

# MICROFILM DIVIDER

OMB/RECORDS MANAGEMENT DIVISION  
SFN 2053 (2/85) 5M



ROLL NUMBER

DESCRIPTION

2021

**2001 SENATE APPROPRIATIONS**

**SB 2021**

2001 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB2021

Senate Appropriations Committee

Conference Committee

Hearing Date January 4, 2001

Tape Number	Side A	Side B	Meter #
#2	UGPTI		43.3 - 54.1
#2		UGPTI	0.0 - 22.9
#3	Res Station/Ext		12.5 - 54.0
#3		Res Station/Ext	0.0 - 50.3
#4	Research Stations		0.0 - 54.0
#4		Research Stations	0.0 - .4
#4		NCI	.4 - 11.0

Committee Clerk Signature

*Dennis Pritchard*

Minutes:

Senator Nething, Chair of Senate Appropriations Committee, opened the hearing on SB2021 at 11:15 a.m., Thursday, January 4, 2001. SB2021 includes the Upper Great Plains Transportation Institute (UGPTI), NDSU Main Research Station, Research Stations located throughout the state, NDSU Extension (EXT), and the Northern Crops Institute (NCI).

Dennis McLeod, Advisory Council Chairman, UGPTI, testified in support of the Institute (copy of written testimony is attached).

Gene Griffin, Director of NCI, presented documentation regarding the Institute (copy of the written testimony is attached).

Senator Solberg: Who uses this shuttle train service?

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Director Griffin: Couple of cities -- one in Cass, and city of Minot; some manufacturers are now reviewing the data/process.

Senator Solberg: Are commodity groups looking?

Director Griffin: The Wheat Commission has, as have others.

Dennis McCloud: Most commodity groups are railroad users; Bobcat at Gwinner is among users; working with Burlington Northern. They've done one study, encouragement coming -- soybeans grown in a particular area are shipped out by containers; and need to be routed through Dilworth-it is congested..

Senator Solberg: We ship soybeans to Japan via Minneapolis then to West Coast...appears to add cost to every 100 pounds plus cost of covered containers.

Dennis McCloud: From the railroad perspective it is logical to route through Minneapolis, for they bring back activity --- and time is of the essence -- international facilities are in ND.

Senator Nething: Will your program solve this unusual traffic situation?

Dennis McCloud: We believe it would. Surveys indicate that within 5 years, expansion of businesses will be stalled if not available.

Senator Thane: Are some beans going directly to Japan - not through Minneapolis?

Dennis McCloud: Cass County and Wahpeton load out of Dilworth, others to Minneapolis; it depends on whose containers are used. Facility serves approximately 100 mile radius -- all product going in containers.

Senator Tomac: What percent goes through Canada?

Dennis McCloud: It was in our survey -- not sure how much, but losing some.

Senator Nething: Decision of shipment method due in part to the entity

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Dennis McCloud: Probably determined because of where containers are made empty. Volume of shipment(s) involved has some impact.

Senator Grindberg: Now that China has joined in world trade -- have they made an impact?

Dennis McCloud: Perhaps, inter modal is a small part of total marketing; if farmers are to get added dollars, they need to get in.

Senator Nething: You spoke of 100 thousand general funds being supported/recommended by Governor Hoeven...page 2, lines 6-13 of SB2021 --- I don't see it? Additional?

Director Griffin: Just heard of the concurrence this morning.

Senator Nething: No decision has been made regarding line items- if separate, regarding block granting...do you consider it an advantage one way or another?

Director Griffin: General funding has been flexible, gives leverage for matching; we are comfortable as it is now.

Jon Mielke, Executive Secretary, Public Service Commission, testified in full support of proposed UGPTI proposal (copy of printed testimony is attached).

Senator Nething: Offering the testimony as an individual, or on behalf of the Commission?

Jon Mielke, On behalf of the Commission.

Neal Fisher, Administrator of the North Dakota Wheat Commission, testified in support of UGPTI.

Keith Brandt, Manager of the Enderlin Elevator and Vice Chairman of the North Dakota Grain Dealers Association, testified in support of UGPTI.. Elevator and Grain Dealers Association are supportive of the shuttle train, like the data received (through weekly input by the various elevator managers throughout the region/state: knowing how we ship and where we ship to.

Senator Nething: Hearing on SB2021 is recessed until 1:30 p.m. today.

Senator Nething reconvened the hearing of SB2021 at 1:30 p.m., Thursday, January 4.

Pat Jensen, Vice President, Dean, Director for Agricultural Affairs, North Dakota State University presented an overview of the budget request(s) for College of Agriculture, Main Station, outlying Research Stations, NDSU Extension Service, and the Northern Crops Institute (copy of the Biennial Budget documents attached). She introduced Jerry Doan, Chair of the State Board of Agriculture Research and Education (SBARE), Cole Gustafson, Associate Dean, Research, Agriculture Experiment Station, and Sharon Anderson, Director, NDSU Extension Service. She indicated a "team approach" of presenting the budget.

Jerry Doan, Chair of SBARE, spoke of the history of the board, its responsibilities, the needs and requests of the agriculture/extension of this budget. There is a need for commitment -- to do their jobs, to be successful, we need to consider priorities -- and six of the ones the Board considers very important and would like to acted upon are: 1) restore cuts; core budget; address lack of graduate students, review the motor pool -- having to use -- costly, hard to adjust budgets; having beef quality assurance, and 6) providing funds for the 10 initiatives ( page 45). The SBARE has worked hard, have 4 sub committees working on various areas of the budget: long-range planning, cooperation with other institutions, technology etc.

Senator Tallackson: Thought about your part in public relations? Assuring that the meat is okay - the crops etc.?

Chairman Doan: Not satisfied entirely, ongoing discussions.

Senator Solberg: Board looking at carry over dollars--extend that? Can/will be a step getting away from production ag? Who controls what? How is that done?

Chairman Doan: Totally in hands of SBARE; we welcome input but the buck stops with the Board. Complete control of all budgets under SB2021.

Cole Gustafson, Associate Dean, Research, AES and Sharon Anderson, Director, NDSU Extension Service presented their respective budgets (documentation contained in the Biennial Budget book attached).

Marlene Kouba, Chair of the North Dakota State Soil Conservation Committee, presented testimony (written copy is attached) in support of the NDSU Extension Service. The ND State Soil Conservation Committee has been within the Extension budget for several years.

Senator Tallackson: Have you combined some soil conservation districts?

Chair Kouba: Yes, we have signed agreements in Walsh County, combining 2; and are in the process of reviewing additional combinations.

Shane Goettle, NDSU graduate in agriculture and currently practicing law in Minot, ND testified in support of the NDSU Extension Service, in particular the 4-H program. He is currently serving as chair of the ND 4-H Foundation.

Senator Bowman: Question directed to Associate Dean Gustafson: What is the marketing structure of today? Is there a bigger future in marketing as producers --- fewer buyers involved making global purchases --- do we need to be more competitive, use different marketing techniques?

Associate Dean Gustafson: The Agricultural Research Fund booklet (copy attached) indicates some of the initiatives we have completed or are in the process of collecting data--helps us to identify needs.

Director Anderson: The entrepreneurial program helps understand marketing; we have been focusing some effort there.

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Senator Solberg: Covered the Main Station's recent flood damage?

Associate Dean Gustafson: We have documented an estimated 20 million loss to FEMA; FEMA denied any reimbursement, due primarily because we could not verify that we would have to make repayment to agencies/businesses who had provided the research funding.

Senator Solberg: Estimate on the time lost? Is it tough to gage?

Associate Dean Gustafson: Yes, very tough. We do have some graduate students around who are trying to recoup data. We've put it all behind us, moving forward.

Senator Tallackson: How is the cooperation among Extension, College, Soil Conservation, Branch Stations? Working well, not so well?

Director Anderson: It is excellent. Local areas are positive, specialist are involved with Soil Conservation...the partnership continues to get better.

No additional testimony time requested.

Timothy C. Faller, Director of the Hettinger Research Extension Center, presented testimony in support of SB2021, and in particular the Hettinger Center (copy of testimony is attached).

Paul E. Nyren, Director, Central Grasslands Research Extension Center, presented testimony in support of SB2021, and in particular the Central Grasslands Center (copy of testimony is attached).

Jay Fisher, Director of the Minot Research Extension Center, presented testimony in support of SB2021, and in particular the Minot Center. He emphasized the video conferencing now being done, and continual working on continuing education courses at all levels. Values continued support.

Blaine Schatz, Director of the Carrington Research Extension Center. The Center appreciates the support and the appreciation of core programs, enjoys flexibility--having the ability to improve things, act quickly when responding to crisis; it will add strength of base to operation. The staff has continued to work with improved crop varieties provided by researchers at NDSU .

Kris Ringwall, Director of the Dickinson Research Station, presented testimony concerning the Station's activities; requested continued support for SB2021, in particular the Dickinson Center (copy of testimony is attached -- showing the theme:"it's about people."

Jerald W. Bergman, Director, Williston Research Extension Center, presented testimony regarding SB2021, and in particular the Williston Center (copy of testimony is attached).

Randy Malup, Director, Langdon Research Extension Center (LREC), presented documentation regarding the Center's budget, activities (copy of written testimony attached).

Tom Teigen, Assistant Director/Seedstocks Coordinator, Agronomy Seed Farm at Casselton, presented testimony regarding the Agronomy Seed Farm budget (copy of written testimony is attached).

