep. Skarphol: What do you do if bids come in higher?

Dr. Ken Grafton explained options (28:19).

Rep. Skarphol asked him to put together the information on the Williston station lab for us so we can get an idea of what it cost to get to the point where you have the bid and have the choices to the alternatives.

Dr. Ken Grafton: One of the issues that we have is that we are not supposed to discuss architectural plans until we receive 90% of the monies available.

Senator Bowman: I don't think we had that when we funded the Williston project. I'd like to get it wrapped up in the next meeting. He adjourned.

2013 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee Harvest Room, State Capitol

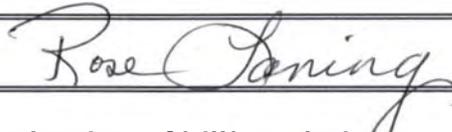
SB 2020 conference committee (2)

April 24, 2013

Job # 21499

Conference Committee

Committee Clerk Signature



Explanation or reason for introduction of bill/resolution:

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

Minutes:

Legislative Council - Brittani Reim
OMB - Tammy Dolan

Senator Bowman called the conference committee to order on SB 2020. **Senators Erbele and O'Connell** were present as well as **Representatives Monson, Skarphol and Boe**.

Discussed the Soils Initiative and the Heritage Fund grants.

Vote 1 -

Senator O'Connell moved to accept the \$80,000 offer from the House with the labs being able to apply for grants and also with an emergency clause.

Senator Erbele seconded
Voice vote approved.

Discussed the Agronomy labs and the Upper Great Plains Transportation plus the 2 FTEs of \$260,000.

Senator Bowman proposed to take out the \$260,000 and add that back and fund the four facilities full. It will still cost a little money to do that, but they can figure out where to get that money. It's a win-win for both. We've got the four labs funded and the 4 FTEs are out.

Brittani Reim: Remove the partial salary support of \$260,000 and provide the agronomy labs with \$5.665M.

Vote 2 - For buildings - and taking \$260,000 out.

Senator O'Connell moved to remove the \$260,000 out of the 2 FTE positions funded by the federal government and add that to the \$5.665M to the 4 building to make that whole. They also have the authority to raise the balance of what is needed and the dollar amount would be shared equally - the percentage - because of the difference in the project cost. It's proportional.

**Rep. Monson seconded
Voice vote carried.**

Discussed the Upper Great Plains Transportation

Vote # 3 -

Rep. Monson: We want to pool all the money that we could find in all the different budgets and we'd put it into this one so it's all in one place. It should be the right amount of money for testing of the roads and bridges.

Senator Bowman: That was the \$250,000? (agreed) There's \$750,000 in there right now for match and you're adding another \$1.25M.

Rep. Monson: which is what we found in all the other budgets that we had or that we could come up with. That's \$2M total.

Rep. Skarphol: That's all roads and bridges.

Senator Bowman: You got that Brittni?

Rep. Skarphol: Would like language that we get a report from state water commission with regard to that drainage area that's being adversely affected with regard to that grass. Over the years there has been a lot of sediment that has filled in some of those areas and the water doesn't flow as it should and whether they would have any recommendation as to how to facilitate the water flow in order to alleviate some of that problem.

**Rep. Skarphol moved that as a motion.
Senator O'Connell seconded.**

Rep. Boe: Would we want this study to extend through the refuge - to see the water flow through the refuge also?

Rep. Skarphol said he's not that familiar with the area. The aerial photo is quite distinct.

Senator O'Connell said it's a very flat area but there's about 10 miles that the refuge is holding it up.

The Study will extend through the refuge area.

Voice vote carried.

Brittani Reim, Legislative Council asked about the salary package because this is in the Higher Ed budget.

Tammy Dolan, OMB: As far as the compensation package, they are not part of the regular state classified system. They operate within the Higher Ed system as far as payroll goes and payroll policy. When the amendments were added on the House side, they included language related to the state classified market piece or performance piece. It hasn't applied to the ag research agencies in the past.

Senator Bowman said to include whatever wordage that is needed. I think we're all in agreement. It's just so it's done correctly.

Rep. Skarphol: Is that something that will be settled in SB 2003?

Tammy Dolan: It would need to be settled on this budget as well. Whatever the agreement is for 2003 will have some implication on this budget as well.

Rep. Monson said he thought they were all in agreement and however Higher Ed is solved, that's how we'd like this salary package to look as well.

Vote 4 -

**Rep. Monson moved to approve the salary package.
Senator O'Connell seconded
Voice vote carried.**

Vote 5 -

**Rep. Skarphol moved to approve all the amendments and the final approval will be contingent upon the settlement of the salary package.
Senator O'Connell seconded the motion.**

The House recesses from the House amendments and further amend.

They will meet again to look over the amendments when the Higher Ed salary package is resolved.

FB
4-30-13
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PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

That the House recede from its amendments as printed on pages 1395-1403 of the Senate Journal and pages 1466-1474 of the House Journal and that Engrossed Senate Bill No. 2020 be amended as follows:

Page 1, line 4, after the semicolon insert "to provide for a state water commission study; to provide for a legislative management report;"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	\$47,026,654	\$3,876,331	\$50,902,985
Soil conservation committee	987,800	150,000	1,137,800
Accrued leave payments	<u>0</u>	<u>1,716,289</u>	<u>1,716,289</u>
Total all funds	\$48,014,454	\$5,742,620	\$53,757,074
Less estimated income	<u>23,128,810</u>	<u>1,718,999</u>	<u>24,847,809</u>
Total general fund	\$24,885,644	\$4,023,621	\$28,909,265
Full-time equivalent positions	256.26	2.00	258.26"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	\$3,347,307	\$472,520	\$3,819,827
Accrued leave payments	<u>0</u>	<u>42,195</u>	<u>42,195</u>
Total all funds	\$3,347,307	\$514,715	\$3,862,022
Less estimated income	<u>1,654,725</u>	<u>142,436</u>	<u>1,797,161</u>
Total general fund	\$1,692,582	\$372,279	\$2,064,861
Full-time equivalent positions	12.00	0.00	12.00"

Page 2, replace lines 16 through 19 with:

"Upper great plains transportation institute	\$24,069,961	\$2,218,199	\$26,288,160
Accrued leave payments	<u>0</u>	<u>241,627</u>	<u>241,627</u>
Total all funds	\$24,069,961	\$2,459,826	\$26,529,787
Less estimated income	<u>22,150,333</u>	<u>302,630</u>	<u>22,452,963</u>
Total general fund	\$1,919,628	\$2,157,196	\$4,076,824
Full-time equivalent positions	51.75	2.00	53.75"

Page 2, replace lines 24 through 27 with:

"Main research center	\$89,012,990	\$20,085,853	\$109,098,843
Accrued leave payments	<u>0</u>	<u>2,561,394</u>	<u>2,561,394</u>
Total all funds	\$89,012,990	\$22,647,247	\$111,660,237
Less estimated income	<u>41,630,644</u>	<u>11,423,072</u>	<u>53,053,716</u>
Total general fund	\$47,382,346	\$11,224,175	\$58,606,521
Full-time equivalent positions	349.01	2.48	351.49"

Page 3, replace lines 1 through 11 with:

"Dickinson research center	\$5,588,562	\$528,059	\$6,116,621
Central grasslands research center	2,865,847	364,020	3,229,867
Hettinger research center	3,373,175	1,288,554	4,661,729
Langdon research center	2,378,807	453,688	2,832,495
North central research center	4,399,821	182,856	4,582,677
Williston research center	3,410,089	356,897	3,766,986
Carrington research center	7,126,488	766,006	7,892,494
Accrued leave payments	<u>0</u>	<u>503,916</u>	<u>503,916</u>
Total all funds	\$29,142,789	\$4,443,996	\$33,586,785
Less estimated income	<u>14,997,581</u>	<u>1,003,502</u>	<u>16,001,083</u>
Total general fund	\$14,145,208	\$3,440,494	\$17,585,702
Full-time equivalent positions	103.04	4.00	107.04"

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Page 3, replace lines 16 through 18 with:

"Agronomy seed farm	\$1,435,168	\$30,850	\$1,466,018
Accrued leave payments	<u>0</u>	<u>5,741</u>	<u>5,741</u>
Total special funds	\$1,435,168	\$36,591	\$1,471,759
Full-time equivalent positions	3.00	0.00	3.00"

Page 3, replace lines 23 through 25 with:

"Grand total general fund	\$90,025,408	\$21,217,765	\$111,243,173
Grand total special funds	<u>104,997,261</u>	<u>14,627,230</u>	<u>119,624,491</u>
Grand total all funds	\$195,022,669	\$35,844,995	\$230,867,664"

Page 4, after line 9, insert:

"Upper great plains transportation institute state match for federal funds"		0	1,250,000
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Page 4, replace lines 11 through 13 with:

"Total all funds		\$10,726,983	\$9,785,000
Total other funds		<u>2,852,931</u>	<u>950,000</u>
Total general fund		\$7,874,052	\$8,835,000"

Page 4, after line 25, insert:

"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 2013-15 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, 2013, and ending June 30, 2015.

SECTION 5. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Williston research extension center must retain all revenues received during the 2013-15 biennium from mineral royalties, leases, or easements in the Williston research extension center fund and shall report to the sixty-fourth legislative assembly on the amounts received for the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 4, after line 30, insert:

3019

"SECTION 7. NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE - NEW TECHNICAL SUPPORT FULL-TIME EQUIVALENT POSITION. The North Dakota state university extension service may utilize the new full-time equivalent technical support position recommended in the 2013-15 executive recommendation and included in subdivision 1 of section 1 of this Act, in either the weed science or potato program for the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 5, line 16, remove **"MATCHING FUNDS"**

Page 5, after line 26, insert:

"SECTION 13. STATE WATER COMMISSION STUDY - MOUSE RIVER AND TRIBUTARIES - LEGISLATIVE MANAGEMENT REPORT. During the 2013-14 interim, the state water commission shall conduct a study of the Mouse River and its tributaries, including the causes of flooding and measures that could be taken to improve waterflows and reduce flooding and the amount of time flooded land is affected. The state water commission shall report its findings to the legislative management."

Page 5, line 27, replace "\$4,300,000" with "\$5,925,000"

Page 5, line 28, replace "and" with a semicolon

Page 5, line 28, replace "is" with "; and \$82,000 relating to a flooded lands study in subdivision 4 of section 1 of this Act are"

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Conference Committee Action

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Transportation Institute						
Total all funds	\$25,353,629	\$25,353,629	\$1,176,158	\$26,529,787	\$26,364,050	\$165,737
Less estimated income	22,525,054	22,525,054	(72,091)	22,452,963	22,316,605	136,358
General fund	\$2,828,575	\$2,828,575	\$1,248,249	\$4,076,824	\$4,047,445	\$29,379
Branch Research Centers						
Total all funds	\$33,746,878	\$33,746,878	(\$160,093)	\$33,586,785	\$33,369,285	\$217,500
Less estimated income	16,021,866	16,021,866	(20,783)	16,001,083	15,961,430	39,653
General fund	\$17,725,012	\$17,725,012	(\$139,310)	\$17,585,702	\$17,407,855	\$177,847
NDSU Extension Service						
Total all funds	\$54,088,058	\$54,288,058	(\$530,984)	\$53,757,074	\$53,112,432	\$644,642
Less estimated income	25,437,414	24,987,414	(139,605)	24,847,809	24,560,620	287,189
General fund	\$28,650,644	\$29,300,644	(\$391,379)	\$28,909,265	\$28,551,812	\$357,453
Northern Crops Institute						
Total all funds	\$3,874,651	\$3,874,651	(\$12,629)	\$3,862,022	\$3,833,715	\$28,307
Less estimated income	1,800,307	1,800,307	(3,146)	1,797,161	1,782,339	14,822
General fund	\$2,074,344	\$2,074,344	(\$9,483)	\$2,064,861	\$2,051,376	\$13,485
Main Research Center						
Total all funds	\$110,293,322	\$112,320,622	(\$660,385)	\$111,660,237	\$110,808,512	\$851,725
Less estimated income	53,255,585	53,255,585	(201,869)	53,053,716	53,471,947	(418,231)
General fund	\$57,037,737	\$59,065,037	(\$458,516)	\$58,606,521	\$57,336,565	\$1,269,956
Agronomy Seed Farm						
Total all funds	\$1,474,961	\$1,474,961	(\$3,202)	\$1,471,759	\$1,464,590	\$7,169
Less estimated income	1,474,961	1,474,961	(3,202)	1,471,759	1,464,590	7,169
General fund	\$0	\$0	\$0	\$0	\$0	\$0
Bill total						
Total all funds	\$228,831,499	\$231,058,799	(\$191,135)	\$230,867,664	\$228,952,584	\$1,915,080

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Less estimated income	120,515,187	120,065,187	(440,696)	119,624,491	119,557,531	66,960
General fund	\$108,316,312	\$110,993,612	\$249,561	\$111,243,173	\$109,395,053	\$1,848,120

Senate Bill No. 2020 - Transportation Institute - Conference Committee Action

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Upper Great Plains Trans. Institute	\$25,353,629	\$25,353,629	\$934,531	\$26,288,160	\$26,122,423	\$165,737
Accrued leave payments			241,627	241,627	241,627	
Total all funds	\$25,353,629	\$25,353,629	\$1,176,158	\$26,529,787	\$26,364,050	\$165,737
Less estimated income	22,525,054	22,525,054	(72,091)	22,452,963	22,316,605	136,358
General fund	\$2,828,575	\$2,828,575	\$1,248,249	\$4,076,824	\$4,047,445	\$29,379
FTE	53.75	53.75	0.00	53.75	53.75	0.00

Department No. 627 - Transportation Institute - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Increases Funding for Matching Grants ³	Total Conference Committee Changes
Upper Great Plains Trans. Institute	(\$73,842)	(\$241,627)	\$1,250,000	\$934,531
Accrued leave payments		241,627		241,627
Total all funds	(\$73,842)	\$0	\$1,250,000	\$1,176,158
Less estimated income	(72,091)	0	0	(72,091)
General fund	(\$1,751)	\$0	\$1,250,000	\$1,248,249
FTE	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from the general fund (\$42,266) and from other funds (\$199,361) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment increases funding to match new federal grants received by the agency to provide a total of \$2 million, all of which is from the general fund. This increase of \$1.25 million is one-time funding and the same as the House version, the Senate did not change the executive recommendation.

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

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Dickinson Research Center	\$6,231,325	\$6,231,325	(\$114,704)	\$6,116,621	\$6,076,015	\$40,606
Central Grasslands Research Center	3,297,559	3,297,559	(67,692)	3,229,867	3,207,216	22,651
Hettinger Research Center	4,746,234	4,746,234	(84,505)	4,661,729	4,634,576	27,153
Langdon Research Center	2,886,763	2,886,763	(54,268)	2,832,495	2,812,795	19,700
North Central Research Center	4,661,679	4,661,679	(79,002)	4,582,677	4,562,396	20,281
Williston Research Center	3,869,023	3,869,023	(102,037)	3,766,986	3,726,987	39,999
Carrington Research Center	8,054,295	8,054,295	(161,801)	7,892,494	7,845,384	47,110

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Accrued leave payments			503,916	503,916	503,916	
Total all funds	\$33,746,878	\$33,746,878	(\$160,093)	\$33,586,785	\$33,369,285	\$217,500
Less estimated income	16,021,866	16,021,866	(20,783)	16,001,083	15,961,430	39,653
General fund	\$17,725,012	\$17,725,012	(\$139,310)	\$17,585,702	\$17,407,855	\$177,847
FTE	107.04	107.04	0.00	107.04	107.04	0.00

Department No. 628 - Branch Research Centers - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total Conference Committee Changes
Dickinson Research Center	(\$27,696)	(\$87,008)	(\$114,704)
Central Grasslands Research Center	(16,329)	(51,363)	(67,692)
Hettinger Research Center	(20,332)	(64,173)	(84,505)
Langdon Research Center	(13,128)	(41,140)	(54,268)
North Central Research Center	(19,051)	(59,951)	(79,002)
Williston Research Center	(24,654)	(77,383)	(102,037)
Carrington Research Center	(38,903)	(122,898)	(161,801)
Accrued leave payments		503,916	503,916
Total all funds	(\$160,093)	\$0	(\$160,093)
Less estimated income	(20,783)	0	(20,783)
General fund	(\$139,310)	\$0	(\$139,310)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

Branch Research Center	General Fund	Estimated Income	Total
Dickinson Research Center	(\$24,101)	(\$3,595)	(\$27,696)
Central Grasslands Research Center	(14,209)	(2,120)	(16,329)
Hettinger Research Center	(17,692)	(2,640)	(20,332)
Langdon Research Center	(11,424)	(1,704)	(13,128)
North Central Research Center	(16,578)	(2,473)	(19,051)
Williston Research Center	(21,453)	(3,201)	(24,654)
Carrington Research Center	(33,853)	(5,050)	(38,903)

² A portion of salaries and wages funding from the general fund (\$407,680) and from other funds (\$96,236) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees for each branch center as follows:

Branch Research Centers	General Fund	Estimated Income	Total
Dickinson Research Center	(\$70,391)	(\$16,617)	(\$87,008)
Central Grasslands Research Center	(41,554)	(9,809)	(51,363)
Hettinger Research Center	(51,917)	(12,256)	(64,173)
Langdon Research Center	(33,283)	(7,857)	(41,140)
North Central Research Center	(48,502)	(11,449)	(59,951)
Williston Research Center	(62,604)	(14,779)	(77,383)
Carrington Research Center	(99,429)	(23,469)	(122,898)
Accrued leave payments	407,680	96,236	503,916

Sections are added:

- Providing that the Dickinson Research Extension Center may only spend revenue from mineral royalties, leases, or easements in excess of \$755,000 for one-time items and not for operations during the 2013-15 biennium. The conference committee amended this section added by the House to allow the use of up to \$755,000 from mineral royalties, leases, or easements revenues for ongoing operational costs.
- Providing that the Williston Research Extension Center must retain all revenues from mineral royalties, leases, or easements in the Williston Research Extension Center fund and report the revenues to the 64th Legislative Assembly. The funds may be used for one-time expenditures in the 2015-17 biennium.

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

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Extension Service	\$53,025,258	\$53,150,258	(\$2,247,273)	\$50,902,985	\$50,333,343	\$569,642
Soil Conservation Committee	1,062,800	1,137,800		1,137,800	1,062,800	75,000
Accrued leave payments			1,716,289	1,716,289	1,716,289	
Total all funds	\$54,088,058	\$54,288,058	(\$530,984)	\$53,757,074	\$53,112,432	\$644,642
Less estimated income	25,437,414	24,987,414	(139,605)	24,847,809	24,560,620	287,189
General fund	\$28,650,644	\$29,300,644	(\$391,379)	\$28,909,265	\$28,551,812	\$357,453
FTE	258.26	258.26	0.00	258.26	258.26	0.00

Department No. 630 - NDSU Extension Service - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Partial Salary Support ³	Provides Funding for Burleigh County Extension Service Summer Internships ⁴	Total Conference Committee Changes
Extension Service	(\$295,984)	(\$1,716,289)	(\$260,000)	\$25,000	(\$2,247,273)
Soil Conservation Committee					
Accrued leave payments		1,716,289			1,716,289
Total all funds	(\$295,984)	\$0	(\$260,000)	\$25,000	(\$530,984)
Less estimated income	(139,605)	0	0	0	(139,605)
General fund	(\$156,379)	\$0	(\$260,000)	\$25,000	(\$391,379)
FTE	0.00	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from the general fund (\$852,203) and from other funds (\$864,086) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes funding included in the executive budget to provide partial general fund salary support for the following existing positions, same as the House version:

- Integrated pest management and plant diagnostic laboratory coordinator.
- State water quality specialist.

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⁴ This amendment provides funding for salaries and wages for a junior master gardener internship program through the Burleigh County Extension Service for the summer of 2013 and the summer of 2014, same as the House version.

This amendment provides the NDSU Extension Service flexibility to use the new FTE technical support position, recommended in the executive budget, in either the weed science or potato program, same as the House version.

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

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Northern Crops Institute	\$3,874,651	\$3,874,651	(\$54,824)	\$3,819,827	\$3,791,520	\$28,307
Accrued leave payments			42,195	42,195	42,195	
	<u>\$3,874,651</u>	<u>\$3,874,651</u>	<u>(\$12,629)</u>	<u>\$3,862,022</u>	<u>\$3,833,715</u>	<u>\$28,307</u>
Total all funds						
Less estimated income	<u>1,800,307</u>	<u>1,800,307</u>	<u>(3,146)</u>	<u>1,797,161</u>	<u>1,782,339</u>	<u>14,822</u>
	<u>\$2,074,344</u>	<u>\$2,074,344</u>	<u>(\$9,483)</u>	<u>\$2,064,861</u>	<u>\$2,051,376</u>	<u>\$13,485</u>
General fund						
FTE	12.00	12.00	0.00	12.00	12.00	0.00

Department No. 638 - Northern Crops Institute - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total Conference Committee Changes
Northern Crops Institute	(\$12,629)	(\$42,195)	(\$54,824)
Accrued leave payments		42,195	42,195
Total all funds	(\$12,629)	\$0	(\$12,629)
Less estimated income	<u>(3,146)</u>	<u>0</u>	<u>(3,146)</u>
General fund	(\$9,483)	\$0	(\$9,483)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from the general fund (\$37,172) and from other funds (\$5,023) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

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

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Main Research Center	\$110,293,322	\$112,320,622	(\$3,221,779)	\$109,098,843	\$108,247,118	\$851,725
Accrued leave payments			2,561,394	2,561,394	2,561,394	
Total all funds	<u>\$110,293,322</u>	<u>\$112,320,622</u>	<u>(\$660,385)</u>	<u>\$111,660,237</u>	<u>\$110,808,512</u>	<u>\$851,725</u>
Less estimated income	<u>53,255,585</u>	<u>53,255,585</u>	<u>(201,869)</u>	<u>53,053,716</u>	<u>53,471,947</u>	<u>(418,231)</u>
General fund	\$57,037,737	\$59,065,037	(\$458,516)	\$58,606,521	\$57,336,565	\$1,269,956

FTE

351.49

351.99

(0.50)

351.49

351.49

0.00

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Department No. 640 - Main Research Center - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Oil- Impacted Centers ³	Reduces Funding for Flooded Lands Study ⁴	Removes Animal Science Position ⁵	Total Conference Committee Changes
Main Research Center Accrued leave payments	(\$480,085)	(\$2,561,394) 2,561,394	(\$100,000)	(\$80,300)		(\$3,221,779) 2,561,394
Total all funds	(\$480,085)	\$0	(\$100,000)	(\$80,300)	\$0	(\$660,385)
Less estimated income	(201,869)	0	0	0	0	(201,869)
General fund	(\$278,216)	\$0	(\$100,000)	(\$80,300)	\$0	(\$458,516)
FTE	0.00	0.00	0.00	0.00	(0.50)	(0.50)

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from the general fund (\$1,748,140) and from other funds (\$813,254) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes the funding added by the Senate for oil-impacted research extension centers for housing allowances or hiring bonuses, same as the House version.

⁴ This amendment reduces the funding added by the Senate for the research relating to the recovery of grasslands affected by Souris River flooding to provide a total of \$82,000, all of which is from the general fund. This amendment is the same as the House version. The conference committee added an emergency clause for this funding.

⁵ The .5 FTE animal science position added by the Senate is removed. The funding of \$140,000 from the general fund added by the Senate relating to the position is not changed, same as the House version.

This amendment also provides:

- Funding of \$5,925,000 from the general fund for replacement of agronomy laboratories, the same as the Senate version. The House reduced the general fund amount appropriated for the replacement of the agronomy laboratories to \$4,925,000 and provided special fund authority to raise up to \$1 million from private grants, gifts, donations, or other nonstate sources.
- For a study of the Mouse River and its tributaries to be conducted by the State Water Commission.

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

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Agronomy Seed Farm Accrued leave payments	\$1,474,961	\$1,474,961	(\$8,943) 5,741	\$1,466,018 5,741	\$1,458,849 5,741	\$7,169
Total all funds	\$1,474,961	\$1,474,961	(\$3,202)	\$1,471,759	\$1,464,590	\$7,169
Less estimated income	1,474,961	1,474,961	(3,202)	1,471,759	1,464,590	7,169
	\$0	\$0	\$0	\$0	\$0	\$0

General fund						
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 Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total Conference Committee Changes
Agronomy Seed Farm	(\$3,202)	(\$5,741)	(\$8,943)
Accrued leave payments		5,741	5,741
Total all funds	(\$3,202)	\$0	(\$3,202)
Less estimated income	(3,202)	0	(3,202)
General fund	\$0	\$0	\$0
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from other funds (\$5,741) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

Senate Bill No. 2020 - Other Changes - Conference Committee Action

The conference committee retained a section allowing carryover authority which was removed by the House.

Date 4-22-13

Roll Call Vote # 1

2013 SENATE CONFERENCE COMMITTEE
ROLL CALL VOTES

BILL/RESOLUTION NO. SB 2020 as (re) engrossed

Senate Appropriations Committee

- Action Taken
- SENATE accede to House Amendments
 - SENATE accede to House Amendments and further amends
 - HOUSE recede from House amendments
 - HOUSE recede from House amendments and amends as follows

Unable to agree, recommends that the committee be discharged and a new committee be appointed

*Dickinson
Experiment
Station*

Motion Made by: Skarphol Seconded by: Monson

Senators	4/18	4/19	4/22	Yes	No	Representatives	4/18	4/19	4/22	Yes	No
Bowman	✓	✓	✓	✓		Monson	✓	✓	✓	✓	
Enbeler	✓	✓	✓	✓		Skarphol	✓	✓	✓	✓	
O'Connell	✓	✓	✓	✓		Bae	✓	✓	✓	✓	
Total Senate Vote				3		Total Rep. Vote				3	

Vote Count Yes: 6 No: 0 Absent: 0

Senate Carrier _____ House Carrier _____

LC Number _____ of amendment

LC Number _____ of engrossment

Date 4-22-13
 Roll Call Vote # 2

**2013 SENATE CONFERENCE COMMITTEE
 ROLL CALL VOTES**

BILL/RESOLUTION NO. _____ as (re) engrossed

Senate _____ Committee

- Action Taken**
- SENATE accede to House Amendments
 - SENATE accede to House Amendments and further amends
 - HOUSE recede from House amendments
 - HOUSE recede from House amendments and amends as follows

Unable to agree, recommends that the committee be discharged and a new committee be appointed

*Willeston experiment
 be locked station*

Motion Made by: Skarphol Seconded by: Monson

Senators				Yes	No	Representatives				Yes	No
				✓						✓	
				✓						✓	
				✓						✓	
Total Senate Vote				3		Total Rep. Vote				3	

Vote Count Yes: 6 No: 0 Absent: 0

Senate Carrier _____ House Carrier _____

LC Number _____ of amendment

LC Number _____ of engrossment

Date 4-22-13

Roll Call Vote # 3

2013 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 amends
 - HOUSE recede from House amendments
 - HOUSE recede from House amendments and amends as follows

Unable to agree, recommends that the committee be discharged and a new committee be appointed

Motion Made by: Monson Seconded by: Skarphol *restored to 150*

\$75,000 Soil Cont

Senators				Yes	No	Representatives				Yes	No
<i>Senator Bowman</i>				<i>✓</i>		<i>Rep. Monson</i>				<i>✓</i>	
<i>Eskela</i>				<i>✓</i>		<i>Skarphol</i>				<i>✓</i>	
<i>O'Connell</i>				<i>✓</i>		<i>Boe</i>				<i>✓</i>	
Total Senate Vote				<i>3</i>		Total Rep. Vote				<i>3</i>	

Vote Count Yes: 6 No: 0 Absent: 0

Senate Carrier _____ House Carrier _____

LC Number _____ of amendment

LC Number _____ of engrossment

Date 4-24-13

Roll Call Vote # 1

2013 SENATE CONFERENCE COMMITTEE
ROLL CALL VOTES

BILL/RESOLUTION NO. 2030 as (re) engrossed

Senate Appropriations Committee

- Action Taken
- SENATE accede to House Amendments
 - SENATE accede to House Amendments and further amends
 - HOUSE recede from House amendments
 - HOUSE recede from House amendments and amends as follows
 - Unable to agree, recommends that the committee be discharged and a new committee be appointed

Motion Made by: Skarphol Seconded by: O'Connell

Senators	2nd meeting				Representatives	2nd meeting				
	4	4/24	4/24	Yes		No	4	4/24	4/24	Yes
Bowman		✓	✓	✓	Rep. Monson		✓	✓	✓	
Eschale		✓	✓	✓	Skarphol		✓	✓	✓	
O'Connell		✓	✓	✓	Boe		✓	✓	✓	
Total Senate Vote				3	Total Rep. Vote				3	

Vote Count Yes: 6 No: 0 Absent: 0

Senate Carrier Bowman House Carrier Monson

LC Number _____ of amendment

LC Number _____ of engrossment

REPORT OF CONFERENCE COMMITTEE

SB 2020, as engrossed: Your conference committee (Sens. Bowman, Erbele, O'Connell and Reps. Monson, Skarphol, Boe) recommends that the **HOUSE RECEDE** from the House amendments as printed on SJ pages 1395-1403, adopt amendments as follows, and place SB 2020 on the Seventh order:

That the House recede from its amendments as printed on pages 1395-1403 of the Senate Journal and pages 1466-1474 of the House Journal and that Engrossed Senate Bill No. 2020 be amended as follows:

Page 1, line 4, after the semicolon insert "to provide for a state water commission study; to provide for a legislative management report;"

Page 1, remove lines 22 through 24

Page 2, replace lines 1 through 3 with:

"Extension service	\$47,026,654	\$3,876,331	\$50,902,985
Soil conservation committee	987,800	150,000	1,137,800
Accrued leave payments	<u>0</u>	<u>1,716,289</u>	<u>1,716,289</u>
Total all funds	\$48,014,454	\$5,742,620	\$53,757,074
Less estimated income	<u>23,128,810</u>	<u>1,718,999</u>	<u>24,847,809</u>
Total general fund	\$24,885,644	\$4,023,621	\$28,909,265
Full-time equivalent positions	256.26	2.00	258.26"

Page 2, replace lines 8 through 11 with:

"Northern crops institute	\$3,347,307	\$472,520	\$3,819,827
Accrued leave payments	<u>0</u>	<u>42,195</u>	<u>42,195</u>
Total all funds	\$3,347,307	\$514,715	\$3,862,022
Less estimated income	<u>1,654,725</u>	<u>142,436</u>	<u>1,797,161</u>
Total general fund	\$1,692,582	\$372,279	\$2,064,861
Full-time equivalent positions	12.00	0.00	12.00"

Page 2, replace lines 16 through 19 with:

"Upper great plains transportation institute	\$24,069,961	\$2,218,199	\$26,288,160
Accrued leave payments	<u>0</u>	<u>241,627</u>	<u>241,627</u>
Total all funds	\$24,069,961	\$2,459,826	\$26,529,787
Less estimated income	<u>22,150,333</u>	<u>302,630</u>	<u>22,452,963</u>
Total general fund	\$1,919,628	\$2,157,196	\$4,076,824
Full-time equivalent positions	51.75	2.00	53.75"

Page 2, replace lines 24 through 27 with:

"Main research center	\$89,012,990	\$20,085,853	\$109,098,843
Accrued leave payments	<u>0</u>	<u>2,561,394</u>	<u>2,561,394</u>
Total all funds	\$89,012,990	\$22,647,247	\$111,660,237
Less estimated income	<u>41,630,644</u>	<u>11,423,072</u>	<u>53,053,716</u>
Total general fund	\$47,382,346	\$11,224,175	\$58,606,521
Full-time equivalent positions	349.01	2.48	351.49"

Page 3, replace lines 1 through 11 with:

"Dickinson research center	\$5,588,562	\$528,059	\$6,116,621
Central grasslands research center	2,865,847	364,020	3,229,867
Hettinger research center	3,373,175	1,288,554	4,661,729
Langdon research center	2,378,807	453,688	2,832,495
North central research center	4,399,821	182,856	4,582,677
Williston research center	3,410,089	356,897	3,766,986

Insert LC: 13.8170.02004

Carrington research center	7,126,488	766,006	7,892,494
Accrued leave payments	<u>0</u>	<u>503,916</u>	<u>503,916</u>
Total all funds	\$29,142,789	\$4,443,996	\$33,586,785
Less estimated income	<u>14,997,581</u>	<u>1,003,502</u>	<u>16,001,083</u>
Total general fund	\$14,145,208	\$3,440,494	\$17,585,702
Full-time equivalent positions	103.04	4.00	107.04"

Page 3, replace lines 16 through 18 with:

"Agronomy seed farm	\$1,435,168	\$30,850	\$1,466,018
Accrued leave payments	<u>0</u>	<u>5,741</u>	<u>5,741</u>
Total special funds	\$1,435,168	\$36,591	\$1,471,759
Full-time equivalent positions	3.00	0.00	3.00"

Page 3, replace lines 23 through 25 with:

"Grand total general fund	\$90,025,408	\$21,217,765	\$111,243,173
Grand total special funds	<u>104,997,261</u>	<u>14,627,230</u>	<u>119,624,491</u>
Grand total all funds	\$195,022,669	\$35,844,995	\$230,867,664"

Page 4, after line 9, insert:

"Upper great plains transportation institute state match for federal funds"	0	1,250,000
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Page 4, replace lines 11 through 13 with:

"Total all funds	\$10,726,983	\$9,785,000
Total other funds	<u>2,852,931</u>	<u>950,000</u>
Total general fund	\$7,874,052	\$8,835,000"

Page 4, after line 25, insert:

"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 2013-15 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, 2013, and ending June 30, 2015.

SECTION 5. WILLISTON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Williston research extension center must retain all revenues received during the 2013-15 biennium from mineral royalties, leases, or easements in the Williston research extension center fund and shall report to the sixty-fourth legislative assembly on the amounts received for the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 4, after line 30, insert:

"SECTION 7. NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE - NEW TECHNICAL SUPPORT FULL-TIME EQUIVALENT POSITION. The North Dakota state university extension service may utilize the new full-time equivalent technical support position recommended in the 2013-15 executive recommendation and included in subdivision 1 of section 1 of this Act, in either the weed science or potato program for the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 5, line 16, remove **"MATCHING FUNDS"**

Page 5, after line 26, insert:

"SECTION 13. STATE WATER COMMISSION STUDY - MOUSE RIVER AND TRIBUTARIES - LEGISLATIVE MANAGEMENT REPORT. During the 2013-14 interim, the state water commission shall conduct a study of the Mouse River and its tributaries, including the causes of flooding and measures that could be taken to improve waterflows and reduce flooding and the amount of time flooded land is affected. The state water commission shall report its findings to the legislative management."

Page 5, line 27, replace "\$4,300,000" with "\$5,925,000"

Page 5, line 28, replace "and" with a semicolon

Page 5, line 28, replace "is" with "; and \$82,000 relating to a flooded lands study in subdivision 4 of section 1 of this Act are"

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Conference Committee Action

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Transportation Institute						
Total all funds	\$25,353,629	\$25,353,629	\$1,176,158	\$26,529,787	\$26,364,050	\$165,737
Less estimated income	22,525,054	22,525,054	(72,091)	22,452,963	22,316,605	136,358
General fund	\$2,828,575	\$2,828,575	\$1,248,249	\$4,076,824	\$4,047,445	\$29,379
Branch Research Centers						
Total all funds	\$33,746,878	\$33,746,878	(\$160,093)	\$33,586,785	\$33,369,285	\$217,500
Less estimated income	16,021,866	16,021,866	(20,783)	16,001,083	15,961,430	39,653
General fund	\$17,725,012	\$17,725,012	(\$139,310)	\$17,585,702	\$17,407,855	\$177,847
NDSU Extension Service						
Total all funds	\$54,088,058	\$54,288,058	(\$530,984)	\$53,757,074	\$53,112,432	\$644,642
Less estimated income	25,437,414	24,987,414	(139,605)	24,847,809	24,560,620	287,189
General fund	\$28,650,644	\$29,300,644	(\$391,379)	\$28,909,265	\$28,551,812	\$357,453
Northern Crops Institute						
Total all funds	\$3,874,651	\$3,874,651	(\$12,629)	\$3,862,022	\$3,833,715	\$28,307
Less estimated income	1,800,307	1,800,307	(3,146)	1,797,161	1,782,339	14,822
General fund	\$2,074,344	\$2,074,344	(\$9,483)	\$2,064,861	\$2,051,376	\$13,485
Man Research Center						
Total all funds	\$110,293,322	\$112,320,622	(\$660,365)	\$111,660,237	\$110,808,512	\$851,725
Less estimated income	53,255,585	53,255,585	(201,869)	53,053,716	53,471,947	(418,231)
General fund	\$57,037,737	\$59,065,037	(\$458,516)	\$58,606,521	\$57,336,565	\$1,269,956
Agronomy Seed Farm						
Total all funds	\$1,474,961	\$1,474,961	(\$3,202)	\$1,471,759	\$1,464,590	\$7,169
Less estimated income	1,474,961	1,474,961	(3,202)	1,471,759	1,464,590	7,169
General fund	\$0	\$0	\$0	\$0	\$0	\$0
Bill total						
Total all funds	\$228,831,499	\$231,058,799	(\$191,135)	\$230,867,664	\$228,952,584	\$1,915,080
Less estimated income	120,515,187	120,065,187	(440,696)	119,624,491	119,557,531	66,960
General fund	\$108,316,312	\$110,993,612	\$249,561	\$111,243,173	\$109,395,053	\$1,848,120

Senate Bill No. 2020 - Transportation Institute - Conference Committee Action

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Upper Great Plains Trans. Institute	\$25,353,629	\$25,353,629	\$934,531	\$26,288,160	\$26,122,423	\$165,737
Accrued leave payments			241,627	241,627	241,627	
Total all funds	\$25,353,629	\$25,353,629	\$1,176,158	\$26,529,787	\$26,364,050	\$165,737
Less estimated income	22,525,054	22,525,054	(72,091)	22,452,963	22,316,605	136,358
General fund	\$2,828,575	\$2,828,575	\$1,248,249	\$4,076,824	\$4,047,445	\$29,379
	53.75	53.75	0.00	53.75	53.75	0.00

FTE

Department No. 627 - Transportation Institute - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Increases Funding for Matching Grants ³	Total Conference Committee Changes
Upper Great Plains Trans. Institute	(\$73,842)	(\$241,627)	\$1,250,000	\$934,531
Accrued leave payments		241,627		241,627
Total all funds	(\$73,842)	\$0	\$1,250,000	\$1,176,158
Less estimated income	(72,091)	0	0	(72,091)
General fund	(\$1,751)	\$0	\$1,250,000	\$1,248,249
FTE	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from the general fund (\$42,266) and from other funds (\$199,361) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment increases funding to match new federal grants received by the agency to provide a total of \$2 million, all of which is from the general fund. This increase of \$1.25 million is one-time funding and the same as the House version, the Senate did not change the executive recommendation.

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

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Dickinson Research Center	\$6,231,325	\$6,231,325	(\$114,704)	\$6,116,621	\$6,076,015	\$40,606
Central Grasslands Research Center	3,297,559	3,297,559	(67,692)	3,229,867	3,207,216	22,651
Hettinger Research Center	4,746,234	4,746,234	(84,505)	4,661,729	4,634,576	27,153
Langdon Research Center	2,886,763	2,886,763	(54,268)	2,832,495	2,812,795	19,700
North Central Research Center	4,661,679	4,661,679	(79,002)	4,582,677	4,562,396	20,281
Williston Research Center	3,869,023	3,869,023	(102,037)	3,766,986	3,726,987	39,999
Carrington Research Center	8,054,295	8,054,295	(161,801)	7,892,494	7,845,384	47,110
Accrued leave payments			503,916	503,916	503,916	
Total all funds	\$33,746,878	\$33,746,878	(\$160,093)	\$33,586,785	\$33,369,285	\$217,500
Less estimated income	16,021,866	16,021,866	(20,783)	16,001,083	15,961,430	39,653
General fund	\$17,725,012	\$17,725,012	(\$139,310)	\$17,585,702	\$17,407,855	\$177,847
FTE	107.04	107.04	0.00	107.04	107.04	0.00

Department No. 628 - Branch Research Centers - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total Conference Committee Changes
Dickinson Research Center	(\$27,696)	(\$87,008)	(\$114,704)
Central Grasslands Research Center	(16,329)	(51,363)	(67,692)
Hettinger Research Center	(20,332)	(64,173)	(84,505)
Langdon Research Center	(13,128)	(41,140)	(54,268)
North Central Research Center	(19,051)	(59,951)	(79,002)
Williston Research Center	(24,654)	(77,383)	(102,037)
Carrington Research Center	(38,903)	(122,898)	(161,801)
Accrued leave payments		503,916	503,916
Total all funds	(\$160,093)	\$0	(\$160,093)
Less estimated income	(20,783)	0	(20,783)
General fund	(\$139,310)	\$0	(\$139,310)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

Branch Research Center	General Fund	Estimated Income	Total
Dickinson Research Center	(\$24,101)	(\$3,595)	(\$27,696)
Central Grasslands Research Center	(14,209)	(2,120)	(16,329)
Hettinger Research Center	(17,692)	(2,640)	(20,332)
Langdon Research Center	(11,424)	(1,704)	(13,128)
North Central Research Center	(16,578)	(2,473)	(19,051)
Williston Research Center	(21,453)	(3,201)	(24,654)
Carrington Research Center	(33,853)	(5,050)	(38,903)

² A portion of salaries and wages funding from the general fund (\$407,680) and from other funds (\$96,236) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees for each branch center as follows:

Branch Research Centers	General Fund	Estimated Income	Total
Dickinson Research Center	(\$70,391)	(\$16,617)	(\$87,008)
Central Grasslands Research Center	(41,554)	(9,809)	(51,363)
Hettinger Research Center	(51,917)	(12,256)	(64,173)
Langdon Research Center	(33,283)	(7,857)	(41,140)
North Central Research Center	(48,502)	(11,449)	(59,951)
Williston Research Center	(62,604)	(14,779)	(77,383)
Carrington Research Center	(99,429)	(23,469)	(122,898)
Accrued leave payments	407,680	96,236	503,916

Sections are added:

- Providing that the Dickinson Research Extension Center may only spend revenue from mineral royalties, leases, or easements in excess of \$755,000 for one-time items and not for operations during the 2013-15 biennium. The conference committee amended this section added by the House to allow the use of up to \$755,000 from mineral royalties, leases, or easements revenues for ongoing operational costs.

- Providing that the Williston Research Extension Center must retain all revenues from mineral royalties, leases, or easements in the Williston Research Extension Center fund and report the revenues to the 64th Legislative Assembly. The funds may be used for one-time expenditures in the 2015-17 biennium.

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

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Extension Service	\$53,025,258	\$53,150,258	(\$2,247,273)	\$50,902,985	\$50,333,343	\$569,642
Soil Conservation Committee	1,062,800	1,137,800		1,137,800	1,062,800	75,000
Accrued leave payments			1,716,289	1,716,289	1,716,289	
Total all funds	\$54,088,058	\$54,288,058	(\$530,984)	\$53,757,074	\$53,112,432	\$644,642
Less estimated income	25,437,414	24,987,414	(139,605)	24,847,809	24,560,620	287,189
General fund	\$28,650,644	\$29,300,644	(\$391,379)	\$28,909,265	\$28,551,812	\$357,453
FTE	258.26	258.26	0.00	258.26	258.26	0.00

Department No. 630 - NDSU Extension Service - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Partial Salary Support ³	Provides Funding for Burleigh County Extension Service Summer Internships ⁴	Total Conference Committee Changes
Extension Service	(\$295,984)	(\$1,716,289)	(\$260,000)	\$25,000	(\$2,247,273)
Soil Conservation Committee					
Accrued leave payments		1,716,289			1,716,289
Total all funds	(\$295,984)	\$0	(\$260,000)	\$25,000	(\$530,984)
Less estimated income	(139,605)	0	0	0	(139,605)
General fund	(\$156,379)	\$0	(\$260,000)	\$25,000	(\$391,379)
FTE	0.00	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from the general fund (\$852,203) and from other funds (\$864,086) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes funding included in the executive budget to provide partial general fund salary support for the following existing positions, same as the House version:

- Integrated pest management and plant diagnostic laboratory coordinator.
- State water quality specialist.

⁴ This amendment provides funding for salaries and wages for a junior master gardener internship program through the Burleigh County Extension Service for the summer of 2013

and the summer of 2014, same as the House version.

This amendment provides the NDSU Extension Service flexibility to use the new FTE technical support position, recommended in the executive budget, in either the weed science or potato program, same as the House version.

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

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Northern Crops Institute	\$3,874,651	\$3,874,651	(\$54,824)	\$3,819,827	\$3,791,520	\$28,307
Accrued leave payments			42,195	42,195	42,195	
Total all funds	\$3,874,651	\$3,874,651	(\$12,629)	\$3,862,022	\$3,833,715	\$28,307
Less estimated income	1,800,307	1,800,307	(3,146)	1,797,161	1,782,339	14,822
General fund	\$2,074,344	\$2,074,344	(\$9,483)	\$2,064,861	\$2,051,376	\$13,485
FTE	12.00	12.00	0.00	12.00	12.00	0.00

Department No. 638 - Northern Crops Institute - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total Conference Committee Changes
Northern Crops Institute	(\$12,629)	(\$42,195)	(\$54,824)
Accrued leave payments		42,195	42,195
Total all funds	(\$12,629)	\$0	(\$12,629)
Less estimated income	(3,146)	0	(3,146)
General fund	(\$9,483)	\$0	(\$9,483)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from the general fund (\$37,172) and from other funds (\$5,023) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

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

	Executive Budget	Senate Version	Conference Committee Changes	Conference Committee Version	House Version	Comparison to House
Main Research Center	\$110,293,322	\$112,320,622	(\$3,221,779)	\$109,098,843	\$108,247,118	\$851,725
Accrued leave payments			2,561,394	2,561,394	2,561,394	
Total all funds	\$110,293,322	\$112,320,622	(\$660,385)	\$111,660,237	\$110,808,512	\$851,725
Less estimated income	53,255,585	53,255,585	(201,869)	53,053,716	53,471,947	(418,231)
	\$57,037,737	\$59,065,037	(\$458,516)	\$58,606,521	\$57,336,565	\$1,269,956

General fund						
FTE	351.49	351.99	(0.50)	351.49	351.49	0.00

Department No. 640 - Main Research Center - Detail of Conference Committee Changes

	Adjusts Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Oil-Impacted Centers ³	Reduces Funding for Flooded Lands Study ⁴	Removes Animal Science Position ⁵	Total Conference Committee Changes
Main Research Center	(\$480,085)	(\$2,561,394)	(\$100,000)	(\$80,300)		(\$3,221,779)
Accrued leave payments		2,561,394				2,561,394
Total all funds	(\$480,085)	\$0	(\$100,000)	(\$80,300)	\$0	(\$660,385)
Less estimated income	(201,869)	0	0	0	0	(201,869)
General fund	(\$278,216)	\$0	(\$100,000)	(\$80,300)	\$0	(\$458,516)
FTE	0.00	0.00	0.00	0.00	(0.50)	(0.50)

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from the general fund (\$1,748,140) and from other funds (\$813,254) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes the funding added by the Senate for oil-impacted research extension centers for housing allowances or hiring bonuses, same as the House version.

⁴ This amendment reduces the funding added by the Senate for the research relating to the recovery of grasslands affected by Souris River flooding to provide a total of \$82,000, all of which is from the general fund. This amendment is the same as the House version. The conference committee added an emergency clause for this funding.

⁵ The .5 FTE animal science position added by the Senate is removed. The funding of \$140,000 from the general fund added by the Senate relating to the position is not changed, same as the House version.

This amendment also provides:

- Funding of \$5,925,000 from the general fund for replacement of agronomy laboratories, the same as the Senate version. The House reduced the general fund amount appropriated for the replacement of the agronomy laboratories to \$4,925,000 and provided special fund authority to raise up to \$1 million from private grants, gifts, donations, or other nonstate sources.
- For a study of the Mouse River and its tributaries to be conducted by the State Water Commission.

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

Executive	Senate	Conference	Conference	House	Comparison
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	Budget	Version	Committee Changes	Committee Version	Version	to House
Agronomy Seed Farm Accrued leave payments	\$1,474,961	\$1,474,961	(\$8,943) 5,741	\$1,466,018 5,741	\$1,458,849 5,741	\$7,169
Total all funds	\$1,474,961	\$1,474,961	(\$3,202)	\$1,471,759	\$1,464,590	\$7,169
Less estimated income	1,474,961	1,474,961	(3,202)	1,471,759	1,464,590	7,169
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 Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Total Conference Committee Changes
Agronomy Seed Farm Accrued leave payments	(\$3,202)	(\$5,741) 5,741	(\$8,943) 5,741
Total all funds	(\$3,202)	\$0	(\$3,202)
Less estimated income	(3,202)	0	(3,202)
General fund	\$0	\$0	\$0
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 3 to 5 percent for the first year of the biennium and 2 to 4 percent for the second year of the biennium.
- Reduces funding for retirement contribution increases to provide for a 1 percent state and 1 percent employee increase beginning in January 2014 and no increase in January 2015.

² A portion of salaries and wages funding from other funds (\$5,741) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

Senate Bill No. 2020 - Other Changes - Conference Committee Action

The conference committee retained a section allowing carryover authority which was removed by the House.

Engrossed SB 2020 was placed on the Seventh order of business on the calendar.

2013 TESTIMONY

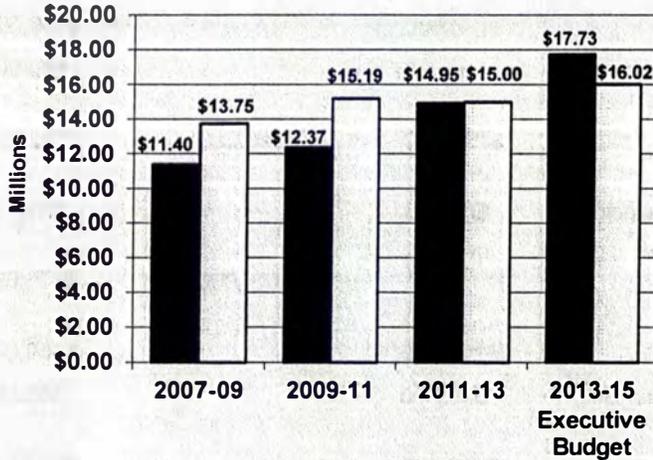
SB 2020

**Department 628 - Branch Research Centers
 Senate Bill No. 2020**

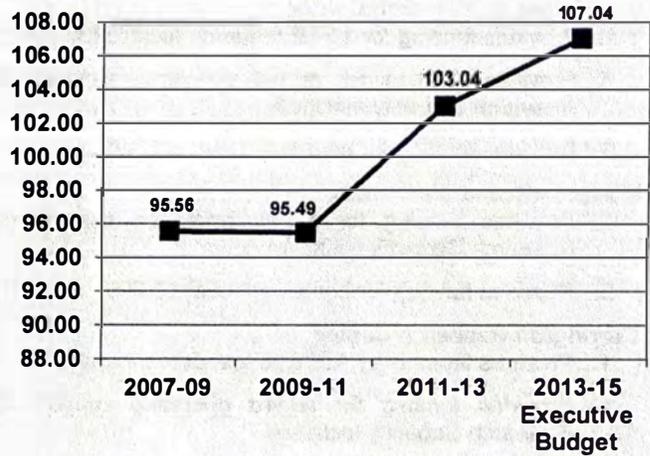
	FTE Positions	General Fund	Other Funds	Total
2013-15 Executive Budget	107.04	\$17,725,012	\$16,021,866	\$33,746,878
2011-13 Legislative Appropriations	103.04 ¹	14,945,208	14,997,581	29,942,789
Increase (Decrease)	4.00	\$2,779,804	\$1,024,285	\$3,804,089

¹The amount shown reflects the addition of 5.55 FTE positions by the branch research centers in accordance with Section 6 of 2011 House Bill No. 1020.

Agency Funding



FTE Positions



■ General Fund □ Other Funds

Ongoing and One-Time General Fund Appropriations

	Ongoing General Fund Appropriation	One-Time General Fund Appropriation	Total General Fund Appropriation
2013-15 Executive Budget	\$17,725,012	\$0	\$17,725,012
2011-13 Legislative Appropriations	14,945,208	0	14,945,208
Increase (Decrease)	\$2,779,804	\$0	\$2,779,804

Executive Budget Highlights

	General Fund	Other Funds	Total
1. Provides funding for state employee salary increases for all of the centers of which \$855,157 relates to performance increases and \$0 is for market equity adjustments	\$711,781	\$143,376	\$855,157
Dickinson Research Center			
1. Removes one-time funding provided in the 2011-13 biennium for operations relating to a reduction in oil-related revenue	(\$800,000)		(\$800,000)
2. Provides ongoing funding to replace one-time funding provided in the 2011-13 biennium relating to oil-related revenue	\$800,000		\$800,000
3. Provides funding for dryland crop improvement (Crop Initiative)	\$120,000		\$120,000
4. Provides funding for added operating support (Enhancing Research Capacity Initiative)	\$80,000		\$80,000
5. Provides funding for equipment over \$5,000	\$125,000	\$118,500	\$243,500
Central Grasslands Research Center			
1. Provides funding for 1 FTE research technician	\$150,000		\$150,000
2. Provides funding for added operating support (Enhancing Research Capacity Initiative)	\$80,000		\$80,000
3. Provides funding for equipment over \$5,000		\$187,000	\$187,000

Hettinger Research Center			
1. Provides funding for 1 FTE weed scientist	\$200,000		\$200,000
2. Provides funding for added operating support (Enhancing Research Capacity Initiative)	\$80,000		\$80,000
3. Provides funding for equipment over \$5,000	\$125,000	\$82,249	\$207,249
Langdon Research Center			
1. Provides funding for added operating support (Enhancing Research Capacity Initiative)	\$80,000		\$80,000
2. Provides funding for variety testing (Crop Initiative)	\$120,000		\$120,000
3. Provides funding for equipment over \$5,000		\$240,000	\$240,000
North Central Research Center			
1. Provides funding for 1 FTE research technician	\$150,000		\$150,000
2. Provides funding for added operating support (Enhancing Research Capacity Initiative)	\$80,000		\$80,000
3. Provides funding for equipment over \$5,000	\$125,000	\$95,000	\$220,000
Williston Research Center			
1. Provides funding for added operating support (Enhancing Research Capacity Initiative)	\$80,000		\$80,000
2. Provides funding for equipment over \$5,000		\$175,000	\$175,000
Carrington Research Center			
1. Provides funding for 1 FTE research technician	\$150,000		\$150,000
2. Provides funding for added operating support (Enhancing Research Capacity Initiative)	\$80,000		\$80,000
3. Provides funding for crop pathology (Crop Initiative)	\$120,000		\$120,000
4. Provides funding for equipment over \$5,000	\$125,000	\$548,500	\$673,500

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 branch research centers, is appropriated for the purposes designated in the act, grant, gift, or donation for the 2013-15 biennium.

Transfer authority - Section 4 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 5 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 6 authorizes the continuation of any unexpended general fund appropriation and excess income received by the branch research centers into the 2015-17 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there have been no significant audit findings for this agency.

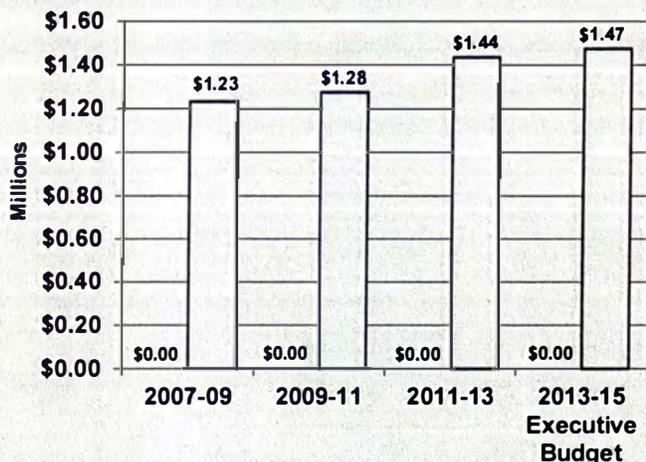
Major Related Legislation

No major legislation has been introduced affecting this agency.

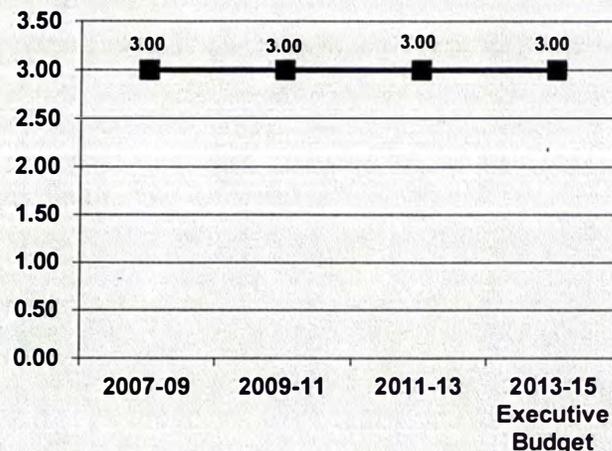
**Department 649 - Agronomy Seed Farm
 Senate Bill No. 2020**

	FTE Positions	General Fund	Other Funds	Total
2013-15 Executive Budget	0.00	\$0	\$1,474,961	\$1,474,961
2011-13 Legislative Appropriations	3.00	0	1,435,168	1,435,168
Increase (Decrease)	0.00	\$0	\$39,793	\$39,793

Agency Funding



FTE Positions



■ General Fund □ Other Funds

Executive Budget Highlights

	General Fund	Other Funds	Total
1. Includes \$278,000 for necessary equipment purchases, including a 16' cultivator, 200 horsepower tractor, 40-50 horsepower tractor, flex header, woods mower, and miscellaneous equipment.		\$278,000	\$278,000
2. Removes 2011-13 funding for equipment over \$5,000		(\$302,803)	(\$302,803)
3. Provides funding for state employee salary increases of which \$26,197 relates to performance increases and \$0 is for market equity adjustments		\$26,197	\$26,197

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 2013-15 biennium.

FTE position adjustments - Section 5 authorize 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 6 authorizes the continuation of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm into the 2015-17 biennium.

Continuing Appropriations

There are no continuing appropriations for this agency.

Significant Audit Findings

At this time, there have been no significant audit findings for this agency.

Major Related Legislation

No major legislation has been introduced affecting this agency.

#1

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

AGENCY 627
DENVER TOLLIVER, DIRECTOR

NORTH DAKOTA
STATE UNIVERSITY

NDSU

2013-15
BIENNIAL BUDGET REQUEST

SENATE APPROPRIATION COMMITTEE HEARING
SENATOR RAY HOLMBERG, CHAIRMAN

JANUARY 16, 2013

Agency Overview

The Upper Great Plains Transportation Institute was established by the North Dakota legislature in 1967 as a specialized center at North Dakota State University to foster a better understanding of transportation's role in the economy through research, education, and technology transfer.

- 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, transportation businesses, counties, 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
- Air services planning
- Transportation security

UGPTI coordinates NDSU's multidisciplinary Transportation and Logistics education program and offers extensive training and workforce development, particularly 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 that 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 2011-2013 Biennium

Changes in Federal Policies and Practices Affecting UGPTI

Changes at the federal level have intensified economic uncertainties and affected UGPTI's traditional strategies in several ways.

- A. The failure of Congress to enact a long-term surface transportation bill has created uncertainty for state and metropolitan agencies that fund transportation research. Although Congress enacted a two year reauthorization bill in July (MAP-21), the legislation resulted in a much shorter planning horizon than in previous reauthorization periods when surface transportation programs were typically authorized for five or six

years. This added uncertainty makes it more difficult to procure grants from agencies that rely extensively on federal funds to finance their research and planning programs.

- B. The agreement to eliminate Congressional earmarks has precluded certain funding opportunities that were available to UGPTI in the past.
- C. The allocation of potential budget cuts posed by sequestration could affect a wide range of federal programs in 2013, adding to the uncertainty that exists.

Federal Match Requirements

Most of the federal grants that UGPTI competes for require a substantial match. The University Transportation Centers (UTC) Program—a key source of funding for UGPTI—requires 100% non-federal match and the demonstration of a substantial “institutional commitment” from the university and state. Institutional commitment is, in fact, one of the selection criteria used by the U.S. Department of Transportation in awarding UTC grants.

Appropriated Funding Level and Expenditures

As shown in Table 1, UGPTI’s General Fund appropriation for the 2011-2013 biennium was approximately \$1.92 million. As of November 30, 2012, roughly 63% of these funds had been expended. The remainder will be expended by June 30, 2013. All carryover funds have been expended.

Table 1: Budgeted and Actual Expenditures for the 2011-2013 Biennium		
Funds	Biennium Budget	Expenditures to Date*
General Funds	\$1,919,628	\$1,209,658
2009-2011 Carryover	\$9,946	\$9,946
Federal Funds	\$17,665,513	\$6,724,409
Special/Other Funds	\$4,834,820	\$2,285,786
* Estimated through November 30, 2012		

One-Time Appropriation

A special study directive in Senate Bill 2325 provided \$350,000 “for the purpose of updating and maintaining reports for transportation infrastructure needs for all county and township roads in the state,” and directed the Upper Great Plains Transportation Institute to report “at least annually to the Budget Section of the Legislative Management” and “present updated reports to the Sixty-Third Legislative Assembly.”

The transportation infrastructure study has been completed and reports were presented to the Budget Section on September 20 and December 14, 2012. At the request of the Budget Section, the study has been broadened to include not only roads, but also an analysis of county and township bridges.

Federal Grants and Contracts

UGPTI's authority to collect and expend federal grants and contracts in the 2011-2013 biennium is \$17.67 million (Table 1). As of November 30, 2012, \$9.62 million of federal grants and contracts have been awarded to UGPTI and \$6.73 million in federal funds expended. As these numbers suggest, federal funding is lagging authorized collection levels.

Decreases in funding for UGPTI's transit and safety centers are primarily caused by the expiration of earmarks and reductions in the overall availability of funding from Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Federal Motor Carrier Safety Administration (FMCSA). In particular, a decrease in funding for UGPTI's Transportation Safety and Security Center is the result of severe budget constraints within FMCSA that resulted in the elimination of two UGPTI positions. While several federal grants or contracts are in process (including two University Transportation Center grants totaling \$4.1 million), a shortfall of roughly \$3.5 million in federal grants and contracts is projected for the biennium.¹

Non-Federal Grants and Contracts

UGPTI's authority to collect and expend other grants and contracts is roughly \$4.84 million (Table 1). As of November 30, 2012, \$6.31 million of non-federal grants and contracts have been awarded to UGPTI and \$2.29 million expended. While roughly \$1.47 million of additional grants and contracts are projected for the remainder of the biennium, collections of non-federal funds for 2011-2013 are expected to be 20% to 25% less than budget authority.

Effects of State and Regional Factors

As a result of rapid oil development in the Bakken and growth in agriculture and other economic activities around the state, the demands for transportation infrastructure studies, workforce development, and training have increased significantly. The need for a greater presence in western North Dakota requires more in-state travel, greater time commitments from the director and staff, and more resources to meet time-sensitive demands. In 2012, UGPTI provided the legislature with a comprehensive analysis of county and township road investment needs and the North Dakota Department of Transportation with an enhanced model for estimating traffic demands in western North Dakota. In addition, UGPTI expanded its technical training program to help counties and cities cope with rapidly increasing truck traffic.

Impacts of Changes during the Biennium on UGPTI

The elimination of federal earmarks, the uncertainties posed by disjointed federal planning, and the cascading effects of federal changes on state and local agencies have impacted UGPTI's funding levels and threatened its stability. At the same time, increased workload demands and

¹ Some of the federal grants awarded to UGPTI are multi-year awards in which the funds will be expended in accordance with work progress over time—which affects planned rates of expenditures. Some of the grants already awarded will extend beyond the end of the biennium. In addition to these factors, the pace of grant and contract expenditures is affected by the availability of matching funds.

space limitations have posed challenges in scaling efforts and expanding staff to meet higher state and regional research demands.²

2013-2015 Budget Request

The 2013-2015 budget request for the Upper Great Plains Transportation Institute is summarized in Table 2. The executive recommendation of \$2,828,575 in General Funds includes \$750,000 for a priority budget initiative (discussed below). The executive recommendation also includes authorization for \$17,465,865 of Federal Funds and \$5,059,189 of Special Funds.

UGPTI's 2013-15 Priority Budget Option

As a result of winning two national competitions, UGPTI has been awarded University Transportation Center (UTC) grants of nearly \$8.4 million—roughly \$4 million of which is intended for use at NDSU, with the remainder going to NDSU's seven consortium partners. In March of 2013, UGPTI will be competing for an additional \$5.5 million in regional University Transportation Center funds. If UGPTI is successful in the upcoming competition, the Institute will have nearly \$2 million of additional UTC funds to utilize, based on existing allocation formulas with consortium universities. Overall, UGPTI may need to match as much as \$6 million of federal funds in the 2013-2015 biennium.

The additional funds requested would create a strong leveraging effect, because each General Fund dollar would enable the utilization of at least one grant dollar.³ Moreover, the additional funds would help offset the loss of earmarks and ensure stability for the Upper Great Plains Transportation Institute at a critical time, when the demand for infrastructure and transportation planning studies is at an all-time high. UGPTI's requested budget enhancement would provide a partial match for federal grants and offer many benefits to North Dakota.

- The requested funds would allow all available federal dollars to be utilized, significantly leveraging the state's investment in transportation research, education, and workforce development.
- The requested funds would increase the benefits of the UTC program to the state and region by allowing more activities to be undertaken with the grants.
- The requested funds would provide financial stability for the Upper Great Plains Transportation Institute, which is heavily dependent upon federal funds.
- The UTC grant requires the demonstration of a strong institutional commitment to the program. The requested general funds would send the strongest possible signal of a long-term institutional commitment to transportation research, education, and workforce development in North Dakota and thus help UGPTI in upcoming grant competitions.

² Increased demands have necessitated the reallocation of some recently vacated positions. In particular, one vacant position has been redefined as a transportation engineering position to help with road and bridge studies.

³ Because some industry matching funds are also anticipated, the leveraging effect is actually greater than 1:1.

Table 2: 2013-2015 Budget Request for the Upper Great Plains Transportation Institute								
Description	Expenditures Previous Biennium 2009-2011	Present Budget 2011-2013	2013-2015 Requested		Requested Budget 2013-2015	2013-2015 Recommended		Executive Recommendation 2013-2015
			Increase (Decrease)	% Change		Increase (Decrease)	% Change	
By Major Program								
Core Program	\$14,928,793	\$24,429,907	\$1,428,658	5.8%	\$25,858,565	\$923,722	3.8%	\$25,353,629
Total Major Programs	\$14,928,793	\$24,429,907	\$1,428,658	5.8%	\$25,858,565	\$923,722	3.8%	\$25,353,629
By Line Item								
Transportation Institute	\$14,928,793	\$24,419,961	\$1,438,604	5.9%	\$25,858,565	\$933,668	3.8%	\$25,353,629
Biennium Carryover	\$0	\$9,946	-\$9,946	(100.0%)	\$0	-\$9,946	(100.0%)	\$0
Total Line Items	\$14,928,793	\$24,429,907	\$1,428,658	5.8%	\$25,858,565	\$923,722	3.8%	\$25,353,629
By Funding Source								
General Fund	\$1,579,848	\$1,929,574	\$1,394,511	72.3%	\$3,324,085	\$899,001	46.6%	\$2,828,575
Federal Funds	\$12,591,692	\$17,665,513	-\$177,286	(1.0%)	\$17,488,227	-\$199,648	(1.1%)	\$17,465,865
Special Funds	\$757,253	\$4,834,820	\$211,433	4.4%	\$5,046,253	\$224,369	4.6%	\$5,059,189
Total Funding Source	\$14,928,793	\$24,429,907	\$1,428,658	5.8%	\$25,858,565	\$923,722	3.8%	\$25,353,629
Total FTE	52.30	51.75	2.00	3.9%	53.75	2.00	3.9%	53.75

#1



North Dakota Agricultural Experiment Station and NDSU Extension Service

NORTH DAKOTA STATE UNIVERSITY



2013-2015 Biennial Budget Request

Senate Bill 2020

Senate Appropriations Committee

Senator Ray Holmberg, Chair

Jan. 16, 2013

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

Rodney Howe - Chair, State Board of Agricultural Research and Education

Ken Grafton - Vice President, Dean and Director for Agricultural Affairs, NDSU

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Kris Ringwall - Director, Dickinson Research Extension Center

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Chris Schauer - Director, Hettinger Research Extension Center

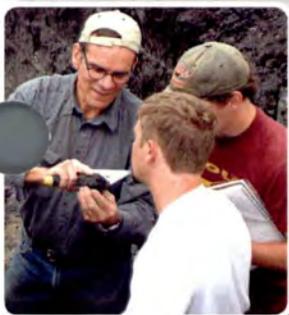
Randy Mehlhoff - Director, Langdon Research Extension Center

Jay Fisher - Director, North Central Research Extension Center

Jerry Bergman - Director, Williston Research Extension Center

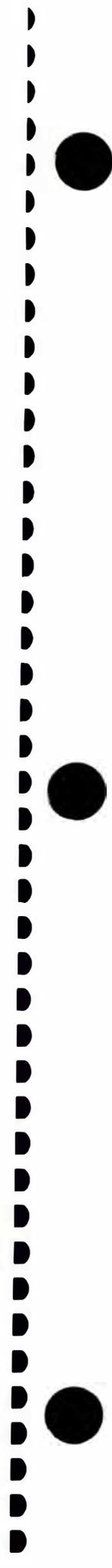
Blaine Schatz - Director, Carrington Research Extension Center

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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 residents 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 March 13, 2012. 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

Areas that need continued emphasis and emerging issue areas that need to be addressed include educational programs on informed decision-making and community-based leadership for communities impacted by oil, coal and bioenergy development; youth development through expanded 4-H efforts in leadership education, science, engineering and technology, and the camping program as a 4-H delivery method; agents-in-training and the summer internship program for workforce preparedness; livestock development to focus on industry expansion; crop and resource protection in the areas of insect pests, plant diseases, weeds and water quality; parent education and nutrition, obesity and aging issues of families; and increased operating.

NDSU EXTENSION
SERVICE



Update of Extension Initiatives Funded in 2011-13 Budget

■ Costs to continue FY2011 salary increases

\$508,356 received and allocated July 1, 2011

■ Infrastructure: technical support

\$450,000 3.0 FTE, Research Specialists hired: .5 FTE Plant Sciences, .5 FTE Plant Pathology, 1.0 FTE School of Natural Resource Sciences (SNRS), 1.0 FTE Food & Nutrition

■ Soil health and land management

\$690,000 received

- \$210,000 salary and fringe benefits, 1.0 FTE State Extension Specialist hired in soil health-SNRS
- \$360,000 salary and fringe benefits, 2.0 FTE Area Extension Specialists hired at Langdon REC and North Central REC
- \$120,000 operating; distributed

■ Livestock stewardship

\$250,000 received

- \$210,000 salary and fringe benefits, 1.0 FTE State Extension Specialist hired in livestock stewardship-Animal Sciences
- \$40,000 operating; distributed

■ State Soil Conservation Committee

\$150,000 received and added to previous funding

Additional funding distributed as grants to Soil Conservation Districts to help landowners reduce soil erosion, improve water quality, and enhance tree plantings, grazing lands and wildlife habitat.





1 Agents-in-Training and Summer Internships

Situation: NDSU Extension continues to experience historic levels of retirements. Extension work can be extremely complex and challenging for recent college graduates. Agent-in-training positions can equip candidates with the skills to be a successful Extension agent. Summer internships are effective at recruiting students for future Extension careers.

Need: Salary pools for four 12- to 18-month agent-in-training positions and five eight- to 12-week summer student internships - \$500,000



2 Livestock Development

Situation: The livestock industry is faced with many marketing and production challenges, but great opportunities exist in North Dakota to grow the beef industry. Enhanced capacity is needed to tackle a focused initiative on industry development. Current staff will be highly synergistic with a new initiative.

Need: Area livestock specialists (2.0 FTE) and operating funds, and support for Extension programming in livestock production economics (no FTE) - \$590,000



3 Crop and Resource Protection

Situation: Crops are the major contributor to North Dakota's agricultural economy. Insect pests, plant diseases and weeds continue to evolve, threaten our diverse crops and require attention. Federal integrated pest management (IPM) program funds are not stable, and increased crop protection capacity is needed. Federal funding cuts have reduced Extension's program on protecting water quality.

Need: Partial funding for the state Extension IPM and Plant Diagnostic Lab coordinators; IPM state entomology specialist (1.0 FTE) and operating funds; increased technical support for the weed science and potato programs (2.0 FTE) and crop management at the NCREC (1.0 FTE); support and operating for the state water quality specialist - \$960,000



4 Community Sustainability

Situation: The economic, environmental and social well-being of many North Dakota communities is in danger if they do not take steps to shape their future. Energy growth in the west poses challenges due to rapid growth while many other small towns are suffering from record population and service losses. Demand for Extension community development assistance can be addressed more effectively through community-based leadership, public dialogue, planning processes, organized public forums and informed decision making.

Need: Two area specialists (2.0 FTE) at the Dickinson and Williston RECs and operating funds to work directly with local communities; and increased technical support to increase tools and accessibility to Extension resources and training (no FTE) - \$620,000



5 Gearing Up for Kindergarten/Parent Education/Nutrition

Situation: Research indicates that entering school is one of the most significant transitions for a child and family. A program called Gearing Up for Kindergarten is making a difference. Parent Resource Centers (PRC) help implement Gearing Up and other programs that address other key transitions for families. Nutrition, wellness, obesity and aging are critical issues for North Dakota families. Extension needs additional staff to lead programming on these issues.

Need: Salary support for the grant-funded portions of PRC staff (existing FTEs); Extension nutrition/wellness and aging specialists (1.0 FTE) and operating funds - \$750,000

Funding support to expand the Gearing Up for Kindergarten program across the state, and ongoing research and evaluation (no FTE) submitted with Department of Public Instruction budget.



DETAILS: 2013-2015 Program Initiatives as Ranked by SBARE

NDSU Extension Service

1. Agents-in-training and Summer Internships

\$500,000 Total General Fund Increase

\$400,000 salary pool, no new FTEs, support for 4 agents-in-training located throughout North Dakota

\$100,000 salary pool, no new FTEs, 5 college internships for summer programming

NDSU Extension continues to experience historic levels of retirements. Between 2012 and 2016, nearly 30 percent of all benefitted county Extension staff will be eligible to retire based on years of service and age. The complexity of Extension work can be extremely challenging for recent college graduates who make up the majority of the hiring pool. Agent-in-training positions are short-term contracts of 12 to 18 months in duration. Agents-in-training are recruited from these temporary positions to fill permanent agent positions that exist in the counties (existing FTEs). The permanent positions are funded with existing county and Extension funding. If agents-in-training do not fill permanent agent positions by the end of their temporary training positions, they are terminated. This training has proven to be a successful avenue for equipping candidates with the skills needed to be successful as Extension agents. Summer internships are anticipated to be an effective means for recruiting students for future Extension careers. Student internships are 8 to 12 weeks in duration during the summer. These students do not become long-term Extension employees (no new FTE) but become future candidates for employment. Funding support is needed for the agent-in-training and summer internship programs which both provide needed program support at the county level.

2. Livestock Development

\$590,000 Total General Fund Increase

\$440,000 area livestock specialists salary, fringe, and operating for the Extension livestock programs led by state specialists, 2.0 FTE

\$150,000 operating, no FTE, Agribusiness and Applied Economics

The livestock industry is faced with many challenges including high feed prices, aging producers, declining herd numbers and weather, but great opportunities still exist in North Dakota when our natural resources, agricultural feed supplies, and new potential processing facilities are considered. These opportunities suggest the beef industry has ample potential for growth. Extension has base staffing in the livestock production areas but lacks the capacity to tackle a focused initiative on industry development. Area livestock specialists can expand livestock programs in the central and western regions of the state. Extension programming in livestock production economics to assist producers with livestock production decisions will enhance support to the livestock industry. Current staff would be highly synergistic with this new initiative.

3. Crop and Resource Protection

\$960,000 Total General Fund Increase

\$150,000 partial salary support for Extension IPM and Plant Diagnostic Lab

\$220,000 salary and fringe benefits, 1.0 FTE, Extension entomologist

\$450,000 salary and fringe benefits, 3.0 FTE, technicians for Extension weed and potato programs
at Main Station and crop management at NCREC

\$110,000 salary and fringe benefits, state water quality specialist

\$30,000 operating for entomologist

North Dakota's cropping systems are diverse, highly productive and contribute significantly to North Dakota's economy. Successful crop production requires effective and efficient pest management. Insect pests, plant diseases and weeds continue to pose a risk to each of North Dakota's diverse crops, and the risks continue to

evolve. New pests, races, resistance and pesticide options all contribute to the challenge of providing growers with the best crop protection solutions. Federal funding for Extension's plant pathologist for cereal crops was shifted from formula funds to uncertain competitive funds, but the demands for the position warrant stable support. North Dakota has only a single state Extension entomologist to provide management recommendations for about 40 crops. Additional insect pest management support is needed. Other NDSU Extension crop specialists need technical support to be more efficient with their applied research activities and more effective with Extension program delivery. The NDSU Extension Service conducts educational programs on best management practices to protect surface and groundwater while fulfilling human and livestock needs for quality water. The water quality educational program works in cooperation with conservation groups and state regulatory agencies, but federal funding has been cut 50%.

4. Community Sustainability

\$620,000 Total General Fund Increase

\$360,000 salary and fringe benefits, 2.0 FTEs, area specialists at DREC and WREC

\$80,000 operating for area specialists

\$180,000 operating, no new FTE, Agriculture Communication

The social, environmental and economic well-being of many North Dakota communities is in danger if communities do not take steps to shape their own future. Energy growth in the west poses multiple farm, ranch, business and community challenges due to rapid growth while many other small towns are suffering from record population and service losses. Demand for Extension assistance in community development along with population forecasts, impact studies and resource impacts is increasing. These issues can be addressed more effectively through community-based leadership, public dialogue, planning processes, organized public forums and informed decision making. Area specialists located in western North Dakota will be able to work directly with local communities to provide the needed programming. North Dakota's ranchers and producers, entrepreneurs and community leaders need to access Extension information and programs with new technologies. Extension needs increased technical support to increase tools and accessibility to Extension resources and training.

5. Gearing Up for Kindergarten/Parent Education/Nutrition

\$750,000 Total General Fund Increase

\$500,000 salary and fringe benefits, no new FTEs, support for 8 existing Extension parent educators

\$210,000 salary and fringe benefits, 1.0 FTE, 0.5 nutrition/wellness specialist and 0.5 aging specialist

\$40,000 operating for specialists

Children and families experience key transitions during their lifecycle that can affect the trajectory of their lives. Many North Dakota families experience divorce and other stresses that place their children at risk of abuse or other negative effects. Parent Resource Centers (PRCs) provide educational programs to develop healthy parenting skills which assist both the parents and youth to be successful. The PRC educators partner with state agencies through grants to provide these programs, but partial base salary funding will stabilize these valuable programs. Nutrition, wellness and obesity are critical issues for families in North Dakota. Rural communities also have limited access to educational programming, particularly for our aging population. Extension can address these issues with evidence-based programs, but additional staff is needed to lead programming.

Element of initiative subsequently submitted with Department of Public Instruction budget

\$210,000 operating, Gearing Up for Kindergarten

Research indicates that entering school is one of the most significant transitions for a child and family. Educating both the parent and the child about the transitions involved upon entering kindergarten has been researched in North Dakota, and an effective program called Gearing Up for Kindergarten is making a difference. Funding is needed to expand the Gearing Up for Kindergarten program across the state and for ongoing research and evaluation of the program.

2011-13 Impacts

Through its research-based educational programs, the NDSU Extension Service strives to:

- *Enhance the profitability of North Dakota's crop and livestock producers by focusing on production, marketing and risk management issues*
- *Conserve and enhance the natural resources of our state*
- *Develop life skills within North Dakota's youth through 4-H youth development programs that focus on decision making, communication skills, career development and healthy lifestyles*
- *Strengthen individual and family skills relating to parenting, school readiness, financial management, work force preparation and communication*
- *Maintain a healthy food system at the production, distribution and consumer levels while promoting healthy lifestyles for all age groups*
- *Provide leadership for communities and community leaders to identify strengths, enhance local expertise and increase the rural economic base while creating an environment that fosters entrepreneurship*
- *Guide communities through processes that relate to public issues*
- *Serve as educational leaders in the adoption and utilization of technology for economic, community and individual benefits*

Extension agents and specialists had more than a million direct educational contacts with North Dakota residents in 2011-2012 in these areas:

- *Community, Economic Development and Leadership*
- *Crop Management*
- *Family Economics*
- *Farm Business Management*
- *4-H Youth Development*
- *Horticulture and Forestry*
- *Human Development and Family Science*
- *Livestock Management*
- *Natural Resource Management*
- *Nutrition, Food Safety and Health*

■ Community, Economic Development and Leadership

Center for Community Vitality Helps Sustain Rural Communities

The mission of the Center for Community Vitality is to create vital North Dakota communities by identifying, developing and delivering resources. The numbers below reflect the impacts made by Extension specialists and agents who worked in the areas of community economic development and leadership in 2011.

Jobs created/retained	42
Businesses created	6
Programs and activities initiated/completed	85
Value of programs and activities initiated/completed	\$ 489,742
Efficiencies and dollars saved	\$ 450,000
Value of grants and resources leveraged/generated by communities	\$ 2,530,000
Community-generated volunteer hours	5,494
Value of community-generated volunteer hours	\$ 83,384
Community, organizational, business plans developed	37
Community, organizational, policies, plans and practices adopted	13
Participants reporting new leadership roles	94

Rural Leadership North Dakota (RLND) Has \$3 Million Impact

RLND participants are required to take action on a self-identified project as part of their RLND coursework. Examples of projects include the opening of a restaurant, providing farm visits for children and adults to help educate them about agriculture, setting up a program to help furnish meals to people in need, fundraising for a new fire truck, updating a community's website, and building a splash park and playground. The community investment, private and public, in the 90 RLND projects over the past eight years is over \$3 million. This investment has created six new businesses and over 20 new jobs along with improved quality of life for local residents. Personal leadership development is the primary goal and has proven successful. Nine alumni have run for public office, 25 have served on new boards and committees, and 37 have been involved with additional community projects after their RLND course concluded.

Rural and Agribusiness Enterprise Development Generating Interest

"Direct Marketing of Food Products," a new online course developed in cooperation with the University of Nebraska, had over 1,000 unique visitors from over 100 states and countries in its first nine months. Visitors have viewed over 18,000 pages. A workshop was conducted in cooperation with United Tribes Technical College and the N.D. Department of Agriculture. Thirty-six people attended and rated it 3.7 on a 4 point scale with over a one point change on 10 separate items of knowledge gained. Participants indicated they would use the information in their business. Direct assistance in the form of educational services is provided regularly. Five other workshops were held during the year with 188 participants. Topics included marketing, small farm development, and increasing sales and general business ownership. In addition 338 individuals subscribe to the newsletters and articles the program generates. The program is also using social media to expand its reach to entrepreneurs.