Senator Thane: Is there adequate supply of the new wheat varieties?

Director Teigen: Yes, we have a good supply available.

Senator Robinson: Was the siding damage done to one of your buildings covered by warranty?

Director Teigen: We have repaired the siding -- 21 years ago it was put on the building at a cost of approximately \$10,300; the insurance company paid us \$7,600 for the peeled siding. They no longer make that type of siding, so we (staff and myself) scraped and repainted at a cost of approximately \$3,000. Appears to be good for another 10-15 years.

Wade Moser, Executive Director of the North Dakota Stockmen's Association testified in support of SB2021, and in particular the new initiatives. There is a need for good wheat varieties, and information regarding how to tie into the end products. Supportive of the Carrington Station enhancement; interested in livestock data which could be done there and benefit the state. Stockmen's Association believes the Carrington Station could provide the study important to the cattlemen, they have a good program and method of collecting data.

Stan Melroe, Farmer/Rancher from Gwinner, ND and advisor to the ND Stockmen's Association, testified in support of SB2021. Believes a study could/should be done on the potato

land -- could grow corn in off years which would benefit the beef arena. There is an excellent beef-line in place, but we feel it need to go further. (A copy of the ND Cattlemen's Beef Research Committee testimony is attached.)

Senator Bowman: Have you considered whether or not this could be a private venture? Perhaps build your own feedlot? When building, the specs are there -- complete when new with all the regulations -- could then secure your own data, with same results -- rather than the State providing funds for Carrington?

Stan Melroe: We have talked about it, but feel research better done at the Station.

Rodney Howe, Hettinger rancher/farmer testified in support of SB2021. Supportive of the Beef-line initiative.

Patricia Bergland, Director, Northern Crops Institute (NCI), presented testimony regarding the NCI's budget (written documentation found in NDSU Biennial Budget book on SB2021).

Neal Fisher, Administrator of the North Dakota Wheat Commission, testified in support of the NCI budget (copy of written testimony is attached).

Matt Mechel, Board Member of the North Dakota Soybean Council, was unable to attend the hearing today, but sent written testimony (copy of which is attached) in support of the NCI.

VP Jensen ended the session on SB2021, thanking the team leaders for their presentations and capabilities of carrying out their respective roles. The hearing on SB2021 was closed.

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Senate Appropriations Committee  
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Hearing Date January 4, 2001

February 13, 2001 Full Committee (Tape #3, Side A, Meter No. 0.0 - 12.0)

Senator Nething reopened the hearing on SB2021.

Senator Solberg, Chair of the Research and Extension Subcommittee presented proposed amendments (18047.0103). Discussion on the amendments.

Senator Solberg moved the amendments; Senator Tomac seconded. Motion carried by verbal vote.

Discussion on the bill.

Senator Solberg moved a DO PASS AS AMENDED: Senator Bowman seconded, Roll Call

Votes: 13 yes; 0 no; 1 absent and not voting.

Senator Solberg accepted the floor assignment.

Date: 2-13-01

Roll Call Vote #: 1

**2001 SENATE STANDING COMMITTEE ROLL CALL VOTES**  
**BILL/RESOLUTION NO. SB 2021**

Senate Appropriations Committee

Subcommittee on \_\_\_\_\_

or

Conference Committee

Legislative Council Amendment Number 18047.0103

Action Taken As Pass as Amended

Motion Made By Sen Solberg Seconded By Sen Bowman

Senators	Yes	No	Senators	Yes	No
Dave Nething, Chairman	✓				
Ken Solberg, Vice-Chairman	✓				
Randy A. Schobinger	✓				
Elroy N. Lindaas	✓				
Harvey Tallackson	✓				
Larry J. Robinson	✓				
Steven W. Tomac	✓				
Joel C. Heitkamp	✓				
Tony Grindberg	✓				
Russell T. Thane					
Ed Kringstad	✓				
Ray Holmberg	✓				
Bill Bowman	✓				
John M. Andrist	✓				

Total Yes 13 No 0

Absent 1

Floor Assignment Senator Solberg

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

**REPORT OF STANDING COMMITTEE**

**SB 2021: Appropriations Committee (Sen. Nething, Chairman) recommends AMENDMENTS AS FOLLOWS and when so amended, recommends DO PASS (13 YEAS, 0 NAYS, 1 ABSENT AND NOT VOTING). SB 2021 was placed on the Sixth order on the calendar.**

Page 1, line 3, after "station" insert "; to provide statements of legislative intent; to provide for a report to the budget section; and to amend and reenact section 4-05.1-16 and subsection 1 of section 4-05.1-21 of the North Dakota Century Code, relating to changing the voting membership of the state board of agricultural research and education and use of agricultural research fund annual proceeds"

Page 1, remove lines 14 through 17

Page 1, line 18, replace "33,678,046" with "33,628,046"

Page 1, line 20, replace "14,379,745" with "14,329,745"

Page 1, remove lines 23 and 24

Page 2, remove line 1

Page 2, remove lines 16 through 21

Page 2, line 22, replace "55,228,597" with "55,178,597"

Page 2, line 24, replace "28,415,985" with "28,365,985"

Page 2, line 27, replace "3,132,653" with "3,811,153"

Page 2, line 30, replace "1,781,894" with "1,916,894"

Page 3, line 1, replace "1,413,786" with "1,493,786"

Page 3, line 3, replace "13,772,645" with "14,666,145"

Page 3, line 4, replace "5,873,485" with "6,848,485"

Page 3, line 5, replace "7,899,160" with "7,817,660"

Page 3, line 10, replace "51,924,395" with "51,742,895"

Page 3, line 11, replace "61,359,583" with "62,334,583"

Page 3, line 12, replace "113,283,978" with "114,077,478"

Page 3, line 20, replace the first "and" with a comma and after the second "education" insert ", and appropriate research extension center directors"

Page 3, line 21, replace "from subdivision 4 to" with "within subdivisions 4, 5, and 6"

Page 3, line 22, remove "subdivision 5 and within subdivision 5"

Page 3, after line 27, insert:

**"SECTION 5. LEGISLATIVE INTENT - LANGDON LEARNING CENTER. It is the intent of the legislative assembly that the Langdon research extension center begin**

construction on the Langdon learning center only when the station has \$650,000 in cash or pledges for the learning center for the biennium beginning July 1, 2001, and ending June 30, 2003.

**SECTION 6. REPORT TO THE BUDGET SECTION.** The state board of agricultural research and education shall present a status report to the budget section of the legislative council during the biennium beginning July 1, 2001, and ending June 30, 2003. The report must include:

1. The number of employees and expenditures for each research extension center and the main station.
2. The expenditures from all funds for each state board of agricultural research and education gas tax research initiative.
3. A statement for each agricultural experiment station research project indicating the economic impact of each project to the state of North Dakota and how the project relates to the vision statement "North Dakota is to become the trusted provider of the highest quality agricultural products in the world," and a statement regarding North Dakota state university extension service's dissemination of information regarding each agricultural experiment station research project.
4. A report on cooperative projects undertaken by the agricultural research center, extension centers, and the main station.
5. A report identifying the source of income at the research and extension centers, the use of those funds, and the extent the research projects are affected by each income source."

Page 4, after line 2, insert:

**"SECTION 8. AMENDMENT.** Section 4-05.1-16 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-16. State board of agricultural research and education - Membership - Terms.**

1. The state board of agricultural research and education consists of:
  - a. The president of North Dakota state university, who serves in an ex officio nonvoting capacity;
  - b. The vice president of agricultural affairs at North Dakota state university;
  - c. The administrator of the agricultural experiment station, who serves in an ex officio nonvoting capacity;
  - d. The five persons appointed to the agricultural consultation board by the ag coalition and serving in that capacity on July 1, 1997;
  - e. The five persons appointed to the agricultural consultation board by the extension service's multicounty program units and serving in that capacity on July 1, 1997;

- f. The two persons appointed to the agricultural consultation board by the president of North Dakota state university as representatives of the state's research extension centers and serving in that capacity on July 1, 1997;
  - g. The agriculture commissioner, who serves in an ex officio nonvoting capacity; and
  - h. The director of the North Dakota state university extension service, who serves in an ex officio nonvoting capacity.
2. a. The initial five members appointed by the ag coalition shall select their terms by lot so that one member serves for one year, one member serves for two years, one member serves for three years, one member serves for four years, and one member serves for five years.
  - b. The initial five members appointed by the extension service's multicounty program units shall select their terms by lot so that one member serves for one year, one member serves for two years, one member serves for three years, one member serves for four years, and one member serves for five years.
  - c. The two persons appointed as representatives of the state's research extension centers shall serve only through June 30, 1998.
3. At the completion of each initial term, the term of office for each member is five years, beginning on July first. No person may be appointed to a second five-year term.
  4. a. At least ninety days before the conclusion of the initial term of each member appointed by the ag coalition, the ag coalition shall provide to the state board of higher education a list of one or more names from which the state board of higher education shall appoint a successor. Future appointments to these five positions must be made in the same manner. The state board of higher education shall ensure that four out of the five seats are held by agricultural producers.
  - b. At least ninety days before the conclusion of the initial term of each member appointed by the extension service's multicounty program units, the units through their advisory groups shall provide to the state board of higher education a list of one or more names from which the state board of higher education shall appoint a successor. Future appointments to these five positions must be made in the same manner. The state board of higher education shall ensure that four out of the five seats are held by agricultural producers.