Flood Preparation and Recovery

The 2011 flooding impacted every river basin in North Dakota and displaced residents in 28 neighborhoods. Over 4,100 homes and business were flooded and approximately 12,000 people were displaced in Minot. The Missouri River record flood forced evacuation of nearly 900 homes in Burleigh and Morton Counties. The rapid rise of Devils Lake continued, and thousands of acres of prime farm land now lie underwater. This created a gigantic need for education and technical assistance. Extension created 14 flood cleanup videos; collaborated with Minnesota to develop an online resource, Recovery after Disaster: The Family Financial Toolkit; and helped create a Disaster Recovery Log, a smartphone application that helps users record information about damages in their flooded homes. After the flooding, NDSU Extension provided seminars on cleaning up flooded buildings to assist thousands of home owners, and workshops for contractors on restoring flood-damaged structures. This same NDSU Extension expertise was recently tapped to assist recovery efforts after hurricane Sandy.

■ Crop Management

Fertility Enhances Wheat Yield and Quality

New North Dakota hard red spring wheat nitrogen recommendations on an NDSU Extension interactive website www.ndsu.edu/pubweb/soils/wheat/ are used by the majority of North Dakota crop consultants and their growers to determine nitrogen rates for their crop. The user chooses the region of the state in which they operate and the relative yield potential of their soils or field, then inputs their residual soil nitrate concentration and any previous crop nitrogen credit. Since 2010, when these recommendations were provided, North Dakota spring wheat and durum quality has been consistently higher than Montana and Minnesota wheat. North Dakota's protein levels were 1.3 to 1.4 percent higher in 2011 and 0.4 to 0.6 percent higher in 2012. With 2012 total production of hard red spring wheat of 257 million bushels in North Dakota, an extra 0.5 percent protein for North Dakota growers compared with Minnesota and Montana was worth about \$128 million if dockage was 50 cents per half-point protein.

Managing Glyphosate-Resistant Weeds

Glyphosate-resistant weeds, such as waterhemp, ragweed, and kochia continue to increase, especially in eastern North Dakota. Based upon current greenhouse testing, 30 percent of 22 kochia samples from 2012 have been confirmed glyphosate-resistant. Adding other herbicides into the management program should delay development of resistant weeds. Preemergence herbicides are one option, but adoption has been slow in North Dakota. In 2009, preemergence herbicides were applied to only four percent of soybean acres. Extension weed scientists are testing and demonstrating the improved control that can be achieved with the addition of preemergence herbicides in a glyphosate-based management system. Other systems like a preemergence herbicide followed by Liberty in LibertyLink soybeans have also been successful in controlling glyphosate-resistant weeds.



Soybean Aphid Thresholds Reduce Insecticide Costs

Soybean aphids were introduced into the U.S. in 2000 from Asia and quickly spread across the North Central Region, including North Dakota, in 2001. Soybean aphids have become a major insect pest of soybeans causing up to 40-50 percent yield loss when populations are high. Controlling aphids caused insecticide use in North Dakota soybeans to surge from under one percent in 2001 to 68 percent in 2008. NDSU Extension recommends that producers scout for soybean aphids and use the economic threshold (average of 250 aphids per plant) to determine if and when an insecticide application is necessary. Adoption of economic thresholds has reduced many unnecessary applications since insecticides are applied only if there is a positive economic return. The adoption of the economic threshold for soybean aphid control in North Dakota currently provides an estimated average annual economic benefit of \$3.5 million.

North Dakota Prepares for Soybean Cyst Nematode (SCN)

Soybean cyst nematode (SCN) is the most devastating disease of soybeans in North America. Since first identified in North Dakota in 2002, the disease has been found in over 10 counties. This disease is new to nearly all North Dakota soybean growers and most Extension agents, crop consultants and other educators in the state. In response, an intensive two-day nematode short-course was hosted by the NDSU Extension Service and the North Dakota Soybean Council in March 2011. The 34 professionals who attended the short-course provide management recommendations for approximately 443,640 soybean acres annually. Based on anticipated infestations in the next five years and yield loss, these attendees may be vulnerable to approximately \$6.7 million in losses from SCN annually. As a result of this SCN short-course, most attendees increased preventative measures and many made management recommendation changes in 2011. The positive impact of this short-course may have exceeded \$1 million in 2011 alone.

Extension weed scientists are testing and demonstrating improved control of glyphosate-resistant weeds such as kochia.

■ Family Economics and Farm Business Management

2012 Farmland Lease Workshops

Strong commodity prices and high production costs have made it more difficult for operators and landowners to successfully determine appropriate farmland lease arrangements. An educational program was needed to increase lease negotiation satisfaction for both parties by providing information on how to calculate equitable rents, evaluate the benefits and risks of different types of leases, and improve communication. Farmland leasing workshops were held at eight sites across North Dakota. Attendees significantly increased their understanding of key components of leases such as knowing the key questions to ask when creating a land lease. Attendee responses indicated that 78 percent intended to initiate discussion with land owners (or operators) about a land lease; 92 percent gained new ideas and tools to develop better land lease arrangements; and 99 percent had a better understanding of how relationships between land owners and tenants may be improved.

High School Financial Planning Program

North Dakota students graduating in spring 2011 and later are mandated to have taken a personal finance curriculum as a result of legislation passed during the 2009 legislative session. For over 20 years, NDSU Extension has partnered with the National Endowment for Financial Education (NEFE) High School Financial Planning Program (HSFPP) to provide research-based educational materials to students and educators at no charge. A series of lesson plans were developed from these materials to specifically address the topics required in North Dakota's legislation. Several teacher training programs were offered throughout the state and online to help teachers use this program to meet the new legislation. Nearly 200 educators have participated. Of the 2,100 student participants, over 50 percent increased their financial knowledge; 73 percent reported having changed their spending habits; and 74 percent had shared with family and friends what they learned about budgeting, investing, saving, and credit and debit card use.

2011 Farm/Ranch Transition and Estate Planning

According to the 1,000 North Dakota participants who completed Annie's Project during the past six years, nearly 50 percent of farm/ranch families do not have an adequate transition plan in place for their business. The lack of such a plan is also one of the greatest concerns expressed by this group. A pilot educational program to address this need was conducted in the spring of 2010. Building upon the success of the 2010 pilot project, the three-part educational series was redesigned to address many topics pertinent to estate planning, including the importance of family communication, business organization forms, asset transfer options and tax implications.

These sessions were offered in the fall of 2010 and spring of 2011. The sessions were conducted at 19 locations in the state by Extension specialists from North Dakota and Iowa, some by interactive video, and local experts at each location. In conjunction with the presentations, several reliable and research-based online tools for transition planning were introduced at each location. Of the 389 participants, 98 percent said the information presented was valuable to very valuable for them and 90 percent increased their knowledge level regarding how to effectively communicate with their family members about estate planning topics.

■ 4-H Youth Development

4-H Makes a Difference

The structured learning, encouragement and adult mentoring that young people receive through their participation in 4-H plays a vital role in helping them achieve future life successes.

Tufts University has been working with faculty at 24 land-grant universities, including North Dakota State University, to conduct "The 4-H Study of Positive Youth Development."

Results of the study show youth in 4-H achieve higher grades, are more likely to go to college and are less likely to engage in risky behaviors, such as drinking, smoking, bullying and vandalism, than youth who don't participate in those programs. Young people in 4-H are committed to improving their communities. The study indicates that 4-H youth are three times more likely to contribute actively to their communities when compared with youth who do not participate in 4-H. The study also shows that young people who participate in a high number of positive youth development activities are more likely to develop the foundational characteristics, or five C's, of positive youth development: competence, confidence, connection, character and caring. They also develop a sixth characteristic, contribution, which helps strengthen their community. The NDSU Extension Service is pleased to deliver the 4-H experience to over 5,200 youth in community 4-H clubs.



4-H Camping

Research indicates that a 4-H camp experience has a positive impact on the social, personal and educational growth of those participating. It also increases awareness of environmental issues, interest in the outdoors, develops leadership skills and influences career decisions. Research also shows that the 4-H camping experience is second only to the 4-H club experience on the level of impact it has on positive youth development. During the past three years, youth from 50 of the 53 counties in North Dakota and seven states have participated in camps conducted by the NDSU Extension Service. The camps are held at the 4-H Camp near Washburn. In addition to hosting over 400 regular campers during the summer season, the camp was used last year to host adult volunteer and staff trainings, and hosted over 200 youth and adults for the 2012 State 4-H Shooting Sports state competition. Based on the current participation this camp will reach 30,000 youth through the summer camping program and other 4-H camps and events over the next 40 years.

Teaching Science through Technology

4-H science, engineering and technology programs reach almost 12,000 rural and urban North Dakota youth a year through hands-on learning experiences that encourage young minds and develop young leaders proficient in science, engineering and technology workforce skills. These experiences are supported by more than a 3,000 volunteers dedicated to placing 4-H youth on a path toward successful careers. Current examples of technology-related 4-H projects include aerospace, computers, electricity, geospatial, wind and robotics. Programming is offered by a variety of delivery methods including 4-H clubs, afterschool programming, school-enrichment and camping. 4-H science's most visible effort has been 4-H National Youth Science Day. The 2011 experiment related to bio-energy and the 2012 experiment taught youth about water quality and climate change. Eighty-seven percent of the North Dakota youth who participated in this year's experiment stated that it made them more interested in science. 4-H National Youth Science Day is an important annual part of 4-H's "One Million New Scientists. One Million New Ideas" campaign, with a national goal of attracting one million new youth to science, engineering and technology programs conducted by 4-H.

4-H National Youth Science Day events help increase youth interest in science.

■ 4-H Youth Development (continued)

Keeping Kids Safe

The safety and well-being of North Dakota's youth is an important priority. Two issues receiving local and national attention are underage drinking and bullying. NDSU Extension is involved in addressing these problems with two programs: Parents LEAD and Take a Stand.

Parents LEAD (Listen, Educate, Ask, Discuss) is a North Dakota-specific underage drinking prevention program that provides parents with tips on handling children's questions and starting the often difficult conversation about underage drinking. The program utilizes a web-site www.parentslead.org, email, Facebook and an interactive blog for parents to receive age- and/or grade-specific prevention measures. The program is a partnership between the North Dakota Department of Transportation, who originally created the Parents LEAD website, North Dakota University System's Consortium for Substance Abuse Prevention, North Dakota Department of Human Services and the NDSU Extension Service.

According to the 2011 Youth Risk Behavior Survey in North Dakota, 50 percent of middle school students and 25 percent of high school students report that they had been bullied on school property during the last 12 months, and 26 percent of middle school students and 17 percent of high school students report that they have been electronically bullied. North Dakota 4-H adopted Take a Stand, a bullying prevention curriculum created by the Texas A&M AgriLife Extension Service, for use with its program and as a curriculum that local youth programs and schools can use to teach youth basic life skills in dealing with bullying and conflict. The NDSU Extension staff is trained in the curriculum that helps meet the North Dakota Legislature's mandate that bullying prevention education become part of school districts' programming throughout the state.

4-H Outdoor Skills Popular

In 2011-12, 1,180 youth were enrolled in the Outdoor Skills project area which includes the 4-H shooting sports program. Thirty-four county Extension offices reported that 393 events within the shooting sports program were held, and there are 19 Shooting Sports Project Clubs involving 228 youth. The North Dakota 4-H Shooting Sports program, officially launched in 2001, is accomplished through eight state trainers in six disciplines and over 500 certified discipline instructors who work with youth at the local level. Program partnerships include the North Dakota Bowhunters Association, North Dakota Turkey Federation, Federal Ammunition, Scheels and the North Dakota Game and Fish Department. The program is also delivered through the support of sportsman's clubs, afterschool programs, and school districts across the state. The focus of all 4-H programs is the development of youth as individuals, and as responsible and productive citizens. The 4-H Shooting Sports program achieves this through youth learning marksmanship, the safe and responsible use of firearms and the principles of hunting and archery. The activities of the program and the support of caring adult leaders provide young people with opportunities to develop life skills, self-worth and conservation ethics.



Shooting sports continue to be a popular part of the 4-H Outdoor Skills project.

■ Horticulture and Forestry

NDSU Plant Diagnostic Lab

In 2012, the NDSU Plant Diagnostic Lab processed over 2,500 samples and supplied nearly 3,400 diagnoses. Samples ranged from commercial crops to lawns and gardens as well as those to fulfill export, seed certification and research requirements. Due to its convenient access to campus experts, the lab is able to offer a high degree of accurate diagnoses. In 2012, the value of diagnoses and recommendations made by the lab were estimated to be \$217,000 while a routine diagnosis costs about \$17. This equals an 86:1 return on investment in using the lab's services. The lab is primarily self-funded; fees generated by the lab are used to support staff and for supplies and equipment. No other lab in the state, public or private, offers the unique and unbiased services of the NDSU Plant Diagnostic Lab.

Junior Master Gardener

Junior Master Gardener (JMG) programs involving 3,500 youth were conducted in 35 counties in 2012. NDSU Extension works with a broad range of community partners including youth clubs, schools, libraries, churches and care centers in coordinating JMG projects. These projects beautify parks and schools, grow food for those in need, build relationships with senior citizens, and honor fallen soldiers. Besides learning about gardening and the environment, youth develop skills in working together and serving their communities. Evaluations show youth in JMG programs increase skills in science and math, develop healthy eating habits, and increase their levels of physical activity. The JMG program also increases youth's service to the community. As an example, one of our community partners reported, "Most of our produce over the summer has been donated to the Senior Citizen Center where it is used in the noon menu and also distributed to local seniors. We also donated to families that are receiving special help through social services."

Dragonfly Garden Project

The NDSU Extension Service and United Tribes Technical College (UTTC) partnered to establish a research and education center for gardeners. This center, called the Dragonfly Garden, promotes wellness and entrepreneurship through horticulture. Extension introduced over 300 varieties of promising fruits and flowers for evaluation. Among these plants are 40 varieties of apples, many grown on a rootstock from Siberia that allows for commercial production of apples on dwarf, easy-to-manage trees. Hundreds of gardeners from the region toured the site in 2012 and learned of its innovative technologies. A complementary youth garden was established where elementary school students gain knowledge on native plants and tribal gardening practices. Families grow vegetables for themselves in the newly renovated campus community garden. A horticulture educator has been hired by UTTC to offer classes. New programs, including a special focus on tribes growing their own foods, are emerging.



NDSU's Plant Diagnostic Lab provides unique and unbiased services to commercial growers and home owners.

■ Human Development and Family Science

Gearing Up for Kindergarten

Gearing Up for Kindergarten is a parent involvement and school readiness program for schools, parents and their four-year old children. The curriculum has undergone extensive revisions and dedicated research to help determine the components of a school readiness and parent involvement program that are most beneficial to the four year-old child, the family and school. Original pilot programs and research were funded over the first five years with grants from a series of partners including NDSU Extension Service, United Way of Class-Clay, and the North Dakota State Parent Involvement Resource Center. During the past two years the entire program was delivered in 64 school districts with 49 class sessions held in 2011-12 and 98 class sessions scheduled for 2012-2013 as a result of an investment made by the state of North Dakota. NDSU Extension Service also developed a variety of evaluation tools and conducted analysis that guided revisions and expansion.

Parent Education for North Dakota Families

NDSU Extension Service, school districts and the N.D. Department of Human Services-Children and Family Services have formed a partnership called North Dakota Parent Education Network (ND PEN) to provide educational programs to families across the state who seek education and support to raise capable and caring children. Families are most vulnerable when in transition (children leaving home or entering

school, divorce, separation or abuse) and when under financial constraints. The ND PEN targets classes that support families in transition and who are at risk and have been referred for educational support. Educational classes can reduce violence, abuse and dysfunction, and prevent more difficult issues that may result in the need for social service intervention. NDSU Extension works in partnership with schools, social services and local agencies to develop and implement prevention education efforts to provide parents with the knowledge and skills to create safe, stable and nurturing relationships with their children. From July 1, 2011 to June 30, 2012, seven parent resource centers participating in the ND PEN provided 8,357 parents with the knowledge and skills to create healthy relationships with their children. Ninety-two percent of participants who completed an outcome survey following the program indicated that the program helped them improve their parenting skills, and 94 percent indicated increased confidence in their ability to parent and take care of their children. (Data reflects only programs served under the Child Abuse Prevention Grant and not the total number served by the North Dakota Parent Education Network.)

Sexting: What Every Caring Adult Should Know

With more than two-thirds of American teens having cell phones, teens send an average of 440 texts every week. While cell phones represent independence and communication for the users, the advent of text and picture messaging has led to some teens sending and receiving sexually charged messages. It is essential for today's parent or caregiver to be aware of how young people are communicating with each other and how they are using technology. The NDSU Extension Service has developed a curriculum for these individuals titled "Sexting: What Every Caring Adult Should Know." It strives to build awareness of the risks and repercussions of sexting and assist adults in helping teens make informed, ethical decisions about how they use their mobile technology. Extension agents have delivered this seminar across North Dakota to parents, youth, caregivers, school faculty, faith community leaders and other professionals who work with youth. In North Dakota 722 adults went through the curriculum and are more aware of the issue.



Gearing Up for Kindergarten continues to expand in North Dakota.

■ Livestock Management

Feedlot School Supports Industry Growth

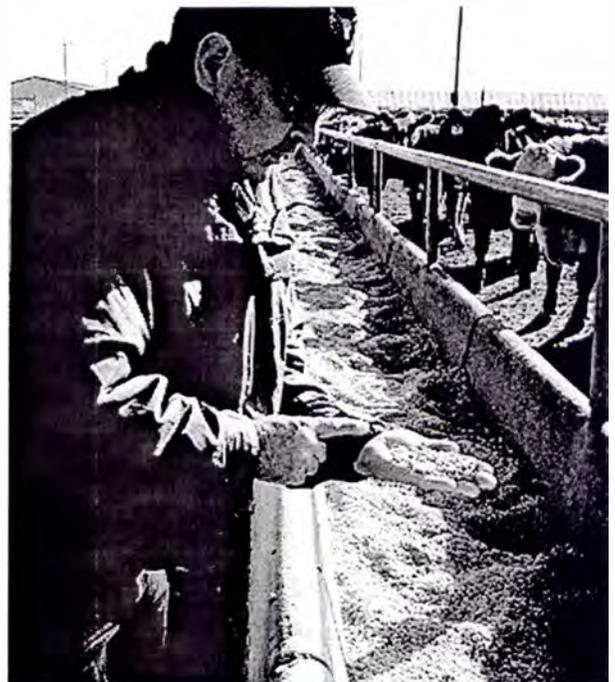
Since the first school was held on Feb 20-21, 1996, two-day schools have been offered to educate farmers and ranchers about the production and management of cattle feedlots. The wide variety of concepts taught include marketing, nutrition, feed bunk management, ration development, employee management, facilities, manure management, veterinary care, business management, beef quality assurance and goal planning. Over 20 schools have been conducted with an average of 23 producer operations per school. During this period, over 250 feed yards have been built in North Dakota that can background or finish cattle. The number of cattle fed to finish has grown from 20,000 to 120,000 head per year. Profitability of feeding cattle to finish from the Dakota Feeder Calf Feedout project found \$115 per head profit in 2011-2012, demonstrating the potential for successful North Dakota feedlot operations.

Bovine Emergency Response Plan

In July 2010 a semi-truck hauling cattle was hit head on by a pickup with a cargo ramp on Highway 200 near Carrington, ND. Both vehicle drivers were killed; the trailer of the truck hauling the cattle was on fire; and there were dead cattle, cattle on fire, cattle with severe injuries and cattle loose on the scene. First responders reported they were not prepared and did not have procedures in place to address accidents involving cattle being transported. In response, NDSU Extension developed the Bovine Emergency Response Program (BERP) that includes decision trees for dispatchers receiving and dispatching calls, arrival protocols, scene assessment, scene security and containment, extrication of cattle, humane euthanasia, relocation of cattle, mortality disposal, righting of the vehicle and debriefing. The BERP team continues to work on implementation with the North Dakota State Board of Animal Health, North Dakota Highway Patrol, North Dakota Stockmen's Association Chief Brand Inspector, North Dakota Department of Emergency Services Division of State Radio and USDA Veterinary Services.

North Dakota Beef Industry Survey

A survey was conducted during spring 2012 as part of an effort to determine how current beef producers perceive the future direction of the industry, attitudes regarding methods of enhancing farm/ranch profitability, and how Extension's educational programs can evolve to meet the future needs of North Dakota beef producers. The survey was vetted by a stakeholder group including members of the NDSU Extension Service, North Dakota Beef Commission, North Dakota Stockmen's Association, North Dakota Corn Council, North Dakota Soybean Council, North Dakota Bankers Association, North Dakota Department of Agriculture, and independent beef producers prior to mailing to ensure input from all stakeholders was considered. Responses from the 527 completed surveys will be the basis for stakeholder strategic planning and to focus educational, programmatic and legislative priorities within and among the respective participating organizations. The ultimate goal of this stakeholder group is to develop strategies to ensure the long-term sustainability of the North Dakota beef industry.



NDSU Feedlot Schools educate farmers and ranchers about the production and management of cattle feedlots.

■ Natural Resource Management

Soil Health Initiative

The soil health initiative, “Enhancing Soil Productivity and Land Management for Future North Dakotans,” was funded in 2011 to address losses in productivity as a result of soil health issues. Six primary positions at NDSU were hired under this initiative, split evenly between Extension and the North Dakota Agricultural Experiment Station. A soil health and land management advisory board consisting of commodity, government and producer groups was formed and convened in fall 2012 to provide guidance for research and Extension efforts of the new hires. Individuals hired under the initiative have participated in several activities such as soil testing and demonstrations at Big Iron, hosting a soil health field tour in Forman, a field day in Edmore and a workshop in Langdon, and presenting at numerous state and regional meetings. Approximately 1,000 people have been reached through these events. In under five months, \$1.2 million in externally-funded grants has been collectively awarded to this team to address soil health and land management issues.

NDSU Tile Drain Field Demonstrations

Several factors have increased farmers’ interest in subsurface drainage in the Northern Plains in recent years. Coupled with the interest in subsurface drainage have come societal concerns about the impact of subsurface drainage on flooding, runoff water quality and its impact on surface water quality. In response, the NDSU Extension Service provided educational presentations followed by demonstrations of tiling and installation. Approximately 450 participants learned about tile drainage equipment, surface drain design options, and the economics of tile drainage in this region. NDSU personnel shared information about wetland determinations and other governmental regulations applicable to tile drainage, the soil types that may be problematic for subsurface drainage, and potential impacts on saline soils. Attendees reported that this information will guide their future decisions on whether subsurface drainage is appropriate for their farm.

Cover Crops for Livestock Grazing

Cover crops have become an important forage resource for late-season livestock grazing in recent years used by about 17 percent of North Dakota livestock producers. NDSU Extension, in collaboration with the N.D. Agricultural Experiment Station, have developed recommended cover crop mixtures and management guidelines to help livestock producers grow productive, cost-effective forage crops for grazing and haying. Cover crops provide not only a high quality feed for most classes of livestock but also benefit the soils through development of actively growing roots throughout the growing season, incorporation of organic matter, improved soil porosity, and the spreading of manure for nutrient recharge. Cover crops have created a cost-saving feed for late-season grazing in three of five years studied at the Central Grasslands Research Extension Center. Cover crops for grazing can be a win-win program for many livestock producers by capturing two crops off the same land base, reducing labor costs and improving soil health during years of good soil moisture conditions.

Increasing Corn Profitability in Eastern High Clay Soils

In 2011, about 1.2 million acres of corn was grown in southeast North Dakota and about half of it in high clay soils. In 2011, counties with significant high clay soils yielded an average of 10 to 20 bushels an acre less than counties to their west due to wet soils. Studies in 2010 and 2011 showed that high clay soils were subject to large nitrogen losses due to denitrification which cut corn yields by 50 to 100 bushels an acre in many fields. Extension showed growers that by delaying about half of their applied nitrogen until the corn reached about the six leaf stage, they could gain a \$250,000 to \$500,000 advantage on 1,500 acres of corn. Growers responded by purchasing all of the side-dress liquid applicators available in the Red River Valley area in the winter/spring of 2012. Suppliers were sold out by late March 2012. If half of the growers applied half of their nitrogen requirements as side-dress on 300,000 acres of corn, the returns would total \$90 million to this region.

■ Nutrition, Food Safety and Health

On the Move to Better Health

Nutrition education for youth and adults accounts for one of the largest programming requests that county staff receive. On the Move to Better Health, a classroom-based, five-week nutrition and fitness education program for elementary students, reached about 8,300 children and their families from 2007 to 2012. A total of 3,330 children in 19 counties are participating in the program in the 2012-13 school year. According to post-surveys with children, 55 percent reported increasing the amount of fruits and vegetables they consumed, 63 percent reported increasing their daily amount of physical activity and 60 percent reported drinking less soda. According to follow-up surveys with parents, 50 percent reported an increase in their families' consumption of fruits and vegetables, and 46 percent met their families' nutrition or fitness goals.

Food Safety Training

In 2011, 63 percent of North Dakotans age 16 to 24 were working (one of the highest rates in the nation) and many were in the food industry. Since 2003, 8,153 students have participated in Teens Serving Food Safely, a food safety training program offered by the NDSU Extension Service. Knowledge scores increased from 54 percent correct on the pre-test to 85 percent on the post-test. About 54 percent of participants had been involved in food preparation for the public.

Food Entrepreneurship

The number of inquiries about food production and safety continues to grow from entrepreneurs and established companies. NDSU Extension provides a service to North Dakota food entrepreneurs and about 25 Nutrition Facts labels are created each year for new North Dakota products, enabling these products to enter the market.

Empowering Families in Need

The goal of two NDSU Extension Service programs is to empower our families with the greatest needs. These are the county-delivered programs called Family Nutrition Program (for SNAP-eligible participants ranging from elderly to young people) and the Expanded Food and Nutrition Education Program for the families with children in highest need. Despite a low unemployment rate and budget surplus, one in 11 North Dakotans needs food assistance. These programs provide direct support to about 5,700 adults and 17,700 children annually. Our evaluation data indicates that participants increase healthy food choices and preparation, and learn how to stretch their dollars to accomplish healthy eating goals on very limited budgets.

Diabetes Education

Diabetes education continues to be a growing need in the U.S. and in North Dakota, with more than 37,000 people living with the disease in North Dakota. In North Dakota, diabetes rose from 3.6 percent in 1994 to 6.9 percent in 2010, an increase of 92 percent. Extension agents teamed up with certified diabetes educators or registered dietitians to deliver a program called Dining with Diabetes North Dakota Style that teaches North Dakotans suffering from or at risk of developing diabetes how to make lifestyle changes and manage the disease. The key is managing blood sugars. Extension agents and their partner educators reached 210 participants in 2011 who increased their knowledge and physical activity, and improved their eating habits to better manage blood sugars.



The Dining with Diabetes program helped participants increase their knowledge and physical activity, and improved their eating habits to better manage blood sugars.



AGENCY OVERVIEW

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 March 13, 2012. 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 OVERVIEW: Main Research Station

Agency Future Critical Issues

The NDAES continues to focus on developing an infrastructure in which to do quality research. Shortfalls occur in laboratory research facilities, especially those for plant-based field research laboratories at the REC's and the Main Station. Cereal and grain quality laboratories, critical to maintain and enhance quality parameters for new crop varieties, are in desperate need of renovation/replacement. Developing separate laboratories for quality evaluation of transgenic experimental breeding lines is also 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.

Disease evaluation by the Veterinary Diagnostic Lab is critical for our livestock industries to thrive, yet this facility is in jeopardy of losing accreditation due to its deteriorating condition. Similarly, our plant pathology labs need enhancement/renovation in order to better utilize the modern tools and technology available. New facilities, specifically the new greenhouse (Phases I and II) and the new animal research complex have had 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. 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. Major problems occur in acquisition of costly field and laboratory equipment that cannot be obtained through grants. 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 safety, food security, natural resources management, new bioproducts (including fuel) need to continue in order to allow NDAES to serve this segment of agriculture well. A systems approach for livestock research, literally from conception to consumption, is identifying ways to better serve this important sector of the 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. While we are proud to provide a high level of applied research that is readily transferred to our stakeholders, some areas of fundamental research have become important to improve the efficiencies of our plant and animal-based applied research. Genomics, bioinformatics, and epigenetics all have their basis in fundamental research, but they provide products and expertise to enhance plant breeding (through genomic selection, marker-based selection) and livestock genetics (evaluating environmental influences on genetic expression). For some units, additional technical support would significantly increase productivity of researchers.

Scientists are responsible for attracting external funding, and their success during this biennium is impressive; however, the effort to write more, and larger, grants is apparent, and we have concern that significant research efforts at the Main Station and the RECs rely almost exclusively on extramural funding. Economic realities often place the NDAES in a position of responding rather than being proactive in affecting positive change. Our efforts to develop close collaborative relationships with industry and other scientific organizations will help allow the NDAES to become more proactive in solving problems critical to the state's largest industry.

Update of NDAES Initiatives Funded in 2011-13 Budget

■ Costs to continue FY2011 salary increases

\$1,079,647 received and allocated July 1, 2011

■ Greenhouse utilities

\$173,622 added to previous biennium funding; allocated

■ Enhancing Soil Productivity and Land Management for Future North Dakotans

\$1,410,000 received

- \$570,000 salary and fringe benefits, 1.0 FTE, Assistant Professor, hired in soil health-SNRS-Main Station and 2.0 FTE, Research Assistant Professors, hired at Hettinger REC and Carrington REC.
- \$120,000 Operating; distributed
- \$720,000 salary and fringe benefits, 6.0 FTE, Research Specialists, hired at Hettinger REC, Carrington REC, Williston REC, Central Grasslands REC, SNRS-Main Station, and ABEN.

■ Infrastructure (equipment, operating, graduate students and office support staff)

\$1,880,000 received

- \$200,000 Equipment, REC and Main Station revolving equipment funds; allocated
- \$410,000 Main Station operating funds allocation per SY added to previous funding; allocated
- \$720,000 Graduate Research Stipends; allocated
- \$550,000 Office Support Staff, 5.0 FTE Main Station hired, in Plant Pathology/SNRS, Animal Science, Ag & Biosystems Eng, Plant Pathology, and Ag Administration.

■ Improving the State's Economy by Enhancing Crop Development Efforts

\$210,000 salary and fringe benefits, 1.0 FTE Scientist-canola breeding/genetics, hired
\$280,000 other fund authority for canola; positions filled

■ Improving Animal Productivity and Livestock Stewardship for Increased Profitability in the North Dakota Livestock Industry

\$240,000 salary and fringe benefits, 2.0 FTE Research Specialists-livestock stewardship hired in animal science.

■ Special Assessment

\$82,402 12th Ave. N biennial payment; FY 12 & 13 assessment paid



Update of Initiatives Funded in 2011-13: NDAES

■ Director-Williston REC - contingency appropriation

\$210,000 salary and fringe benefits, 1.0 FTE

Agreement with Montana State University Eastern Agricultural Research Center dissolved, hired Director January 2012.

■ Dickinson REC operating pool

\$800,000 distributed for operations at Dickinson REC

■ Research greenhouse complex

\$6,991,650 general funds, \$2,502,931 other funds; construction in progress

Funds used to construct Phase III of the Main Station Greenhouse. Phase III is scheduled to be completed in summer 2013.

2011-13 Legislation that Included Reporting Requirements to 2013 Appropriation Committees

HB1020 (NDSU Research & Extension, & Agronomy Seed Farm)

■ **SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO SIXTY-THIRD LEGISLATIVE ASSEMBLY.** The following amounts reflect the one-time funding items approved by the sixty-first legislative assembly for ... the 2011-13 one-time funding items included in the appropriation in section 1 of this Act:

One-Time Funding Description

Main research center greenhouse project	\$9,494,581
Total other funds	2,502,931
Total general fund	\$6,991,650

The 2011-13 one-time funding amounts are not a part of the entity's base budget for the 2013-15 biennium. The main research center shall report to the appropriations committees of the sixty-third legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2011, and ending June 30, 2013.

- Main research center greenhouse project - \$9,494,581 (\$6,991,650 GF, \$2,502,931 OF)
Status: Construction in progress. Below ground construction (foundation work) completed late 2012, with above-ground work substantially complete. Project scheduled to be completed summer 2013.

■ **SECTION 8 (As amended in Section 18 of SB2015). PERMANENT OIL TAX TRUST FUND - DICKINSON RESEARCH CENTER - OPERATING POOL FUNDING.** The estimated income general fund line item in subdivision 5 of section 1 of this Act includes \$800,000 from the permanent oil tax trust fund. This of operating pool funding is available only for defraying the costs of operations of the Dickinson research center, for the biennium beginning July 1, 2011, and ending June 30, 2013.

- Dickinson research center-operating pool funding - \$800,000
Status: Funds have been allocated and used to defray operating costs at Dickinson REC.

■ **Additional Reporting**

- Special Assessments: \$82,402
Status: Assessments for FY12 and FY13 have been paid.

■ **Main Station Carryover Status**

	Authorization			Total Expense as of 11/30/2012	Remaining Authority
	GF	OF	Total		
Branch REC Projects Status: Complete	845,157	–	845,157	845,157	–
Greenhouse/Utilities Status: to be complete summer 2013	1,687,111	2,669,317	4,356,428	1,933,842	2,422,586
Total	2,532,268	2,669,317	5,201,585	2,778,999	2,422,586



Construction of Greenhouse Complex

NDSU Agriculture and University Extension
North Dakota Agricultural Experiment Station

FACILITIES

Main Station - North Dakota Agricultural Experiment Station Research Greenhouse Complex

2011-2013 Authorized Amount:

\$6,991,650 GF, \$2,502,931 OF

An outline of the Main Station Research Greenhouse project process:

- Phase I of the Main Station Research Greenhouse Complex appeared as priority No. 1 in the 2004 NDSU Campus Master Plan for the Agricultural Experiment Station.
- This project was authorized in SB 2023 for the 2005-07 biennium in the amount of \$7,000,000 including \$2,000,000 in state bonding and \$5,000,000 in other and federal funds.
- NDSU further requested and was granted carryover authorization for the project at the Jan. 18, 2007, SBHE meeting to continue to raise funds to meet the \$5,000,000 goal in special funding, with the remaining \$2,000,000 being provided by state bonding.
- The 2007-09 appropriation in HB 1020 included an additional \$7,000,000 for the completion of Phase II of the three phase greenhouse project under the Main Research Center section and also carryover authority of \$7,000,000 in funding authorized in 2005-07.
- The legislature also removed the designations of Phase I and II of the project, and furthermore, Section 14 of HB 1020 stated that the Main Research Center may use any funding available within the total appropriation authority for the Main Research Center Greenhouse project to begin construction of the greenhouse with total cumulative authorization of \$14,000,000.
- SB2020 in the 2009-11 Biennium provided \$11,450,400 to fund additional construction.
- The NDAES was successful in raising additional funds for the special fund authorization that was approved for the project.
- HB1020 in the 2011-13 Biennium provided \$6,991,650 (General Funds) and \$2,502,931 (Special Funds) and the appropriation was declared to be an emergency measure. Of this appropriation, \$383,625 (General Fund) was spent as an emergency measure. In addition, HB 1020 included a carryover provision for appropriations from previous sessions. These amounts (including greenhouse utilities) are expected to be spent by the end of the biennium as the project is completed.





2013-15 Program Initiatives as Ranked by SBARE

Unranked Response to Legislative Request – Addressing oil revenue shortfall at Dickinson Research Extension Center (DREC) \$800,000 Operating, Dickinson REC - Permanent funds to offset reduced oil revenue - Oil revenues have declined due to decreased production in the last several years. Past legislative sessions have made efforts to offset this reduced revenue, but these efforts were temporary. Last session, a request was granted to provide \$800,000 to offset reduced oil revenues, but SBARE was tasked by the Legislature with determining and suggesting a permanent solution to this issue.



1 Crops Initiative - Enhancing Crop Development and Protection Efforts

Situation: Agriculture accounts for 25 percent of the state's economy. Related activities (e.g., sale of products, manufacturing, transportation of commodities, professional services, processing) increase that to more than 40 percent. Developing improved crop varieties and protecting crops from diseases and pests are fundamental to North Dakota farmers' competitive success and profitability. Research in areas such as bioinformatics and statistical genomics will provide scientists with cutting-edge tools.

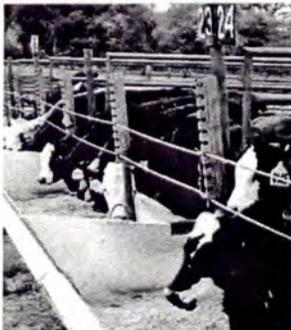
Need: Nematologist and support staff, bioinformaticist, statistical genomicist and support staff (5.0 FTE, Main Station) and operating support for crop variety development, disease control (Main Station, CREC, LREC, DREC); increased support for NDAWN (1.0 FTE, Main Station) - \$2,470,000



2 Enhancing Research Capacity at the RECs

Situation: The RECs play a very important role in carrying out applied research in the Agricultural Experiment Station. Their involvement in important regional and state research activities has expanded, and support for these activities from farmers and ranchers is strong. The ability of the scientists stationed at the RECs to address important and emerging problems, such as weed and disease control, will increase as the technical sophistication of farming and ranching practices increases.

Need: Operating support (LREC, CGREC, NCREC, DREC, WREC, CREC, HREC); scientists to focus on control of weeds and plant pathogens (2.0 FTE: HREC, WREC); technical support (6.0 FTE: LREC, CGREC, NCREC, DREC, WREC, CREC) - \$1,860,000



3 Livestock Initiative - Improving Livestock Productivity and Protection

Situation: North Dakota livestock producers are committed to producing the safest, highest-quality food products. Increasing demand for our meat products nationally and internationally will require additional emphasis on productivity and present additional opportunities for specialty markets and improved profitability. Through research, we can identify sustainable, profitable opportunities to improve livestock productivity in North Dakota.

Need: Scientists (2.0 FTE, Main Station); operating and technical support (4.0 FTE: HREC, CREC, CGREC, DREC); operating and technical support (4.0 FTE, Main Station) - \$2,100,000



4 Risk Management and Trade in Domestic and Global Markets

Situation: Risk in agriculture has increased three to four times since 1980 due to changes in technology, weather, farm policy, markets and food safety issues. North Dakota leads the nation in the production of 15 crop commodities; no other state has the incentive to develop new risk management products for these commodities. Also, North Dakota relies heavily on exports to global markets; thus, monitoring and evaluating changes in farm policies helps producers develop global market strategies.

Need: Ag market risk scientist, econometrician, policy and trade issues research scientists (5.0 FTE, Main Station) - \$1,000,000



5 Sustaining Water, Air and Land Quality to Maintain and Improve North Dakota's Agriculture

Situation: North Dakota agriculture is committed to producing the highest-quality products in an environmentally sustainable manner. However, agriculture may be perceived poorly and face unreasonable regulations for its impacts on water, air and land resources. Additionally, the oil industry's impacts on air and land resources may result in significant impacts on North Dakota Agriculture.

Need: Operating funds and equipment to measure water quality parameters and develop nutrient recommendations; technical support (2.0 FTE, Main Station) - \$380,000



DETAILS: 2013-2015 Program Initiatives as Ranked by SBARE

N.D. Agricultural Experiment Station

Unranked Response to Legislative Request – Addressing oil revenue shortfall at Dickinson Research Extension Center (DREC)

\$800,000 Operating, Dickinson REC - Permanent funds to offset reduced oil revenue - Oil revenues have declined due to decreased production in the last several years. Past legislative sessions have made efforts to offset this reduced revenue, but these efforts were temporary. Last session, a request was granted to provide \$800,000 to offset reduced oil revenues, but SBARE was tasked by the Legislature with determining and suggesting a permanent solution to this issue.

1. Crops Initiative — Enhancing Crop Development and Protection Efforts

\$2,470,000 Total General Fund Increase

\$1,160,000 Increased operating support for the following programs: barley, corn, dry bean, pulse, soybean, HRS wheat, winter wheat, canola, cereal diseases, dry bean and pulse diseases (Main Station), crop pathology (CREC), variety testing (LREC), and dryland crop improvement (DREC)

\$355,000 salary and fringe benefits, 2.0 FTE – Main Station, one nematologist and technician

\$300,000 Increased funding for operating (\$80,000), software and hardware (\$100,000), and technical support (1.0 FTE, Main Station – \$120,000) for NDAWN

\$300,000 salary and fringe benefit, 1.0 FTE, Main Station – one bioinformaticist

\$355,000 salary and fringe benefit, 2.0 FTE Main Station – one statistical genomicist and technical support

Agriculture is the leading sector of the state's economy. Cash "farm-gate" receipts of crop and livestock commodities account for 25% of the state's economy. Further, additional agricultural activities including, but not limited to, sale of products, manufacturing, transportation of commodities, professional services, and processing increases the percentage of this important component to more than 40%.

Developing improved crop varieties is fundamental to continued competitive success and profitability of farmers in the state. North Dakota has an extremely diverse crop mix; farmers grow more than 42 different crops in the state, and lead the nation in the production of more than 14 crop commodities. To accommodate the demand, the NDAES has developed over 13 plant breeding programs, with additional research programs that significantly aid in the development of improved varieties. These programs are expensive to operate, yet provide substantial ROI. When new varieties are released, they provide an immediate level of new wealth to farmers in the state. In general, \$1 invested in variety development generates over \$200 in return to the state. These increased operating dollars would be distributed based on need to the different programs. The funds would be used for purchasing field and lab supplies, minor equipment purchases and repairs, and salaries for non-benefitted student workers (both field and lab).

Research to protect yield of all of the commodities is critical in reducing production costs. One area of crop protection that needs to be addressed is nematology. Several species of nematodes infest the roots of many of our important commodities; of these, the Soybean Cyst Nematode (SCN) perhaps causes the greatest economic impact. While the organism does not travel far on its own, mechanical transportation by humans enhance its movement within a region. This organism has recently been identified in 12 counties in the state, as far north as the Canadian border and west to the Missouri River. The population is expected to increase rapidly. Yield losses in soybean and in other susceptible hosts of the pathogen, such as dry bean, are expected to increase as the population increases. In addition to SCN, other nematode species likely or confirmed in ND can infect sugarbeet, canola, potato, wheat, corn, and others.

Efforts to monitor disease development using NDAWN saved more than \$30 million annually (either protecting the crop using timely application or not needing to spray). However, the NDAWN network is in need of upgrades, both

DETAILS: 2013-2015 Program Initiatives as Ranked by SBARE

in software and hardware. Of the 73 sites operated by NDAWN, only eight stations are capable of near-real-time data delivery using Wireless Data communication. Also, large spatial gaps exist, with 15 western ND counties not having an NDAWN station.

Fundamental research is research that creates new knowledge of science. Also described as basic research, it is the basis of all applied research that is carried out. Unlike applied research, where we can typically identify an immediate "payback", basic research generally has a more long-term payback. Having a combination of basic and applied research in agriculture allows our scientists to be at the forefront of identifying new knowledge, new technology, and new products. It also enhances our ability as an experiment station to partner with industry, to increase our success in garnering competitive grants from a number of organizations and solving tomorrow's problems today.

Research in areas, such as bioinformatics and statistical genomics, has future payoff, but also will provide our scientists with cutting edge tools with which to work more efficiently. Modern genetic and genomic technologies are providing a wealth of new data that are rapidly accelerating the pace of new applied discoveries. Understanding these data and interpreting them in a manner that supports breeding and other investigative research areas is essential for rapid advancement and the efficient development of new crop cultivars. Statistical genetics defines the new experimental approaches necessary to take advantage of large genomics data sets. Bioinformatics is the analytical tool necessary to analyze these data. Together, researchers in these fields analyze the data and provide applied researchers with interpretations that allow for timely and efficient decisions.

Crop development efforts can be enhanced by additional support to a number of breeding and affiliated research programs in quality evaluation, disease reaction, and agronomics.

2. Enhancing Research Capacity at the RECs

\$1,860,000 Total General Fund Increase

\$400,000 salary and fringe benefits, 2.0 FTE (HREC and WREC) are needed to focus on chemical and cultural control of weeds and plant pathogens in farming and grazing enterprises in western North Dakota.

\$900,000 operating and fringe benefit (1.0 FTE, LREC; 1.0 FTE, CGREC; 1.0 FTE, NCREC; 1.0 FTE, DREC; 1.0 FTE, WREC; and 1.0 FTE, CREC), technical support

\$560,000 Operating support (LREC, CGREC, NCREC, WREC, HREC, CREC, DREC)

The Research Extension Centers play a very important role in carrying out applied research in the Agricultural Experiment Station. Since evolving from branch stations/research farms, their involvement in important regional and state research activities has expanded, and there is strong support for these activities from farmers and ranchers in the state. Each REC has a unique mission to serve their respective region of the state; therefore, their needs also are unique. The ability of the scientists stationed at the RECs to address important and emerging problems will increase as the technical sophistication of farming and ranching practices continues to occur. Additional technical support staff to assist scientists on their research efforts and operating funds to help carry out the research are needed. Approximately 50% of each REC total budget is from gifts, grants (to support research), and sale of product.

A few scientists throughout the state carry out weed control research. Often, the mix of weed species affecting crop production in western North Dakota, and the cost of herbicides relative to potential productivity in the western part of the state, requires identifying different options better suited to this unique environment. A number of factors differentiate this region from other regions of the state, including extensive grazing lands, widespread adoption of no-till for moisture conservation, and the crops mix used in the region. Additionally, soil fertility, C-N ratios that exist in the region, and the identification of invasive species into this region all indicate that more expansive weed control activities be carried out in the region. Environmental conditions, including extended growing seasons and frequent drought create unique populations of tough-to-control weeds like downy brome, Persian darnel, and cleavers. Many weeds are directly responsible for reduced productivity of grazing lands, reduced palatability of livestock feeds, and some can be toxic to livestock.

There is an increasing level of crop disease problems occurring in western North Dakota due to the switch from a strict wheat-fallow rotation to intensive no-till cropping systems and irrigation development. Wheat and barley fields infected with leaf diseases, viruses, and even Fusarium head blight have been observed, while fields of pulse crops and other alternate crops have been infected with a number of diseases. A plant pathologist is needed to conduct timely disease surveys on the incidence and severity of crop diseases and to develop and recommend disease management control measures to no-till and irrigated producers. The plant pathologist will work with NDSU plant breeders on screening and identifying germplasm having resistance to the prevalent diseases occurring under no-till and irrigated production in western North Dakota.

3. Livestock Initiative — Improving Livestock Productivity and Protection

\$2,100,000 Total General Fund Increase

\$700,000 salary and fringe benefit, 5.0 FTE (HREC, CREC, CGREC, DREC, and Main Station), technical support.

\$480,000 Operating support (Main Station, HREC, CGREC, CREC, DREC)

\$225,000 salary and fringe benefit, 1.0 FTE, Main Station, one scientist in forage nutrition and management

\$340,000 salary and fringe benefit 2.0 FTE, Main Station, support staff

\$355,000 salary and fringe benefit, 2.0 FTE, Main Station, one scientist in epigenetics and one technician

North Dakota livestock producers are committed to producing the safest, highest quality food products. Increasing demand for our meat products nationally and internationally will require additional emphasis on productivity and also will present additional opportunities for specialty markets and improved profitability. Through research, we can identify sustainable, profitable opportunities to improve livestock productivity in North Dakota.

Forage and Forage Nutrition Research. Forages are the backbone of North Dakota's livestock industry. The cow-calf, sheep, and dairy industries in the state rely on forages (grazed and harvested) for profitable and sustainable production. Additional investments in forage and forage nutrition research will pay dividends for North Dakota's livestock industry by enhancing productivity through a systems approach.

Expanded Beef Cattle Finishing Research. The resources are in place to grow beef feedlot enterprises in North Dakota. Opportunities for new market outlets and international trade, as well as the large variety of available feedstuffs, should enhance the opportunity for expansion. Systems that provide a stable, year-round finished cattle supply for processors and enhanced carcass quality for specialty markets, along with mitigating environmental stress, improving environmental sustainability, and improved animal care and husbandry are priorities for research.

Bison Research. North Dakota is the third largest bison producer in the nation. The North Dakota bison industry identified several emerging needs areas at their recent testimony (Jan. 6, 2012), the most important of which is information on mineral nutrition of bison. Also, included in their testimony was research on feeding and nutrition of bison, grazing management, basic nutrient requirements, and animal health.

Epigenetics. Epigenetics is the study of factors such as diet, stress and other regulators that influence genetic expression. Our research capabilities can be enhanced by adequately funding efforts such as those made in the Advanced Imaging and Microscopy Lab and the Center for Nutrition and Pregnancy.

Through cooperative agreements and collections income, the laboratory has been responsible for the funding of positions considered essential by our accrediting organization, the American Association of Veterinary Laboratory Diagnosticians. Uncertainty about the year to year availability of these monies places these critical positions in jeopardy. Without accreditation, the laboratory would lose reputation, status, and clientele. Permanent funding is needed to give stability to these positions.

4. Risk Management and Trade in Domestic and Global Markets

\$1,000,000 Total General Fund Increase

\$355,000 salary and fringe benefit, 2.0 FTE Main Station, one scientist and technician, Ag market risk

\$215,000 salary and fringe benefit, 1.0 FTE Main Station, one econometrician

\$430,000 salary and fringe benefit, 2.0 FTE Main Station, research scientists, policy and trade issues

Risk Management. Risk in agriculture has increased 3-4X since 1980 due to changes in technology, weather, farm policy, markets, and food safety issues. Declining federal support will place greater emphasis on crop insurance. North Dakota leads the nation in the production of 15 crop commodities; no other state has the incentive to develop new risk management products for these commodities that are critical to the state.

Econometrics. Econometrics investigates voluminous information from newly available macro databanks. Investments in basic research such as econometrics pave the way for breakthroughs in the applied sciences area in the future and will lay the foundation for applied breakthroughs to enhance production agriculture in the future.

Ag Policy and Trade. North Dakota Agriculture relies heavily on exports to global markets. The ability of our crops and livestock producers to remain profitable in ever-changing global markets brought about, in part, by changes in farm policy domestically and globally, remains critical to the continuation of the state's largest industry. Monitoring and evaluating change in farm policies to better develop global market strategies is the focus of the Center for Ag Policy and Trade Studies.

5. Sustaining Water, Air, and Land Quality to Maintain and Improve North Dakota's Agriculture

\$380,000 Total General Fund Increase

\$100,000 operating and equipment for to measure water quality parameters and to develop nutrient recommendations - this will improve nutrient use efficiency and decrease input costs and reduce water quality impacts, Main Station

\$280,000 salary and fringe benefit, 2.0 FTE Main Station, technical support

North Dakota's plant and animal agriculture are committed to producing the highest quality products in an environmentally sustainable manner. A healthy environment produces the best agricultural products and is sustainable for future generations. However, agriculture may be perceived poorly and face unreasonable regulations for its impacts on water, air, and land resources. Additionally, the oil industries' impacts on air and land resources have negatively affected the health of North Dakota's agriculture.

Water. An important part of reducing water quality impacts and reducing input costs is the development of soil nutrient recommendations that improve nutrient use efficiencies. Improved nutrient use efficiencies can reduce water quality impacts from tile-drained fields. The addition of operating support to the soil test laboratory will help develop nutrient recommendations that can improve nutrient use efficiency. Animal agriculture also has perceived negative effects on water quality and limits the growth of certain industries, such as dairy. Federal policies also can be restrictive to the cattle industry. Furthermore, maintaining good water quality is essential to improving the health and safety of livestock.

Air. Livestock operations face increased scrutiny for potential negative impacts to air quality (e.g. greenhouse gas emissions). Moreover, increased road traffic around oil production areas has resulted in increases in dust emissions. Increased dust emission may have negative impacts on plant and animal health.

Land. The rise of oil industries in western North Dakota may have long-term negative impacts on land quality, thereby decreasing agricultural productivity. Brine spills and soil compaction have reduced land quality and crop productivity in western North Dakota.

It is necessary to quantify the actual impacts agriculture has on water, air, and land quality in North Dakota, and, if necessary, develop better management practices. Water quality indicators (e.g., nutrients, pesticides, herbicides, pathogens) need to be proactively monitored in runoff and tile drainage from cropped fields and runoff from feedlots. Demonstrations of good management practices are also useful in determining agriculture's effects on the environment and educating and informing the community and policy-makers. Greenhouse gas emissions from animal agriculture also need to be quantified. North Dakota's agriculture should strive to be proactive to ensure quality agricultural productivity for future generations, which will reduce negative perceptions and deter restrictive regulations.

In areas affected by oil production, water, air, and land quality should be monitored to ensure sustainable conditions for plant and animal production. Strategies should be developed to ensure the sustainable development of these areas and to remediate impacted lands.

2011-13 Impacts

The North Dakota Agricultural Experiment Station develops and disseminates technology that is vital to the production and use of food, feed, fiber and fuel from crop and livestock operations.

To do that, the Agricultural Experiment Station has eight Research Extension Centers strategically placed throughout the state. Researchers at these centers work on solving problems the state faces and test new management techniques and crop varieties. The centers are the Main Station in Fargo, Agronomy Seed Farm (Casselton) and the Carrington, Central Grasslands (Streeter), Dickinson, Hettinger, Langdon, North Central (Minot) and Williston Research Extension Centers.

The centers work with the NDSU College of Agriculture, Food Systems, and Natural Resources' seven departments: Agribusiness and Applied Economics, Agricultural and Biosystems Engineering, Animal Sciences, Cereal and Food Sciences, Plant Pathology, Plant Sciences, and Veterinary and Microbiological Sciences along with the School of Natural Resources Sciences and the School of Food Systems.

Here are some accomplishments at the Main Station during the past two years:

- Released high yielding, disease resistant, and high quality HRSW cultivars Prosper (eastern N.D.), Velve (central N.D.) and Elgin (western N.D.).
- Released Jury, an oat variety well adapted throughout eastern and central N.D., with high yield potential, improved disease resistance, and high quality traits, including high beta-glucan levels.
- Released the durum cultivar Carpio, high yielding and excellent quality traits, for central and western N.D.
- Released the red bean Rio Rojo, a high yielding, disease resistant small red bean that meets both domestic and export markets.

Prosper hard red spring wheat is one of the cultivars developed and released by the North Dakota Agricultural Experiment Station.



IMPACTS: North Dakota Agricultural Experiment Station

- Developed, maintained, and improved disease forecasting systems that are important tools for crop disease management.
- Reduced leafy spurge infestation from its peak of 1.5 million acres to 600,000 acres by 2011, the lowest amount since 1971, providing an estimated \$14 million in additional revenue due to landowners.
- Developed and implemented an early detection and rapid response system to prevent invasive weeds from establishing in the state.
- Determined that nutrient intake of the mother influences progeny performance of livestock via epigenetic modification of gametes.
- Identified methods to reduce the cost of feeding cattle using the new Beef Cattle Research Complex.
- Developed in-house assays that target the detection of petroleum byproducts in rumen contents.
- Established the nation's first Pulse Quality Lab that works with both the breeding program and with the industry to evaluate the level of quality of the N.D. pulse crop.
- Identified improved genetic resistance to many plant diseases found in the state, saving the N.D. farmer millions in lost yield.
- Investigated the feasibility of using CRP biomass for ethanol production while preserving and enhancing the production, delivery, and stability of CRP.
- Developed low cadmium durum wheat lines, which is highly desired in some global markets.



The Beef Cattle Research Complex conducts research on the cost of feeding cattle that will benefit North Dakota's livestock industry.



AGENCY OVERVIEW

Carrington Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory 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 1,700 acres and has infrastructure to irrigate about 260 acres with center-pivot systems and 120 acres by surface methods. The balance of the acreage is managed as traditional dryland and is utilized primarily for dryland field crop research activities.

The research effort at CREC focuses on these general program areas: traditional crop variety evaluation, crop production and management, plant disease management, alternative crop development, cropping systems, irrigation, integration of crop and livestock production, intensive cow/calf production, beef cattle feeding, feedlot management, livestock waste and nutrient management, foundation seedstocks production, and development of new agricultural enterprises. Through these efforts, the CREC research program has gained a national reputation for its involvement in agriculturally-based economic development and study of a wide range of crops and cropping systems.

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, plant pathology, irrigation, livestock, 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 CREC 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 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 March 13, 2012. 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

An Agronomy Laboratory is a critical facility need for a primary program of the CREC. The Agronomy Laboratory is required to support what is considered one of the largest and most diverse agronomy field research programs in the upper Midwest. The CREC conducts more than 350 field research experiments annually including trials on all crops (> 30) representing the diversity of agriculture in North Dakota. The seeds, plants, soils, and other samples associated with these experiments are all processed in a repurposed 1962 potato warehouse representing a total space of 2,400 square feet. This laboratory has limited space for current experiment preparation and processing, sample cleaning, dryers, field sample storage, and lacks appropriate environmental controls for seed storage. Additionally, the present facility does not meet worker protection standards as dust handling, air exchange, and a chemical handling area are not a fit for the building's design. The innovative and proactive research efforts of the CREC agronomists, plant pathologist and soil scientist are severely compromised as the current facility has zero laboratory space for plant pathology equipment, detailed soils evaluations, or the adaptation of new technologies for seed, soil, and plant research processes. An Agronomy Laboratory is a critical need since North Dakota producers will not realize the scope and depth of new knowledge that the CREC scientists are capable of generating with modern laboratory facilities.

A secure (owned or long-term leases) land base is critical to sustain the current and future research mission of the CREC. The diverse and broad based programs of the CREC operate on a relatively small land base. For many years, the CREC has operated on a land base of around 1,700 acres with the state owning around 840 acres. The remaining land base of more than 850 acres must be secured from 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.

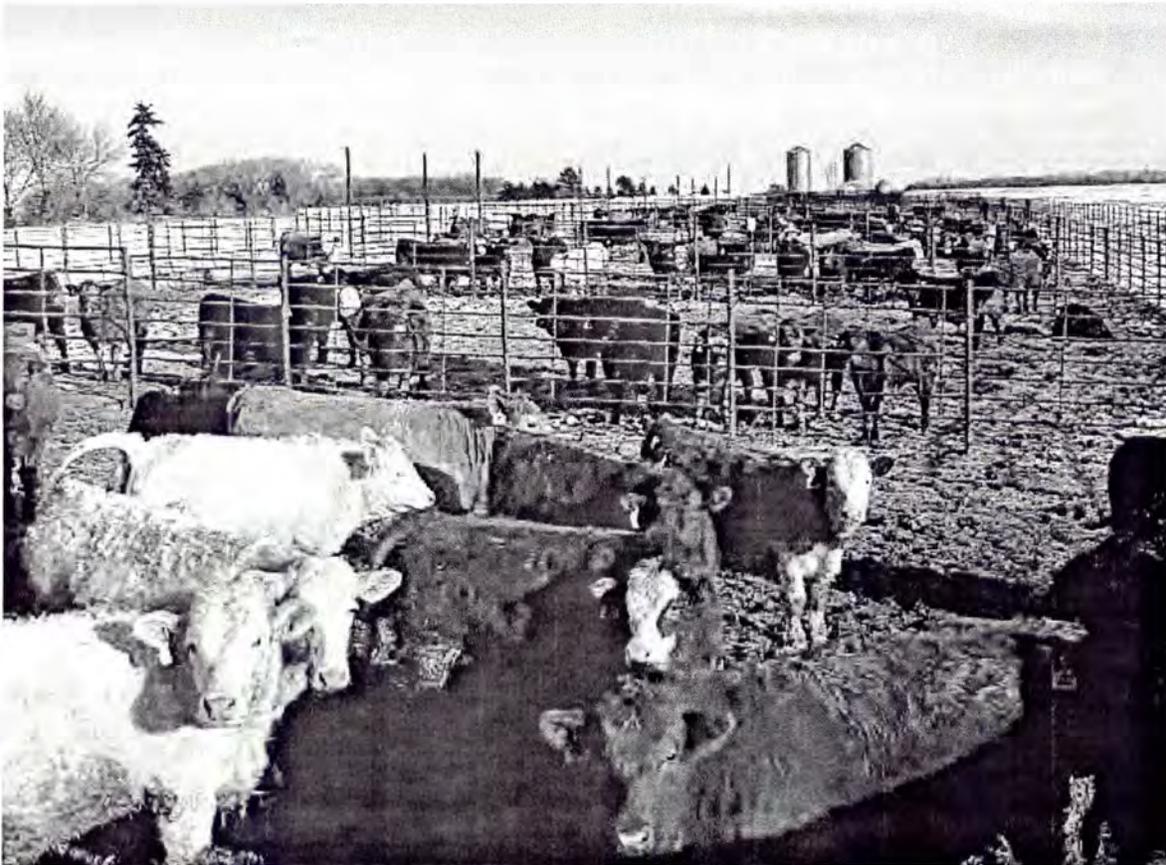
Additional primary program facilities are further issues that need to be addressed to sustain the viability of the diverse programs at Carrington. The beef research unit desperately needs a multi-use 'feedlot research support facility.' This facility would improve feedlot research operational capacity, assist in sustaining IAUAC compliance, attain worker protection standards, and reduce maintenance costs for equipment.

The CREC's foundation seedstocks program is an important part of NDSU's seedstocks program that is challenged to process the diversity of crops and varieties the center annually produces. The CREC seed conditioning plant is in need of replacement since the current facility has very limited capacity and structurally is too small to accommodate needed upgrades. A mobile seed conditioning mill is needed.

■ Carrington Research Extension Center (CREC)

Here are some accomplishments at the Carrington Research Extension Center during the past two years:

- Investigated practices to optimize corn fertilizer management with intensive management, in-furrow, top-dress and secondary fertilizer research projects.
- Assessed response and economics of soybean production strategies that utilize combinations of cultural practices and crop production inputs.
- Established grain and forage crops across a soil salinity gradient to assess tolerance based on plant survival and performance.
- Provided training for over 50 private and cooperative crop consultants during the 2011 CREC Crop Management Field School.
- Partnered with North Dakota angus producers to form North Dakota Angus University, a research program that facilitates CREC feedlot research and expands producer's knowledge of herd performance.
- Determined that self-feeding is a viable option for smaller-scale cattle producers who want to finish cattle in a collaborative project with the HREC.
- Determined that raising beef cattle in a drylot system is a viable alternative beef management practice.



Feedlot research at the Carrington Research Extension Center.



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. CGREC is located between two counties which rank in the top 10 counties for the production of livestock and forages. The area served by CGREC contains 5.0 million acres (44 percent) of the state's rangeland where 42 percent of the state's livestock is raised on 38 percent of the state's farms.

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.

NDSU NORTH DAKOTA AGRICULTURAL
EXPERIMENT STATION

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 March 13, 2012. 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 CGREC administers over 5,000 acres of native rangeland, tame pastures, and crop acreages. Future critical issues include:

1. Laboratory space, in the form of an agronomy lab, is needed to allow scientists the opportunity to expand current research and develop and implement new research projects.
2. Current livestock facilities are deficient for a fully implemented animal science program. 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.
3. Technical support is a critical issue. In order to strengthen current research programs, research specialists are needed for the animal science and range science programs and a full-time technician is needed to support the farming and livestock needs of the center.
4. The addition of a regional extension specialist has been encouraged by our advisory board. The specialty of this individual could relate to range nutrition, forage/hay production, or sustainable agriculture.
5. Significant improvements are also needed at the director's residence as the current residence has water and possible mold issues in the basement.
6. Other facilities are in need of deferred maintenance funding. Specifically, roof work on the technician residence, updates to existing barns to increase usefulness and safety, replacement of antiquated fences, as well as general maintenance at all residence, barn, and office buildings.

■ Central Grasslands Research Extension Center - Streeter (CGREC)

Here are some accomplishments at the Central Grasslands Research Extension Center during the past two years:

- Conducted studies on plant respiration and photosynthesis in response to grazing.
- Continued projects on control of invasive grass species through grazing.
- Collaborated with multiple on-campus faculty and scientists at other REC's on livestock projects evaluating breeding systems, range supplementation, and meat quality.
- Conducted research projects evaluating a multitude of forage species for use in the northern plains. Additionally, continued forage based biofuels research at sites across the state.
- Obtained funding to develop management practices allowing for increased use of distillers dried grains with solubles in range settings.
- Hired technical support for the forage agronomy program.



Forage-based biofuels research at Central Grasslands Research Extension Center.





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 4,916 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 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 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 March 13, 2012. 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

SBARE \$800,000 Operating, Dickinson REC — Permanent funds to offset reduced oil revenue — Oil revenues have declined due to decreased production in the last several years. Past legislative sessions have made efforts to offset this reduced revenue, but these efforts were temporary. Last session, a request was granted to provide \$800,000 to offset reduced oil revenues, but SBARE was tasked by the Legislature with determining and suggesting a permanent solution to this issue. The DREC needs to continue to resolve lost income dollars from oil revenue. This funding was available for defraying the costs of operations for the biennium beginning July 1, 2011, and ending June 30, 2013. Permanent funding is needed.

SBARE Crops Initiative — Enhancing Crop Development and Protection Efforts — DREC improved operating funds — The DREC advisory board has placed dry land corn research as a very high priority. Improved breeding and management will add diversity and stability in production opportunities for western North Dakota agricultural business. While yields are promising, optimal management techniques need to be developed for the West. Additional operating support is needed for enhancing corn production and no-till cropping systems with improved crop varieties and protection from diseases, insects and weeds.

SBARE Initiative — Enhancing Research Capacity at the RECs — DREC improved operating and technician support — The Center's involvement in important regional and state research activities has expanded, and encouraged by the DREC advisory board. The ability of the scientists located at the Center to address important and emerging crop, range and beef issues requires improved operating and technical (technician) assistance.

The Center would be appreciative of enhancing funding that supports the efforts of SBARE through the North Dakota Agricultural Experiment Station and NDSU Extension Service.

■ Dickinson Research Extension Center (DREC)

Here are some accomplishments at the Dickinson Research Extension Center during the past two years:

- Continued work in four research and extension areas: agronomy, beef management, range management, and sustainable agricultural practices.
- Reported conventional and organic agronomic research and extension information regarding various management techniques involving tillage (conservation tillage and no-till), cropping systems, pest control systems, variety development and the integration of cover crops.
- Reported grassland research information regarding various management techniques involving grass cultivars, ornamental xeriscape, soil mineral nitrogen, prairie ecosystems, drought, grassland restoration, grazing systems, burning and the integration of beef cattle.
- Reported beef research and extension information regarding various management practices involving winter forage replacement strategies, effects of heifer frame size and forage based diets on development and yearling steer performance on extended grazing annual forages.



Cropping systems presentation at a Dickinson Research Extension Center field day.





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 Extension 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 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, and 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, 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 and wildlife/livestock interactions has resulted in a significant increase in the quantity of rangeland research conducted at the HREC throughout the western Dakotas. Research at HREC involves the disciplines of animal science, range science, wildlife science, agronomy, and agri-business and applied economics. 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 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 March 13, 2012. 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 OVERVIEW: Hettinger Research Extension Center

Agency Future Critical Issues

A modern agronomy and range lab is needed to recruit and maintain quality scientists and graduate students, as well as meet the requirements set forth in today's competitive granting environment.

A new livestock processing and educational facility is needed to provide the facilities necessary to conduct research, train graduate students, and educate producers.

Extension and research staffing, both professional and technical support, for weed science and livestock production continue to be a priority to meet the educational and research needs of producers in SW North Dakota.

■ Hettinger Research Extension Center (HREC)

Here are some accomplishments at the Hettinger Research Extension Center during the past two years:

- Distributed foundation seed produced at NDSU research centers, making new varieties available to southwest North Dakota producers.
- Conducted crop trials and pesticide trials as well as off-station variety testing at Regent, Scranton, New Leipzig, Selfridge, Reeder, and Mandan.
- Evaluated new varieties and technologies for growing drought tolerant corn and wheat, wheat stem sawfly resistance, and new and emerging bio-fuels.
- Conducted multiple land use research evaluating sharp-tailed grouse habitat, reclamation of low-quality farmland back to native grasslands through the use of cover crops to improve soil conditions, and grazing systems that included both wildlife habitat and agricultural outputs.
- Collaborated with Sitting Bull College on the Standing Rock Sioux Reservation, the USDA-ARS in Mandan, NDSU, and SDSU on a new multi-agency research and outreach project evaluating the reclamation of lands degraded by prairie dogs, and the feasibility of producing a Tribal beef product that is produced from birth to plate on the Standing Rock Sioux Reservation.
- Conducted research evaluating feeding technologies for cattle and sheep that improved reproductive efficiency, improved feedlot performance and decreased feed costs, and affected male reproductive performance in response to different feed types.
- Provided educational opportunities to livestock and crop producers such as the Crop Tours and Field Day, Dakota Ram Test, Shearing School, Wool Classing School, Ultrasound Certification School, and multiple rangeland, beef, and sheep schools.



Educational opportunities for sheep producers were provided at the Hettinger Research Extension Center.





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 389 owned acres and an additional 320 acres under lease agreement. The LREC serves a nine-county region located in northeast North Dakota and has North Dakota's highest precipitation rates, coolest temperatures, and richest productive soils. The climate creates high levels of 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. 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 proven cultural practices and advances in chemical applications that minimize disease and insect pressures in all regions of North Dakota.

Since 2001, the LREC has significantly enhanced its overall agricultural research programming with the addition of a crop protection scientist, a director that also serves the region with an emphasis in rural economic/community development, increased foundation seed stocks program and a farm business management instructor. In addition, a full service agricultural based learning center was constructed in 2004 which greatly enhances outreach and extension efforts delivered to the regions agricultural industry. Finally, additional programming has been created that is working to employ LREC resources as an engine for rural community and economic development in partnership with the region's economic developers.

Agency Mission Statement

The Langdon Research Extension Center will conduct applied agricultural research that enhances the quality of life for the regions 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 regions natural resources.

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 March 13, 2012. 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

Langdon is not able to begin cleaning its foundation seed production until January as the seed storage warehouse and adjacent rooms to the seed cleaning plant double as the agronomy lab plot processing area. These two functions cannot be done simultaneously as grain dust created with cleaning seed make it unhealthy and unsafe for the researchers and support staff associated with processing thousands of research plot materials. In addition, LREC's strong plant pathology applied research program is being limited to what it can do as the pathology lab triples as an office, pathology lab and storage area. A new agronomy and pathology lab would add efficiencies to the utilization of labor and other areas as well as significantly improve safety issues associated with the outdated facility. Additional operating dollars are also needed to support day to day operations of a new lab.

In 1962, a seed cleaning plant was constructed at LREC 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. LREC still uses the the same facility and equipment that was employed in 1962. The inefficiencies associated with the plant forces LREC's seed cleaners to run individual lots of dirty seed through the plant two and sometimes three times to achieve the best result. 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. The LREC feels that all of these issues can be resolved with a mobile seed conditioning mill.

■ Langdon Research Extension Center (LREC)

Here are some accomplishments at the Langdon Research Extension Center during the past two years:

- Continued to provide dependable and unbiased applied research results in all aspects of crop production for all crops grown in northeast North Dakota.
- Fostered strong research partnerships with agricultural input companies, commodity groups and others to give producers better information regarding which inputs to employ and which crops to grow in their operation.
- Produced the highest quality foundation grade seed of the major crops grown in our region for seedsman and producers through Langdon's foundation seedstocks program.
- Pursued value added agricultural opportunities with local economic development groups that may lead to new high value cropping system opportunities for producers and economic enhancements for rural communities.
- Provided dependable support for main station breeding programs and other cropping system research based out of the main campus that benefit producers for the entire state.
- Added two new Extension outreach programs in agronomy and soil health that bring a strong outreach program to address critical needs to the region's producers.



A soil health management program was established to meet the needs of producers in the 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 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 March 13, 2012. 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 mobile seed conditioning mill adequate to handle peas, lentils, beans, and chickpeas (in addition to small grains and oilseeds) for the expanding pulse crop industry and new NDSU breeding program is needed.
- Base funding for personnel to address the research and extension needs for pulse crops, canola, and cereal grains to meet the needs of growers and the increase of processing plants in the Minot area.
- Technical support.
- Increased operational costs.
- Removal of old seedhouse.
- Tile drain yard.
- Encroachment from City of Minot/relocation of center (land and facilities).
- Horticulturist needed to serve growing urban population and projects.
- Affordable housing/competitive salaries.

■ North Central Research Extension Center - Minot (NCREC)

Here are some accomplishments at the North Central Research Extension Center during the past two years:

- Continued to play key role in the strategic planning and production of foundation seed in the region. The center produced, conditioned, and distributed foundation seed of varieties including Pinnacle and Tradition barley; Omega and York flax; Divide, Grenora, and Tioga durum; Barlow, Glenn, RB07, and Velva hard red spring wheat; Decade, Darrell, and Jerry winter wheat; and Jury oat.
- Researched new crop protection products for minor crops such as sunflower, safflower, dry pea, lentil, chickpea, canola, mustard, and flax.
- Researched new products for controlling noxious weeds in non-cropland areas such as yellow toadflax, Canada thistle, and leafy spurge.
- Conducted residue trials with the USDA IR-4 that will lead to registration of new pesticides for controlling weeds and insects in minor crops.
- Conducted studies in several crops to identify weed control alternatives in response to development of weed resistance.
- Researched production practices and genetic improvement of 42 different crops.
- Researched *Brassica carinata* (Ethiopian mustard) lines for potential jet fuel and biodiesel use.



Research was conducted on *Brassica carinata* at the North Central Research Extension Center.





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 and an irrigated research and development project was established. WREC research studies are conducted on crop variety evaluation, herbicide performance and other cultural management research, cropping systems and soil and water conservation practices. The main dryland crops are spring wheat and durum. Barley, oats, safflower, pea, lentil, chickpea, canola, flax, alfalfa and other alternative crops are also grown as cash crops or for livestock feed.

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 for the region. 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, USDA-ARS Northern Plains Agricultural Research Laboratory in Sidney, Montana, and NDSU and other university scientists.

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 March 13, 2012. 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

Pea and lentil acreage has dramatically increased over the past 15 years and there has also been a significant increase in production of other broadleaf alternative crops. The switch from a strict small grain fallow rotation to a more intensive and diversified cropping system has resulted in a reduction of one million summer fallow acres in northwest North Dakota to significantly increase annual return per acre in our region.

Farmers in the MonDak region grow more than 20 different crops. There is an urgent need for additional technical support for WREC and off-station variety testing in each of the crops in dryland and irrigated cropping systems. There is a critical need for a plant pathologist to evaluate and research crop disease impacts due to the more intensive cropping systems used in western North Dakota.

A new seed plant at the WREC is needed to condition Foundation seed to replace the aging seed conditioning plant built in 1954. Seed conditioning efficiency of all crops would be significantly enhanced with a new mobile seed conditioning mill.

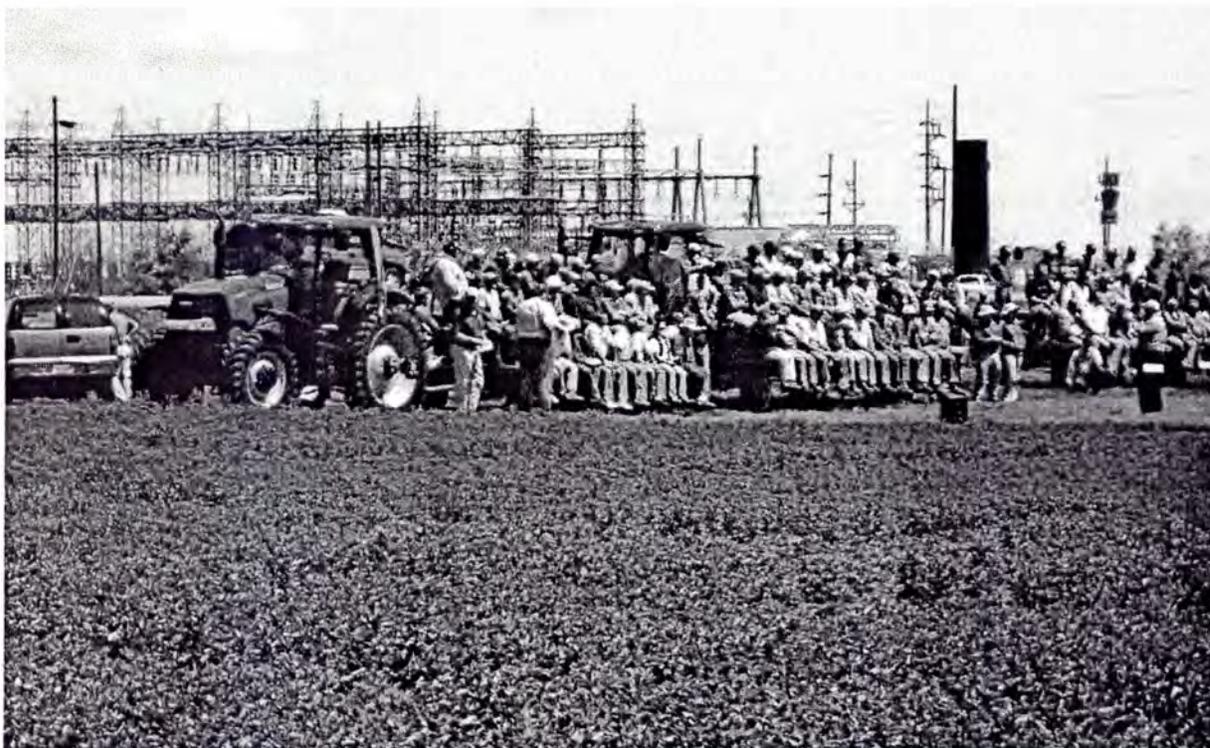
Retention and recruitment of staff is a critical issue for WREC due to the huge impact of oil and gas development in the Williston area. The energy explosion has significantly increased the cost of living and created a severe housing shortage in the region.

The Williston area is projected to increase in population to 40-50,000 people. There is an increased need for landscape materials and requests for adapted plant species for this climate by landscapers, homeowners, architects and local nurseries. The collaboration between NDSU researchers and the staff at WREC will become even more important for the emerging wine industry, truck farms and Community Supported Agriculture.

■ Williston Research Extension Center (WREC)

Here are some accomplishments at the Williston Research Extension Center during the past two years:

- Evaluated the performance and adaptation of new and established crop cultivars and crop cultural practices to improve productivity of agricultural products and reduce inputs.
- Conducted research and demonstration projects on potatoes, malting barley, safflower, spring wheat, and winter wheat variety developments, safflower disease control, pulse crop production and variety selection, horticultural crops, sprinkler irrigation, water and crop management.
- Conducted bioenergy crop research on barley and sugar beets for ethanol and biomass production from switchgrass and other perennial herbaceous crops.
- Utilized a 160-acre irrigated site in the Nesson Valley Irrigation District for an irrigated research and development project on sustainable irrigated cropping systems to increase irrigation profitability; promote irrigation development and support food processing industries in North Dakota.
- Dedicated the Neil Riveland Research Laboratory Addition to the Ernie French Center at the WREC Field Day in July 2011 and occupied for use in October 2011. The research laboratory addition provides updated seed sample processing/cleaning facilities, office space and soils, irrigation research and horticulture crops laboratories.
- Organized and assisted with outreach programming opportunities in the region: National Hard Spring Wheat Show, MonDak Pulse Day, Western Crop/Pest School, Irrigation Workshop, off-station trials and tours, field day events and the MonDak Ag Showcase.
- Collaborated with NDSU researchers and seed companies to evaluate grapes, floral and vegetable crops. The WREC garden is listed as a display garden for All America Selections. Sweet potatoes have been evaluated as an alternate crop.



Field days at the Williston Research Extension Center.





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 March 13, 2012. 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 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.

■ Agronomy Seed Farm

Here are some accomplishments at the Agronomy Seed Farm during the past two years:

- Produced 25,000 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.



Providing high quality seed continues to be an important part of the Agronomy Seed Farm's mission.

NDSU EXTENSION SERVICE

2013-15 Capital Improvement and One-time Needs as Supported by SBARE



North Dakota 4-H Camp

North Dakota 4-H Camp, along the Missouri River near Washburn, N.D., is used extensively during summer months for day and overnight youth camps, and secondarily for Extension staff training. The three cabins and main lodge need renovations to fix run-down facilities, meet handicap accessibility and privacy needs for youth campers and adult counselors and volunteers. The renovations will reduce the lodging capacity, so additional lodging space is required in a new multipurpose camp building. The multipurpose building also will provide additional indoor activity space that is needed for camp programs during inclement weather. Plus, it will serve as a storm shelter, which is not available at the camp site. Improvements such as an archery range, ropes course and a small barn for livestock will be made to the infrastructure for camp programs. These renovations, new building and camp improvements will increase the capacity of Extension to provide excellent youth development programs through camp experiences. Funding of this capital request would provide the renovations to improve the facilities and safety for youth education programs and will increase the overall utility and value of the North Dakota 4-H Camp facilities by extending its use to about eight months of the year. - \$1,900,000 (\$950,000 general fund request and \$950,000 other funds)

One-time Request

Replace 14 outdated, unsupported videoconferencing systems used for Extension programs including pesticide training, ag economics educational programs, marketing clubs, departmental seminars, and faculty and staff interviews - \$110,000

Additional Request

Funding to provide technical assistance grants to soil conservation districts to help landowners reduce soil erosion, improve water quality, and enhance tree plantings, grazing lands and wildlife habitat - \$150,000





DETAILS: 2013-2015 Capital Improvement and One-time Needs as Supported by SBARE

NDSU Extension Service

Capital Improvement

North Dakota 4-H Camp

\$1,900,000

\$950,000 general fund request

\$950,000 other funds

North Dakota 4-H Camp, along the Missouri River near Washburn, N.D., is used extensively during summer months for day and overnight youth camps, and secondarily for Extension staff training. The three cabins and main lodge need renovations to fix run-down facilities, meet handicap accessibility and privacy needs for youth campers, and adult counselors and volunteers. The renovations will reduce the lodging capacity, so additional lodging space is required in a new multipurpose camp building. The multipurpose building also will provide additional indoor activity space that is needed for camp programs during inclement weather. Plus, it will serve as a storm shelter, which is not available at the camp site. Improvements such as an archery range, ropes course and a small barn for livestock will be made to the infrastructure for camp programs. These renovations, new building and camp improvements will increase the capacity of Extension to provide excellent youth development programs through camp experiences. Funding of this capital request would provide the renovations to improve the facilities and safety for youth education programs and will increase the overall utility and value of the North Dakota 4-H Camp facilities by extending its use to about eight months of the year.

One-time Request

Interactive Video Equipment Upgrades at 14 Sites

\$110,000

\$110,000 for high definition interactive video cameras, monitors and installation

NDSU Agriculture uses videoconferencing — a technology that connects rooms electronically with video and audio through Internet lines — for pesticide training, ag economics educational programs, marketing clubs, departmental seminars, faculty and staff interviews, and meetings. The systems purchased nine years ago need replacing in order to continue to offer educational programming for groups of people without the added cost of travel expenses. This request is for 50% of the cost of six county units and the full cost of eight units at RECs and NDSU campus locations.

Additional Request — North Dakota State Soil Conservation Committee

\$150,000

\$150,000 for technical assistance grants to Soil Conservation Districts

The planning, design, installation and checkout of conservation practices by participating soil conservation districts have a significant impact on North Dakota's natural resources. Funds from this request will assist soil conservation districts to help landowners reduce soil erosion, improve water quality, and enhance tree plantings, grazing lands and wildlife habitat.