**SECTION 9. AMENDMENT.** Subsection 1 of section 4-05.1-21 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:



- f. The two persons appointed to the agricultural consultation board by the president of North Dakota state university as representatives of the state's research extension centers and serving in that capacity on July 1, 1997;
  - g. The agriculture commissioner, who serves in an ex officio nonvoting capacity; and
  - h. The director of the North Dakota state university extension service, who serves in an ex officio nonvoting capacity.
2. a. The initial five members appointed by the ag coalition shall select their terms by lot so that one member serves for one year, one member serves for two years, one member serves for three years, one member serves for four years, and one member serves for five years.  
b. The initial five members appointed by the extension service's multicounty program units shall select their terms by lot so that one member serves for one year, one member serves for two years, one member serves for three years, one member serves for four years, and one member serves for five years.  
c. The two persons appointed as representatives of the state's research extension centers shall serve only through June 30, 1998.
3. At the completion of each initial term, the term of office for each member is five years, beginning on July first. No person may be appointed to a second five-year term.
4. a. At least ninety days before the conclusion of the initial term of each member appointed by the ag coalition, the ag coalition shall provide to the state board of higher education a list of one or more names from which the state board of higher education shall appoint a successor. Future appointments to these five positions must be made in the same manner. The state board of higher education shall ensure that four out of the five seats are held by agricultural producers.  
b. At least ninety days before the conclusion of the initial term of each member appointed by the extension service's multicounty program units, the units through their advisory groups shall provide to the state board of higher education a list of one or more names from which the state board of higher education shall appoint a successor. Future appointments to these five positions must be made in the same manner. The state board of higher education shall ensure that four out of the five seats are held by agricultural producers.

**SECTION 9. AMENDMENT.** Subsection 1 of section 4-05.1-21 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:

- a. Seventy percent to research activities affecting North Dakota agricultural commodities that account for at least two percent of the gross sales of all agricultural commodities grown or produced in the state. The percentage of the dollars available for each agricultural commodity under this section may not exceed the percentage that the gross sales of the agricultural commodity bear to the North Dakota gross sales of all agricultural commodities grown or produced during the previous year, as determined by the agricultural statistics service;
- b. Eighteen percent to research activities affecting North Dakota animal agriculture; and
- c. Twelve percent to research activities affecting new and emerging crops in North Dakota."

Renumber accordingly

**STATEMENT OF PURPOSE OF AMENDMENT:**

**Senate Bill No. 2021 - Summary of Senate Action**

	EXECUTIVE BUDGET	SENATE CHANGES	SENATE VERSION
<b>Transportation Institute</b>			
Total all funds	\$7,888,427	\$0	\$7,888,427
Less estimated income	7,383,348		7,383,348
General fund	\$505,079	\$0	\$505,079
<b>Branch research centers</b>			
Total all funds	\$13,772,845	\$893,500	\$14,666,145
Less estimated income	5,873,485	975,000	6,848,485
General fund	\$7,899,160	(\$81,500)	\$7,817,660
<b>NDSU Extension Service</b>			
Total all funds	\$33,678,048	(\$50,000)	\$33,628,048
Less estimated income	19,298,301		19,298,301
General fund	\$14,379,745	(\$50,000)	\$14,329,745
<b>Northern Crops Institute</b>			
Total all funds	\$1,457,123	\$0	\$1,457,123
Less estimated income	732,697		732,697
General fund	\$724,426	\$0	\$724,426
<b>Main Research Station</b>			
Total all funds	\$55,228,597	(\$50,000)	\$55,178,597
Less estimated income	26,812,612		26,812,612
General fund	\$28,415,985	(\$50,000)	\$28,365,985
<b>Agronomy Seed Farm</b>			
Total all funds	\$1,259,140	\$0	\$1,259,140
Less estimated income	1,259,140		1,259,140
General fund	\$0	\$0	\$0
<b>Bill Total</b>			
Total all funds	\$113,293,978	\$793,500	\$114,077,478
Less estimated income	61,359,583	975,000	62,334,583
General fund	\$51,924,395	(\$181,500)	\$51,742,895

**Senate Bill No. 2021 - Branch Research Centers - Senate Action**

	EXECUTIVE BUDGET	SENATE CHANGES	SENATE VERSION
Dickinson Research Center	\$3,132,653	\$878,500	\$3,811,153
Central Grasslands Research Center	1,413,982		1,413,982
Hettinger Research Center	1,559,583		1,559,583
Lisingson Research Center	1,781,894	135,000	1,916,894
North Central Research Center	1,511,068		1,511,068
Williston Research Center	1,413,788	80,000	1,493,788
Carrington Research Center	2,959,679		2,959,679
<b>Total all funds</b>	<b>\$13,772,645</b>	<b>\$893,500</b>	<b>\$14,666,145</b>

Less estimated income	<u>5,873,485</u>	<u>976,000</u>	<u>6,849,485</u>
General fund	\$7,899,160	(\$81,500)	\$7,817,660
FTE	78.36	0.00	78.36

**Dept. 628 - Branch Research Centers - Detail of Senate Changes**

	PROVIDE FUNDING FOR LEARNING CENTER <sup>1</sup>	REMOVE FUNDING FOR OPERATING EXPENSES	PROVIDE FUNDING FOR BEEFLINE <sup>2</sup>	REDUCE FUNDING	PROVIDE FUNDING FOR LAND PURCHASE <sup>3</sup>	TOTAL SENATE CHANGES
Dickinson Research Center			\$745,000	(\$66,500)		\$678,500
Central Grasslands Research Center						
Hettinger Research Center						
Langdon Research Center	\$150,000	(\$15,000)				135,000
North Central Research Center						
Williston Research Center					\$80,000	80,000
Carrington Research Center						
Total all funds	\$150,000	(\$15,000)	\$745,000	(\$66,500)	\$80,000	\$893,500
Less estimated income	<u>150,000</u>		<u>745,000</u>		<u>80,000</u>	<u>976,000</u>
General fund	\$0	(\$15,000)	\$0	(\$66,500)	\$0	(\$81,500)
FTE	0.00	0.00	0.00	0.00	0.00	0.00

<sup>1</sup> Estimated income is increased by \$150,000 for construction of the Langdon Learning Center. A total of \$810,000 is provided for the project, \$150,000 of which is from the general fund. A section is added providing that the center must raise \$650,000 before construction may begin.

<sup>2</sup> Provides authorization for the beeline initiative from additional income.

<sup>3</sup> Provides authorization to purchase 160 acres of land in the Nesson Valley irrigation project from other income.

**Senate Bill No. 2021 - NDSU Extension Service - Senate Action**

	EXECUTIVE BUDGET	SENATE CHANGES	SENATE VERSION
Salaries and wages	\$26,183,226	(\$26,183,226)	
Operating expenses	6,216,970	(6,216,970)	
Equipment	897,850	(897,850)	
Grants	580,000	(580,000)	
NDSU Extension Service		<u>33,628,046</u>	<u>33,628,046</u>
Total all funds	\$33,678,046	(\$50,000)	\$33,628,046
Less estimated income	<u>19,299,301</u>		<u>19,299,301</u>
General fund	\$14,379,745	(\$50,000)	\$14,329,745
FTE	275.81	0.00	275.81

**Dept. 630 - NDSU Extension Service - Detail of Senate Changes**

	CHANGE TO ONE LINE ITEM	REDUCES FUNDING	TOTAL SENATE CHANGES
Salaries and wages	(\$26,183,226)		(\$26,183,226)
Operating expenses	(6,216,970)		(6,216,970)
Equipment	(897,850)		(897,850)
Grants	(580,000)		(580,000)
NDSU Extension Service	<u>33,878,046</u>	<u>(\$50,000)</u>	<u>33,828,046</u>
Total all funds	\$0	(\$50,000)	(\$50,000)
Less estimated income			
General fund	\$0	(\$50,000)	(\$50,000)
FTE	0.00	0.00	0.00

**Senate Bill No. 2021 - Northern Crops Institute - Senate Action**

	EXECUTIVE BUDGET	SENATE CHANGES	SENATE VERSION
Salaries and wages	\$985,010	(\$985,010)	
Operating expenses	399,233	(399,233)	
Equipment	72,880	(72,880)	
Northern Crops Institute		<u>1,457,123</u>	<u>\$1,457,123</u>
Total all funds	\$1,457,123	\$0	\$1,457,123
Less estimated income	<u>732,897</u>		<u>732,897</u>
General fund	\$724,426	\$0	\$724,426
FTE	8.00	0.00	8.00

**Dept. 638 - Northern Crops Institute - Detail of Senate Changes**

	CHANGE TO ONE LINE ITEM	TOTAL SENATE CHANGES
Salaries and wages	(\$985,010)	(\$985,010)
Operating expenses	(399,233)	(399,233)
Equipment	(72,880)	(72,880)
Northern Crops Institute	<u>1,457,123</u>	<u>1,457,123</u>
Total all funds	\$0	\$0
Less estimated income		
General fund	\$0	\$0
FTE	0.00	0.00