1. Agronomy Laboratories

Agronomy laboratories at the Carrington, Hettinger, Langdon and Central Grasslands Research Extension Centers need to be replaced. Current facilities (an old potato warehouse, converted granary and an equipment storage building with a dirt floor, for example) were not designed as lab space and do not meet worker safety and protection standards. Current facilities also lack modern research technology and storage space. New labs would provide adequate facilities to conduct research and compile research data that the region's producers need to solve crop production problems. - \$5,925,000

2. Seed-cleaning Plants

Seed-cleaning facilities at NCREC, CREC, WREC, and LREC need to be replaced. Current facilities are antiquated, lack reliable capability to ensure good seed quality, are slow and inefficient. Current facilities were designed to handle cereal crops and are not capable of cleaning pulse crops and other fragile seed that are in high demand by the state's farmers. Also, these facilities pose considerable worker safety issues. SBARE was charged with developing a plan to determine the best, cost-effective model to replace these out-of-date facilities. SBARE chose a model that allows for four self-contained (portable) seed conditioning units at each of the centers that produce foundation grade seed which would meet producer demands for high quality seed of new, high yielding, high quality varieties. - \$3,470,000.

3. Livestock Facilities

The Carrington Research Extension Center needs a multiuse feedlot research support facility and the addition of at least 16 pens to improve its feedlot research capabilities, assist in sustaining Institutional Animal Care and Use Committee compliance, attain worker protection standards and reduce maintenance costs for equipment. Sixteen more pens would hold 160 head of cattle and allow the center to conduct one additional experiment per feedout period. Additional pens would allow for more treatments and replications in feedlot studies. The Hettinger Research Extension Center is in need of a multipurpose livestock processing barn and educational facility to address the center's research needs and provide state-of-the-art training and educational events. - \$1,650,000

One-time Request — Vet Diagnostic Lab

Identifying and preventing disease outbreaks in the animal herds in the state is the responsibility of the Veterinary Diagnostic Lab (VDL). Livestock feeds can be tested for mycotoxins, molds, and phytoestrogens. Liquid chromatography with mass spectrometry capability (LC/MS/MS) can be used to test animal feeds for natural contamination by field and storage molds. In addition, the expanding oilfield presents challenges to livestock producers in western North Dakota. Pipeline breaks, semi-truck chemical spills, and down-hole accidents can contaminate ground and surface water sources. The proximity of livestock to drilling sites can result in poisoning from ingestion of water/feedstuffs contaminated with crude oil, condensate, salt water, heavy metals and/or caustic chemicals. Diagnosis of these cases requires sophisticated equipment. - \$400,000 equipment



DETAILS: 2013-2015 Capital Improvement and One-time Needs as Ranked by SBARE

N.D. Agricultural Experiment Station

Capital Improvements

1. Agronomy Labs (CREC, HREC, LREC, CGREC)

\$5,925,000

Agronomy Lab (CREC) – 10,040 square feet new construction – \$2,500,000

The Carrington Research Extension Center agronomy program is perhaps the largest and most diverse of the out-state RECs. Yet this program must perform the duties and processes associated with this large program in an old (1962-era) potato warehouse. For example, more than 25,000 individual samples are handled in multiple processing steps in the confines of this antiquated facility. During the course of the past 30 years, the CREC agronomy staff have self-renovated the interior of this warehouse to create a degree of functionality, given the limitations. First and foremost, the current agronomy laboratory does not meet worker safety and protection standards. The current laboratory has limited space for experiment preparation and processing, sample cleaning, dryers and field sample storage. The current facility lacks some basic research functionality, such as dust and air exchange capability, isolated chemical handling space and controlled environment for seed storage plus it has no room for plant pathology experiments. The innovative and proactive research efforts of the CREC agronomist and plant pathologist are severely compromised by the limitations and lack of modern capabilities in the present facility.

Agronomy Lab (HREC) – 8,000 square feet new construction – \$1,800,000

The agronomy and range research programs at the NDSU Hettinger Research Extension Center have grown beyond the ability of our agronomy lab to house them. The current lab is a converted granary with inadequate sample storage space, inadequate drying ovens, and no Internet service or the ability to provide a modern office working environment. Additionally, the HREC has inadequate equipment storage space needed to store the agronomy research program's seed drills and combine, and the range research program's equipment. A modern agronomy and range lab of approximately 8,000 square feet is needed to provide technicians and graduate students with office space, technical facilities in line with modern research (Internet access, dust-free environments to work on computers, and lab areas for handling radio telemetry collars for wildlife and domestic livestock), new drying ovens and sampling processing areas, and storage for research samples and equipment.

Agronomy Lab (LREC) – 5,500 square feet new construction – \$1,225,000

The Langdon Research Extension Center has an active agronomy research program that includes all aspects of crop production, including, but not limited to, soil health, plant pathology, entomology, crop fertility, weed control and variety development. The LREC has no dedicated facility to store, process and perform an array of tests to compile research data the region's producers need to solve crop production problems and questions. A new agronomy lab would allow LREC scientists to conduct this work and, in the long run, would save resources that are expended on shipping research materials away for processing and testing.

Agronomy Lab (CGREC) – 4,000 square feet new construction – \$400,000

With the addition of a forage agronomist at the Central Grasslands Research Extension Center, the center is in need of a forage lab/storage building. Currently, samples collected in the field by the scientist are processed in a corner of an equipment storage building with a dirt floor. The dust from opening the overhead door and moving equipment renders this area very dusty and makes keeping scales and computers clean very difficult. The new building would house the forage drying ovens, computer, scale, etc., for sample data processing. It also would house the grinders and equipment to process the forage samples in preparation for nutrient analysis. The building would be 40 by 100 feet, with half used for the forage lab and the remainder used for sample and equipment storage. We are forced to store plot equipment outside, where the weather takes its toll on the equipment. New plot equipment such as self-propelled forage harvesters cost upwards of \$100,000 and should be maintained in a clean, dry storage environment.

2. Seed-cleaning Plants (NCREC, CREC, WREC, LREC) – Option B

\$3,470,000

Self Contained (portable) Conditioning Mill (CREC) – \$905,000

The current seed plant was constructed in 1963 and is seriously out of date. The current plant is not designed to readily accommodate air exchange and dust control mechanical features to address worker safety concerns. The present building is too small to retro-fit with larger capacity seed conditioning equipment.

A Self Contained (portable) Conditioning Mill, color sorter, steel storage building, and necessary ancillary improvements are needed. The Self Contained Mill includes an air screen cleaner, an indent mill, and a gravity mill.

Self Contained (portable) Conditioning Mill (LREC) – \$755,000

The LREC produces an average 15,000 bushels of regionally adapted foundation seed production for use by the regions producers in their cropping enterprise. The current foundation seed facility at the LREC was constructed in 1962 and utilizes the same equipment. It is outdated, inefficient, very slow, and needs to be modernized to support a foundation seed system demanded by the region's producers. In 2008, the condition of the seed cleaning plant was cited as the number one safety hazard on the grounds of the LREC. There is no room for a renovation, such as adding another leg.

A Self Contained (portable) Conditioning Mill, steel storage building, and necessary ancillary improvements are needed. The Self Contained Mill includes an air screen cleaner, an indent mill, and a gravity mill.

Self Contained (portable) Conditioning Mill (NCREC) – \$905,000

The current seed conditioning facility was built in 1949 and added on to in 1982. It is too small, inefficient, and is a health and safety problem due to inadequate dust handling. It is not equipped to gently handle pulse crops, oil seeds, and other crops.

A Self Contained (portable) Conditioning Mill, color sorter, steel storage building, and necessary ancillary improvements are needed. The Self Contained Mill includes an air screen cleaner, an indent mill, and a gravity mill.

Self Contained (portable) Conditioning Mill (WREC) – \$905,000

The current building used to house the foundation seed conditioning equipment was built in the mid 1950's. The area designated to unload trucks can only accommodate a small single axle truck and does not have sufficient unloading capacity. Grain legs that move the dirty and clean grain are all too small for efficient movement of grain. We are limited to cleaning a maximum of 45 bushels per hour by the current grain leg size. Upgrading the grain legs is difficult to near impossible in this building because of space limitations. Equipment for the distribution and conditioning of grain is currently located on five different floor levels in the building, creating potential worker safety issues and problems associated with constant stair climbing. The conditioning plant is cleaned thoroughly at every level between each crop variety that is conditioned in order to insure seed purity for Foundation Seed production. This means that in 2011-2012 the conditioning plant will need to be hand cleaned about 18 times, a task that now takes two people approximately ten hours to complete.

A Self Contained (portable) Conditioning Mill, color sorter, steel storage building, and necessary ancillary improvements are needed. The Self Contained Mill includes an air screen cleaner, an indent mill, and a gravity mill.

3. Livestock Facilities

\$1,650,000 (CREC – \$1,150,000, HREC – \$500,000)

Construction of a multi-use Feedlot Research Support Facility will improve feedlot research operational capability, assist in sustaining IACUC compliance, attain worker protection standards, and reduce maintenance costs for equipment. The CREC has a critical need for a facility that would combine the functions of storing and dispensing pharmaceuticals and animal health supplies, allow for the efficient processing of feeds, blood, and tissue, provide office space for technical staff with computer support and records storage, indoor storage for feeding equipment used on a daily basis, and a general shop area for equipment maintenance and minor repairs.

Meeting the expanding demands for feedlot research is partially limited by available pens. Current pens are fully utilized. The CREC is continually challenged to do more research, however feedlot pen availability is a clear limitation. The addition of a minimum of sixteen pens that would hold 160 head of cattle would allow the CREC to conduct one additional experiment per feedout period. Further additional pens will allow more treatments and replications in feedlot research studies which would improve statistical confidence and precision. Any feedlot pen expansion must include the associated waste containment facilities to remain compliant with state law.

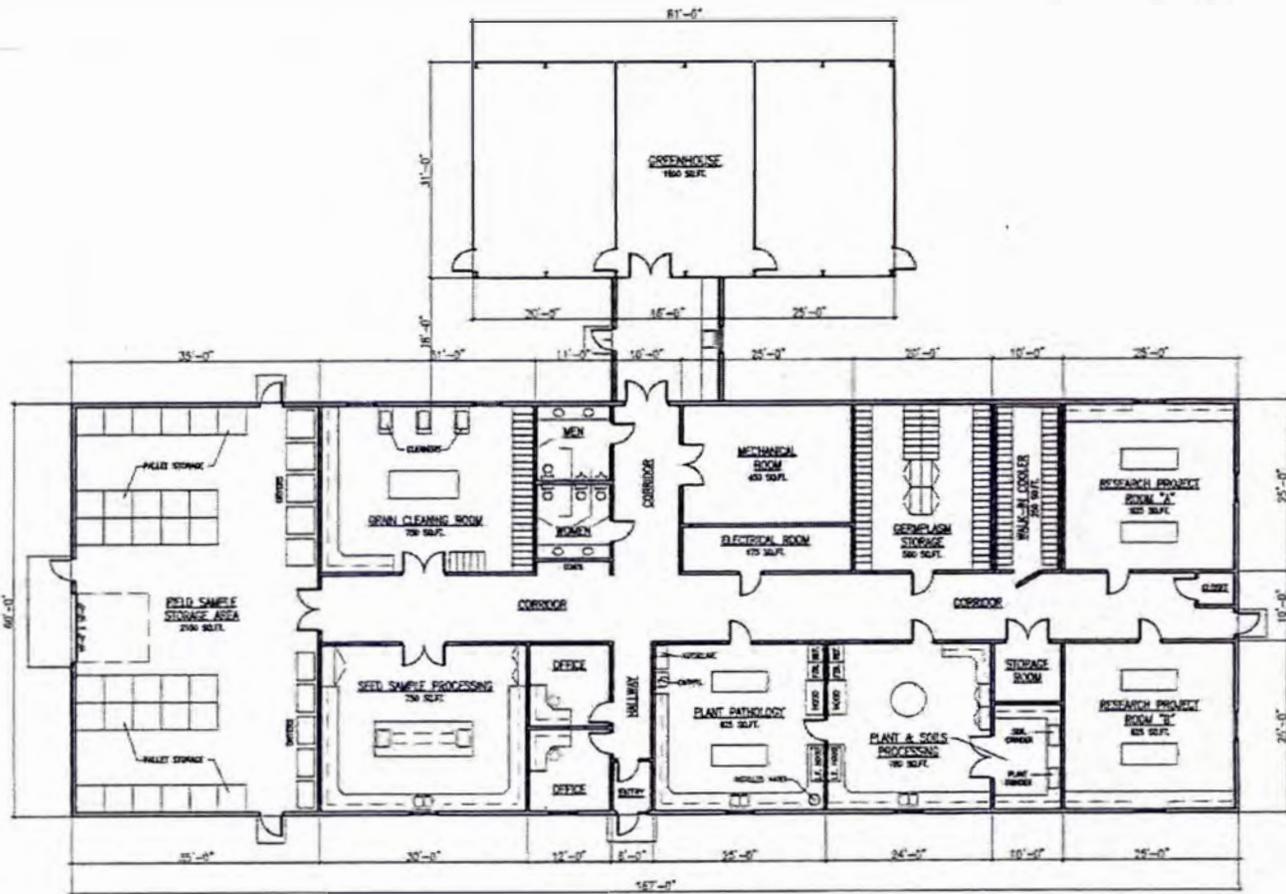
HREC has provided educational events to veterinarians, extension specialists, and producers from 14 states and three countries. These events include various demonstrations, including, but not limited to, carcass ultrasound evaluation, shearing and wool grading schools, and technical cattle feedlot schools and trainings. All of these events are held in the former dairy barn, originally built in 1909, or outdoors. This facility is inadequate to provide state-of-the-art training and educational events. A multi-purpose livestock facility is needed to address the research and outreach needs of the Center and the stakeholders in the region.

One-time Request

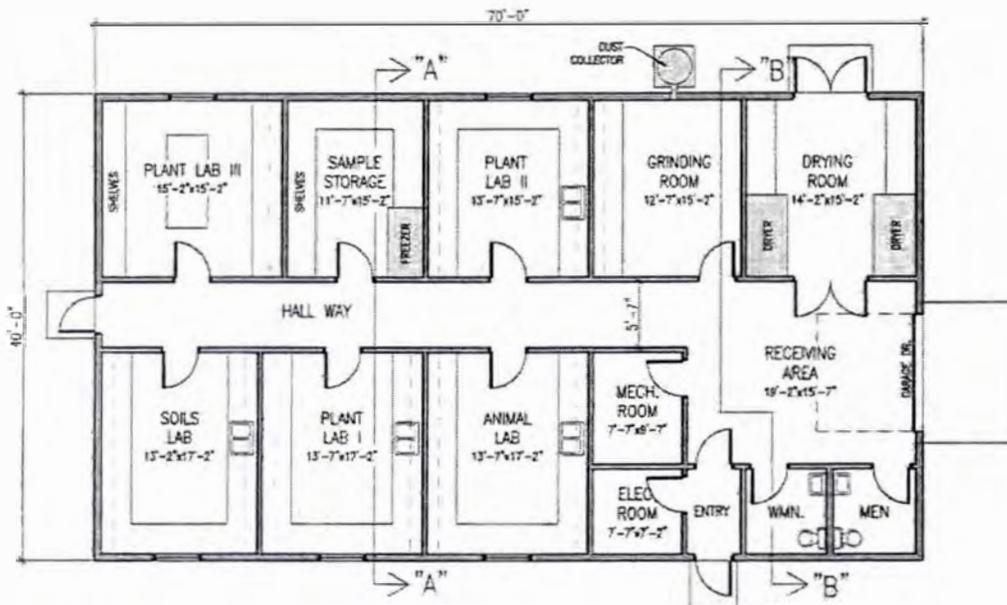
Vet Diagnostic Lab

\$400,000 equipment

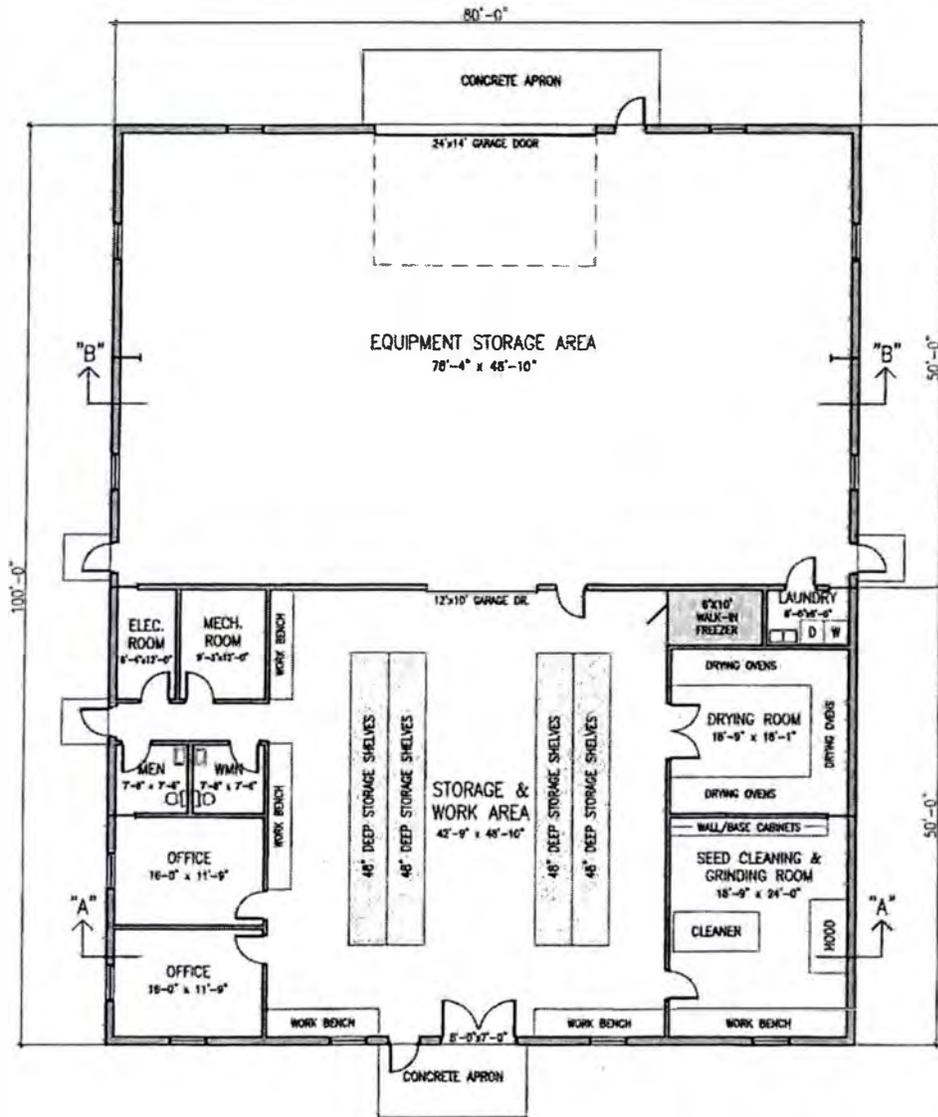
Identifying and preventing disease outbreaks in the animal herds in the state is the responsibility of the Veterinary Diagnostic Lab (VDL). Livestock feeds can be tested for mycotoxins, molds, and phytoestrogens. Liquid chromatography with mass spectrometry capability (LC/MS/MS) can be used to test animal feeds for natural contamination by field and storage molds. In addition, the expanding oilfield presents challenges to livestock producers in western North Dakota. Pipeline breaks, semi-truck chemical spills, and down-hole accidents can contaminate ground and surface water sources. The proximity of livestock to drilling sites can result in poisoning from ingestion of water/feedstuffs contaminated with crude oil, condensate, salt water, heavy metals and/or caustic chemicals. Diagnosis of these cases requires sophisticated equipment.



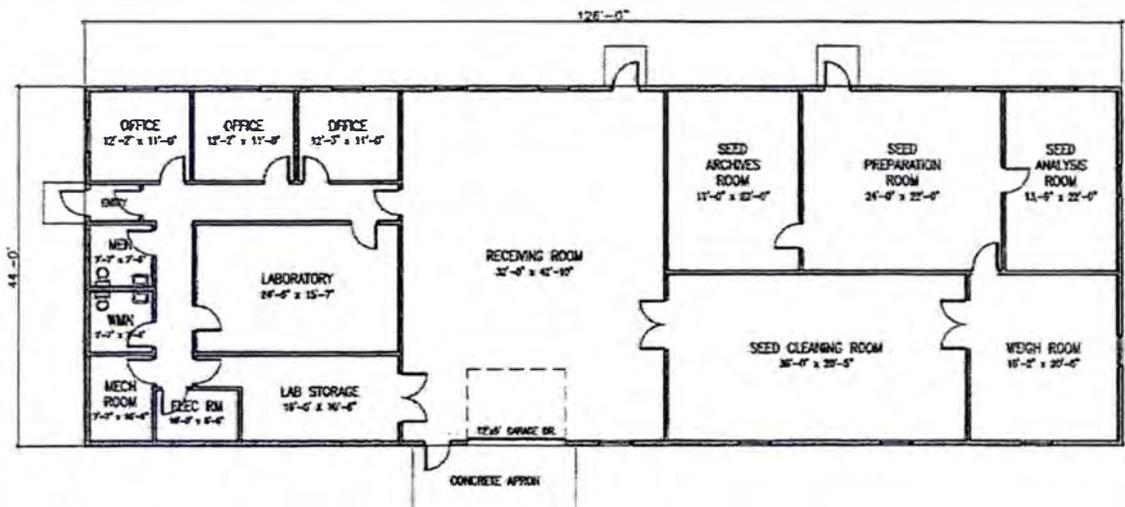
**FLOOR PLAN - PROPOSED AGRONOMY LABORATORY
CARRINGTON RESEARCH EXTENSION CENTER**



**FLOOR PLAN - PROPOSED FORAGE AGRONOMY LAB
CENTRAL GRASSLANDS RESEARCH EXTENSION CENTER**



**FLOOR PLAN - PROPOSED AGRONOMY & RANGE LAB
HETTINGER RESEARCH EXTENSION CENTER**



**FLOOR PLAN - PROPOSED AGRONOMY / PATHOLOGY BUILDING
LANGDON RESEARCH EXTENSION CENTER**



Special Assessments

North Dakota Agricultural Experiment Station

Outstanding Beginning Balance	
2011-2013 Biennium	\$555,336
2011-2013 Payment Schedule:	
Interest	\$ 56,317
Principal	\$ 26,085
Total	<u>\$ 82,402</u>
Balance, 6/30/2013	\$527,971

Status: Assessments for FY12 and FY13 have been paid.



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SENATE BILL NO. 2020

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 extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to provide for transfers; to provide an exemption; and to declare an emergency.

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, 2013, and ending June 30, 2015, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Extension service	\$47,026,654	\$5,998,604	\$53,025,258
Soil conservation committee	<u>987,800</u>	<u>75,000</u>	<u>1,062,800</u>
Total all funds	\$48,014,454	\$6,073,604	\$54,088,058
Less estimated income	<u>23,128,810</u>	<u>2,308,604</u>	<u>25,437,414</u>
Total general fund	\$24,885,644	\$3,765,000	\$28,650,644
Full-time equivalent positions	256.26	2.00	258.26

Subdivision 2.

NORTHERN CROPS INSTITUTE

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Total all funds	\$3,347,307	\$527,344	\$3,874,651
Less estimated income	<u>1,654,725</u>	<u>145,582</u>	<u>1,800,307</u>
Total general fund	\$1,692,582	\$381,762	\$2,074,344
Full-time equivalent positions	12.00	0.00	12.00

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Total all funds	\$24,069,961	\$1,283,668	\$25,353,629
Less estimated income	<u>22,150,333</u>	<u>374,721</u>	<u>22,525,054</u>
Total general fund	\$1,919,628	\$908,947	\$2,828,575

Full-time equivalent positions	51.75	2.00	53.75
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Subdivision 4.

MAIN RESEARCH CENTER

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Total all funds	\$89,012,990	\$21,280,332	\$110,293,322
Less estimated income	<u>41,630,644</u>	<u>11,624,941</u>	<u>53,255,585</u>
Total general fund	\$47,382,346	\$9,655,391	\$57,037,737
Full-time equivalent positions	349.01	2.48	351.49

Subdivision 5.

RESEARCH CENTERS

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Dickinson research center	\$5,588,562	\$642,763	\$6,231,325
Central grasslands research center	2,865,847	431,712	3,297,559
Hettinger research center	3,373,175	1,373,059	4,746,234
Langdon research center	2,378,807	507,956	2,886,763
North central research center	4,399,821	261,858	4,661,679
Williston research center	3,410,089	458,934	3,869,023
Carrington research center	<u>7,126,488</u>	<u>927,807</u>	<u>8,054,295</u>
Total all funds	\$29,142,789	\$4,604,089	\$33,746,878
Less estimated income	<u>14,997,581</u>	<u>1,024,285</u>	<u>16,021,866</u>
Total general fund	\$14,145,208	\$3,579,804	\$17,725,012
Full-time equivalent positions	103.04	4.00	107.04

Subdivision 6.

AGRONOMY SEED FARM

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Agronomy seed farm	<u>\$1,435,168</u>	<u>\$39,793</u>	<u>\$1,474,961</u>
Total special funds	1,435,168	39,793	1,474,961
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Grand total general fund	\$90,025,408	\$18,290,904	\$108,316,312
Grand total special funds	<u>104,997,261</u>	<u>15,517,926</u>	<u>120,515,187</u>
Grand total all funds	\$195,022,669	\$33,808,830	\$228,831,499

SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO SIXTY-FOURTH LEGISLATIVE ASSEMBLY. The following amounts reflect the one-time funding items approved by the sixty-second legislative assembly for the 2011-13 biennium and the 2013-15 one-time funding items included in the appropriation in section 1 of this Act:

<u>One-Time Funding Description</u>	<u>2011-13</u>	<u>2013-15</u>
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Main research center greenhouse project	\$9,494,581	\$0
Main research center special assessments	82,402	0
Dickinson research center operations pool	800,000	0
UGPTI transportation study	350,000	0
Agronomy laboratories	0	4,300,000
Extension 4-H camp renovation	0	1,900,000
Feed mill equipment	0	100,000
Video conference equipment	0	110,000
Diagnostic equipment	0	<u>400,000</u>
Total all funds	\$10,726,983	\$6,810,000
Total other funds	<u>2,852,931</u>	<u>1,400,000</u>
Total general fund	\$7,874,052	\$5,410,000

The 2013-15 one-time funding amounts are not a part of the entity's base budget for the 2015-17 biennium. The main research center shall report to the appropriations committees of the sixty-fourth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2013, and ending June 30, 2015.

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, 2013, and ending June 30, 2015.

SECTION 4. 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 5. 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 2015-17 budget request.

SECTION 6. 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, 2015, and ending June 30, 2017.

SECTION 7. EXEMPTION. The amounts appropriated for the research greenhouse complex project, as contained in subdivision 4, section 3, of chapter 48 of the 2005 Session Laws, and subdivision 4, section 1 of chapter 19 of the 2011 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, 2013, and ending June 30, 2015.

SECTION 8. INTERNSHIP MATCHING FUNDS. The extension service line item in subdivision 1 of section 1 of this Act includes \$250,000 from the general fund for an extension service internship program, for the biennium beginning July 1, 2013 and ending June 30, 2015. Internship program funds can be spent only to the extent that matching funds have been secured from non-state resources on a dollar-for-dollar cash basis.

SECTION 9. EMERGENCY. The appropriation for capital projects of \$4,300,000 in subdivision 4 of section 1 of this Act, and \$1,900,000 in subdivision 1 of section 1 of this Act is declared to be an emergency measure.

**2013-15 Budget Request comparison -
NDSU Extension Service and North Dakota Agricultural Experiment Station**

	2013-15 SBARE Priority List	Included in 2013-15 Executive Recommendation
NDSU Extension Service		
<i>Current 11-13 Adj. Base Budget (including State Soil Conservation)=\$24,885,644</i>		
Cost to continue 2012-13 salary & retirement increase	\$0	\$540,528
Compensation package (4% per year) and health insurance & retirement increases	\$0	\$1,509,472
SBARE #1: Agents-in-training and summer internship program	\$500,000	\$250,000
Program support, 4 agents in training (no fte)	\$400,000	\$0
Program support, 5 summer internships (no fte)		
[Internships only & require 1:1 match]	\$100,000	\$250,000
SBARE #2: Livestock development	\$590,000	\$370,000
2.0 FTE area livestock specialists and operating - Extension livestock programs [FUNDED 1.0 FTE]	\$440,000	\$220,000
Operating support, livestock production economics	\$150,000	\$150,000
SBARE #3: Crop protection	\$960,000	\$410,000
.5 FTE partial funding for IPM and plant diagnostic lab coordinator	\$150,000	\$150,000
1.0 FTE extension state entomology specialist and operating	\$250,000	\$0
2.0 FTE technical support - NDSU Extension weed science & potato programs, and 1.0 FTE crop management at NCREC [FUNDED 1.0 FTE technical weed science]	\$450,000	\$150,000
.5 FTE salary support & operating for state water quality specialist to replace 50% cut in federal funding	\$110,000	\$110,000
SBARE #4: Community sustainability and workforce development	\$620,000	\$0
2.0 FTE area specialists at DREC and WREC and operating	\$440,000	\$0
Increased technical operating support	\$180,000	\$0
SBARE #5: Gearing Up for Kindergarten/Parent education/Nutrition	\$960,000	\$0
Complete core staffing of Parent Resource Centers in each region (no fte)	\$500,000	\$0
Expand Gearing Up for Kindergarten, ongoing research & evaluation	\$210,000	\$0
1.0 FTE extension nutrition/wellness & aging specialists and operating	\$250,000	\$0
SBARE Additional Request: Soil Conservation Committee Technical Assistance Grants	\$150,000	\$75,000
Total base increase - NDSU Extension Service	\$3,780,000	\$3,155,000
ONE-TIME & CAPITAL FUNDING		
Video conference equipment replacement at 14 locations	\$110,000	\$110,000
4-H Camp, Washburn	\$950,000	\$500,000
Total One-time & capital funding- NDSU Extension Service	\$1,060,000	\$610,000

**2013-15 Budget Request comparison -
NDSU Extension Service and North Dakota Agricultural Experiment Station**

2013-15 SBARE
Priority List

Included in
2013-15 Executive
Recommendation

North Dakota Agricultural Experiment Station		
<i>Current 11-13 Adj. Base Budget = \$61,527,554</i>		
Cost to continue 2012-13 salary & retirement increase	\$0	\$1,142,646
Compensation package (4% per year) and health insurance & retirement increases	\$0	\$3,710,386
Remove funding for State Data Center	\$0	-\$142,837
Unranked - Permanent funds to offset reduced oil revenue @ Dickinson REC	\$800,000	\$800,000
SBARE #1: Crop initiative-Enhancing crop development & protection efforts	\$2,470,000	\$1,815,000
Increased operating support: barley, corn, dry bean, pulse, soybean, HRS wheat, winter wheat, canola, cereal diseases, dry bean and pulse diseases (Main Station), crop pathology (CREC), variety testing (LREC), dryland crop improvement (DREC)		
2.0 FTE nematologist and technician (Main Station)	\$1,160,000	\$1,160,000
1.0 FTE technical support (\$120,000), increased operating (\$80,000), software & hardware (\$100,000) for NDAWN (Main Station)	\$355,000	\$355,000
1.0 FTE bioinformaticist (Main Station)	\$300,000	\$300,000
1.0 FTE bioinformaticist (Main Station)	\$300,000	\$0
2.0 FTE statistical genomicist & technical support (Main Station)	\$355,000	\$0
SBARE #2: Enhancing research capacities at REC's	\$1,860,000	\$1,210,000
2.0 FTE (HREC & WREC) to focus on chemical & cultural control of weeds & plant pathogens in western ND [FUNDED 1.0 FTE HREC]	\$400,000	\$200,000
6.0 FTE technical support-LREC,CGREC,NCREC,DREC,WREC&CREC [FUNDED 3.0 FTE CREC, CGREC, NCREC]	\$900,000	\$450,000
Operating support-LREC,CGREC,NCREC, WREC, HREC, CREC, DREC	\$560,000	\$560,000
SBARE #3: Livestock initiative-Improving livestock productivity and protection	\$2,100,000	\$0
5.0 FTE technical support-HREC, CREC, CGREC, DREC, Main Station	\$700,000	\$0
Operating support-HREC, CREC, CGREC, DREC, Main Station	\$480,000	\$0
1.0 FTE forage nutrition & management scientist (Main Station)	\$225,000	\$0
2.0 FTE support staff-Main Station	\$340,000	\$0
2.0 FTE epigenetics scientist and technician-Main Station	\$355,000	\$0
SBARE #4: Risk management and trade in domestic and global markets	\$1,000,000	\$0
2.0 FTE scientist and technician, Ag market risk (Main Station)	\$355,000	\$0
1.0 FTE econometrician (Main Station)	\$215,000	\$0
2.0 FTE research scientists, Policy & trade issues (Main Station)	\$430,000	\$0
SBARE #5: Sustaining water, air & land quality to maintain & improve ND agriculture	\$380,000	\$0
Operating & equipment (Main Station) to measure water quality parameters & develop nutrient recommendations	\$100,000	\$0
2.0 FTE technical support (Main Station)	\$280,000	\$0
Total base increase - North Dakota Agricultural Experiment Station	\$8,610,000	\$8,535,195

ONE-TIME & CAPITAL FUNDING

Equipment-Vet Diagnostic Lab	\$400,000	\$400,000
SBARE #1 Capital: Agronomy Laboratories	\$5,925,000	\$4,300,000
CREC	\$2,500,000	\$2,500,000
HREC	\$1,800,000	\$1,800,000
LREC	\$1,225,000	\$0
CGREC	\$400,000	\$0
SBARE #2 Capital: Seed Cleaning Plants NCREC, CREC, WREC, LREC	\$3,470,000	\$0
SBARE #3 Capital: Livestock Facilities CREC, HREC	\$1,650,000	\$0
Total One-time & capital funding-North Dakota Agricultural Experiment Station	\$11,445,000	\$4,700,000

North Dakota University System
 Extension Service and Main & Branch Research Centers
 Reconciliation of 2011-13 Original General Fund Appropriation to 2013-15 Executive Recommendation (SB 2020)

	(1)	(2)	(3)	(4)
	<u>Extension Service</u>	<u>Main Research Center</u>	<u>Branch Research Centers</u>	<u>Total</u>
2011-13 Original General Fund Appropriation	\$ 24,885,644	\$ 54,456,398	\$ 14,945,208	\$ 94,287,250
2009-11 GF Carryover - Greenhouse		2,532,268		2,532,268
2011-13 Emergency clause		(383,625)		(383,625)
2011-13 Adjusted GF Appropriation	24,885,644	56,605,041	14,945,208	96,435,893
Base Adjustments:				
Less 2009-11 GF Carryover		(2,532,268)		(2,532,268)
Less 2011-13 One-time Appropriations		(82,402)	(800,000)	(882,402)
Less 2011-13 Capital Projects, net of emergency clause		(6,608,025)		(6,608,025)
2011-13 Adjusted Appropriation, Less Base Adjustments	24,885,644	47,382,346	14,145,208	86,413,198
Executive Recommendation Base Increases (Decreases):				
Cost to continue FY2013 salary & retirement increases	540,528	926,198	216,337	1,683,063
Increase in 2013-15 Capital Bond Payments		82	29	111
Compensation package (4% per year) and health insurance & retirement increases	1,509,472	2,716,948	993,438	5,219,858
Remove funding for State Data Center		(142,837)		(142,837)
Soil Conservation Increase	75,000			75,000
SBARE initiatives (1)	1,030,000	1,455,000	2,370,000	4,855,000
2013-15 Recommended Base General Fund Increases	3,155,000	4,955,391	3,579,804	11,690,195
Executive Recommendation One-time Increases:				
Video conference equipment replacement @ 14 locations	110,000			110,000
Equipment - Vet Diagnostic Lab		400,000		400,000
2013-15 Capital Projects	500,000	4,300,000		4,800,000
2013-15 Recommended One-time Increases:	610,000	4,700,000	-	5,310,000
2013-15 Total Executive Recommendation - General Fund	28,650,844	57,037,737	17,725,012	103,413,393
Increase (Decrease) From 2011-13 Adjusted Appropriation, Less Base Adjustments	\$ 3,765,000	\$ 9,655,391	\$ 3,579,804	\$ 17,000,195

(1) The following SBARE initiatives were funded (all base funding increases):

 Extension - \$250,000 Summer internship program; \$370,000 Livestock development (1 FTE); \$410,000 Crop protection (1 FTE) [Total requested for all Extension initiatives = \$2,590,528]
 Main Research - \$1,455,000 Crop Initiative (3 FTE); [Total requested for all Main REC = \$3,290,000]
 Branch REC's - \$800,000 Permanent funds to offset reduced oil revenue at Dickinson REC; \$360,000 Crop Initiative (3 FTE); \$1,210,000 Enhancing research capacities at REC's (4 FTE);
 [Total requested for Branch REC's = \$3,940,000]

North Dakota University System
Extension Service, Main & Branch Research Centers, and Agronomy Seed Farm
Reconciliation of 2011-13 Original Other Fund Appropriation to 2013-15 Executive Recommendation (SB 2020)

	(1)	(2)	(3)	(4)	(5)
	Extension Service	Main Research Center	Branch Research Centers	Agronomy Seed Farm	Total
2011-13 Original Other Fund Appropriation	\$ 23,128,810	\$ 44,133,575	\$ 14,997,581	\$ 1,435,168	\$ 83,695,134
2009-11 capital assets carryover		2,669,317			2,669,317
2011-13 Adjusted OF Appropriation	23,128,810	46,802,892	14,997,581	1,435,168	86,364,451
Base Adjustments:					
Less 2009-11 OF Carryover		(2,669,317)			(2,669,317)
Less 2011-13 Capital Projects		(2,502,931)			(2,502,931)
2013-15 Adjusted Appropriation, Less Base Adjustments	23,128,810	41,630,644	14,997,581	1,435,168	81,192,203
Executive Recommendation Base Increases (Decreases):					
Cost to continue FY2013 salary & retirement increases	252,188	217,898	57,797	9,625	537,508
Compensation package (4% per year) and health insurance & retirement increases	1,513,351	1,781,017	222,126	36,798	3,553,292
2013-15 Capital projects	1,400,000				1,400,000
Other changes in estimated income	(856,935)	9,626,026	744,362	(6,630)	9,506,823
Total requested increases (decreases)	2,308,604	11,624,941	1,024,285	39,793	14,997,623
2013-15 Total Executive Recommendation - Other Funds	\$ 25,437,414	\$ 53,255,585	\$ 16,021,866	\$ 1,474,961	\$ 96,189,826

Note: Federal funding levels may be reduced.

**North Dakota University System
Branch Research Centers
Reconciliation of 2011-13 Original General & Other Fund Appropriation to 2013-15 Executive Recommendation (SB 2020)**

	(1) Dickinson	(2) Central Grasslands	(3) Hettinger	(4) Langdon	(5) North Central	(6) Williston	(7) Carrington	(8) Total
General Fund:								
2011-13 Original General Fund Appropriation	\$ 3,158,759	\$ 1,789,789	\$ 1,659,018	\$ 1,395,564	\$ 1,670,255	\$ 2,358,157	\$ 2,913,666	\$ 14,945,208
Base Adjustments:								
Reallocation of Revolving Equipment Pool for 2013-15	125,000	(125,000)	125,000	(125,000)		(125,000)	125,000	-
Less 2011-13 One-time Appropriations	(800,000)							(800,000)
2011-13 Adjusted Appropriation, Less Base Adjustments	2,483,759	1,664,789	1,784,018	1,270,564	1,670,255	2,233,157	3,038,666	14,145,208
Executive Recommendation Increases (Decreases):								
Cost to continue FY2013 salary & retirement increases	41,240	25,701	26,601	19,749	24,506	29,340	49,200	216,337
Increase in 2013-15 Capital Bond Payments		11			18			29
Compensation package (4% per year) and health insurance & retirement increases	177,710	119,698	122,863	88,746	107,751	157,688	218,982	993,438
SBARE Initiatives	1,000,000	230,000	280,000	200,000	230,000	80,000	350,000	2,370,000
2013-15 Recommended Base General Fund Increases	1,218,950	375,410	429,464	308,495	362,275	267,028	618,182	3,579,804
2013-15 Total Executive Recommendation - General Fund	\$ 3,702,709	\$ 2,040,199	\$ 2,213,482	\$ 1,579,059	\$ 2,032,530	\$ 2,500,185	\$ 3,656,848	\$ 17,725,012
Other Funds:								
2011-13 Original Other Fund Appropriation	\$ 3,229,803	\$ 1,076,058	\$ 1,714,157	\$ 983,243	\$ 2,729,566	\$ 1,051,932	\$ 4,212,822	\$ 14,997,581
Executive Recommendation Increases (Decreases):								
Cost to continue FY2013 salary & retirement increases	14,840	1,791	8,995	3,717	9,894	2,010	16,550	57,797
Compensation package (4% per year) and health insurance & retirement increases	28,615	4,125	32,751	8,212	40,360	21,945	86,118	222,126
Other changes in estimated income	(744,642)	175,386	776,849	312,532	(150,671)	292,951	81,957	744,362
2013-15 Recommended Base Other Fund Increases	(701,187)	181,302	818,595	324,461	(100,417)	316,906	184,625	1,024,285
2013-15 Total Executive Recommendation - Other Funds	\$ 2,528,616	\$ 1,257,360	\$ 2,532,752	\$ 1,307,704	\$ 2,629,149	\$ 1,368,838	\$ 4,397,447	\$ 16,021,866

NDSU Extension Service - 630

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$24,885,644	\$14,936,274	\$9,949,370	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report



NDSU Main Research Station - 640

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$54,456,398	\$34,634,448	\$19,821,950	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Carrington Research Center- 647

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$2,913,666	\$1,856,752	\$1,056,914	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Central Grasslands Research Center- 642

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,789,789	\$1,212,757	\$577,032	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Dickinson Research Center- 641

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$3,158,759	\$1,881,248	\$1,277,511	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Hettinger Research Center- 643

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,659,018	\$1,074,610	\$584,408	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Langdon Research Center- 644

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,395,564	\$975,106	\$420,458	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU North Central Research Center- 645

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,670,255	\$1,116,896	\$553,359	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Williston Research Center- 646

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$2,358,157	\$1,385,349	\$972,808	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Agronomy Seed Farm- 649

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total Appropriation	\$1,435,168	\$650,361	\$784,807	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report



Lindsey Novak #2
SB 2020
1-16-13

Good morning,

My name is Lindsey Novak. I am originally from Wilton, ND. In 2005, I graduated from NDSU with a B.S. in Horticulture Production and Management.

Since graduation, my career has been involved in Agriculture. My first job was with Technology Crops International to work with sunflowers and oil seed crops. In 2008, I moved to Northfield Minnesota to work for Syngenta Seeds Inc. as the Research Associate in the Marker Assisted Breeding department.

My experiences in working with people and agricultural research have helped me realize that Extension was the career for me. For the past 6 years it has been my goal to become an Extension agent.

About 2 years ago, I decided I wanted to move back to North Dakota, so I immediately started looking for jobs. At that time, NDSU Extension Service had a few county positions open, but when I saw the Agent In Training position posted, I was thrilled to see an opportunity to get hands on training from an experienced extension agent. I knew that taking time to become trained would set me up for great transition into my extension career. I was offered the agent in training position and I moved back to North Dakota.

My training took place in Oliver County under the direction of Rick Schmidt. Over a short period of time, I was involved in delivering many programs, including pesticide certification trainings, other ag programs, and coaching various 4-H judging teams. I provided leadership for the Junior Master Gardener program by delivering lessons to youth during the school year and then planting a garden with them during the summer. I experienced the important working relationships you form with other organizations within the county such as (example) Soil Conservation. I also helped with Extension programs in Morton and Mercer Counties which allowed me to broaden my understanding of Extension programs.

The outcome of this agent in training experience was that I was much more qualified for permanent Extension agent positions. I was successful in being selected to be the Stutsman County Ag Extension Agent and I started 3 months ago. This training program has allowed me to become much more knowledgeable and confident in my new position. Yes, the NDSU Extension service does have a job description for extension agents, but no job description could ever cover the breadth of programs, projects and daily responsibilities that a new agent needs to know. That's what makes the agent in training program so valuable. When people ask me if I would do it again, my answer is YES!

Thank you for the opportunity to describe my experience with the agent-in-training program.

9am
Harvest Room
600 E. Boulevard Ave

Actual 9:45
am

210
10th St SE

Testimony for Public Hearing
Senate Appropriations Committee
January 17, 2013

Kayla Shafer
Government Affairs Manager
KLJ
128 Soo Line Drive
Bismarck, ND 58502

S.B. No. 2020 (Committee) - NDSU Extension Service allocation for two FTE

Hello Senate Appropriations Committee Chairman and members, thank you for this opportunity to speak to you today. My name is Kayla Shafer and I am here in support of Senate Bill 2020 Section 1 Subdivision 1 pertaining to the NDSU Extension Services allocation for two full-time community development specialists.

I am the Government Affairs Manager at KLJ and for the past year I have worked with the NDSU Center for Community Vitality to assist small rural communities in understanding the basics of community impact planning, leadership development and advocacy to enhance their community resident's quality of life. The partnership has proven to be a valuable relationship between a public agency and a private industry.

The NDSU Extension Services is a vital asset to communities and is a link to help communities and counties pool their resources. These agents were on the ground working with communities before the oil boom when outmigration was catastrophic, they are there now helping communities enhance growth opportunities, and they will be with the communities after the boom.

I encourage the Senate Appropriations Committee to uphold the recommendation to add two full-time staff positions for the NDSU Extension Services. This funding will greatly benefit rural communities in North Dakota to utilize their financial and human resources more efficiently while also serving as advocates, knowledge resource and a link between communities and private industries.

Thank you for your time today.

Kayla Shafer

Scott Rising
SB 2020

44

1-16-13



Testimony for SB 2020

AG Research & Extension

Good morning Chairman Holmberg and Senate Appropriations Committee Members. I am Scott Rising, and am here this morning on behalf of the North Dakota Soybean Growers Association.

I am respectfully seeking your support the SBARE priorities in SB 2020.

Our Appreciation

Let me start by thanking you, our friends and neighbors that serve us in our legislature. Thank you for that service and your important role in our continuing success.

We also will share with you our appreciation for the great folks that provide us with the OUTSTANDING Agricultural Research and Extension Services we enjoy. Their hard, and successful, work contributes directly to the prosperity ALL in North Dakota enjoy today. Our Ag Community's direct and indirect economic impact in North Dakota in 2012 alone will be well north of \$30 BILLION and contributes significantly to America's food security efforts.

Soybeans are an important part of ND's Ag Community. Two years ago I stood right in this spot and shared that the 2010 crop was about four million acres and valued at about a \$1 BILLION. Today I am delighted to report that the 2012 Soybean crop's direct value will be about \$2 BILLION.

AND, that the Soybean community has averaged over \$1 MILLION per year of its check-off dollars into Research projects in the last six years.

North Dakota's Success Formula

North Dakota's gifts of soil, sun, rain and breeze in favorable portions are important factors. We thank you too for the infrastructure investments needed to import our inputs and export our harvests. Key ingredients of the formula include the time and talent of our growers, and the magnificent research and sharing of that information over the years.

Growing Soybean Growers?

It's easy; give them the hope of profitability rooted in Trusted Research, combined with an effective Extension Service . . . and Walla! All it takes are great people . . . with the right talents, in the right roles, and the proper resourcing.

If we provided soybean researchers with a dime and they returned a quarter we'd view that as positive. If we invested that dime and got back a half-dollar we'd be thrilled. United Soybean Board (the national soybean check-off entity) studies indicate that money invested in soybean research has historically returned in a one-to-six ratio.

The success of the Soybean Industry in North Dakota only comes with continuous innovation through the investments in both Basic and Applied research to effectively provide the important ingredients needed by the "Riskers", our farmers.

Not all are familiar with the SBARE Needs Based Funding process. Please look to your SBARE Chart handout and I will provide a brief explanation. (SBARE Process Review)

SBARE's NEEDS

The SBARE prioritized list of Crop Initiatives; with its Nematologist, Bioinformaticist, Statistical Genomicist and their Technical support are all critical; as is enhancing research capacities at the Regional Research Centers across ND in crops and animal initiatives. A favorite quote of mine is from a ND Rancher; "I always wanted to be a Rancher, I just didn't realize that I need to be a "Grass Scientist" to succeed."

The Risk Management initiative has never had more potential value as we look forward. The future demands a clear understanding of existing and emerging global markets that will not happen without very deliberate actions on our part. Growing ND's water, air and soil quality are key factors at all levels. The future is coming . . . ready or not!

Extension agents are the go-to folks in communities and the Extension Service's "Agent's-in-Training" and Summer Internship programs are critical to guiding both hard and soft skill development opportunities. Livestock Development, Crop Protection and the other priorities are at the "TOP" of SBARE's Extension list, not the bottom, and need to be funded.

Lastly . . . Capital Projects. Two years ago we worked to fund Agronomy Labs; one . . . then two . . . then none! We'll do it all next time. Now is next time.

The term laboratory congers up one of two images for me. One, a clean well laid out work space that is effective and efficient; the other, a scene from a Frankenstein movie. Unfortunately, all but one of ND's agronomy labs are more like the Frankenstein movie. We simply MUST DO Better. The Vet Diagnostic Lab is recommended for funding by all reviewing this budget so far, I am hopeful that you will also. The 4H Camp, and its critical focus on the positive development of our state's youth, is "Future Critical"!

All of the initiatives and the great folks engaged in them are working to benefit the future . . . our children, our grandchildren, their safety and prosperity; both on, and for more of us, off the Farm.

The Additive Benefit

Perhaps the most important role these good people have is to grow those that will replace them. It is not easy, but Research and Extension are about creating and sharing future opportunity.

Lastly, and importantly, we thank you . . . again. We will not succeed without you. Your resourcing of these SPARE Needs provides a critical a path to a place we do not yet know . . . Tomorrow. We do not know the full challenge ahead. What we believe is; our collaborative efforts, while being good neighbors, will see us through.

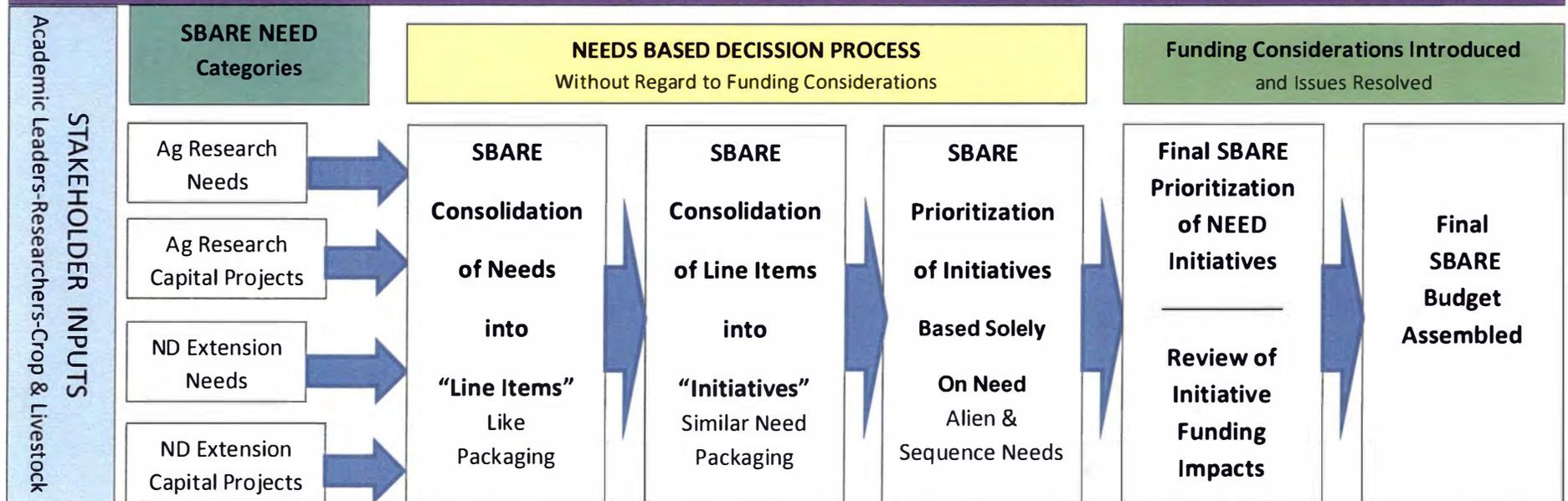
We have HIGH CONFIDENCE in the Needs Based SBARE process. We Strongly encourage full funding for All SBARE priorities presented. The Six-to-One Return on Investment reaches out to every place in our state.

Thank You all for your time and attention, and most importantly, your continuing service on our behalf.

I am available any questions that you may have of me.

Contact Information:
Scott Rising
701-527-1073 (cell)
grwbeans@earthlink.net

State Board of Agricultural Research & Education Prioritized Needs Based Budget





5

Your voice for wheat and barley. www.ndgga.com

North Dakota Grain Growers Association Testimony on Senate Bill 2020 Senate Appropriations Committee January 16, 2013

Chairman Holmberg, members of the Senate Appropriations Committee, for the record my name is Dan Wogsland, Executive Director of the North Dakota Grain Growers Association. The North Dakota Grain Growers Association appears before you today in support of SB 2020.

Agricultural Research and Extension efforts conducted by NDSU are the vital cog that keeps the agricultural machine moving in the state of North Dakota. Ag research has for decades enabled farmers in the state of North Dakota the ability to lead the nation in the production of at least 14 different agricultural commodities annually. This is especially critical for crops such as wheat and barley which depend on research on the public side to provide farmers the necessary advances in technology to stay competitive in the marketplace as well as providing farmers the ability to provide food on a global basis for an ever increasing population. NDGGA applauds the efforts of NDSU Ag Research and we support NDSU collaborative efforts with the private sector as a method of enhancing Ag research efforts on behalf of North Dakota farmers.

Having the technology is one thing; literally getting the technology to the field is another. NDSU Extension efforts have been unmatched in providing farmers and the agricultural industry the information necessary to make agriculture successful in our state. Efforts such as NDSU Extension's "Best of the Best" in research workshops and Annie's Project are but two examples of how NDSU Extension reaches out to today's farmers to provide them the most up-to-date information available.

Together NDSU Ag Research and Extension provide North Dakota farmers with the ability to produce food on a global scale that is unmatched; however challenges remain as the plant moves toward 9 billion people by the year 2050. To help meet those challenges, and to meet the expectations of farmers and the agricultural industry for continued excellence in agricultural research and extension efforts, Mr. Chairman, members of the Senate Appropriations Committee, you have the NDSU Ag Research and Extension

NDGGA provides a voice for wheat and barley producers on domestic policy issues – such as crop insurance, disaster assistance and the Farm Bill – while serving as a source for agronomic and crop marketing education for its members.

budget, with the State Board of Research and Education (SBARE) priorities before you today.

All of the initiatives presented to you today are Ag research and extension needs as assessed by SBARE. From a small grains perspective Extension initiatives such as the Agents in Training and Summer Internship program, the crop and resource protection program provide essential information services that are vital to farmers. On the research side initiatives from a small grains perspective the Crops Initiative, Risk Management and Trade as well as the Sustaining Water, Air and Land Quality as well as the Agronomy Labs upgrade provide essential services for agricultural research. However, from an agricultural industry side, all are important!

NDGGA supports SBARE, its mission and its process. SBARE allows agricultural stakeholders the ability to present our unlimited wants and prioritize our needs within the means available. NDGGA is proud to have current NDGGA Board Member and North Dakota Barley Council Chairman as well as past NDGGA Board member Bob Bahm as a part of the process. Involvement is essential; without involvement the SBARE process cannot and will not work.

That said NDGGA is very concerned about the recent attempts to limit SBARE's ability to present the Ag research and extension priorities to the North Dakota Legislature. SBARE is a creature of the Legislature; the Legislature formed SBARE to provide the Legislature with the agricultural research and extension priorities of North Dakota. It is SBARE's job to provide you with a priority list; it is the job of the Legislature to review the priorities and to meld those priorities with the Legislature's priorities. In no way should that open dialogue be impeded; the Legislature should and deserves to see the entire Ag research and extension priority list as compiled by SBARE. Only then can we have a true dialogue and debate on what is needed in agriculture.

Chairman Holmberg, Members of the Senate Appropriations Committee, NDGGA supports NDSU Agricultural Research and Extension, we support SBARE and its process, and we support the budget you have before you. North Dakota agriculture is the number one economic engine in our state; in order to keep the machine moving we must always maintain and enhance the machinery.

SB 2020

Julie Ellingson
SB 2020
1-16-13

#6

Good morning, Mr. Chairman and members of the Senate Appropriations Committee. For the record, my name is Julie Ellingson, and I represent the North Dakota Stockmen's Association. I too rise in support of SB 2020 today, recognizing the important role beef extension and research projects have on the competitiveness of our industry and the state's overall economy.

Stockmen's Association members have endorsed the State Board of Agricultural Research and Education's (SBARE) priority list. We are very grateful for the North Dakota Legislature's past support of people, programs and projects that have helped us move the needle in the beef industry, such as the recently dedicated Beef Cattle Research Complex, which is a state-of-the-art facility that allows for very specialized feeding trials – and one that you can be very proud to have been a part of.

The list of animal agriculture priorities that we offer for your consideration this year focuses on beefing up our people power, a one-time spending request and two smaller-ticket capital improvements.

On the Extension side, the *Livestock Development Initiative* is ranked no. 2 on the SBARE list and has two simple components:

- First is providing two area livestock specialists – one in Hettinger and the other in Streeter – to enhance Extension's ability to help beef producers curb marketing and production obstacles and capitalize on the opportunities that exist in our sector. It may surprise you that, despite Southwestern and South Central North Dakota being two of

the significant beef-cattle-producing areas in our state, there are no livestock specialists located in these areas. Each offers unique geographic considerations that influence cattle ranchers' business models, and livestock experts in these communities can help us zero in on their unique features – like federal land and oil-impact issues in the west or grass-based and forage opportunities and Prairie Pothole considerations in the South Central corridor.

- Second is a programming enhancement in the area of livestock production economics. A comprehensive, statewide Beef Producer Survey conducted with the help of North Dakota State University's Animal Science and Agribusiness Departments last year revealed several data points supporting this. In the survey, 43 percent of beef producers indicated that they needed additional information regarding production cost analyses and, thematically significant, that input costs are both the largest barrier to expansion and the most significant issue influencing industry exodus.

The governor's budget includes funding for one livestock specialist and the production economics piece.

On the experiment station side, there are several beef industry priorities we ask you to consider, including the no. 3 ranked *Livestock Initiative* that calls for fortification of our people power with two scientists and operating and technical support for the Main Station, area research stations and Vet Diagnostics Laboratory. Support of this area, of course, will help keep our scientists pumping out the research we rely on them for and best utilize their talents and the facilities you have invested in.

In addition, we support the one-time funding request for the Veterinary Diagnostic Laboratory's equipment needs. The Diagnostic Lab does an amazing job identifying and

preventing disease outbreaks in our animal herds, and keeping the lab's equipment up-to-date is critical to ensure its effectiveness, whether it is to test for livestock feed contamination, chemical exposure or other disease areas.

And, finally, we support the no.-3-ranked livestock facilities capital improvement projects, to expand the Carrington Research Extension Center's multi-use feedlot by 16 pens and to erect a livestock processing barn at the Hettinger station.

The governor's budget includes the Diagnostic Laboratory equipment, but not the other livestock industry support items.

North Dakota's cattle industry is significant, ranking 16th largest in the nation with our cattle and calves valued at more than \$1.8 billion. We respectfully ask for your support of one of the state's key economic engines, animal agriculture, and restore the funds allocated for these key initiatives.

Thank you for your time today.



P.O. Box 1091
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(701) 355-4458
FAX (701) 223-4645

MEMBERS

AmeriFlax
BNSF Railway Company
Garrison Diversion Conservancy District
Independent Beef Association of ND
Landowners Association of ND
Milk Producers Association of ND
Minn-Dak Farmers Cooperative
ND Ag Aviation Association
ND Ag Consultants
ND Agricultural Association
ND Agri-Women
ND Association of Agricultural Educators
ND Association of Soil Conservation Districts
ND Barley Council
ND Beef Commission
ND Corn Growers Association
ND Corn Utilization Council
ND Crop Improvement and Seed Association
ND Dairy Coalition
ND Department of Agriculture
ND Dry Bean Council
ND Dry Edible Bean Seed Growers
ND Elk Growers
ND Ethanol Council
ND Farm Bureau
ND Farm Credit Council
ND Farmers Union
ND Grain Dealers Association
ND Grain Growers Association
ND Irrigation Association
ND Lamb and Wool Producers
ND Oilseed Council
ND Pork Producers
ND Soybean Council
ND Soybean Growers Association
ND State Seed Commission
ND Stockmen's Association
ND Wheat Commission
NDSU Agricultural Affairs
Northern Canola Growers Association
Northern Food Grade Soybean Association
Northern Plains Potato Growers Association
Northern Pulse Growers Association
Red River Valley Sugarbeet Growers

Jeff Enger

SB 2020

1-16-13

#7

Testimony of Jeff Enger
North Dakota Ag Coalition Chairman
SB 2020

Mr. Chairman and members of the committee, my name is Jeff Enger 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, these 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 2013-15 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.

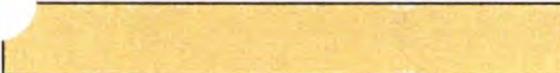
We appreciate your past support and urge your continued support of research and extension as these programs provide valuable information, education and tools for the state's producers. They have been and will continue to be driving forces in the future of North Dakota's agriculture industry.

It is for these reasons we encourage your support of SB 2020.



NCI

Northern Crops Institute

NORTH DAKOTA STATE UNIVERSITY

2013-2015 BIENNIAL BUDGET

ND SENATE APPROPRIATIONS COMMITTEE

Senator Ray Holmberg, Chairman

2:00 p.m., Wednesday, January 16, 2013

SB 2020

<http://www.legis.nd.gov/assembly/63-2013/documents/13-8170-01000.pdf>

NORTHERN CROPS INSTITUTE

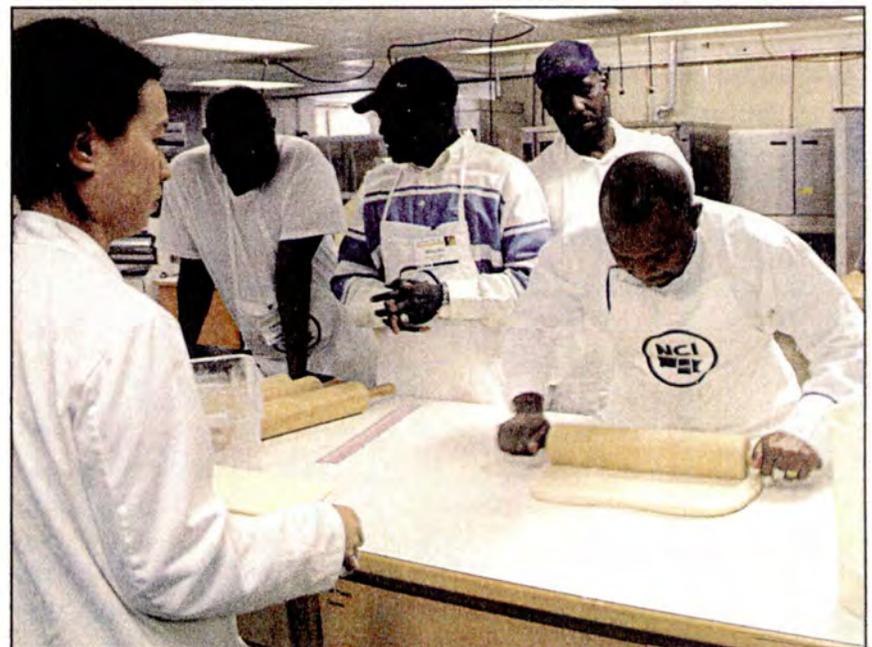
Budget No. 638

Mark F. Weber, Director
Northern Crops Institute

Robert Majkrzak, Chair
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, the staff of NCI works to support the promotion, market development and expanded sales of crops grown in this four-state region.

Some of NCI's major accomplishments are highlighted in these materials. NCI continues to focus on education and technical services as mandated in the Century Code. Our educational programs teach buyers, both U.S. and international, about the quality and end-use characteristics of northern grown crops to encourage the purchase and use of our crops for their processing needs. Our procurement programs teach international buyers how to use the U.S. grain marketing system to make their purchases of northern grown U.S. crops and better manage their risks. We also add value to these crops through technical services in the form of processing, providing technical support and processing solutions to processors and users of regional commodities in the region, U.S. and around the globe.

NCI continues to receive regional funding. However, without the support of North Dakota, we would not be able to continue the level of work documented here. The executive recommendation for NCI's budget is very supportive of our work and our plans for the future.

A one-time funding request of \$100,000 will replace original equipment installed in the NCI feedmill in 1990 and will enhance our worldwide reputation as a provider of high quality feed technology programming and education. Permanent funding of \$135,000 for the biennium will support 1.25 FTE current staff positions allowing the NCI to interact, build, and maintain relationships with our customers from all over the globe with the level of excellence that they have come to expect.

I ask that you support the Governor's executive recommendation of the NCI budget, and thank you for your continued interest and support of the Northern Crops Institute.

Respectfully submitted,
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 130 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). On November 20, 2012, presentations and written documentation on accomplishments during Fiscal Year 2012 and plans for the next fiscal year were provided to the Council. Copies are on file at the NCI office and with Council members. NCI provided verbal and written status reports to the South Dakota Appropriations Committees in January 2012. NCI also gives regular status reports on NCI accomplishments to other agencies that provide Special (other) funds.

At the June 26, 2012, Northern Crops Council (NCC) meeting, NCI Director Mark Weber provided a synopsis of staff discussions on the direction of NCI programs and activities. Again the NCC reaffirmed NCI's direction and mission for the future. NCI's direction for the future is to provide programs that educate the world about the broad spectrum of crops produced in our 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 has the opportunity to provide leadership in teaching snack food extrusion processes, but available space at the NCI may limit installation of necessary equipment needed to pursue this strategy.

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.

Recent research by the University of Minnesota shows that northern-grown soybeans have higher feeding values compared to soybeans grown in the rest of the United States. The NCI is beginning to share this information with our customers throughout the world.

The dynamic commodity markets has 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 will be 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.

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 Funded in 2011-2013

Feed Production Center Manager: \$199,362 salary and fringe benefits, 1.0 FTE

Since the 2011-13 NCI Feed Production Center Manager's initiative was funded, the NCI Feed Production Center has played an increasingly critical role in further developing both international and domestic markets for soybeans, corn, DDGS, and other regional grains and co-products.

In particular, the Asian market is exploding with opportunities, with the Pacific Northwest (PNW) becoming the major shipping point serving those markets. The PNW not only provides significant reduction in transit time for our region's crops compared to the gulf, but it has invested heavily in high capacity bulk vessel loading facilities. The result is that our region's producers have become the premier suppliers of raw commodities to those markets. Research by the University of Minnesota has shown that our region's soybeans have higher feeding values compared to soybeans grown in the rest of the U.S.

The NCI Feed Production Center's manager has been communicating this important information to our customers. He has traveled extensively in Southeast Asia, teaching feed manufacturing companies how to become more efficient in operating their plants and communicating current trends in animal nutrition and feed manufacturing technology. Our programming in that region is focusing on the importance of ingredient quality, manufacture of safe, wholesome and cost effective feed while emphasizing reliability of our region's supplies. He also established a feed manufacturing course at the NCI recently attended by 21 participants representing 18 companies from Indonesia, Philippines, Vietnam, and Thailand. He is increasingly called upon to provide technical advice to U.S. Wheat Associates, American Soybean Association, and the U.S. Grains Council throughout the world.

Operating Funds: \$45,308

These operating funds were used to cover the additional operating expenses associated with increased educational programming activities at the NCI main facility located on the NDSU campus and the NCI Feed Production Center located on the north side of the NDSU campus. The additional expenses included increased promotion of educational short courses to an expanding global audience and repairs for laboratory equipment and the Feed Production Center.

Northern Crops Institute - 638

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,692,582	\$1,061,063	\$631,519	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

Note: NCI does not receive Federal Formula Funds. No change expected.

2013-15 Needs-Based Budget

The initiatives below were identified and approved by the Northern Crops Council.

Initiative 1: Enhancing Feed Markets with Improved Services

\$100,000 (one-time request)

To enhance the NCI Feed Production Center's worldwide reputation as a provider of high quality feed technology programming and education, NCI is requesting one-time funding of \$100,000 to replace original equipment installed in 1990. It includes the purchase of a feed mixer and additional capabilities for the mill's computerized operating system.

Initiative 2: Ensuring NCI Expertise in the World's Changing Food Markets

\$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, we are requesting permanent funding for 1.25 FTE current positions.

The Food Technologist Position (1 FTE) is currently funded with 100 percent soft monies. This specialist in baking with wheat and other regional crops 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) is currently funded at 75 percent from the state general fund and 25 percent from soft monies. This position 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 world, helping food companies develop new information and products, thereby increasing utilization of these crops.

2013-2015 Needs-Based Budget

Reconciliation of 2011-13 General Fund Appropriation to 2013-2015 Executive Recommendation (SB 2020)

General Fund:	<u>NCI</u>
2011-13 Original General Fund Appropriation	\$ 1,692,582
Base Adjustments: N/A	
2011-13 Adjusted Appropriation, Less Base Adjustments	<u>1,692,582</u>
Executive Recommendation Base Increases (Decreases):	
Cost to continue FY2013 salary & retirement increases	31,644
Compensation package (4% per year) and health insurance & retirement increases	115,118
NCI initiatives	<u>135,000</u>
2013-15 Recommended Base General Fund Increases	<u>281,762</u>
Executive Recommendation One-time Increases:	
Update feedmill equipment	<u>100,000</u>
2013-15 Recommended One-time Increases:	<u>100,000</u>
2013-15 Total Executive Recommendation - General Fund	\$ <u>2,074,344</u>
Increase (Decrease) From 2011-13 Adjusted Appropriation, Less Base Adjustments	\$ <u>381,762</u>
 Other Funds:	
2011-13 Original Other Fund Appropriation	\$ 1,654,725
2011-13 Adjusted OF Appropriation	1,654,725
Base Adjustments: N/A	
2013-15 Adjusted Appropriation, Less Base Adjustments	<u>1,654,725</u>
Executive Recommendation Base Increases (Decreases):	
Cost to continue FY2013 salary & retirement increases	4,651
Compensation package (4% per year) and health insurance & retirement increases	30,072
2013-15 Capital projects	
Other changes in estimated income	<u>110,859</u>
Total requested increases (decreases)	<u>145,582</u>
2013-15 Total Executive Recommendation - Other Funds	\$ <u>1,800,307</u>

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. Such demand is also 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. One must look at what NCI does in the same way as one looks at other forms of education. We provide information on marketing and technical utilization of northern-grown commodities for both domestic and export markets. This service increases the possibilities of these 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 130 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 and how to buy them through the U.S. grain marketing system.

In 2011 and 2012, NCI trained over 381 professionals from 43 countries in our educational programs, with 23 scheduled short courses and 4 customized courses for private groups and companies. Another important part of our educational program is our activity with trade teams who visit NCI. In the last two years, NCI hosted 138 international visitors from 19 countries as part of 25 trade missions. The total number of countries visiting NCI in 2011 and 2012 was 50. In addition, NCI specialists often participate in domestic and overseas programs that have reached over 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 2012 annual report is included at the end of this report.

State Impact

Agricultural exports are extremely important to the North Dakota economy with \$3.96 billion exported in 2011 (USDA ERS).

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 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 2011 was \$16.03 billion, accounting for over 11.75% of the total U.S. exports. (<http://www.ers.usda.gov/Data/stateexports/>).

Success Stories

Pulse Activities: Beginning in 2011, NCI staff have presented pulse seminars at Culinary Institute of America. Nearly 63% of participants indicated they had done R&D formulation work with dry peas, lentils, and chickpeas. The same audience in an NCI follow-up seminar a year later indicated that they were extremely likely to incorporate those crops into new or existing menu items. NCI efforts helped solidify and advance their plans. Since then, two pulse processing plants have made plans to become operational in ND this year, employing 73 people.

Wheat Activities: According to U.S. Wheat Associates, personnel at a new Indonesian flour mill bought 9 million dollars worth of hard red spring (HRS) wheat after attending the Contracting for Wheat Value Workshop at Northern Crops Institute in September 2012.

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 2011 and 2012, NCI staff conducted overseas food and feed seminars and technical services in Dominican Republic, El Salvador, Guatemala, Honduras, Indonesia, Japan, Malaysia, Mexico, Morocco, Philippines, Thailand, Turkey, and Vietnam.
- **Wheat and Soybean Procurement Training:** In 2011-12, NCI educated 119 crop buyers from 34 countries at five procurement courses. These courses teach grain merchandisers how to make more effective U.S. crop purchases while managing their risk. The October 2012 Soybean Procurement Course utilized the NDSU electronic Commodity Trading Room (CTR) for the first time. The CTR 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.
- **Pulse, Oilseed, and Specialty Crops Promotion:** Production of these crops has seen tremendous growth. To promote these markets, NCI has developed new courses in their utilization, functionality, and quality characteristics, and staff have been featured speakers for these crops at national and international seminars.
- **Food Barley Initiative:** NCI is working with the U.S. Grains Council, N.D. Barley Council, National Barley Foods Council and growers to promote food barley use in other countries. NCI recently hosted its first food barley trade team and follow-up "Healthy Solutions for Food Barley Uses" course.
- **Feed Manufacturing Using Corn, Soybeans and DDGs:** When the Colombian Swine Producers Association sought a way to update their feed production skills, thirteen of their members came to NCI for a week of training, with support from the N.D. Corn Utilization Council. Feed safety programs are also a major focus in response to the passage of the Food Safety Modernization Act in 2011. Feed manufacturers from Southeast Asia attended the Feed Manufacturing Technology course in 2012. The first-time course was co-sponsored by the soybean commodity groups in Minnesota, North Dakota, and South Dakota, in conjunction with the American Soybean Association International Marketing.
- **Near Record Pasta Course Enrollment:** NCI's pasta manufacturing courses are very unique, since no other U.S. organization offers pasta processing courses. A near record enrollment attended the 2012 Pasta Production and Technology Short Course. This course remains in demand by U.S. and international pasta companies.
- **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 2011 and 2012, NCI conducted in-house processing and baking investigations, and analytical testing projects for 26 food and feed companies, universities and others.
- **NCI Feed Center Activities:** In 2011, the staff at the NCI Feed Center produced a total of 1,320 tons of feed; of that about 2.5% was designated as NDSU research feed. In 2012, about 1,575 tons of feed was produced, and about 10% was designated as NDSU research feed. Feed that is not designated as research is used in support of the teaching animals with the largest portion going to the swine unit, then the dairy, then beef, sheep and equine.

13.8170.01000

Sixty-third
Legislative Assembly
of North Dakota

SENATE BILL NO. 2020

Introduced by

Appropriations Committee

(At the request of the Governor)

1 A BILL for an Act to provide an appropriation for defraying the expenses of the extension
2 service, northern crops institute, upper great plains transportation institute, main research
3 center, branch research centers, and agronomy seed farm; to provide for transfers; to provide
4 an exemption; and to declare an emergency.

5 **BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

6 **SECTION 1. APPROPRIATION.** The funds provided in this section, or so much of the funds
7 as may be necessary, are appropriated out of any moneys in the general fund in the state
8 treasury, not otherwise appropriated, and from special funds derived from federal funds and
9 other income, to the North Dakota state university extension service, the northern crops
10 institute, the upper great plains transportation institute, the main research center, branch
11 research centers, and agronomy seed farm for the purpose of defraying the expenses of the
12 North Dakota state university extension service, the northern crops institute, the upper great
13 plains transportation institute, the main research center, branch research centers, and
14 agronomy seed farm, for the biennium beginning July 1, 2013, and ending June 30, 2015, as
15 follows:

16 Subdivision 1.

17 **NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE**

		Adjustments or		
	<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>	
18				
19				
20	Extension service	\$47,026,654	\$5,998,604	\$53,025,258
21	Soil conservation committee	<u>987,800</u>	<u>75,000</u>	<u>1,062,800</u>
22	Total all funds	\$48,014,454	\$6,073,604	\$54,088,058
23	Less estimated income	<u>23,128,810</u>	<u>2,308,604</u>	<u>25,437,414</u>

Sixty-third
Legislative Assembly

1	Total general fund	\$24,885,644	\$3,765,000	\$28,650,644
2	Full-time equivalent positions	256.26	2.00	258.26
3	Subdivision 2.			

NORTHERN CROPS INSTITUTE

5			Adjustments or	
6		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
7	Total all funds	\$3,347,307	\$527,344	\$3,874,651
8	Less estimated income	<u>1,654,725</u>	<u>145,582</u>	<u>1,800,307</u>
9	Total general fund	\$1,692,582	\$381,762	\$2,074,344
10	Full-time equivalent positions	12.00	0.00	12.00
11	Subdivision 3.			

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

13			Adjustments or	
14		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
15	Total all funds	\$24,069,961	\$1,283,668	\$25,353,629
16	Less estimated income	<u>22,150,333</u>	<u>374,721</u>	<u>22,525,054</u>
17	Total general fund	\$1,919,628	\$908,947	\$2,828,575
18	Full-time equivalent positions	51.75	2.00	53.75
19	Subdivision 4.			

MAIN RESEARCH CENTER

21			Adjustments or	
22		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
23	Total all funds	\$89,012,990	\$21,280,332	\$110,293,322
24	Less estimated income	<u>41,630,644</u>	<u>11,624,941</u>	<u>53,255,585</u>
25	Total general fund	\$47,382,346	\$9,655,391	\$57,037,737
26	Full-time equivalent positions	349.01	2.48	351.49
27	Subdivision 5.			

RESEARCH CENTERS

29			Adjustments or	
30		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
31	Dickinson research center	\$5,588,562	\$642,763	\$6,231,325

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1	Central grasslands research center	2,865,847	431,712	3,297,559
2	Hettinger research center	3,373,175	1,373,059	4,746,234
3	Langdon research center	2,378,807	507,956	2,886,763
4	North central research center	4,399,821	261,858	4,661,679
5	Williston research center	3,410,089	458,934	3,869,023
6	Carrington research center	<u>7,126,488</u>	<u>927,807</u>	<u>8,054,295</u>
7	Total all funds	\$29,142,789	\$4,604,089	\$33,746,878
8	Less estimated income	<u>14,997,581</u>	<u>1,024,285</u>	<u>16,021,866</u>
9	Total general fund	\$14,145,208	\$3,579,804	\$17,725,012
10	Full-time equivalent positions	103.04	4.00	107.04

11 Subdivision 6.

12 AGRONOMY SEED FARM

13			Adjustments or	
14		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
15	Agronomy seed farm	<u>\$1,435,168</u>	<u>\$39,793</u>	<u>\$1,474,961</u>
16	Total special funds	\$1,435,168	\$39,793	\$1,474,961
17	Full-time equivalent positions	3.00	0.00	3.00

18 Subdivision 7.

19 BILL TOTAL

20			Adjustments or	
21		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
22	Grand total general fund	\$90,025,408	\$18,290,904	\$108,316,312
23	Grand total special funds	<u>104,997,261</u>	<u>15,517,926</u>	<u>120,515,187</u>
24	Grand total all funds	\$195,022,669	\$33,808,830	\$228,831,499

25 **SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO**

26 **SIXTY-FOURTH LEGISLATIVE ASSEMBLY.** The following amounts reflect the one-time
 27 funding items approved by the sixty-second legislative assembly for the 2011-13 biennium and
 28 the 2013-15 one-time funding items included in the appropriation in section 1 of this Act:

29	<u>One-Time Funding Description</u>	<u>2011-13</u>	<u>2013-15</u>
30	Main research center greenhouse project	\$9,494,581	\$0
31	Main research center special assessments	82,402	0

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1	Dickinson research center operations pool	800,000	0
2	Upper great plains transportation institute	350,000	0
3	transportation study		
4	Agronomy laboratories	0	4,300,000
5	Extension 4-H camp renovation	0	1,900,000
6	Feed mill equipment	0	100,000
7	Video conference equipment	0	110,000
8	Diagnostic equipment	<u>0</u>	<u>400,000</u>
9	Total all funds	\$10,726,983	\$6,810,000
10	Total other funds	<u>2,852,931</u>	<u>1,400,000</u>
11	Total general fund	\$7,874,052	\$5,410,000

12 The 2013-15 one-time funding amounts are not a part of the entity's base budget for the
13 2015-17 biennium. The main research center shall report to the appropriations committees of
14 the sixty-fourth legislative assembly on the use of this one-time funding for the biennium
15 beginning July 1, 2013, and ending June 30, 2015.

16 **SECTION 3. ADDITIONAL INCOME - APPROPRIATION.** In addition to the amount
17 included in the grand total special funds appropriation line item in section 1 of this Act, any other
18 income, including funds from federal acts, private grants, gifts, and donations, or from other
19 sources received by the North Dakota state university extension service, the northern crops
20 institute, the upper great plains transportation institute, the main research center, branch
21 research centers, and agronomy seed farm, except as otherwise provided by law, is
22 appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium
23 beginning July 1, 2013, and ending June 30, 2015.

24 **SECTION 4. TRANSFER AUTHORITY.** Upon approval of the state board of agricultural
25 research and education and appropriate branch research center directors, the director of the
26 main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of
27 section 1 of this Act. Any amounts transferred must be reported to the director of the office of
28 management and budget.

29 **SECTION 5. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS.** The board of higher
30 education may adjust or increase full-time equivalent positions as needed for the entities in

1 section 1 of this Act, subject to availability of funds. The board shall report any adjustments to
2 the office of management and budget prior to the submission of the 2015-17 budget request.

3 **SECTION 6. UNEXPENDED GENERAL FUND - EXCESS INCOME.** Any unexpended
4 general fund appropriation authority to and any excess income received by entities listed in
5 section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any
6 unexpended funds from these appropriations or revenues are available and may be expended
7 by those entities, during the biennium beginning July 1, 2015, and ending June 30, 2017.

8 **SECTION 7. EXEMPTION.** The amounts appropriated for the research greenhouse
9 complex project, as contained in subdivision 4 of section 3 of chapter 48 of the 2005 Session
10 Laws and subdivision 4 of section 1 of chapter 19 of the 2011 Session laws, are not subject to
11 the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or
12 related revenues are available and may be expended during the biennium beginning July 1,
13 2013, and ending June 30, 2015.

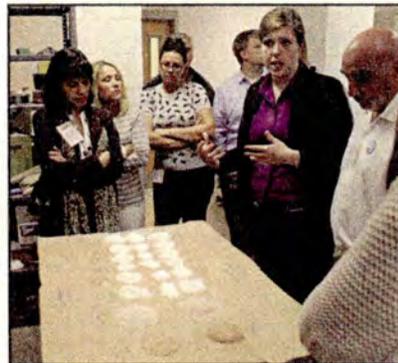
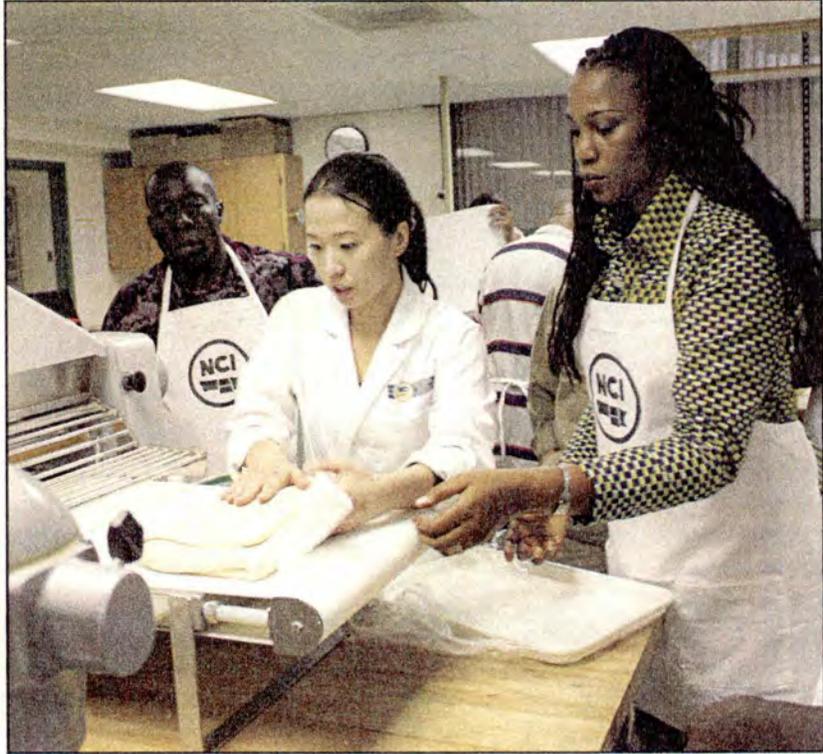
14 **SECTION 8. INTERNSHIP MATCHING FUNDS.** The extension service line item in
15 subdivision 1 of section 1 of this Act includes \$250,000 from the general fund for an extension
16 service internship program, for the biennium beginning July 1, 2013, and ending June 30, 2015.
17 Internship program funds can be spent only to the extent that matching funds have been
18 secured from nonstate resources on a dollar-for-dollar cash basis.

19 **SECTION 9. EMERGENCY.** The appropriation for capital projects of \$4,300,000 in
20 subdivision 4 of section 1 of this Act and \$1,900,000 in subdivision 1 of section 1 of this Act is
21 declared to be an emergency measure.

Northern Crops Institute Annual Update

2012

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



A Note from the NCC Chair

Robert Majkrzak, NCC Chair
President, Red River Commodities, Inc.



Majkrzak

It is a pleasure to report on the progress and activities of the NCI over the past year, as so many positive things have occurred.

Mark Weber joined the NCI late in 2011 as Director. His impact on direction and leadership has really been felt in 2012. Mark has brought new energy to the position and his outreach to various organizations that cooperate with the

NCI has been impressive. Mark will continue to develop his vision and direction of programs during the next few years.

Within the NCI, we have seen continued improvements in short courses, technical equipment and staff. New courses added focus on soybeans and the procurement aspects of all commodities in the region. There has been a greater involvement with corn and soybean grower groups and the products as these commodities have come to be so dominating in the northern-grown crops.

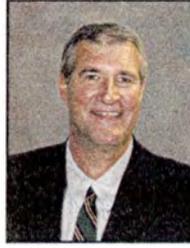
Incorporating the new NDSU Commodity Trading Room at Barry Hall into procurement short courses is offering a learning experience that attendees are very excited about. Technical equipment is being upgraded and additional new equipment will be sourced to allow for oil/meal separation for the oil crops of the region.

As world demand continues to increase for food, feed and fuel, there will be renewed interest from buyers to understand the dynamic commodity markets. Developing programs that are in step with the latest issues facing procurement, such as risk analysis, logistics and food safety, will be incorporated to the already solid educational short course line-up. NCI is uniquely prepared to assist in developing that knowledge and enhance the marketing opportunities for northern-grown crops.

I congratulate Mark and the entire NCI staff for a great year and look forward to the continued success of the Northern Crops Institute.

Director's Corner

Mark Weber
Director, Northern Crops Institute



Weber

U.S. agriculture is exploding with opportunities particularly in this northern region where our farmers are in a strategic position to supply many world markets due to our logistics, climate, and quality characteristics of our crops. We have witnessed prolific growth in soybean, corn and pulse production in the last two decades. 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 (NCI) is responding by providing increased services in quality evaluation, education, processing and technical expertise.

Asia's rising population and soaring demand will dramatically change the current global food industry. It is predicted that Asian diets will adopt the U.S. trend of eating food prepared outside the home, requiring a tremendous amount of education to the food industry in crop quality an utilization.

The majority of soybeans and corn are used for animal feed, and our region's corn has some of the lowest mycotoxin levels. Research conducted by the University of Minnesota shows that our soybeans have very high protein quality, which is the true indicator of feeding value and efficiency in livestock. The importance of communicating this information to the rest of the world becomes abundantly clear.

Our region's hard red spring (HRS) wheat continues to be the world's most reliable choice for superior quality. Recently a team of quality control and purchasing managers from Indonesian and Philippine flour mills attended the NCI's three-day South Asia Contracting for Wheat Value Workshop, held in cooperation with U.S. Wheat Associates. At the workshop, our staff conducted side-by-side baking demonstrations, comparing flours from other parts of the world to flour made from this region's HRS. Once again, our northern-grown HRS demonstrated excellent quality and results to our customers.

The commodity groups supported by farmer check-off dollars from our four-state region have stepped to the plate in a huge way by offering program direction, furnishing trade contacts throughout the world, and providing major funding. We deeply appreciate their significant support and efforts.

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2012-2013 Northern Crops Council (NCC)

Robert Majkrzak, Chair
 Fargo, ND
 Red River Commodities, Inc.

Dean Bresciani, Ph.D.
 President
 North Dakota State University

Ryan Brooks
 Bowman, ND
 Northern Pulse Growers

David Clough, Past Chair
 Fessenden, ND
 ND Wheat Commission

Chet Edinger
 Mitchell, SD
 SD Wheat Commission

Doug Goehring
 Commissioner of Agriculture
 ND Department of Agriculture

Mark Jossund
 Moorhead, MN
 MN Wheat Research and
 Promotion Council

Doyle Lentz
 Rolla, ND
 ND Barley Council

Milo "Buzz" Mattelin
 Culbertson, MT
 MT Wheat & Barley
 Committee

Dwight Mork
 Bellingham, MN
 MN Corn Research and
 Promotion Council

Keith Peltier
 West Fargo, ND
 Proseed

Jay Romsa
 LeSueur, MN
 General Mills

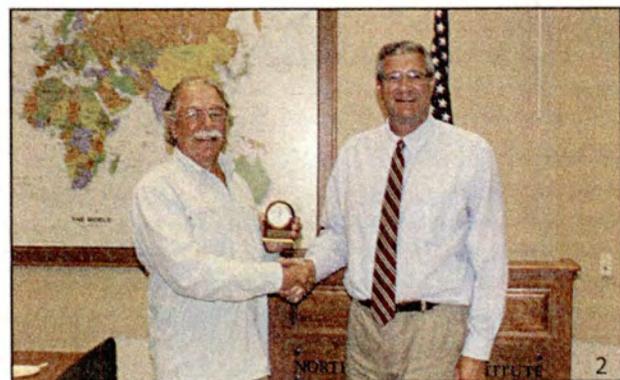
Mike Satrom
 Galesburg, ND
 ND Soybean Council

Robert Sinner
 Casselton, ND
 SB & B Foods Inc.

Kevin Skunes
 Arthur, ND
 ND Corn Council

Arnold Woodbury
 Wyndmere, ND
 ND Oilseed Council

Karolyn Zurn, Vice Chair
 Callaway, MN
 MN Soybean Growers



NCI Director Mark Weber thanked two out-going board members for their service to the Northern Crops Council by presenting each with an engraved clock at the June 2012 meeting. René Steiner (on left in photo 1), Buhler North America, represented food processors during his two terms on the council. Steiner will continue to serve on the NCI Industry Advisory Board. Ernie Hoffert (on left in photo 2), a producer from Carrington, N.D., represented AmeriFlax during his two terms.

2012-2013 Industry Advisory Board

- John McLean, Chair
Cargill
- Mark Askegaard
Askegaard Organic Farm
- Eric Bartsch
United Pulse Trading
- David Berg
American Crystal Sugar
- Mark Berwick
Upper Great Plains
Transportation Institute
- Darwin Britzman
International Nutrition
Consulting
- Rodney Christianson
SD Soybean Processors, Inc.
- Ron DeJongh
Columbia Grain, Inc.
- Carrol Duerr
Colfax Elevator
- Tim Egeland
Dahlgren & Company Inc.
- Gordon Gingras
Evonik
- Mike Gray
Kellogg's
- Brad Hennrich
Hesco, Inc.
- Roger Hipwell
MGI Grain Processing LLC
- Brad Kjar
Tharaldson Ethanol
- Gerald Leukam
T.E. Ibberson Co.
- Jon Long
BNSF Railway Inc.
- Robert Majkrzak
Red River Commodities
- Dave Polries
Dakota Dry Bean
- Jay Romsa
General Mills
- Robert Sinner
SB & B Foods Inc.
- Travis Sitter
Silveus Insurance Group
- Alan Slater
Busch Agricultural Resources
- Brian Sorenson
Dakota Specialty Milling
- René Steiner
Buhler North America
- Scott Stofferahn
Golden Growers Cooperative
- Tom Streifel
Highwater Ethanol
- Mark Stutrud
Summit Brewing Company
- Vance Taylor
North Dakota Mill
- Jennifer Tesch
SK Food International
- Ken Ulbrich
Bay State Milling

Northern Crops Institute Honored with North Dakota Trade Office's Service to Exporters Award



Northern Crops Institute received the 2011 Service to Exporters Award at the 2012 Global Business Connections Conference in Fargo, N.D., on April 11. The award was presented by North Dakota Governor Jack Dalrymple, (right), on behalf of the North Dakota Trade Office (NDTO). The award was accepted by John Crabtree, (left), NCI Assistant Director.

The NDTO Service to Exporters Award is an accolade given to one organization that demonstrates exceptional commitment to supporting North Dakota exporters and increasing the state's international business.

NCI Director Mark Weber says, "Since NCI opened its doors in 1983, we have been blessed with an outstanding staff. The success of NCI is largely due to the partners we have in the regional commodity groups and university scientific communities. I would like to thank them all for their outstanding contributions to NCI."

"NCI has consistently provided opportunities for North Dakota exporters through their significant exposure to buyers and processors around the world. The North Dakota Trade Office looks forward to continuing and expanding this great relationship," said Dean Gorder, Executive Director of the North Dakota Trade Office.

Thank You to NCI's Agribusiness Sponsors for Their Generous Contributions in 2012

American Crystal Sugar Company
Buhler Inc.
Columbia Grain, Inc.
Dakota Growers Pasta Co., Inc.
Hesco Inc.
North Dakota Grain Dealers Association
Northern Plains Potato Growers Association
Proseed Inc.
Red River Commodities



Red River Valley Sugarbeet Growers Association
SB & B Foods Inc.
SK Food International
Summit Brewing Company
SunOpta Foods Inc.

NCI Office Manager Linda Briggs with the new plaque that recognizes NCI's agribusiness sponsors.

A Special Thank You to All Who Supported NCI Programs and Activities in 2012

- North Dakota State University
Agribusiness and Applied Economics
William Wilson, Ph.D.
Frayne Olson, Ph.D.
- Animal Science
Kurt Johnsen
Greg Lardy, Ph.D.
David Newman, Ph.D.
- Research Extension Center
Vern Anderson, Ph.D.
- Cereal and Food Sciences
Clifford Hall, Ph.D.
Dilrukshi Thavarajah, Ph.D.
- Plant Sciences
Elias Elias, Ph.D.
Rich Horsley, Ph.D.
Frank Manthey, Ph.D.
Kevin McPhee, Ph.D.
Mohamed Mergoum, Ph.D.
Paul Schwarz, Ph.D.
Senay Simsek, Ph.D.
- ADM-Benson Quinn
Minneapolis, Minn.
Kerry Melius
- Ag Processing Inc., Omaha, Neb.
Craig Pietig
- Agassiz Valley Grain, Barnesville, Minn.
Dan Noreen
- AgriBank, FCB, St. Paul, Minn.
David Bullock, Ph.D.
- Alton Grain, Hillsboro, N.D.
Cory Tryan
- American Feed Industry Association
- American Soybean Association International
Marketing
- AmeriFlax
- Axor America, Inc., Plymouth, Minn.
Al Lucia
- BNSF Railway, Fort Worth, Tex.
Brandon Mortensen
- Buhler, Minneapolis, Minn.
Michael Ehr
- Busch Ag Resources
Moorhead, Minn.
Paul Bolin
Judd Carlson
West Fargo, N.D.
Tony Rosing
- Cargill, Inc., Minneapolis, Minn.
Stephane Henchoz
Wayne Koester
- CHS, Inc.
Inver Grove Heights, Minn.
Ryan Caffrey
Dan Endreson
Mike Klein
Savage, Minn.
Greg Oberle
Superior, Wisc.
Dick Carlson
- Columbia Grain
Minneapolis, Minn.
Michael Brinda
Ron De Jongh
Portland, Ore.
Kevin Callahan
- C-W Valley Co-op, Wolverton, Minn.
Curt Bjertness
- C.W. Brabender, Inc., Hackensack, N.J.
Salvatore Iaquez
Shuping Yan, Ph.D.
- D. Maldari & Sons, Inc., Brooklyn, N.Y.
Dan Maldari
- Dakota Growers Pasta, New Hope, Minn.
Alexis Freier
Radwan Ibrahim, Ph.D.
- Dakota Specialty Milling, Fargo, N.D.
Robert Meyer
Brian Sorenson
- Duluth Seaway Port Authority
Ron Johnson
Adolph Ojard
Adele Yorde
- EGT, LLC, Longview, Wash.
Jerry Gibson
Brad Hansen
- FC Stone, St. Louis Park, Minn.
Gordy Elliot
- Frontier Futures, Minneapolis, Minn.
Austin Damiani
- Gavilon Grain, LLC, Valley City, N.D.
Ryan Motl
- GIPSA/FGIS
Portland, Ore.
Tom Steele
Superior, Wisc.
Art Boline
- Hunter Grain Company, Hunter, N.D.
Paul Skarnagel
- MGI Grain Processing, LLC
East Grand Forks, Minn.
Roger Hipwell
- Minneapolis Grain Exchange
Rita Maloney
Joe Victor
- Minnesota Corn Research & Promotion
Council
- Minnesota Department of Agriculture
- Minnesota Soybean Research and
Promotion Council
- Minnesota Wheat Research and
Promotion Council
- Montana Wheat and Barley Committee
- Montana State University
- National Grain and Feed Association
- North Dakota Barley Council
Steve Edwardson
- North Dakota Corn Council
- North Dakota Oilseed Council
- North Dakota Soybean Council
- North Dakota Mill, Grand Forks, N.D.
Travis Devlin
Vance Taylor
- North Dakota Wheat Commission
Neal Fisher
Erica Olson
Jim Peterson
- Northharvest Bean Growers
- Northern Canola Growers Association
- Northern Pulse Growers Association
- Pacific Grain Export Association
- PolyCell Technologies, Crookston, Minn.
Tom Jorgen
- Port of Grays Harbor, Aberdeen, Wash.
Leonard Barnes
Gary Nelson
- Rahr Malting Company, Shakopee, Minn.
Curt Jacobson
- Riverland Ag Corporation, St. Louis Park, Minn.
Don Grambsch
- South Dakota Corn Utilization Council
- South Dakota Soybean Research and Promotion
Council
- South Dakota State University
Animal and Range Science
Bob Thaler, Ph.D.
- South Dakota Wheat Commission
- State of North Dakota
- State of South Dakota
- Technical Foods Consultants, Cincinnati, Ohio
Clyde Stauffer
- The Money Farm, Fargo, N.D.
Mike Krueger
- U.S. Bank, Minneapolis, Minn.
Nabil Amra
- U.S. Dry Bean Council
- USA Dry Pea and Lentil Council
- USDA Biosciences Research Laboratory
Fargo, N.D.
Shiaoman Chao, Ph.D.
- USDA Northern Crop Science Laboratory
Fargo, N.D.
Lynn Dahleen, Ph.D.
- U.S. Grains Council
- U.S. Soybean Export Council
- U.S. Wheat Associates
Roy Chung
John Oades, Ph.D., Consultant
Lock Yang Phua
Joe Sowers
Mike Spier
Steve Wirsching
- University of Minnesota
Food Science & Nutrition
Joanne Slavin, Ph.D.
- Washington Grain Alliance
Mary Palmer Sullivan
- Westbred, Fargo, N.D.
Christine Fastnaught, Ph.D.
- Wheat Marketing Center, Portland, Ore.
David Shelton, Ph.D.

52 Grain Buyers from 23 Nations Attend NCI Grain Buying Courses

Advanced Grain Procurement Strategies Course: Honduras, Italy, Japan, Mexico, Netherlands, Poland, Portugal, Trinidad, and USA • May 14-18, 2012

Grain Procurement Management for Importers Course: Belgium, Chile, China, Egypt, Guatemala, Italy, Lebanon, Morocco, Netherlands, Peru, South Korea, Singapore, Sweden, Thailand, Trinidad, Tunisia, United Arab Emirates • September 17-26, 2012

Fifty-two grain buyers from 23 nations attended two grain procurement courses offered in 2012 by Northern Crops Institute.

In May, seventeen grain buyers attended the Advanced Grain Procurement Strategies Short Course. Eleven participants were sponsored



Crabtree

by U.S. Wheat Associates.

Thirty-five participants attended the Grain Procurement Management for Importers Course in September. Twenty-one participants

from this class were sponsored by U.S. Wheat Associates, while seven other participants were sponsored through the USDA FAS Cochran Fellowship Program.

John Crabtree, NCI Assistant Director, coordinates the NCI short courses.

William Wilson, Ph.D., NDSU Distinguished Professor of Agribusiness and Applied Economics and an expert in commodity futures trading, is the lead lecturer for both courses.

Advanced Grain Procurement Strategies Course

"As agriculture continues to evolve around the world, it creates a lot of uncertainty in the grain markets. From this advanced course, grain merchandisers learn various price risk management tools that they can use to minimize market volatility. Companies need to assess their risk management program and to know how much risk they can financially accept," says Crabtree.

"At this year's course, I am happy to report that we had a number of participants who are repeat customers from other courses. That is a strong testament to the quality of the course," Crabtree concludes.

Trading and tendering games, case studies involving real world situations, and panel discussions give participants practical experience in applying what they learned. The group also toured the Alton Grain Terminal, Hillsboro, N.D., to learn how their shuttle train facility operates.

Lecture topics included changes in agriculture trade and evolving global supply chains; basis analysis; hedging and contracting; integrating

options; Value-at-Risk; logistics pricing; inventories as risk management strategy; currency exchange risk management; risk management policy; current grain situation and outlook; and buyer/seller relations.

Grain Procurement Management for Importers Course

The September grain procurement course is a basic-level class for grain buyers. It is designed for global grain buyers who want to learn more about buying grain through the U.S. grain



Wilson

marketing system and gain a competitive edge in grain marketing decisions to better manage price and quality risks.

Highlights of the course are lectures by academic and

commodity trade authorities on cash and futures markets, and sessions with grain merchandisers who explain international grain markets. On-site tours of the Minneapolis Grain Exchange, a country elevator, Duluth Seaway Port Authority, an export grain terminal, and a barge facility round out the course.



2012 Grain Procurement Management for Importers Short Course participants and faculty



Participants examine various kinds of wheat in the Commodity Grading Laboratory.



2012 Advanced Grain Procurement Short Course participants and faculty

Electronic Trade Room is Showcased at Soybean Procurement Class

India, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam • October 8-16, 2012

Twenty-one soybean buyers from seven Southeast Asian nations learned how to better negotiate electronic trading systems as they attended the Soybean Procurement Management for Importers short course in October. Focus of the course was to learn more about contracting and purchasing U.S. soybeans. The course was hosted at NCI from October 8-12, and then the group traveled to Portland, Ore., where the course concluded October 16.

"This course was the result of a multi-state effort by the Minnesota, North Dakota, and South



Weber

Dakota soybean organizations, who provided major funding for this program. For Northern Crops Institute, this soybean program was the first of its kind in that it was generated at the grass roots level, in cooperation with the American Soybean Association International Marketing (ASAIM)," says NCI Director Mark Weber.

"The Southeast Asian region is a very large and growing market. We believe that we can capitalize on that



William Wilson, Ph.D., explains some of the electronic trading tools that are present in the NDSU Commodity Trading Room at Barry Hall.

growth by bringing customers here to improve their risk management skills, which they then can apply to their U.S. soybean purchases," Weber concludes.

Much of the course took place in the electronic Commodity Trading Room (CTR), a new addition to the Agribusiness and Applied Economics Department at North Dakota State University (NDSU), Fargo. In this new commodity trading and financial laboratory, students learn how to extract and analyze information, and then make decisions with respect to risk and risk management. The CTR is the brainchild of William Wilson, Ph.D., lead instructor for NCI procurement courses.

"Our trading room is truly unique because of its focus on agricultural trading. I envision organizing the procurement classes around the trading room as a means of illustrating trading tools and technology," says Wilson.

The CTR 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. The room has 32 seats, each with a PC station and dual monitors. Students have electronic access to information through Bloomberg, DTN and X-Trader simulation software from Trading Technologies.

In the second week of the course, NCI Director Mark Weber accompanied the group to Portland, Ore., where U.S. soybean shipments to Asia originate.



The soybean procurement class at the Port of Grays Harbor, Aberdeen, Wash.



2012 Soybean Procurement Course participants and faculty

South Asia Wheat Team Learns More about Managing Supply Chain Indonesia and Philippines • September 10-13, 2012

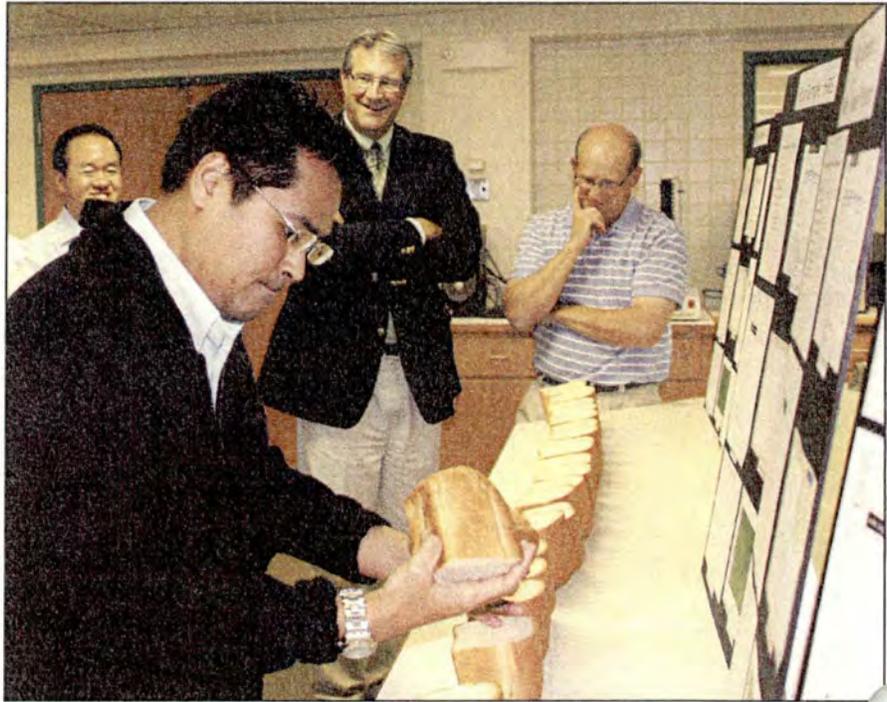
A team of six quality control and purchasing personnel from mills in Indonesia and the Philippines attended the South Asia Contracting for Wheat Value Workshop at NCI. The workshop, which concluded at the U.S. Wheat Associates (USW) office, in Portland, Ore., was sponsored by the U.S. Wheat Associates.

The workshop was designed to teach the team how to better manage their supply chain challenges and how to write contracts that accurately specify the wheat they want to purchase.

"In South Asia, our most important markets are the Philippines and Indonesia," says Steve Wirsching, director of the U.S. Wheat Associates West Coast office.

"The Philippines has long been a very important market for U.S. hard red spring (HRS) wheat and U.S. wheat in general, buying about 2 million metric tons each year, as compared to Indonesia, which is an up-and-coming market that purchased 830 thousand metric tons last year. Indonesia is not a new market for us, but we are seeing increased spring wheat sales driven by economic growth and wheat consumption," continues Wirsching.

"At this workshop, we brought together the quality control personnel and the purchasing departments from four mills. Typically, the quality control department wants the highest quality,



A participant examines bread samples that were baked from a wide range of flours from many parts of the world. NCI Director Mark Weber and Jim Peterson, Marketing Director for North Dakota Wheat Commission, observe in the background.

and often times, the most expensive wheat; whereas the purchasing group and the accountants want the cheapest wheat."

"We at USW are promoting the idea that they need to work together as a team to figure out these problems. Buying the cheapest wheat doesn't give you the best value, while buying the best quality wheat doesn't necessarily give you the best value either. We teach them about how quality is

measured and why it is important to end-use performance," concludes Wirsching.

NCI Director Mark Weber comments, "The Northern Crops Institute has enjoyed a long and fruitful relationship with our friends in the Philippines and Indonesia. This workshop was another example of the outstanding cooperation in market development efforts that exist with companies in this region of the world.



Lock Yang Phua, USW, slices the bread before the quality evaluations.



2012 Contracting for Wheat Value Workshop participants and faculty



Roy Chung, USW, and a participant examine the cookie samples.

As part of this workshop, we did side-by-side baking demonstrations, comparing flours from other parts of the world to the hard red spring (HRS) wheat grown in our region of the U.S. Once again our northern-grown HRS showed excellent quality and results," he concludes.

In addition to lectures on wheat quality testing and procurement, the group also toured Jay Nord's farm near Wolverton, Minn. They were hosted by Manager Curt Bjertness as they toured the Wolverton C-W Valley Co-op Elevator.

Workshop speakers and technicians included: Rachel Carlson, NCI Food Technologist; Roy Chung, USW Baking Consultant, Singapore; Natsuki Fujiwara, NCI Food Technologist; Lock Yang Phua, USW Baking Specialist, Singapore; John Oades, Consultant, Vancouver, Wash.; Erica Olson, North Dakota Wheat Commission; Senay Simsek, Ph.D., NDSU Department of Plant Sciences; Joseph Sowers, USW Assistant Regional Director, Singapore; Michael Spier, USW Regional Vice President, Singapore; Tom Steele, Federal Grain Inspection Service, Portland; William Wilson, Ph.D., NDSU Department of Agribusiness and Applied Economics; and Steve Wirsching, USW Director, Portland office.



Carlson



"As part of this workshop, we did side-by-side baking demonstrations, comparing flours from other parts of the world to the hard red spring (HRS) wheat grown in our region of the U.S. Once again our northern-grown HRS showed excellent quality and results," says NCI Director Mark Weber.



The Contracting for Wheat Value team included (l to r): Steve Wirsching, Joe Sowers, Mike Spier, Roy Chung, Lock Yang Phua, all U.S. Wheat Associates; Rachel Carlson, Natsuki Fujiwara, and Mark Weber, all Northern Crops Institute.



Rachel Carlson, NCI Food Technologist, demonstrates how to do a colorimeter test.



Natsuki Fujiwara, NCI Food Technologist, explains the falling number test.



Senay Simsek, Ph.D., NDSU Assistant Professor of Plant Sciences, explains several analytical laboratory tests for flour and dough quality.

NCI Responds to Milling Industry with Hands-On Rheology Course Colombia and USA • June 12-14, 2012

Twelve participants from Colombia and USA attended the Rheology of Wheat and Flour Quality Short Course from June 12-14 at NCI.

This course was designed to teach participants about the importance of wheat and flour quality, and how differences in quality can affect milling and baking performance. The hands-on laboratory experiences focused on learning to operate rheological instruments that measure wheat and flour quality, and how to analyze, interpret, and apply the results effectively.

John Crabtree, NCI Assistant Director, comments, "We developed this course in response to feedback from the milling and baking industries that indicated a need for their personnel to have more training on the latest rheological equipment. This knowledge will help them explain to their customers the differences in quality and how to adjust for those variations."

"This year's course included much more hands-on training in running the rheological instruments and in interpreting the analytical tests. We want to thank C.W. Brabender Instruments Company, who sent their personnel to assist in the equipment training," Crabtree concludes.



Alyssa Hicks, NCI Milling Specialist, explains the differences in results using various milling parameters.



Hicks

Each participant had the opportunity to gain hands-on experience with the rheological instruments. They focused on tests for gluten content, falling number, flour color, ash content, moisture, starch damage, speck count, protein and starch. Equipment training included the Buhler lab mill, Alveograph, Mixolab, RVA, Amylograph, Farinograph, Extensograph, TA-XT Plus, and C-Cell Technology.

Speakers who lectured on quality analysis from kernel quality, milling, rheology analysis, and baking evaluation, included Brian Sorenson and Robert Meyer, both of Dakota Specialty Milling; Sal Iaquez and Shuping Yan, Ph.D., both of C.W. Brabender Instruments; Alyssa Hicks, NCI Milling Specialist; Rachel Carlson, NCI Food Technologist; Thunyporn Naggie Jeradechachai, NCI Crop Quality Specialist; Natsuki Fujiwara, NCI Food Technologist; and Rilie Morgan, NCI Processing Specialist.



A participant practices running the extensograph test during the course.



Rheology of Wheat and Flour Quality Short Course participants and faculty



Robert Meyer of Dakota Specialty Milling explains quality evaluation of baked bread.

Pasta Manufacturing Course Hits Near Record Enrollment

Brazil, Nigeria, South Africa, and USA • April 10-12, 2012



John Crabtree, NCI Assistant Director, welcomes participants of the 2012 Pasta course, who came from 21 companies in four countries.

A near record enrollment of 36 participants from 21 pasta manufacturing companies in Brazil, Nigeria, South Africa, and USA attended the Pasta Production and Technology Short Course from April 10 to 12.

The pasta course is designed to showcase the high quality durum wheat that is produced in this four-state region. NCI's pasta short course has been offered annually since 1984.

"We were pleased to host a near record enrollment at this year's course," says John Crabtree, NCI Assistant Director. "Almost all of the major U.S. pasta companies were represented. This says a lot about what the NCI staff has done with the program over the years. Many companies have sent their people to the course since its beginning. This year, in addition to representatives from the U.S. pasta industry, we hosted pasta companies

from Nigeria, Brazil and South Africa. Nigeria is actually a big consumer of wheat. In 2012, Nigeria was the United States' fourth largest durum wheat customer and their wheat flour milling and pasta industries continue to grow. Eight participants were sponsored by U.S. Wheat Associates," Crabtree concludes.

Rilie Morgan, NCI Processing Specialist, led the hands-on processing of traditional pasta made with semolina. There were also demos of ravioli and gluten-free pasta processing.

Lecture topics included durum varieties, quality evaluation, durum milling and semolina quality, functional and alternative pasta ingredients, physical and rheological

tests, commercial pasta production, protein and starch, die design and management, pasta drying technology, equipment options for pasta extrusion, pasta color and cooking evaluation, quality assurance, specialty pasta technology, and causes and solutions of pasta defects.

Additional faculty and technicians for the course were: Rachel Carlson, NCI Food Technologist; Michael Ehr, Buhler; Elias Elias, Ph.D., NDSU Durum Wheat Breeder; Alexis Freier and Radwan Ibrahim, Ph.D., Dakota Growers Pasta Company; Natsuki Fujiwara, NCI Food Technologist; Alyssa Hicks, NCI Milling Specialist; Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist; Al Lucia, Axor America; Dan Maldari, D. Maldari & Sons; Frank Manthey, Ph.D., NDSU Plant Sciences; and Brian Sorenson, Dakota Specialty Milling.



Morgan



Rilie Morgan, NCI Processing Specialist, explains the pilot scale pasta press during the course.



Pasta Production and Technology Short Course participants and faculty



Rachel Carlson, NCI Food Technologist, explains how to evaluate cooked pasta.

Food Barley Course Showcases Food Ingredient Uses Chile, Taiwan, and USA • July 10-12, 2012

Seven participants from Chile, Taiwan, and USA attended the Healthy Solutions for Food Barley Uses Short Course July 10-12 at NCI to learn more about how they can use barley in their food products.

The use of barley has increased since the U.S. Food and Drug Administration permitted barley food products to carry a health claim recognizing the positive effects of beta-glucan soluble fiber.

This course focused on current barley health research and benefits of beta-glucan and dietary fiber in food barley. Participants also gained hands-on experience in barley processing, sensory evaluation, analytical testing, baking, and evaluation of baked goods.

Course topics included: current barley health research and health benefits of beta-glucan and dietary

fiber in food barley; basic definitions of hulled and hull-less barley; quality characteristics and functionality of barley; how to incorporate barley into food products for both hulled and waxy types of barley; and marketing trends of barley.

The National Barley Foods Council (NBFC) co-sponsored the course. NBFC serves as an information clearinghouse for barley food and nutrition issues on behalf of the U.S. barley industry. It is currently the only non-profit organization

devoted to generic education and promotion of food barley nationally. This course is part of the NCI's Barley Initiative that is designed to increase the use of food barley.



Participants prepare barley-enhanced cookies in NCI Bake Lab.

Natsuki Fujiwara, NCI Food Technologist, developed a series of recipes for the course that increase the amount of barley flour in bakery products, such as pan bread, muffins, bagels, cookies, and pizza, without sacrificing performance, taste, color or appearance.

Northern Crops Institute is working with national barley industry leaders and growers to promote food barley use in other countries. Several states, including North Dakota, Montana, and Minnesota, are involved in this initiative.

The North Dakota Barley Council is sponsoring much of the NCI food barley program.



Fujiwara



Rachel Carlson and Natsuki Fujiwara, NCI Food Technologists, join Mary Palmer Sullivan, (center right), Executive Director, Washington Grain Alliance, and Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, in evaluating barley-enhanced breads.



The group toured MGI Grain Processing, East Grand Forks, Minn., hosted by Roger Hipwell.



2012 Healthy Solutions for Food Barley Uses Course participants and faculty



Rilie Morgan, NCI Processing Specialist, explains extrusion of barley foods.

Improving Barley Malt Quality Attracts Brewers to NCI Course Canada and USA • August 14-17, 2012

Nine maltsters and brewers from Canada and U.S. attended the Barley Malt Quality Evaluation Short Course at NCI August 14-17.

Paul Schwarz, Ph.D., NDSU professor of plant sciences, coordinated and lectured in the course, which was co-sponsored by the Institute of Barley and Malt Sciences.

The course focused on the quality components of barley and malt necessary to produce an acceptable beer. Topics included U.S. barley production and variety development, barley quality evaluation, barley malt production technology, biochemistry and analysis, specialty malts and extracts, biotechnology update on barley, barley breeding/gene mapping, germplasm enhancement, world barley malt supply and demand, food safety issues in malting. The group also heard brewer's prospective on malt.

Additional instructors included: Paul Bolin, Busch Ag Resources; Shiaoman Chao, Ph.D., USDA Biosciences Research Laboratory; Lynn Dahleen, Ph.D., USDA Northern Crop Science Laboratory; Don Grambsch, Riverland Ag Corp.; Richard Horsley, Ph.D., NDSU barley breeder and professor of plant science; and Curt Jacobson, Rahr Malting Company.

In addition to lectures, the group toured the Busch Agricultural Resources Operations in West Fargo, N.D., NDSU Greenhouse Facility and the NDSU Malt Analysis Laboratory.



Paul Schwarz, Ph.D., center, lead instructor, listens as Jaidev Sehrawat, right, M.S. candidate in the malting barley quality program, explains methods used in the barley and malt quality laboratory at North Dakota State University.



Guest lecturer Paul Bolin, right, Busch Ag Resources, explains malting barley quality tests during the course.



Paul Schwarz, Ph.D., welcomes the course participants on the first day of class.

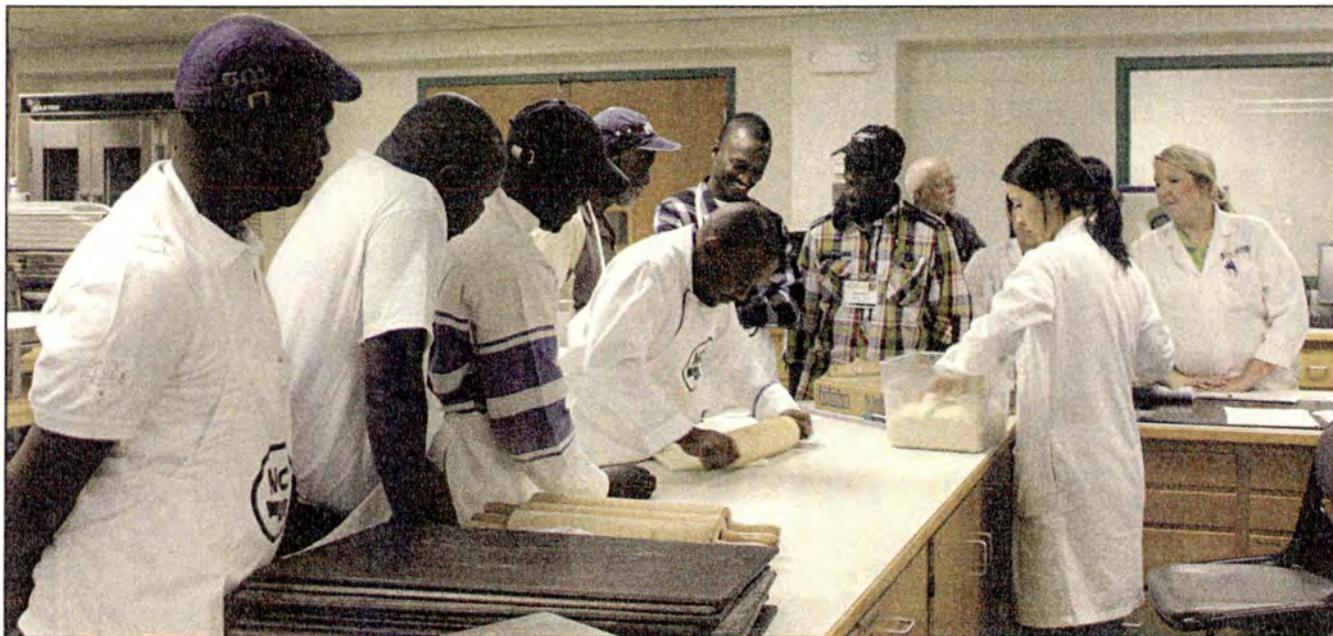


2012 Barley Malt Quality Evaluation Course participants and faculty



The group at Busch Agricultural Resources Inc. Malt House, Moorhead, Minn.

ASA-WISHH Sponsors Baking with Soy Courses for African Bakers



A participant rolls out the soy-enhanced croissant dough during the September Baking with Soy short course.

The benefits of soy protein were in the spotlight at two NCI Baking with Soy short courses sponsored by WISHH, The World Initiative for Soy in Human Health, a program of the American Soybean Association. The first Baking with Soy course for seven Senegal and Rwanda bakers was September 24-28. During October 15-19, twelve bakers from Nigeria and Uganda attended a similar course.

NCI Director Mark Weber says, "Addition of soy flour to baked products can raise protein content, balance essential amino acids, and increase bread's nutritional value, making soy

flour one of the most promising uses of soybeans in many countries. We are delighted to work with WISHH in hosting these courses that showcase the region's high quality soybeans."

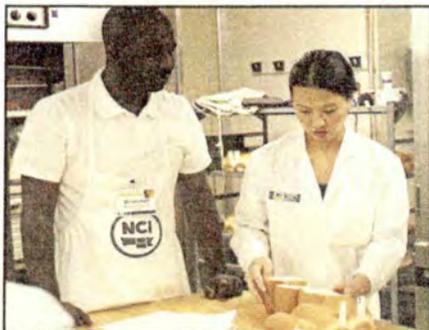
Clyde Stauffer, Ph.D., Technical Foods Consultants, Cincinnati, OH, was the lead instructor for the courses. His lectures focused on helping the teams develop a better understanding of the various functional properties of adding soy to baked products. Stauffer also led sessions on calculating calories, using cost spreadsheets, and the various kinds of wheats and their flour characteristics.

The hands-on baking labs were led by Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, Rachel Carlson and Natsuki Fujiwara, both NCI Food Technologists. During the courses' baking sessions, the teams made and evaluated soy-enhanced donuts, baguettes, croissants, pan bread, Poilâne bread, and spritzer cookies.

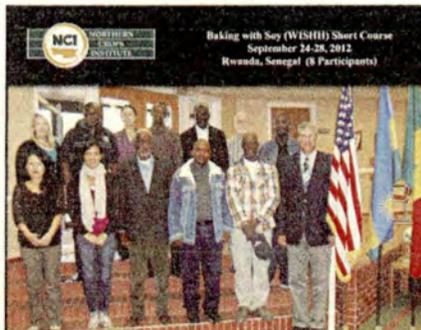


Jeradechachai

Kimberly Rochette, West Africa Project Manager for WISHH, and Drew Klein, Ph.D., Global Director, Human



Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, examines bread quality.



2012 Baking with Soy course (September) participants and faculty



Clyde Stauffer (right), lead instructor for the baking with soy courses, with participants.

Senegal and Rwanda • September 24-28, 2012

Nigeria and Uganda • October 15-19, 2012



The participants and faculty of the October Baking with Soy course gather for a photo on the last day of the course.

Utilization, U.S. Soybean Export Council, accompanied the participants for the first course.

“WISHH has been promoting soy flour to bakers in Africa for about 15 years. As part of that outreach, about 6 years ago, we first started the Baking with Soy Seminars at NCI. We thought it was important to bring bakers to the U.S. and run a baking school for them. The first Baking with Soy course in 2007 involved bakers from the Middle East,” says Stauffer.

“During these baking courses, we try to expose the participants to new ideas, such as no-time pan bread and

Poilâne bread, a fermented dough. These may become specialty items in their bakeries. We also made spritzer cookies with and without soy flour, using a formula that I developed for Liberia’s school feeding program.”

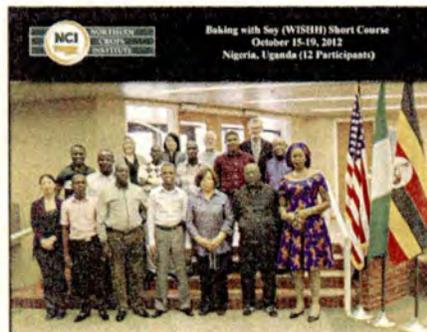
“These bakers are agents of change in the baking community. That’s a big part of why they were chosen for this program,” Stauffer concludes.

According to the WISHH website, “WISHH brings the benefits of U.S. soy protein to developing countries where it can make a difference in lives today and in the future. Soy is well suited to provide the protein, calories

and other nutritional needs of such people. WISHH also understands that developing nations of today are tomorrow’s customers for U.S. soy. All of the top 10 export countries for U.S. soy is a current or former recipient of U.S. foreign aid assistance.”



Natsuki Fujiwara (left), NCI Food Technologist, makes croissants with course participants.



2012 Baking with Soy course (October) participants and faculty



Three participants evaluate the baking characteristics of the soy-enhanced bread.

Southeast Asian Feed Manufacturers Attend Feed Technology Course Indonesia, Philippines, Thailand, and Vietnam • November 5-9, 2012

Nineteen feed manufacturers from Southeast Asia attended the Feed Manufacturing Technology course November 5-9. After three days at NCI, the group traveled to Portland, Ore., for the wrap-up.

The course was co-sponsored by Minnesota Soybean Research and Promotion Council, North Dakota Soybean Council, and South Dakota Soybean Research and Promotion Council, in conjunction with the American Soybean Association International Marketing.

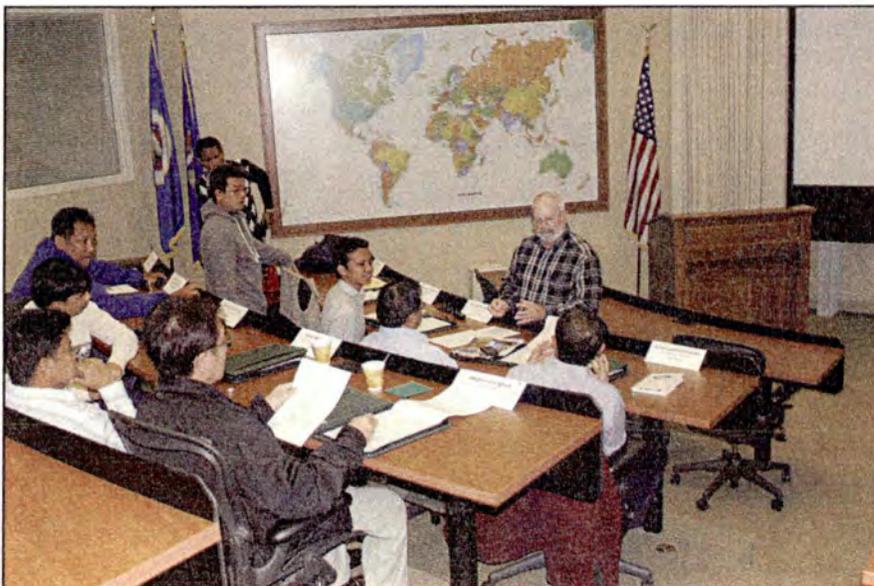
Lead instructor was Kim Koch, Ph.D., NCI Feed Center Manager. In addition to lectures on feed mill efficiency; feed mill design; mixing; particle size reduction; and pelleting, he also provided hands-on demonstrations of size reduction and pelleting at the NCI Feed Center.



Koch

“There is tremendous potential for production of food animals in China, India, and Southeast Asia. The group we had at this course is from Thailand, Indonesia, Vietnam and the Philippines. They are all trying to understand how to use quality ingredients to make better feed, to increase animal production, and still make money,” says Koch.

“In shipping soybeans to Asia, the U.S. has a definite advantage over our competitors of Brazil and Argentina because we can ship from the PNW



Kim Koch, Ph.D., NCI Feed Center manager, troubleshoots feed questions from several participants during the Feed Manufacturing Technology course.

directly to Asia. The shorter shipping time results in lower freight costs. This will be an advantage for the next ten years during the developmental time that is taking place in Southeast Asia. The more we can do to help them get quality U.S. soybeans for making quality meal, the better off they are and the better off we will be,” Koch concludes.

The five-day course focused on the theory and mechanics of feed manufacturing technology using a combination of classroom presentations, processing demonstrations, and hands-on training. The group visited an integrated swine production facility

and feed mill at Cando, N.D., and export facilities on the West Coast, so participants could see first-hand the quality, efficiency and reliability of the U.S. soy production and logistics systems.

Other speakers included: Frayne Olson, Ph.D., NDSU, who discussed commodity price outlook for 2013 and beyond; and Robert Thaler, Ph.D., SDSU, who presented information on soybean meal utilization. Brad Hansen hosted the group as they toured EGT’s export terminal in Longview, Wash., and Leonard Barnes led a tour of AGP’s export terminal in Aberdeen, Wash.



Participants observe a feed pelleting demo underway at the NCI Feed Center.



2012 Feed Manufacturing Technology Course participants and faculty



Participants observe computerized data collection at the swine facility at Cando, N.D.

2013 COURSE SCHEDULE

(Tentative)

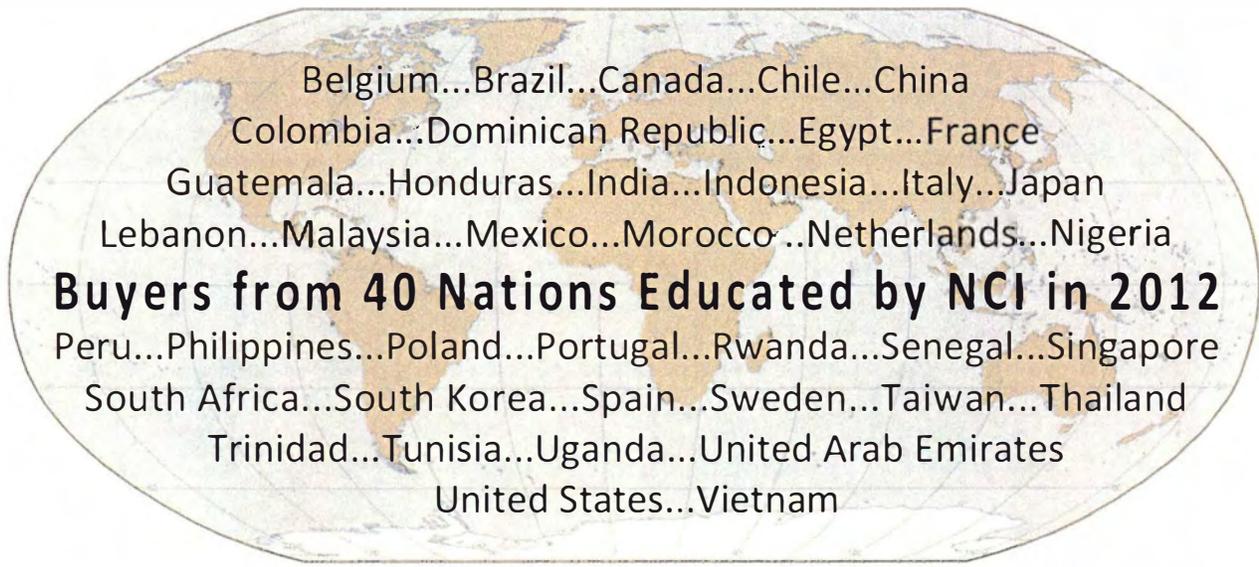
April 16-18	Pasta Production and Technology
May 6-10	Advanced Grain Procurement Strategies*
May 21-24	Durum Milling*
June 11-13	Rheology of Wheat and Flour Quality
September 16-25	Grain Procurement Management for Importers

*A cooperative effort with the International Grains Program, Kansas State University

More courses are in the planning stages for 2013.

Please check our website for the most up-to-date information.

www.northern-crops.com



Belgium...Brazil...Canada...Chile...China
Colombia...Dominican Republic...Egypt...France
Guatemala...Honduras...India...Indonesia...Italy...Japan
Lebanon...Malaysia...Mexico...Morocco...Netherlands...Nigeria
Buyers from 40 Nations Educated by NCI in 2012
Peru...Philippines...Poland...Portugal...Rwanda...Senegal...Singapore
South Africa...South Korea...Spain...Sweden...Taiwan...Thailand
Trinidad...Tunisia...Uganda...United Arab Emirates
United States...Vietnam

Let NCI Design a Customized Short Course for Your Company's Needs...

Northern Crops Institute (NCI) will help your company develop a customized training program to meet your specific needs. Our customized programs provide timely technical information by NCI staff and U.S. experts, offer hands-on experiences to enhance lectures, and provide a retreat or in-service atmosphere and team building opportunities. We do this in a confidential environment, so that your employees can discuss proprietary issues. Contact Northern Crops Institute to arrange a course geared for your particular needs. Phone: 701-231-7736.

We specialize in:

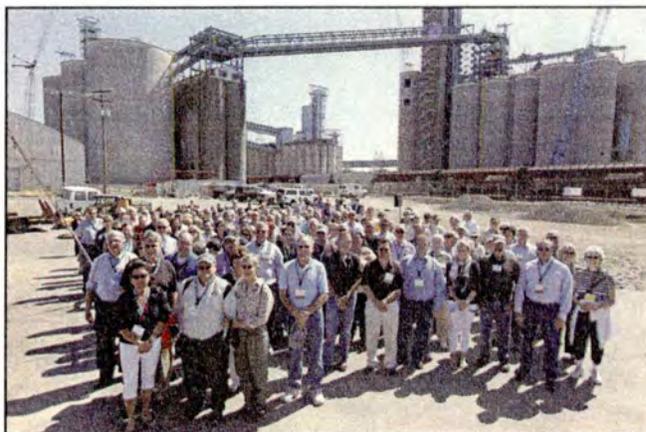
- Baking
- Flour and semolina milling
- Pasta processing
- Extrusion technology
- Value-enhanced uses of U.S. northern-grown crops
- Quality analysis of cereal and feed grains
- Grain procurement strategies
- Grain standards and inspection procedures
- Feed milling/manufacturing

Koch Attends National Soybean and USGC Commodity Meetings

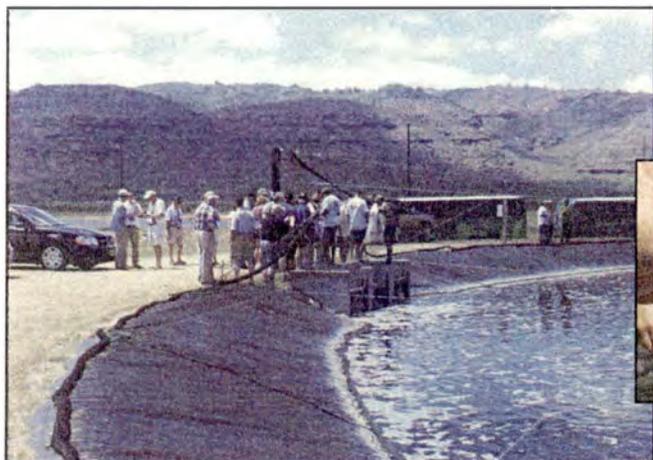
Kim Koch, Ph.D., NCI Feed Center manager, attended the U.S. Soybean Export Council's (USSEC) Aqua Stakeholders Meeting in Kauai, Hawaii in August, where he toured the largest aqua farm in Hawaii during the meeting.

The farm's primary revenue is the rearing and sale of Specific Pathogen Free (SPF) brood stock and post larval shrimp into Pacific markets. These shrimp have been bred to be resistant to the three most common diseases of shrimp.

The aqua farm has annual sales of 200 tons, including shrimp, fish and clams produced on site.



Koch also attended the U.S. Grains Council's 52nd Annual Board of Delegates Meeting in Vancouver, Wash., in early August. During the meeting, the attendees toured the UGC Terminal at the Port of Vancouver (pictured above), where large shipments of corn and soybeans go to Asia.



Tour group at the largest aqua farm in Hawaii.



Koch holds a shrimp from the aqua farm. That's a mighty big shrimp!

Members voted in a new slate of board of directors, electing Don Fas of Montana as Chairman and Mark Seastrand of North Dakota as Barley Sector Director.



Jeradechachai Promotes Pulses at IFT

Thunyaporn Naggie Jeradechachai (left), NCI Crop Quality Specialist, assisted Kaye Effertz (right), Marketing Director for Northern Pulse Growers Association, at the USA Dry Pea and Lentil Council's booth during the Institute of Food Technologists Annual Expo in Las Vegas, Nev. Visitors tasted rice crispy treats that were made at NCI from yellow peas and yellow pea caramel puffs, as Jeradechachai and Effertz explained the benefits of using pulses in products.



Wheat Quality Council Tour Wraps Up at NCI

The Wheat Quality Council's annual inspection tour of wheat fields in North Dakota, western Minnesota and northern South Dakota concluded with its wrap-up discussion at NCI. About 70 people, primarily trade association leaders and representatives of millers and other companies that use wheat, participated in the tour. The participants split into small groups that traveled eight different routes, stopping periodically to inspect fields. North Dakota's wheat crop drew interest because the state is the nation's leading producer of both hard red spring wheat, used for bread, and durum, used for pasta.



Jeradechachai Presents 2012 HRS and Durum Quality Reports in Central America

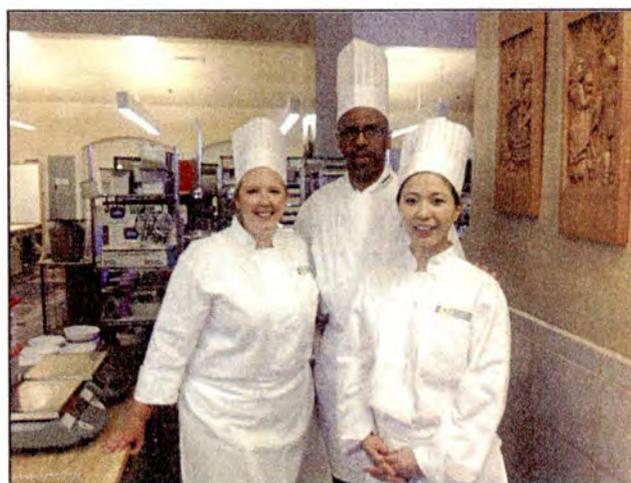
Thunyporn Naggie Jeradechachai, NCI Crop Quality Specialist, presented the 2012 HRS and Durum Wheat Crop Quality Reports at the Crop Quality Seminars, hosted by U.S. Wheat Associates (USW) in Guatemala, El Salvador and Honduras in November. Jeradechachai, traveling with the USW team, also gathered feedback from wheat buyers and millers about quality characteristics, testing, and milling.



Jeradechachai

Fujiwara Presents on Hulless Barley at Whole Grains on Every Plate Conference

Natsuki Fujiwara, NCI Food Technologist, presented at the Whole Grains on Every Plate Conference, hosted by the Whole Grains Council in October in San Antonio, Texas. Fujiwara participated on the New Ingredient Panel Discussion section where she discussed hulless barley, its health effects, functionality, and how it fits as a whole grain. More than 100 people attended the conference.



Carlson and Jeradechachai Teach in Pulse Course at Culinary Institute of America

Rachel Carlson (left), NCI Food Technologist, and Thunyporn Naggie Jeradechachai (right), NCI Crop Quality Specialist, taught at a pulse promotion course at the Culinary Institute of America (CIA) in St. Helena, Calif., in August. The Legumes: Wholesome Ingredients for Value-Added Foods course was sponsored by the USA Dry Pea and Lentil Council. Jeradechachai presented a lecture on pulse ingredients and utilization. The course featured cooking demonstrations using pulse products along with hands-on baking and cooking opportunities with legumes. The attendees were chefs, food processors, and ingredient suppliers. Carlson and Jeradechachai are pictured with Chef Richard Coppedge (center) from the CIA, Hyde Park, N.Y.



Sam Chang, Ph.D., NDSU Soybean Researcher, Goes to Mississippi State

A farewell reception was held at NCI for Dr. Sam Chang, who accepted the position of Chair of the Department of Food Science, Nutrition and Health Promotion at Mississippi State University in Starkville. He began his new position on July 1. Dr. Chang was at NDSU for over 25 years and had many accomplishments in soybean, protein, and functional foods research. Dr. and Mrs. Chang (center) are pictured with Bob Sinner (left), SB & B Foods; Mark Weber (back), NCI Director; and Deland J. Myers Sr., Ph.D., (right), NDSU School of Food Systems.



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Trade Teams and International Consulting



Vietnam... Kim Koch, Ph.D., (fourth from left), NCI Feed Center Manager, traveled with the American Soybean Association International Marketing (ASAIM) to Vietnam to present seminars on Feed Mill Efficiency and Pelleting of Feeds in Ho Chi Minh City and Hanoi. Other speakers included Dr. Salim Bootwalla, ASAIM, Singapore; Dr. Ravi Ravindram, Massey University; and Dr. Ahmad and Mr. K. Yoshimoto, Sumitomo Chemicals. The team also made site visits to area feed mills. The seminars were sponsored by the American Soybean Association International Marketing, United Soybean Board, Minnesota Soybean Research and Promotion Council, and Sumitomo Chemicals.



Dominican Republic... Thunyakorn Naggie Jeradechachai (far right), NCI Crop Quality Specialist, presented a seminar during the Introduction to Japanese Sweet Beans 2012 at Santo Domingo, Dominican Republic. The seminar was sponsored by the U.S. Dry Bean Council. Jeradechachai discussed the diverse applications and benefits of bean paste and flour. The sweet bean paste was made in Japan with U.S. dry beans. She also prepared Danishes, cookies, coffee breads, and scones made with Japanese sweet bean paste for the 40 participants that included bakers, chefs, and food manufacturers from Mexico and Dominican Republic.



Colombia and France... A nine-person team of bean buyers from Colombia and France visited NCI in September to learn more about NCI's bean activities. NCI Director Mark Weber and Thunyakorn Naggie Jeradechachai, NCI Crop Quality Specialist, hosted the team. After an overview of the NCI's work in beans, Jeradechachai discussed baking applications enhanced with beans. U.S. Dry Bean Council European representative Johanna Stobbs accompanied the French trade team. They were sponsored by North Central Bean Dealers Association and Northarvest Bean Growers Association.



India... A ten-member trade team from India was at NCI to learn more about the quality and utilization of northern-grown pulses and to see the 2012 pulse crop. The team was accompanied by Pete Klaiber, Director of Marketing for USA Dry Pea and Lentil Council, and Shannon Berndt, Executive Director of Northern Pulse Growers. Thunyakorn Naggie Jeradechachai, NCI Crop Quality Specialist, hosted the team.



Italy and Spain...A team of mill owners and managers from Spain and Italy were at NCI to learn more about the hard red spring wheat crop. Combined, the two countries import an average of 36 million bushels of U.S. wheat every year. The team was accompanied by Goris van Lit, Regional Director for U.S. Wheat Associates, Rotterdam. They were hosted by NCI Director Mark Weber, who led them on a tour of Northern Crops Institute. They also visited with NDSU wheat experts and toured a local wheat farm. They concluded their visit to the region with a trip to the North Dakota Mill, and then traveled to Minnesota and Ohio. They were escorted by Erica Olson and Jim Peterson, North Dakota Wheat Commission.



Thailand...Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, traveled to Thailand in January, where she presented information on the ingredient production, nutrition, and the applications of U.S. pulse at the "Healthy Cooking with U.S. Pulse" seminar in Bangkok, Thailand. The seminar was sponsored by the U.S.A. Dry Pea and Lentil Council (USADPLC). The course participants were dietitians, nutritionists, university faculty, school food service personnel, and chefs. The seminar included lectures, cooking, and baking demonstrations. This was the first seminar held in the Thai language for the USADPLC.



Japan...The Japanese Mid-level Management Millers Team came to NCI to learn more from wheat breeders and university researchers about the region's 2012 wheat crop. The team consisted of representatives from three large flour mills and the Japanese Flour Millers Association. They were accompanied by Wataru "Charlie" Utsunomiya, Director of the U.S. Wheat Associates Tokyo office. The team was hosted by Erica Olson, North Dakota Wheat Commission, and NCI Director Mark Weber. After their visit to NCI, they toured a local elevator facility. Japan is the largest market for U.S. hard red spring wheat, annually purchasing nearly 55 million bushels.



Japan...Natsuki Fujiwara, NCI Food Technologist, worked with the U.S. Grains Council to promote beta-glucan barley products at the Health Ingredients Show in Tokyo, Japan, in October. The show is the largest exhibition on health oriented products in Japan and had a total of 40,000 visitors over the course of the three days. Fujiwara presented the developments of food barley and the U.S. Food and Drug Administration (FDA) health benefit claim on barley dietary fiber during a seminar and panel discussion.

Trade Teams and International Consulting



Japan... A representative of the Nisshin Flour Mills came to NCI to learn more about the current year's crops. He was hosted by Erica Olson, N.D. Wheat Commission.



South Korea and Singapore...

Soybean buyers from South Korea and Singapore came to NCI to learn more about the region's soybeans. They were escorted by Leland Judge Barth (second from left), Executive Director of the Dakota Pride Cooperative.



Kosovo... An extension team from Kosovo visited NCI in August to learn more about NCI's educational and technical activities. They were in the region to gather ideas for developing their Extension Service. The team included the Kosovo Extension Director and agents.



Malaysia, Indonesia, Thailand, & Vietnam...

Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, was a featured speaker at the "New Look at U.S. Pulses as Healthy and Versatile Ingredients" Seminars at the Malaysian Institute of Baking, Kuala Lumpur, in September. Jeradechachai also presented baking demonstrations to promote the use of U.S. dry beans. She repeated the seminars in Vietnam and visited with food processors in Indonesia and Thailand. The trip was sponsored by USA Dry Pea and Lentil Council and USA Dry Bean Council.



Philippines... A 20-member Philippines Import Group was at NCI to learn more about regional soybeans, and the activities of Northern Crops Institute. They were hosted by the North Dakota Soybean Council. They toured the NCI Facilities, NCI Feed Center, NDSU Greenhouse complex, and the NDSU Commodity Trading Room at Barry Hall. The Philippines is the third largest market for U.S. soy meal. In 2011, the U.S. provided 61% of their soy imports. They were escorted by Michelle Swenson, Director of Marketing and Development with the North Dakota Soybean Council.



Japan...A three-member team from Torigoe and Hanamaru Companies in Japan visited Northern Crops Institute to learn more about this year's wheat crop, especially hard red spring wheat. Torigoe is a Japanese milling company and Hanamaru has 300 Japanese noodle shops in Japan. Erica Olson, (back right), North Dakota Wheat Commission, escorted the group. Natsuki Fujiwara (back left), NCI Food Technologist, hosted them.



Morocco...Kim Koch, Ph.D., NCI Feed Center manager, traveled to Morocco to assist poultry farmers in their feed manufacturing operations. His trip was sponsored by the U.S. Grains Council (USGC). He is pictured in the new layer house at the Zaim farm near Marrakech. Zaim is the president of the Moroccan Poultry Association. USGC believes using roller-grinders when manufacturing poultry feed with U.S. corn and sorghum will help poultry growers become more efficient.



Indonesia, Singapore & Thailand... John Crabtree, NCI Assistant Director, explained the grain shipping system in the United States to a food-grade soybean trade team that visited NCI in September. They were hosted by the North Dakota Trade Office, in conjunction with the Northern Food Grade Soybean Association. The delegation consisted of seven value-added food buyers and three American Soybean Association officers from Indonesia, Singapore and Thailand. The Southeast Asian visitors were interested in purchasing high-quality, food-grade Red River Valley soybeans. They were part of the Southeast Asia Reverse Trade Mission and also attended Big Iron in West Fargo, N.D., during their time in Fargo.



Philippines... A Philippines Wheat Trade Team came to NCI to learn about the new crop hard red spring (HRS) wheat prospects and programs that promote wheat consumption in the U.S. The team was composed of flour milling and food industry marketing executives. While in the state, the team also met with HRS breeding and quality researchers from North Dakota State University as well as a nutrition expert. The team saw samples of the 2012 HRS crop and received quality and supply and demand updates. After departing North Dakota, the team made visits to Minnesota, Montana and Oregon. Joe Sowers, U.S. Wheat Associates Manila, accompanied the group. They were hosted by Erica Olson, North Dakota Wheat Commission.



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 Fargo, ND 58108-6050

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2012 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
 - Extrusion
 - Post-extrusion
 - Feed
 - Industrial

NCI can provide:

- Skilled Staff
- Up-to-date Information
- Fully-equipped Labs
- Hands-on Experiences
- Confidential Environment
- Network of Resources

NCI Staff

Mark Weber, Director
 John Crabtree, Assistant Director
 Sally Backman, PR/Communications Specialist
 Linda Briggs, Office Manager
 Rachel Carlson, Food Technologist
 Natsuki Fujiwara, Food Technologist
 Alyssa Hicks, Milling Specialist
 Thunyaporn Naggie Jeradechachai, Crop Quality Specialist
 Kim Koch, Ph.D., Feed Center Manager
 Pat Limesand, Account Technician
 Rilie Morgan, Processing Specialist
 Technical Director Position Open

Contact us at:

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 E-mail: nci@ndsu.edu



Sally Backman
 Update Editor

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Scott Rising
SB 2020
1-16-13

#9



Testimony for SB 2020 Northern Corps Institute

Good morning Chairman Holmberg and Senate Appropriations Committee Members. I am Scott Rising, and am here this morning on behalf of the North Dakota Soybean Growers Association.

I am seeking your support the Northern Crops Institute portion of SB 2020.

ND's Soybean Farmers are excited about the expanding mission of the Northern Crops Institute because it includes us . . . in a big way.

The Northern Crops Institute has hosted four Educational Short-course events this year with attendees were from Southeast Asia, our primary marketing area due to our proximity to our nation's Pacific Northwest port facilities. Focus of the courses included Soybean procurement risk management strategies and methods of incorporating soybeans and soymeal into their milling processes. Other initiatives include incorporation of soy flour into African country bread and baking industries.

We work through the Northern Crops Institute with Soybean Growers from South Dakota and Minnesota on these important and productive projects, and eagerly await similar opportunities in the future.

Thank You all for your time and attention, and most importantly, your continuing service on our behalf.

I am available any questions that you may have of me.

Contact Information: Scott Rising, 701-527-1073 (cell), grwbeans@earthlink.net

Testimony 1-16-13
North Dakota State Soil Conservation Committee
Senate Bill 2020
Senate Appropriations

#10

Chairman and Members of the Senate Appropriations, my name is Tom Burau. 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. The Farm Security and Rural Investment Act of 2002 increased the conservation workload in all Soil Conservation Districts. 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 \$987,800 appropriated to 54 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 55 applications from Soil Conservation Districts requesting \$2,011,000 for the 2013-2015 Biennium.

As this legislative session proceeds the State Soil Conservation Committee would appreciate your consideration of increased funding 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.

Chairman and Members, Thank You for your support.

Julie Ellingson, North Dakota Stockmen's Association

Larry Kleingartner, National Sunflower Association

Sheena Johnson, North Dakota Grain Growers

Neal Fisher, North Dakota Wheat Commission

Matt Sanderson, Northern Great Plains Research Laboratory

Betsy Dalrymple, North Dakota First Lady-Office of the Governor

Tara Muhlhauser, ND Department of Human Services

Susan Keller, North Dakota Department of Agriculture

Leann Harner, North Dakota Association of Soil Conservation Districts

Rob Lech, Beulah Public Schools

Bill Davis, USDA Rural Development

Dave Dockter, North Dakota Beef Cattle Association

Rod Holth, Milton Lindvig, and Kenny Roger, Energy Beets (Green Vision)

Mark Birdsall, North Dakota Crop Improvement Association

Eric Bartsch, United Pulse Growers

Keith Deutsch, North Central Research Extension Center Advisory Board

Deland Myers, School of Food Systems

Terry Traynor, North Dakota Association of Counties

Denise Andress and Cole Kaspari, North Dakota Agri-Health

Jane Schuh, NDSU Department of Veterinary and Microbiological Sciences

Blaine Schatz, Carrington Research Extension Center

Paul Nyren Central Grasslands Research Extension Center

Frank Kutka, Dickinson Research Extension Center

Chris Schauer and Denise Andress, Hettinger Research Extension Center

Randy Mehlhoff and Leon Hiltner, Langdon Research Extension Center

Jay Fisher, North Central Research Extension Center

Jerry Bergman, Mike Ames, and Wayne Berry, Williston Research Extension Center Chad Ellingson and

Tana Waldren, NDSU 4-H Foundation

Sara Otte Coleman, ND Commerce Department

Tourism Deb Gebeke – family and consumer science needs

Lynette Flage – Extension agents-in-training

Kathy Tweeten – community and workforce sustainability

Chris Boerboom – ag and natural resources needs

Brad Cogdill – western 4-H camp

Cole Gustafson, Agribusiness and Applied Economics

Frank Casey, Agricultural and Biosystems Engineering

Greg Lardy, Animal Sciences

Jack Rasmussen, Plant Pathology

Rich Horsley, Plant Sciences

Frank Casey, School of Natural Resource Sciences

Charlene Wolf-Hall, Veterinary and Microbiological Sciences

Neil Dyer, Veterinary Diagnostic Laboratory

Greg Sanders/Jane Strommen, Aging Initiative

Tim Lilja, North Dakota Corn Growers

Steve Edwardson, North Dakota Barley Council

Barry Coleman, Northern Canola Growers

Beau Bateman, Red River Valley Sugarbeet Growers

Gary Hoffman, North Dakota Dairy Coalition

Jason Mewes, Northharvest Bean Growers

Jeff Hamre, Soybean Growers/Council

Kim Christianson, North Dakota Alliance for Renewable Energy

Paul Anderson, North Dakota Grape Growers (Ron Smith)

Howard Olson, AgCountry Farm Credit

Bob Sinner, Northern Food Grade Soybeans

Proposed Amendment for SB2020

New Section 9. The State Board of Agricultural Research and Education will present its complete Needs Based Budget to the State Board of Higher Education which shall forward it without modification to the Office of Management and Budget and the Legislative Appropriations Committees.

Renumber Current Section 9 to 10.

PROPOSED AMENDMENTS TO SENATE BILL NO. 2020

Page 1, replace line 20 with:

"Extension service	\$47,026,654	\$6,123,604	\$53,150,258"
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Page 1, replace line 22 with:

"Total all funds	\$48,014,454	\$6,198,604	\$54,213,058"
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Page 2, replace line 1 with:

"Total general fund	\$24,885,644	\$3,890,000	\$28,775,644"
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Page 3, replace line 22 with:

"Grand total general fund	\$90,025,408	\$18,415,904	\$108,441,312"
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Page 3, replace line 24 with:

"Grand total all funds	\$195,022,669	\$33,933,830	\$228,956,499"
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Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Senate Action

	Executive Budget	Senate Changes	Senate Version
Transportation Institute			
Total all funds	\$25,353,629	\$0	\$25,353,629
Less estimated income	<u>22,525,054</u>	0	<u>22,525,054</u>
General fund	\$2,828,575	\$0	\$2,828,575
Branch Research Centers			
Total all funds	\$33,746,878	\$0	\$33,746,878
Less estimated income	<u>16,021,866</u>	0	<u>16,021,866</u>
General fund	\$17,725,012	\$0	\$17,725,012
NDSU Extension Service			
Total all funds	\$54,088,058	\$125,000	\$54,213,058
Less estimated income	<u>25,437,414</u>	0	<u>25,437,414</u>
General fund	\$28,650,644	\$125,000	\$28,775,644
Northern Crops Institute			
Total all funds	\$3,874,651	\$0	\$3,874,651
Less estimated income	<u>1,800,307</u>	0	<u>1,800,307</u>
General fund	\$2,074,344	\$0	\$2,074,344
Main Research Center			
Total all funds	\$110,293,322	\$0	\$110,293,322
Less estimated income	<u>53,255,585</u>	0	<u>53,255,585</u>
General fund	\$57,037,737	\$0	\$57,037,737
Agronomy Seed Farm			
Total all funds	\$1,474,961	\$0	\$1,474,961
Less estimated income	<u>1,474,961</u>	0	<u>1,474,961</u>
General fund	\$0	\$0	\$0
Bill total			
Total all funds	\$228,831,499	\$125,000	\$228,956,499

2

Less estimated income	120,515,187	0	120,515,187
General fund	\$108,316,312	\$125,000	\$108,441,312

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

	Executive Budget	Senate Changes	Senate Version
Extension Service	\$53,025,258	\$125,000	\$53,150,258
Soil Conservation Committee	1,062,800		1,062,800
Total all funds	\$54,088,058	\$125,000	\$54,213,058
Less estimated income	25,437,414	0	25,437,414
General fund	\$28,650,644	\$125,000	\$28,775,644
FTE	258.26	0.00	258.26

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

	Provides Funding for Rural Leadership ¹	Total Senate Changes
Extension Service	\$125,000	\$125,000
Soil Conservation Committee		
Total all funds	\$125,000	\$125,000
Less estimated income	0	0
General fund	\$125,000	\$125,000
FTE	0.00	0.00

¹Provides funding for the Rural Leadership North Dakota program.

LISTING OF PROPOSED CHANGES TO SENATE BILL NO. 2020

Department - UGPTI, Branch Research Centers, Northern Crops, Extension Service, Main Research Center, Ag Seed Farm

Proposed funding changes:

Description	FTE	General Fund	Special Funds	Total
1 Additional one time funding for 4-H Camp line item		\$450,000	(\$450,000)	\$0
2 Langdon and Central Grasslands RECs one-time funding		\$1,625,000		\$1,625,000
3 One-time funding for oil impacted REC for housing allowance/sign on bonus pool (Williston, Minot, and Dickinson Main Research Center and Extension Service)		\$100,000		\$100,000
4 Add 0.50 FTE - Animal Science position		\$140,000		\$140,000
5 Add funding for Soil Conservation for a total of \$150,000		\$75,000		\$75,000
6 Add funding for soil research for reclamation of flooded lands (FTE??)		\$162,300		\$162,300
7 Rural Leadership operations		\$150,000		\$150,000
8				
Total proposed funding changes		<u>\$2,702,300</u>	<u>(\$450,000)</u>	<u>\$2,252,300</u>

Other proposed changes:

- 1 Remove Section 8 for the match requirement for agents-in-training for the Extension Service and internships
- 2 FTE and Operating added in Governor's Budget can be used for potato program
- 3
- 4

13.8170.01007
Title.
Fiscal No. 4

Prepared by the Legislative Council staff for
Senator Bowman
February 19, 2013

PROPOSED AMENDMENTS TO SENATE BILL NO. 2020

Page 1, line 4, after the semicolon insert "to amend and reenact subsection 6 of section 4-05.1-19 of the North Dakota Century Code, relating to the duties of the state board of agricultural research and education;"

Page 1, remove lines 20 through 23

Page 2, replace line 1 with:

"Extension service	\$47,026,654	\$6,123,604	\$53,150,258
Soil conservation committee	<u>987,800</u>	<u>150,000</u>	<u>1,137,800</u>
Total all funds	\$48,014,454	\$6,273,604	\$54,288,058
Less estimated income	<u>23,128,810</u>	<u>1,858,604</u>	<u>24,987,414</u>
Total general fund	\$24,885,644	\$4,415,000	\$29,300,644"

Page 2, replace line 23 with:

"Total all funds	\$89,012,990	\$23,307,632	\$112,320,622"
------------------	--------------	--------------	----------------

Page 2, replace lines 25 and 26 with:

"Total general fund	\$47,382,346	\$11,682,691	\$59,065,037
Full-time equivalent positions	349.01	2.98	351.99"

Page 3, replace lines 22 through 24 with:

"Grand total general fund	\$90,025,408	\$20,968,204	\$110,993,612
Grand total special funds	<u>104,997,261</u>	<u>15,067,926</u>	<u>120,065,187</u>
Grand total all funds	\$195,022,669	\$36,036,130	\$231,058,799"

Page 4, replace line 4 with:

"Agronomy laboratories	0	5,925,000"
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Page 4, after line 5, insert:

"Oil impact assistance	0	100,000"
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Page 4, replace lines 9 through 11 with:

"Total all funds	\$10,726,983	\$8,535,000
Total other funds	<u>2,852,931</u>	<u>950,000</u>
Total general fund	\$7,874,052	\$7,585,000"

Page 5, line 16, after "program" insert "and agents-in-training program"

Page 5, replace lines 17 and 18 with:

"SECTION 9. AMENDMENT. Subsection 6 of section 4-05.1-19 of the North Dakota Century Code is amended and reenacted as follows:

6. Develop a biennial budget request based on its prioritized needs list and submit that request to the president of North Dakota state university and

the state board of higher education, and forward its prioritized needs list and request without modification to the office of management and budget and the appropriations committees of the legislative assembly;"

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of Senate Action

	Executive Budget	Senate Changes	Senate Version
Transportation Institute			
Total all funds	\$25,353,629	\$0	\$25,353,629
Less estimated income	22,525,054	0	22,525,054
General fund	<u>\$2,828,575</u>	<u>\$0</u>	<u>\$2,828,575</u>
Branch Research Centers			
Total all funds	\$33,746,878	\$0	\$33,746,878
Less estimated income	16,021,866	0	16,021,866
General fund	<u>\$17,725,012</u>	<u>\$0</u>	<u>\$17,725,012</u>
NDSU Extension Service			
Total all funds	\$54,088,058	\$200,000	\$54,288,058
Less estimated income	25,437,414	(450,000)	24,987,414
General fund	<u>\$28,650,644</u>	<u>\$650,000</u>	<u>\$29,300,644</u>
Northern Crops Institute			
Total all funds	\$3,874,651	\$0	\$3,874,651
Less estimated income	1,800,307	0	1,800,307
General fund	<u>\$2,074,344</u>	<u>\$0</u>	<u>\$2,074,344</u>
Main Research Center			
Total all funds	\$110,293,322	\$2,027,300	\$112,320,622
Less estimated income	53,255,585	0	53,255,585
General fund	<u>\$57,037,737</u>	<u>\$2,027,300</u>	<u>\$59,065,037</u>
Agronomy Seed Farm			
Total all funds	\$1,474,961	\$0	\$1,474,961
Less estimated income	1,474,961	0	1,474,961
General fund	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Bill total			
Total all funds	\$228,831,499	\$2,227,300	\$231,058,799
Less estimated income	120,515,187	(450,000)	120,065,187
General fund	<u>\$108,316,312</u>	<u>\$2,677,300</u>	<u>\$110,993,612</u>

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

	Executive Budget	Senate Changes	Senate Version
Extension Service	\$53,025,258	\$125,000	\$53,150,258
Soil Conservation Committee	1,062,800	75,000	1,137,800
Total all funds	\$54,088,058	\$200,000	\$54,288,058
Less estimated income	25,437,414	(450,000)	24,987,414
General fund	<u>\$28,650,644</u>	<u>\$650,000</u>	<u>\$29,300,644</u>
FTE	258.26	0.00	258.26

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

	Changes Funding Source for 4-H Camp¹	Increases Funding to Soil Conservation Committee²	Provides Funding to Rural Leadership North Dakota³	Total Senate Changes
Extension Service			\$125,000	\$125,000

Soil Conservation Committee		75,000		75,000
Total all funds	\$0	\$75,000	\$125,000	\$200,000
Less estimated income	(450,000)	0	0	(450,000)
General fund	\$450,000	\$75,000	\$125,000	\$650,000
FTE	0.00	0.00	0.00	0.00

¹The source of funding for the NDSU Extension Service 4-H camp project is changed to provide a total of \$1.9 million, \$950,000 of which is from the general fund and \$950,000 from special funds. The executive budget provided a total of \$1.9 million, of which \$500,000 is from the general fund and \$1.4 million from special funds.

²Funding to the soil conservation committee is increased to provide a total of \$150,000.

³Funding is provided for the Rural Leadership North Dakota program.

Section 8 is changed to remove the matching requirement for the summer internship program and to allow the funds to also be used for the agents-in-training program.

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

	Executive Budget	Senate Changes	Senate Version
Main Research Center	\$110,293,322	\$2,027,300	\$112,320,622
Total all funds	\$110,293,322	\$2,027,300	\$112,320,622
Less estimated income	53,255,585	0	53,255,585
General fund	\$57,037,737	\$2,027,300	\$59,065,037
FTE	351.49	0.50	351.99

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

	Provides Funding for Capital Projects ¹	Provides Funding for Oil-Impacted Centers ²	Adds Animal Science Position ³	Provides Funding for Flooded Lands Study ⁴	Total Senate Changes
Main Research Center	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
Total all funds	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
Less estimated income	0	0	0	0	0
General fund	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
FTE	0.00	0.00	0.50	0.00	0.50

¹One-time funding is added for replacing the agronomy laboratories at the Langdon and Central Grasslands Research Extension Center locations.

²A funding pool of \$100,000 is added for housing allowances or hiring bonuses for employees at the North Central, Dickinson, and Williston Research Extension Centers.

³Funding for a new .5 FTE animal science position is added.

⁴Funding is provided for conducting research relating to the recovery of grasslands affected by Souris River flooding.

This amendment adds a section relating to the State Board of Agricultural Research and Education needs-based budget request.