**Senate Bill No. 2021 - Main Research Station - Senate Action**

	EXECUTIVE BUDGET	SENATE CHANGES	SENATE VERSION
Salaries and wages	\$40,952,648	(\$40,952,648)	
Operating expenses	10,027,903	(10,027,903)	
Equipment	1,532,746	(1,532,746)	
Capital improvements	415,300	(415,300)	
Agricultural research grants	2,000,000	(2,000,000)	
Animal replacement	300,000	(300,000)	
Main Research Station		<u>55,178,597</u>	<u>\$55,178,597</u>
Total all funds	\$55,228,597	(\$50,000)	\$55,178,597
Less estimated income	<u>26,812,612</u>		<u>26,812,612</u>
General fund	\$28,415,985	(\$50,000)	\$28,365,985
FTE	351.29	0.00	351.28

**Dept. 640 - Main Research Station - Detail of Senate Changes**

	CHANGE TO ONE LINE ITEM	REDUCE FUNDING	TOTAL SENATE CHANGES
Salaries and wages	(\$40,952,648)		(\$40,952,648)
Operating expenses	(10,027,903)		(10,027,903)
Equipment	(1,532,746)		(1,532,746)
Capital improvements	(415,300)		(415,300)
Agricultural research grants	(2,000,000)		(2,000,000)
Animal replacement	(300,000)		(300,000)
Main Research Station	<u>55,228,597</u>	<u>(\$50,000)</u>	<u>55,178,597</u>
Total all funds	\$0	(\$50,000)	(\$50,000)
Less estimated income			
General fund	\$0	(\$50,000)	(\$50,000)



2001 HOUSE APPROPRIATIONS  
SB 2021

2001 HOUSE STANDING COMMITTEE MINUTES  
BILL/RESOLUTION NO. SB2003 - SB2021 Overview

House Appropriations Committee

Conference Committee

Hearing Date March 1, 2001

Tape Number	Side A	Side B	Meter #
1	x		0 - 6217
1		x	0 - 6011
2	x		0 - 6224
2		x	0 - 3821
Committee Clerk Signature			

Minutes:

**House Appropriations Committee overview meeting on SB2003 & SB2021.**

**Rep. Timm:** Called the House Appropriations Committee to Order and Called the roll.

**Dr. William Isaacson, President, State Board of Higher Education. (Followed written testimony and then followed by questions and answers) Tape # 105 through 1700 Tape 1 - Side A.**

**Larry Isaak, Chancellor. (Followed written testimony and then followed by questions and answers) Tape # 1700 through 6216 Tape 1 - Side A.**

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House Appropriations Committee  
Bill/Resolution Number SB2003 & SB2021 -overview  
Hearing Date March 1, 2001

**Speakers:** Craig Schnell, Mike Hillman, Laura Glatt, Sen. Nething, Bill Goetz, Dale Anderson, Greg Schnell, Pat Jensen Jerry Doan. (All had written testimony and then answered questions for the overview meeting.

**Tape 2 - Side B ends at approx 3821..**

**This process continued for the remainder of ( Tape 1. Side B and Tape 2. Sides A & B.)**

2001 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB2021

House Appropriations Committee  
Education and Environment Division

Conference Committee

Hearing Date March 06, 2001

Tape Number	Side A	Side B	Meter #
1 of 3	Starting at 4,920	x	
1 of 2	x	x	850
Committee Clerk Signature <i>Judy Schock</i>			

Minutes:

Representatives Aarsvold, Boehm, Gulleason, Martinson, Monson, Wald, Wentz.

Representative Wentz: We will open the hearing on SB2021. The budget number is 640 in your budget books.

Jerry Doan: Chairman of Station Branch Agriculture Research Equipment. Our main problem is to determine the problems in agriculture and address them to research extension to see how they fit into ND. I think as a board we were pleasantly surprised that there were some good things happening. We weren't too far off in some areas. We then developed some initiatives and fill in the gaps that weren't addressed. We saw that need for graduate students. We also wanted to cross departmental lines and make these projects more systematic to where they would target in. Another are in our facilities. Our animal facilities we were falling behind, which was one of our major goals. We spent a considerable amount of time building trust with in the faculty and administration at NDSU. We didn't use numbers and percentages when getting together with

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Education and Environment Division

Bill/Resolution Number SB2021

Hearing Date March 06, 2001

the board to discuss the budget. We decided to look at what are the needs of agriculture and lets move forward. A couple of the key themes were, industry and bring forward a budget that has priorities and makes sense. We left millions of ideas lay, and we had some great ideas. After having taken it to the State Board of Higher Education, we took it to OMB, and now to you folks. I think we have a lot of checks and balances. Our number one priority was to restore the cuts that we had to do to get to that hold even budget. If you make those cuts we end up cutting support staff and we have a plan for that. The other think I don't like is we would have to increase fees to producers and anytime we put it on the backs of producers it sort of bothers me. Our number two priority was the biggest chunk and one that is very important is the core budget area. In another area the NCI Feed Mill. Even though we are not responsible for that, the feed mill part of it is used for all of our livestock programs. A couple of points in the core budget that will help us. Any of you involved in livestock production know the Livestock Market specialist, the Howard Hughes position. That has never been filled and will be with in that core budget. Also the 4-H Youth specialist has sat vacant for some time, and too will be filled. The Beef Quality Assurance program will also be funded within these core budgets. Our number three priority are the initiatives. We cut this back to a respectable number and were not funded in the executive budget. but has a number of things that would be good if there was added money. The number one initiative priority is the beef line, because we think there is tremendous potential in the beef cattle industry in ND for expansion. The only area we were concerned about is the cost to continue area. The Senate cut 50,000 out of the main station, 50,000 cut out of extension budget, and 81,500 out of the branch station. That includes the 66,500 for Dickinson and 15,000 for Langdon center. We were able to restore the Langdon center authorization up to 810,000. Also see the budget for all center involved. In section 6 has the accountability measures. There

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Education and Environment Division

Bill/Resolution Number SB2021

Hearing Date March 06, 2001

is a section in there that does change the voting on the State Board of Ag Research and Education. The section that the Gas Tax Research Fund, the administration be limited to 10 percent. That is contradictory to the bill you just passed out of the house that limited 50,000. This will have to get sorted out. We are looking at ways to partner up.

Tim Bryan: (1165) Chairman of Crop sub committee. See attached.

Representative Martinson: (1645) When we up there for capital for a day, and you and I were out in your shop. I was very interested in your canola and how you were going to treat and plant it in the fall to see how it would come up in the spring because of the weather conditions. How did that work out for you?

Tim Brian: No, those of us in farming know that good ideas at times don't work out as good as you had hoped. We are still hopeful but I think right now our view is, our excitement has greatly diminished.

Representative Aarsvold: What effect of the micro climate of the city is having on those plots? Is that a consequence at all in your mind as a farmer, and now being involved with the research decisions?

Tim Brian: That is one of the reasons why we have all the regional branch stations to make sure we don't get caught up in environmental issues at one place. Scientist may be more qualified to respond to that.

Cole Gustufson: Associate Dean for Research for NDSU. Location and the effectiveness, primarily the would be the lighting from the city lights effects the day light growth of the plant. Their is concern that as the campus and city expand and there is foot traffic there that crated problems at times.

Ryan Brooks: (1880) Chairman of the Livestock Sub Committee. See attached, hand written, but read.

Representative Gulleon: (2595) I see mass funding on projects coming from the commodity group. I haven't see where mass dollars provided through the animal associated beef, pork, producers or any of those types of groups. Have they been involved in putting forth some of those research topics that you talked about and has there been asked for resources from their groups?

Jerry Doan: In the Ag research fund which is the gas tax money that goes into that fund. Seventy percent of those go to the major crops, and they have to have a twenty five percent match. If they are in state a fifty percent match if the project would be out of state. Eighteen percent goes to livestock. They do not have to have a match, and the reason being the National Beef check off will not allow dollars to go to production research. Twelve percent goes to new and emerging, They also do not have a match.

Representative Wald: (2775) When the bill left the Senate there was an additional 745,000 for a program called the beef line 2. What is your take on that project, and fill us in on the Dickinson project.

Ryan Brooks: That project started out quite a little larger than where it is at and, pared it down. We put it in as our number one initiative. We felt like livestock maybe got a bit of the short end in past years. I think it is a pretty well put together program. We have yet to prioritize all the components in that program. I guess our feeling was to wait and see what kind of money we could put towards it and than prioritize with some help from the livestock industry.

Jerry Doan: (2920) I hope you see the true commitment of our board. I feel good where we are at although we are not near where we want to be. It will never be perfect but we have made progress.

Representative Aarsvold: I hear a lot of frustration vented from farmers about the market and disease and now the food safety. I hear some farmers say we are giving up some of our gas tax refund for research. Yet their impression that the research is not practical or a benefit to them directly. They want to see quicker results. I know you can't move those things along very rapidly. More importantly they perceive a lot of duplicated effort, not only externally, that is with other states, universities and other research programs but also within our state. Can you help me with those folks?

Jerry Doan: I think the frustration from our perspective is as well. Part of the reason we set up the sub committees is we have got to get producers to work with us. We don't have all the answers. Producers that have concerns need to come and funnel this information to our sub committees. They need to come to us and work with us. On the duplicate those are producers making those decisions. They have the knowledge. The wheat granting committee has the expertise along with the wheat commission. It is in their hands. I don't want to as chair or our board to say they are all wet. This should be in the hands of producers. I encourage them to come to the meetings. Research is a building block.