Attachment 1.
March 14, 2013
SB 2020



North Dakota Agricultural Experiment Station and NDSU Extension Service

NORTH DAKOTA STATE UNIVERSITY

2013-2015 Biennial Budget Request

Senate Bill 2020

House Education & Environment Division

Representative Bob Skarphol, Chair

March 14, 2013

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

Rodney Howe - 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

Bryan Neville - Director, Central Grasslands Research Extension Center

Chris Schauer - Director, Hettinger Research Extension Center

Randy Mehlhoff - Director, Langdon Research Extension Center

Jay Fisher - Director, North Central Research Extension Center

Jerry Bergman - Director, Williston Research Extension Center

Blaine Schatz - Director, Carrington Research Extension Center

Tom Teigen - Director, Agronomy Seed Farm

NDSU NORTH DAKOTA
STATE UNIVERSITY

www.ndsu.edu/legislators

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 residents 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

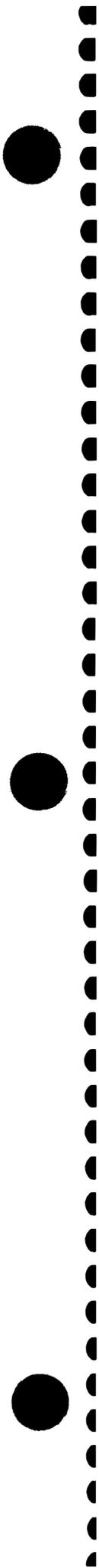
The purpose of the NDSU Extension Service is "to create learning partnerships that help youth and adults enhance their lives and communities." This purpose is accomplished through the dissemination of research-based information and the implementation of educational programs geared to the changing needs 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 March 13, 2012. 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

Areas that need continued emphasis and emerging issue areas that need to be addressed include educational programs on informed decision-making and community-based leadership for communities impacted by oil, coal and bioenergy development; youth development through expanded 4-H efforts in leadership education, science, engineering and technology, and the camping program as a 4-H delivery method; agents-in-training and the summer internship program for workforce preparedness; livestock development to focus on industry expansion; crop and resource protection in the areas of insect pests, plant diseases, weeds and water quality; parent education and nutrition, obesity and aging issues of families; and increased operating.



Update of Extension Initiatives Funded in 2011-13 Budget

■ Costs to continue FY2011 salary increases

\$508,356 received and allocated July 1, 2011

■ Infrastructure: technical support

\$450,000 3.0 FTE, Research Specialists hired: .5 FTE Plant Sciences, .5 FTE Plant Pathology, 1.0 FTE School of Natural Resource Sciences (SNRS), 1.0 FTE Food & Nutrition

■ Soil health and land management

\$690,000 received

- \$210,000 salary and fringe benefits, 1.0 FTE State Extension Specialist hired in soil health-SNRS
- \$360,000 salary and fringe benefits, 2.0 FTE Area Extension Specialists hired at Langdon REC and North Central REC
- \$120,000 operating; distributed

■ Livestock stewardship

\$250,000 received

- \$210,000 salary and fringe benefits, 1.0 FTE State Extension Specialist hired in livestock stewardship-Animal Sciences
- \$40,000 operating; distributed

■ State Soil Conservation Committee

\$150,000 received and added to previous funding

Additional funding distributed as grants to Soil Conservation Districts to help landowners reduce soil erosion, improve water quality, and enhance tree plantings, grazing lands and wildlife habitat.

2013-15 Program Initiatives as Ranked by SBARE



1 Agents-in-Training and Summer Internships

Situation: NDSU Extension continues to experience historic levels of retirements. Extension work can be extremely complex and challenging for recent college graduates. Agent-in-training positions can equip candidates with the skills to be a successful Extension agent. Summer internships are effective at recruiting students for future Extension careers.

Need: Salary pools for four 12- to 18-month agent-in-training positions and five eight- to 12-week summer student internships - \$500,000



2 Livestock Development

Situation: The livestock industry is faced with many marketing and production challenges, but great opportunities exist in North Dakota to grow the beef industry. Enhanced capacity is needed to tackle a focused initiative on industry development. Current staff will be highly synergistic with a new initiative.

Need: Area livestock specialists (2.0 FTE) and operating funds, and support for Extension programming in livestock production economics (no FTE) - \$590,000



3 Crop and Resource Protection

Situation: Crops are the major contributor to North Dakota's agricultural economy. Insect pests, plant diseases and weeds continue to evolve, threaten our diverse crops and require attention. Federal integrated pest management (IPM) program funds are not stable, and increased crop protection capacity is needed. Federal funding cuts have reduced Extension's program on protecting water quality.

Need: Partial funding for the state Extension IPM and Plant Diagnostic Lab coordinators; IPM state entomology specialist (1.0 FTE) and operating funds; increased technical support for the weed science and potato programs (2.0 FTE) and crop management at the NCREC (1.0 FTE); support and operating for the state water quality specialist - \$960,000



4 Community Sustainability

Situation: The economic, environmental and social well-being of many North Dakota communities is in danger if they do not take steps to shape their future. Energy growth in the west poses challenges due to rapid growth while many other small towns are suffering from record population and service losses. Demand for Extension community development assistance can be addressed more effectively through community-based leadership, public dialogue, planning processes, organized public forums and informed decision making.

Need: Two area specialists (2.0 FTE) at the Dickinson and Williston RECs and operating funds to work directly with local communities; and increased technical support to increase tools and accessibility to Extension resources and training (no FTE) - \$620,000



5 Gearing Up for Kindergarten/Parent Education/Nutrition

Situation: Research indicates that entering school is one of the most significant transitions for a child and family. A program called Gearing Up for Kindergarten is making a difference. Parent Resource Centers (PRC) help implement Gearing Up and other programs that address other key transitions for families. Nutrition, wellness, obesity and aging are critical issues for North Dakota families. Extension needs additional staff to lead programming on these issues.

Need: Salary support for the grant-funded portions of PRC staff (existing FTEs); Extension nutrition/wellness and aging specialists (1.0 FTE) and operating funds - \$750,000

Funding support to expand the Gearing Up for Kindergarten program across the state, and ongoing research and evaluation (no FTE) submitted with Department of Public Instruction budget.

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DETAILS: 2013-2015 Program Initiatives as Ranked by SBARE

NDSU Extension Service

1. Agents-in-training and Summer Internships

\$500,000 Total General Fund Increase

\$400,000 salary pool, no new FTEs, support for 4 agents-in-training located throughout North Dakota

\$100,000 salary pool, no new FTEs, 5 college internships for summer programming

NDSU Extension continues to experience historic levels of retirements. Between 2012 and 2016, nearly 30 percent of all benefitted county Extension staff will be eligible to retire based on years of service and age. The complexity of Extension work can be extremely challenging for recent college graduates who make up the majority of the hiring pool. Agent-in-training positions are short-term contracts of 12 to 18 months in duration. Agents-in-training are recruited from these temporary positions to fill permanent agent positions that exist in the counties (existing FTEs). The permanent positions are funded with existing county and Extension funding. If agents-in-training do not fill permanent agent positions by the end of their temporary training positions, they are terminated. This training has proven to be a successful avenue for equipping candidates with the skills needed to be successful as Extension agents. Summer internships are anticipated to be an effective means for recruiting students for future Extension careers. Student internships are 8 to 12 weeks in duration during the summer. These students do not become long-term Extension employees (no new FTE) but become future candidates for employment. Funding support is needed for the agent-in-training and summer internship programs which both provide needed program support at the county level.

2. Livestock Development

\$590,000 Total General Fund Increase

\$440,000 area livestock specialists salary, fringe, and operating for the Extension livestock programs led by state specialists, 2.0 FTE

\$150,000 operating, no FTE, Agribusiness and Applied Economics

The livestock industry is faced with many challenges including high feed prices, aging producers, declining herd numbers and weather, but great opportunities still exist in North Dakota when our natural resources, agricultural feed supplies, and new potential processing facilities are considered. These opportunities suggest the beef industry has ample potential for growth. Extension has base staffing in the livestock production areas but lacks the capacity to tackle a focused initiative on industry development. Area livestock specialists can expand livestock programs in the central and western regions of the state. Extension programming in livestock production economics to assist producers with livestock production decisions will enhance support to the livestock industry. Current staff would be highly synergistic with this new initiative.

3. Crop and Resource Protection

\$960,000 Total General Fund Increase

\$150,000 partial salary support for Extension IPM and Plant Diagnostic Lab

\$220,000 salary and fringe benefits, 1.0 FTE, Extension entomologist

\$450,000 salary and fringe benefits, 3.0 FTE, technicians for Extension weed and potato programs
at Main Station and crop management at NCREC

\$110,000 salary and fringe benefits, state water quality specialist

\$30,000 operating for entomologist

North Dakota's cropping systems are diverse, highly productive and contribute significantly to North Dakota's economy. Successful crop production requires effective and efficient pest management. Insect pests, plant diseases and weeds continue to pose a risk to each of North Dakota's diverse crops, and the risks continue to

DETAILS: 2013-2015 Program Initiatives as Ranked by SBARE

evolve. New pests, races, resistance and pesticide options all contribute to the challenge of providing growers with the best crop protection solutions. Federal funding for Extension's plant pathologist for cereal crops was shifted from formula funds to uncertain competitive funds, but the demands for the position warrant stable support. North Dakota has only a single state Extension entomologist to provide management recommendations for about 40 crops. Additional insect pest management support is needed. Other NDSU Extension crop specialists need technical support to be more efficient with their applied research activities and more effective with Extension program delivery. The NDSU Extension Service conducts educational programs on best management practices to protect surface and groundwater while fulfilling human and livestock needs for quality water. The water quality educational program works in cooperation with conservation groups and state regulatory agencies, but federal funding has been cut 50%.

4. Community Sustainability

\$620,000 Total General Fund Increase

\$360,000 salary and fringe benefits, 2.0 FTEs, area specialists at DREC and WREC

\$80,000 operating for area specialists

\$180,000 operating, no new FTE, Agriculture Communication

The social, environmental and economic well-being of many North Dakota communities is in danger if communities do not take steps to shape their own future. Energy growth in the west poses multiple farm, ranch, business and community challenges due to rapid growth while many other small towns are suffering from record population and service losses. Demand for Extension assistance in community development along with population forecasts, impact studies and resource impacts is increasing. These issues can be addressed more effectively through community-based leadership, public dialogue, planning processes, organized public forums and informed decision making. Area specialists located in western North Dakota will be able to work directly with local communities to provide the needed programming. North Dakota's ranchers and producers, entrepreneurs and community leaders need to access Extension information and programs with new technologies. Extension needs increased technical support to increase tools and accessibility to Extension resources and training.

5. Gearing Up for Kindergarten/Parent Education/Nutrition

\$750,000 Total General Fund Increase

\$500,000 salary and fringe benefits, no new FTEs, support for 8 existing Extension parent educators

\$210,000 salary and fringe benefits, 1.0 FTE, 0.5 nutrition/wellness specialist and 0.5 aging specialist

\$40,000 operating for specialists

Children and families experience key transitions during their lifecycle that can affect the trajectory of their lives. Many North Dakota families experience divorce and other stresses that place their children at risk of abuse or other negative effects. Parent Resource Centers (PRCs) provide educational programs to develop healthy parenting skills which assist both the parents and youth to be successful. The PRC educators partner with state agencies through grants to provide these programs, but partial base salary funding will stabilize these valuable programs. Nutrition, wellness and obesity are critical issues for families in North Dakota. Rural communities also have limited access to educational programming, particularly for our aging population. Extension can address these issues with evidence-based programs, but additional staff is needed to lead programming.

Element of initiative subsequently submitted with Department of Public Instruction budget

\$210,000 operating, Gearing Up for Kindergarten

Research indicates that entering school is one of the most significant transitions for a child and family. Educating both the parent and the child about the transitions involved upon entering kindergarten has been researched in North Dakota, and an effective program called Gearing Up for Kindergarten is making a difference. Funding is needed to expand the Gearing Up for Kindergarten program across the state and for ongoing research and evaluation of the program.

2011-13 Impacts

Through its research-based educational programs, the NDSU Extension Service strives to:

- *Enhance the profitability of North Dakota's crop and livestock producers by focusing on production, marketing and risk management issues*
- *Conserve and enhance the natural resources of our state*
- *Develop life skills within North Dakota's youth through 4-H youth development programs that focus on decision making, communication skills, career development and healthy lifestyles*
- *Strengthen individual and family skills relating to parenting, school readiness, financial management, work force preparation and communication*
- *Maintain a healthy food system at the production, distribution and consumer levels while promoting healthy lifestyles for all age groups*
- *Provide leadership for communities and community leaders to identify strengths, enhance local expertise and increase the rural economic base while creating an environment that fosters entrepreneurship*
- *Guide communities through processes that relate to public issues*
- *Serve as educational leaders in the adoption and utilization of technology for economic, community and individual benefits*

Extension agents and specialists had more than a million direct educational contacts with North Dakota residents in 2011-2012 in these areas:

- *Community, Economic Development and Leadership*
- *Crop Management*
- *Family Economics*
- *Farm Business Management*
- *4-H Youth Development*
- *Horticulture and Forestry*
- *Human Development and Family Science*
- *Livestock Management*
- *Natural Resource Management*
- *Nutrition, Food Safety and Health*

■ Community, Economic Development and Leadership

Center for Community Vitality Helps Sustain Rural Communities

The mission of the Center for Community Vitality is to create vital North Dakota communities by identifying, developing and delivering resources. The numbers below reflect the impacts made by Extension specialists and agents who worked in the areas of community economic development and leadership in 2011.

Jobs created/retained	42
Businesses created	6
Programs and activities initiated/completed	85
Value of programs and activities initiated/completed	\$ 489,742
Efficiencies and dollars saved	\$ 450,000
Value of grants and resources leveraged/generated by communities	\$ 2,530,000
Community-generated volunteer hours	5,494
Value of community-generated volunteer hours	\$ 83,384
Community, organizational, business plans developed	37
Community, organizational, policies, plans and practices adopted	13
Participants reporting new leadership roles	94

Rural Leadership North Dakota (RLND) Has \$3 Million Impact

RLND participants are required to take action on a self-identified project as part of their RLND coursework. Examples of projects include the opening of a restaurant, providing farm visits for children and adults to help educate them about agriculture, setting up a program to help furnish meals to people in need, fundraising for a new fire truck, updating a community's website, and building a splash park and playground. The community investment, private and public, in the 90 RLND projects over the past eight years is over \$3 million. This investment has created six new businesses and over 20 new jobs along with improved quality of life for local residents. Personal leadership development is the primary goal and has proven successful. Nine alumni have run for public office, 25 have served on new boards and committees, and 37 have been involved with additional community projects after their RLND course concluded.

Rural and Agribusiness Enterprise Development Generating Interest

"Direct Marketing of Food Products," a new online course developed in cooperation with the University of Nebraska, had over 1,000 unique visitors from over 100 states and countries in its first nine months. Visitors have viewed over 18,000 pages. A workshop was conducted in cooperation with United Tribes Technical College and the N.D. Department of Agriculture. Thirty-six people attended and rated it 3.7 on a 4 point scale with over a one point change on 10 separate items of knowledge gained. Participants indicated they would use the information in their business. Direct assistance in the form of educational services is provided regularly. Five other workshops were held during the year with 188 participants. Topics included marketing, small farm development, and increasing sales and general business ownership. In addition 338 individuals subscribe to the newsletters and articles the program generates. The program is also using social media to expand its reach to entrepreneurs.

Flood Preparation and Recovery

The 2011 flooding impacted every river basin in North Dakota and displaced residents in 28 neighborhoods. Over 4,100 homes and business were flooded and approximately 12,000 people were displaced in Minot. The Missouri River record flood forced evacuation of nearly 900 homes in Burleigh and Morton Counties. The rapid rise of Devils Lake continued, and thousands of acres of prime farm land now lie underwater. This created a gigantic need for education and technical assistance. Extension created 14 flood cleanup videos; collaborated with Minnesota to develop an online resource, Recovery after Disaster: The Family Financial Toolkit; and helped create a Disaster Recovery Log, a smartphone application that helps users record information about damages in their flooded homes. After the flooding, NDSU Extension provided seminars on cleaning up flooded buildings to assist thousands of home owners, and workshops for contractors on restoring flood-damaged structures. This same NDSU Extension expertise was recently tapped to assist recovery efforts after hurricane Sandy.

■ Crop Management

Fertility Enhances Wheat Yield and Quality

New North Dakota hard red spring wheat nitrogen recommendations on an NDSU Extension interactive website www.ndsu.edu/pubweb/soils/wheat/ are used by the majority of North Dakota crop consultants and their growers to determine nitrogen rates for their crop. The user chooses the region of the state in which they operate and the relative yield potential of their soils or field, then inputs their residual soil nitrate concentration and any previous crop nitrogen credit. Since 2010, when these recommendations were provided, North Dakota spring wheat and durum quality has been consistently higher than Montana and Minnesota wheat. North Dakota's protein levels were 1.3 to 1.4 percent higher in 2011 and 0.4 to 0.6 percent higher in 2012. With 2012 total production of hard red spring wheat of 257 million bushels in North Dakota, an extra 0.5 percent protein for North Dakota growers compared with Minnesota and Montana was worth about \$128 million if dockage was 50 cents per half-point protein.

Managing Glyphosate-Resistant Weeds

Glyphosate-resistant weeds, such as waterhemp, ragweed, and kochia continue to increase, especially in eastern North Dakota. Based upon current greenhouse testing, 30 percent of 22 kochia samples from 2012 have been confirmed glyphosate-resistant. Adding other herbicides into the management program should delay development of resistant weeds. Preemergence herbicides are one option, but adoption has been slow in North Dakota. In 2009, preemergence herbicides were applied to only four percent of soybean acres. Extension weed scientists are testing and demonstrating the improved control that can be achieved with the addition of preemergence herbicides in a glyphosate-based management system. Other systems like a preemergence herbicide followed by Liberty in LibertyLink soybeans have also been successful in controlling glyphosate-resistant weeds.



Extension weed scientists are testing and demonstrating improved control of glyphosate-resistant weeds such as kochia.

Soybean Aphid Thresholds Reduce Insecticide Costs

Soybean aphids were introduced into the U.S. in 2000 from Asia and quickly spread across the North Central Region, including North Dakota, in 2001. Soybean aphids have become a major insect pest of soybeans causing up to 40-50 percent yield loss when populations are high. Controlling aphids caused insecticide use in North Dakota soybeans to surge from under one percent in 2001 to 68 percent in 2008. NDSU Extension recommends that producers scout for soybean aphids and use the economic threshold (average of 250 aphids per plant) to determine if and when an insecticide application is necessary. Adoption of economic thresholds has reduced many unnecessary applications since insecticides are applied only if there is a positive economic return. The adoption of the economic threshold for soybean aphid control in North Dakota currently provides an estimated average annual economic benefit of \$3.5 million.

North Dakota Prepares for Soybean Cyst Nematode (SCN)

Soybean cyst nematode (SCN) is the most devastating disease of soybeans in North America. Since first identified in North Dakota in 2002, the disease has been found in over 10 counties. This disease is new to nearly all North Dakota soybean growers and most Extension agents, crop consultants and other educators in the state. In response, an intensive two-day nematode short-course was hosted by the NDSU Extension Service and the North Dakota Soybean Council in March 2011. The 34 professionals who attended the short-course provide management recommendations for approximately 443,640 soybean acres annually. Based on anticipated infestations in the next five years and yield loss, these attendees may be vulnerable to approximately \$6.7 million in losses from SCN annually. As a result of this SCN short-course, most attendees increased preventative measures and many made management recommendation changes in 2011. The positive impact of this short-course may have exceeded \$1 million in 2011 alone.

■ Family Economics and Farm Business Management

2012 Farmland Lease Workshops

Strong commodity prices and high production costs have made it more difficult for operators and landowners to successfully determine appropriate farmland lease arrangements. An educational program was needed to increase lease negotiation satisfaction for both parties by providing information on how to calculate equitable rents, evaluate the benefits and risks of different types of leases, and improve communication. Farmland leasing workshops were held at eight sites across North Dakota. Attendees significantly increased their understanding of key components of leases such as knowing the key questions to ask when creating a land lease. Attendee responses indicated that 78 percent intended to initiate discussion with land owners (or operators) about a land lease; 92 percent gained new ideas and tools to develop better land lease arrangements; and 99 percent had a better understanding of how relationships between land owners and tenants may be improved.

High School Financial Planning Program

North Dakota students graduating in spring 2011 and later are mandated to have taken a personal finance curriculum as a result of legislation passed during the 2009 legislative session. For over 20 years, NDSU Extension has partnered with the National Endowment for Financial Education (NEFE) High School Financial Planning Program (HSFPP) to provide research-based educational materials to students and educators at no charge. A series of lesson plans were developed from these materials to specifically address the topics required in North Dakota's legislation. Several teacher training programs were offered throughout the state and online to help teachers use this program to meet the new legislation. Nearly 200 educators have participated. Of the 2,100 student participants, over 50 percent increased their financial knowledge; 73 percent reported having changed their spending habits; and 74 percent had shared with family and friends what they learned about budgeting, investing, saving, and credit and debit card use.

2011 Farm/Ranch Transition and Estate Planning

According to the 1,000 North Dakota participants who completed Annie's Project during the past six years, nearly 50 percent of farm/ranch families do not have an adequate transition plan in place for their business. The lack of such a plan is also one of the greatest concerns expressed by this group. A pilot educational program to address this need was conducted in the spring of 2010. Building upon the success of the 2010 pilot project, the three-part educational series was redesigned to address many topics pertinent to estate planning, including the importance of family communication, business organization forms, asset transfer options and tax implications.

These sessions were offered in the fall of 2010 and spring of 2011. The sessions were conducted at 19 locations in the state by Extension specialists from North Dakota and Iowa, some by interactive video, and local experts at each location. In conjunction with the presentations, several reliable and research-based online tools for transition planning were introduced at each location. Of the 389 participants, 98 percent said the information presented was valuable to very valuable for them and 90 percent increased their knowledge level regarding how to effectively communicate with their family members about estate planning topics.

■ 4-H Youth Development

4-H Makes a Difference

The structured learning, encouragement and adult mentoring that young people receive through their participation in 4-H plays a vital role in helping them achieve future life successes.

Tufts University has been working with faculty at 24 land-grant universities, including North Dakota State University, to conduct “The 4-H Study of Positive Youth Development.”

Results of the study show youth in 4-H achieve higher grades, are more likely to go to college and are less likely to engage in risky behaviors, such as drinking, smoking, bullying and vandalism, than youth who don't participate in those programs. Young people in 4-H are committed to improving their communities. The study indicates that 4-H youth are three times more likely to contribute actively to their communities when compared with youth who do not participate in 4-H. The study also shows that young people who participate in a high number of positive youth development activities are more likely to develop the foundational characteristics, or five C's, of positive youth development: competence, confidence, connection, character and caring. They also develop a sixth characteristic, contribution, which helps strengthen their community. The NDSU Extension Service is pleased to deliver the 4-H experience to over 5,200 youth in community 4-H clubs.



4-H Camping

Research indicates that a 4-H camp experience has a positive impact on the social, personal and educational growth of those participating. It also increases awareness of environmental issues, interest in the outdoors, develops leadership skills and influences career decisions. Research also shows that the 4-H camping experience is second only to the 4-H club experience on the level of impact it has on positive youth development. During the past three years, youth from 50 of the 53 counties in North Dakota and seven states have participated in camps conducted by the NDSU Extension Service. The camps are held at the 4-H Camp near Washburn. In addition to hosting over 400 regular campers during the summer season, the camp was used last year to host adult volunteer and staff trainings, and hosted over 200 youth and adults for the 2012 State 4-H Shooting Sports state competition. Based on the current participation this camp will reach 30,000 youth through the summer camping program and other 4-H camps and events over the next 40 years.

Teaching Science through Technology

4-H science, engineering and technology programs reach almost 12,000 rural and urban North Dakota youth a year through hands-on learning experiences that encourage young minds and develop young leaders proficient in science, engineering and technology workforce skills. These experiences are supported by more than a 3,000 volunteers dedicated to placing 4-H youth on a path toward successful careers. Current examples of technology-related 4-H projects include aerospace, computers, electricity, geospatial, wind and robotics. Programming is offered by a variety of delivery methods including 4-H clubs, afterschool programming, school-enrichment and camping. 4-H science's most visible effort has been 4-H National Youth Science Day. The 2011 experiment related to bio-energy and the 2012 experiment taught youth about water quality and climate change. Eighty-seven percent of the North Dakota youth who participated in this year's experiment stated that it made them more interested in science. 4-H National Youth Science Day is an important annual part of 4-H's “One Million New Scientists. One Million New Ideas” campaign, with a national goal of attracting one million new youth to science, engineering and technology programs conducted by 4-H.

4-H National Youth Science Day events help increase youth interest in science.

■ 4-H Youth Development (continued)

Keeping Kids Safe

The safety and well-being of North Dakota's youth is an important priority. Two issues receiving local and national attention are underage drinking and bullying. NDSU Extension is involved in addressing these problems with two programs: Parents LEAD and Take a Stand.

Parents LEAD (Listen, Educate, Ask, Discuss) is a North Dakota-specific underage drinking prevention program that provides parents with tips on handling children's questions and starting the often difficult conversation about underage drinking. The program utilizes a web-site www.parentslead.org, email, Facebook and an interactive blog for parents to receive age- and/or grade-specific prevention measures. The program is a partnership between the North Dakota Department of Transportation, who originally created the Parents LEAD website, North Dakota University System's Consortium for Substance Abuse Prevention, North Dakota Department of Human Services and the NDSU Extension Service.

According to the 2011 Youth Risk Behavior Survey in North Dakota, 50 percent of middle school students and 25 percent of high school students report that they had been bullied on school property during the last 12 months, and 26 percent of middle school students and 17 percent of high school students report that they have been electronically bullied. North Dakota 4-H adopted Take a Stand, a bullying prevention curriculum created by the Texas A&M AgriLife Extension Service, for use with its program and as a curriculum that local youth programs and schools can use to teach youth basic life skills in dealing with bullying and conflict. The NDSU Extension staff is trained in the curriculum that helps meet the North Dakota Legislature's mandate that bullying prevention education become part of school districts' programming throughout the state.

4-H Outdoor Skills Popular

In 2011-12, 1,180 youth were enrolled in the Outdoor Skills project area which includes the 4-H shooting sports program. Thirty-four county Extension offices reported that 393 events within the shooting sports program were held, and there are 19 Shooting Sports Project Clubs involving 228 youth. The North Dakota 4-H Shooting Sports program, officially launched in 2001, is accomplished through eight state trainers in six disciplines and over 500 certified discipline instructors who work with youth at the local level. Program partnerships include the North Dakota Bowhunters Association, North Dakota Turkey Federation, Federal Ammunition, Scheels and the North Dakota Game and Fish Department. The program is also delivered through the support of sportsman's clubs, afterschool programs, and school districts across the state. The focus of all 4-H programs is the development of youth as individuals, and as responsible and productive citizens. The 4-H Shooting Sports program achieves this through youth learning marksmanship, the safe and responsible use of firearms and the principles of hunting and archery. The activities of the program and the support of caring adult leaders provide young people with opportunities to develop life skills, self-worth and conservation ethics.



Shooting sports continue to be a popular part of the 4-H Outdoor Skills project.

■ Horticulture and Forestry

NDSU Plant Diagnostic Lab

In 2012, the NDSU Plant Diagnostic Lab processed over 2,500 samples and supplied nearly 3,400 diagnoses. Samples ranged from commercial crops to lawns and gardens as well as those to fulfill export, seed certification and research requirements. Due to its convenient access to campus experts, the lab is able to offer a high degree of accurate diagnoses. In 2012, the value of diagnoses and recommendations made by the lab were estimated to be \$217,000 while a routine diagnosis costs about \$17. This equals an 86:1 return on investment in using the lab's services. The lab is primarily self-funded; fees generated by the lab are used to support staff and for supplies and equipment. No other lab in the state, public or private, offers the unique and unbiased services of the NDSU Plant Diagnostic Lab.

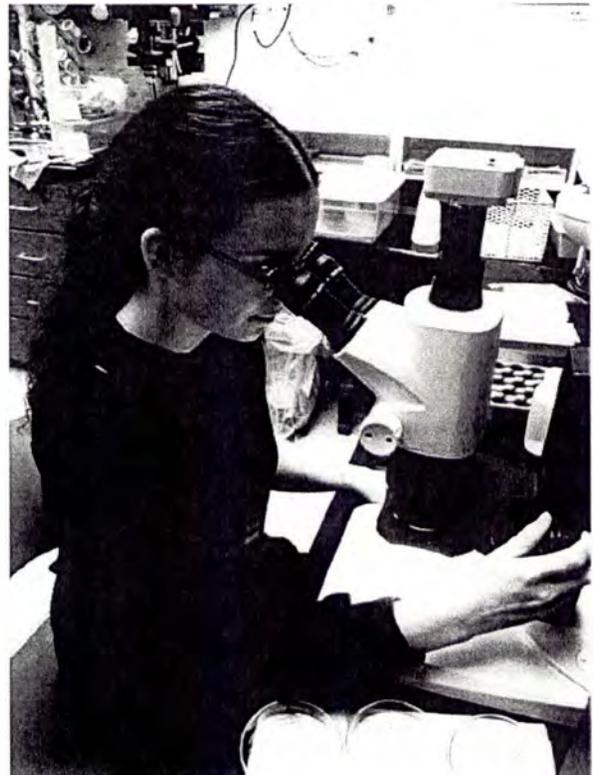
Junior Master Gardener

Junior Master Gardener (JMG) programs involving 3,500 youth were conducted in 35 counties in 2012. NDSU Extension works with a broad range of community partners including youth clubs, schools, libraries, churches and care centers in coordinating JMG projects. These projects beautify parks and schools, grow food for those in need, build relationships with senior citizens, and honor fallen soldiers. Besides learning about gardening and the environment, youth develop skills in working together and serving their communities. Evaluations show youth in JMG programs increase skills in science and math, develop healthy eating habits, and increase their levels of physical activity. The JMG program also increases youth's service to the community. As an example, one of our community partners reported, "Most of our produce over the summer has been donated to the Senior Citizen Center where it is used in the noon menu and also distributed to local seniors. We also donated to families that are receiving special help through social services."

NDSU's Plant Diagnostic Lab provides unique and unbiased services to commercial growers and home owners.

Dragonfly Garden Project

The NDSU Extension Service and United Tribes Technical College (UTTC) partnered to establish a research and education center for gardeners. This center, called the Dragonfly Garden, promotes wellness and entrepreneurship through horticulture. Extension introduced over 300 varieties of promising fruits and flowers for evaluation. Among these plants are 40 varieties of apples, many grown on a rootstock from Siberia that allows for commercial production of apples on dwarf, easy-to-manage trees. Hundreds of gardeners from the region toured the site in 2012 and learned of its innovative technologies. A complementary youth garden was established where elementary school students gain knowledge on native plants and tribal gardening practices. Families grow vegetables for themselves in the newly renovated campus community garden. A horticulture educator has been hired by UTTC to offer classes. New programs, including a special focus on tribes growing their own foods, are emerging.



■ Human Development and Family Science

Gearing Up for Kindergarten

Gearing Up for Kindergarten is a parent involvement and school readiness program for schools, parents and their four-year old children. The curriculum has undergone extensive revisions and dedicated research to help determine the components of a school readiness and parent involvement program that are most beneficial to the four year-old child, the family and school. Original pilot programs and research were funded over the first five years with grants from a series of partners including NDSU Extension Service, United Way of Class-Clay, and the North Dakota State Parent Involvement Resource Center. During the past two years the entire program was delivered in 64 school districts with 49 class sessions held in 2011-12 and 98 class sessions scheduled for 2012-2013 as a result of an investment made by the state of North Dakota. NDSU Extension Service also developed a variety of evaluation tools and conducted analysis that guided revisions and expansion.

Parent Education for North Dakota Families

NDSU Extension Service, school districts and the N.D. Department of Human Services-Children and Family Services have formed a partnership called North Dakota Parent Education Network (ND PEN) to provide educational programs to families across the state who seek education and support to raise capable and caring children. Families are most vulnerable when in transition (children leaving home or entering

school, divorce, separation or abuse) and when under financial constraints. The ND PEN targets classes that support families in transition and who are at risk and have been referred for educational support. Educational classes can reduce violence, abuse and dysfunction, and prevent more difficult issues that may result in the need for social service intervention. NDSU Extension works in partnership with schools, social services and local agencies to develop and implement prevention education efforts to provide parents with the knowledge and skills to create safe, stable and nurturing relationships with their children. From July 1, 2011 to June 30, 2012, seven parent resource centers participating in the ND PEN provided 8,357 parents with the knowledge and skills to create healthy relationships with their children. Ninety-two percent of participants who completed an outcome survey following the program indicated that the program helped them improve their parenting skills, and 94 percent indicated increased confidence in their ability to parent and take care of their children. (Data reflects only programs served under the Child Abuse Prevention Grant and not the total number served by the North Dakota Parent Education Network.)

Sexting: What Every Caring Adult Should Know

With more than two-thirds of American teens having cell phones, teens send an average of 440 texts every week. While cell phones represent independence and communication for the users, the advent of text and picture messaging has led to some teens sending and receiving sexually charged messages. It is essential for today's parent or caregiver to be aware of how young people are communicating with each other and how they are using technology. The NDSU Extension Service has developed a curriculum for these individuals titled "Sexting: What Every Caring Adult Should Know." It strives to build awareness of the risks and repercussions of sexting and assist adults in helping teens make informed, ethical decisions about how they use their mobile technology. Extension agents have delivered this seminar across North Dakota to parents, youth, caregivers, school faculty, faith community leaders and other professionals who work with youth. In North Dakota 722 adults went through the curriculum and are more aware of the issue.



Gearing Up for Kindergarten continues to expand in North Dakota.

■ Livestock Management

Feedlot School Supports Industry Growth

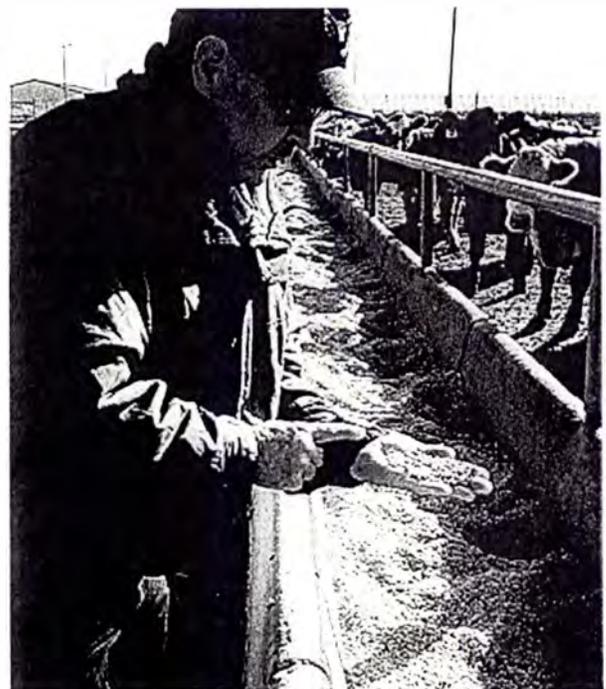
Since the first school was held on Feb 20-21, 1996, two-day schools have been offered to educate farmers and ranchers about the production and management of cattle feedlots. The wide variety of concepts taught include marketing, nutrition, feed bunk management, ration development, employee management, facilities, manure management, veterinary care, business management, beef quality assurance and goal planning. Over 20 schools have been conducted with an average of 23 producer operations per school. During this period, over 250 feed yards have been built in North Dakota that can background or finish cattle. The number of cattle fed to finish has grown from 20,000 to 120,000 head per year. Profitability of feeding cattle to finish from the Dakota Feeder Calf Feedout project found \$115 per head profit in 2011-2012, demonstrating the potential for successful North Dakota feedlot operations.

Bovine Emergency Response Plan

In July 2010 a semi-truck hauling cattle was hit head on by a pickup with a cargo ramp on Highway 200 near Carrington, ND. Both vehicle drivers were killed; the trailer of the truck hauling the cattle was on fire; and there were dead cattle, cattle on fire, cattle with severe injuries and cattle loose on the scene. First responders reported they were not prepared and did not have procedures in place to address accidents involving cattle being transported. In response, NDSU Extension developed the Bovine Emergency Response Program (BERP) that includes decision trees for dispatchers receiving and dispatching calls, arrival protocols, scene assessment, scene security and containment, extrication of cattle, humane euthanasia, relocation of cattle, mortality disposal, righting of the vehicle and debriefing. The BERP team continues to work on implementation with the North Dakota State Board of Animal Health, North Dakota Highway Patrol, North Dakota Stockmen's Association Chief Brand Inspector, North Dakota Department of Emergency Services Division of State Radio and USDA Veterinary Services.

North Dakota Beef Industry Survey

A survey was conducted during spring 2012 as part of an effort to determine how current beef producers perceive the future direction of the industry, attitudes regarding methods of enhancing farm/ranch profitability, and how Extension's educational programs can evolve to meet the future needs of North Dakota beef producers. The survey was vetted by a stakeholder group including members of the NDSU Extension Service, North Dakota Beef Commission, North Dakota Stockmen's Association, North Dakota Corn Council, North Dakota Soybean Council, North Dakota Bankers Association, North Dakota Department of Agriculture, and independent beef producers prior to mailing to ensure input from all stakeholders was considered. Responses from the 527 completed surveys will be the basis for stakeholder strategic planning and to focus educational, programmatic and legislative priorities within and among the respective participating organizations. The ultimate goal of this stakeholder group is to develop strategies to ensure the long-term sustainability of the North Dakota beef industry.



NDSU Feedlot Schools educate farmers and ranchers about the production and management of cattle feedlots.

■ Natural Resource Management

Soil Health Initiative

The soil health initiative, “Enhancing Soil Productivity and Land Management for Future North Dakotans,” was funded in 2011 to address losses in productivity as a result of soil health issues. Six primary positions at NDSU were hired under this initiative, split evenly between Extension and the North Dakota Agricultural Experiment Station. A soil health and land management advisory board consisting of commodity, government and producer groups was formed and convened in fall 2012 to provide guidance for research and Extension efforts of the new hires. Individuals hired under the initiative have participated in several activities such as soil testing and demonstrations at Big Iron, hosting a soil health field tour in Forman, a field day in Edmore and a workshop in Langdon, and presenting at numerous state and regional meetings. Approximately 1,000 people have been reached through these events. In under five months, \$1.2 million in externally-funded grants has been collectively awarded to this team to address soil health and land management issues.

NDSU Tile Drain Field Demonstrations

Several factors have increased farmers’ interest in subsurface drainage in the Northern Plains in recent years. Coupled with the interest in subsurface drainage have come societal concerns about the impact of subsurface drainage on flooding, runoff water quality and its impact on surface water quality. In response, the NDSU Extension Service provided educational presentations followed by demonstrations of tiling and installation. Approximately 450 participants learned about tile drainage equipment, surface drain design options, and the economics of tile drainage in this region. NDSU personnel shared information about wetland determinations and other governmental regulations applicable to tile drainage, the soil types that may be problematic for subsurface drainage, and potential impacts on saline soils. Attendees reported that this information will guide their future decisions on whether subsurface drainage is appropriate for their farm.

Cover Crops for Livestock Grazing

Cover crops have become an important forage resource for late-season livestock grazing in recent years used by about 17 percent of North Dakota livestock producers. NDSU Extension, in collaboration with the N.D. Agricultural Experiment Station, have developed recommended cover crop mixtures and management guidelines to help livestock producers grow productive, cost-effective forage crops for grazing and haying. Cover crops provide not only a high quality feed for most classes of livestock but also benefit the soils through development of actively growing roots throughout the growing season, incorporation of organic matter, improved soil porosity, and the spreading of manure for nutrient recharge. Cover crops have created a cost-saving feed for late-season grazing in three of five years studied at the Central Grasslands Research Extension Center. Cover crops for grazing can be a win-win program for many livestock producers by capturing two crops off the same land base, reducing labor costs and improving soil health during years of good soil moisture conditions.

Increasing Corn Profitability in Eastern High Clay Soils

In 2011, about 1.2 million acres of corn was grown in southeast North Dakota and about half of it in high clay soils. In 2011, counties with significant high clay soils yielded an average of 10 to 20 bushels an acre less than counties to their west due to wet soils. Studies in 2010 and 2011 showed that high clay soils were subject to large nitrogen losses due to denitrification which cut corn yields by 50 to 100 bushels an acre in many fields. Extension showed growers that by delaying about half of their applied nitrogen until the corn reached about the six leaf stage, they could gain a \$250,000 to \$500,000 advantage on 1,500 acres of corn. Growers responded by purchasing all of the side-dress liquid applicators available in the Red River Valley area in the winter/spring of 2012. Suppliers were sold out by late March 2012. If half of the growers applied half of their nitrogen requirements as side-dress on 300,000 acres of corn, the returns would total \$90 million to this region.

■ Nutrition, Food Safety and Health

On the Move to Better Health

Nutrition education for youth and adults accounts for one of the largest programming requests that county staff receive. On the Move to Better Health, a classroom-based, five-week nutrition and fitness education program for elementary students, reached about 8,300 children and their families from 2007 to 2012. A total of 3,330 children in 19 counties are participating in the program in the 2012-13 school year. According to post-surveys with children, 55 percent reported increasing the amount of fruits and vegetables they consumed, 63 percent reported increasing their daily amount of physical activity and 60 percent reported drinking less soda. According to follow-up surveys with parents, 50 percent reported an increase in their families' consumption of fruits and vegetables, and 46 percent met their families' nutrition or fitness goals.

Food Safety Training

In 2011, 63 percent of North Dakotans age 16 to 24 were working (one of the highest rates in the nation) and many were in the food industry. Since 2003, 8,153 students have participated in Teens Serving Food Safely, a food safety training program offered by the NDSU Extension Service. Knowledge scores increased from 54 percent correct on the pre-test to 85 percent on the post-test. About 54 percent of participants had been involved in food preparation for the public.

Food Entrepreneurship

The number of inquiries about food production and safety continues to grow from entrepreneurs and established companies. NDSU Extension provides a service to North Dakota food entrepreneurs and about 25 Nutrition Facts labels are created each year for new North Dakota products, enabling these products to enter the market.

Empowering Families in Need

The goal of two NDSU Extension Service programs is to empower our families with the greatest needs. These are the county-delivered programs called Family Nutrition Program (for SNAP-eligible participants ranging from elderly to young people) and the Expanded Food and Nutrition Education Program for the families with children in highest need. Despite a low unemployment rate and budget surplus, one in 11 North Dakotans needs food assistance. These programs provide direct support to about 5,700 adults and 17,700 children annually. Our evaluation data indicates that participants increase healthy food choices and preparation, and learn how to stretch their dollars to accomplish healthy eating goals on very limited budgets.

Diabetes Education

Diabetes education continues to be a growing need in the U.S. and in North Dakota, with more than 37,000 people living with the disease in North Dakota. In North Dakota, diabetes rose from 3.6 percent in 1994 to 6.9 percent in 2010, an increase of 92 percent. Extension agents teamed up with certified diabetes educators or registered dietitians to deliver a program called Dining with Diabetes North Dakota Style that teaches North Dakotans suffering from or at risk of developing diabetes how to make lifestyle changes and manage the disease. The key is managing blood sugars. Extension agents and their partner educators reached 210 participants in 2011 who increased their knowledge and physical activity, and improved their eating habits to better manage blood sugars.



The Dining with Diabetes program helped participants increase their knowledge and physical activity, and improved their eating habits to better manage blood sugars.



AGENCY OVERVIEW

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 March 13, 2012. 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 an infrastructure in which to do quality research. Shortfalls occur in laboratory research facilities, especially those for plant-based field research laboratories at the REC's and the Main Station. Cereal and grain quality laboratories, critical to maintain and enhance quality parameters for new crop varieties, are in desperate need of renovation/replacement. Developing separate laboratories for quality evaluation of transgenic experimental breeding lines is also 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.

Disease evaluation by the Veterinary Diagnostic Lab is critical for our livestock industries to thrive, yet this facility is in jeopardy of losing accreditation due to its deteriorating condition. Similarly, our plant pathology labs need enhancement/renovation in order to better utilize the modern tools and technology available. New facilities, specifically the new greenhouse (Phases I and II) and the new animal research complex have had 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. 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. Major problems occur in acquisition of costly field and laboratory equipment that cannot be obtained through grants. 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 safety, food security, natural resources management, new bioproducts (including fuel) need to continue in order to allow NDAES to serve this segment of agriculture well. A systems approach for livestock research, literally from conception to consumption, is identifying ways to better serve this important sector of the 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. While we are proud to provide a high level of applied research that is readily transferred to our stakeholders, some areas of fundamental research have become important to improve the efficiencies of our plant and animal-based applied research. Genomics, bioinformatics, and epigenetics all have their basis in fundamental research, but they provide products and expertise to enhance plant breeding (through genomic selection, marker-based selection) and livestock genetics (evaluating environmental influences on genetic expression). For some units, additional technical support would significantly increase productivity of researchers.

Scientists are responsible for attracting external funding, and their success during this biennium is impressive; however, the effort to write more, and larger, grants is apparent, and we have concern that significant research efforts at the Main Station and the RECs rely almost exclusively on extramural funding. Economic realities often place the NDAES in a position of responding rather than being proactive in affecting positive change. Our efforts to develop close collaborative relationships with industry and other scientific organizations will help allow the NDAES to become more proactive in solving problems critical to the state's largest industry.



Update of NDAES Initiatives Funded in 2011-13 Budget

■ Costs to continue FY2011 salary increases

\$1,079,647 received and allocated July 1, 2011

■ Greenhouse utilities

\$173,622 added to previous biennium funding; allocated

■ Enhancing Soil Productivity and Land Management for Future North Dakotans

\$1,410,000 received

- \$570,000 salary and fringe benefits, 1.0 FTE, Assistant Professor, hired in soil health-SNRS-Main Station and 2.0 FTE, Research Assistant Professors, hired at Hettinger REC and Carrington REC.
- \$120,000 Operating; distributed
- \$720,000 salary and fringe benefits, 6.0 FTE, Research Specialists, hired at Hettinger REC, Carrington REC, Williston REC, Central Grasslands REC, SNRS-Main Station, and ABEN.

■ Infrastructure (equipment, operating, graduate students and office support staff)

\$1,880,000 received

- \$200,000 Equipment, REC and Main Station revolving equipment funds; allocated
- \$410,000 Main Station operating funds allocation per SY added to previous funding; allocated
- \$720,000 Graduate Research Stipends; allocated
- \$550,000 Office Support Staff, 5.0 FTE Main Station hired, in Plant Pathology/SNRS, Animal Science, Ag & Biosystems Eng, Plant Pathology, and Ag Administration.

■ Improving the State's Economy by Enhancing Crop Development Efforts

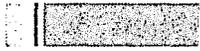
\$210,000 salary and fringe benefits, 1.0 FTE Scientist-canola breeding/genetics, hired
\$280,000 other fund authority for canola; positions filled

■ Improving Animal Productivity and Livestock Stewardship for Increased Profitability in the North Dakota Livestock Industry

\$240,000 salary and fringe benefits, 2.0 FTE Research Specialists-livestock stewardship hired in animal science.

■ Special Assessment

\$82,402 12th Ave. N biennial payment; FY 12 & 13 assessment paid



Update of Initiatives Funded in 2011-13: NDAES

■ Director-Williston REC - contingency appropriation

\$210,000 salary and fringe benefits, 1.0 FTE

Agreement with Montana State University Eastern Agricultural Research Center dissolved, hired Director January 2012.

■ Dickinson REC operating pool

\$800,000 distributed for operations at Dickinson REC

■ Research greenhouse complex

\$6,991,650 general funds, \$2,502,931 other funds; construction in progress

Funds used to construct Phase III of the Main Station Greenhouse. Phase III is scheduled to be completed in summer 2013.

2011-13 Legislation that Included Reporting Requirements to 2013 Appropriation Committees

HB1020 (NDSU Research & Extension, & Agronomy Seed Farm)

■ **SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO SIXTY-THIRD LEGISLATIVE ASSEMBLY.** The following amounts reflect the one-time funding items approved by the sixty-first legislative assembly for ... the 2011-13 one-time funding items included in the appropriation in section 1 of this Act:

One-Time Funding Description

Main research center greenhouse project	\$9,494,581
Total other funds	2,502,931
Total general fund	\$6,991,650

The 2011-13 one-time funding amounts are not a part of the entity's base budget for the 2013-15 biennium. The main research center shall report to the appropriations committees of the sixty-third legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2011, and ending June 30, 2013.

- Main research center greenhouse project - \$9,494,581 (\$6,991,650 GF, \$2,502,931 OF)
Status: Construction in progress. Below ground construction (foundation work) completed late 2012, with above-ground work substantially complete. Project scheduled to be completed summer 2013.

■ **SECTION 8 (As amended in Section 18 of SB2015). PERMANENT OIL TAX TRUST FUND -- DICKINSON RESEARCH CENTER - OPERATING POOL FUNDING.** The ~~estimated income~~ general fund line item in subdivision 5 of section 1 of this Act includes \$800,000 ~~from the permanent oil tax trust fund. This of operating pool~~ funding is available only for defraying the costs of operations of the Dickinson research center, for the biennium beginning July 1, 2011, and ending June 30, 2013.

- Dickinson research center-operating pool funding - \$800,000
Status: Funds have been allocated and used to defray operating costs at Dickinson REC.

■ Additional Reporting

- Special Assessments: \$82,402
Status: Assessments for FY12 and FY13 have been paid.

■ Main Station Carryover Status

	Authorization			Total Expense as of 11/30/2012	Remaining Authority
	GF	OF	Total		
Branch REC Projects Status: Complete	845,157	–	845,157	845,157	–
Greenhouse/Utilities Status: to be complete summer 2013	1,687,111	2,669,317	4,356,428	1,933,842	2,422,586
Total	2,532,268	2,669,317	5,201,585	2,778,999	2,422,586



Construction of Greenhouse Complex

NDSU Agriculture and University Extension
North Dakota Agricultural Experiment Station

FACILITIES

Main Station - North Dakota Agricultural Experiment Station Research Greenhouse Complex

2011-2013 Authorized Amount:

\$6,991,650 GF, \$2,502,931 OF

An outline of the Main Station Research Greenhouse project process:

- Phase I of the Main Station Research Greenhouse Complex appeared as priority No. 1 in the 2004 NDSU Campus Master Plan for the Agricultural Experiment Station.
- This project was authorized in SB 2023 for the 2005-07 biennium in the amount of \$7,000,000 including \$2,000,000 in state bonding and \$5,000,000 in other and federal funds.
- NDSU further requested and was granted carryover authorization for the project at the Jan. 18, 2007, SBHE meeting to continue to raise funds to meet the \$5,000,000 goal in special funding, with the remaining \$2,000,000 being provided by state bonding.
- The 2007-09 appropriation in HB 1020 included an additional \$7,000,000 for the completion of Phase II of the three phase greenhouse project under the Main Research Center section and also carryover authority of \$7,000,000 in funding authorized in 2005-07.
- The legislature also removed the designations of Phase I and II of the project, and furthermore, Section 14 of HB 1020 stated that the Main Research Center may use any funding available within the total appropriation authority for the Main Research Center Greenhouse project to begin construction of the greenhouse with total cumulative authorization of \$14,000,000.
- SB2020 in the 2009-11 Biennium provided \$11,450,400 to fund additional construction.
- The NDAES was successful in raising additional funds for the special fund authorization that was approved for the project.
- HB1020 in the 2011-13 Biennium provided \$6,991,650 (General Funds) and \$2,502,931 (Special Funds) and the appropriation was declared to be an emergency measure. Of this appropriation, \$383,625 (General Fund) was spent as an emergency measure. In addition, HB 1020 included a carryover provision for appropriations from previous sessions. These amounts (including greenhouse utilities) are expected to be spent by the end of the biennium as the project is completed.



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2013-15 Program Initiatives as Ranked by SBARE

Unranked Response to Legislative Request – Addressing oil revenue shortfall at Dickinson Research Extension Center (DREC)
 \$800,000 Operating, Dickinson REC - Permanent funds to offset reduced oil revenue - Oil revenues have declined due to decreased production in the last several years. Past legislative sessions have made efforts to offset this reduced revenue, but these efforts were temporary. Last session, a request was granted to provide \$800,000 to offset reduced oil revenues, but SBARE was tasked by the Legislature with determining and suggesting a permanent solution to this issue.



1 Crops Initiative - Enhancing Crop Development and Protection Efforts

Situation: Agriculture accounts for 25 percent of the state's economy. Related activities (e.g., sale of products, manufacturing, transportation of commodities, professional services, processing) increase that to more than 40 percent. Developing improved crop varieties and protecting crops from diseases and pests are fundamental to North Dakota farmers' competitive success and profitability. Research in areas such as bioinformatics and statistical genomics will provide scientists with cutting-edge tools.

Need: Nematologist and support staff, bioinformaticist, statistical genomicist and support staff (5.0 FTE, Main Station) and operating support for crop variety development, disease control (Main Station, CREC, LREC, DREC); increased support for NDAWN (1.0 FTE, Main Station) - \$2,470,000



2 Enhancing Research Capacity at the RECs

Situation: The RECs play a very important role in carrying out applied research in the Agricultural Experiment Station. Their involvement in important regional and state research activities has expanded, and support for these activities from farmers and ranchers is strong. The ability of the scientists stationed at the RECs to address important and emerging problems, such as weed and disease control, will increase as the technical sophistication of farming and ranching practices increases.

Need: Operating support (LREC, CGREC, NCREC, DREC, WREC, CREC, HREC); scientists to focus on control of weeds and plant pathogens (2.0 FTE: HREC, WREC); technical support (6.0 FTE: LREC, CGREC, NCREC, DREC, WREC, CREC) - \$1,860,000



3 Livestock Initiative - Improving Livestock Productivity and Protection

Situation: North Dakota livestock producers are committed to producing the safest, highest-quality food products. Increasing demand for our meat products nationally and internationally will require additional emphasis on productivity and present additional opportunities for specialty markets and improved profitability. Through research, we can identify sustainable, profitable opportunities to improve livestock productivity in North Dakota.

Need: Scientists (2.0 FTE, Main Station); operating and technical support (4.0 FTE: HREC, CREC, CGREC, DREC); operating and technical support (4.0 FTE, Main Station) - \$2,100,000



4 Risk Management and Trade in Domestic and Global Markets

Situation: Risk in agriculture has increased three to four times since 1980 due to changes in technology, weather, farm policy, markets and food safety issues. North Dakota leads the nation in the production of 15 crop commodities; no other state has the incentive to develop new risk management products for these commodities. Also, North Dakota relies heavily on exports to global markets; thus, monitoring and evaluating changes in farm policies helps producers develop global market strategies.

Need: Ag market risk scientist, econometrician, policy and trade issues research scientists (5.0 FTE, Main Station) - \$1,000,000



5 Sustaining Water, Air and Land Quality to Maintain and Improve North Dakota's Agriculture

Situation: North Dakota agriculture is committed to producing the highest-quality products in an environmentally sustainable manner. However, agriculture may be perceived poorly and face unreasonable regulations for its impacts on water, air and land resources. Additionally, the oil industry's impacts on air and land resources may result in significant impacts on North Dakota Agriculture.

Need: Operating funds and equipment to measure water quality parameters and develop nutrient recommendations; technical support (2.0 FTE, Main Station) - \$380,000



DETAILS: 2013-2015 Program Initiatives as Ranked by SBARE

N.D. Agricultural Experiment Station

Unranked Response to Legislative Request – Addressing oil revenue shortfall at Dickinson Research Extension Center (DREC)

\$800,000 Operating, Dickinson REC - Permanent funds to offset reduced oil revenue - Oil revenues have declined due to decreased production in the last several years. Past legislative sessions have made efforts to offset this reduced revenue, but these efforts were temporary. Last session, a request was granted to provide \$800,000 to offset reduced oil revenues, but SBARE was tasked by the Legislature with determining and suggesting a permanent solution to this issue.

1. Crops Initiative — Enhancing Crop Development and Protection Efforts

\$2,470,000 Total General Fund Increase

\$1,160,000 Increased operating support for the following programs: barley, corn, dry bean, pulse, soybean, HRS wheat, winter wheat, canola, cereal diseases, dry bean and pulse diseases (Main Station), crop pathology (CREC), variety testing (LREC), and dryland crop improvement (DREC)

\$355,000 salary and fringe benefits, 2.0 FTE – Main Station, one nematologist and technician

\$300,000 Increased funding for operating (\$80,000), software and hardware (\$100,000), and technical support (1.0 FTE, Main Station – \$120,000) for NDAWN

\$300,000 salary and fringe benefit, 1.0 FTE, Main Station – one bioinformaticist

\$355,000 salary and fringe benefit, 2.0 FTE Main Station – one statistical genomicist and technical support

Agriculture is the leading sector of the state's economy. Cash "farm-gate" receipts of crop and livestock commodities account for 25% of the state's economy. Further, additional agricultural activities including, but not limited to, sale of products, manufacturing, transportation of commodities, professional services, and processing increases the percentage of this important component to more than 40%.

Developing improved crop varieties is fundamental to continued competitive success and profitability of farmers in the state. North Dakota has an extremely diverse crop mix; farmers grow more than 42 different crops in the state, and lead the nation in the production of more than 14 crop commodities. To accommodate the demand, the NDAES has developed over 13 plant breeding programs, with additional research programs that significantly aid in the development of improved varieties. These programs are expensive to operate, yet provide substantial ROI. When new varieties are released, they provide an immediate level of new wealth to farmers in the state. In general, \$1 invested in variety development generates over \$200 in return to the state. These increased operating dollars would be distributed based on need to the different programs. The funds would be used for purchasing field and lab supplies, minor equipment purchases and repairs, and salaries for non-benefitted student workers (both field and lab).

Research to protect yield of all of the commodities is critical in reducing production costs. One area of crop protection that needs to be addressed is nematology. Several species of nematodes infest the roots of many of our important commodities; of these, the Soybean Cyst Nematode (SCN) perhaps causes the greatest economic impact. While the organism does not travel far on its own, mechanical transportation by humans enhance its movement within a region. This organism has recently been identified in 12 counties in the state, as far north as the Canadian border and west to the Missouri River. The population is expected to increase rapidly. Yield losses in soybean and in other susceptible hosts of the pathogen, such as dry bean, are expected to increase as the population increases. In addition to SCN, other nematode species likely or confirmed in ND can infect sugarbeet, canola, potato, wheat, corn, and others.

Efforts to monitor disease development using NDAWN saved more than \$30 million annually (either protecting the crop using timely application or not needing to spray). However, the NDAWN network is in need of upgrades, both

in software and hardware. Of the 73 sites operated by NDAWN, only eight stations are capable of near-real-time data delivery using Wireless Data communication. Also, large spatial gaps exist, with 15 western ND counties not having an NDAWN station.

Fundamental research is research that creates new knowledge of science. Also described as basic research, it is the basis of all applied research that is carried out. Unlike applied research, where we can typically identify an immediate “payback”, basic research generally has a more long-term payback. Having a combination of basic and applied research in agriculture allows our scientists to be at the forefront of identifying new knowledge, new technology, and new products. It also enhances our ability as an experiment station to partner with industry, to increase our success in garnering competitive grants from a number of organizations and solving tomorrow's problems today.

Research in areas, such as bioinformatics and statistical genomics, has future payoff, but also will provide our scientists with cutting edge tools with which to work more efficiently. Modern genetic and genomic technologies are providing a wealth of new data that are rapidly accelerating the pace of new applied discoveries. Understanding these data and interpreting them in a manner that supports breeding and other investigative research areas is essential for rapid advancement and the efficient development of new crop cultivars. Statistical genetics defines the new experimental approaches necessary to take advantage of large genomics data sets. Bioinformatics is the analytical tool necessary to analyze these data. Together, researchers in these fields analyze the data and provide applied researchers with interpretations that allow for timely and efficient decisions.

Crop development efforts can be enhanced by additional support to a number of breeding and affiliated research programs in quality evaluation, disease reaction, and agronomics.

2. Enhancing Research Capacity at the RECs

\$1,860,000 Total General Fund Increase

\$400,000 salary and fringe benefits, 2.0 FTE (HREC and WREC) are needed to focus on chemical and cultural control of weeds and plant pathogens in farming and grazing enterprises in western North Dakota.

\$900,000 operating and fringe benefit (1.0 FTE, LREC; 1.0 FTE, CGREC; 1.0 FTE, NCREC; 1.0 FTE, DREC; 1.0 FTE, WREC; and 1.0 FTE, CREC), technical support

\$560,000 Operating support (LREC, CGREC, NCREC, WREC, HREC, CREC, DREC)

The Research Extension Centers play a very important role in carrying out applied research in the Agricultural Experiment Station. Since evolving from branch stations/research farms, their involvement in important regional and state research activities has expanded, and there is strong support for these activities from farmers and ranchers in the state. Each REC has a unique mission to serve their respective region of the state; therefore, their needs also are unique. The ability of the scientists stationed at the RECs to address important and emerging problems will increase as the technical sophistication of farming and ranching practices continues to occur. Additional technical support staff to assist scientists on their research efforts and operating funds to help carry out the research are needed. Approximately 50% of each REC total budget is from gifts, grants (to support research), and sale of product.

A few scientists throughout the state carry out weed control research. Often, the mix of weed species affecting crop production in western North Dakota, and the cost of herbicides relative to potential productivity in the western part of the state, requires identifying different options better suited to this unique environment. A number of factors differentiate this region from other regions of the state, including extensive grazing lands, widespread adoption of no-till for moisture conservation, and the crops mix used in the region. Additionally, soil fertility, C-N ratios that exist in the region, and the identification of invasive species into this region all indicate that more expansive weed control activities be carried out in the region. Environmental conditions, including extended growing seasons and frequent drought create unique populations of tough-to-control weeds like downy brome, Persian darnel, and cleavers. Many weeds are directly responsible for reduced productivity of grazing lands, reduced palatability of livestock feeds, and some can be toxic to livestock.

There is an increasing level of crop disease problems occurring in western North Dakota due to the switch from a strict wheat-fallow rotation to intensive no-till cropping systems and irrigation development. Wheat and barley fields infected with leaf diseases, viruses, and even Fusarium head blight have been observed, while fields of pulse crops and other alternate crops have been infected with a number of diseases. A plant pathologist is needed to conduct timely disease surveys on the incidence and severity of crop diseases and to develop and recommend disease management control measures to no-till and irrigated producers. The plant pathologist will work with NDSU plant breeders on screening and identifying germplasm having resistance to the prevalent diseases occurring under no-till and irrigated production in western North Dakota.

3. Livestock Initiative — Improving Livestock Productivity and Protection

\$2,100,000 Total General Fund Increase

\$700,000 salary and fringe benefit, 5.0 FTE (HREC, CREC, CGREC, DREC, and Main Station), technical support.

\$480,000 Operating support (Main Station, HREC, CGREC, CREC, DREC)

\$225,000 salary and fringe benefit, 1.0 FTE, Main Station, one scientist in forage nutrition and management

\$340,000 salary and fringe benefit 2.0 FTE, Main Station, support staff

\$355,000 salary and fringe benefit, 2.0 FTE, Main Station, one scientist in epigenetics and one technician

North Dakota livestock producers are committed to producing the safest, highest quality food products. Increasing demand for our meat products nationally and internationally will require additional emphasis on productivity and also will present additional opportunities for specialty markets and improved profitability. Through research, we can identify sustainable, profitable opportunities to improve livestock productivity in North Dakota.

Forage and Forage Nutrition Research. Forages are the backbone of North Dakota's livestock industry. The cow-calf, sheep, and dairy industries in the state rely on forages (grazed and harvested) for profitable and sustainable production. Additional investments in forage and forage nutrition research will pay dividends for North Dakota's livestock industry by enhancing productivity through a systems approach.

Expanded Beef Cattle Finishing Research. The resources are in place to grow beef feedlot enterprises in North Dakota. Opportunities for new market outlets and international trade, as well as the large variety of available feedstuffs, should enhance the opportunity for expansion. Systems that provide a stable, year-round finished cattle supply for processors and enhanced carcass quality for specialty markets, along with mitigating environmental stress, improving environmental sustainability, and improved animal care and husbandry are priorities for research.

Bison Research. North Dakota is the third largest bison producer in the nation. The North Dakota bison industry identified several emerging needs areas at their recent testimony (Jan. 6, 2012), the most important of which is information on mineral nutrition of bison. Also, included in their testimony was research on feeding and nutrition of bison, grazing management, basic nutrient requirements, and animal health.

Epigenetics. Epigenetics is the study of factors such as diet, stress and other regulators that influence genetic expression. Our research capabilities can be enhanced by adequately funding efforts such as those made in the Advanced Imaging and Microscopy Lab and the Center for Nutrition and Pregnancy.

Through cooperative agreements and collections income, the laboratory has been responsible for the funding of positions considered essential by our accrediting organization, the American Association of Veterinary Laboratory Diagnosticians. Uncertainty about the year to year availability of these monies places these critical positions in jeopardy. Without accreditation, the laboratory would lose reputation, status, and clientele. Permanent funding is needed to give stability to these positions.

4. Risk Management and Trade in Domestic and Global Markets

\$1,000,000 Total General Fund Increase

\$355,000 salary and fringe benefit, 2.0 FTE Main Station, one scientist and technician, Ag market risk

\$215,000 salary and fringe benefit, 1.0 FTE Main Station, one econometrician

\$430,000 salary and fringe benefit, 2.0 FTE Main Station, research scientists, policy and trade issues

Risk Management. Risk in agriculture has increased 3-4X since 1980 due to changes in technology, weather, farm policy, markets, and food safety issues. Declining federal support will place greater emphasis on crop insurance. North Dakota leads the nation in the production of 15 crop commodities; no other state has the incentive to develop new risk management products for these commodities that are critical to the state.

Econometrics. Econometrics investigates voluminous information from newly available macro databanks. Investments in basic research such as econometrics pave the way for breakthroughs in the applied sciences area in the future and will lay the foundation for applied breakthroughs to enhance production agriculture in the future.

Ag Policy and Trade. North Dakota Agriculture relies heavily on exports to global markets. The ability of our crops and livestock producers to remain profitable in ever-changing global markets brought about, in part, by changes in farm policy domestically and globally, remains critical to the continuation of the state's largest industry. Monitoring and evaluating change in farm policies to better develop global market strategies is the focus of the Center for Ag Policy and Trade Studies.

5. Sustaining Water, Air, and Land Quality to Maintain and Improve North Dakota's Agriculture

\$380,000 Total General Fund Increase

\$100,000 operating and equipment for to measure water quality parameters and to develop nutrient recommendations - this will improve nutrient use efficiency and decrease input costs and reduce water quality impacts, Main Station

\$280,000 salary and fringe benefit, 2.0 FTE Main Station, technical support

North Dakota's plant and animal agriculture are committed to producing the highest quality products in an environmentally sustainable manner. A healthy environment produces the best agricultural products and is sustainable for future generations. However, agriculture may be perceived poorly and face unreasonable regulations for its impacts on water, air, and land resources. Additionally, the oil industries' impacts on air and land resources have negatively affected the health of North Dakota's agriculture.

Water. An important part of reducing water quality impacts and reducing input costs is the development of soil nutrient recommendations that improve nutrient use efficiencies. Improved nutrient use efficiencies can reduce water quality impacts from tile-drained fields. The addition of operating support to the soil test laboratory will help develop nutrient recommendations that can improve nutrient use efficiency. Animal agriculture also has perceived negative effects on water quality and limits the growth of certain industries, such as dairy. Federal policies also can be restrictive to the cattle industry. Furthermore, maintaining good water quality is essential to improving the health and safety of livestock.

Air. Livestock operations face increased scrutiny for potential negative impacts to air quality (e.g. greenhouse gas emissions). Moreover, increased road traffic around oil production areas has resulted in increases in dust emissions. Increased dust emission may have negative impacts on plant and animal health.

Land. The rise of oil industries in western North Dakota may have long-term negative impacts on land quality, thereby decreasing agricultural productivity. Brine spills and soil compaction have reduced land quality and crop productivity in western North Dakota.

It is necessary to quantify the actual impacts agriculture has on water, air, and land quality in North Dakota, and, if necessary, develop better management practices. Water quality indicators (e.g., nutrients, pesticides, herbicides, pathogens) need to be proactively monitored in runoff and tile drainage from cropped fields and runoff from feedlots. Demonstrations of good management practices are also useful in determining agriculture's effects on the environment and educating and informing the community and policy-makers. Greenhouse gas emissions from animal agriculture also need to be quantified. North Dakota's agriculture should strive to be proactive to ensure quality agricultural productivity for future generations, which will reduce negative perceptions and deter restrictive regulations.

In areas affected by oil production, water, air, and land quality should be monitored to ensure sustainable conditions for plant and animal production. Strategies should be developed to ensure the sustainable development of these areas and to remediate impacted lands.

2011-13 Impacts

The North Dakota Agricultural Experiment Station develops and disseminates technology that is vital to the production and use of food, feed, fiber and fuel from crop and livestock operations.

To do that, the Agricultural Experiment Station has eight Research Extension Centers strategically placed throughout the state. Researchers at these centers work on solving problems the state faces and test new management techniques and crop varieties. The centers are the Main Station in Fargo, Agronomy Seed Farm (Casselton) and the Carrington, Central Grasslands (Streeter), Dickinson, Hettinger, Langdon, North Central (Minot) and Williston Research Extension Centers.

The centers work with the NDSU College of Agriculture, Food Systems, and Natural Resources' seven departments: Agribusiness and Applied Economics, Agricultural and Biosystems Engineering, Animal Sciences, Cereal and Food Sciences, Plant Pathology, Plant Sciences, and Veterinary and Microbiological Sciences along with the School of Natural Resources Sciences and the School of Food Systems.

Here are some accomplishments at the Main Station during the past two years:

- Released high yielding, disease resistant, and high quality HRSW cultivars Prosper (eastern N.D.), Velve (central N.D.) and Elgin (western N.D.).
- Released Jury, an oat variety well adapted throughout eastern and central N.D., with high yield potential, improved disease resistance, and high quality traits, including high beta-glucan levels.
- Released the durum cultivar Carpio, high yielding and excellent quality traits, for central and western N.D.
- Released the red bean Rio Rojo, a high yielding, disease resistant small red bean that meets both domestic and export markets.

Prosper hard red spring wheat is one of the cultivars developed and released by the North Dakota Agricultural Experiment Station.



IMPACTS: North Dakota Agricultural Experiment Station

- Developed, maintained, and improved disease forecasting systems that are important tools for crop disease management.
- Reduced leafy spurge infestation from its peak of 1.5 million acres to 600,000 acres by 2011, the lowest amount since 1971, providing an estimated \$14 million in additional revenue due to landowners.
- Developed and implemented an early detection and rapid response system to prevent invasive weeds from establishing in the state.
- Determined that nutrient intake of the mother influences progeny performance of livestock via epigenetic modification of gametes.
- Identified methods to reduce the cost of feeding cattle using the new Beef Cattle Research Complex.
- Developed in-house assays that target the detection of petroleum byproducts in rumen contents.
- Established the nation's first Pulse Quality Lab that works with both the breeding program and with the industry to evaluate the level of quality of the N.D. pulse crop.
- Identified improved genetic resistance to many plant diseases found in the state, saving the N.D. farmer millions in lost yield.
- Investigated the feasibility of using CRP biomass for ethanol production while preserving and enhancing the production, delivery, and stability of CRP.
- Developed low cadmium durum wheat lines, which is highly desired in some global markets.



The Beef Cattle Research Complex conducts research on the cost of feeding cattle that will benefit North Dakota's livestock industry.



AGENCY OVERVIEW

Carrington Research Extension Center

North Dakota Agricultural Experiment Station

Agency Statutory 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 1,700 acres and has infrastructure to irrigate about 260 acres with center-pivot systems and 120 acres by surface methods. The balance of the acreage is managed as traditional dryland and is utilized primarily for dryland field crop research activities.

The research effort at CREC focuses on these general program areas: traditional crop variety evaluation, crop production and management, plant disease management, alternative crop development, cropping systems, irrigation, integration of crop and livestock production, intensive cow/calf production, beef cattle feeding, feedlot management, livestock waste and nutrient management, foundation seedstocks production, and development of new agricultural enterprises. Through these efforts, the CREC research program has gained a national reputation for its involvement in agriculturally-based economic development and study of a wide range of crops and cropping systems.

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, plant pathology, irrigation, livestock, 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 CREC 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 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 March 13, 2012. 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

An Agronomy Laboratory is a critical facility need for a primary program of the CREC. The Agronomy Laboratory is required to support what is considered one of the largest and most diverse agronomy field research programs in the upper Midwest. The CREC conducts more than 350 field research experiments annually including trials on all crops (> 30) representing the diversity of agriculture in North Dakota. The seeds, plants, soils, and other samples associated with these experiments are all processed in a repurposed 1962 potato warehouse representing a total space of 2,400 square feet. This laboratory has limited space for current experiment preparation and processing, sample cleaning, dryers, field sample storage, and lacks appropriate environmental controls for seed storage. Additionally, the present facility does not meet worker protection standards as dust handling, air exchange, and a chemical handling area are not a fit for the building's design. The innovative and proactive research efforts of the CREC agronomists, plant pathologist and soil scientist are severely compromised as the current facility has zero laboratory space for plant pathology equipment, detailed soils evaluations, or the adaptation of new technologies for seed, soil, and plant research processes. An Agronomy Laboratory is a critical need since North Dakota producers will not realize the scope and depth of new knowledge that the CREC scientists are capable of generating with modern laboratory facilities.

A secure (owned or long-term leases) land base is critical to sustain the current and future research mission of the CREC. The diverse and broad based programs of the CREC operate on a relatively small land base. For many years, the CREC has operated on a land base of around 1,700 acres with the state owning around 840 acres. The remaining land base of more than 850 acres must be secured from 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.

Additional primary program facilities are further issues that need to be addressed to sustain the viability of the diverse programs at Carrington. The beef research unit desperately needs a multi-use 'feedlot research support facility.' This facility would improve feedlot research operational capacity, assist in sustaining IAUAC compliance, attain worker protection standards, and reduce maintenance costs for equipment.

The CREC's foundation seedstocks program is an important part of NDSU's seedstocks program that is challenged to process the diversity of crops and varieties the center annually produces. The CREC seed conditioning plant is in need of replacement since the current facility has very limited capacity and structurally is too small to accommodate needed upgrades. A mobile seed conditioning mill is needed.

■ Carrington Research Extension Center (CREC)

Here are some accomplishments at the Carrington Research Extension Center during the past two years:

- Investigated practices to optimize corn fertilizer management with intensive management, in-furrow, top-dress and secondary fertilizer research projects.
- Assessed response and economics of soybean production strategies that utilize combinations of cultural practices and crop production inputs.
- Established grain and forage crops across a soil salinity gradient to assess tolerance based on plant survival and performance.
- Provided training for over 50 private and cooperative crop consultants during the 2011 CREC Crop Management Field School.
- Partnered with North Dakota angus producers to form North Dakota Angus University, a research program that facilitates CREC feedlot research and expands producer's knowledge of herd performance.
- Determined that self-feeding is a viable option for smaller-scale cattle producers who want to finish cattle in a collaborative project with the HREC.
- Determined that raising beef cattle in a drylot system is a viable alternative beef management practice.



Feedlot research at the Carrington Research Extension Center.





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. CGREC is located between two counties which rank in the top 10 counties for the production of livestock and forages. The area served by CGREC contains 5.0 million acres (44 percent) of the state's rangeland where 42 percent of the state's livestock is raised on 38 percent of the state's farms.

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.

NDSU NORTH DAKOTA AGRICULTURAL
EXPERIMENT STATION

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 March 13, 2012. 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 CGREC administers over 5,000 acres of native rangeland, tame pastures, and crop acreages. Future critical issues include:

1. Laboratory space, in the form of an agronomy lab, is needed to allow scientists the opportunity to expand current research and develop and implement new research projects.
2. Current livestock facilities are deficient for a fully implemented animal science program. 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.
3. Technical support is a critical issue. In order to strengthen current research programs, research specialists are needed for the animal science and range science programs and a full-time technician is needed to support the farming and livestock needs of the center.
4. The addition of a regional extension specialist has been encouraged by our advisory board. The specialty of this individual could relate to range nutrition, forage/hay production, or sustainable agriculture.
5. Significant improvements are also needed at the director's residence as the current residence has water and possible mold issues in the basement.
6. Other facilities are in need of deferred maintenance funding. Specifically, roof work on the technician residence, updates to existing barns to increase usefulness and safety, replacement of antiquated fences, as well as general maintenance at all residence, barn, and office buildings.

■ Central Grasslands Research Extension Center - Streeter (CGREC)

Here are some accomplishments at the Central Grasslands Research Extension Center during the past two years:

- Conducted studies on plant respiration and photosynthesis in response to grazing.
- Continued projects on control of invasive grass species through grazing.
- Collaborated with multiple on-campus faculty and scientists at other REC's on livestock projects evaluating breeding systems, range supplementation, and meat quality.
- Conducted research projects evaluating a multitude of forage species for use in the northern plains. Additionally, continued forage based biofuels research at sites across the state.
- Obtained funding to develop management practices allowing for increased use of distillers dried grains with solubles in range settings.
- Hired technical support for the forage agronomy program.



Forage-based biofuels research at Central Grasslands Research Extension Center.





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 4,916 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 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 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 March 13, 2012. 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

SBARE \$800,000 Operating, Dickinson REC — Permanent funds to offset reduced oil revenue — Oil revenues have declined due to decreased production in the last several years. Past legislative sessions have made efforts to offset this reduced revenue, but these efforts were temporary. Last session, a request was granted to provide \$800,000 to offset reduced oil revenues, but SBARE was tasked by the Legislature with determining and suggesting a permanent solution to this issue. The DREC needs to continue to resolve lost income dollars from oil revenue. This funding was available for defraying the costs of operations for the biennium beginning July 1, 2011, and ending June 30, 2013. Permanent funding is needed.

SBARE Crops Initiative — Enhancing Crop Development and Protection Efforts — DREC improved operating funds — The DREC advisory board has placed dry land corn research as a very high priority. Improved breeding and management will add diversity and stability in production opportunities for western North Dakota agricultural business. While yields are promising, optimal management techniques need to be developed for the West. Additional operating support is needed for enhancing corn production and no-till cropping systems with improved crop varieties and protection from diseases, insects and weeds.

SBARE Initiative — Enhancing Research Capacity at the RECs — DREC improved operating and technician support — The Center's involvement in important regional and state research activities has expanded, and encouraged by the DREC advisory board. The ability of the scientists located at the Center to address important and emerging crop, range and beef issues requires improved operating and technical (technician) assistance.

The Center would be appreciative of enhancing funding that supports the efforts of SBARE through the North Dakota Agricultural Experiment Station and NDSU Extension Service.

■ Dickinson Research Extension Center (DREC)

Here are some accomplishments at the Dickinson Research Extension Center during the past two years:

- Continued work in four research and extension areas: agronomy, beef management, range management, and sustainable agricultural practices.
- Reported conventional and organic agronomic research and extension information regarding various management techniques involving tillage (conservation tillage and no-till), cropping systems, pest control systems, variety development and the integration of cover crops.
- Reported grassland research information regarding various management techniques involving grass cultivars, ornamental xeriscape, soil mineral nitrogen, prairie ecosystems, drought, grassland restoration, grazing systems, burning and the integration of beef cattle.
- Reported beef research and extension information regarding various management practices involving winter forage replacement strategies, effects of heifer frame size and forage based diets on development and yearling steer performance on extended grazing annual forages.



Cropping systems presentation at a Dickinson Research Extension Center field day.





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 Extension 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 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, and 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, 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 and wildlife/livestock interactions has resulted in a significant increase in the quantity of rangeland research conducted at the HREC throughout the western Dakotas. Research at HREC involves the disciplines of animal science, range science, wildlife science, agronomy, and agri-business and applied economics. 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 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 March 13, 2012. 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 OVERVIEW: Hettinger Research Extension Center

Agency Future Critical Issues

A modern agronomy and range lab is needed to recruit and maintain quality scientists and graduate students, as well as meet the requirements set forth in today's competitive granting environment.

A new livestock processing and educational facility is needed to provide the facilities necessary to conduct research, train graduate students, and educate producers.

Extension and research staffing, both professional and technical support, for weed science and livestock production continue to be a priority to meet the educational and research needs of producers in SW North Dakota.

■ Hettinger Research Extension Center (HREC)

Here are some accomplishments at the Hettinger Research Extension Center during the past two years:

- Distributed foundation seed produced at NDSU research centers, making new varieties available to southwest North Dakota producers.
- Conducted crop trials and pesticide trials as well as off-station variety testing at Regent, Scranton, New Leipzig, Selfridge, Reeder, and Mandan.
- Evaluated new varieties and technologies for growing drought tolerant corn and wheat, wheat stem sawfly resistance, and new and emerging bio-fuels.
- Conducted multiple land use research evaluating sharp-tailed grouse habitat, reclamation of low-quality farmland back to native grasslands through the use of cover crops to improve soil conditions, and grazing systems that included both wildlife habitat and agricultural outputs.
- Collaborated with Sitting Bull College on the Standing Rock Sioux Reservation, the USDA-ARS in Mandan, NDSU, and SDSU on a new multi-agency research and outreach project evaluating the reclamation of lands degraded by prairie dogs, and the feasibility of producing a Tribal beef product that is produced from birth to plate on the Standing Rock Sioux Reservation.
- Conducted research evaluating feeding technologies for cattle and sheep that improved reproductive efficiency, improved feedlot performance and decreased feed costs, and affected male reproductive performance in response to different feed types.
- Provided educational opportunities to livestock and crop producers such as the Crop Tours and Field Day, Dakota Ram Test, Shearing School, Wool Classing School, Ultrasound Certification School, and multiple rangeland, beef, and sheep schools.



Educational opportunities for sheep producers were provided at the Hettinger Research Extension Center.





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 389 owned acres and an additional 320 acres under lease agreement. The LREC serves a nine-county region located in northeast North Dakota and has North Dakota's highest precipitation rates, coolest temperatures, and richest productive soils. The climate creates high levels of 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. 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 proven cultural practices and advances in chemical applications that minimize disease and insect pressures in all regions of North Dakota.

Since 2001, the LREC has significantly enhanced its overall agricultural research programming with the addition of a crop protection scientist, a director that also serves the region with an emphasis in rural economic/community development, increased foundation seed stocks program and a farm business management instructor. In addition, a full service agricultural based learning center was constructed in 2004 which greatly enhances outreach and extension efforts delivered to the regions agricultural industry. Finally, additional programming has been created that is working to employ LREC resources as an engine for rural community and economic development in partnership with the region's economic developers.

Agency Mission Statement

The Langdon Research Extension Center will conduct applied agricultural research that enhances the quality of life for the regions 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 regions natural resources.

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 March 13, 2012. 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

Langdon is not able to begin cleaning its foundation seed production until January as the seed storage warehouse and adjacent rooms to the seed cleaning plant double as the agronomy lab plot processing area. These two functions cannot be done simultaneously as grain dust created with cleaning seed make it unhealthy and unsafe for the researchers and support staff associated with processing thousands of research plot materials. In addition, LREC's strong plant pathology applied research program is being limited to what it can do as the pathology lab triples as an office, pathology lab and storage area. A new agronomy and pathology lab would add efficiencies to the utilization of labor and other areas as well as significantly improve safety issues associated with the outdated facility. Additional operating dollars are also needed to support day to day operations of a new lab.

In 1962, a seed cleaning plant was constructed at LREC 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. LREC still uses the the same facility and equipment that was employed in 1962. The inefficiencies associated with the plant forces LREC's seed cleaners to run individual lots of dirty seed through the plant two and sometimes three times to achieve the best result. 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. The LREC feels that all of these issues can be resolved with a mobile seed conditioning mill.

■ Langdon Research Extension Center (LREC)

Here are some accomplishments at the Langdon Research Extension Center during the past two years:

- Continued to provide dependable and unbiased applied research results in all aspects of crop production for all crops grown in northeast North Dakota.
- Fostered strong research partnerships with agricultural input companies, commodity groups and others to give producers better information regarding which inputs to employ and which crops to grow in their operation.
- Produced the highest quality foundation grade seed of the major crops grown in our region for seedsmen and producers through Langdon's foundation seedstocks program.
- Pursued value added agricultural opportunities with local economic development groups that may lead to new high value cropping system opportunities for producers and economic enhancements for rural communities.
- Provided dependable support for main station breeding programs and other cropping system research based out of the main campus that benefit producers for the entire state.
- Added two new Extension outreach programs in agronomy and soil health that bring a strong outreach program to address critical needs to the region's producers.



A soil health management program was established to meet the needs of producers in the 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 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 March 13, 2012. 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

- A mobile seed conditioning mill adequate to handle peas, lentils, beans, and chickpeas (in addition to small grains and oilseeds) for the expanding pulse crop industry and new NDSU breeding program is needed.
- Base funding for personnel to address the research and extension needs for pulse crops, canola, and cereal grains to meet the needs of growers and the increase of processing plants in the Minot area.
- Technical support.
- Increased operational costs.
- Removal of old seedhouse.
- Tile drain yard.
- Encroachment from City of Minot/relocation of center (land and facilities).
- Horticulturist needed to serve growing urban population and projects.
- Affordable housing/competitive salaries.

■ North Central Research Extension Center - Minot (NCREC)

Here are some accomplishments at the North Central Research Extension Center during the past two years:

- Continued to play key role in the strategic planning and production of foundation seed in the region. The center produced, conditioned, and distributed foundation seed of varieties including Pinnacle and Tradition barley; Omega and York flax; Divide, Grenora, and Tioga durum; Barlow, Glenn, RB07, and Velva hard red spring wheat; Decade, Darrell, and Jerry winter wheat; and Jury oat.
- Researched new crop protection products for minor crops such as sunflower, safflower, dry pea, lentil, chickpea, canola, mustard, and flax.
- Researched new products for controlling noxious weeds in non-cropland areas such as yellow toadflax, Canada thistle, and leafy spurge.
- Conducted residue trials with the USDA IR-4 that will lead to registration of new pesticides for controlling weeds and insects in minor crops.
- Conducted studies in several crops to identify weed control alternatives in response to development of weed resistance.
- Researched production practices and genetic improvement of 42 different crops.
- Researched *Brassica carinata* (Ethiopian mustard) lines for potential jet fuel and biodiesel use.



Research was conducted on *Brassica carinata* at the North Central Research Extension Center.



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 and an irrigated research and development project was established. WREC research studies are conducted on crop variety evaluation, herbicide performance and other cultural management research, cropping systems and soil and water conservation practices. The main dryland crops are spring wheat and durum. Barley, oats, safflower, pea, lentil, chickpea, canola, flax, alfalfa and other alternative crops are also grown as cash crops or for livestock feed.

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 for the region. 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, USDA-ARS Northern Plains Agricultural Research Laboratory in Sidney, Montana, and NDSU and other university scientists.

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 March 13, 2012. 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

Pea and lentil acreage has dramatically increased over the past 15 years and there has also been a significant increase in production of other broadleaf alternative crops. The switch from a strict small grain fallow rotation to a more intensive and diversified cropping system has resulted in a reduction of one million summer fallow acres in northwest North Dakota to significantly increase annual return per acre in our region.

Farmers in the MonDak region grow more than 20 different crops. There is an urgent need for additional technical support for WREC and off-station variety testing in each of the crops in dryland and irrigated cropping systems. There is a critical need for a plant pathologist to evaluate and research crop disease impacts due to the more intensive cropping systems used in western North Dakota.

A new seed plant at the WREC is needed to condition Foundation seed to replace the aging seed conditioning plant built in 1954. Seed conditioning efficiency of all crops would be significantly enhanced with a new mobile seed conditioning mill.

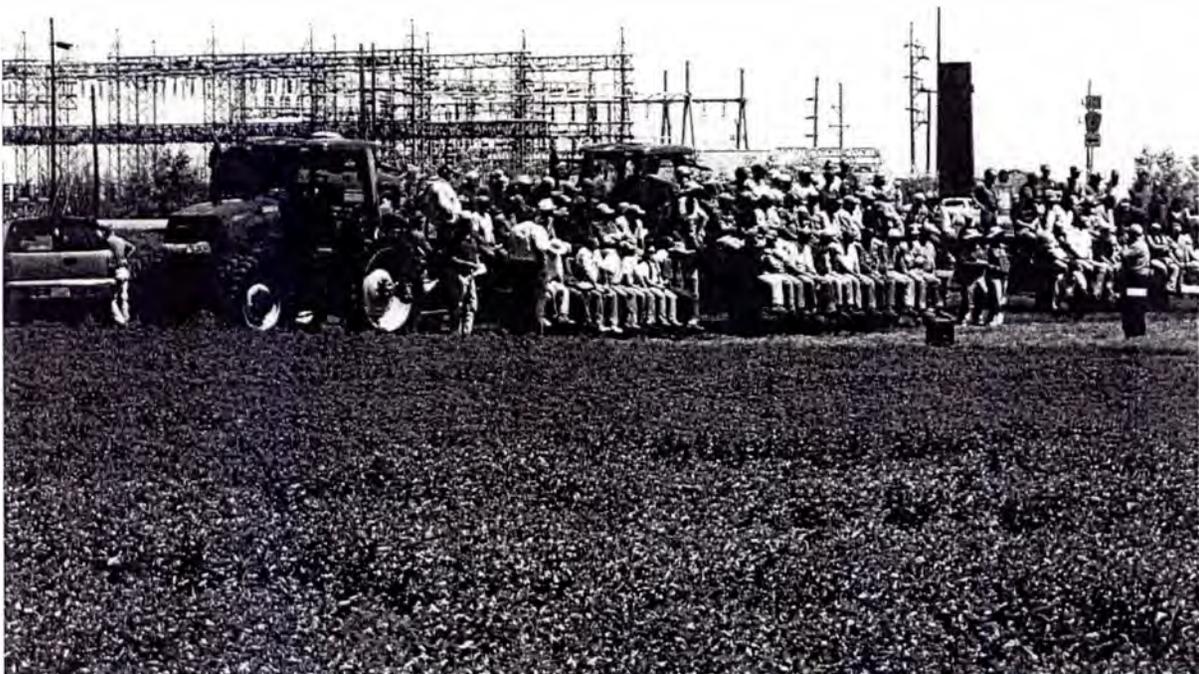
Retention and recruitment of staff is a critical issue for WREC due to the huge impact of oil and gas development in the Williston area. The energy explosion has significantly increased the cost of living and created a severe housing shortage in the region.

The Williston area is projected to increase in population to 40-50,000 people. There is an increased need for landscape materials and requests for adapted plant species for this climate by landscapers, homeowners, architects and local nurseries. The collaboration between NDSU researchers and the staff at WREC will become even more important for the emerging wine industry, truck farms and Community Supported Agriculture.

■ Williston Research Extension Center (WREC)

Here are some accomplishments at the Williston Research Extension Center during the past two years:

- Evaluated the performance and adaptation of new and established crop cultivars and crop cultural practices to improve productivity of agricultural products and reduce inputs.
- Conducted research and demonstration projects on potatoes, malting barley, safflower, spring wheat, and winter wheat variety developments, safflower disease control, pulse crop production and variety selection, horticultural crops, sprinkler irrigation, water and crop management.
- Conducted bioenergy crop research on barley and sugar beets for ethanol and biomass production from switchgrass and other perennial herbaceous crops.
- Utilized a 160-acre irrigated site in the Nesson Valley Irrigation District for an irrigated research and development project on sustainable irrigated cropping systems to increase irrigation profitability; promote irrigation development and support food processing industries in North Dakota.
- Dedicated the Neil Riveland Research Laboratory Addition to the Ernie French Center at the WREC Field Day in July 2011 and occupied for use in October 2011. The research laboratory addition provides updated seed sample processing/cleaning facilities, office space and soils, irrigation research and horticulture crops laboratories.
- Organized and assisted with outreach programming opportunities in the region: National Hard Spring Wheat Show, MonDak Pulse Day, Western Crop/Pest School, Irrigation Workshop, off-station trials and tours, field day events and the MonDak Ag Showcase.
- Collaborated with NDSU researchers and seed companies to evaluate grapes, floral and vegetable crops. The WREC garden is listed as a display garden for All America Selections. Sweet potatoes have been evaluated as an alternate crop.



Field days at the Williston Research Extension Center.



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 March 13, 2012. 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 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.

■ Agronomy Seed Farm

Here are some accomplishments at the Agronomy Seed Farm during the past two years:

- Produced 25,000 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.



Providing high quality seed continues to be an important part of the Agronomy Seed Farm's mission.



North Dakota 4-H Camp

North Dakota 4-H Camp, along the Missouri River near Washburn, N.D., is used extensively during summer months for day and overnight youth camps, and secondarily for Extension staff training. The three cabins and main lodge need renovations to fix run-down facilities, meet handicap accessibility and privacy needs for youth campers and adult counselors and volunteers. The renovations will reduce the lodging capacity, so additional lodging space is required in a new multipurpose camp building. The multipurpose building also will provide additional indoor activity space that is needed for camp programs during inclement weather. Plus, it will serve as a storm shelter, which is not available at the camp site. Improvements such as an archery range, ropes course and a small barn for livestock will be made to the infrastructure for camp programs. These renovations, new building and camp improvements will increase the capacity of Extension to provide excellent youth development programs through camp experiences. Funding of this capital request would provide the renovations to improve the facilities and safety for youth education programs and will increase the overall utility and value of the North Dakota 4-H Camp facilities by extending its use to about eight months of the year. - \$1,900,000 (\$950,000 general fund request and \$950,000 other funds)

One-time Request

Replace 14 outdated, unsupported videoconferencing systems used for Extension programs including pesticide training, ag economics educational programs, marketing clubs, departmental seminars, and faculty and staff interviews - \$110,000

Additional Request

Funding to provide technical assistance grants to soil conservation districts to help landowners reduce soil erosion, improve water quality, and enhance tree plantings, grazing lands and wildlife habitat - \$150,000





DETAILS: 2013-2015 Capital Improvement and One-time Needs as Supported by SBARE

NDSU Extension Service

Capital Improvement

North Dakota 4-H Camp

\$1,900,000

\$950,000 general fund request

\$950,000 other funds

North Dakota 4-H Camp, along the Missouri River near Washburn, N.D., is used extensively during summer months for day and overnight youth camps, and secondarily for Extension staff training. The three cabins and main lodge need renovations to fix run-down facilities, meet handicap accessibility and privacy needs for youth campers, and adult counselors and volunteers. The renovations will reduce the lodging capacity, so additional lodging space is required in a new multipurpose camp building. The multipurpose building also will provide additional indoor activity space that is needed for camp programs during inclement weather. Plus, it will serve as a storm shelter, which is not available at the camp site. Improvements such as an archery range, ropes course and a small barn for livestock will be made to the infrastructure for camp programs. These renovations, new building and camp improvements will increase the capacity of Extension to provide excellent youth development programs through camp experiences. Funding of this capital request would provide the renovations to improve the facilities and safety for youth education programs and will increase the overall utility and value of the North Dakota 4-H Camp facilities by extending its use to about eight months of the year.

One-time Request

Interactive Video Equipment Upgrades at 14 Sites

\$110,000

\$110,000 for high definition interactive video cameras, monitors and installation

NDSU Agriculture uses videoconferencing — a technology that connects rooms electronically with video and audio through Internet lines — for pesticide training, ag economics educational programs, marketing clubs, departmental seminars, faculty and staff interviews, and meetings. The systems purchased nine years ago need replacing in order to continue to offer educational programming for groups of people without the added cost of travel expenses. This request is for 50% of the cost of six county units and the full cost of eight units at RECs and NDSU campus locations.

Additional Request — North Dakota State Soil Conservation Committee

\$150,000

\$150,000 for technical assistance grants to Soil Conservation Districts

The planning, design, installation and checkout of conservation practices by participating soil conservation districts have a significant impact on North Dakota's natural resources. Funds from this request will assist soil conservation districts to help landowners reduce soil erosion, improve water quality, and enhance tree plantings, grazing lands and wildlife habitat.



1. Agronomy Laboratories

Agronomy laboratories at the Carrington, Hettinger, Langdon and Central Grasslands Research Extension Centers need to be replaced. Current facilities (an old potato warehouse, converted granary and an equipment storage building with a dirt floor, for example) were not designed as lab space and do not meet worker safety and protection standards. Current facilities also lack modern research technology and storage space. New labs would provide adequate facilities to conduct research and compile research data that the region's producers need to solve crop production problems. - \$5,925,000

2. Seed-cleaning Plants

Seed-cleaning facilities at NCREC, CREC, WREC, and LREC need to be replaced. Current facilities are antiquated, lack reliable capability to ensure good seed quality, are slow and inefficient. Current facilities were designed to handle cereal crops and are not capable of cleaning pulse crops and other fragile seed that are in high demand by the state's farmers. Also, these facilities pose considerable worker safety issues. SBARE was charged with developing a plan to determine the best, cost-effective model to replace these out-of-date facilities. SBARE chose a model that allows for four self-contained (portable) seed conditioning units at each of the centers that produce foundation grade seed which would meet producer demands for high quality seed of new, high yielding, high quality varieties. - \$3,470,000.

3. Livestock Facilities

The Carrington Research Extension Center needs a multiuse feedlot research support facility and the addition of at least 16 pens to improve its feedlot research capabilities, assist in sustaining Institutional Animal Care and Use Committee compliance, attain worker protection standards and reduce maintenance costs for equipment. Sixteen more pens would hold 160 head of cattle and allow the center to conduct one additional experiment per feedout period. Additional pens would allow for more treatments and replications in feedlot studies. The Hettinger Research Extension Center is in need of a multipurpose livestock processing barn and educational facility to address the center's research needs and provide state-of-the-art training and educational events. - \$1,650,000

One-time Request — Vet Diagnostic Lab

Identifying and preventing disease outbreaks in the animal herds in the state is the responsibility of the Veterinary Diagnostic Lab (VDL). Livestock feeds can be tested for mycotoxins, molds, and phytoestrogens. Liquid chromatography with mass spectrometry capability (LC/MS/MS) can be used to test animal feeds for natural contamination by field and storage molds. In addition, the expanding oilfield presents challenges to livestock producers in western North Dakota. Pipeline breaks, semi-truck chemical spills, and down-hole accidents can contaminate ground and surface water sources. The proximity of livestock to drilling sites can result in poisoning from ingestion of water/feedstuffs contaminated with crude oil, condensate, salt water, heavy metals and/or caustic chemicals. Diagnosis of these cases requires sophisticated equipment. - \$400,000 equipment



DETAILS: 2013-2015 Capital Improvement and One-time Needs as Ranked by SBARE

N.D. Agricultural Experiment Station

Capital Improvements

1. Agronomy Labs (CREC, HREC, LREC, CGREC)

\$5,925,000

Agronomy Lab (CREC) – 10,040 square feet new construction – \$2,500,000

The Carrington Research Extension Center agronomy program is perhaps the largest and most diverse of the out-state RECs. Yet this program must perform the duties and processes associated with this large program in an old (1962-era) potato warehouse. For example, more than 25,000 individual samples are handled in multiple processing steps in the confines of this antiquated facility. During the course of the past 30 years, the CREC agronomy staff have self-renovated the interior of this warehouse to create a degree of functionality, given the limitations. First and foremost, the current agronomy laboratory does not meet worker safety and protection standards. The current laboratory has limited space for experiment preparation and processing, sample cleaning, dryers and field sample storage. The current facility lacks some basic research functionality, such as dust and air exchange capability, isolated chemical handling space and controlled environment for seed storage plus it has no room for plant pathology experiments. The innovative and proactive research efforts of the CREC agronomist and plant pathologist are severely compromised by the limitations and lack of modern capabilities in the present facility.

Agronomy Lab (HREC) – 8,000 square feet new construction – \$1,800,000

The agronomy and range research programs at the NDSU Hettinger Research Extension Center have grown beyond the ability of our agronomy lab to house them. The current lab is a converted granary with inadequate sample storage space, inadequate drying ovens, and no Internet service or the ability to provide a modern office working environment. Additionally, the HREC has inadequate equipment storage space needed to store the agronomy research program's seed drills and combine, and the range research program's equipment. A modern agronomy and range lab of approximately 8,000 square feet is needed to provide technicians and graduate students with office space, technical facilities in line with modern research (Internet access, dust-free environments to work on computers, and lab areas for handling radio telemetry collars for wildlife and domestic livestock), new drying ovens and sampling processing areas, and storage for research samples and equipment.

Agronomy Lab (LREC) – 5,500 square feet new construction – \$1,225,000

The Langdon Research Extension Center has an active agronomy research program that includes all aspects of crop production, including, but not limited to, soil health, plant pathology, entomology, crop fertility, weed control and variety development. The LREC has no dedicated facility to store, process and perform an array of tests to compile research data the region's producers need to solve crop production problems and questions. A new agronomy lab would allow LREC scientists to conduct this work and, in the long run, would save resources that are expended on shipping research materials away for processing and testing.

Agronomy Lab (CGREC) – 4,000 square feet new construction – \$400,000

With the addition of a forage agronomist at the Central Grasslands Research Extension Center, the center is in need of a forage lab/storage building. Currently, samples collected in the field by the scientist are processed in a corner of an equipment storage building with a dirt floor. The dust from opening the overhead door and moving equipment renders this area very dusty and makes keeping scales and computers clean very difficult. The new building would house the forage drying ovens, computer, scale, etc., for sample data processing. It also would house the grinders and equipment to process the forage samples in preparation for nutrient analysis. The building would be 40 by 70 feet, with half used for the forage lab and the remainder used for sample and equipment storage. We are forced to store plot equipment outside, where the weather takes its toll on the equipment. New plot equipment such as self-propelled forage harvesters cost upwards of \$100,000 and should be maintained in a clean, dry storage environment.

2. Seed-cleaning Plants (NCREC, CREC, WREC, LREC) – Option B

\$3,470,000

Self Contained (portable) Conditioning Mill (CREC) – \$905,000

The current seed plant was constructed in 1963 and is seriously out of date. The current plant is not designed to readily accommodate air exchange and dust control mechanical features to address worker safety concerns. The present building is too small to retro-fit with larger capacity seed conditioning equipment.

A Self Contained (portable) Conditioning Mill, color sorter, steel storage building, and necessary ancillary improvements are needed. The Self Contained Mill includes an air screen cleaner, an indent mill, and a gravity mill.

Self Contained (portable) Conditioning Mill (LREC) – \$755,000

The LREC produces an average 15,000 bushels of regionally adapted foundation seed production for use by the regions producers in their cropping enterprise. The current foundation seed facility at the LREC was constructed in 1962 and utilizes the same equipment. It is outdated, inefficient, very slow, and needs to be modernized to support a foundation seed system demanded by the region's producers. In 2008, the condition of the seed cleaning plant was cited as the number one safety hazard on the grounds of the LREC. There is no room for a renovation, such as adding another leg.

A Self Contained (portable) Conditioning Mill, steel storage building, and necessary ancillary improvements are needed. The Self Contained Mill includes an air screen cleaner, an indent mill, and a gravity mill.

Self Contained (portable) Conditioning Mill (NCREC) – \$905,000

The current seed conditioning facility was built in 1949 and added on to in 1982. It is too small, inefficient, and is a health and safety problem due to inadequate dust handling. It is not equipped to gently handle pulse crops, oil seeds, and other crops.

A Self Contained (portable) Conditioning Mill, color sorter, steel storage building, and necessary ancillary improvements are needed. The Self Contained Mill includes an air screen cleaner, an indent mill, and a gravity mill.

Self Contained (portable) Conditioning Mill (WREC) – \$905,000

The current building used to house the foundation seed conditioning equipment was built in the mid 1950's. The area designated to unload trucks can only accommodate a small single axle truck and does not have sufficient unloading capacity. Grain legs that move the dirty and clean grain are all too small for efficient movement of grain. We are limited to cleaning a maximum of 45 bushels per hour by the current grain leg size. Upgrading the grain legs is difficult to near impossible in this building because of space limitations. Equipment for the distribution and conditioning of grain is currently located on five different floor levels in the building, creating potential worker safety issues and problems associated with constant stair climbing. The conditioning plant is cleaned thoroughly at every level between each crop variety that is conditioned in order to insure seed purity for Foundation Seed production. This means that in 2011-2012 the conditioning plant will need to be hand cleaned about 18 times, a task that now takes two people approximately ten hours to complete.

A Self Contained (portable) Conditioning Mill, color sorter, steel storage building, and necessary ancillary improvements are needed. The Self Contained Mill includes an air screen cleaner, an indent mill, and a gravity mill.

3. Livestock Facilities

\$1,650,000 (CREC – \$1,150,000, HREC – \$500,000)

Construction of a multi-use Feedlot Research Support Facility will improve feedlot research operational capability, assist in sustaining IACUC compliance, attain worker protection standards, and reduce maintenance costs for equipment. The CREC has a critical need for a facility that would combine the functions of storing and dispensing pharmaceuticals and animal health supplies, allow for the efficient processing of feeds, blood, and tissue, provide office space for technical staff with computer support and records storage, indoor storage for feeding equipment used on a daily basis, and a general shop area for equipment maintenance and minor repairs.

Meeting the expanding demands for feedlot research is partially limited by available pens. Current pens are fully utilized. The CREC is continually challenged to do more research, however feedlot pen availability is a clear limitation. The addition of a minimum of sixteen pens that would hold 160 head of cattle would allow the CREC to conduct one additional experiment per feedout period. Further additional pens will allow more treatments and replications in feedlot research studies which would improve statistical confidence and precision. Any feedlot pen expansion must include the associated waste containment facilities to remain compliant with state law.

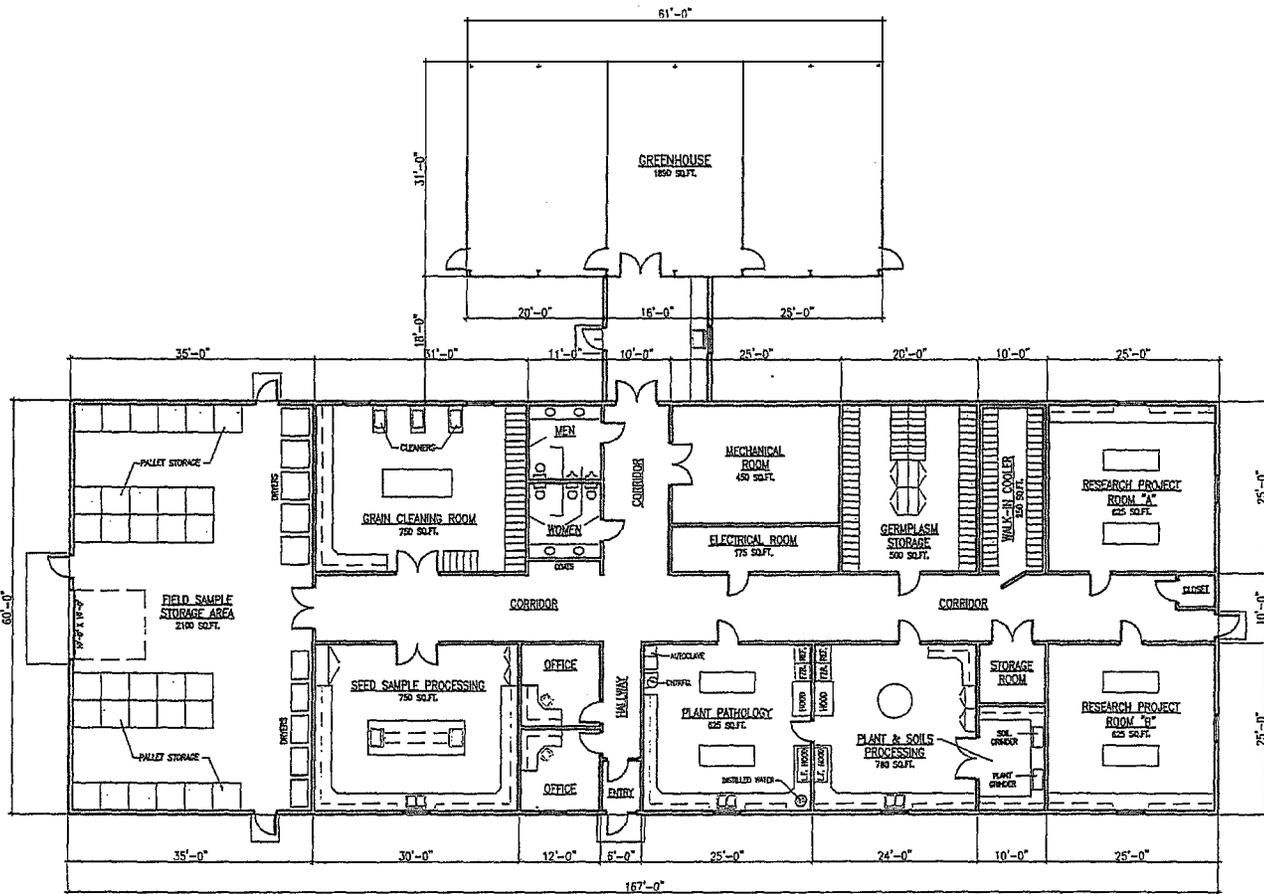
HREC has provided educational events to veterinarians, extension specialists, and producers from 14 states and three countries. These events include various demonstrations, including, but not limited to, carcass ultrasound evaluation, shearing and wool grading schools, and technical cattle feedlot schools and trainings. All of these events are held in the former dairy barn, originally built in 1909, or outdoors. This facility is inadequate to provide state-of-the-art training and educational events. A multi-purpose livestock facility is needed to address the research and outreach needs of the Center and the stakeholders in the region.

One-time Request

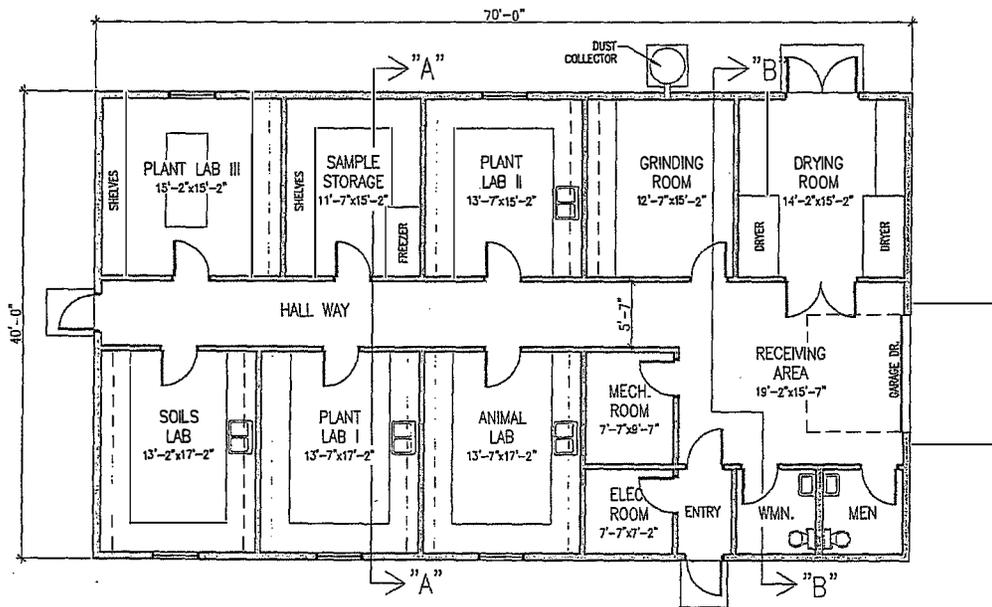
Vet Diagnostic Lab

\$400,000 equipment

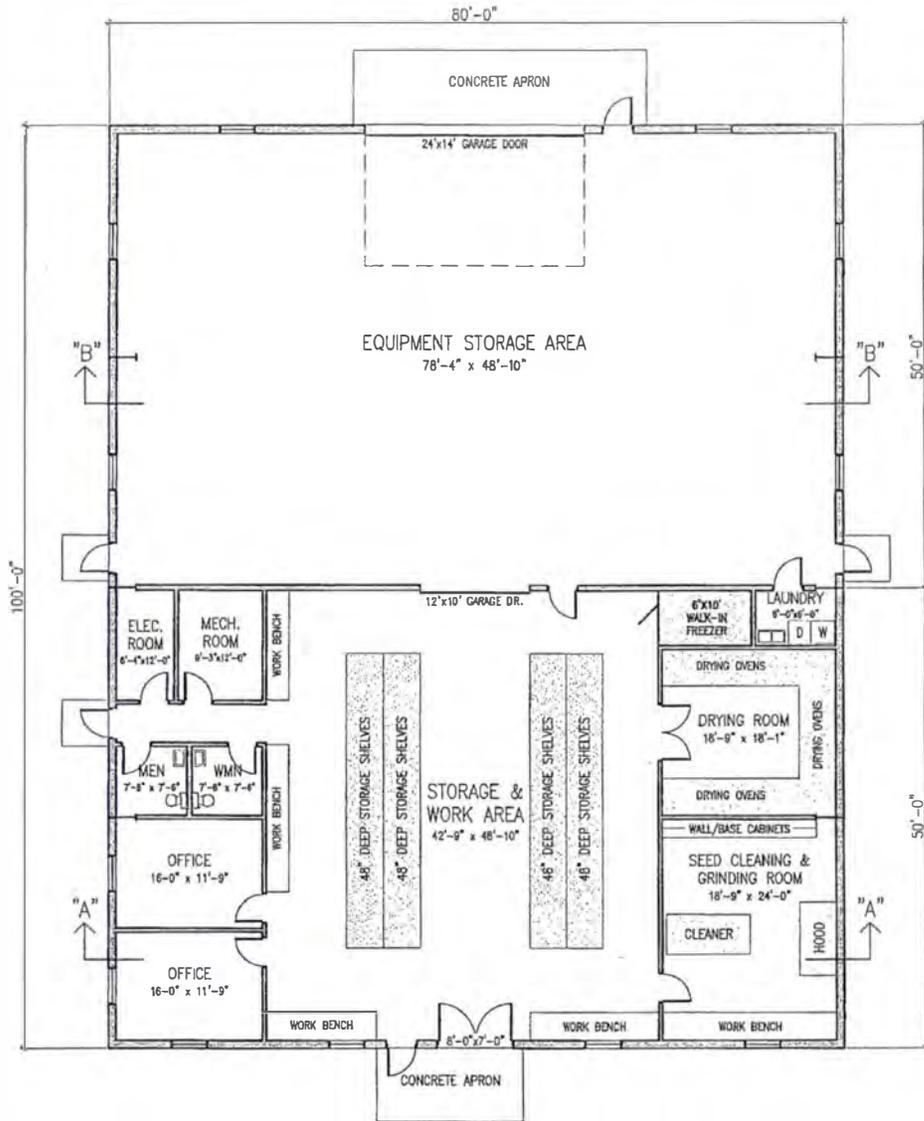
Identifying and preventing disease outbreaks in the animal herds in the state is the responsibility of the Veterinary Diagnostic Lab (VDL). Livestock feeds can be tested for mycotoxins, molds, and phytoestrogens. Liquid chromatography with mass spectrometry capability (LC/MS/MS) can be used to test animal feeds for natural contamination by field and storage molds. In addition, the expanding oilfield presents challenges to livestock producers in western North Dakota. Pipeline breaks, semi-truck chemical spills, and down-hole accidents can contaminate ground and surface water sources. The proximity of livestock to drilling sites can result in poisoning from ingestion of water/feedstuffs contaminated with crude oil, condensate, salt water, heavy metals and/or caustic chemicals. Diagnosis of these cases requires sophisticated equipment.



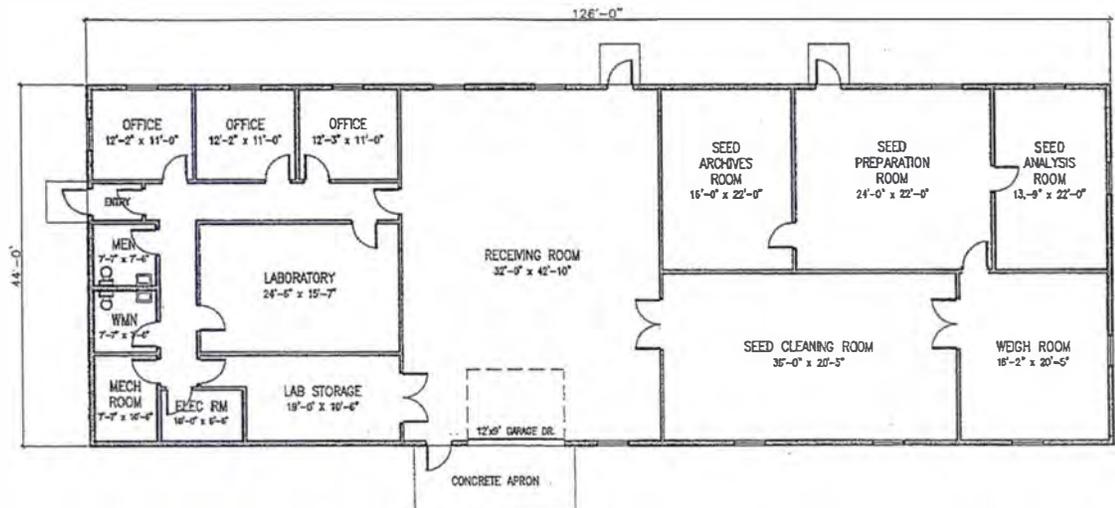
FLOOR PLAN - PROPOSED AGRONOMY LABORATORY
CARRINGTON RESEARCH EXTENSION CENTER



FLOOR PLAN - PROPOSED FORAGE AGRONOMY LAB
CENTRAL GRASSLANDS RESEARCH EXTENSION CENTER



N FLOOR PLAN - PROPOSED AGRONOMY & RANGE LAB
HETTINGER RESEARCH EXTENSION CENTER



N FLOOR PLAN - PROPOSED AGRONOMY / PATHOLOGY BUILDING
LANGDON RESEARCH EXTENSION CENTER



Special Assessments

North Dakota Agricultural Experiment Station

Outstanding Beginning Balance	
2011-2013 Biennium	\$555,336
2011-2013 Payment Schedule:	
Interest	\$ 56,317
Principal	\$ 26,085
Total	<u>\$ 82,402</u>
Balance, 6/30/2013	\$527,971

Status: Assessments for FY12 and FY13 have been paid.



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SENATE BILL NO. 2020

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 extension service, northern crops institute, upper great plains transportation institute, main research center, branch research centers, and agronomy seed farm; to provide for transfers; to provide an exemption; and to declare an emergency.

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, 2013, and ending June 30, 2015, as follows:

Subdivision 1.

NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Extension service	\$47,026,654	\$5,998,604	\$53,025,258
Soil conservation committee	987,800	75,000	1,062,800
Total all funds	\$48,014,454	\$6,073,604	\$54,088,058
Less estimated income	23,128,810	2,308,604	25,437,414
Total general fund	\$24,885,644	\$3,765,000	\$28,650,644
Full-time equivalent positions	256.26	2.00	258.26

Subdivision 2.

NORTHERN CROPS INSTITUTE

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Total all funds	\$3,347,307	\$527,344	\$3,874,651
Less estimated income	1,654,725	145,582	1,800,307
Total general fund	\$1,692,582	\$381,762	\$2,074,344
Full-time equivalent positions	12.00	0.00	12.00

Subdivision 3.

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Total all funds	\$24,069,961	\$1,283,668	\$25,353,629
Less estimated income	22,150,333	374,721	22,525,054
Total general fund	\$1,919,628	\$908,947	\$2,828,575

Full-time equivalent positions 51.75 2.00 53.75

Subdivision 4.

MAIN RESEARCH CENTER

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Total all funds	\$89,012,990	\$21,280,332	\$110,293,322
Less estimated income	<u>41,630,644</u>	<u>11,624,941</u>	<u>53,255,585</u>
Total general fund	\$47,382,346	\$9,655,391	\$57,037,737
Full-time equivalent positions	349.01	2.48	351.49

Subdivision 5.

RESEARCH CENTERS

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Dickinson research center	\$5,588,562	\$642,763	\$6,231,325
Central grasslands research center	2,865,847	431,712	3,297,559
Hettinger research center	3,373,175	1,373,059	4,746,234
Langdon research center	2,378,807	507,956	2,886,763
North central research center	4,399,821	261,858	4,661,679
Williston research center	3,410,089	458,934	3,869,023
Carrington research center	<u>7,126,488</u>	<u>927,807</u>	<u>8,054,295</u>
Total all funds	\$29,142,789	\$4,604,089	\$33,746,878
Less estimated income	<u>14,997,581</u>	<u>1,024,285</u>	<u>16,021,866</u>
Total general fund	\$14,145,208	\$3,579,804	\$17,725,012
Full-time equivalent positions	103.04	4.00	107.04

Subdivision 6.

AGRONOMY SEED FARM

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Agronomy seed farm	<u>\$1,435,168</u>	<u>\$39,793</u>	<u>\$1,474,961</u>
Total special funds	1,435,168	39,793	1,474,961
Full-time equivalent positions	3.00	0.00	3.00

Subdivision 7.

BILL TOTAL

	<u>Base Level</u>	<u>Adjustments or Enhancements</u>	<u>Appropriation</u>
Grand total general fund	\$90,025,408	\$18,290,904	\$108,316,312
Grand total special funds	<u>104,997,261</u>	<u>15,517,926</u>	<u>120,515,187</u>
Grand total all funds	\$195,022,669	\$33,808,830	\$228,831,499

SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO SIXTY-FOURTH LEGISLATIVE ASSEMBLY. The following amounts reflect the one-time funding items approved by the sixty-second legislative assembly for the 2011-13 biennium and the 2013-15 one-time funding items included in the appropriation in section 1 of this Act:

<u>One-Time Funding Description</u>	<u>2011-13</u>	<u>2013-15</u>
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Main research center greenhouse project	\$9,494,581	\$0
Main research center special assessments	82,402	0
Dickinson research center operations pool	800,000	0
UGPTI transportation study	350,000	0
Agronomy laboratories	0	4,300,000
Extension 4-H camp renovation	0	1,900,000
Feed mill equipment	0	100,000
Video conference equipment	0	110,000
Diagnostic equipment	0	<u>400,000</u>
Total all funds	\$10,726,983	\$6,810,000
Total other funds	<u>2,852,931</u>	<u>1,400,000</u>
Total general fund	\$7,874,052	\$5,410,000

The 2013-15 one-time funding amounts are not a part of the entity's base budget for the 2015-17 biennium. The main research center shall report to the appropriations committees of the sixty-fourth legislative assembly on the use of this one-time funding for the biennium beginning July 1, 2013, and ending June 30, 2015.

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, 2013, and ending June 30, 2015.

SECTION 4. 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 5. 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 2015-17 budget request.

SECTION 6. 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, 2015, and ending June 30, 2017.

SECTION 7. EXEMPTION. The amounts appropriated for the research greenhouse complex project, as contained in subdivision 4, section 3, of chapter 48 of the 2005 Session Laws, and subdivision 4, section 1 of chapter 19 of the 2011 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, 2013, and ending June 30, 2015.

SECTION 8. INTERNSHIP MATCHING FUNDS. The extension service line item in subdivision 1 of section 1 of this Act includes \$250,000 from the general fund for an extension service internship program, for the biennium beginning July 1, 2013 and ending June 30, 2015. Internship program funds can be spent only to the extent that matching funds have been secured from non-state resources on a dollar-for-dollar cash basis.

SECTION 9. EMERGENCY. The appropriation for capital projects of \$4,300,000 in subdivision 4 of section 1 of this Act, and \$1,900,000 in subdivision 1 of section 1 of this Act is declared to be an emergency measure.

**2013-15 Budget Request comparison -
NDSU Extension Service and North Dakota Agricultural Experiment Station**

	2013-15 SBARE Priority List	Included in 2013-15 Executive Recommendation
NDSU Extension Service		
<i>Current 11-13 Adj. Base Budget (including State Soil Conservation)= \$24,885,644</i>		
Cost to continue 2012-13 salary & retirement increase	\$0	\$540,528
Compensation package (4% per year) and health insurance & retirement increases	\$0	\$1,509,472
SBARE #1: Agents-in-training and summer internship program	\$500,000	\$250,000
Program support, 4 agents in training (no fte)	\$400,000	\$0
Program support, 5 summer internships (no fte)		
[Internships only & require 1:1 match]	\$100,000	\$250,000
SBARE #2: Livestock development	\$590,000	\$370,000
2.0 FTE area livestock specialists and operating - Extension livestock programs		
[FUNDED 1.0 FTE]	\$440,000	\$220,000
Operating support, livestock production economics	\$150,000	\$150,000
SBARE #3: Crop protection	\$960,000	\$410,000
.5 FTE partial funding for IPM and plant diagnostic lab coordinator	\$150,000	\$150,000
1.0 FTE extension state entomology specialist and operating	\$250,000	\$0
2.0 FTE technical support - NDSU Extension weed science & potato programs, and 1.0 FTE crop management at NCREC [FUNDED 1.0 FTE technical weed science]	\$450,000	\$150,000
.5 FTE salary support & operating for state water quality specialist to replace 50% cut in federal funding	\$110,000	\$110,000
SBARE #4: Community sustainability and workforce development	\$620,000	\$0
2.0 FTE area specialists at DREC and WREC and operating	\$440,000	\$0
Increased technical operating support	\$180,000	\$0
SBARE #5: Gearing Up for Kindergarten/Parent education/Nutrition	\$960,000	\$0
Complete core staffing of Parent Resource Centers in each region (no fte)	\$500,000	\$0
Expand Gearing Up for Kindergarten, ongoing research & evaluation	\$210,000	\$0
1.0 FTE extension nutrition/wellness & aging specialists and operating	\$250,000	\$0
SBARE Additional Request: Soil Conservation Committee Technical Assistance Grants	\$150,000	\$75,000
Total base increase - NDSU Extension Service	\$3,780,000	\$3,155,000
ONE-TIME & CAPITAL FUNDING		
Video conference equipment replacement at 14 locations	\$110,000	\$110,000
4-H Camp, Washburn	\$950,000	\$500,000
Total One-time & capital funding- NDSU Extension Service	\$1,060,000	\$610,000

**2013-15 Budget Request comparison -
NDSU Extension Service and North Dakota Agricultural Experiment Station**

2013-15 SBARE
Priority List

Included in
2013-15 Executive
Recommendation

North Dakota Agricultural Experiment Station		
<i>Current 11-13 Adj. Base Budget = \$61,527,554</i>		
Cost to continue 2012-13 salary & retirement increase	\$0	\$1,142,646
Compensation package (4% per year) and health insurance & retirement increases	\$0	\$3,710,386
Remove funding for State Data Center	\$0	-\$142,837
Unranked - Permanent funds to offset reduced oil revenue @ Dickinson REC	\$800,000	\$800,000
SBARE #1: Crop initiative-Enhancing crop development & protection efforts	\$2,470,000	\$1,815,000

Increased operating support: barley, corn, dry bean, pulse, soybean, HRS wheat, winter wheat, canola, cereal diseases, dry bean and pulse diseases (Main Station), crop pathology (CREC), variety testing (LREC), dryland crop improvement (DREC)

2.0 FTE nematologist and technician (Main Station)	\$1,160,000	\$1,160,000
1.0 FTE technical support (\$120,000), increased operating (\$80,000), software & hardware (\$100,000) for NDAWN (Main Station)	\$355,000	\$355,000
1.0 FTE bioinformaticist (Main Station)	\$300,000	\$300,000
2.0 FTE statistical genomicist & technical support (Main Station)	\$300,000	\$0
	\$355,000	\$0

SBARE #2: Enhancing research capacities at REC's	\$1,860,000	\$1,210,000
2.0 FTE (HREC & WREC) to focus on chemical & cultural control of weeds & plant pathogens in western ND [FUNDED 1.0 FTE HREC]	\$400,000	\$200,000
6.0 FTE technical support-LREC,CGREC,NCREC,DREC,WREC&CREC [FUNDED 3.0 FTE CREC, CGREC, NCREC]	\$900,000	\$450,000
Operating support-LREC,CGREC,NCREC, WREC, HREC, CREC, DREC	\$560,000	\$560,000

SBARE #3: Livestock initiative-Improving livestock productivity and protection	\$2,100,000	\$0
5.0 FTE technical support-HREC, CREC, CGREC, DREC, Main Station	\$700,000	\$0
Operating support-HREC, CREC, CGREC, DREC, Main Station	\$480,000	\$0
1.0 FTE forage nutrition & management scientist (Main Station)	\$225,000	\$0
2.0 FTE support staff-Main Station	\$340,000	\$0
2.0 FTE epigenetics scientist and technician-Main Station	\$355,000	\$0

SBARE #4: Risk management and trade in domestic and global markets	\$1,000,000	\$0
2.0 FTE scientist and technician, Ag market risk (Main Station)	\$355,000	\$0
1.0 FTE econometrician (Main Station)	\$215,000	\$0
2.0 FTE research scientists, Policy & trade issues (Main Station)	\$430,000	\$0

SBARE #5: Sustaining water, air & land quality to maintain & improve ND agriculture	\$380,000	\$0
Operating & equipment (Main Station) to measure water quality parameters & develop nutrient recommendations	\$100,000	\$0
2.0 FTE technical support (Main Station)	\$280,000	\$0

Total base increase - North Dakota Agricultural Experiment Station	\$8,610,000	\$8,535,195
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ONE-TIME & CAPITAL FUNDING

Equipment-Vet Diagnostic Lab	\$400,000	\$400,000
SBARE #1 Capital: Agronomy Laboratories	\$5,925,000	\$4,300,000
CREC	\$2,500,000	\$2,500,000
HREC	\$1,800,000	\$1,800,000
LREC	\$1,225,000	\$0
CGREC	\$400,000	\$0
SBARE #2 Capital: Seed Cleaning Plants NCREC, CREC, WREC, LREC	\$3,470,000	\$0
SBARE #3 Capital: Livestock Facilities CREC, HREC	\$1,650,000	\$0

Total One-time & capital funding-North Dakota Agricultural Experiment Station	\$11,445,000	\$4,700,000
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North Dakota University System
 Extension Service and Main & Branch Research Centers
 Reconciliation of 2011-13 Original General Fund Appropriation to 2013-15 Executive Recommendation (SB 2020)

	(1)	(2)	(3)	(4)
	<u>Extension Service</u>	<u>Main Research Center</u>	<u>Branch Research Centers</u>	<u>Total</u>
2011-13 Original General Fund Appropriation	\$ 24,885,644	\$ 54,456,398	\$ 14,945,208	\$ 94,287,250
2009-11 GF Carryover - Greenhouse		2,532,268		2,532,268
2011-13 Emergency clause		(383,625)		(383,625)
2011-13 Adjusted GF Appropriation	24,885,644	56,605,041	14,945,208	96,435,893
Base Adjustments:				
Less 2009-11 GF Carryover		(2,532,268)		(2,532,268)
Less 2011-13 One-time Appropriations		(82,402)	(800,000)	(882,402)
Less 2011-13 Capital Projects, net of emergency clause		(6,608,025)		(6,608,025)
2011-13 Adjusted Appropriation, Less Base Adjustments	24,885,644	47,382,346	14,145,208	86,413,198
Executive Recommendation Base Increases (Decreases):				
Cost to continue FY2013 salary & retirement increases	540,528	926,198	216,337	1,683,063
Increase in 2013-15 Capital Bond Payments		82	29	111
Compensation package (4% per year) and health insurance & retirement increases	1,509,472	2,716,948	993,438	5,219,858
Remove funding for State Data Center		(142,837)		(142,837)
Soil Conservation Increase	75,000			75,000
SBARE initiatives (1)	1,030,000	1,455,000	2,370,000	4,855,000
2013-15 Recommended Base General Fund Increases	3,155,000	4,955,391	3,579,804	11,690,195
Executive Recommendation One-time Increases:				
Video conference equipment replacement @ 14 locations	110,000			110,000
Equipment - Vet Diagnostic Lab		400,000		400,000
2013-15 Capital Projects	500,000	4,300,000		4,800,000
2013-15 Recommended One-time Increases:	610,000	4,700,000	-	5,310,000
2013-15 Total Executive Recommendation - General Fund	28,650,644	57,037,737	17,725,012	103,413,393
Increase (Decrease) From 2011-13 Adjusted Appropriation, Less Base Adjustments	\$ 3,765,000	\$ 9,655,391	\$ 3,579,804	\$ 17,000,195

(1) The following SBARE initiatives were funded (all base funding increases):

 Extension - \$250,000 Summer internship program; \$370,000 Livestock development (1 FTE); \$410,000 Crop protection (1 FTE) [Total requested for all Extension initiatives = \$2,590,528]

 Main Research - \$1,455,000 Crop Initiative (3 FTE); [Total requested for all Main REC = \$3,290,000]

 Branch REC's - \$800,000 Permanent funds to offset reduced oil revenue at Dickinson REC; \$360,000 Crop Initiative (3 FTE); \$1,210,000 Enhancing research capacities at REC's (4 FTE); [Total requested for Branch REC's = \$3,940,000]

North Dakota University System
Extension Service, Main & Branch Research Centers, and Agronomy Seed Farm
Reconciliation of 2011-13 Original Other Fund Appropriation to 2013-15 Executive Recommendation (SB 2020)

	(1)	(2)	(3) Branch Research Centers	(4) Agronomy Seed Farm	(5) Total
	Extension Service	Main Research Center			
2011-13 Original Other Fund Appropriation	\$ 23,128,810	\$ 44,133,575	\$ 14,997,581	\$ 1,435,168	\$ 83,695,134
2009-11 capital assets carryover		2,669,317			2,669,317
2011-13 Adjusted OF Appropriation	23,128,810	46,802,892	14,997,581	1,435,168	86,364,451
Base Adjustments:					
Less 2009-11 OF Carryover		(2,669,317)			(2,669,317)
Less 2011-13 Capital Projects		(2,502,931)			(2,502,931)
2013-15 Adjusted Appropriation, Less Base Adjustments	23,128,810	41,630,644	14,997,581	1,435,168	81,192,203
Executive Recommendation Base Increases (Decreases):					
Cost to continue FY2013 salary & retirement increases	252,188	217,898	57,797	9,625	537,508
Compensation package (4% per year) and health insurance & retirement increases	1,513,351	1,781,017	222,126	36,798	3,553,292
2013-15 Capital projects	1,400,000				1,400,000
Other changes in estimated income	(856,935)	9,626,026	744,362	(6,630)	9,506,823
Total requested increases (decreases)	2,308,604	11,624,941	1,024,285	39,793	14,997,623
2013-15 Total Executive Recommendation - Other Funds	\$ 25,437,414	\$ 53,255,585	\$ 16,021,866	\$ 1,474,961	\$ 96,189,826

Note: Federal funding levels may be reduced.

**North Dakota University System
Branch Research Centers
Reconciliation of 2011-13 Original General & Other Fund Appropriation to 2013-15 Executive Recommendation (SB 2020)**

	(1) Dickinson	(2) Central Grasslands	(3) Hettinger	(4) Langdon	(5) North Central	(6) Williston	(7) Carrington	(8) Total
General Fund:								
2011-13 Original General Fund Appropriation	\$ 3,158,759	\$ 1,789,789	\$ 1,659,018	\$ 1,395,564	\$ 1,670,255	\$ 2,358,157	\$ 2,913,666	\$ 14,945,208
Base Adjustments:								
Reallocation of Revolving Equipment Pool for 2013-15	125,000	(125,000)	125,000	(125,000)		(125,000)	125,000	-
Less 2011-13 One-time Appropriations	(800,000)							(800,000)
2011-13 Adjusted Appropriation, Less Base Adjustments	2,483,759	1,664,789	1,784,018	1,270,564	1,670,255	2,233,157	3,038,666	14,145,208
Executive Recommendation Increases (Decreases):								
Cost to continue FY2013 salary & retirement increases	41,240	25,701	26,601	19,749	24,506	29,340	49,200	216,337
Increase in 2013-15 Capital Bond Payments		11			18			29
Compensation package (4% per year) and health insurance & retirement increases	177,710	119,698	122,863	88,746	107,751	157,688	218,982	993,438
SBARE Initiatives	1,000,000	230,000	280,000	200,000	230,000	80,000	350,000	2,370,000
2013-15 Recommended Base General Fund Increases	1,218,950	375,410	429,464	308,495	362,275	267,028	618,182	3,579,804
2013-15 Total Executive Recommendation - General Fund	\$ 3,702,709	\$ 2,040,199	\$ 2,213,482	\$ 1,579,059	\$ 2,032,530	\$ 2,500,185	\$ 3,656,848	\$ 17,725,012
Other Funds:								
2011-13 Original Other Fund Appropriation	\$ 3,229,803	\$ 1,076,058	\$ 1,714,157	\$ 983,243	\$ 2,729,566	\$ 1,051,932	\$ 4,212,822	\$ 14,997,581
Executive Recommendation Increases (Decreases):								
Cost to continue FY2013 salary & retirement increases	14,840	1,791	8,995	3,717	9,894	2,010	16,550	57,797
Compensation package (4% per year) and health insurance & retirement increases	28,615	4,125	32,751	8,212	40,360	21,945	86,118	222,126
Other changes in estimated income	(744,642)	175,386	776,849	312,532	(150,671)	292,951	81,957	744,362
2013-15 Recommended Base Other Fund Increases	(701,187)	181,302	818,595	324,461	(100,417)	316,906	184,625	1,024,285
2013-15 Total Executive Recommendation - Other Funds	\$ 2,528,616	\$ 1,257,360	\$ 2,532,752	\$ 1,307,704	\$ 2,629,149	\$ 1,368,838	\$ 4,397,447	\$ 16,021,866

Sixty-third
Legislative Assembly
of North Dakota

ENGROSSED SENATE BILL NO. 2020

Introduced by

Appropriations Committee

(At the request of the Governor)

1 A BILL for an Act to provide an appropriation for defraying the expenses of the extension
2 service, northern crops institute, upper great plains transportation institute, main research
3 center, branch research centers, and agronomy seed farm; to provide for transfers; to provide
4 an exemption; to amend and reenact subsection 6 of section 4-05.1-19 of the North Dakota
5 Century Code, relating to the duties of the state board of agricultural research and education;
6 and to declare an emergency.

7 **BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

8 **SECTION 1. APPROPRIATION.** The funds provided in this section, or so much of the funds
9 as may be necessary, are appropriated out of any moneys in the general fund in the state
10 treasury, not otherwise appropriated, and from special funds derived from federal funds and
11 other income, to the North Dakota state university extension service, the northern crops
12 institute, the upper great plains transportation institute, the main research center, branch
13 research centers, and agronomy seed farm for the purpose of defraying the expenses of the
14 North Dakota state university extension service, the northern crops institute, the upper great
15 plains transportation institute, the main research center, branch research centers, and
16 agronomy seed farm, for the biennium beginning July 1, 2013, and ending June 30, 2015, as
17 follows:

18 Subdivision 1.

19 NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE

		Adjustments or	
	<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
22 Extension service	\$47,026,654	\$6,123,604	\$53,150,258
23 Soil conservation committee	<u>987,800</u>	<u>150,000</u>	<u>1,137,800</u>
24 Total all funds	\$48,014,454	\$6,273,604	\$54,288,058

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1	Less estimated income	<u>23,128,810</u>	<u>1,858,604</u>	<u>24,987,414</u>
2	Total general fund	\$24,885,644	\$4,415,000	\$29,300,644
3	Full-time equivalent positions	256.26	2.00	258.26

4 Subdivision 2.

5 NORTHERN CROPS INSTITUTE

6			Adjustments or	
7		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
8	Total all funds	\$3,347,307	\$527,344	\$3,874,651
9	Less estimated income	<u>1,654,725</u>	<u>145,582</u>	<u>1,800,307</u>
10	Total general fund	\$1,692,582	\$381,762	\$2,074,344
11	Full-time equivalent positions	12.00	0.00	12.00

12 Subdivision 3.

13 UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

14			Adjustments or	
15		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
16	Total all funds	\$24,069,961	\$1,283,668	\$25,353,629
17	Less estimated income	<u>22,150,333</u>	<u>374,721</u>	<u>22,525,054</u>
18	Total general fund	\$1,919,628	\$908,947	\$2,828,575
19	Full-time equivalent positions	51.75	2.00	53.75

20 Subdivision 4.

21 MAIN RESEARCH CENTER

22			Adjustments or	
23		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
24	Total all funds	\$89,012,990	\$23,307,632	\$112,320,622
25	Less estimated income	<u>41,630,644</u>	<u>11,624,941</u>	<u>53,255,585</u>
26	Total general fund	\$47,382,346	\$11,682,691	\$59,065,037
27	Full-time equivalent positions	349.01	2.98	351.99

28 Subdivision 5.

29 RESEARCH CENTERS

30			Adjustments or	
31		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>

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Legislative Assembly

1	Dickinson research center	\$5,588,562	\$642,763	\$6,231,325
2	Central grasslands research center	2,865,847	431,712	3,297,559
3	Hettinger research center	3,373,175	1,373,059	4,746,234
4	Langdon research center	2,378,807	507,956	2,886,763
5	North central research center	4,399,821	261,858	4,661,679
6	Williston research center	3,410,089	458,934	3,869,023
7	Carrington research center	<u>7,126,488</u>	<u>927,807</u>	<u>8,054,295</u>
8	Total all funds	\$29,142,789	\$4,604,089	\$33,746,878
9	Less estimated income	<u>14,997,581</u>	<u>1,024,285</u>	<u>16,021,866</u>
10	Total general fund	\$14,145,208	\$3,579,804	\$17,725,012
11	Full-time equivalent positions	103.04	4.00	107.04

12 Subdivision 6.

13 AGRONOMY SEED FARM

14			Adjustments or	
15		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
16	Agronomy seed farm	<u>\$1,435,168</u>	<u>\$39,793</u>	<u>\$1,474,961</u>
17	Total special funds	\$1,435,168	\$39,793	\$1,474,961
18	Full-time equivalent positions	3.00	0.00	3.00

19 Subdivision 7.

20 BILL TOTAL

21			Adjustments or	
22		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
23	Grand total general fund	\$90,025,408	\$20,968,204	\$110,993,612
24	Grand total special funds	<u>104,997,261</u>	<u>15,067,926</u>	<u>120,065,187</u>
25	Grand total all funds	\$195,022,669	\$36,036,130	\$231,058,799

26 **SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO**

27 **SIXTY-FOURTH LEGISLATIVE ASSEMBLY.** The following amounts reflect the one-time

28 funding items approved by the sixty-second legislative assembly for the 2011-13 biennium and

29 the 2013-15 one-time funding items included in the appropriation in section 1 of this Act:

30	<u>One-Time Funding Description</u>	<u>2011-13</u>	<u>2013-15</u>
31	Main research center greenhouse project	\$9,494,581	\$0

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1	Main research center special assessments	82,402	0
2	Dickinson research center operations pool	800,000	0
3	Upper great plains transportation institute	350,000	0
4	transportation study		
5	Agronomy laboratories	0	5,925,000
6	Extension 4-H camp renovation	0	1,900,000
7	Oil impact assistance	0	100,000
8	Feed mill equipment	0	100,000
9	Video conference equipment	0	110,000
10	Diagnostic equipment	<u>0</u>	<u>400,000</u>
11	Total all funds	\$10,726,983	\$8,535,000
12	Total other funds	<u>2,852,931</u>	<u>950,000</u>
13	Total general fund	\$7,874,052	\$7,585,000

14 The 2013-15 one-time funding amounts are not a part of the entity's base budget for the
 15 2015-17 biennium. The main research center shall report to the appropriations committees of
 16 the sixty-fourth legislative assembly on the use of this one-time funding for the biennium
 17 beginning July 1, 2013, and ending June 30, 2015.

18 **SECTION 3. ADDITIONAL INCOME - APPROPRIATION.** In addition to the amount
 19 included in the grand total special funds appropriation line item in section 1 of this Act, any other
 20 income, including funds from federal acts, private grants, gifts, and donations, or from other
 21 sources received by the North Dakota state university extension service, the northern crops
 22 institute, the upper great plains transportation institute, the main research center, branch
 23 research centers, and agronomy seed farm, except as otherwise provided by law, is
 24 appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium
 25 beginning July 1, 2013, and ending June 30, 2015.

26 **SECTION 4. TRANSFER AUTHORITY.** Upon approval of the state board of agricultural
 27 research and education and appropriate branch research center directors, the director of the
 28 main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of
 29 section 1 of this Act. Any amounts transferred must be reported to the director of the office of
 30 management and budget.

1 **SECTION 5. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS.** The board of higher
2 education may adjust or increase full-time equivalent positions as needed for the entities in
3 section 1 of this Act, subject to availability of funds. The board shall report any adjustments to
4 the office of management and budget prior to the submission of the 2015-17 budget request.

5 **SECTION 6. UNEXPENDED GENERAL FUND - EXCESS INCOME.** Any unexpended
6 general fund appropriation authority to and any excess income received by entities listed in
7 section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any
8 unexpended funds from these appropriations or revenues are available and may be expended
9 by those entities, during the biennium beginning July 1, 2015, and ending June 30, 2017.

10 **SECTION 7. EXEMPTION.** The amounts appropriated for the research greenhouse
11 complex project, as contained in subdivision 4 of section 3 of chapter 48 of the 2005 Session
12 Laws and subdivision 4 of section 1 of chapter 19 of the 2011 Session laws, are not subject to
13 the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or
14 related revenues are available and may be expended during the biennium beginning July 1,
15 2013, and ending June 30, 2015.

16 **SECTION 8. INTERNSHIP MATCHING FUNDS.** The extension service line item in
17 subdivision 1 of section 1 of this Act includes \$250,000 from the general fund for an extension
18 service internship program and agents-in-training program, for the biennium beginning July 1,
19 2013, and ending June 30, 2015.

20 **SECTION 9. AMENDMENT.** Subsection 6 of section 4-05.1-19 of the North Dakota Century
21 Code is amended and reenacted as follows:

- 22 6. Develop a biennial budget request based on its prioritized needs list and submit that
23 request to the president of North Dakota state university and the state board of higher
24 education, and forward its prioritized needs list and request without modification to the
25 office of management and budget and the appropriations committees of the legislative
26 assembly;

27 **SECTION 10. EMERGENCY.** The appropriation for capital projects of \$4,300,000 in
28 subdivision 4 of section 1 of this Act and \$1,900,000 in subdivision 1 of section 1 of this Act is
29 declared to be an emergency measure.

**2013-15 Budget Request -
NDSU Extension Service**

2013-15 SBARE
Priority List

Included in
2013-15 Executive
Recommendation

Senate Amendments

NDSU Extension Service			
<i>Current 11-13 Adj. Base Budget (including State Soil Conservation)=\$24,885,644</i>			
Cost to continue 2012-13 salary & retirement increase	\$0	\$540,528	
Compensation package (4% per year) and health insurance & retirement increases	\$0	\$1,509,472	
SBARE #1: Agents-in-training and summer internship program	\$500,000	\$250,000	
Program support, 4 agents in training (no fte)	\$400,000	\$0	
Program support, 5 summer internships (no fte)			Removes Match, Adds Agents-in Training
[Internships only & require 1:1 match]	\$100,000	\$250,000	
SBARE #2: Livestock development	\$590,000	\$370,000	
2.0 FTE area livestock specialists and operating - Extension livestock programs			
[FUNDED 1.0 FTE]	\$440,000	\$220,000	
Operating support, livestock production economics	\$150,000	\$150,000	
SBARE #3: Crop protection	\$960,000	\$410,000	
.5 FTE partial funding for IPM and plant diagnostic lab coordinator	\$150,000	\$150,000	
1.0 FTE extension state entomology specialist and operating	\$250,000	\$0	
2.0 FTE technical support - NDSU Extension weed science & potato programs, and 1.0 FTE crop management at NCREC [FUNDED 1.0 FTE technical weed science]	\$450,000	\$150,000	
.5 FTE salary support & operating for state water quality specialist to replace 50% cut in federal funding	\$110,000	\$110,000	
SBARE #4: Community Sustainability	\$620,000	\$0	
2.0 FTE area specialists at DREC and WREC and operating	\$440,000	\$0	
Increased technical operating support	\$180,000	\$0	
SBARE #5: Gearing Up for Kindergarten/Parent education/Nutrition	\$750,000	\$0	
Complete core staffing of Parent Resource Centers in each region (no fte)	\$500,000	\$0	
Expand Gearing Up for Kindergarten, ongoing research & evaluation	\$210,000	N/A	
1.0 FTE extension nutrition/wellness & aging specialists and operating	\$250,000	\$0	
Rural Leadership North Dakota Program			125,000
SBARE Additional Request: Soil Conservation Committee Technical Assistance Grants	\$150,000	\$75,000	\$ 75,000
Total base increase - NDSU Extension Service	\$3,570,000	\$3,155,000	\$ 200,000
ONE-TIME & CAPITAL FUNDING			
Video conference equipment replacement at 14 locations	\$110,000	\$110,000	
4-H Camp, Washburn	\$950,000	\$500,000	\$ 450,000
Total One-time & capital funding- NDSU Extension Service	\$1,060,000	\$610,000	\$ 450,000

**2013-15 Budget Request -
North Dakota Agricultural Experiment Station**

2013-15 SBARE
Priority List

Included in
2013-15 Executive
Recommendation

Senate Amendments

North Dakota Agricultural Experiment Station			
<i>Current 11-13 Adj. Base Budget = \$61,527,554</i>			
Cost to continue 2012-13 salary & retirement increase	\$0	\$1,142,646	
Compensation package (4% per year) and health insurance & retirement increases	\$0	\$3,710,386	
Remove funding for State Data Center	\$0	-\$142,837	
Unranked - Permanent funds to offset reduced oil revenue @ Dickinson REC	\$800,000	\$800,000	
SBARE #1: Crop initiative-Enhancing crop development & protection efforts	\$2,470,000	\$1,815,000	
Increased operating support: barley, corn, dry bean, pulse, soybean, HRS wheat, winter wheat, canola, cereal diseases, dry bean and pulse diseases (Main Station), crop pathology (CREC), variety testing (LREC), dryland crop improvement (DREC)	\$1,160,000	\$1,160,000	
2.0 FTE nematologist and technician (Main Station)	\$355,000	\$355,000	
1.0 FTE technical support (\$120,000), increased operating (\$80,000), software & hardware (\$100,000) for NDAWN (Main Station)	\$300,000	\$300,000	
1.0 FTE bioinformaticist (Main Station)	\$300,000	\$0	
2.0 FTE statistical genomicist & technical support (Main Station)	\$355,000	\$0	
SBARE #2: Enhancing research capacities at REC's	\$1,860,000	\$1,210,000	
2.0 FTE (HREC & WREC) to focus on chemical & cultural control of weeds & plant pathogens in western ND [FUNDED 1.0 FTE HREC]	\$400,000	\$200,000	
6.0 FTE technical support-LREC,CGREC,NCREC,DREC,WREC&CREC [FUNDED 3.0 FTE CREC, CGREC, NCREC]	\$900,000	\$450,000	
Operating support-LREC,CGREC,NCREC, WREC, HREC, CREC, DREC	\$560,000	\$560,000	
SBARE #3: Livestock initiative-Improving livestock productivity and protection	\$2,100,000	\$0	
5.0 FTE technical support-HREC, CREC, CGREC, DREC, Main Station	\$700,000	\$0	
Operating support-HREC, CREC, CGREC, DREC, Main Station	\$480,000	\$0	
1.0 FTE forage nutrition & management scientist (Main Station)	\$225,000	\$0	
2.0 FTE support staff-Main Station	\$340,000	\$0	
2.0 FTE epigenetics scientist and technician-Main Station	\$355,000	\$0	
SBARE #4: Risk management and trade in domestic and global markets	\$1,000,000	\$0	
2.0 FTE scientist and technician, Ag market risk (Main Station)	\$355,000	\$0	
1.0 FTE econometrician (Main Station)	\$215,000	\$0	
2.0 FTE research scientists, Policy & trade issues (Main Station)	\$430,000	\$0	
SBARE #5: Sustaining water, air & land quality to maintain & improve ND agriculture	\$380,000	\$0	
Operating & equipment (Main Station) to measure water quality parameters & develop nutrient recommendations	\$100,000	\$0	
2.0 FTE technical support (Main Station)	\$280,000	\$0	
.5 FTE for Animal Science position			\$ 140,000
Total base increase - North Dakota Agricultural Experiment Station	\$8,610,000	\$8,535,195	\$ 140,000
ONE-TIME & CAPITAL FUNDING			
Equipment-Vet Diagnostic Lab	\$400,000	\$400,000	
SBARE #1 Capital: Agronomy Laboratories	\$5,925,000	\$4,300,000	
CREC	\$2,500,000	\$2,500,000	
HREC	\$1,800,000	\$1,800,000	
LREC	\$1,225,000	\$0	\$ 1,225,000
CGREC	\$400,000	\$0	\$ 400,000
SBARE #2 Capital: Seed Cleaning Plants NCREC, CREC, WREC, LREC	\$3,470,000	\$0	
SBARE #3 Capital: Livestock Facilities CREC, HREC	\$1,650,000	\$0	
One-time funding for Oil impacted RECs: Housing allowance or Hiring bonuses (NCREC, DREC, WREC)			\$ 100,000
Funding for research related to recovery of grasslands affected by Souris River flooding			\$ 162,300
Total One-time & capital funding-North Dakota Agricultural Experiment Station	\$11,445,000	\$4,700,000	\$ 1,887,300

North Dakota University System
Extension Service and Main & Branch Research Centers
Summary of 2013-15 Executive Recommendation & Summary of Senate Amendments to SB 2020 (General Fund)

	(1)	(2)	(3)	(4)
	Extension Service	Main Research Center	Branch Research Centers	Total
2011-13 Adjusted Appropriation, Less Base Adjustments	\$24,885,644	\$47,382,346	\$14,145,208	\$86,413,198
Executive Recommendation Increases (Decreases):				
Cost to continue FY2013 salary & retirement increases	540,528	926,198	216,337	1,683,063
Increase in 2013-15 Capital Bond Payments		82	29	111
Compensation package (4% per year) and health insurance & retirement increases	1,509,472	2,716,948	993,438	5,219,858
Remove funding for State Data Center		(142,837)		(142,837)
Soil Conservation Increase	75,000			75,000
SBARE initiatives (1)	1,030,000	1,455,000	2,370,000	4,855,000
Subtotal - Recommended Base Increases	3,155,000	4,955,391	3,579,804	11,690,195
Video conference equipment replacement @ 14 locations	110,000			110,000
Equipment - Vet Diagnostic Lab		400,000		400,000
Update feedmill equipment				-
2013-15 Capital Projects	500,000	4,300,000		4,800,000
Subtotal - Recommended One-time Increases	610,000	4,700,000	-	5,310,000
2013-15 Total Executive Recommendation - General Fund	28,650,644	57,037,737	17,725,012	103,413,393
Senate Amendments:				
Adjustments to Base Funding:				
Increased funding to Soil Conservation Committee	75,000			75,000
Funding for Rural Leadership North Dakota	125,000			125,000
Adds .5 FTE funding for animal science position		140,000		140,000
Funding for grasslands flood recovery research		162,300		162,300
Subtotal - Base Funding Adjustments	200,000	302,300	-	502,300
Adjustments to One-time Funding:				
Changes source of funding for 4-H Camp capital project	450,000			450,000
Adds agronomy laboratory capital projects at Langdon & Central Grasslands REC's		1,625,000		1,625,000
Funding for housing allowances or hiring bonuses for oil-impacted REC's at North Central, Dickinson and Williston		100,000		100,000
Subtotal - One-time Funding Adjustments	450,000	1,725,000	-	2,175,000
Total Senate Amendments to General Fund	650,000	2,027,300	-	2,677,300
General Fund per Engrossed SB2020	\$29,300,644	\$59,065,037	\$17,725,012	\$106,090,693

(1) The following SBARE initiatives increases were funded (all base funding increases):

Extension - \$250,000 Summer internship program; \$370,000 Livestock development (1 FTE); \$410,000 Crop protection (1 FTE) [Total requested for all Extension initiatives = \$2,590,528]

Main Research - \$1,455,000 Crop Initiative (3 FTE); [Total requested for all Main REC = \$3,290,000]

Branch REC's - \$800,000 Permanent funds to offset reduced oil revenue at Dickinson REC; \$360,000 Crop Initiative (3 FTE); \$1,210,000 Enhancing research capacities

North Dakota University System
Extension Service, Main & Branch Research Centers, and Agronomy Seed Farm
Summary of 2013-15 Executive Recommendation & Summary of Senate Amendments to SB 2020 (Other Funds)

	(1)	(2)	(3)	(4)	(5)
	Extension Service	Main Research Center	Branch Research Centers	Agronomy Seed Farm	Total
2011-13 Original Other Fund Appropriation	\$ 23,128,810	\$ 44,133,575	\$ 14,997,581	\$ 1,435,168	\$ 83,695,134
2009-11 capital assets carryover		2,669,317			2,669,317
2011-13 Adjusted OF Appropriation	23,128,810	46,802,892	14,997,581	1,435,168	86,364,451
Base Adjustments:					
Less 2009-11 OF Carryover		(2,669,317)			(2,669,317)
Less 2011-13 Capital Projects		(2,502,931)			(2,502,931)
2013-15 Adjusted Appropriation, Less Base Adjustments	\$23,128,810	\$41,630,644	\$14,997,581	\$1,435,168	\$81,192,203
Executive Recommendation Increases (Decreases):					
Cost to continue FY2013 salary & retirement increases	252,188	217,898	57,797	9,625	537,508
Compensation package (4% per year) and health insurance & retirement increases	1,513,351	1,781,017	222,126	36,798	3,553,292
2013-15 Capital projects	1,400,000				1,400,000
Other changes in estimated income	(856,935)	9,626,026	744,362	(6,630)	9,506,823
Total increases (decreases)	2,308,604	11,624,941	1,024,285	39,793	14,997,623
2013-15 Total Executive Recommendation - Other Funds	25,437,414	53,255,585	16,021,866	1,474,961	96,189,826
Senate Amendments:					
Changes source of funding for 4-H Camp capital project	(450,000)				(450,000)

**North Dakota University System
Branch Research Centers
Summary of 2013-15 Executive Recommendation & Engrossed SB 2020 (General and Other Funds)**

	(1) Dickinson	(2) Central Grasslands	(3) Hettinger	(4) Langdon	(5) North Central	(6) Williston	(7) Carrington	(8) Total
General Fund:								
2011-13 Original General Fund Appropriation	\$ 3,158,759	\$ 1,789,789	\$ 1,659,018	\$ 1,395,564	\$ 1,670,255	\$ 2,358,157	\$ 2,913,666	\$ 14,945,208
Base Adjustments:								
Reallocation of Revolving Equipment Pool for 2013-15	125,000	(125,000)	125,000	(125,000)		(125,000)	125,000	-
Less 2011-13 One-time Appropriations	(800,000)							(800,000)
2011-13 Adjusted Appropriation, Less Base Adjustments	<u>2,483,759</u>	<u>1,664,789</u>	<u>1,784,018</u>	<u>1,270,564</u>	<u>1,670,255</u>	<u>2,233,157</u>	<u>3,038,666</u>	<u>14,145,208</u>
Executive Recommendation Increases (Decreases):								
Cost to continue FY2013 salary & retirement increases	41,240	25,701	26,601	19,749	24,506	29,340	49,200	216,337
Increase in 2013-15 Capital Bond Payments		11			18			29
Compensation package (4% per year) and health insurance & retirement increases	177,710	119,698	122,863	88,746	107,751	157,688	218,982	993,438
SBARE Initiatives	1,000,000	230,000	280,000	200,000	230,000	80,000	350,000	2,370,000
2013-15 Recommended Base General Fund Increases	<u>1,218,950</u>	<u>375,410</u>	<u>429,464</u>	<u>308,495</u>	<u>362,275</u>	<u>267,028</u>	<u>618,182</u>	<u>3,579,804</u>
2013-15 Total Engrossed SB2020 - General Fund [No Senate Adjustments to Executive Recommendation]	<u>\$ 3,702,709</u>	<u>\$ 2,040,199</u>	<u>\$ 2,213,482</u>	<u>\$ 1,579,059</u>	<u>\$ 2,032,530</u>	<u>\$ 2,500,185</u>	<u>\$ 3,656,848</u>	<u>\$ 17,725,012</u>
Other Funds:								
2011-13 Original Other Fund Appropriation	\$ 3,229,803	\$ 1,076,058	\$ 1,714,157	\$ 983,243	\$ 2,729,566	\$ 1,051,932	\$ 4,212,822	\$ 14,997,581
Executive Recommendation Increases (Decreases):								
Cost to continue FY2013 salary & retirement increases	14,840	1,791	8,995	3,717	9,894	2,010	16,550	57,797
Compensation package (4% per year) and health insurance & retirement increases	28,615	4,125	32,751	8,212	40,360	21,945	86,118	222,126
Other changes in estimated income	(744,642)	175,386	776,849	312,532	(150,671)	292,951	81,957	744,362
2013-15 Recommended Base Other Fund Increases	<u>(701,187)</u>	<u>181,302</u>	<u>818,595</u>	<u>324,461</u>	<u>(100,417)</u>	<u>316,906</u>	<u>184,625</u>	<u>1,024,285</u>
2013-15 Total Engrossed SB2020 - Other Funds [No Senate Adjustments to Executive Recommendation]	<u>\$ 2,528,616</u>	<u>\$ 1,257,360</u>	<u>\$ 2,532,752</u>	<u>\$ 1,307,704</u>	<u>\$ 2,629,149</u>	<u>\$ 1,368,838</u>	<u>\$ 4,397,447</u>	<u>\$ 16,021,866</u>

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$24,885,644	\$14,936,274	\$9,949,370	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Main Research Station - 640

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$54,456,398	\$34,634,448	\$19,821,950	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Carrington Research Center- 647

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$2,913,666	\$1,856,752	\$1,056,914	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Central Grasslands Research Center- 642

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,789,789	\$1,212,757	\$577,032	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Dickinson Research Center- 641

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$3,158,759	\$1,881,248	\$1,277,511	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Hettinger Research Center- 643**Comparison of 2011-13 Appropriation and Estimated Spending**

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,659,018	\$1,074,610	\$584,408	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Langdon Research Center- 644**Comparison of 2011-13 Appropriation and Estimated Spending**

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,395,564	\$975,106	\$420,458	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU North Central Research Center- 645**Comparison of 2011-13 Appropriation and Estimated Spending**

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,670,255	\$1,116,896	\$553,359	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Williston Research Center- 646

Comparison of 2011-13 Appropriation and Estimated Spending

	<u>2011-13 Appropriation</u>	<u>Actual Expenditures Through 11/30/12</u>	<u>Remaining Balance</u>	<u>Comments</u>
Total General Fund Appropriation	\$2,358,157	\$1,385,349	\$972,808	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

NDSU Agronomy Seed Farm- 649

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total Appropriation	\$1,435,168	\$650,361	\$784,807	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

Attachment 2.
March 14, 2013
SB 2020



Testimony for SB 2020

Good morning Chairman Skarphol and House Appropriations Education and Environment Division Committee Members. I am Scott Rising, and am here this morning on behalf of the North Dakota Soybean Growers Association.

Successful Research

I'm not a professional researcher. However, I have the scars proving my armature status. I believe the formula for successful research involves Human Activity, Interest, Curiosity, Talent, Creativity, Tenacity, Time; and Place; and Equipment; and Assistance; and Collaborative Opportunity . . . and much more.

The best I can do for Ag Research and the Extension's "lessons learned" sharing TODAY is to ask you to fund the SBARE Needs Based Priorities set out before you in SB 2020.

The Soybean Community in North Dakota has invested more than \$6 million of its own check-off money in research in the last half dozen years, the majority of it within North Dakota; and all of it in the North Central Region.

Our Appreciation & Trust

I also will share with you our appreciation for, and confidence in, the great folks that provide us with the OUTSTANDING Agricultural Research and Extension Services we enjoy. Their hard, and successful, work contributes directly to the prosperity ALL in North Dakota enjoy today. Our Ag Community's direct and indirect economic impact in North Dakota in 2012 alone will be well north of \$35 BILLION and contributes significantly to America's food security efforts.

Soybeans are an important part of ND's Ag Community. Two years ago I stood right in this spot and shared that the 2010 crop was about four million acres and valued at about a \$1 BILLION. Today I am delighted to report that the 2012 Soybean crop's direct value is over \$2 BILLION.

We Trust our Livelihood and our family's future to the folks that conduct these important Research and Extension activities. It is very common for today's farmer to "invest" more than \$300 per acre of inputs on a season's crop. And similar investments are required of our livestock producers. Farming and Ranching are risk intensive businesses. These investments are made knowing the research is well beyond "good" . . . It has to be great!

Value of Research

If we provided soybean researchers with a dime and they returned a quarter, that'd be good. If we invested that dime and got back forty

cents that would be better. United Soybean Board (the national soybean check-off entity) studies indicate that a dime invested in soybean research has historically returned sixty cents.

The success of the Soybean Industry in North Dakota only comes with continuous innovation through the investments in both Basic and Applied research to effectively provide the important ingredients needed by the “Riskers”, our farmers and ranchers.

The Additive Benefit

Perhaps the most important role these good people have is to **grow those that will replace them**. It is not easy, but Research and Extension are about creating and sharing future opportunity.

Lastly

Lastly, and importantly, we thank you. We cannot succeed without you either. Your resourcing of these SPARE Needs provides a critical a path to a place we do not yet know . . . **Tomorrow**. We don't know the full challenge ahead.

We have HIGH CONFIDENCE in the Needs Based SBARE process. We Strongly encourage full funding for the SBARE priorities presented. The Six-to-One Return on Investment reaches out to every place in our state.

Thank You all for your time and attention, and most importantly, your continuing service on our behalf.

I am available any questions that you may have of me.

Contact Information:
Scott Rising
701-527-1073 (cell)
grwbeans@earthlink.net

Attachment 3.

March 14, 2013

SB 2013



P.O Box 1091
Bismarck, ND 58502
(701) 355-4458
FAX (701) 223-4645

MEMBERS

AmeriFlax
BNSF Railway Company
Garrison Diversion Conservancy District
Independent Beef Association of ND
Landowners Association of ND
Milk Producers Association of ND
Minn-Dak Farmers Cooperative
ND Ag Aviation Association
ND Ag Consultants
ND Agricultural Association
ND Agri-Women
ND Association of Agricultural Educators
ND Association of Soil Conservation Districts
ND Barley Council
ND Beef Commission
ND Corn Growers Association
ND Corn Utilization Council
ND Crop Improvement and Seed Association
ND Dairy Coalition
ND Department of Agriculture
ND Dry Bean Council
ND Dry Edible Bean Seed Growers
ND Elk Growers
ND Ethanol Council
ND Farm Bureau
ND Farm Credit Council
ND Farmers Union
ND Grain Dealers Association
ND Grain Growers Association
ND Irrigation Association
ND Lamb and Wool Producers
ND Oilseed Council
ND Pork Producers
ND Soybean Council
ND Soybean Growers Association
ND State Seed Commission
ND Stockmen's Association
ND Wheat Commission
NDSU Agricultural Affairs
Northern Canola Growers Association
Northern Food Grade Soybean Association
Northern Plains Potato Growers Association
Northern Pulse Growers Association
Red River Valley Sugarbeet Growers

**Testimony of Jessie Bateman
Administrator, North Dakota Ag Coalition
SB 2020
March 14, 2013**

Chairman Skarphol and members of the House Appropriations - Education and Environment Division.