Representative Monson: (3985) You said you don't feel like you are put up on a echelon, but still you are saying that you're board has dibs on the good ideas because you don't want us to come along and change any of those. We do have constituents just as you do. They feel that we as Legislators might have some responsibilities to them to bring some of their ideas forward too. On one hand you are saying don't put you on a echelon because you don't have all the

answers, but at the other hand you are saying keep your hands off of our initiatives because we have done all this hard work, and we know best.

Jerry Doan: I think what we have to be concerned about is we built a system here. If we go around the system than I think we need to get rid of the Board and go back to the old system to where everyone brings their ideas, and it's a free for all, and we shoot at the hip and we throw a bunch of dollars out there and hopefully something hits. I think we are past that. I can appreciate if I were from your district and sitting in your chair. I understand the pressure you get put in. Our Board truly votes with their heads and where we put the dollars first. It is the best system at this time. Again we need to tell those people to come to us.

Representative Wald: (4372) A comment I get when out for coffee is do you take advantage of the research done by feed and feed companies, chemical companies and that sort of thing? I hear farmer's say so and so feed did that four years ago and why are we doing it now. Are we taking advantage of what they are doing in surrounding States and even the Canadian Provinces? Which raise similar crops under similar conditions. I hear them from the best and most successful farmers.

Jerry Doan: We do, and we are trying to partner up where ever we can to share information so we aren't reinventing the wheel all the time. I don't know the specifics so I don't want to say that I am right or they are wrong. Often times we get caught up in perception as well. When you sit there you realize you were not doing as many things wrong as you thought were happening. That is not the down play of those producers. They too have a legitimate concern.

Pat Jenson: (4885) Vice President and Dean of Agriculture at NDSU. I did want to make a couple of comments. Since DR Chapman has come to our campus we truly are unified in our purpose, and agriculture is very excited about the goals and themes he has set and placed in front

of us. We at NDSU appreciate the diligence and the food members of SBARE. We were brand new when I took my job at NDSU. We worked hard to work together as partners, but at the same time not to be the same entity. Their responsibility is a little different than ours and they are independent from us. We are running those programs as best we can in the land grant school and serving the people of ND. We appreciate the manner in which they have come about putting the SBARE together. You added extension to their responsibility last year and all of that is working well together. Another thing about SBARE even though their oversight and responsibility is to the State Appropriation for NDSU Agriculture. The State Appropriation is almost fifty percent of our entire appropriation in dollars that we take into NDSU Agriculture. It is very critical to us that they are partnering with us and are able to view the entire scope of what we are doing.

Having that core budget in good shape will help us with several concerns in the livestock disease area. With diseases it isn't any more that you just find the answer to a disease, because there is a more virulent around the corner. We exceed the number of cattle and livestock in this state even more than Texas which is number two, ND is number one. Another part of our budget that didn't come up this morning is the diagnostic lab. We have been working with SBARE and the diagnostic lab and what we do there to serve the ND producers and the veterinarians. You can see how, even though we call this a core budget increase, it is indeed targeted toward many initiatives and many specific areas we see as we move along through the year. The key components driving our budgets of course are research, extension and our budget is geared toward serving these land grant missions. In the NDSU budget it is all enter twined. Having the core program strong allows us to collaborate as strong partners.

DR Cole Gustafson: (325 tape 2) Associate Dean, Research. We are developing our presentation around the six corner stones of the Legislative Round Table. See blue attached

Agriculture Experiment Station booklet page 7. I would like to discuss the initiatives starting on page 19.

Sharon Anderson: (1165) When Dr. Chapman arrived on campus and used the theme "Its all about people," it was perfect because that is exactly what extension has been from day one, is listening to the needs of the people operating at the local level using the resources of NDSU as well as other research entities to provide that information to people. The Extension Service has done many of the things that you would expect us to do. We have had aggressive crop production programs and have really worked into alternative crops. We have amazing new programs in that area. Our livestock programs continue with a lot of people interested in diversified enterprises. Our youth program remains very strong. We have 35,000 young people involved in the 4 H youth development program. Which is about 35 percent of the potential audience we could have. Our food safety, food preservation remains strong. Most every week during the production season most of our Ag agents produce an Ag alert distributed through out the county. In most cases that is on the individual county web page. People are starting to use that technique. Every Monday morning every Ag agent in the state phones in the crop and weather report from that county, which than makes the ND crop and weather report for the entire growing season. We have a lot of traditional things that people like from the extension service. However, every biennium, every year, there are new and different things that we move into and address because of what people are saying. That comes from SBARE, our multa county unit advisory committees, peoples in put of what we should be doing to address needs. See attached page 11 of blue book handout, than to page 33. As we proposed our budget we looked at the cost to continue, and for an organization like ours keeping the salaries of our good staff members. Maintaining those is important and that is part of the cost to continue and the operating expenses

to keep doing your work. On page 38 we included the core budget. We have been very pleased with the executive budget.

Representative Monson: (2090) You mentioned on page 33, why did some get executive recommendation and most got zero. What is happening with that?

Sharon Anderson: Our understanding was that the parts that we said we thought we could fund through assessment to producers, adding costs to our programs or somehow finding the money that way we're not honored. If there was something we indicated, would be cut because of the cost to continue than that money was added back in on the Governor's budget.

DR. Cole Gustafson: (2288) Continue on with page 33. There were cuts by the Governor's budget. The Senate too cut some. A position was cut for Dickinson. We may still need to work with the Senate possibly in conference session so we need to be careful. I didn't feel that was appropriate decision on the Dickinson side. We have worked really hard on changing what that person has done in the past. We would like to work with you on having that restored. Our top priority is going to be for cost continue. Continue with the budget.

Sharon Anderson: As you know two biennium's ago the ND State Soil Conservation committees budget was merged into the extension services budget. We have worked very hard and diligently with that organization and things are going very well.

Marlene Kouba: Chairman of the ND Soil Conservation Committee. (2715) We keep saying ND is agricultural state. Every state except Hawaii, agriculture is the number one industry. Agriculture is number two in Hawaii, number one being tourism. See attached.

Timothy Faller: (3316) Director of Hettinger Research Extension Center. See attached.

Representative Gulleason: (3865) Regarding the cost of equipment, do you ever get into any kind of agreement with companies in lease agreements or testing agreements on your equipment so you are having the out lay to purchase those large pieces that are used seasonally?

Tim Faller: We have tried to be able to work with those companies with testing and that has not worked out, but the one place they have been helpful with additional funds to their dealers for entities such Ag research centers in the purchase of these new equipment items. So you are turning your equipment over a little faster, you take advantage of what they have made available to the research centers. It is typically a 10-20 percent additional discount. We do use leases but most times they cost about the same or more than owning.

Paul Nyren: (4030) Director of Central Grasslands Research Extension Center. See attached Rep Wald asked a question about importing research. We do everything we can to import any information that we have from other states. We need to remember research conducted on an environmental factors. Such as climate and soils can only be conducted where it is to be used, if the producers of ND are to use these results.

Stan Melroe: (4440) Director of Williston Research Extension Center. Our area has developed an irrigation. We have developed about 25,000 acres in the last five years. Sugar beets have increased 15,000 acres, dry beans 8,000, malt barley has increased from zero bushel in 1998 and eight to two million last year. Anheiser Bush plants grow 3-4 million bushel my area with chances of a malt plant in our area. We are also working industrial dairies, one at Sidney and there are others under study at Wolf Point, Williston and Parshall. We are also working with identity wheat. The Williston center with the technology transfer center is the regional hop for this economic development for this activity. We work with the farmers economic development leaders and industry partners from within and outside the region.

Randy Mehloff: (4640) Director of the Langdon Research Extension Center. We hope to place a learning and technology center on our site. The people in our region are actually the people who came to us about building the center. A very good survey was done of our region and people recognized the things we need to start working on. One was for us to be updated in technology and have this resource to help our region become more sustainable. See attached.

Kris Ringwall: (5245) Dickinson Research Center. See attached. We would appreciate the reinstatement of the 66,500 that was with drawn from general fund budget. That takes our budget down to about a 96 percent general fund budget from where we were coming into this biennium. We feel this would be a significant hardship.

Jay Fisher: Director of the North Central Research Center in Minot. See in the blue handout page 25 for accomplishments and page 33 and 49 for budget information.

Tom Teigen: Represent the Agronomy-Seed Farm. My budget request is very simple. The budget for 2001-2003 is very similar to the previous biennium budget. It contains everything we need to do as usual and contains a small component for continued capital improvements. If we have such seed income that we feel we can adequately add some hopper bins to our bulk seed storage facility. We are 100 percent independent on sales income, no general fund money and I have a similarity with the four other seed producing components of the research center group, in that we all rely on continued and orderly variety development and release. Therefore our existence also hinges on your support for the entire Ag experiment station budget who is the entity that is responsible in their plant science department for the release of these varieties.

Pat Berghund: (5885) Director of the Northern Crop Institute on the NDSU campus. Refer to page 112 in the blue attached book. The mission of the Northern Crops Institute is somewhat different than the rest of the University system in that we support ND and regional agriculture

and, a value added processing by conducting educational and technical programs for professionals from the US and overseas, that we can maintain domestic and international markets for northern grown crops. Page 114 listing of consulting overseas. We continue service to the livestock industry. We have a feed mill which process feed for the NDSU main research station, and for many of the research projects at the branch stations. We have taught a feed manufacturing course to NDSU students and bring regional students and teach specialized programs in feed manufacturing to emphasize the use of commodities from this region. Part of that core funding that was in the Executive and Senate bill will be used for out utilities at the feed mill. Turn to page 116. Your funding helps enormously to leverage.

Representative Wald: (566) How much money will you receive from SD, Minn, and Mt?

Pat Berglund: Page 125 regional funding for the biennium is shown there. SD, even though it is not high doubled their funding so it will be 50,000 dollars for this year. They do a one year budget. You can see the rest those should remain stable.

Representative Wald: Why is your operating going up and down so.

Pat Berglund: Actually it's to keep our spending in the budget as it actually is happening. Our travel budget is probably one good example. When people come in from other countries the bill comes through we pay it but we are reimbursed by other agencies and than shows up in our total budget. It is a rare thing we pay for airline meals or any other per diem. We do have some funding granted through commodity groups that helps defray tuition. I have a testimony by Matt Mechel that I will distribute in the interest of time.

Representative Wentz: This ends the hearing on SB2021

2001 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB2021

House Appropriations Committee  
Education and Environment Division

Conference Committee

Hearing Date March 06, 2001

Tape Number	Side A	Side B	Meter #
2 of 3		3,665	end
3 of 3	x		1,455
Committee Clerk Signature <i>Judith Schock</i>			

Minutes:

Representatives Aarsvold, Boehm, Gulleason, Martinson, Monson, Wald, Wentz.

Dennis McLeod: (3755) Chairman of the Transportation Institute's Advisory Council. See attached.

Gene Griffin: (4330) Director of Transportation Institute of NDSU. We are very much a part of the University and we answer directly to the Vice President of academic affairs. See Biennial Strategic Transportation Analysis. We think it is critical to continue this program and have a competitive advantage in this state. As you become more logistical competitive, what you actually do is enter an environment where there is more competition. Once you do that you have to pay more attention to being logistically competitive. Which means it is a never ending cycle of once you reach one level of efficiency and market penetration, you have to pay attention to that and find ways to maintain and improve that, because now instead of competing with the neighbor next door you are competing with the country next door.

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Education and Environment Division

Bill/Resolution Number SB2021

Hearing Date March 06,2001

Representative Gullison: (5555) I would like a copy of the analysis on the grains, and the oil seeds. That is the one area I get the most discussion regarding transportation and our state has access to and rates on rail service. Did your study address the two issues, access and rates?

Gene Griffin: Yes we did. We addressed four issues, shuttle trains, heavy rail cars, inter motile facilities and vocational analysis used in sighting food processing or agricultural processing facilities. The final result will come out by July. We did take a very detailed look at the shuttle trains facility phenomena that is taking place. I think it is sufficient to say, the drawing territory that those facilities require to be viable spells some significant change. Not only for the elevator system, and road infrastructure are the types of trucks that producers are going to be using, and the amount of miles they are going to travel etc. We have evaluated those things. There is some question whether these facilities are going to work. My opinion is there is so much money on the table in terms of efficiencies to be gained that I think the railroads are going to work very hard to figure out how to make them successful.

Representative Wald: (5940) You alluded to the movement of agricultural products and with NAFTA being a fact of life, trucks running out of Canada to this country all the way to the Mexican border. There are some real problems in the trucking industry, primarily with insurance. Your truckers policy isn't any good in Mexico as it is in the US and Canada, so you have a territorial restriction there. The same being true with cargo insurance. Seems to me that some one in ND and possibly a cooperative effort with neighboring states and Canadian Provinces, where there is a lot of livestock moving North and South. You have a problem at the border with livestock waste disposal. Seems we have many artificial barriers in weight per axle different in Canada, weight restrictions, length of truck box etc. It may be time someone and I see Motor Carriers, Stockman Association and Department of Transportation is a part of your

organization, should take a look on how this traffic can flow with fewer restrictions between the Canadian Provinces through the States and into Mexico. It is a problem with moving with NAFTA. This is increasing daily. So again is this anything you have looked at?

Gene Griffin: (50) It is what is in the preview of the institute to look at that. It is beyond the scope of what we are trying to do here. I have done boarder cross inspections in Arizona and Mexico, and you are right about the state of the equipment. The Federal Motor Carriers Administration is facing a huge problem because of NAFTA, we are going to have to start allowing Mexican trucks come across the boarder. There is significant concerns about safety of equipment, the drivers, and the qualification of the drivers. It is a huge problem probably beyond the scope of any funding we have. Certainly on the Canadian boarder side it would be something we could take a look at as part of this next study because one of the market analysis that we will conduct for manufacturing is we will look and specialize Ag marketing. We will look to the Canadian side of the boarder and see if there is potential market there to move down into the US. So it certainly something we could put on the list of things to evaluate. The scope of the problem is you have suggested is huge.

Representative Wald: A trucker can bring a load of livestock out of Regina, haul it to a packing plant in Iowa or Nebraska or Colorado, and before he can go back into Canada he has to dump that livestock waste. It was waste that originated in Canada and has to be dumped on this side of the boarder. That is highly unfair to the trucker, particularly to the American trucker, before he can move back into Canada with that truck.

Gene Griffin: You are right, and I don't know the answer is. I think it is a Federal issue or DOT.

Representative Wentz: (240) We have a problem at the boarder by the Peace Gardens.

Sometimes those trucks stand there for a while and wash them out and the waste is draining into a little creek which runs very close to the well we have there. So something needs to be done.

Gene Griffin: I agree with you. I don't know the law but I would think that was highly illegal.

Representative Gulleason: Under your mission that you work in the region on Transportation issues, it got me thinking about those types of issues that tend to be Federal Transportation issues. A problem we had on the ND, SD transporting potatoes back and forth during harvest. The processing plant is in the SD side and much of the irrigated acreage is on our corner of the State. They are having terrible problems regarding these. The weight expectancy is on the SD side different than the ND side. Your roll in these types of things, do you make recommendations to the congressional delegation or to the Federal Government and how to make our system of transportation to work better as a whole instead of having state by state.

Gene Griffin: Yes we do. As you look from our budget almost all of our research is sponsored research, even the general fund we have is used to match other. Unless we found a sponsored project to address that we probably wouldn't. It is an issue and one we do get involved in, and an issue between two states as well.

David Sprynczenatic: (480) Director of the Department of Transportation. I support of the appropriations for the Upper Great Plains Transportation Institute as contained in SB2021. We have a close relationship working with them and several on going on contracts that allow us to use the resources of the Institute to address problems, and issues regarding transportation not only in ND but within the upper great plains. We have a support center where young engineering students are able to work within the institute and assist us addressing some of our engineering needs and the advanced traffic analysis center.

**Robert Sinner:** (630) Producer, farmer, and from Casselton, ND. My partners and I have been exporting food grain soybeans for about 13 years. We utilize inter motile facilities and inter motile containers on a regular basis. Many people in the State don't know or understand or appreciate what intermit is. It simply is the movement of freight and can be anything by container or by trailers loaded on a railroad car. We have worked with a number of steamship lines that provide containers for us to give us the ability to export a product from our farm to a customer in Asia or Europe. It is becoming the way of the future. My opinion this analysis is long overdue. We have a serious problem developing in our region, specifically our state. We have access to a facility at Dilworth Mn. that is under sized, ineffective, and we are going to see our manufacturing sector as well our agriculture economy suffer greatly if something isn't done with it. Burlington Northern does acknowledge that it is a concern and their facility have congestion, and expansion problems, and is willing to listen to us. We need to convince them there is volume out there that will justify a larger and better facility. Any discussion that is made relocating a facility, become a very comprehensive study so you don't interrupt the public transportation system. We all live with the railroad and without the ability to control the railroad Burlington Railroad has a large impact on our state. They to need to be convinced this needs to be done. We need this study to convince them. There is a strong movement in Ag towards identify preserve. Food processors want specific types of commodities for specific food uses. We also have a lack of imports in our State. We have had opportunities in the past to attract some big business, Unfortunately that did not happen. ND has a real opportunity here. I think this analysis is critical to convince Burlington Northern that there is a tremendous growth opportunity for the state. If we don't do that we are going to suffer.

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Education and Environment Division

Bill/Resolution Number SB2021

Hearing Date March 06,2001

Jeff Mielke: (1175) Executive Secretary of Public Services Commission and Commission's

Licensing Division. See attached. I also distributed testimony from Steve Strege, ND Grain

Dealers Association who is unable to be here today.

Representative Wentz: Does anyone else wish to appear in opposition of SB2021 Seeing none

we will close the hearing on SB2021.

2001 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB2021

House Appropriations Committee  
Education and Environment Division

Conference Committee

Hearing Date March 07, 2001

Tape Number	Side A	Side B	Meter #
1 of 1	110		1,395
Committee Clerk Signature <i>Judy Schock</i>			

Minutes:

Representatives Aarsvold, Boehm, Gulleason, Martinson, Monson, Wald, Wentz.

**Representative Wentz:** When we adjourned yesterday March 06, There was not time on some public comments on the Extension budget contained in SB2021. I am allowing time for Mr. Moser to make some comments to us on the budget.