My name is Jessie Bateman, and I am here today as the administrator of the North Dakota Ag Coalition. On behalf of the Ag Coalition, I would encourage your support 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, these 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 2013-15 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 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 driving forces in the future of North Dakota's agriculture industry.

It is for these reasons we encourage your support of SB 2020.

ATTACHMENT 4.
March 14, 2013
SB 2020



Your voice for wheat and barley. www.ndgga.com

North Dakota Grain Growers Association
Testimony on Senate Bill 2020
House Appropriations Committee
March 14, 2013

Chairman Skarphol, members of the House Appropriations Committee, for the record my name is Dan Wogsland, Executive Director of the North Dakota Grain Growers Association. The North Dakota Grain Growers Association appears before you today in support of SB 2020.

Agricultural Research and Extension efforts conducted by NDSU are the vital cog that keeps the agricultural machine moving in the state of North Dakota. Ag research has for decades enabled farmers in the state of North Dakota the ability to lead the nation in the production of at least 14 different agricultural commodities annually. This is especially critical for crops such as wheat and barley which depend on research on the public side to provide farmers the necessary advances in technology to stay competitive in the marketplace as well as providing farmers the ability to provide food on a global basis for an ever increasing population. NDGGA applauds the efforts of NDSU Ag Research and we support NDSU collaborative efforts with the private sector as a method of enhancing Ag research efforts on behalf of North Dakota farmers.

Having the technology is one thing; literally getting the technology to the field is another. NDSU Extension efforts have been unmatched in providing farmers and the agricultural industry the information necessary to make agriculture successful in our state. Efforts such as NDSU Extension's "Best of the Best" in research workshops and Annie's Project are but two examples of how NDSU Extension reaches out to today's farmers to provide them the most up-to-date information available.

Together NDSU Ag Research and Extension provide North Dakota farmers with the ability to produce food on a global scale that is unmatched; however challenges remain as the plant moves toward 9 billion people by the year 2050. To help meet those challenges, and to meet the expectations of farmers and the agricultural industry for continued excellence in agricultural research and extension efforts you have the NDSU Ag Research and Extension budget, with the State Board of Research and Education (SBARE) priorities before you today.

NDGGA provides a voice for wheat and barley producers on domestic policy issues – such as crop insurance, disaster assistance and the Farm Bill – while serving as a source for agronomic and crop marketing education for its members.

All of the initiatives presented to you today are Ag research and extension needs as assessed by SBARE. From a small grains perspective Extension initiatives such as the Agents in Training and Summer Internship program, the crop and resource protection program provide essential information services that are vital to farmers. On the research side initiatives from a small grains perspective the Crops Initiative, Risk Management and Trade as well as the Sustaining Water, Air and Land Quality as well as the Agronomy Labs upgrade provide essential services for agricultural research. However, from an agricultural industry side, all are important!

NDGGA supports SBARE, its mission and its process. SBARE allows agricultural stakeholders the ability to present our unlimited wants and prioritize our needs within the means available. NDGGA is proud to have current NDGGA Board Member and North Dakota Barley Council Chairman Doyle Lentz as well as past NDGGA Board member Bob Bahm as a part of the process. Involvement is essential; without involvement the SBARE process cannot and will not work.

That said NDGGA is very concerned about the recent attempts to limit SBARE's ability to present the Ag research and extension priorities to the North Dakota Legislature. SBARE is a creature of the Legislature; the Legislature formed SBARE to provide the Legislature with the agricultural research and extension priorities of North Dakota. It is SBARE's job to provide you with a priority list; it is the job of the Legislature to review the priorities and to meld those priorities with the Legislature's priorities. In no way should that open dialogue be impeded; the Legislature should and deserves to see the entire Ag research and extension priority list as compiled by SBARE. Only then can we have a true dialogue and debate on what is needed in agriculture.

Chairman Skarphol, Members of the House Appropriations Committee, NDGGA supports NDSU Agricultural Research and Extension, we support SBARE and its process, and we support the budget you have before you. North Dakota agriculture is the number one economic engine in our state; in order to keep the machine moving we must always maintain and enhance the machinery.



Attachment 5.
March 14, 2013
SB 2020

NCI

Northern Crops Institute



ND HOUSE APPROPRIATIONS COMMITTEE

Representative Robert Skarphol, Chair
Education and Environment Division

9:00 a.m., Thursday, March 14, 2013

SB 2020

<http://www.legis.nd.gov/assembly/63-2013/documents/13-8170-01000.pdf>

NORTHERN CROPS INSTITUTE
Budget No. 638

Mark F. Weber, Director
Northern Crops Institute
Robert Majkrzak, Chair
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
2013-2015 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, the staff of NCI works to support the promotion, market development and expanded sales of crops grown in this four-state region.

Some of NCI's major accomplishments are highlighted in these materials. NCI continues to focus on education and technical services as mandated in the Century Code. Our educational programs teach buyers, both U.S. and international, about the quality and end-use characteristics of northern grown crops to encourage the purchase and use of our crops for their processing needs. Our procurement programs teach international buyers how to use the U.S. grain marketing system to make their purchases of northern grown U.S. crops and better manage their risks. We also add value to these crops through technical services in the form of processing, providing technical support and processing solutions to processors and users of regional commodities in the region, U.S. and around the globe.

NCI continues to receive regional funding. However, without the support of North Dakota, we would not be able to continue the level of work documented here. The executive recommendation for NCI's budget is very supportive of our work and our plans for the future.

A one-time funding request of \$100,000 will replace original equipment installed in the NCI feedmill in 1990 and will enhance our worldwide reputation as a provider of high quality feed technology programming and education. Permanent funding of \$135,000 for the biennium will support 1.25 FTE current staff positions allowing the NCI to interact, build, and maintain relationships with our customers from all over the globe with the level of excellence that they have come to expect.

I ask that you support the Governor's executive recommendation of the NCI budget, and thank you for your continued interest and support of the Northern Crops Institute.

Respectfully submitted,
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 130 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). On November 20, 2012, presentations and written documentation on accomplishments during Fiscal Year 2012 and plans for the next fiscal year were provided to the Council. Copies are on file at the NCI office and with Council members. NCI provided verbal and written status reports to the South Dakota Appropriations Committees in January 2012. NCI also gives regular status reports on NCI accomplishments to other agencies that provide Special (other) funds.

At the June 26, 2012, Northern Crops Council (NCC) meeting, NCI Director Mark Weber provided a synopsis of staff discussions on the direction of NCI programs and activities. Again the NCC reaffirmed NCI's direction and mission for the future. NCI's direction for the future is to provide programs that educate the world about the broad spectrum of crops produced in our 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 has the opportunity to provide leadership in teaching snack food extrusion processes, but available space at the NCI may limit installation of necessary equipment needed to pursue this strategy.

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.

Recent research by the University of Minnesota shows that northern-grown soybeans have higher feeding values compared to soybeans grown in the rest of the United States. The NCI is beginning to share this information with our customers throughout the world.

The dynamic commodity markets has 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 will be 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.

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 Funded in 2011-2013

Feed Production Center Manager: \$199,362 salary and fringe benefits, 1.0 FTE

Since the 2011-13 NCI Feed Production Center Manager's initiative was funded, the NCI Feed Production Center has played an increasingly critical role in further developing both international and domestic markets for soybeans, corn, DDGS, and other regional grains and co-products.

In particular, the Asian market is exploding with opportunities, with the Pacific Northwest (PNW) becoming the major shipping point serving those markets. The PNW not only provides significant reduction in transit time for our region's crops compared to the gulf, but it has invested heavily in high capacity bulk vessel loading facilities. The result is that our region's producers have become the premier suppliers of raw commodities to those markets. Research by the University of Minnesota has shown that our region's soybeans have higher feeding values compared to soybeans grown in the rest of the U.S.

The NCI Feed Production Center's manager has been communicating this important information to our customers. He has traveled extensively in Southeast Asia, teaching feed manufacturing companies how to become more efficient in operating their plants and communicating current trends in animal nutrition and feed manufacturing technology. Our programming in that region is focusing on the importance of ingredient quality, manufacture of safe, wholesome and cost effective feed while emphasizing reliability of our region's supplies. He also established a feed manufacturing course at the NCI recently attended by 21 participants representing 18 companies from Indonesia, Philippines, Vietnam, and Thailand. He is increasingly called upon to provide technical advice to U.S. Wheat Associates, American Soybean Association, and the U.S. Grains Council throughout the world.

Operating Funds: \$45,308

These operating funds were used to cover the additional operating expenses associated with increased educational programming activities at the NCI main facility located on the NDSU campus and the NCI Feed Production Center located on the north side of the NDSU campus. The additional expenses included increased promotion of educational short courses to an expanding global audience and repairs for laboratory equipment and the Feed Production Center.

Northern Crops Institute - 638

Comparison of 2011-13 Appropriation and Estimated Spending

	2011-13 Appropriation	Actual Expenditures Through 11/30/12	Remaining Balance	Comments
Total General Fund Appropriation	\$1,692,582	\$1,061,063	\$631,519	--Balance will be drawn down for expenditures by end of biennium.

Source: November 2012 Appropriation Status Report

Note: NCI does not receive Federal Formula Funds. No change expected.

2013-15 Needs-Based Budget

The initiatives below were identified and approved by the Northern Crops Council.

Initiative 1: Enhancing Feed Markets with Improved Services

\$100,000 (one-time request)

To enhance the NCI Feed Production Center's worldwide reputation as a provider of high quality feed technology programming and education, NCI is requesting one-time funding of \$100,000 to replace original equipment installed in 1990. It includes the purchase of a feed mixer and additional capabilities for the mill's computerized operating system.

Initiative 2: Ensuring NCI Expertise in the World's Changing Food Markets

\$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, we are requesting permanent funding for 1.25 FTE current positions.

The Food Technologist Position (1 FTE) is currently funded with 100 percent soft monies. This specialist in baking with wheat and other regional crops 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) is currently funded at 75 percent from the state general fund and 25 percent from soft monies. This position 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 world, helping food companies develop new information and products, thereby increasing utilization of these crops.

2013-2015 Needs-Based Budget

Reconciliation of 2011-13 General Fund Appropriation to 2013-2015 Executive Recommendation (SB 2020).
 Note: No Senate Amendments to SB 2020.

General Fund:

	<u>NCI</u>
2011-13 Original General Fund Appropriation	\$ 1,692,582
Base Adjustments: N/A	
2011-13 Adjusted Appropriation, Less Base Adjustments	<u>1,692,582</u>
Executive Recommendation Base Increases (Decreases):	
Cost to continue FY2013 salary & retirement increases	31,644
Compensation package (4% per year) and health insurance & retirement increases	115,118
NCI initiatives	<u>135,000</u>
2013-15 Recommended Base General Fund Increases	<u>281,762</u>
Executive Recommendation One-time Increases:	
Update feedmill equipment	<u>100,000</u>
2013-15 Recommended One-time Increases:	<u>100,000</u>
2013-15 Total Executive Recommendation - General Fund	\$ <u>2,074,344</u>
Increase (Decrease) From 2011-13 Adjusted Appropriation, Less Base Adjustments	\$ <u>381,762</u>

Other Funds:

2011-13 Original Other Fund Appropriation	\$ 1,654,725
2011-13 Adjusted OF Appropriation	1,654,725
Base Adjustments: N/A	
2013-15 Adjusted Appropriation, Less Base Adjustments	<u>1,654,725</u>
Executive Recommendation Base Increases (Decreases):	
Cost to continue FY2013 salary & retirement increases	4,651
Compensation package (4% per year) and health insurance & retirement increases	30,072
2013-15 Capital projects	
Other changes in estimated income	<u>110,859</u>
Total requested increases (decreases)	<u>145,582</u>
2013-15 Total Executive Recommendation - Other Funds	\$ <u>1,800,307</u>

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. Such demand is also 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. One must look at what NCI does in the same way as one looks at other forms of education. We provide information on marketing and technical utilization of northern-grown commodities for both domestic and export markets. This service increases the possibilities of these 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 130 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 and how to buy them through the U.S. grain marketing system.

In 2011 and 2012, NCI trained over 381 professionals from 43 countries in our educational programs, with 23 scheduled short courses and 4 customized courses for private groups and companies. Another important part of our educational program is our activity with trade teams who visit NCI. In the last two years, NCI hosted 138 international visitors from 19 countries as part of 25 trade missions. The total number of countries visiting NCI in 2011 and 2012 was 50. In addition, NCI specialists often participate in domestic and overseas programs that have reached over 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 2012 annual report is included at the end of this report.

State Impact

Agricultural exports are extremely important to the North Dakota economy with \$3.96 billion exported in 2011 (USDA ERS).

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 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 2011 was \$16.03 billion, accounting for over 11.75% of the total U.S. exports. (<http://www.ers.usda.gov/Data/stateexports/>).

Success Stories

Pulse Activities: Beginning in 2011, NCI staff have presented pulse seminars at Culinary Institute of America. Nearly 63% of participants indicated they had done R&D formulation work with dry peas, lentils, and chickpeas. The same audience in an NCI follow-up seminar a year later indicated that they were extremely likely to incorporate those crops into new or existing menu items. NCI efforts helped solidify and advance their plans. Since then, two pulse processing plants have made plans to become operational in ND this year, employing 73 people.

Wheat Activities: According to U.S. Wheat Associates, personnel at a new Indonesian flour mill bought 9 million dollars worth of hard red spring (HRS) wheat after attending the Contracting for Wheat Value Workshop at Northern Crops Institute in September 2012.

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. This year's cooperators are listed on page 5 of the 2012 Annual Update.

- 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), 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.

- The region's commodity check-off groups and their producer members 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 those crops and products.

- 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.

- NCI received the 2011 Service to Exporters Award at the 2012 Global Business Connections Conference in Fargo, N.D., on April 11. The award was presented by North Dakota Governor Jack Dalrymple, on behalf of the North Dakota Trade Office (NDTO).

50 Nations Learn More About Northern-Grown Crops

In 2011 and 2012, NCI staff taught short course participants, hosted trade teams and visitors, and consulted with companies from the following 50 countries.

Algeria	Dominican Republic	Indonesia	Kosovo	Peru	South Africa	Thailand
Belgium		Iraq	Kyrgyzstan	Philippines	South Korea	Trinidad and Tobago
Brazil	Egypt	Ireland	Lebanon	Poland	Spain	Tunisia
Canada	France	Israel	Malaysia	Portugal	St. Vincent and the Grenadines	United Arab Emirates
Chile	Guatemala	Italy	Mexico	Romania		Uganda
China	Honduras	Japan	Morocco	Rwanda		United States
Colombia	India	Jordan	Netherlands	Senegal	Sweden	Vietnam
			Nigeria	Singapore	Taiwan	Yemen

13.8170.01000

Sixty-third
Legislative Assembly
of North Dakota

SENATE BILL NO. 2020

Introduced by

Appropriations Committee

(At the request of the Governor)

1 A BILL for an Act to provide an appropriation for defraying the expenses of the extension
2 service, northern crops institute, upper great plains transportation institute, main research
3 center, branch research centers, and agronomy seed farm; to provide for transfers; to provide
4 an exemption; and to declare an emergency.

5 **BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

6 **SECTION 1. APPROPRIATION.** The funds provided in this section, or so much of the funds
7 as may be necessary, are appropriated out of any moneys in the general fund in the state
8 treasury, not otherwise appropriated, and from special funds derived from federal funds and
9 other income, to the North Dakota state university extension service, the northern crops
10 institute, the upper great plains transportation institute, the main research center, branch
11 research centers, and agronomy seed farm for the purpose of defraying the expenses of the
12 North Dakota state university extension service, the northern crops institute, the upper great
13 plains transportation institute, the main research center, branch research centers, and
14 agronomy seed farm, for the biennium beginning July 1, 2013, and ending June 30, 2015, as
15 follows:

16 Subdivision 1.

17 **NORTH DAKOTA STATE UNIVERSITY EXTENSION SERVICE**

		Adjustments or		
	<u>Base Level</u>	<u>Enhancements</u>		<u>Appropriation</u>
18				
19				
20	Extension service	\$47,026,654	\$5,998,604	\$53,025,258
21	Soil conservation committee	<u>987,800</u>	<u>75,000</u>	<u>1,062,800</u>
22	Total all funds	\$48,014,454	\$6,073,604	\$54,088,058
23	Less estimated income	<u>23,128,810</u>	<u>2,308,604</u>	<u>25,437,414</u>

Sixty-third
Legislative Assembly

1	Total general fund	\$24,885,644	\$3,765,000	\$28,650,644
2	Full-time equivalent positions	256.26	2.00	258.26
3	Subdivision 2.			

NORTHERN CROPS INSTITUTE

5			Adjustments or	
6		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
7	Total all funds	\$3,347,307	\$527,344	\$3,874,651
8	Less estimated income	<u>1,654,725</u>	<u>145,582</u>	<u>1,800,307</u>
9	Total general fund	\$1,692,582	\$381,762	\$2,074,344
10	Full-time equivalent positions	12.00	0.00	12.00
11	Subdivision 3.			

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

13			Adjustments or	
14		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
15	Total all funds	\$24,069,961	\$1,283,668	\$25,353,629
16	Less estimated income	<u>22,150,333</u>	<u>374,721</u>	<u>22,525,054</u>
17	Total general fund	\$1,919,628	\$908,947	\$2,828,575
18	Full-time equivalent positions	51.75	2.00	53.75
19	Subdivision 4.			

MAIN RESEARCH CENTER

21			Adjustments or	
22		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
23	Total all funds	\$89,012,990	\$21,280,332	\$110,293,322
24	Less estimated income	<u>41,630,644</u>	<u>11,624,941</u>	<u>53,255,585</u>
25	Total general fund	\$47,382,346	\$9,655,391	\$57,037,737
26	Full-time equivalent positions	349.01	2.48	351.49
27	Subdivision 5.			

RESEARCH CENTERS

29			Adjustments or	
30		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
31	Dickinson research center	\$5,588,562	\$642,763	\$6,231,325

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1	Central grasslands research center	2,865,847	431,712	3,297,559
2	Hettinger research center	3,373,175	1,373,059	4,746,234
3	Langdon research center	2,378,807	507,956	2,886,763
4	North central research center	4,399,821	261,858	4,661,679
5	Williston research center	3,410,089	458,934	3,869,023
6	Carrington research center	<u>7,126,488</u>	<u>927,807</u>	<u>8,054,295</u>
7	Total all funds	\$29,142,789	\$4,604,089	\$33,746,878
8	Less estimated income	<u>14,997,581</u>	<u>1,024,285</u>	<u>16,021,866</u>
9	Total general fund	\$14,145,208	\$3,579,804	\$17,725,012
10	Full-time equivalent positions	103.04	4.00	107.04

11 Subdivision 6.

12 AGRONOMY SEED FARM

13			Adjustments or	
14		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
15	Agronomy seed farm	<u>\$1,435,168</u>	<u>\$39,793</u>	<u>\$1,474,961</u>
16	Total special funds	\$1,435,168	\$39,793	\$1,474,961
17	Full-time equivalent positions	3.00	0.00	3.00

18 Subdivision 7.

19 BILL TOTAL

20			Adjustments or	
21		<u>Base Level</u>	<u>Enhancements</u>	<u>Appropriation</u>
22	Grand total general fund	\$90,025,408	\$18,290,904	\$108,316,312
23	Grand total special funds	<u>104,997,261</u>	<u>15,517,926</u>	<u>120,515,187</u>
24	Grand total all funds	\$195,022,669	\$33,808,830	\$228,831,499

25 **SECTION 2. ONE-TIME FUNDING - EFFECT ON BASE BUDGET - REPORT TO**

26 **SIXTY-FOURTH LEGISLATIVE ASSEMBLY.** The following amounts reflect the one-time
 27 funding items approved by the sixty-second legislative assembly for the 2011-13 biennium and
 28 the 2013-15 one-time funding items included in the appropriation in section 1 of this Act:

29	<u>One-Time Funding Description</u>	<u>2011-13</u>	<u>2013-15</u>
30	Main research center greenhouse project	\$9,494,581	\$0
31	Main research center special assessments	82,402	0

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1	Dickinson research center operations pool	800,000	0
2	Upper great plains transportation institute	350,000	0
3	transportation study		
4	Agronomy laboratories	0	4,300,000
5	Extension 4-H camp renovation	0	1,900,000
6	Feed mill equipment	0	100,000
7	Video conference equipment	0	110,000
8	Diagnostic equipment	<u>0</u>	<u>400,000</u>
9	Total all funds	\$10,726,983	\$6,810,000
10	Total other funds	<u>2,852,931</u>	<u>1,400,000</u>
11	Total general fund	\$7,874,052	\$5,410,000

12 The 2013-15 one-time funding amounts are not a part of the entity's base budget for the
13 2015-17 biennium. The main research center shall report to the appropriations committees of
14 the sixty-fourth legislative assembly on the use of this one-time funding for the biennium
15 beginning July 1, 2013, and ending June 30, 2015.

16 **SECTION 3. ADDITIONAL INCOME - APPROPRIATION.** In addition to the amount
17 included in the grand total special funds appropriation line item in section 1 of this Act, any other
18 income, including funds from federal acts, private grants, gifts, and donations, or from other
19 sources received by the North Dakota state university extension service, the northern crops
20 institute, the upper great plains transportation institute, the main research center, branch
21 research centers, and agronomy seed farm, except as otherwise provided by law, is
22 appropriated for the purpose designated in the act, grant, gift, or donation, for the biennium
23 beginning July 1, 2013, and ending June 30, 2015.

24 **SECTION 4. TRANSFER AUTHORITY.** Upon approval of the state board of agricultural
25 research and education and appropriate branch research center directors, the director of the
26 main research center may transfer appropriation authority within subdivisions 1, 2, 4, and 5 of
27 section 1 of this Act. Any amounts transferred must be reported to the director of the office of
28 management and budget.

29 **SECTION 5. FULL-TIME EQUIVALENT POSITION ADJUSTMENTS.** The board of higher
30 education may adjust or increase full-time equivalent positions as needed for the entities in

1 section 1 of this Act, subject to availability of funds. The board shall report any adjustments to
2 the office of management and budget prior to the submission of the 2015-17 budget request.

3 **SECTION 6. UNEXPENDED GENERAL FUND - EXCESS INCOME.** Any unexpended
4 general fund appropriation authority to and any excess income received by entities listed in
5 section 1 of this Act are not subject to the provisions of section 54-44.1-11, and any
6 unexpended funds from these appropriations or revenues are available and may be expended
7 by those entities, during the biennium beginning July 1, 2015, and ending June 30, 2017.

8 **SECTION 7. EXEMPTION.** The amounts appropriated for the research greenhouse
9 complex project, as contained in subdivision 4 of section 3 of chapter 48 of the 2005 Session
10 Laws and subdivision 4 of section 1 of chapter 19 of the 2011 Session laws, are not subject to
11 the provisions of section 54-44.1-11, and any unexpended funds from these appropriations or
12 related revenues are available and may be expended during the biennium beginning July 1,
13 2013, and ending June 30, 2015.

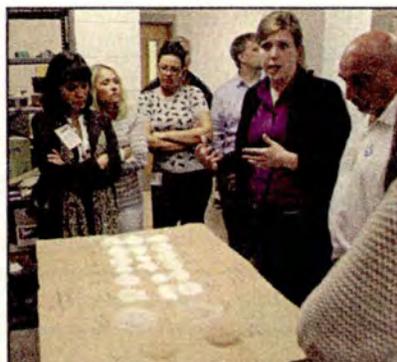
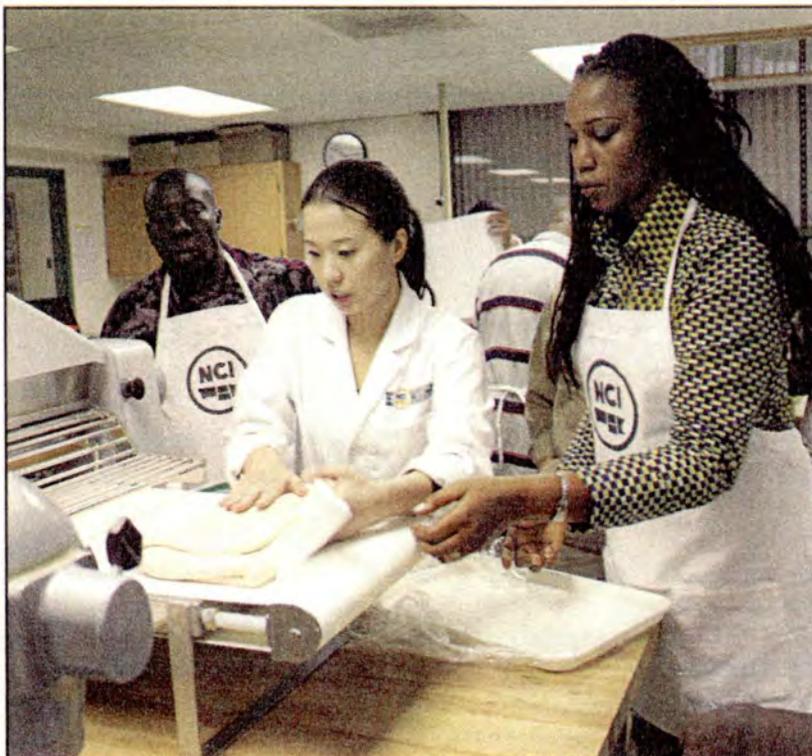
14 **SECTION 8. INTERNSHIP MATCHING FUNDS.** The extension service line item in
15 subdivision 1 of section 1 of this Act includes \$250,000 from the general fund for an extension
16 service internship program, for the biennium beginning July 1, 2013, and ending June 30, 2015.
17 Internship program funds can be spent only to the extent that matching funds have been
18 secured from nonstate resources on a dollar-for-dollar cash basis.

19 **SECTION 9. EMERGENCY.** The appropriation for capital projects of \$4,300,000 in
20 subdivision 4 of section 1 of this Act and \$1,900,000 in subdivision 1 of section 1 of this Act is
21 declared to be an emergency measure.

Northern Crops Institute Annual Update

2012

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



NORTHERN
CROPS
INSTITUTE

A Note from the NCC Chair

Robert Majkrzak, NCC Chair
President, Red River Commodities, Inc.



Majkrzak

It is a pleasure to report on the progress and activities of the NCI over the past year, as so many positive things have occurred.

Mark Weber joined the NCI late in 2011 as Director. His impact on direction and leadership has really been felt in 2012. Mark has brought new energy to the position and his outreach to various organizations that cooperate with the

NCI has been impressive. Mark will continue to develop his vision and direction of programs during the next few years.

Within the NCI, we have seen continued improvements in short courses, technical equipment and staff. New courses added focus on soybeans and the procurement aspects of all commodities in the region. There has been a greater involvement with corn and soybean grower groups and the products as these commodities have come to be so dominating in the northern-grown crops.

Incorporating the new NDSU Commodity Trading Room at Barry Hall into procurement short courses is offering a learning experience that attendees are very excited about. Technical equipment is being upgraded and additional new equipment will be sourced to allow for oil/meal separation for the oil crops of the region.

As world demand continues to increase for food, feed and fuel, there will be renewed interest from buyers to understand the dynamic commodity markets. Developing programs that are in step with the latest issues facing procurement, such as risk analysis, logistics and food safety, will be incorporated to the already solid educational short course line-up. NCI is uniquely prepared to assist in developing that knowledge and enhance the marketing opportunities for northern-grown crops.

I congratulate Mark and the entire NCI staff for a great year and look forward to the continued success of the Northern Crops Institute.

Director's Corner

Mark Weber
Director, Northern Crops Institute



Weber

U.S. agriculture is exploding with opportunities particularly in this northern region where our farmers are in a strategic position to supply many world markets due to our logistics, climate, and quality characteristics of our crops. We have witnessed prolific growth in soybean, corn and pulse production in the last two decades. 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 (NCI) is responding by providing increased services in quality evaluation, education, processing and technical expertise.

Asia's rising population and soaring demand will dramatically change the current global food industry. It is predicted that Asian diets will adopt the U.S. trend of eating food prepared outside the home, requiring a tremendous amount of education to the food industry in crop quality and utilization.

The majority of soybeans and corn are used for animal feed, and our region's corn has some of the lowest mycotoxin levels. Research conducted by the University of Minnesota shows that our soybeans have very high protein quality, which is the true indicator of feeding value and efficiency in livestock. The importance of communicating this information to the rest of the world becomes abundantly clear.

Our region's hard red spring (HRS) wheat continues to be the world's most reliable choice for superior quality. Recently a team of quality control and purchasing managers from Indonesian and Philippine flour mills attended the NCI's three-day South Asia Contracting for Wheat Value Workshop, held in cooperation with U.S. Wheat Associates. At the workshop, our staff conducted side-by-side baking demonstrations, comparing flours from other parts of the world to flour made from this region's HRS. Once again, our northern-grown HRS demonstrated excellent quality and results to our customers.

The commodity groups supported by farmer check-off dollars from our four-state region have stepped to the plate in a huge way by offering program direction, furnishing trade contacts throughout the world, and providing major funding. We deeply appreciate their significant support and efforts.

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2012-2013 Northern Crops Council (NCC)

Robert Majkrzak, Chair
 Fargo, ND
 Red River Commodities, Inc.

Dean Bresciani, Ph.D.
 President
 North Dakota State University

Ryan Brooks
 Bowman, ND
 Northern Pulse Growers

David Clough, Past Chair
 Fessenden, ND
 ND Wheat Commission

Chet Edinger
 Mitchell, SD
 SD Wheat Commission

Doug Goehring
 Commissioner of Agriculture
 ND Department of Agriculture

Mark Jossund
 Moorhead, MN
 MN Wheat Research and
 Promotion Council

Doyle Lentz
 Rolla, ND
 ND Barley Council

Milo "Buzz" Mattelin
 Culbertson, MT
 MT Wheat & Barley
 Committee

Dwight Mork
 Bellingham, MN
 MN Corn Research and
 Promotion Council

Keith Peltier
 West Fargo, ND
 Proseed

Jay Romsa
 LeSueur, MN
 General Mills

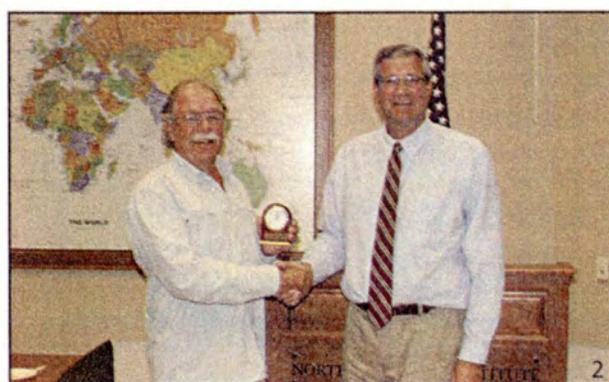
Mike Satrom
 Galesburg, ND
 ND Soybean Council

Robert Sinner
 Casselton, ND
 SB & B Foods Inc.

Kevin Skunes
 Arthur, ND
 ND Corn Council

Arnold Woodbury
 Wyndmere, ND
 ND Oilseed Council

Karolyn Zurn, Vice Chair
 Callaway, MN
 MN Soybean Growers



NCI Director Mark Weber thanked two out-going board members for their service to the Northern Crops Council by presenting each with an engraved clock at the June 2012 meeting. René Steiner (on left in photo 1), Buhler North America, represented food processors during his two terms on the council. Steiner will continue to serve on the NCI Industry Advisory Board. Ernie Hoffert (on left in photo 2), a producer from Carrington, N.D., represented AmeriFlax during his two terms.

2012-2013 Industry Advisory Board

- John McLean, Chair
Cargill
- Mark Askegaard
Askegaard Organic Farm
- Eric Bartsch
United Pulse Trading
- David Berg
American Crystal Sugar
- Mark Berwick
Upper Great Plains
Transportation Institute
- Darwin Britzman
International Nutrition
Consulting
- Rodney Christianson
Soybean Processors, Inc.
- Ron DeJongh
Columbia Grain, Inc.
- Carrol Duerr
Colfax Elevator
- Tim Egeland
Dahlgren & Company Inc.
- Gordon Gingras
Evonik
- Mike Gray
Kellogg's
- Brad Hennrich
Hesco, Inc.
- Roger Hipwell
MGI Grain Processing LLC
- Brad Kjar
Tharaldson Ethanol
- Gerald Leukam
T.E. Ibberson Co.
- Jon Long
BNSF Railway Inc.
- Robert Majkrzak
Red River Commodities
- Dave Polries
Dakota Dry Bean
- Jay Romsa
General Mills
- Robert Sinner
SB & B Foods Inc.
- Travis Sitter
Silveus Insurance Group
- Alan Slater
Busch Agricultural Resources
- Brian Sorenson
Dakota Specialty Milling
- René Steiner
Buhler North America
- Scott Stofferahn
Golden Growers Cooperative
- Tom Streifel
Highwater Ethanol
- Mark Stutrud
Summit Brewing Company
- Vance Taylor
North Dakota Mill
- Jennifer Tesch
SK Food International
- Ken Ulbrich
Bay State Milling

Northern Crops Institute Honored with North Dakota Trade Office's Service to Exporters Award



Northern Crops Institute received the 2011 Service to Exporters Award at the 2012 Global Business Connections Conference in Fargo, N.D., on April 11. The award was presented by North Dakota Governor Jack Dalrymple, (right), on behalf of the North Dakota Trade Office (NDTO). The award was accepted by John Crabtree, (left), NCI Assistant Director.

The NDTO Service to Exporters Award is an accolade given to one organization that demonstrates exceptional commitment to supporting North Dakota exporters and increasing the state's international business.

NCI Director Mark Weber says, "Since NCI opened its doors in 1983, we have been blessed with an outstanding staff. The success of NCI is largely due to the partners we have in the regional commodity groups and university scientific communities. I would like to thank them all for their outstanding contributions to NCI."

"NCI has consistently provided opportunities for North Dakota exporters through their significant exposure to buyers and processors around the world. The North Dakota Trade Office looks forward to continuing and expanding this great relationship," said Dean Gorder, Executive Director of the North Dakota Trade Office.

Thank You to NCI's Agribusiness Sponsors for Their Generous Contributions in 2012

American Crystal Sugar Company
Buhler Inc.
Columbia Grain, Inc.
Dakota Growers Pasta Co., Inc.
Hesco Inc.

North Dakota Grain Dealers Association
Northern Plains Potato Growers Association
Proseed Inc.
Red River Commodities



Red River Valley Sugarbeet Growers Association
SB & B Foods Inc.
SK Food International
Summit Brewing Company
SunOpta Foods Inc.

NCI Office Manager Linda Briggs with the new plaque that recognizes NCI's agribusiness sponsors.

Special Thank You to All Who Supported NCI Programs and Activities in 2012

- North Dakota State University
Agribusiness and Applied Economics
William Wilson, Ph.D.
Frayne Olson, Ph.D.
- Animal Science
Kurt Johnsen
Greg Lardy, Ph.D.
David Newman, Ph.D.
- Research Extension Center
Vern Anderson, Ph.D.
- Cereal and Food Sciences
Clifford Hall, Ph.D.
Dilrukshi Thavarajah, Ph.D.
- Plant Sciences
Elias Elias, Ph.D.
Rich Horsley, Ph.D.
Frank Manthey, Ph.D.
Kevin McPhee, Ph.D.
Mohamed Mergoum, Ph.D.
Paul Schwarz, Ph.D.
Senay Simsek, Ph.D.
- ADM-Benson Quinn
Minneapolis, Minn.
Kerry Melius
- Ag Processing Inc., Omaha, Neb.
Craig Pietig
- Agassiz Valley Grain, Barnesville, Minn.
Dan Noreen
- iBank, FCB, St. Paul, Minn.
David Bullock, Ph.D.
- Aiton Grain, Hillsboro, N.D.
Cory Tryan
- American Feed Industry Association
- American Soybean Association International
Marketing
- AmeriFlax
- Axor America, Inc., Plymouth, Minn.
Al Lucia
- BNSF Railway, Fort Worth, Tex.
Brandon Mortensen
- Buhler, Minneapolis, Minn.
Michael Ehr
- Busch Ag Resources
Moorhead, Minn.
Paul Bolin
Judd Carlson
West Fargo, N.D.
Tony Rosing
- Cargill, Inc., Minneapolis, Minn.
Stephane Henchoz
Wayne Koester
- CHS, Inc.
Inver Grove Heights, Minn.
Ryan Caffrey
Dan Endreson
Mike Klein
Savage, Minn.
Greg Oberle
Superior, Wisc.
Dick Carlson
- Columbia Grain
Minneapolis, Minn.
Michael Brinda
Ron De Jongh
Portland, Ore.
Kevin Callahan
- C-W Valley Co-op, Wolverton, Minn.
Curt Bjertness
- C.W. Brabender, Inc., Hackensack, N.J.
Salvatore Iaquez
Shuping Yan, Ph.D.
- D. Maldari & Sons, Inc., Brooklyn, N.Y.
Dan Maldari
- Dakota Growers Pasta, New Hope, Minn.
Alexis Freier
Radwan Ibrahim, Ph.D.
- Dakota Specialty Milling, Fargo, N.D.
Robert Meyer
Brian Sorenson
- Duluth Seaway Port Authority
Ron Johnson
Adolph Ojard
Adele Yorde
- EGT, LLC, Longview, Wash.
Jerry Gibson
Brad Hansen
- FC Stone, St. Louis Park, Minn.
Gordy Elliot
- Frontier Futures, Minneapolis, Minn.
Austin Damiani
- Gavilon Grain, LLC, Valley City, N.D.
Ryan Motl
- GIPSA/FGIS
Portland, Ore.
Tom Steele
Superior, Wisc.
Art Boline
- Hunter Grain Company, Hunter, N.D.
Paul Skarnagel
- MGI Grain Processing, LLC
East Grand Forks, Minn.
Roger Hipwell
- Minneapolis Grain Exchange
Rita Maloney
Joe Victor
- Minnesota Corn Research & Promotion
Council
- Minnesota Department of Agriculture
Minnesota Soybean Research and
Promotion Council
- Minnesota Wheat Research and
Promotion Council
- Montana Wheat and Barley Committee
Montana State University
National Grain and Feed Association
North Dakota Barley Council
Steve Edwardson
- North Dakota Corn Council
- North Dakota Oilseed Council
- North Dakota Soybean Council
- North Dakota Mill, Grand Forks, N.D.
Travis Devlin
Vance Taylor
- North Dakota Wheat Commission
Neal Fisher
Erica Olson
Jim Peterson
- Northharvest Bean Growers
Northern Canola Growers Association
Northern Pulse Growers Association
Pacific Grain Export Association
PolyCell Technologies, Crookston, Minn.
Tom Jorgen
- Port of Grays Harbor, Aberdeen, Wash.
Leonard Barnes
Gary Nelson
- Rahr Malting Company, Shakopee, Minn.
Curt Jacobson
- Riverland Ag Corporation, St. Louis Park, Minn.
Don Grambsch
- South Dakota Corn Utilization Council
- South Dakota Soybean Research and Promotion
Council
- South Dakota State University
Animal and Range Science
Bob Thaler, Ph.D.
- South Dakota Wheat Commission
State of North Dakota
State of South Dakota
Technical Foods Consultants, Cincinnati, Ohio
Clyde Stauffer
- The Money Farm, Fargo, N.D.
Mike Krueger
- U.S. Bank, Minneapolis, Minn.
Nabil Amra
- U.S. Dry Bean Council
- USA Dry Pea and Lentil Council
- USDA Biosciences Research Laboratory
Fargo, N.D.
Shiaoman Chao, Ph.D.
- USDA Northern Crop Science Laboratory
Fargo, N.D.
Lynn Dahleen, Ph.D.
- U.S. Grains Council
- U.S. Soybean Export Council
- U.S. Wheat Associates
Roy Chung
John Oades, Ph.D., Consultant
Lock Yang Phua
Joe Sowers
Mike Spier
Steve Wirsching
- University of Minnesota
Food Science & Nutrition
Joanne Slavin, Ph.D.
- Washington Grain Alliance
Mary Palmer Sullivan
- Westbred, Fargo, N.D.
Christine Fastnaught, Ph.D.
- Wheat Marketing Center, Portland, Ore.
David Shelton, Ph.D.

52 Grain Buyers from 23 Nations Attend NCI Grain Buying Courses

Advanced Grain Procurement Strategies Course: Honduras, Italy, Japan, Mexico, Netherlands, Poland, Portugal, Trinidad, and USA • May 14-18, 2012

Grain Procurement Management for Importers Course: Belgium, Chile, China, Egypt, Guatemala, Italy, Lebanon, Morocco, Netherlands, Peru, South Korea, Singapore, Sweden, Thailand, Trinidad, Tunisia, United Arab Emirates • September 17-26, 2012

Fifty-two grain buyers from 23 nations attended two grain procurement courses offered in 2012 by Northern Crops Institute.

In May, seventeen grain buyers attended the Advanced Grain Procurement Strategies Short Course. Eleven participants were sponsored



Crabtree

by U.S. Wheat Associates. Thirty-five participants attended the Grain Procurement Management for Importers Course in September. Twenty-one participants from this class were sponsored by U.S. Wheat Associates, while seven other participants were sponsored through the USDA FAS Cochran Fellowship Program.

John Crabtree, NCI Assistant Director, coordinates the NCI short courses.

William Wilson, Ph.D., NDSU Distinguished Professor of Agribusiness and Applied Economics and an expert in commodity futures trading, is the lead lecturer for both courses.

Advanced Grain Procurement Strategies Course

“As agriculture continues to evolve around the world, it creates a lot of uncertainty in the grain markets. From this advanced course, grain merchandisers learn various price risk management tools that they can use to minimize market volatility. Companies need to assess their risk management program and to know how much risk they can financially accept,” says Crabtree.

“At this year’s course, I am happy to report that we had a number of participants who are repeat customers from other courses. That is a strong testament to the quality of the course,” Crabtree concludes.

Trading and tendering games, case studies involving real world situations, and panel discussions give participants practical experience in applying what they learned. The group also toured the Alton Grain Terminal, Hillsboro, N.D., to learn how their shuttle train facility operates.

Lecture topics included changes in agriculture trade and evolving global supply chains; basis analysis; hedging and contracting; integrating

options; Value-at-Risk; logistics pricing; inventories as risk management strategy; currency exchange risk management; risk management policy; current grain situation and outlook; and buyer/seller relations.

Grain Procurement Management for Importers Course

The September grain procurement course is a basic-level class for grain buyers. It is designed for global grain buyers who want to learn more about buying grain through the U.S. grain



Wilson

marketing system and gain a competitive edge in grain marketing decisions to better manage price and quality risks. Highlights of the course are lectures by academic and commodity trade authorities on cash and futures markets, and sessions with grain merchandisers who explain international grain markets. On-site tours of the Minneapolis Grain Exchange, a country elevator, Duluth Seaway Port Authority, an export grain terminal, and a barge facility round out the course.



2012 Grain Procurement Management for Importers Short Course participants and faculty



Participants examine various kinds of wheat in the Commodity Grading Laboratory.



2012 Advanced Grain Procurement Short Course participants and faculty

Electronic Trade Room is Showcased at Soybean Procurement Class

India, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam • October 8-16, 2012

Twenty-one soybean buyers from seven Southeast Asian nations learned how to better negotiate electronic trading systems as they attended the Soybean Procurement Management for Importers short course in October. Focus of the course was to learn more about contracting and purchasing U.S. soybeans. The course was hosted at NCI from October 8-12, and then the group traveled to Portland, Ore., where the course concluded October 16.

"This course was the result of a multi-state effort by the Minnesota, North Dakota, and South

Dakota soybean organizations, who provided major funding for this program. For Northern Crops Institute, this soybean program was the first of its kind in that it was generated at the

grass roots level, in cooperation with the American Soybean Association International Marketing (ASAIM)," says NCI Director Mark Weber.

"The Southeast Asian region is a very large and growing market. We believe that we can capitalize on that



William Wilson, Ph.D., explains some of the electronic trading tools that are present in the NDSU Commodity Trading Room at Barry Hall.

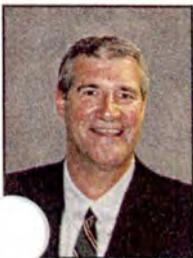
growth by bringing customers here to improve their risk management skills, which they then can apply to their U.S. soybean purchases," Weber concludes.

Much of the course took place in the electronic Commodity Trading Room (CTR), a new addition to the Agribusiness and Applied Economics Department at North Dakota State University (NDSU), Fargo. In this new commodity trading and financial laboratory, students learn how to extract and analyze information, and then make decisions with respect to risk and risk management. The CTR is the brainchild of William Wilson, Ph.D., lead instructor for NCI procurement courses.

"Our trading room is truly unique because of its focus on agricultural trading. I envision organizing the procurement classes around the trading room as a means of illustrating trading tools and technology," says Wilson.

The CTR 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. The room has 32 seats, each with a PC station and dual monitors. Students have electronic access to information through Bloomberg, DTN and X-Trader simulation software from Trading Technologies.

In the second week of the course, NCI Director Mark Weber accompanied the group to Portland, Ore., where U.S. soybean shipments to Asia originate.



Weber



soybean procurement class at the Port of Grays Harbor, Aberdeen, Wash.



2012 Soybean Procurement Course participants and faculty

South Asia Wheat Team Learns More about Managing Supply Chain Indonesia and Philippines • September 10-13, 2012

A team of six quality control and purchasing personnel from mills in Indonesia and the Philippines attended the South Asia Contracting for Wheat Value Workshop at NCI. The workshop, which concluded at the U.S. Wheat Associates (USW) office, in Portland, Ore., was sponsored by the U.S. Wheat Associates.

The workshop was designed to teach the team how to better manage their supply chain challenges and how to write contracts that accurately specify the wheat they want to purchase.

“In South Asia, our most important markets are the Philippines and Indonesia,” says Steve Wirsching, director of the U.S. Wheat Associates West Coast office.

“The Philippines has long been a very important market for U.S. hard red spring (HRS) wheat and U.S. wheat in general, buying about 2 million metric tons each year, as compared to Indonesia, which is an up-and-coming market that purchased 830 thousand metric tons last year. Indonesia is not a new market for us, but we are seeing increased spring wheat sales driven by economic growth and wheat consumption,” continues Wirsching.

“At this workshop, we brought together the quality control personnel and the purchasing departments from four mills. Typically, the quality control department wants the highest quality,



A participant examines bread samples that were baked from a wide range of flours from many parts of the world. NCI Director Mark Weber and Jim Peterson, Marketing Director for North Dakota Wheat Commission, observe in the background.

and often times, the most expensive wheat; whereas the purchasing group and the accountants want the cheapest wheat.”

“We at USW are promoting the idea that they need to work together as a team to figure out these problems. Buying the cheapest wheat doesn’t give you the best value, while buying the best quality wheat doesn’t necessarily give you the best value either. We teach them about how quality is

measured and why it is important to end-use performance,” concludes Wirsching.

NCI Director Mark Weber comments, “The Northern Crops Institute has enjoyed a long and fruitful relationship with our friends in the Philippines and Indonesia. This workshop was another example of the outstanding cooperation in market development efforts that exist with companies in this region of the world.



Lock Yang Phua, USW, slices the bread before the quality evaluations.



2012 Contracting for Wheat Value Workshop participants and faculty



Roy Chung, USW, and a participant examine cookie samples.

part of this workshop, we did side-by-side baking demonstrations, comparing flours from other parts of the world to the hard red spring (HRS) wheat grown in our region of the U.S. Once again our northern-grown HRS showed excellent quality and results," he concludes.

In addition to lectures on wheat quality testing and procurement, the group also toured Jay Nord's farm near Wolverton, Minn. They were hosted by Manager Curt Bjertness as they toured the Wolverton C-W Valley Co-op Elevator.

Workshop speakers and technicians included: Rachel Carlson, NCI Food Technologist; Roy Chung, USW Baking Consultant, Singapore; Natsuki Fujiwara, NCI Food Technologist; Lock Yang Phua, USW Baking Specialist, Singapore; John Oades, Consultant, Vancouver, Wash.; Erica Olson, North Dakota Wheat Commission; Senay Simsek, Ph.D., NDSU Department of Plant Sciences; Joseph Sowers, USW Assistant Regional Director, Singapore; Michael Spier, USW Regional Vice President, Singapore; Tom Steele, Federal Grain Inspection Service, Portland; William Wilson, Ph.D., NDSU Department of Agribusiness and Applied Economics; and Steve Wirsching, USW Director, Portland office.



Carlson



"As part of this workshop, we did side-by-side baking demonstrations, comparing flours from other parts of the world to the hard red spring (HRS) wheat grown in our region of the U.S. Once again our northern-grown HRS showed excellent quality and results," says NCI Director Mark Weber.



The Contracting for Wheat Value team included (l to r): Steve Wirsching, Joe Sowers, Mike Spier, Roy Chung, Lock Yang Phua, all U.S. Wheat Associates; Rachel Carlson, Natsuki Fujiwara, and Mark Weber, all Northern Crops Institute.



Rachel Carlson, NCI Food Technologist, demonstrates how to do a colorimeter test.



Natsuki Fujiwara, NCI Food Technologist, explains the falling number test.



Senay Simsek, Ph.D., NDSU Assistant Professor of Plant Sciences, explains several analytical laboratory tests for flour and dough quality.

NCI Responds to Milling Industry with Hands-On Rheology Course Colombia and USA • June 12-14, 2012

Twelve participants from Colombia and USA attended the Rheology of Wheat and Flour Quality Short Course from June 12-14 at NCI.

This course was designed to teach participants about the importance of wheat and flour quality, and how differences in quality can affect milling and baking performance. The hands-on laboratory experiences focused on learning to operate rheological instruments that measure wheat and flour quality, and how to analyze, interpret, and apply the results effectively.

John Crabtree, NCI Assistant Director, comments, "We developed this course in response to feedback from the milling and baking industries that indicated a need for their personnel to have more training on the latest rheological equipment. This knowledge will help them explain to their customers the differences in quality and how to adjust for those variations."

"This year's course included much more hands-on training in running the rheological instruments and in interpreting the analytical tests. We want to thank C.W. Brabender Instruments Company, who sent their personnel to assist in the equipment training," Crabtree concludes.



Alyssa Hicks, NCI Milling Specialist, explains the differences in results using various milling parameters.

Hicks

Each participant had the opportunity to gain hands-on experience with the rheological instruments. They focused on tests for gluten content, falling number, flour color, ash content, moisture, starch damage, speck count, protein and starch. Equipment training included the Buhler lab mill, Alveograph, Mixolab, RVA, Amylograph, Farinograph, Extensograph, TA-XT Plus, and C-Cell Technology.

Speakers who lectured on quality analysis from kernel quality, milling, rheology analysis, and baking evaluation, included Brian Sorenson and Robert Meyer, both of Dakota Specialty Milling; Sal laquez and Shuping Yan, Ph.D., both of C.W. Brabender Instruments; Alyssa Hicks, NCI Milling Specialist; Rachel Carlson, NCI Food Technologist; Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist; Natsuki Fujiwara, NCI Food Technologist; and Rilie Morgan, NCI Processing Specialist.



A participant practices running the extensograph test during the course.



Rheology of Wheat and Flour Quality Short Course participants and faculty



Robert Meyer of Dakota Specialty Milling explains quality evaluation of baked bread.

Pasta Manufacturing Course Hits Near Record Enrollment

Brazil, Nigeria, South Africa, and USA • April 10-12, 2012



John Crabtree, NCI Assistant Director, welcomes participants of the 2012 Pasta course, who came from 21 companies in four countries.

A near record enrollment of 36 participants from 21 pasta manufacturing companies in Brazil, Nigeria, South Africa, and USA attended the Pasta Production and Technology Short Course from April 10 to 12.

The pasta course is designed to showcase the high quality durum wheat that is produced in this four-state region. NCI's pasta short course has been offered annually since 1984.

"We were pleased to host a near record enrollment at this year's course," says John Crabtree, NCI Assistant Director. "Almost all of the major U.S. pasta companies were represented. This says a lot about what the NCI staff has done with the program over the years. Many companies have sent their people to the course since its beginning. This year, in addition to representatives from the U.S. pasta industry, we hosted pasta companies

from Nigeria, Brazil and South Africa. Nigeria is actually a big consumer of wheat. In 2012, Nigeria was the United States' fourth largest durum wheat customer and their wheat flour milling and pasta industries continue to grow. Eight participants were sponsored by U.S. Wheat Associates," Crabtree concludes.

Rilie Morgan, NCI Processing Specialist, led the hands-on processing of traditional pasta made with semolina. There were also demos of ravioli and gluten-free pasta processing.

Lecture topics included durum varieties, quality evaluation, durum milling and semolina quality, functional and alternative pasta ingredients, physical and rheological

tests, commercial pasta production, protein and starch, die design and management, pasta drying technology, equipment options for pasta extrusion, pasta color and cooking evaluation, quality assurance, specialty pasta technology, and causes and solutions of pasta defects.

Additional faculty and technicians for the course were: Rachel Carlson, NCI Food Technologist; Michael Ehr, Buhler; Elias Elias, Ph.D., NDSU Durum Wheat Breeder; Alexis Freier and Radwan Ibrahim, Ph.D., Dakota Growers Pasta Company; Natsuki Fujiwara, NCI Food Technologist; Alyssa Hicks, NCI Milling Specialist; Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist; Al Lucia, Axor America; Dan Maldari, D. Maldari & Sons; Frank Manthey, Ph.D., NDSU Plant Sciences; and Brian Sorenson, Dakota Specialty Milling.



Morgan



Morgan, NCI Processing Specialist, explains the pilot scale pasta press during the course.



Pasta Production and Technology Short Course participants and faculty



Rachel Carlson, NCI Food Technologist, explains how to evaluate cooked pasta.

Food Barley Course Showcases Food Ingredient Uses Chile, Taiwan, and USA • July 10-12, 2012

Seven participants from Chile, Taiwan, and USA attended the Healthy Solutions for Food Barley Uses Short Course July 10-12 at NCI to learn more about how they can use barley in their food products.

The use of barley has increased since the U.S. Food and Drug Administration permitted barley food products to carry a health claim recognizing the positive effects of beta-glucan soluble fiber.

This course focused on current barley health research and benefits of beta-glucan and dietary fiber in food barley. Participants also gained hands-on experience in barley processing, sensory evaluation, analytical testing, baking, and evaluation of baked goods.

Course topics included: current barley health research and health benefits of beta-glucan and dietary

fiber in food barley; basic definitions of hulled and hull-less barley; quality characteristics and functionality of barley; how to incorporate barley into food products for both hulled and waxy types of barley; and marketing trends of barley.

The National Barley Foods Council (NBFC) co-sponsored the course. NBFC serves as an information clearinghouse for barley food and nutrition issues on behalf of the U.S. barley industry. It is currently the only non-profit organization

devoted to generic education and promotion of food barley nationally. This course is part of the NCI's Barley Initiative that is designed to increase the use of food barley.



Participants prepare barley-enhanced cookies in NCI Bake Lab.

Natsuki Fujiwara, NCI Food Technologist, developed a series of recipes for the course that increase the amount of barley flour in bakery products, such as pan bread, muffins, bagels, cookies, and pizza, without sacrificing performance, taste, color or appearance.

Northern Crops Institute is working with national barley industry leaders and growers to promote food barley use in other countries. Several states, including North Dakota, Montana, and Minnesota, are involved in this initiative.

The North Dakota Barley Council is sponsoring much of the NCI food barley program.



Fujiwara



Rachel Carlson and Natsuki Fujiwara, NCI Food Technologists, join Mary Palmer Sullivan, (center right), Executive Director, Washington Grain Alliance, and Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, in evaluating barley-enhanced breads.



The group toured MGI Grain Processing, East Grand Forks, Minn., hosted by Roger Hipwell.



2012 Healthy Solutions for Food Barley Uses Course participants and faculty



Rilie Morgan, NCI Processing Specialist, explains extrusion of barley foods.

Improving Barley Malt Quality Attracts Brewers to NCI Course Canada and USA • August 14-17, 2012

Nine maltsters and brewers from Canada and U.S. attended the Barley Malt Quality Evaluation Short Course at NCI August 14-17.

Paul Schwarz, Ph.D., NDSU professor of plant sciences, coordinated and lectured in the course, which was co-sponsored by the Institute of Barley and Malt Sciences.

The course focused on the quality components of barley and malt necessary to produce an acceptable beer. Topics included U.S. barley production and variety development, barley quality evaluation, barley malt production technology, biochemistry and analysis, specialty malts and extracts, biotechnology update on barley, barley breeding/gene mapping, germplasm enhancement, world barley malt supply and demand, food safety issues in malting. The group also heard a brewer's prospective on malt.

Additional instructors included: Paul Bolin, Busch Ag Resources; Shiaoan Chao, Ph.D., USDA Biosciences Research Laboratory; Lynn Dahleen, Ph.D., USDA Northern Crop Science Laboratory; Don Grambsch, Riverland Ag Corp.; Richard Horsley, Ph.D., NDSU barley breeder and professor of plant science; and Curt Jacobson, Rahr Malting Company.

In addition to lectures, the group toured the Busch Agricultural Resources Operations in West Fargo, N.D., NDSU Greenhouse Facility and the NDSU Malt Analysis Laboratory.



Paul Schwarz, Ph.D., center, lead instructor, listens as Jaidev Sehrawat, right, M.S. candidate in the malting barley quality program, explains methods used in the barley and malt quality laboratory at North Dakota State University.



Guest lecturer Paul Bolin, right, Busch Ag Resources, explains malting barley quality tests during the course.



Paul Schwarz, Ph.D., welcomes the course participants on the first day of class.

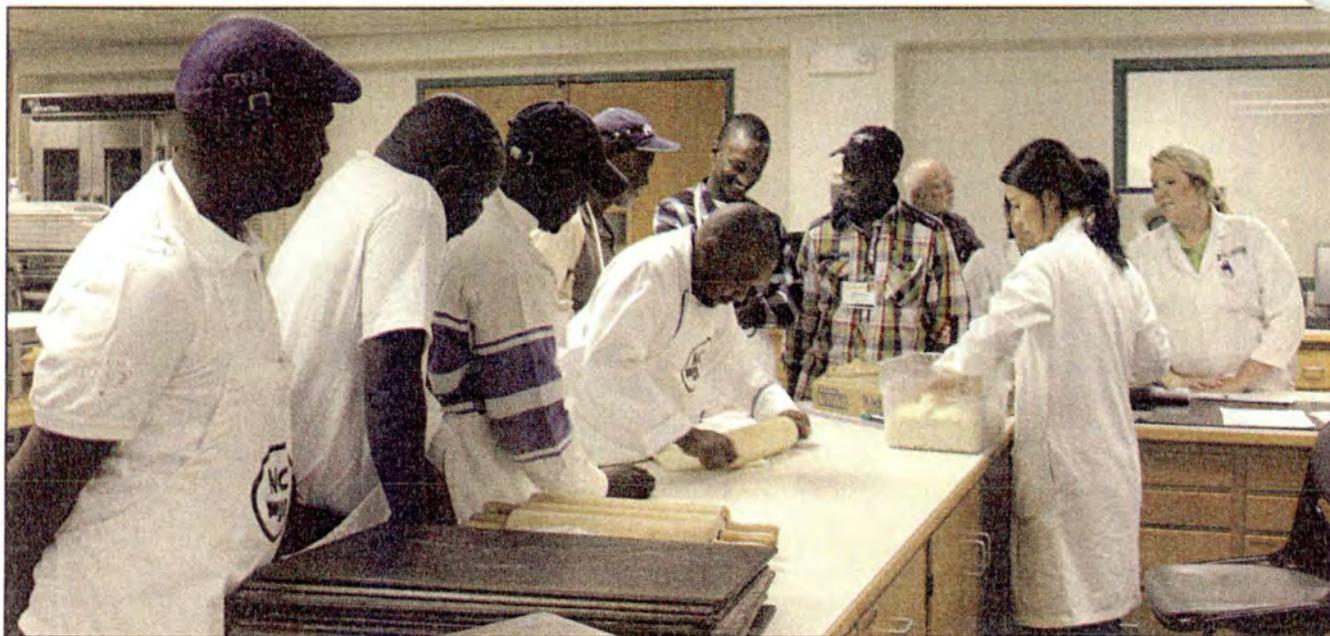


2012 Barley Malt Quality Evaluation Course participants and faculty



The group at Busch Agricultural Resources Inc. Malt House, Moorhead, Minn.

ASA-WISHH Sponsors Baking with Soy Courses for African Bakers



A participant rolls out the soy-enhanced croissant dough during the September Baking with Soy short course.

The benefits of soy protein were in the spotlight at two NCI Baking with Soy short courses sponsored by WISHH, The World Initiative for Soy in Human Health, a program of the American Soybean Association. The first Baking with Soy course for seven Senegal and Rwanda bakers was September 24-28. During October 15-19, twelve bakers from Nigeria and Uganda attended a similar course.

NCI Director Mark Weber says, "Addition of soy flour to baked products can raise protein content, balance essential amino acids, and increase bread's nutritional value, making soy

flour one of the most promising uses of soybeans in many countries. We are delighted to work with WISHH in hosting these courses that showcase the region's high quality soybeans."

Clyde Stauffer, Ph.D., Technical Foods Consultants, Cincinnati, OH, was the lead instructor for the courses. His lectures focused on helping the teams develop a better understanding of the various functional properties of adding soy to baked products. Stauffer also led sessions on calculating calories, using cost spreadsheets, and the various kinds of wheats and their flour characteristics.

The hands-on baking labs were led by Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, Rachel Carlson and Natsuki Fujiwara, both NCI Food Technologists. During the courses' baking sessions, the teams made and evaluated soy-enhanced donuts, baguettes, croissants, pan bread, Poilâne bread, and spritzer cookies.



Jeradechachai

Kimberly Rochette, West Africa Project Manager for WISHH, and Drew Klein, Ph.D., Global Director, Human



Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, examines bread quality.



2012 Baking with Soy course (September) participants and faculty



Clyde Stauffer (right), lead instructor for the baking with soy courses, with participants.

Senegal and Rwanda • September 24-28, 2012

Nigeria and Uganda • October 15-19, 2012



The participants and faculty of the October Baking with Soy course gather for a photo on the last day of the course.

Utilization, U.S. Soybean Export Council, accompanied the participants for the course.

“WISHH has been promoting soy flour to bakers in Africa for about 15 years. As part of that outreach, about 6 years ago, we first started the Baking with Soy Seminars at NCI. We thought it was important to bring bakers to the U.S. and run a baking school for them. The first Baking with Soy course in 2007 involved bakers from the Middle East,” says Stauffer.

“During these baking courses, we try to expose the participants to new ideas, such as no-time pan bread and

Poilâne bread, a fermented dough. These may become specialty items in their bakeries. We also made spritzer cookies with and without soy flour, using a formula that I developed for Liberia’s school feeding program.”

“These bakers are agents of change in the baking community. That’s a big part of why they were chosen for this program,” Stauffer concludes.

According to the WISHH website, “WISHH brings the benefits of U.S. soy protein to developing countries where it can make a difference in lives today and in the future. Soy is well suited to provide the protein, calories

and other nutritional needs of such people. WISHH also understands that developing nations of today are tomorrow’s customers for U.S. soy. All of the top 10 export countries for U.S. soy is a current or former recipient of U.S. foreign aid assistance.”



Maki Fujiwara (left), NCI Food Technologist, makes croissants with course participants.



2012 Baking with Soy course (October) participants and faculty



Three participants evaluate the baking characteristics of the soy-enhanced bread.

Southeast Asian Feed Manufacturers Attend Feed Technology Course Indonesia, Philippines, Thailand, and Vietnam • November 5-9, 2012

Nineteen feed manufacturers from Southeast Asia attended the Feed Manufacturing Technology course November 5-9. After three days at NCI, the group traveled to Portland, Ore., for the wrap-up.

The course was co-sponsored by Minnesota Soybean Research and Promotion Council, North Dakota Soybean Council, and South Dakota Soybean Research and Promotion Council, in conjunction with the American Soybean Association International Marketing.

Lead instructor was Kim Koch, Ph.D., NCI Feed Center Manager. In addition to lectures on feed mill efficiency; feed mill design; mixing; particle size reduction; and pelleting, he also provided hands-on demonstrations of size reduction and pelleting at the NCI Feed Center.



Koch

"There is tremendous potential for production of food animals in China, India, and Southeast Asia. The group we had at this course is from Thailand, Indonesia, Vietnam and the Philippines. They are all trying to understand how to use quality ingredients to make better feed, to increase animal production, and still make money," says Koch.

"In shipping soybeans to Asia, the U.S. has a definite advantage over our competitors of Brazil and Argentina because we can ship from the PNW



Kim Koch, Ph.D., NCI Feed Center manager, troubleshoots feed questions from several participants during the Feed Manufacturing Technology course.

directly to Asia. The shorter shipping time results in lower freight costs. This will be an advantage for the next ten years during the developmental time that is taking place in Southeast Asia. The more we can do to help them get quality U.S. soybeans for making quality meal, the better off they are and the better off we will be," Koch concludes.

The five-day course focused on the theory and mechanics of feed manufacturing technology using a combination of classroom presentations, processing demonstrations, and hands-on training. The group visited an integrated swine production facility

and feed mill at Cando, N.D., and export facilities on the West Coast, so participants could see first-hand the quality, efficiency and reliability of the U.S. soy production and logistics systems.

Other speakers included: Frayne Olson, Ph.D., NDSU, who discussed commodity price outlook for 2013 and beyond; and Robert Thaler, Ph.D., SDSU, who presented information on soybean meal utilization. Brad Hansen hosted the group as they toured EGT's export terminal in Longview, Wash., and Leonard Barnes led a tour of AGP's export terminal in Aberdeen, Wash.



Participants observe a feed pelleting demo underway at the NCI Feed Center.



2012 Feed Manufacturing Technology Course participants and faculty



Participants observe computerized data collection at the swine facility at Cando, N.D.

2013 COURSE SCHEDULE

(Tentative)

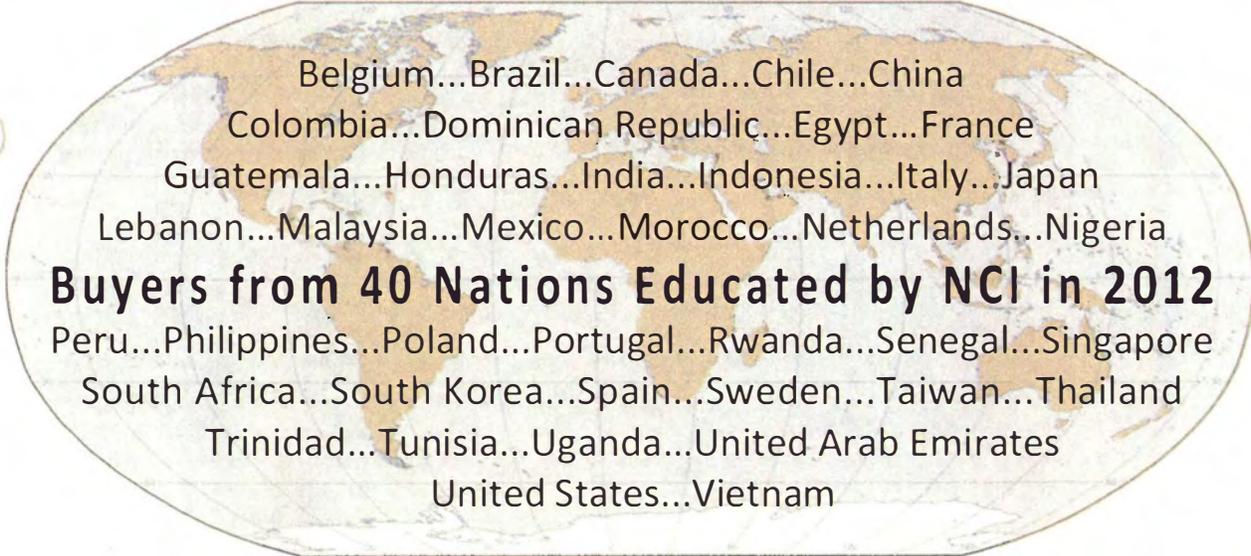
April 16-18	Pasta Production and Technology
May 6-10	Advanced Grain Procurement Strategies*
May 21-24	Durum Milling*
June 11-13	Rheology of Wheat and Flour Quality
September 16-25	Grain Procurement Management for Importers

*A cooperative effort with the International Grains Program, Kansas State University

More courses are in the planning stages for 2013.

Please check our website for the most up-to-date information.

www.northern-crops.com



Belgium...Brazil...Canada...Chile...China
Colombia...Dominican Republic...Egypt...France
Guatemala...Honduras...India...Indonesia...Italy...Japan
Lebanon...Malaysia...Mexico...Morocco...Netherlands...Nigeria
Buyers from 40 Nations Educated by NCI in 2012
Peru...Philippines...Poland...Portugal...Rwanda...Senegal...Singapore
South Africa...South Korea...Spain...Sweden...Taiwan...Thailand
Trinidad...Tunisia...Uganda...United Arab Emirates
United States...Vietnam

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Northern Crops Institute (NCI) will help your company develop a customized training program to meet your specific needs. Our customized programs provide timely technical information by NCI staff and U.S. experts, offer hands-on experiences to enhance lectures, and provide a retreat or in-service atmosphere and team building opportunities. We do this in a confidential environment, so that your employees can discuss proprietary issues. Contact Northern Crops Institute to arrange a course tailored for your particular needs. Phone: 701-231-7736.

We specialize in:

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- Flour and semolina milling
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- Quality analysis of cereal and feed grains
- Grain procurement strategies
- Grain standards and inspection procedures
- Feed milling/manufacturing

Koch Attends National Soybean and USGC Commodity Meetings

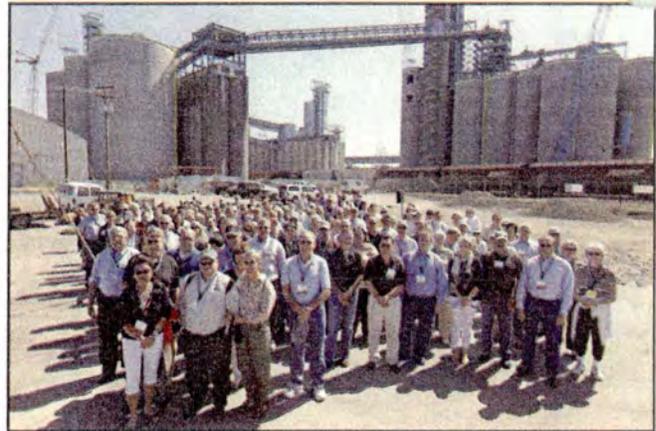
Kim Koch, Ph.D., NCI Feed Center manager, attended the U.S. Soybean Export Council's (USSEC) Aqua Stakeholders Meeting in Kauai, Hawaii in August, where he toured the largest aqua farm in Hawaii during the meeting.

The farm's primary revenue is the rearing and sale of Specific Pathogen Free (SPF) brood stock and post larval shrimp into Pacific markets. These shrimp have been bred to be resistant to the three most common diseases of shrimp.

The aqua farm has annual sales of 200 tons, including shrimp, fish and clams produced on site.



Tour group at the largest aqua farm in Hawaii.



Koch also attended the U.S. Grains Council's 52nd Annual Board of Delegates Meeting in Vancouver, Wash., in early August. During the meeting, the attendees toured the UGC Terminal at the Port of Vancouver (pictured above), where large shipments of corn and soybeans go to Asia.



Koch holds a shrimp from the aqua farm. That's a mighty big shrimp!

Members voted in a new slate of board of directors, electing Don Fast of Montana as Chairman and Marjorie Seastrand of North Dakota as Barley Sector Director.



Jeradechachai Promotes Pulses at IFT

Thunyaporn Naggie Jeradechachai (left), NCI Crop Quality Specialist, assisted Kaye Effertz (right), Marketing Director for Northern Pulse Growers Association, at the USA Dry Pea and Lentil Council's booth during the Institute of Food Technologists Annual Expo in Las Vegas, Nev. Visitors tasted rice crispy treats that were made at NCI from yellow peas and yellow pea caramel puffs, as Jeradechachai and Effertz explained the benefits of using pulses in products.



Wheat Quality Council Tour Wraps Up at NCI

The Wheat Quality Council's annual inspection tour of wheat fields in North Dakota, western Minnesota and northern South Dakota concluded with its wrap-up discussion at NCI. About 70 people, primarily trade association leaders and representatives of millers and other companies that use wheat, participated in the tour. The participants split into small groups that traveled eight different routes, stopping periodically to inspect fields. North Dakota's wheat crop drew interest because the state is the nation's leading producer of both hard red spring wheat, used for bread, and durum, used for pasta.



Fujiwara Presents on Hulless Barley at Whole Grains on Every Plate Conference

Natsuki Fujiwara, NCI Food Technologist, presented at the Whole Grains on Every Plate Conference, hosted by the Whole Grains Council in October in San Antonio, Texas. Fujiwara participated on the New Ingredient Panel Discussion section where she discussed hulless barley, its health effects, functionality, and how it fits as a whole grain. More than 100 people attended the conference.



Sam Chang, Ph.D., NDSU Soybean Researcher, Goes to Mississippi State

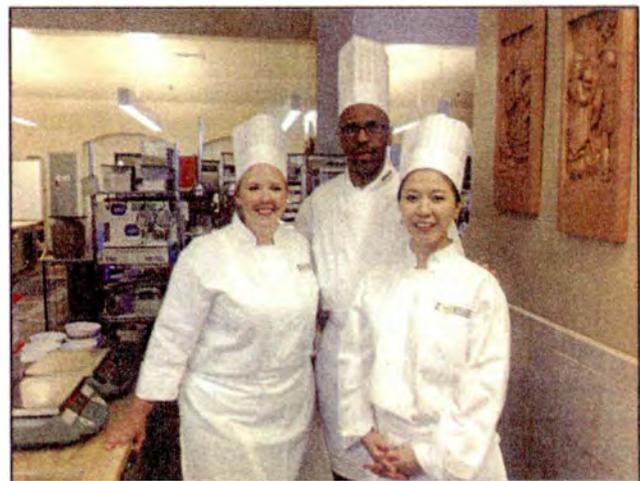
A farewell reception was held at NCI for Dr. Sam Chang, who accepted the position of Chair of the Department of Food Science, Nutrition and Health Promotion at Mississippi State University in Starkville. He began his new position on July 1. Dr. Chang was at NDSU for over 25 years and had many accomplishments in soybean, protein, and functional foods research. Dr. and Mrs. Chang (center) are pictured with Bob Sinner (left), SB & B Foods; Mark Weber (back), NCI Director; and Deland J. Myers Sr., Ph.D., (right), NDSU School of Food Systems.

Jeradechachai Presents 2012 HRS and Durum Quality Reports in Central America

Thunyporn Naggie Jeradechachai, NCI Crop Quality Specialist, presented the 2012 HRS and Durum Wheat Crop Quality Reports at the Crop Quality Seminars, hosted by U.S. Wheat Associates (USW) in Guatemala, El Salvador and Honduras in November. Jeradechachai, traveling with the USW team, also gathered feedback from wheat buyers and millers about quality characteristics, testing, and milling.



Jeradechachai



Carlson and Jeradechachai Teach in Pulse Course at Culinary Institute of America

Rachel Carlson (left), NCI Food Technologist, and Thunyporn Naggie Jeradechachai (right), NCI Crop Quality Specialist, taught at a pulse promotion course at the Culinary Institute of America (CIA) in St. Helena, Calif., in August. The Legumes: Wholesome Ingredients for Value-Added Foods course was sponsored by the USA Dry Pea and Lentil Council. Jeradechachai presented a lecture on pulse ingredients and utilization. The course featured cooking demonstrations using pulse products along with hands-on baking and cooking opportunities with legumes. The attendees were chefs, food processors, and ingredient suppliers. Carlson and Jeradechachai are pictured with Chef Richard Coppedge (center) from the CIA, Hyde Park, N.Y.



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Trade Teams and International Consulting



Vietnam... Kim Koch, Ph.D., (fourth from left), NCI Feed Center Manager, traveled with the American Soybean Association International Marketing (ASAIM) to Vietnam to present seminars on Feed Mill Efficiency and Pelleting of Feeds in Ho Chi Minh City and Hanoi. Other speakers included Dr. Salim Bootwalla, ASAIM, Singapore; Dr. Ravi Ravindram, Massey University; and Dr. Ahmad and Mr. K. Yoshimoto, Sumitomo Chemicals. The team also made site visits to area feed mills. The seminars were sponsored by the American Soybean Association International Marketing, United Soybean Board, Minnesota Soybean Research and Promotion Council, and Sumitomo Chemicals.



Dominican Republic... Thunyaporn Naggie Jeradechachai (far right), NCI Crop Quality Specialist, presented a seminar during the Introduction to Japanese Sweet Beans 2012 at Santo Domingo, Dominican Republic. The seminar was sponsored by the U.S. Dry Bean Council. Jeradechachai discussed the diverse applications and benefits of bean paste and flour. The sweet bean paste was made in Japan with U.S. dry beans. She also prepared Danishes, cookies, coffee breads, and scones made with Japanese sweet bean paste for the 40 participants that included bakers, chefs, and food manufacturers from Mexico and Dominican Republic.



Colombia and France... A nine-person team of bean buyers from Colombia and France visited NCI in September to learn more about NCI's bean activities. NCI Director Mark Weber and Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, hosted the team. After an overview of the NCI's work in beans, Jeradechachai discussed baking applications enhanced with beans. U.S. Dry Bean Council European representative Johanna Stobbs accompanied the French trade team. They were sponsored by North Central Bean Dealers Association and Northarvest Bean Growers Association.



India... A ten-member trade team from India was at NCI to learn more about the quality and utilization of northern-grown pulses and to see the 2012 pulse crop. The team was accompanied by Pete Klaiber, Director of Marketing for USA Dry Pea and Lentil Council, and Shannon Berndt, Executive Director of Northern Pulse Growers. Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, hosted the team.



Italy and Spain...A team of mill owners and managers from Spain and Italy were at NCI to learn more about the hard red spring wheat crop. Combined, the two countries import an average of 36 million bushels of U.S. wheat every year. The team was accompanied by Goris van Lit, Regional Director for U.S. Wheat Associates, Rotterdam. They were hosted by NCI Director Mark Weber, who led them on a tour of Northern Crops Institute. They also visited with NDSU wheat experts and toured a local wheat farm. They concluded their visit to the region with a trip to the North Dakota Mill, and then traveled to Minnesota and Ohio. They were escorted by Erica Olson and Jim Peterson, North Dakota Wheat Commission.



Thailand...Thunyaporn Naggie Jeradechachai, NCI Crop Quality Specialist, traveled to Thailand in January, where she presented information on the ingredient production, nutrition, and the applications of U.S. pulse at the "Healthy Cooking with U.S. Pulse" seminar in Bangkok, Thailand. The seminar was sponsored by the U.S.A. Dry Pea and Lentil Council (USADPLC). The course participants were dietitians, nutritionists, university faculty, school food service personnel, and chefs. The seminar included lectures, cooking, and baking demonstrations. This was the first seminar held in the Thai language for the USADPLC.



Japan...The Japanese Mid-level Management Millers Team came to NCI to learn more from wheat breeders and university researchers about the region's 2012 wheat crop. The team consisted of representatives from three large flour mills and the Japanese Flour Millers Association. They were accompanied by Wataru "Charlie" Utsunomiya, Director of the U.S. Wheat Associates Tokyo office. The team was hosted by Erica Olson, North Dakota Wheat Commission, and NCI Director Mark Weber. After their visit to NCI, they toured a local elevator facility. Japan is the largest market for U.S. hard red spring wheat, annually chasing nearly 55 million bushels.



Japan...Natsuki Fujiwara, NCI Food Technologist, worked with the U.S. Grains Council to promote beta-glucan barley products at the Health Ingredients Show in Tokyo, Japan, in October. The show is the largest exhibition on health oriented products in Japan and had a total of 40,000 visitors over the course of the three days. Fujiwara presented the developments of food barley and the U.S. Food and Drug Administration (FDA) health benefit claim on barley dietary fiber during a seminar and panel discussion.

Trade Teams and International Consulting



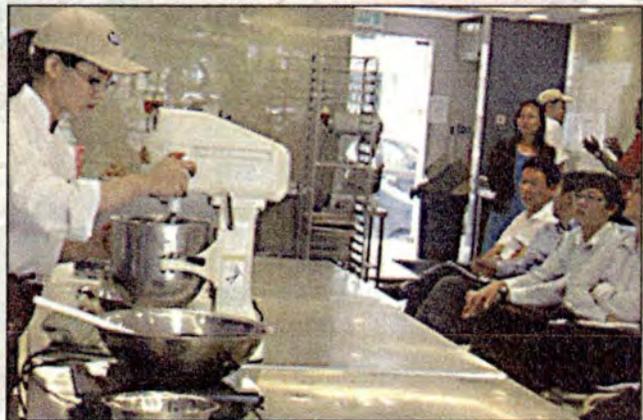
Japan... A representative of the Nisshin Flour Mills came to NCI to learn more about the current year's crops. He was hosted by Erica Olson, N.D. Wheat Commission.



South Korea and Singapore... Soybean buyers from South Korea and Singapore came to NCI to learn more about the region's soybeans. They were escorted by Leland Judge Barth (second from left), Executive Director of the Dakota Pride Cooperative.



Kosovo... An extension team from Kosovo visited NCI in August to learn more about NCI's educational and technical activities. They were in the region to gather ideas for developing their Extension Service. The team included the Kosovo Extension Director and agents.



Malaysia, Indonesia, Thailand, & Vietnam... Thunyporn Naggie Jeradechachai, NCI Crop Quality Specialist, was a featured speaker at the "New Look at U.S. Pulses as Healthy and Versatile Ingredients" Seminars at the Malaysian Institute of Baking, Kuala Lumpur, in September. Jeradechachai also presented baking demonstrations to promote the use of U.S. dry beans. She repeated the seminars in Vietnam and visited with food processors in Indonesia and Thailand. The trip was sponsored by USA Dry Pea and Lentil Council and USA Dry Bean Council.



Philippines... A 20-member Philippines Import Group was at NCI to learn more about regional soybeans, and the activities of Northern Crops Institute. They were hosted by the North Dakota Soybean Council. They toured the NCI Facilities, NCI Feed Center, NDSU Greenhouse complex, and the NDSU Commodity Trading Room at Barry Hall. The Philippines is the third largest market for U.S. soy meal. In 2011, the U.S. provided 61% of their soy imports. They were escorted by Michelle Swenson, Director of Marketing and Development with the North Dakota Soybean Council.



Japan...A three-member team from Torigoe and Hanamaru Companies in Japan visited Northern Crops Institute to learn more about this year's wheat crop, especially hard red spring wheat. Torigoe is a Japanese milling company and Hanamaru has 300 Japanese noodle shops in Japan. Erica Olson, (back right), North Dakota Wheat Commission, escorted the group. Natsuki Fujiwara (back left), NCI Food Technologist, hosted them.



Morocco... Kim Koch, Ph.D., NCI Feed Center manager, traveled to Morocco to assist poultry farmers in their feed manufacturing operations. His trip was sponsored by the U.S. Grains Council (USGC). He is pictured in the new layer house at the Zaim farm near Marrakech. Zaim is the president of the Moroccan Poultry Association. USGC believes using roller-grinders when manufacturing poultry feed with U.S. corn and sorghum will help poultry growers become more efficient.



Indonesia, Singapore & Thailand...