**Wade Moser:** ND Stockman's Association. We have a bit of a different spin on where we feel research ought to go in ND. It concerns the beef cattle industry. People are reading more in publications than we are getting out of the research stations. We felt we advanced past the stations to some degree, they were still doing a lot of production Ag research, and our philosophy had moved that we have got to do more research on the end products. We sell beef and need to see how this research we are working on effects the end product. We had feed lot people from Kansas call our extension people saying I just bought a unit train of damaged grain out of ND to feed my cattle. What do I need to be concerned about. We thought that to be odd, why are we

shipping all this damaged grain that some of you at 75-85 cents a bushel for someone else to take advantage of. Their concern on the other end knowing they can feed it but, do we need to worry about what the end product is going to look like. When we slotter them, what do we have? No one had the answer. We have opportunities in ND to change the direction and do more research. See attached. What we purposed is we change and reemphasized is the mission of the Carrington station to which is a feeding station and upgrade it to do the research we feel is necessary. That is taking those cattle from those research stations to the end product. Along with research we need to know the end product. The numbers are high from a study done to see what it would cost to upgrade the Carrington Station. We disappointed in the numbers. When we got to looking at it we found a lot of problems with it. Two 5,000 grain hopper bins they projected cost of 50,000 dollars. As we started tearing it apart, their million dollar project probably is far less, maybe 600-700,000 dollars, to put a new mill, and upgrade the Carrington Station. That is the direction we would like you people to take a look at. Take a look at the five points the feed lot would do for our beef cattle industry on back of attached.

Representative Monson: (530) What exactly do you want for research at Carrington? Many years ago in the scab business came out Carrington was doing feeding of high levels of barley to their cattle in the feed lots when I took a tour. Do you need more? Do you necessarily need quantity of more than they had and are doing?

Wade Moser: We would like to see an upgrade of the Carrington Station to put in a mill that will feed more cattle than they have now, and the building has some feed lots. One to handle the livestock and probably secondly to do a lot of environmental research that we desperately need. We too were concerned were we looking at something to big. The researchers tell us you need replication and we are looking at probably needing more than one or two little trials where we

can take larger numbers and doing it more on a commercial basis. One thing they did not do in those trials was to follow through to see what the effect was on the end product. We also have a proposal in the beef line initiative for marketing. We will not be marketing our cattle any more where we take them to market and ask what are they worth. We are going to price our cattle to someone down the line as they do in the retail business. In order to do that we need to know what we have in genetics and we have to sell our cattle knowing once they are slotted what they will produce. This is the kind of research that needs to be done.

Representative Wald: (725) The grain they bought down in Kansas, what was the problem with it?

Wayde Moser: We were told by the elevators it was damaged grain, and that could mean a whole lot of things. What happened I think the people in ND aren't very comfortable and the fact they haven't feed cattle and I think we need to prove that we can, and need to use these grains. The Streeter station depend highly on selling their calves to generate money for their research budget. That is a problem because they are not willing, because of budget reasons to do high risk research. They can not afford to put any livestock in a situation where they may devalue them. Nine months down the road they need to sell them to operate their next budget. We think that whole system needs to be looked at.

Representative Monson: What this is, is your initiatives that you are proposing that did not make SBARE cut?

Wayde Moser: Yes, mainly because of timing is what we were told.

Representative Gulleason: (900) Would it be appropriate for us to consider substituting or adding your project on to their request? Do you think the State's beef industry, the Stockman's

Association, and the Beef Commission would agree that it would be a priority in that area over the current project that has been proposed?

Wayde Moser: We would like you to consider that. We realize their first two priorities are very important although the beef line is their third priority. We feel we would like to substitute this for the third priority because we feel what is happening in the beef line can be implemented in to this and probably be more effective than a stand alone beef project. At our convention we passed a resolution that this is our priority.

Representative Wald: I hear from successful farmers, you guys know how to raise it, the problem is selling it. Should we direct more emphasis on marketing these foods and fibers we raise in ND. Raising it is easier than selling it.

Wayde Moser: We are getting a lot more the production type of information from actual operation than commercial operations. Our of our priorities in our proposal is on marketing and how we can do a better job of marketing because we know what we have for a product.

Representative Aarsvold: (1205) I was disappointed in not seeing an initiative included in SB2021, on the marketing clubs we started last time. The have been incredibly successful. I have had a number of calls from folks who want to become involved, but the money was all gone already. These are farmers and other producers who want to develop skills, but the mechanism is not there to find how to do that.

Wayde Moser: I want to draw your attention to section 6 and 8 in the Senate Bill we support.

Representative Wentz: I apologize for not having had the time to get to you yesterday.

2001 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. Committee Work

House Appropriations Committee  
Education and Environment Division

Conference Committee

Hearing Date March 12, 2001

*2021  
ag  
Appropriation  
Statement's*

Tape Number	Side A	Side B	Meter #
1 of 1		Starting at 1235	5,420

Committee Clerk Signature *Judy Schock*

Minutes:

Representatives Aarsvold, Boehm, Gulleason, Martinson, Monson, Wald, Wentz.

**Representative Wentz:** I am going to appoint sub committees first 2021 the Ag Research bill I am going to appoint Rep Boehm, Rep Wald and Rep Aarsvold. I also wanted us to talk about Job Service and Administrative Hearing.

**Representative Wald:** On Job Service I think the only question is, since it is all federal and employer premiums is the amount of money we are going to put into the training area. This is the only issue, and needing to know from leadership how much we need to start trimming.

**Representative Aarsvold:** My concern on the Administrative Hearing is them not being responsible for the interest portion. I do understand they are not able to assess those interest cost to federal programs that they work with, but drops it back in the laps of the general fund. I would think they should be able to stand their own operating expenses. Rep Wald shares the

same concerns. Chairman Wentz asks the committee if they would like to hold it for a while or make a motion or act on it or any other comments.

Representative Martinson: On the work force money, is that general fund money? And How much was there?

Representative Wald: It was 2,000,234 and Hoeven added another quarter of a million.

Representative Martinson: Than we have work force money in the Universities, and I understand in Bismarck they really go begging to spend that money to convince the employers to do the training. We have really gotten high on that work force training.

Representative Wald: I think we could move it out of here, as a suggestion at about a million and a quarter. I think that would be ample considering there is money in other budgets. The work force training money and Job Service budget. That is not very scientific, but if you look at what we gave them last year I think that is where we ended up at.

Representative Martinson: I would second that.

Representative Monson: In light of the fact that we are funding them through the colleges too. I don't see any thing wrong with keeping them where they were at least in this budget. I would rather put it through the colleges than through here. That is my opinion.

Representative Martinson: I would hope we take some from the schools too.

Representative Wald: I would move that we remove 1 million dollars on the job service budget for job training. The engrossed bill is 2,250, 356. My motion would be to take out 1 million.

Representative Wentz: You seconded it Bob? Any discussion. That seems a bit harsh to me.

Representative Aarsvold: I guess I have a little reservation about the motion in light of us not knowing what the dollars are in the 2003 for that same effort. I would like to see a bottom line number before I voted on this motion.

Representative Wald: I can appreciate his concern and I would share that, except I think what ever movement we make on this Job Service budget, would give us some guidance on how we operate on 2003. I am going back in the budget book, and last year it was 1,250,000 in the Job Service. They should not complain they are getting a 356.00 increase. (chuckles were heard) That is money after all. We will obviously have input from the full committee when we waltz this one out for their consideration. Maybe waltz it out was a poor choice of words.

Representative Wentz: In the testimony didn't they tell us once they were out of money the first year? Yes, 6 months. If the colleges on the other hand are begging people to take advantage of their programs and that is something Rep Martinson says he has heard. It would than seem as if we have the money in the wrong place. This is where we should have more money and less on the other end. We could take a vote on that motion. It just seems harsh to me.

Representative Wald: If you want to wait, I can withdraw my motion. Can we temporarily skip the 2003 and see what is in there?

Representative Wentz: I looked there and I didn't see anything. It is not going to be easy to find it in that bill. It probably is somewhere in the individual campuses budgets under operations.

Representative Aarsvoid: The higher Ed binder has something in it. Under section 11 in the resource guide book. Section 11 page 3.7 has some budget information. Specifically dealing with work force development. It appears this could be through the C Tech activity. The four regional campuses, the two year campuses set this up.

Representative Wald: I think if we are going to spend money for work force development, I think the campuses would do a better job than Job Service.

Representative Wentz: I would like to find out more on that, so I think I will ask you to withdraw that motion until we find out exactly what is in the campus budgets. Is that all right

with you? How about the Administrative Hearings budget? Their budget is about 54,724 less this biennium. Who is going to make a decision? Lets talk a little about 2003, the Higher Ed budget. During the hearing I asked the gentleman who over sees the EPSCoR project for information on how much of that research money had gone to their institutions, other than UND and NDSU. I have gotten several faxes from him. I did a quick addition in my head and it is probably between 270-300,000 from 92-2001 that went out to their institutions in the state. He did not include the total EPSCoR appropriations for those years. I think last year it was about 2 million. This year they want to up it to four. So there isn't much that is going out to the rest of the schools and that is what I wanted to find out. How do you think we should handle the 2003 budget? Would you like to work on it in sub committee as we have done it in other sessions? I am thinking we need to make some kind of a determination of the committee what we want to do with that budget. If we leave the line items that go out to the campuses as they are in 2003 with only two lines in them there isn't a whole lot we can do in sub committee's.