John Crabtree, NCI Assistant Director, explained the grain shipping system in the United States to a food-grade soybean trade team that visited NCI in September. They were hosted by the North Dakota Trade Office, in conjunction with the Northern Food Grade Soybean Association. The delegation consisted of seven value-added food buyers and three American Soybean Association officers from Indonesia, Singapore and Thailand. The Southeast Asian visitors were interested in purchasing high-quality, food-grade Red River Valley soybeans. They were part of the Southeast Asia Reverse de Mission and also attended Big Iron in West Fargo, N.D., during their time in Fargo.



Philippines...

A Philippines Wheat Trade Team came to NCI to learn about the new crop hard red spring (HRS) wheat prospects and programs that promote wheat consumption in the U.S. The team was composed of flour milling and food industry marketing executives. While in the state, the team also met with HRS breeding and quality researchers from North Dakota State University as well as a nutrition expert. The team saw samples of the 2012 HRS crop and received quality and supply and demand updates. After departing North Dakota, the team made visits to Minnesota, Montana and Oregon. Joe Sowers, U.S. Wheat Associates Manila, accompanied the group. They were hosted by Erica Olson, North Dakota Wheat Commission.



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 North Dakota State University
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 P.O. Box 6050
 Fargo, ND 58108-6050

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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
 - Extrusion
 - Post-extrusion
 - Feed
 - Industrial

NCI can provide:

- Skilled Staff
- Up-to-date Information
- Fully-equipped Labs
- Hands-on Experiences
- Confidential Environment
- Network of Resources

NCI Staff

Mark Weber, Director
 John Crabtree, Assistant Director
 Sally Backman, PR/Communications Specialist
 Linda Briggs, Office Manager
 Rachel Carlson, Food Technologist
 Natsuki Fujiwara, Food Technologist
 Alyssa Hicks, Milling Specialist
 Thunyaporn Naggie Jeradechachai, Crop Quality Specialist
 Kim Koch, Ph.D., Feed Center Manager
 Pat Limesand, Account Technician
 Rilie Morgan, Processing Specialist
 Technical Director Position Open

Contact us at:

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Sally Backman
 Update Editor

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ATTACHMENT 6.
March 14, 2013
SB 2020

UPPER GREAT PLAINS TRANSPORTATION INSTITUTE

AGENCY 627
DENVER TOLLIVER, DIRECTOR

NORTH DAKOTA
STATE UNIVERSITY

NDSU

2013-15
BIENNIAL BUDGET REQUEST

HOUSE APPROPRIATION EDUCATION AND
ENVIRONMENT DIVISION COMMITTEE HEARING
REP. ROBERT J. SKARPHOL, CHAIRMAN

MARCH 14, 2013

Agency Overview

The Upper Great Plains Transportation Institute was established by the North Dakota legislature in 1967 as a specialized center at North Dakota State University to foster a better understanding of transportation's role in the economy through research, education, and technology transfer.

- 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, transportation businesses, counties, 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
- Air services planning
- Transportation security

UGPTI coordinates NDSU's multidisciplinary Transportation and Logistics education program and offers extensive training and workforce development, particularly 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 that 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 2011-2013 Biennium

Changes in Federal Policies and Practices Affecting UGPTI

Changes at the federal level have intensified economic uncertainties and affected UGPTI's traditional strategies in several ways.

- A. The failure of Congress to enact a long-term surface transportation bill has created uncertainty for state and metropolitan agencies that fund transportation research. Although Congress enacted a two year reauthorization bill in July (MAP-21), the legislation resulted in a much shorter planning horizon than in previous reauthorization periods when surface transportation programs were typically authorized for five or six

years. This added uncertainty makes it more difficult to procure grants from agencies that rely extensively on federal funds to finance their research and planning programs.

- B. The agreement to eliminate Congressional earmarks has precluded certain funding opportunities that were available to UGPTI in the past.
- C. The allocation of potential budget cuts posed by sequestration could affect a wide range of federal programs in 2013, adding to the uncertainty that exists.

Federal Match Requirements

Most of the federal grants that UGPTI competes for require a substantial match. The University Transportation Centers (UTC) Program—a key source of funding for UGPTI—requires 100% non-federal match and the demonstration of a substantial “institutional commitment” from the university and state. Institutional commitment is, in fact, one of the selection criteria used by the U.S. Department of Transportation in awarding UTC grants.

Appropriated Funding Level and Expenditures

As shown in Table 1, UGPTI’s General Fund appropriation for the 2011-2013 biennium was approximately \$1.92 million. As of November 30, 2012, roughly 63% of these funds had been expended. The remainder will be expended by June 30, 2013. All carryover funds have been expended.

Table 1: Budgeted and Actual Expenditures for the 2011-2013 Biennium		
Funds	Biennium Budget	Expenditures to Date*
General Funds	\$1,919,628	\$1,209,658
2009-2011 Carryover	\$9,946	\$9,946
Federal Funds	\$17,665,513	\$6,724,409
Special/Other Funds	\$4,834,820	\$2,285,786
* Estimated through November 30, 2012		

One-Time Appropriation

A special study directive in Senate Bill 2325 provided \$350,000 “for the purpose of updating and maintaining reports for transportation infrastructure needs for all county and township roads in the state,” and directed the Upper Great Plains Transportation Institute to report “at least annually to the Budget Section of the Legislative Management” and “present updated reports to the Sixty-Third Legislative Assembly.”

The transportation infrastructure study has been completed and reports were presented to the Budget Section on September 20 and December 14, 2012. At the request of the Budget Section, the study has been broadened to include not only roads, but also an analysis of county and township bridges.

Federal Grants and Contracts

UGPTI's authority to collect and expend federal grants and contracts in the 2011-2013 biennium is \$17.67 million (Table 1). As of November 30, 2012, \$9.62 million of federal grants and contracts have been awarded to UGPTI and \$6.73 million in federal funds expended. As these numbers suggest, federal funding is lagging authorized collection levels.

Decreases in funding for UGPTI's transit and safety centers are primarily caused by the expiration of earmarks and reductions in the overall availability of funding from Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Federal Motor Carrier Safety Administration (FMCSA). In particular, a decrease in funding for UGPTI's Transportation Safety and Security Center is the result of severe budget constraints within FMCSA that resulted in the elimination of two UGPTI positions. While several federal grants or contracts are in process (including two University Transportation Center grants totally \$4.1 million), a shortfall of roughly \$3.5 million in federal grants and contracts is projected for the biennium.¹

Non-Federal Grants and Contracts

UGPTI's authority to collect and expend other grants and contracts is roughly \$4.84 million (Table 1). As of November 30, 2012, \$6.31 million of non-federal grants and contracts have been awarded to UGPTI and \$2.29 million expended. While roughly \$1.47 million of additional grants and contracts are projected for the remainder of the biennium, collections of non-federal funds for 2011-2013 are expected to be 20% to 25% less than budget authority.

Effects of State and Regional Factors

As a result of rapid oil development in the Bakken and growth in agriculture and other economic activities around the state, the demands for transportation infrastructure studies, workforce development, and training have increased significantly. The need for a greater presence in western North Dakota requires more in-state travel, greater time commitments from the director and staff, and more resources to meet time-sensitive demands. In 2012, UGPTI provided the legislature with a comprehensive analysis of county and township road investment needs and the North Dakota Department of Transportation with an enhanced model for estimating traffic demands in western North Dakota. In addition, UGPTI expanded its technical training program to help counties and cities cope with rapidly increasing truck traffic.

Impacts of Changes during the Biennium on UGPTI

The elimination of federal earmarks, the uncertainties posed by disjointed federal planning, and the cascading effects of federal changes on state and local agencies have impacted UGPTI's funding levels and threatened its stability. At the same time, increased workload demands and

¹ Some of the federal grants awarded to UGPTI are multi-year awards in which the funds will be expended in accordance with work progress over time—which affects planned rates of expenditures. Some of the grants already awarded will extend beyond the end of the biennium. In addition to these factors, the pace of grant and contract expenditures is affected by the availability of matching funds.

space limitations have posed challenges in scaling efforts and expanding staff to meet higher state and regional research demands.²

2013-2015 Budget Request

The 2013-2015 budget request for the Upper Great Plains Transportation Institute is summarized in Table 2. The executive recommendation of \$2,828,575 in General Funds includes \$750,000 for a priority budget initiative (discussed below). The executive recommendation also includes authorization for \$17,465,865 of Federal Funds and \$5,059,189 of Special Funds.

UGPTI's 2013-15 Priority Budget Option

As a result of winning two national competitions, UGPTI has been awarded University Transportation Center (UTC) grants of nearly \$8.4 million—roughly \$4 million of which is intended for use at NDSU, with the remainder going to NDSU's seven consortium partners. In March of 2013, UGPTI will be competing for an additional \$5.5 million in regional University Transportation Center funds. If UGPTI is successful in the upcoming competition, the Institute will have nearly \$2 million of additional UTC funds to utilize, based on existing allocation formulas with consortium universities. Overall, UGPTI may need to match as much as \$6 million of federal funds in the 2013-2015 biennium.

The additional funds requested would create a strong leveraging effect, because each General Fund dollar would enable the utilization of at least one grant dollar.³ Moreover, the additional funds would help offset the loss of earmarks and ensure stability for the Upper Great Plains Transportation Institute at a critical time, when the demand for infrastructure and transportation planning studies is at an all-time high. UGPTI's requested budget enhancement would provide a partial match for federal grants and offer many benefits to North Dakota.

- The requested funds would allow all available federal dollars to be utilized, significantly leveraging the state's investment in transportation research, education, and workforce development.
- The requested funds would increase the benefits of the UTC program to the state and region by allowing more activities to be undertaken with the grants.
- The requested funds would provide financial stability for the Upper Great Plains Transportation Institute, which is heavily dependent upon federal funds.
- The UTC grant requires the demonstration of a strong institutional commitment to the program. The requested general funds would send the strongest possible signal of a long-term institutional commitment to transportation research, education, and workforce development in North Dakota and thus help UGPTI in upcoming grant competitions.

² Increased demands have necessitated the reallocation of some recently vacated positions. In particular, one vacant position has been redefined as a transportation engineering position to help with road and bridge studies.

³ Because some industry matching funds are also anticipated, the leveraging effect is actually greater than 1:1.

Description	Expenditures Previous Biennium 2009-2011	Present Budget 2011-2013	2013-2015 Requested		Requested Budget 2013-2015	2013-2015 Recommended		Executive Recommendation 2013-2015
			Increase (Decrease)	% Change		Increase (Decrease)	% Change	
By Major Program								
Core Program	\$14,928,793	\$24,429,907	\$1,428,658	5.8%	\$25,858,565	\$923,722	3.8%	\$25,353,629
Total Major Programs	\$14,928,793	\$24,429,907	\$1,428,658	5.8%	\$25,858,565	\$923,722	3.8%	\$25,353,629
By Line Item								
Transportation Institute	\$14,928,793	\$24,419,961	\$1,438,604	5.9%	\$25,858,565	\$933,668	3.8%	\$25,353,629
Biennium Carryover	\$0	\$9,946	-\$9,946	(100.0%)	\$0	-\$9,946	(100.0%)	\$0
Total Line Items	\$14,928,793	\$24,429,907	\$1,428,658	5.8%	\$25,858,565	\$923,722	3.8%	\$25,353,629
By Funding Source								
General Fund	\$1,579,848	\$1,929,574	\$1,394,511	72.3%	\$3,324,085	\$899,001	46.6%	\$2,828,575
Federal Funds	\$12,591,692	\$17,665,513	-\$177,286	(1.0%)	\$17,488,227	-\$199,648	(1.1%)	\$17,465,865
Special Funds	\$757,253	\$4,834,820	\$211,433	4.4%	\$5,046,253	\$224,369	4.6%	\$5,059,189
Total Funding Source	\$14,928,793	\$24,429,907	\$1,428,658	5.8%	\$25,858,565	\$923,722	3.8%	\$25,353,629
Total FTE	52.30	51.75	2.00	3.9%	53.75	2.00	3.9%	53.75

Attachment 7.

March 14, 2013

SB2020

HOUSE APPROPRIATIONS COMMITTEE

March 14, 2013

2:00 p.m., Roughrider Room

**North Dakota Department of Transportation
Steve Salwei, Transportation Programs Director**

SB2020

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, determine economic impacts, and providing analysis on various transportation related topics. The services UGPTI provides are a valuable service 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.

Attachment 8.
March 14, 2013
SB 2020

SB 2020

Good morning, Mr. Chairman and members of the Appropriations Committee. My name is Julie Ellingson, and I represent the Stockmen's Association. We rise in support of SB 2020, recognizing the important role extension and research projects have on the competitiveness of our industry and the state's overall economy.

Stockmen's Association members have endorsed the State Board of Agricultural Research and Education's (SBARE) priority list. We are very grateful for the North Dakota Legislature's past support of people, programs and projects that have helped us move the needle in the beef industry, such as the recently dedicated Beef Cattle Research Complex.

The list of animal agriculture priorities that we offer for your consideration this year focuses on beefing up our people power, a one-time spending request and two smaller-ticket capital improvements.

On the Extension side, the *Livestock Development Initiative* is ranked no. 2 on the SBARE list and has two simple components:

- First is providing two area livestock specialists – one in Hettinger and the other in Streeter – to enhance Extension's ability to help beef producers curb marketing and production obstacles and capitalize on the opportunities that exist in our sector. It may surprise you that, despite Southwestern and South Central North Dakota being two of the significant beef-cattle-producing areas in our state, there are no livestock specialists located in these areas. Each offers unique geographic considerations that influence cattle ranchers' business models, and livestock experts in these communities can help us zero in on their unique features – like federal land and oil-impact issues in the west or grass-based and forage opportunities and Prairie Pothole considerations in the South Central corridor.

- Second is a programming enhancement in the area of livestock production economics. A comprehensive, statewide Beef Producer Survey conducted with the help

of North Dakota State University's Animal Science and Agribusiness Departments last year revealed several data points supporting this. In the survey, 43 percent of beef producers indicated that they needed additional information regarding production cost analyses and, thematically significant, that input costs are both the largest barrier to expansion and the most significant issue influencing industry exodus.

The governor's budget includes funding for one livestock specialist and the production economics piece.

On the experiment station side, there are several beef industry priorities we ask you to consider, including the no. 3 ranked *Livestock Initiative* that calls for fortification of our people power with scientists and operating and technical support for the Main Station and area research stations. Support of this area, of course, will help keep our scientists pumping out the research we rely on them for and best utilize their talents and the state-of-the-art facilities many of them work in.

In addition, we support the one-time funding request for the Veterinary Diagnostic Laboratory's equipment needs. The Diagnostic Lab does a great job identifying and preventing disease outbreaks in our animal herds, and keeping the lab's equipment up-to-date is critical to ensure its effectiveness, whether it is to test for livestock feed contaminations, chemical exposure or other disease areas.

And, finally, we support the no.-3-ranked livestock facilities capital improvement projects, to expand the Carrington Research Extension Center's multi-use feedlot and to erect a livestock processing barn at the Hettinger station.

The budget before you includes the Diagnostic Laboratory equipment and some technical support.

Thank you for keeping these livestock-industry priorities in mind as you contemplate this budget.

Testimony
North Dakota State Soil Conservation Committee
Senate Bill 2020
House Appropriations – Education and Environment Division

Attachment 9.

March 14, 2013

SB 2020

Chairman and Members of the House Appropriations – Education and Environment Division, my name is Tom Burau. 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. The Farm Security and Rural Investment Act of 2002 increased the conservation workload in all Soil Conservation Districts. 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 \$987,800 appropriated to 54 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 55 applications from Soil Conservation Districts requesting \$2,011,000 for the 2013-2015 Biennium.

As this legislative session proceeds the State Soil Conservation Committee would appreciate your consideration of increased funding 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.

Chairman and Members, Thank You for your support.

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2020

Page 1, remove lines 22 through 24

Page 2, replace lines 1 and 2 with:

"Extension service	\$47,026,654	\$3,306,689	\$50,333,343
Soil conservation committee	987,800	75,000	1,062,800
Accrued leave payments	<u>0</u>	<u>1,716,289</u>	<u>1,716,289</u>
Total all funds	\$48,014,454	\$5,097,978	\$53,112,432
Less estimated income	<u>23,128,810</u>	<u>1,431,810</u>	<u>24,560,620</u>
Total general fund	\$24,885,644	\$3,666,168	\$28,551,812"

Page 2, replace lines 8 through 10 with:

"Northern crops institute	\$3,347,307	\$444,213	\$3,791,520
Accrued leave payments	<u>0</u>	<u>42,195</u>	<u>42,195</u>
Total all funds	\$3,347,307	\$486,408	\$3,833,715
Less estimated income	<u>1,654,725</u>	<u>127,614</u>	<u>1,782,339</u>
Total general fund	\$1,692,582	\$358,794	\$2,051,376"

Page 2, after line 15 insert

Page 2, replace lines 24 through 27 with:

"Main research center	\$89,012,990	\$19,234,128	\$108,247,118
Accrued leave payments	<u>0</u>	<u>2,561,394</u>	<u>2,561,394</u>
Total all funds	\$89,012,990	\$21,795,522	\$110,808,512
Less estimated income	<u>41,630,644</u>	<u>11,841,303</u>	<u>53,471,947</u>
Total general fund	\$47,382,346	\$9,954,219	\$57,336,565
Full-time equivalent positions	349.01	2.48	351.49"

Page 3, replace lines 1 through 10 with:

"Dickinson research center	\$5,588,562	\$487,453	\$6,076,015
Central grasslands research center	2,865,847	341,369	3,207,216
Hettinger research center	3,373,175	1,261,401	4,634,576
Langdon research center	2,378,807	433,988	2,812,795
North central research center	4,399,821	162,575	4,562,396
Williston research center	3,410,089	316,898	3,726,987
Carrington research center	7,126,488	718,896	7,845,384
Accrued leave payments	<u>0</u>	<u>503,916</u>	<u>503,916</u>
Total all funds	\$29,142,789	\$4,226,496	\$33,369,285
Less estimated income	<u>14,997,581</u>	<u>963,849</u>	<u>15,961,430</u>
Total general fund	\$14,145,208	\$3,262,647	\$17,407,855"

Page 3, replace lines 16 and 17 with:

"Agronomy seed farm	\$1,435,168	\$23,681	\$1,458,849
Accrued leave payments	<u>0</u>	<u>5,741</u>	<u>5,741</u>
Total special funds	\$1,435,168	\$29,422	\$1,464,590"

Page 3, replace lines 23 through 25 with:

"Grand total general fund	\$90,025,408	\$19,369,645	\$109,395,053
Grand total special funds	<u>104,997,261</u>	<u>14,560,270</u>	<u>119,557,531</u>
Grand total all funds	\$195,022,669	\$33,929,915	\$228,952,584"

Page 4, replace line 5 with:

"Agronomy laboratories	0	6,000,000"
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Page 4, remove line 7

Page 4, replace lines 11 through 13 with:

"Total all funds	\$10,726,983	\$8,510,000
Total other funds	<u>2,852,931</u>	<u>1,950,000</u>
Total general fund	\$7,874,052	\$6,560,000"

Page 4, after line 25, insert:

"SECTION 4. DICKINSON RESEARCH EXTENSION CENTER - MINERAL RIGHTS INCOME. The Dickinson research extension center may spend revenues received from mineral royalties, leases, or easements only for one-time items and not for ongoing operational expenses, for the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 5, after line 4, insert:

"SECTION 7. EXTENSION SERVICE - NEW TECHNICAL SUPPORT FULL-TIME EQUIVALENT POSITION. The North Dakota state university extension service may utilize the new full-time equivalent technical support position recommended in the 2013-15 executive budget and included in subdivision 1 of section 1 of this Act, in either the weed science or potato program during the biennium beginning July 1, 2013, and ending June 30, 2015."

Page 5, line 16, remove **"MATCHING FUNDS"**

Page 5, line 27, replace "\$4,300,000" with "\$5,925,000"

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Summary of House Action

	Executive Budget	Senate Version	House Changes	House Version
Transportation Institute				
Total all funds	\$25,353,629	\$25,353,629	\$1,010,421	\$26,364,050
Less estimated income	<u>22,525,054</u>	<u>22,525,054</u>	(208,449)	<u>22,316,605</u>
General fund	\$2,828,575	\$2,828,575	\$1,218,870	\$4,047,445
Branch Research Centers				
Total all funds	\$33,746,878	\$33,746,878	(\$377,593)	\$33,369,285
Less estimated income	<u>16,021,866</u>	<u>16,021,866</u>	(60,436)	<u>15,961,430</u>
General fund	\$17,725,012	\$17,725,012	(\$317,157)	\$17,407,855
NDSU Extension Service				
Total all funds	\$54,088,058	\$54,288,058	(\$1,175,626)	\$53,112,432
Less estimated income	<u>25,437,414</u>	<u>24,987,414</u>	(426,794)	<u>24,560,620</u>
General fund	\$28,650,644	\$29,300,644	(\$748,832)	\$28,551,812

Northern Crops Institute				
Total all funds	\$3,874,651	\$3,874,651	(\$40,936)	\$3,833,715
Less estimated income	1,800,307	1,800,307	(17,968)	1,782,339
General fund	\$2,074,344	\$2,074,344	(\$22,968)	\$2,051,376
Main Research Center				
Total all funds	\$110,293,322	\$112,320,622	(\$1,512,110)	\$110,808,512
Less estimated income	53,255,585	53,255,585	216,362	53,471,947
General fund	\$57,037,737	\$59,065,037	(\$1,728,472)	\$57,336,565
Agronomy Seed Farm				
Total all funds	\$1,474,961	\$1,474,961	(\$10,371)	\$1,464,590
Less estimated income	1,474,961	1,474,961	(10,371)	1,464,590
General fund	\$0	\$0	\$0	\$0
Bill total				
Total all funds	\$228,831,499	\$231,058,799	(\$2,106,215)	\$228,952,584
Less estimated income	120,515,187	120,065,187	(507,656)	119,557,531
General fund	\$108,316,312	\$110,993,612	(\$1,598,559)	\$109,395,053

Senate Bill No. 2020 - Transportation Institute - House Action

	Executive Budget	Senate Version	House Changes	House Version
Upper Great Plains Trans. Institute	\$25,353,629	\$25,353,629	\$768,794	\$26,122,423
Accrued leave payments			241,627	241,627
Total all funds	\$25,353,629	\$25,353,629	\$1,010,421	\$26,364,050
Less estimated income	22,525,054	22,525,054	(208,449)	22,316,605
General fund	\$2,828,575	\$2,828,575	\$1,218,870	\$4,047,445
FTE	53.75	53.75	0.00	53.75

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

	Adjusts State Employee Compensation and Benefits Package ¹	Removes Separate Line Item for Accrued Leave Payments ²	Increases Funding for Matching Grants ³	Total House Changes
Upper Great Plains Trans. Institute	(\$239,579)	(\$241,627)	\$1,250,000	\$768,794
Accrued leave payments		241,627		241,627
Total all funds	(\$239,579)	\$0	\$1,250,000	\$1,010,421
Less estimated income	(208,449)	0	0	(208,449)
General fund	(\$31,130)	\$0	\$1,250,000	\$1,218,870
FTE	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$42,266) and from other funds (\$199,361) for permanent employees compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment increases funding to match new federal grants received by the agency to provide a total of \$2 million, all of which is from the general fund.

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

	Executive Budget	Senate Version	House Changes	House Version
Dickinson Research Center	\$6,231,325	\$6,231,325	(\$155,310)	\$6,076,015
Central Grasslands Research Center	3,297,559	3,297,559	(90,343)	3,207,216
Hettinger Research Center	4,746,234	4,746,234	(111,658)	4,634,576
Langdon Research Center	2,886,763	2,886,763	(73,968)	2,812,795
North Central Research Center	4,661,679	4,661,679	(99,283)	4,562,396
Williston Research Center	3,869,023	3,869,023	(142,036)	3,726,987
Carrington Research Center	8,054,295	8,054,295	(208,911)	7,845,384
Accrued leave payments			503,916	503,916
Total all funds	\$33,746,878	\$33,746,878	(\$377,593)	\$33,369,285
Less estimated income	16,021,866	16,021,866	(60,436)	15,961,430
General fund	\$17,725,012	\$17,725,012	(\$317,157)	\$17,407,855
FTE	107.04	107.04	0.00	107.04

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

	Adjusts State Employee Compensation and Benefits Package¹	Provides Separate Line Item for Accrued Leave Payments²	Total House Changes
Dickinson Research Center	(\$68,302)	(\$87,008)	(\$155,310)
Central Grasslands Research Center	(38,980)	(51,363)	(90,343)
Hettinger Research Center	(47,485)	(64,173)	(111,658)
Langdon Research Center	(32,828)	(41,140)	(73,968)
North Central Research Center	(39,332)	(59,951)	(99,283)
Williston Research Center	(64,653)	(77,383)	(142,036)
Carrington Research Center	(86,013)	(122,898)	(208,911)
Accrued leave payments		503,916	503,916
Total all funds	(\$377,593)	\$0	(\$377,593)
Less estimated income	(60,436)	0	(60,436)
General fund	(\$317,157)	\$0	(\$317,157)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$407,680) and from other funds (\$96,236) for permanent employees compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees for each branch center as follows:

Branch Research Centers	General Fund	Estimated Income	Total
Dickinson Research Center	(\$70,391)	(\$16,617)	(\$87,008)
Central Grasslands Research Center	(41,554)	(9,809)	(51,363)
Hettinger Research Center	(51,917)	(12,256)	(64,173)
Langdon Research Center	(33,283)	(7,857)	(41,140)
North Central Research Center	(48,502)	(11,449)	(59,951)
Williston Research Center	(62,604)	(14,779)	(77,383)
Carrington Research Center	(99,429)	(23,469)	(122,898)
Accrued leave payments	407,680	96,236	503,916

A section is added providing that Dickinson Research Extension Center may only spend revenue from mineral royalties, leases, or easements for one-time items and not for operations during the 2013-15 biennium.

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

	Executive Budget	Senate Version	House Changes	House Version
Extension Service	\$53,025,258	\$53,150,258	(\$2,816,915)	\$50,333,343
Soil Conservation Committee	1,062,800	1,137,800	(75,000)	1,062,800
Accrued leave payments			1,716,289	1,716,289
Total all funds	\$54,088,058	\$54,288,058	(\$1,175,626)	\$53,112,432
Less estimated income	25,437,414	24,987,414	(426,794)	24,560,620
General fund	\$28,650,644	\$29,300,644	(\$748,832)	\$28,551,812
FTE	258.26	258.26	0.00	258.26

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Partial Salary Support ³	Reduces Funding for Soil Conservation Committee ⁴	Provides Funding for Burleigh County Extension Service Summer Internships ⁵	Total House Changes
Extension Service	(\$865,626)	(\$1,716,289)	(\$260,000)		\$25,000	(\$2,816,915)
Soil Conservation Committee				(75,000)		(75,000)
Accrued leave payments		1,716,289				1,716,289
Total all funds	(\$865,626)	\$0	(\$260,000)	(\$75,000)	\$25,000	(\$1,175,626)
Less estimated income	(426,794)	0	0	0	0	(426,794)
General fund	(\$438,832)	\$0	(\$260,000)	(\$75,000)	\$25,000	(\$748,832)
FTE	0.00	0.00	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$852,203) and from other funds (\$864,086) for permanent employees compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes funding included in the executive budget to provide partial general fund salary support for the following existing positions:

- Integrated pest management and plant diagnostic laboratory coordinator.
- State water quality specialist.

⁴ This amendment removes funding added by the Senate for Soil Conservation Committee operations.

⁵ This amendment provides funding for salaries and wages for a Junior Master Gardener internship program through the Burleigh County Extension Service for the summer of 2013 and the summer of

2014.

This amendment provides the NDSU Extension Service flexibility to use the new FTE technical support position, recommended in the executive budget, in either the weed science or potato program.

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

	Executive Budget	Senate Version	House Changes	House Version
Northern Crops Institute	\$3,874,651	\$3,874,651	(\$83,131)	\$3,791,520
Accrued leave payments			42,195	42,195
Total all funds	\$3,874,651	\$3,874,651	(\$40,936)	\$3,833,715
Less estimated income	1,800,307	1,800,307	(17,968)	1,782,339
General fund	\$2,074,344	\$2,074,344	(\$22,968)	\$2,051,376
FTE	12.00	12.00	0.00	12.00

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

	Adjusts State Employee Compensation and Benefits Package¹	Provides Separate Line Item for Accrued Leave Payments²	Total House Changes
Northern Crops Institute	(\$40,936)	(\$42,195)	(\$83,131)
Accrued leave payments		42,195	42,195
Total all funds	(\$40,936)	\$0	(\$40,936)
Less estimated income	(17,968)	0	(17,968)
General fund	(\$22,968)	\$0	(\$22,968)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$37,172) and from other funds (\$5,023) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

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

	Executive Budget	Senate Version	House Changes	House Version
Main Research Center	\$110,293,322	\$112,320,622	(\$4,073,504)	\$108,247,118
Accrued leave payments			2,561,394	2,561,394
Total all funds	\$110,293,322	\$112,320,622	(\$1,512,110)	\$110,808,512
Less estimated income	53,255,585	53,255,585	216,362	53,471,947
General fund	\$57,037,737	\$59,065,037	(\$1,728,472)	\$57,336,565
FTE	351.49	351.99	(0.50)	351.49

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

	Adjusts State Employee Compensation and Benefits Package ¹	Provides Separate Line Item for Accrued Leave Payments ²	Removes Funding for Oil-Impacted Centers ³	Reduces Funding for Flooded Lands Study ⁴	Adjusts Funding for Capital Projects ⁵	Removes Animal Science Position ⁶
Main Research Center Accrued leave payments	(\$1,331,810)	(\$2,561,394) 2,561,394	(\$100,000)	(\$80,300)		
Total all funds	(\$1,331,810)	\$0	(\$100,000)	(\$80,300)	\$0	\$0
Less estimated income	(783,638)	0	0	0	1,000,000	0
General fund	(\$548,172)	\$0	(\$100,000)	(\$80,300)	(\$1,000,000)	\$0
FTE	0.00	0.00	0.00	0.00	0.00	(0.50)

	Total House Changes
Main Research Center Accrued leave payments	(\$4,073,504) 2,561,394
Total all funds	(\$1,512,110)
Less estimated income	216,362
General fund	(\$1,728,472)
FTE	(0.50)

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$1,748,140) and from other funds (\$813,254) for permanent employees compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes the funding added by the Senate for oil-impacted research extension centers for housing allowances or hiring bonuses.

⁴ This amendment reduces the funding added by the Senate for the research relating to the recovery of grasslands affected by Souris River flooding to provide a total of \$82,000, all of which is from the general fund.

⁵ This amendment:

- Provides a total of \$5.925 million for replacement of agronomy laboratories, the same as the Senate version and \$1,625,000 more than the executive budget.
- Reduces funding from the general fund for the replacement of agronomy laboratories to provide a total of \$4.925 million, \$1,000,000 less than the Senate version but \$625,000 more than the executive budget.
- Provides authority for the agency to raise funds from the private industry of up to \$1 million for all of the agronomy laboratory projects. Neither the Senate nor the executive budget included other funds for the projects.

⁶ The .5 FTE animal science position added by the Senate is removed. The funding of \$140,000 from the general fund added by the Senate relating to the position is not changed.

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

	Executive Budget	Senate Version	House Changes	House Version
Agronomy Seed Farm	\$1,474,961	\$1,474,961	(\$16,112)	\$1,458,849

Accrued leave payments			5,741	5,741
Total all funds	\$1,474,961	\$1,474,961	(\$10,371)	\$1,464,590
Less estimated income	1,474,961	1,474,961	(10,371)	1,464,590
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 State Employee Compensation and Benefits Package¹	Provides Separate Line Item for Accrued Leave Payments²	Total House Changes
Agronomy Seed Farm	(\$10,371)	(\$5,741)	(\$16,112)
Accrued leave payments		5,741	5,741
Total all funds	(\$10,371)	\$0	(\$10,371)
Less estimated income	(10,371)	0	(10,371)
General fund	\$0	\$0	\$0
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from other funds (\$5,741) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2020 - Funding Summary

	Executive Budget	Senate Version	House Changes	House Version
Transportation Institute				
Upper Great Plains	\$25,353,629	\$25,353,629	\$768,794	\$26,122,423
Transportation Institute				
Accrued leave payments			241,627	241,627
Total all funds	\$25,353,629	\$25,353,629	\$1,010,421	\$26,364,050
Less estimated income	22,525,054	22,525,054	(208,449)	22,316,605
General fund	\$2,828,575	\$2,828,575	\$1,218,870	\$4,047,445
FTE	53.75	53.75	0.00	53.75
Branch Research Centers				
Dickinson Research Center	\$6,231,325	\$6,231,325	(\$155,310)	\$6,076,015
Central Grasslands Research Center	3,297,559	3,297,559	(90,343)	3,207,216
Hettinger Research Center	4,746,234	4,746,234	(111,658)	4,634,576
Langdon Research Center	2,886,763	2,886,763	(73,968)	2,812,795
North Central Research Center	4,661,679	4,661,679	(99,283)	4,562,396
Williston Research Center	3,869,023	3,869,023	(142,036)	3,726,987
Carrington Research Center	8,054,295	8,054,295	(208,911)	7,845,384
Accrued leave payments			503,916	503,916
Total all funds	\$33,746,878	\$33,746,878	(\$377,593)	\$33,369,285
Less estimated income	16,021,866	16,021,866	(60,436)	15,961,430
General fund	\$17,725,012	\$17,725,012	(\$317,157)	\$17,407,855
FTE	107.04	107.04	0.00	107.04
NDSU Extension Service				
Extension Service	\$53,025,258	\$53,150,258	(\$2,816,915)	\$50,333,343
Soil Conservation Committee	1,062,800	1,137,800	(75,000)	1,062,800
Accrued leave payments			1,716,289	1,716,289
Total all funds	\$54,088,058	\$54,288,058	(\$1,175,626)	\$53,112,432
Less estimated income	25,437,414	24,987,414	(426,794)	24,560,620
General fund	\$28,650,644	\$29,300,644	(\$748,832)	\$28,551,812
FTE	258.26	258.26	0.00	258.26
Northern Crops Institute				
Northern Crops Institute	\$3,874,651	\$3,874,651	(\$83,131)	\$3,791,520
Accrued leave payments			42,195	42,195
Total all funds	\$3,874,651	\$3,874,651	(\$40,936)	\$3,833,715
Less estimated income	1,800,307	1,800,307	(17,968)	1,782,339
General fund	\$2,074,344	\$2,074,344	(\$22,968)	\$2,051,376
FTE	12.00	12.00	0.00	12.00
Main Research Center				
Main Research Center	\$110,293,322	\$112,320,622	(\$4,073,504)	\$108,247,118
Accrued leave payments			2,561,394	2,561,394
Total all funds	\$110,293,322	\$112,320,622	(\$1,512,110)	\$110,808,512
Less estimated income	53,255,585	53,255,585	216,362	53,471,947
General fund	\$57,037,737	\$59,065,037	(\$1,728,472)	\$57,336,565
FTE	351.49	351.99	(0.50)	351.49
Agronomy Seed Farm				
Agronomy Seed Farm	\$1,474,961	\$1,474,961	(\$16,112)	\$1,458,849
Accrued leave payments			5,741	5,741

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Total all funds	\$1,474,961	\$1,474,961	(\$10,371)	\$1,464,590
Less estimated income	1,474,961	1,474,961	(10,371)	1,464,590
General fund	\$0	\$0	\$0	\$0
FTE	3.00	3.00	0.00	3.00
Bill Total				
Total all funds	\$228,831,499	\$231,058,799	(\$2,106,215)	\$228,952,584
Less estimated income	120,515,187	120,065,187	(507,656)	119,557,531
General fund	\$108,316,312	\$110,993,612	(\$1,598,559)	\$109,395,053
FTE	785.54	786.04	(0.50)	785.54

Senate Bill No. 2020 - Transportation Institute - Senate Action

The Senate did not change the executive recommendation for the Upper Great Plains Transportation Institute.

Senate Bill No. 2020 - Transportation Institute - House Action

	Executive Budget	Senate Version	House Changes	House Version
Upper Great Plains Trans. Institute	\$25,353,629	\$25,353,629	\$768,794	\$26,122,423
Accrued leave payments			241,627	241,627
Total all funds	\$25,353,629	\$25,353,629	\$1,010,421	\$26,364,050
Less estimated income	22,525,054	22,525,054	(208,449)	22,316,605
General fund	\$2,828,575	\$2,828,575	\$1,218,870	\$4,047,445
FTE	53.75	53.75	0.00	53.75

Department 627 - Transportation Institute - Detail of House Changes

	Adjusts State Employee Compensation and Benefits Package ¹	Removes Separate Line Item for Accrued Leave Payments ²	Increases Funding for Matching Grants ³	Total House Changes
Upper Great Plains Trans. Institute	(239,579)	(241,627)	1,250,000	768,794
Accrued leave payments		241,627		241,627
Total all funds	(\$239,579)	\$0	\$1,250,000	\$1,010,421
Less estimated income	(208,449)	0	0	(208,449)
General fund	(\$31,130)	\$0	\$1,250,000	\$1,218,870
FTE	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$42,266) and from other funds (\$199,361) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment increases funding to match new federal grants received by the agency to provide a total of \$2 million, all of which is from the general fund. This increase of \$1.25 million added by the House is one-time funding.

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

The Senate did not change the executive recommendation for the Branch Research Centers.

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

	Executive Budget	Senate Version	House Changes	House Version
Dickinson Research Center	\$6,231,325	\$6,231,325	(\$155,310)	\$6,076,015
Central Grasslands Research Center	3,297,559	3,297,559	(90,343)	3,207,216
Hettinger Research Center	4,746,234	4,746,234	(111,658)	4,634,576
Langdon Research Center	2,886,763	2,886,763	(73,968)	2,812,795
North Central Research Center	4,661,679	4,661,679	(99,283)	4,562,396
Williston Research Center	3,869,023	3,869,023	(142,036)	3,726,987
Carrington Research Center	8,054,295	8,054,295	(208,911)	7,845,384
Accrued leave payments			503,916	503,916
Total all funds	\$33,746,878	\$33,746,878	(\$377,593)	\$33,369,285
Less estimated income	16,021,866	16,021,866	(60,436)	15,961,430
General fund	\$17,725,012	\$17,725,012	(\$317,157)	\$17,407,855
FTE	107.04	107.04	0.00	107.04

Department 628 - Branch Research Centers - Detail of House Changes

	Adjusts State Employee Compensation and Benefits Package¹	Provides Separate Line Item for Accrued Leave Payments²	Total House Changes
Dickinson Research Center	(68,302)	(87,008)	(155,310)
Central Grasslands Research Center	(38,980)	(51,363)	(90,343)
Hettinger Research Center	(47,485)	(64,173)	(111,658)
Langdon Research Center	(32,828)	(41,140)	(73,968)
North Central Research Center	(39,332)	(59,951)	(99,283)
Williston Research Center	(64,653)	(77,383)	(142,036)
Carrington Research Center	(86,013)	(122,898)	(208,911)
Accrued leave payments		503,916	503,916
Total all funds	(\$377,593)	\$0	(\$377,593)
Less estimated income	(60,436)	0	(60,436)
General fund	(\$317,157)	\$0	(\$317,157)
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$407,680) and from other funds (\$96,236) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees for each branch center as follows:

Branch Research Centers	General Fund	Estimated Income	Total
Dickinson Research Center	(\$70,391)	(\$16,617)	(\$87,008)
Central Grasslands Research Center	(41,554)	(9,809)	(51,363)
Hettinger Research Center	(51,917)	(12,256)	(64,173)
Langdon Research Center	(33,283)	(7,857)	(41,140)
North Central Research Center	(48,502)	(11,449)	(59,951)
Williston Research Center	(62,604)	(14,779)	(77,383)
Carrington Research Center	(99,429)	(23,469)	(122,898)
Accrued leave payments	407,680	96,236	503,916

A section is added providing that the Dickinson Research Extension Center may only spend revenue from mineral royalties, leases, or easements for one-time items and not for operations during the 2013-15 biennium.

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

	Executive Budget	Senate Changes	Senate Version
Extension Service	\$53,025,258	\$125,000	\$53,150,258
Soil Conservation Committee	1,062,800	75,000	1,137,800
Total all funds	\$54,088,058	\$200,000	\$54,288,058
Less estimated income	25,437,414	(450,000)	24,987,414
General fund	\$28,650,644	\$650,000	\$29,300,644
FTE	258.26	0.00	258.26

Department 630 - NDSU Extension Service - Detail of Senate Changes

	Changes Funding Source for 4-H Camp ¹	Increases Funding to Soil Conservation Committee ²	Provides Funding to Rural Leadership North Dakota ³	Total Senate Changes
Extension Service			125,000	125,000
Soil Conservation Committee		75,000		75,000
Total all funds	\$0	\$75,000	\$125,000	\$200,000
Less estimated income	(450,000)	0	0	(450,000)
General fund	\$450,000	\$75,000	\$125,000	\$650,000
FTE	0.00	0.00	0.00	0.00

¹ The source of funding for the NDSU Extension Service 4-H camp project is changed to provide a total of \$1.9 million, \$950,000 of which is from the general fund and \$950,000 from special funds. The executive budget provided a total of \$1.9 million, of which \$500,000 is from the general fund and \$1.4 million from special funds.

² Funding to the Soil Conservation Committee is increased to provide a total of \$150,000.

³ Funding is provided for the Rural Leadership North Dakota program.

Section 8 is changed to remove the matching requirement for the summer internship program and to allow the funds to also be used for the agents-in-training program.

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

	Executive Budget	Senate Version	House Changes	House Version
Extension Service	\$53,025,258	\$53,150,258	(\$2,816,915)	\$50,333,343
Soil Conservation Committee	1,062,800	1,137,800	(75,000)	1,062,800
Accrued leave payments			1,716,289	1,716,289
Total all funds	\$54,088,058	\$54,288,058	(\$1,175,626)	\$53,112,432
Less estimated income	25,437,414	24,987,414	(426,794)	24,560,620
General fund	\$28,650,644	\$29,300,644	(\$748,832)	\$28,551,812
FTE	258.26	258.26	0.00	258.26

Department 630 - NDSU Extension Service - Detail of House Changes

	Adjusts State Employee Compensation and Benefits Package¹	Provides Separate Line Item for Accrued Leave Payments²	Removes Funding for Partial Salary Support³	Reduces Funding for Soil Conservation Committee⁴	Provides Funding for Burleigh County Extension Service Summer Internships⁵	Total House Changes
Extension Service	(865,626)	(1,716,289)	(260,000)		25,000	(2,816,915)
Soil Conservation Committee				(75,000)		(75,000)
Accrued leave payments		1,716,289				1,716,289
Total all funds	(\$865,626)	\$0	(\$260,000)	(\$75,000)	\$25,000	(\$1,175,626)
Less estimated income	(426,794)	0	0	0	0	(426,794)
General fund	(\$438,832)	\$0	(\$260,000)	(\$75,000)	\$25,000	(\$748,832)
FTE	0.00	0.00	0.00	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$852,203) and from other funds (\$864,086) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes funding included in the executive budget to provide partial general fund salary support for the following existing positions:

- Integrated pest management and plant diagnostic laboratory coordinator.
- State water quality specialist.

⁴ This amendment removes funding added by the Senate for Soil Conservation Committee operations.

⁵ This amendment provides funding for salaries and wages for a junior master gardener internship program through the Burleigh County Extension Service for the summer of 2013 and the summer of 2014.

This amendment provides the NDSU Extension Service flexibility to use the new FTE technical support position, recommended in the executive budget, in either the weed science or potato program.

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

The Senate did not change the executive recommendation for the Northern Crops Institute.

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

	Executive Budget	Senate Version	House Changes	House Version
Northern Crops Institute	\$3,874,651	\$3,874,651	(\$83,131)	\$3,791,520
Accrued leave payments			42,195	42,195
Total all funds	<u>\$3,874,651</u>	<u>\$3,874,651</u>	<u>(\$40,936)</u>	<u>\$3,833,715</u>
Less estimated income	1,800,307	1,800,307	(17,968)	1,782,339
General fund	<u>\$2,074,344</u>	<u>\$2,074,344</u>	<u>(\$22,968)</u>	<u>\$2,051,376</u>
FTE	12.00	12.00	0.00	12.00

Department 638 - Northern Crops Institute - Detail of House Changes

	Adjusts State Employee Compensation and Benefits Package¹	Provides Separate Line Item for Accrued Leave Payments²	Total House Changes
Northern Crops Institute	(40,936)	(42,195)	(83,131)
Accrued leave payments		42,195	42,195
Total all funds	<u>(\$40,936)</u>	<u>\$0</u>	<u>(\$40,936)</u>
Less estimated income	(17,968)	0	(17,968)
General fund	<u>(\$22,968)</u>	<u>\$0</u>	<u>(\$22,968)</u>
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$37,172) and from other funds (\$5,023) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

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

	Executive Budget	Senate Changes	Senate Version
Main Research Center	\$110,293,322	\$2,027,300	\$112,320,622
Total all funds	<u>\$110,293,322</u>	<u>\$2,027,300</u>	<u>\$112,320,622</u>
Less estimated income	53,255,585	0	53,255,585
General fund	<u>\$57,037,737</u>	<u>\$2,027,300</u>	<u>\$59,065,037</u>
FTE	351.49	0.50	351.99

Department 640 - Main Research Center - Detail of Senate Changes

	Provides Funding for Capital Projects¹	Provides Funding for Oil-Impacted Centers²	Adds Animal Science Position³	Provides Funding for Flooded Lands Study⁴	Total Senate Changes
Main Research Center	1,625,000	100,000	140,000	162,300	2,027,300
Total all funds	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
Less estimated income	0	0	0	0	0
General fund	\$1,625,000	\$100,000	\$140,000	\$162,300	\$2,027,300
FTE	0.00	0.00	0.50	0.00	0.50

¹ One-time funding is added for replacing the agronomy laboratories at the Langdon and Central Grasslands Research Extension Center locations.

² A funding pool of \$100,000 is added for housing allowances or hiring bonuses for employees at the North Central, Dickinson, and Williston Research Extension Centers.

³ Funding for a new .50 FTE animal science position is added.

⁴ Funding is provided for conducting research relating to the recovery of grasslands affected by Souris River flooding.

This amendment adds a section relating to the State Board of Agricultural Research and Education needs-based budget request.

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

	Executive Budget	Senate Version	House Changes	House Version
Main Research Center	\$110,293,322	\$112,320,622	(\$4,073,504)	\$108,247,118
Accrued leave payments			2,561,394	2,561,394
Total all funds	\$110,293,322	\$112,320,622	(\$1,512,110)	\$110,808,512
Less estimated income	53,255,585	53,255,585	216,362	53,471,947
General fund	\$57,037,737	\$59,065,037	(\$1,728,472)	\$57,336,565
FTE	351.49	351.99	(0.50)	351.49

Department 640 - Main Research Center - Detail of House Changes

	Adjusts State Employee Compensation and Benefits Package¹	Provides Separate Line Item for Accrued Leave Payments²	Removes Funding for Oil-Impacted Centers³	Reduces Funding for Flooded Lands Study⁴	Adjusts Funding for Capital Projects⁵	Removes Animal Science Position⁶
Main Research Center	(1,331,810)	(2,561,394)	(100,000)	(80,300)		
Accrued leave payments		2,561,394				
Total all funds	(\$1,331,810)	\$0	(\$100,000)	(\$80,300)	\$0	\$0
Less estimated income	(783,638)	0	0	0	1,000,000	0
General fund	(\$548,172)	\$0	(\$100,000)	(\$80,300)	(\$1,000,000)	\$0
FTE	0.00	0.00	0.00	0.00	0.00	(0.50)

	Total House Changes
Main Research Center	(4,073,504)
Accrued leave payments	2,561,394
Total all funds	(\$1,512,110)
Less estimated income	216,362
General fund	(\$1,728,472)
FTE	(0.50)

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from the general fund (\$1,748,140) and from other funds (\$813,254) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

³ This amendment removes the funding added by the Senate for oil-impacted research extension centers for housing allowances or hiring bonuses.

⁴ This amendment reduces the funding added by the Senate for the research relating to the recovery of grasslands affected by Souris River flooding to provide a total of \$82,000, all of which is from the general fund.

⁵ This amendment:

- Provides a total of \$5,925,000 for replacement of agronomy laboratories, the same as the Senate version and \$1,625,000 more than the executive budget.
- Reduces funding from the general fund for the replacement of agronomy laboratories to provide a total of \$4,925,000, \$1,000,000 less than the Senate version but \$625,000 more than the executive budget.
- Provides authority for the agency to raise funds from the private industry of up to \$1 million for all of the agronomy laboratory projects. Neither the Senate nor the executive budget included other funds for the projects.

⁶ The .5 FTE animal science position added by the Senate is removed. The funding of \$140,000 from the general fund added by the Senate relating to the position is not changed.

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

The Senate did not change the executive recommendation for the Agronomy Seed Farm.

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

	Executive Budget	Senate Version	House Changes	House Version
Agronomy Seed Farm	\$1,474,961	\$1,474,961	(\$16,112)	\$1,458,849
Accrued leave payments			5,741	5,741
Total all funds	<u>\$1,474,961</u>	<u>\$1,474,961</u>	<u>(\$10,371)</u>	<u>\$1,464,590</u>
Less estimated income	1,474,961	1,474,961	(10,371)	1,464,590
General fund	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
FTE	3.00	3.00	0.00	3.00

Department 649 - Agronomy Seed Farm - Detail of House Changes

	Adjusts State Employee Compensation and Benefits Package¹	Provides Separate Line Item for Accrued Leave Payments²	Total House Changes
Agronomy Seed Farm	(10,371)	(5,741)	(16,112)
Accrued leave payments	<u> </u>	<u>5,741</u>	<u>5,741</u>
Total all funds	(\$10,371)	\$0	(\$10,371)
Less estimated income	<u>(10,371)</u>	<u>0</u>	<u>(10,371)</u>
General fund	\$0	\$0	\$0
FTE	0.00	0.00	0.00

¹ This amendment adjusts the state employee compensation and benefits package as follows:

- Reduces the performance component from 3 to 5 percent per year to 2 to 4 percent per year.
- Reduces the market component from 2 to 4 percent per year for employees below the midpoint of their salary range to up to 2 percent for employees in the first quartile of their salary range for the first year of the biennium only.
- Removes funding for additional retirement contribution increases.

² A portion of salaries and wages funding from other funds (\$5,741) for permanent employees' compensation and benefits is reallocated to an accrued leave payments line item for paying annual leave and sick leave for eligible employees.

Senate Bill No. 2020 - Other Changes - House Action

Section 8 is amended to remove the general fund carryover authority.

Dickinson Research Extension Center Oil Revenue

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05-07 Biennium

07/2005	08/2005	09/2005	10/2005	11/2005	12/2005	01/2006	02/2006	03/2006	04/2006	05/2006	06/2006	FY 06 Total
36,728.87	40,628.30	87,034.79	41,868.27	-	73,465.16	736.68	130,360.26	64,624.40	-	102,853.31	27,950.00	606,250.04
07/2006	08/2006	09/2006	10/2006	11/2006	12/2006	01/2007	02/2007	03/2007	04/2007	05/2007	06/2007	FY 07 Total
75,257.98	41,393.25	104,516.93	-	28,952.63	54,042.99	48,637.34	21,378.69	55,667.45	588.78	77,286.67	25,043.68	532,766.39
05 - 07 Actual												1,139,016.43

07-09 Biennium

07/2007	08/2007	09/2007	10/2007	11/2007	12/2007	01/2008	02/2008	03/2008	04/2008	05/2008	06/2008	FY 08 Total
16,744.35	86,668.03	736.23	30,015.47	85,136.38	34,560.12	36,732.17	48,201.69	37,571.87	33,812.40	104,229.65	118,609.61	633,017.97
07/2008	08/2008	09/2008	10/2008	11/2008	12/2008	01/2009	02/2009	03/2009	04/2009	05/2009	06/2009	FY 09 Total
50,243.13	47,964.81	49,750.33	43,082.99	33,797.28	110,057.76	14,507.02	9,332.50	23,175.62	9,324.91	-	43,064.01	434,300.36
07 - 09 Actual												1,067,318.33
Perm Oil Tax Trust Fund Appn (OT)												750,000.00
Grand Total Available												1,817,318.33

09-11 Biennium

07/2009	08/2009	09/2009	10/2009	11/2009	12/2009	01/2010	02/2010	03/2010	04/2010	05/2010	06/2010	FY 10 Total
24,608.12	518.43	69,612.84	-	35,411.42	25,481.58	62,368.93	557.90	37,744.49	17,965.09	591.59	50,363.18	325,223.57
07/2010	08/2010	09/2010	10/2010	11/2010	12/2010	01/2011	02/2011	03/2011	04/2011	05/2011	06/2011	FY 11 Total
545.78	57,421.89	17,055.63	577.13	519.54	34,582.39	76,640.11	612.35	57,365.59	18,117.08	22,885.69	25,552.55	311,875.73
09 - 11 Actual												637,099.30
Perm Oil Tax Trust Fund Appn (OT)												925,000.00
Grand Total Available												1,562,099.30

11-13 Biennium

07/2011	08/2011	09/2011	10/2011	11/2011	12/2011	01/2012	02/2012	03/2012	04/2012	05/2012	06/2012	FY 12 Total
582.83	116,112.54	327.04	19,866.72	949.46	541.06	38,425.68	641.17	136,409.16	25.81	35,581.32	15,944.58	365,407.37
07/2012	08/2012	09/2012	10/2012	11/2012	12/2012	01/2013	02/2013	03/2013	04/2013	05/2013	06/2013	FY 13 Total
16,520.46	447.96	96,368.82	16,480.66									129,817.90
11 - 13 Actual + Projected												495,225.27
Perm Oil Tax Trust Fund Appn (OT)												800,000.00
Grand Total Available												1,295,225.27

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**State Soil Conservation Committee
Soil Conservation District Assistance Program Allocation
For 2011-2013 Biennium**

*Brittini Reim #1
5B2020
4-22-13*

Soil Conservation Districts	SSCC Allocation
Cedar	\$19,500
Adams Co.	\$19,500
Golden Valley	\$19,500
Grant Co.	\$19,500
Slope-Hettinger	\$19,500
North Central (Benson Co.)	\$19,500
Wells Co.	\$19,500
Dunn Co.	\$19,500
LaMoure Co.	\$19,500
Rolette Co.	\$19,500
Mountrail	\$19,500
Renville Co.	\$19,500
Towner Co.	\$19,500
Burke	\$19,500
Divide Co.	\$19,500
Ransom Co.	\$19,500
Oliver	\$19,500
Steele Co.	\$19,500
Pembina Co.	\$19,500
Eddy Co.	\$19,500
South McLean Co.	\$19,500
Griggs Co.	\$19,500
North McHenry Co.	\$19,500
Bowman-Slope	\$19,500
Central Stark Co.	\$19,500
Turtle Mountain (Bottineau Co.)	\$19,500
Nelson Co.	\$4,500
West McLean Co.	\$19,500
Foster Co.	\$19,500
Sheridan Co.	\$19,500
McIntosh Co.	\$19,500
Wild Rice (Sargent Co.)	\$19,500
McKenzie Co.	\$19,500
Kidder Co.	\$19,500
Logan Co.	\$19,500
Mouse River (Bottineau Co.)	\$19,500
Cavalier Co.	\$14,500
South McHenry Co.	\$19,500
James River (Dickey Co.)	\$19,500
Pierce Co.	\$19,500
Western	\$19,500
Walsh Co. Three Rivers	\$19,500
Mercer Co.	\$19,500
Williams Co.	\$19,500
Barnes Co.	\$19,500
Morton Co.	\$19,500
Ramsey Co.	\$19,500
Trail Co.	\$4,500
Richland Co.	\$14,750
Grand Forks Co.	\$14,500
Stutsman Co.	\$14,750
Emmons Co.	\$14,750
Burleigh Co.	\$14,025
Cass Co.	\$14,025
TOTAL	\$987,800

**Soil Conservation District Mill Levy Amounts
Based on Property Tax Statistical Report**

Brittini Reim
SP 2020
4-22-13

#2

Soil Conservation District	2010	2011
Adams Co.	\$8,268	\$8,616
Barnes Co.	\$54,522	\$57,225
North Central (Benson Co.)	\$25,847	\$32,550
Mouse River (Bottineau Co.)	\$23,398	\$25,152
Turtle Mountain (Bottineau Co)	\$55,296	\$57,426
Bowman-Slope	\$17,758	\$24,152
Burke	\$24,354	\$24,432
Burleigh Co.	\$289,849	\$323,452
Cass Co.	\$438,265	\$417,659
Cavalier Co.	\$30,110	\$30,303
James River (Dickey Co.)	\$42,594	\$38,602
Divide Co.	\$9,902	\$11,566
Dunn Co.	\$24,143	\$27,988
Eddy Co.	\$34,679	\$52,723
Emmons Co.*	\$2,500	\$2,500
Foster Co.	\$38,310	\$38,316
Golden Valley Co.	\$13,937	\$14,587
Grand Forks Co.	\$290,829	\$303,021
Grant Co.	\$21,099	\$21,624
Griggs Co.	\$12,856	\$13,643
Slope-Hettinger	\$27,844	\$37,927
Kidder Co.	\$12,792	\$13,017
LaMoure Co.	\$22,265	\$23,326
Logan Co.	\$8,775	\$18,614
North McHenry Co.	\$29,396	\$30,327
South McHenry Co.	\$33,215	\$35,929
McIntosh Co.	\$38,650	\$46,682
McKenzie Co.	\$35,074	\$44,339
South McLean Co.	\$35,136	\$43,570
West McLean Co.	\$28,180	\$35,314
Mercer Co.	\$24,804	\$24,684
Morton Co.	\$96,613	\$80,604
Mountrail	\$26,005	\$43,469
Nelson Co.	\$13,227	\$18,570
Oliver	\$20,803	\$20,786
Pembina Co.	\$66,558	\$79,661
Pierce Co.	\$17,898	\$18,124
Ramsey Co.	\$43,949	\$46,309
Ransom Co.	\$22,055	\$24,001
Renville Co.	\$15,245	\$18,248
Richland	\$59,237	\$61,454
Rolette Co.	\$28,407	\$26,468
Wild Rice (Sargent Co.)	\$20,487	\$21,832
Sheridan Co.	\$15,065	\$15,576
Cedar (Sioux Co.)	\$3,375	\$3,469
Central Stark Co.	\$12,373	\$12,495
Western (Stark Co.)	\$63,575	\$64,298
Steele Co.	\$19,535	\$21,673
Stutsman Co.	\$0	\$0
Towner Co.	\$29,349	\$30,837
Traill Co.	\$32,537	\$32,752
Walsh Co. Three Rivers	\$80,104	\$83,104
Ward	\$41,388	\$56,015
Wells Co.	\$47,907	\$54,851
Williams Co.	\$93,070	\$118,571
*County Funds in lieu of mill	\$2,623,409	\$2,832,433

SB2020
4-22-13

3

Bowman, Bill L.

From: Grafton, Kenneth <K.Grafton@ndsu.edu>
Sent: Friday, April 19, 2013 7:49 PM
To: Bowman, Bill L.
Cc: Rod Howe; Mike Beltz; Boerboom, Chris; Ruhland, David
Subject: SB 2020

Senator Bowman: Thank you for giving me the opportunity to provide you with some information regarding SB 2020, specifically for the Experiment Station and the Extension Service budget.

There appears to be some contention regarding the Capital Improvement projects to build Agronomy Laboratories at Carrington, Hettinger, Langdon, and Central Grasslands. While our preference would be to have full funding, other options (listed in priority) do exist:

1. Four laboratories (CREC, HREC, LREC, CGREC) at \$5,925,000 – full funding as amended by the Senate
2. Four laboratories funded at \$5,425,000 – this is splitting the difference between House and Senate and would allow for approximately a 10% match
3. Four laboratories at \$5,332,500 – this would allow a 10% match similar to match requirements for SBHE
- House* 4. 3 or 4 labs at \$4,925,000 + \$1,000,000 special fund authorization – House version - calls for a 17% match

An issue for Extension is the difference between House and Senate on partial funding for two positions – The Senate supported each position (IPM and Water Quality), while the House removed the funding for those two positions. If it is not possible to restore the funding for both, could a compromise be reached to support the effort to restore funding for one position (\$150,000)?

The Souris River project – Efforts can be modified to the funding level that is ultimately approved– more research could be carried out with additional funds, but an effort could be initiated with some funding – I cannot recommend any level of funding – perhaps a compromise at \$125,000??? Please note that this is one-time funding.

Finally, I want to bring to your attention a change in the Bill language – SECTION 6. UNEXPENDED GENERAL FUND –EXCESS INCOME. This language has been in our bill for a number of years and allows both AES and Extension the ability to carry over General funds for additional biennia. The House removed the language. While we do not necessarily make it a practice to carry over funding, it is a good option in order to efficiently use state funds for our research and Extension activities.

I hope this helps. Please let me know if I can provide any additional information.

Regards,

Ken

Ken Grafton
Vice-President for Agricultural Affairs
Dean, College of Agriculture, Food Systems, and Natural Resources
Director, ND Agricultural Experiment Station
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Fargo, ND 58108-6050
phone:701.231.6693
fax:701.231.8520
k.grafton@ndsu.edu

SB 2020
4-22-13

4

Bowman, Bill L.

From: Boerboom, Chris <Chris.Boerboom@ndsu.edu>
Sent: Friday, April 19, 2013 8:15 PM
To: Bowman, Bill L.; Monson, David C.
Cc: Grafton, Kenneth; Rodney (rodneyh@ndsupernet.com); Ruhland, David; Mike Beltz (mrbeltz@rrv.net)
Subject: SB 2020

Senator Bowman and Representative Monson:

I know differences exist between the Senate and House versions of SB 2020 in regard to the SBARE priority #3. Specifically, the Senate provides partial support for the Extension plant pathologist/IPM position (formerly Dr. Marcia McMullen's position) and partial support for the Extension water quality position and the House does not. I ask you to consider supporting one of these positions as a compromise as both have significant value to North Dakota.

I also want to apologize that I will not be available if a conference committee is held early next week. I will be in Washington D.C. informing our legislative team on Capitol Hill about the need to support the federal share of our Extension funding. Ironically, the President's proposed budget deletes the remaining funding for Extension water quality and recommends further reductions for IPM.

If I can answer any questions, my cell is 701-212-6888.

Chris

Chris Boerboom
Director / Extension Director's Office
NORTH DAKOTA STATE UNIVERSITY

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Sen. O'Connell
SB 2020
4-23-13 #1

Souris River Flooding: A Proposed Plan for Agricultural Land Recovery

Statement of Problem

Water level management of the Souris River has adversely affected production of over 40 thousand acres in northern McHenry County, ND, with an early estimated loss to farmers and livestock producers at \$5,000,000. Forage quality and quantity has dramatically decreased in rangelands sandwiched between water-managed practices that slowly release water flows at J. Clark Saylor National Wildlife Refuge and that increase flow rates that mitigate the flooding of Minot, ND. Where flood water stood till late fall, native grasses and vegetation did not recover in 2012. Lowlands along the river relied on for forage production has been invaded by quackgrass, foxtail barley, and annual/perennial weed species (predominately red goosefoot – *Chenopodium rubrum* L.) in some locations. For example, land located 10 miles north of Towner, ND that traditionally produced 2,800 hay bails has only produced a maximum of 1,600 bails since 1999, and in 2012 only produced 782 bails. North Dakota State University's Range and Soil Agricultural Experiment Station and Extension personnel propose to address the recovery of these flooded lands with research, and recommend best management practices through Extension education.

Proposed Activities

NDSU Range and Soil personnel have an established cooperative relationship with a landowner in the affected area, and proposed observations and experiments will take place on this property. The approach that will be taken to define the problem and make management recommendations will focus on the following: (i) surface and subsurface hydrology, (ii) aboveground rangeland species composition and seedbed stock, (iii) belowground soil quality, (iv) impacts of filamental algae and moss on restoration, and (v) reseeding options for restoration. Comparisons will be made in affected and unaffected areas, and potential management based on results will be applied.

- (i) **Hydrologic measures and supplies = \$58,000 subtotal**
 - a. Physical measures = \$20,000 initially+\$5,000 per year=\$30,000 Total
 - i. Water contents to measure degree of saturation, oxygen status of soil, datalogging, soil temperature, piezometer installation, and surface water flow.
 - b. Surface/Subsurface water quality measures = \$14,000 per year = \$28,000 Total
 - i. Water analyses for 20 observations 8 times per year (160 samples total analyzed for Ca, Na, Mg, K, NH₄, NO₃, NO₂, SO₄, Cl, PO₄, TDS, DO, EC, pH, TOC = \$7,000)
- (ii) **Rangeland surveys and supplies = \$16,000 subtotal**
 - a. Initial surface survey = \$8,000
 - b. Final surface survey = \$8,000
- (iii) **Soil analysis and supplies = \$36,000 subtotal**
 - a. Soil analyses for 200 locations (guided by the apparent salinity maps) sampled across the plots (samples collected from 0-6, 6-12, 12-24, 24-36, 36-48" depths; 1000 samples total analyzed for saturated paste pH, Ec, Ca, Mg, Na; 200 samples from 0-6 and 6-12" depths analyzed for NPK, micronutrients, %CN; 350 samples across all depths analyzed for texture, moisture release curves)
- (iv) **Research assistantship = \$33,619 subtotal**
 - a. Year 1 = \$16,000+3% fringe=\$16,480
 - b. Year 2 = \$16,640+3% fringe=\$17,139
- (v) **Travel = \$18,688 subtotal**
 - a. \$9,344 per year = 5-8 trips per year for 5 personnel to the site x 500 miles round trip x \$0.60 per mile. Including hotel [\$100/night] and per diem [\$24/day])
- (vi) **Total Request = \$162,307**

Application of Results

The desired outcome of this proposed work is to develop objective information about flood-impacted lands, and to make improved recommendations to recover land productivity after flooding. Furthermore, the knowledge obtained from these activities can be used as a model approach for flooded regions throughout the state, and perhaps develop an educational model used to advise producers recovering from floods.

TO: Bob White, ISRB Secretary

FROM: Leland S. Goodman
802 77th ST NE Willow City ND 58384
701-366-4765



DATE: April 3, 2013

RE: Comments for Operating Plan of Souris River

I am a lifetime resident and concerned citizen of the Souris River Basin. I am a homeowner, I am a landowner, I am a livestock producer, I am a recreation and wildlife enthusiast and I am a taxpayer – deserving of equal considerations to the well-being of my property and livelihood.

The past and current operating plan of the Souris River is not working in everyone's best interest. The monetary losses to the farmers and livestock producers upstream and downstream have not been a consideration in the entire flood and water management plan. The vast majority of North Dakota's economy is driven by agriculture and the livelihood of farmers and livestock producers should be given equal consideration along with the City of Minot and the recreational uses of the river as part of any short or long term plan.

Over the past 10+ years, water management issues and inadequate flood control of the Souris River has adversely affected production of over 40 thousand acres in northern McHenry County, ND alone. It is estimated that the economic impact on these lands and affiliated business resources far exceeds tens of millions of dollars. Impacts include land loss and use to overland flooding, forage yield losses, forage quality losses, infrastructure losses and more. Many of these losses can and have been quantified. I can provide direct accounting for my business losses alone that exceed \$2 million. I've provided some examples below.

- Land Use Losses
 - Land's that are covered with standing flood waters for extended periods of time cannot be used for pasture, hay crops or farming. Additional acreage must be rented to make up for the loss of use – while still being required to make land payments on unusable lands. However, with excessive flooding, little acreage is available for rent and demand is higher forcing up rental rates and requiring travel to greater distances to put up crops.
 - IMPACT: Additional Pasture Rent Needed Due to Lost Acreage –
1000 acres X \$20/acre = \$20,000 x 2 years = \$40,000
 - IMPACT: Additional Hayland Rent Needed Due to Lost Acreage –
1000 acres x \$40/acre = \$40,000 x 2 years = \$80,000
- Forage Quality and Quantity Declines
 - Land's that are covered with standing flood waters for extended periods of time find the loss of native grasses and vegetation. Late season drainage results in the growth of low quality invader species including quack grass, foxtail barley, and annual/perennial weed species (predominately red goosefoot-*Chenopodium rubrum*L.)
 - EXAMPLE: Average production on my hayland near the Souris River
 - Prior to 1999 Flooding – Produced 2800 bales/year

- 1999 – Produced no hay crop due to flooding
- 2000 – Produced 480 bales
- 2001 – 2010 – Produced 1600 bales/year
 - Required reseeding and weed management at additional costs of \$150-\$250/acre
 - Two of these years did not produce hay crops due to untimely water releases and infrastructure work.
- 2011 – Flood Year – No Production
- 2012 – 782 bales
 - Reseeding and weed management. Some areas, so heavily impacted by moss and mold would not allow seed germination and revegetation
 - Estimated Cost of Reseeding: \$150-250/acre
- 10 Year IMPACT: 21,938 bales lost x \$60/bale = \$1,316,280
- EXAMPLE: Old Growth Forest Losses
 - 2011 flooding – caused by mismanagement of snow pack information, water holding and untimely rains led to extreme flooding and long term standing water with high forest and vegetation losses
 - Thousands of old growth ash and oak trees killed
 - Forestry Service Estimate to Replant - \$450,000
 - Impact – habitat, erosion, loss of natural resources 100+ years in the making
- EXAMPLE: Basic Infrastructure Losses
 - Pasture Fencing - \$43,000/year x 2 years = \$86,000
 - Has been replaced twice (1999, 2012)

My story is not unique or extreme. It is echoed by dozens of farmers and livestock producers in and around the Souris River and the Souris River Basin and it must be addressed at a multitude of levels.

First drainage plans need to be improved along the entire river channel. The structures are already in place to hold the water but we do not believe that enough time has been spent on making sure that the channels are clear and able to handle the flows downstream. Channels that existed in J. Clark Salyer Refuge in 1950 and 1960 are now filled with sedimentation, cattails, trees, and beaver dams. The floods of 1969 and 1976 have added to the problem, causing additional channel blockages. These channel blockages prevent water from moving through the basin and instead allow water pooling and overland flooding north of the Eaton Project.

Secondly, timing is an issue. Water releases have not been adequately timed and anticipated flows have been underestimated resulting in high volume releases that cause for significant overland flooding and prolonged standing water in agricultural lands preventing use. In turn, this prolonged standing water creates additional flow impairment by allowing for the growth of invasive species including cattails and willows that also hold water and sedimentation making parts of the agricultural lands difficult to reclaim even after the lands are drained.

Thirdly, research and recovery needs to be part of a long term plan to help restore native lands, habitat and agricultural grounds. Homes, businesses and infrastructures are rebuilt in cities and should be rebuilt in rural and agricultural areas as well. I have discussed the flooding and vegetation issues with

North Dakota State University's Range and Soil Agricultural Experiment Station and Extension personal. They feel there is a need to address the recovery of these flooded lands with research that will identify best management practices to reclaim native habitat and agricultural lands.

The need to address the opening of the blocked drains and channels within the J. Clark Salyer Refuge to move the water through the entire system is paramount to the survival of habitat and agricultural production on private lands near the Souris River and the diverse ecosystem of meadow grasses and trees within the J. Clark Salyer Refuge. It will be critical to manage flows that allow for early drain on meadows, pasture and farmland to allow for the maintenance and protection of natural resources and habitat, as well as agricultural use.

I have worked tirelessly on this issue for the past several years to not only understand the issues, but also to help find solutions. I am enclosing copies of letters that were sent to our local Souris River Planning Board. As you can see by these letters I have been asking questions about the planning process and asked them to respond to my questions about protecting my interests and other farmers and livestock producers. I have not had my concerns addressed even once. I have also attended meetings to address my concerns and have continued to hear silence on this issue.

As this board looks into an operating plan for the Souris River, I urge you to consider that the monetary losses are just as great upstream and downstream as they are in the cities. Quite honestly they are greater, with longer lasting impact.

I look forward to your feedback and hope we can work together for the best interests of the entire Souris River Basin.

TO: Souris River Planning Board – David Ashley
4893 7th Ave N; Voltaire, ND 58792

FR: Leland Goodman; McHenry County Landowner
802 77th St NE; Willow City, ND 58384

DA: June 12, 2012

RE: Impact Studies, Flood Protection & Remediation for Flood Impacted Regions of McHenry County

I'm writing to glean insight and answers regarding the gathering of information and the development of flood protection and remediation plans concerning short term and long term impacts of overland flooding in McHenry County and other surrounding agricultural areas.

It has come to my attention that the current decision making process is based on the use of environmental, economic and hydrological impact studies of the Mouse River Basin that were developed by the Corp of Engineers in 1986. However, I am concerned that the results of those studies are flawed based on the use of outdated maps from the 1950's. These older maps do not account for major flooding events that occurred in the 60's and 70's that would show differences in the watershed. Additionally, I understand that this plan was developed based on theoretical assumptions and did not include any site visits to verify data, gain firsthand accounts or collect additional critical research analysis. It is my understanding that the final plan cited no expectation of economic losses to agriculture and any water releases would be planned to return all lands to use by June to create no net losses with minimal impact to the J. Clark Salyer Wildlife Refuge.

In theory, in 1986 this appeared to be a viable plan – no impact – why wouldn't decision makers accept the plan and move forward. More importantly, why didn't they ask more questions and demand more current data. However, 1986 is a far cry from 2012 and we have a variety of observations under our belt, so it's disconcerting that we would use the same information to continue to proceed with flood protection planning.

What I know today is that with the flood control plan of 1986 in place, even without the serious flooding of 2011, the impact of water in the flood plain most years has been far greater than it was expected to be and has far exceeded the expected target water flows, drainage dates and controlled easement acreage. What we see on the ground – not in an office or report built on assumptions – is higher than normal CFS that exceeds what the river can handle, riverbank erosion and sediment buildup, slowing flows causing additional flooding and changes in the river path, encroachment of overland flooding onto hay meadows, pastureland, farmland and more beyond the easements, and water releases from upstream that last longer than the basins ability to drain that water and producers to reclaim use of the land for hayland, pasture or crops, along with along with extended subsoll infiltration causing sub-irrigation issues to wells and homes. Additionally, extended periods of overland flooding with standing water also cause degradation and long term impact of trees, soil quality and native grasses & foliage.

If the above mentioned issues don't illustrate flaws in the plan, I believe the following issues as it relates

to J. Clark Salyer Refuge should at the very least make us all question the validity of the plan and the need for new assessments. In the 90's when this flood protection plan was put in place, J. Clark Salyer Wildlife Refuge was forced to accept the plan that was laid out based on the 1986 studies. Based on that plan, the J. Clark Salyer Refuge experienced significant shallow water pooling, loss of native grasses and increases of cattails in subsaturated areas, increases in sediment, and increases of willow tree and brush stands diminishing the overall quality of habitat. Unwilling to disregard the damaging effects of this new plan, the manager of the J. Clark Salyer Refuge, reviewed the plan in further detail and noted numerous flaws in the plan, many of which were contributing to the issues mentioned above. He fought for the repair and enhancements of flood damaged habitats and was awarded mitigation on behalf of the Corp of Engineers that included enhancements of dams and raised spillways among other actions inside the J.C. Salyer Wildlife Refuge.

I believe there is more than enough evidence that calls in to question the validity of the 1986 environmental, economic and hydrological studies that merit the need for new data before any short or long term flood plans are made or monies allocated. These studies should include the use of current maps and data, as well as field research to verify all assumptions. Additionally all outlying areas beyond the major population center of Minot, ND should be part of the study to assess not only the environmental and hydrological impact of flooding and proposed flood plans, but the economic impact of said plans on homes and businesses including agricultural lands and communities in rural areas.

As with any plan, it is normal to assess the greatest economic or community risk and make plans to accommodate those areas first, and it has been clear, that the City of Minot has been a priority in the development of flood protection plans. However, it is also important to note that the agricultural lands that make up the Mouse River Basin also provide a significant economic impact to the region and their communities. It is believed that McHenry County alone has between 30,000-40,000 acres of impacted farm and ranch lands with an economic impact far exceeding ten million dollars as a low guess. This number does not take into account additional lands affected in Ward, Renville or Bottineau counties. And in a rural county like McHenry County, the economic stability and livelihood of the people who live there depends on agriculture.

I'm asking that at the very least, current studies of all affected areas be conducted before any flood plans are evaluated or adopted. Additionally, I believe that opportunities exist to take a long-term proactive approach to document and study the effects of flooding and recovery as it relates to the environmental and economic impacts on natural habitat and agricultural areas and the process and recovery of those affected areas. I believe such research would be beneficial not only to our area in the light of potential future flooding, but other areas around the country that experience similar devastation.

I look forward to your timely response and attention to this issue.

A handwritten signature in black ink, appearing to read "Laura S Goodman". The signature is fluid and cursive, with a long horizontal stroke at the end.

DATE: June 14, 2012

TO: Souris River Planning Board
Attn: Dave Ashley; President

FROM: Leland Goodman

RE: Questions Regarding Economic Impact & Recovery Related to Flooding & Watershed Issues

NOTE: The last 12 years have produced increased flooding in areas north of Towner near the J. Clark Salyer Wildlife Refuge and the last year produced some unprecedented and sustained flooding causing considerable financial damage and long term losses throughout the entire watershed. Prolonged water storage contributes to downstream flooding and increased flows which have an exacerbated effect of river bank erosion. When river bank erosion occurs, it causes overall reduced flows in the main downstream river channel leading to increased overland flooding and direct losses to agricultural landowners. Agriculture (both farming and ranching) is the main economic engine of this region. Flooded land is unusable while it is underwater. When the water recedes lands are often unusable for long periods of time as they are covered with debris and sediment that hinders the growth of native plants. In fact, these native plants can take up to 7 years to recover under ideal conditions and during that time, ranchers experience direct economic losses to pasture and haylands.

QUESTIONS:

1. First, what is your plan to compensate existing landowners for damages caused by previous flooding?
 - a. What is your plan to restore grasslands? And what budget and timeline will you be working on?
 - b. What is your plan for reforestation of forested areas? And what budget and timeline will you be working on?
 - c. What is your plan to prevent riverbank erosion and repair? And what budget and timeline will you be working on?

2. What are the current predictions on this Spring's and future water issues?
 - a. What are the flow levels expected to be?
 - b. What is the timeline for release in dates and CFS?
 - c. What is the CFS Flow going to be at the target date of June 10th?

- d. Will the flow be lowered to allow timely crop seeding?
 - e. Will the target date flow be lowered early enough that the river in ranch country will return flows of 300 CFS or less by June 1 to allow runoff?
3. What information have you gathered to begin formulating a plan to prevent widespread flooding in the future?
- a. What documents have you obtained related to economic impact studies related to flood damage and watershed issues, specifically as it relates to agriculture?
 - b. What documents have you obtained related to hydrology reports prior to 1969, 1969-1975 and 1975 through the 1990's?
 - i. If these documents were received in the past, have they been recently reviewed and what findings are relevant today?
 - c. What documents do you have related to the 1999 flood to show the effects and duration of water and the damages it caused?
 - i. Have these documents been recently reviewed? If yes, what findings are relevant today?
 - d. What steps have you taken to research and document the cause and effect damages from this past flood season as related to the ag industry – including the economic losses?
 - i. Who is conducting the research?
 - ii. Is this data complete or when is it expected to be completed?
 - iii. How was the research funded?
 - e. What hydrology reports have you obtained to show dates and CFS flows of target flows and dates in Canada and the length of time water flow takes to reach area north of Towner?
 - i. Have these documents been recently reviewed? If yes, what findings are relevant today?
 - f. What studies do you have showing the extended flow effect on the J. Clark Salyer Refuge area north of Towner?
 - i. How are these findings being incorporated into your long term planning?
 - g. Are all of your reports and studies available for review? If so, how do we obtain copies?
4. What is your plan to prevent this from happening again or to protect landowners in the future?
- a. Based on the above mentioned data you have gathered, what information have you found most beneficial in drafting your future water protection plans?

Leland Goodman
802 77th St NE
Willow City, ND 58384
701-366-4765

- b. What are all of the flood prevention and watershed changes you are considering and which plans look most viable?
 - i. What plans have you considered and abandoned? And for what reasons?
- c. What is the Souris River Planning Board's impact plan for higher than normal flow?
- d. What is the water level proposed under the new plan opposed to the old plan?
- e. What is the plan for the protection of our individual ranches and farms?
 - i. What is your plan to protect the ranches and farms from continued expenses related to poorly planned water releases?
- f. If planned releases do not coincide with dates to allow draining water from private lands timely, what have you done to see that private landowner's interests are protected or that they are financially compensated?
- g. How have you identified and plotted all areas of the watershed and the five factions from Velva to Lower J. Clark Salyer Refuge and developed a fair plan to adjust the flow across the whole watershed to spread out the total impact versus putting all the impact on one area and completely devastating a few?
- h. When will your formal plan be published for review? And how and when can we get a copy of this plan?
- i. Will there be a comment period for revisions? And if so when will the comment period be and how long will it be?

I appreciate your time and I look forward to your timely responses. All responses can be sent in writing to the address listed in the letterhead. Any questions can be directed to my attention at 701-366-4765.

Signed:

CC:

North Dakota State Water Commission

Brittini Reim - Leg Council #1
 SB 2020
 4-24-13

North Dakota University System
UGPTI, Extension Service, Main & Branch Research Centers and NCI
Summary of 2013-15 Executive Recommendation and Senate & House Amendments to SB 2020 (General Fund)

As provided by the ag agencies, the schedule below provides the Senate changes compared to the House changes. The Senate changes are highlighted in orange and the House changes are highlighted in purple.

	(1)	(2)	(3)	(4)	(5)	(6)
	UGPTI	Extension Service	Main Research Center	Branch Research Centers	NCI	Total
2013-15 Executive Recommendation - General Fund	2,828,575	28,650,644	57,037,737	17,725,012	2,074,344	108,316,312
Senate & House Amendments:						
Adjustments to Ongoing Funding:						
Increased funding to Soil Conservation Committee		75,000				75,000
Removes Soil Conservation Increase		(75,000)				(75,000)
Funding for Rural Leadership North Dakota		125,000				125,000
Adds 0.5 FTE funding for animal science position (2)			140,000			140,000
Removes 0.5 FTE but leaves funding			-			-
Funding for grasslands flood recovery research			162,300			162,300
Reduced funding for grasslands flood recovery research			(80,300)			(80,300)
Adds 2 interns in the junior master gardener program for Burleigh County Extension		25,000				25,000
Removes increases for partial salary support (3)		(260,000)				(260,000)
Reduces compensation package and removes increased retirement contributions	(31,130)	(438,832)	(548,172)	(317,157)	(22,968)	(1,358,259)
Subtotal - Ongoing Adjustments	(31,130)	(548,832)	(326,172)	(317,157)	(22,968)	(1,246,259)
Adjustments to One-time Funding:						
Changes source of funding for 4-H Camp capital project		450,000				450,000
Adds agronomy laboratory capital projects at Langdon & Central Grasslands REC's			1,625,000			1,625,000
Reduced state funding for agronomy lab projects (4)			(1,000,000)			(1,000,000)
Funding for housing allowances or hiring bonuses for oil-impacted REC's at North Central, Dickinson and Williston			100,000			100,000
Removed funding for oil impact payments			(100,000)			(100,000)
Adds one-time funding to match federal grants	1,250,000					1,250,000
Subtotal - One-time Funding Adjustments	1,250,000	450,000	625,000	-	-	2,325,000
Total Senate & House Amendments to General Fund	1,218,870	(98,832)	298,828	(317,157)	(22,968)	1,078,741
General Fund per Engrossed SB2020	\$4,047,445	\$28,551,812	\$57,336,565	\$17,407,855	\$2,051,376	\$109,395,053