Representative Wald: I do appreciate Rep Martinson motion last week to break the budget down and historic as we know it format, which we got this morning. I had a conversation with one we all know Earl Strinden over the week end of another matter. His suggestion maybe a two year sunset so that the higher Ed people understand that we are looking over their shoulder and that we do have accountability, and we do get feed back from the college presidents hoping that no one gets starved out and the two big ones get the lions share.

Representative Wentz: I do think it is a train we are not going to be able to stop entirely but, I still would like to see us look at the System Office budget. I am not opposed for keeping the two line items for the campuses and allowing them that flexibility and keeping their tuition. I am concerned about the huge dollars we have put into the system office and the amount of control

and power we have given them. I wonder as the House of Representatives we couldn't make a difference knowing what the sentiment is from a lot of our members.

Representative Martinson: I talked to the same person who told me one of the main inputs behind this close Mayville and Bottineau and make Dickinson and Valley City 2 year schools. Also that the accountability standards are so tough that those colleges will not be able to meet them. So it will give the board what they need to make the decisions.

Representative Wald: I think the constitution says there shall be a four year school at Valley City and Mayville.

Representative Martinson: I don't think it says four years.

Representative Wentz: How do the rest of you feel about the bill.

Representative Boehm: (3106) I am worried about the Chancellor's office with all that extra money, the pool money. I think we should delegate some of that to each college rather than give them the option to do what they want. I am worried about some of the smaller colleges getting their fair share. I know the Chancellor says everyone is on board but probably monetarily.

Representative Monson: I am kind of leaning toward what Rep Wald was saying. Maybe we can do a sunset of two years, see how it works. I also like the idea you said we should really go through that budget a little higher. There is a lot of money and a lot of flexibility. Maybe too much flexibility and not much accountability. I am thinking that two years is not that much can happen that we can't pull back in the reigns if we have to

Representative Aarsvold: (3250) I voice my concerns last week, we are certainly conceding an immense amount of responsibility and authority by listening to the details of the Roundtable. I was a part of the Roundtable there are a lot of things there that are good. It is an issue of trust I think, and accountability, and I have concerns about that because I think the trust has been

breached in the past and I see no reason it may not be breached in the future in light of limitations and accountability. So those are the concerns I have.

Representative Wentz: I have heard there are some people out there that are giving them this authority, some of the Senators have said . They better not make any mistakes. So they are almost giving them the authority looking for them to fail so they can come down hard on them, on the campuses around the system. I guess that is not our concern if give them what they are asking for.

Representative Gulleon: I am wondering if there is some more comfortable middle ground here, where we do give the flexibility to the campuses so they can meet the situations as they arrive. Yet I think the preference for so many of us is to keep a little more control over the System office. As Rep Aarsvold expressed not really concede the role of the legislature in determining the dollars that go out to those campuses. I don't know how we can word all of this to come to some kind of middle ground, but I don't think it has to be all or nothing. I would hope not.

Representative Wald: One of the questions I have. Who really runs the Higher Ed System? The Chancellor or the Board? Looking at the board there are only about two people who assert themselves, as I get the story and read it in the papers etc., who fully understand and take the time to do some in-depth study about not only what is suggested by the Chancellor and college Presidents. If that is the case, than maybe the legislature has to assume a more serious role in how the money is spent and where. I agree with Pam, I don't know what that middle ground would be. I know that some of these college president s are nervous. Some of these audits we get there is some serious miscalculations and misappropriations where the money should have been spent. The more leigh way you give the more of that you are going to have. What's the answer I don't know.

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Education and Environment Division  
Bill/Resolution Number Committee Work  
Hearing Date March 12, 2001

Representative Wentz: I don't know either, but a sunset may be one place to begin.

Representative Martinson: I think it was a matter of having Roundtable's interim committee's, we wouldn't need to meet. Just because 61 people got together you look up the makeup to the 61 people, as Rex said the other day in committee is there really any doubt on what is going to happen. Of course everyone is in line. The presidents are paid by the board, you look at the raises they get and how. I think that is questionable too, when you pay Dr. Chaffee and Mayville and Valley City got the lowest salary increase of anybody. DR Thigpen gets the same amount of money as the President of Minot State. It is hard to figure how they come up with these things, other than to keep people in line.

Representative Wentz: I would like more information on their evaluation process, and what criteria they use, if any. If any objectivity at all. I suppose that is a question we could ask.

Representative Wald: The other day you passed out a sheet with salaries and I don't begrudge people of that, but when Laura Glatt makes as much as the President of Dickinson State, I am wondering if that is realistic.

Representative Wentz: One of their employees gets a 30,000 increase in one year. You wonder about that too.

Representative Martinson: Just for our Republican caucus, I think they expect us to look into this a little bit rather than just pass it off. There were two people that thought we should agree with the Roundtable. The rest said no, we want to change it. I think we owe it to at least our caucuses if not the people that elected us to dove into this a little bit.

Representative Aarsvold: If I could speak for the minority, I think there is a similar sense on our side. We do cover the gambit in terms our opinions of the Roundtable, but I think there is a majority that want us to explore and come up with alternatives at least consider it.

Representative Wentz: Are all of you sufficiently interested in this we should try it as a section or would you be okay with a sub committee to work on it? If we did it in sub section we would no need some people on each campus because it seems to me what I am hearing it is the system office we are more interested in looking at. We have the amendment that breaks it out for the campuses, it is just the pool dollars.

Representative Monson: Maybe a sub committee to work on the budget for higher Ed office in greater detail. We could look at these pools of money in the Roundtable discussion etc.

Representative Wentz: I have not spent a lot of time looking at the accountability measures that are in there, and how many pertain to the board office, or are they all directed at the campuses.

Representative Martinson: They are the campuses. That is the pressure point. You have heard a couple of the presidents say they thought they were pretty stringent. I would go along with doing it as a whole committee. I think we should get going on it.

Representative Wald: To shift a little 2021 research. The criticism that I hear from not only farmers but from station managers is that last week they were given 2 minutes. There were people that drove in from Langdon, Minot, Dickinson and where all. They were not given time to tell their story. I realize we have time constraints here, but I think they were almost told by Fargo to keep it short and best you not say anything. I have the same exact concern in extension and research as I do with higher Ed in general.

Representative Wentz: you are on that sub committee so make some changes. I think we will work as a section on 2003, but to get some direction, I am going to appoint a sub committee to began digging into the system office. I think we will spin our wheels too long as a complete section if we don't have some preliminary work done. I will put myself, Rep Martinson and Rep Aarsvold. Lets put Pam on 2021 instead of Olie on both.

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Education and Environment Division  
Bill/Resolution Number Committee Work  
Hearing Date March 12, 2001

Representative Wald: Would it be appropriate to have a sub committee check out this work force development, as it relates to both Job Service and 2003. I am looking at my friend Monson, he understands Vo Ed and Gulleson would like too.

Representative Wentz: Any thing else to get these bill going and out? If not we adjourn.

2001 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB2021

House Appropriations Committee  
Education and Environment Division

Conference Committee

Hearing Date April 03, 2001

Tape Number	Side A	Side B	Meter #
1 of 1		Starting at 750	3,810
Committee Clerk Signature <i>Judith Schrock</i>			

Minutes:

Representatives Aarsvold, Boehm, Gulleson, Martinson, Monson, Wald, Wentz.

Representative Wentz: How are you coming on SB2021?

Rep Boehm and Rep Gulleson report they have amendments being worked on up stairs, and they are through the most of the budget. So far they have not cut any of the budget. They are actually doing an increase. We need some in Langdon, and the need for starting a marketing club. They request a need for 50,000 and Rep Monson was told it only takes about 700.00 to get started in a marketing club. However the need is more than that and that was why we took out the word Langdon, so it can be used to continue or start. There already is over a half a million dollars in farm management, which should get sprinkled all over the state. Question is do they need this extra money. 164,000 is out. Should we put back 50,000. Celest reported on the study done during the interim. It showed there was not a duplication on any of these programs. They each

Page 2

Education and Environment Division

Bill/Resolution Number SB2020

Hearing Date April 03, 2001

fill specific niches, and will try to get a copy of that. Rep Gulleson makes a motion to further amend to remove the 50,400. Seconded by Rep Wald. Amendment 0306. All those in favor say yes, those oppose no. Motion carries.

Representative Gulleson: (1530) There is a reason why the Governor didn't specifically name a group. Referring to Explore Net, and was the money going to them even though they were not specifically named. Many committee members are having a problem with naming a particular vendor.

Conversation on how it was stated in the IT budget. Responses from Celest and LC. How was Explorer Net started here. How do we do the language. Will they get it if put into Vo Tech? Is it right to name them in the bill. Other vendors are not. Did the words, administrative costs, get bungled up into something that was not really meant to say. What is the definition of administration in Explorer Net? Who develops the curriculum? Do we put this into Vo Tech or back to IT budget?

2001 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2021

House Appropriations Committee

Conference Committee

Hearing Date April 5, 2001

Tape Number	Side A	Side B	Meter #
04-05-01 tape #2	2000 - 3570		
Committee Clerk Signature <i>Kathie Lall</i>			

Minutes:

The committee was called to order, and opened committee work on SB 2021, the Extension Service. There should be two sets of amendments.

Rep. Boehm: Explains amendment 18047.0213. Section 6, Section 7, Section 8, and Section 9. The Senate had taken out voting members and we put the members back in and put the president or his ex officio as a voting member. Section 13, NDCC 4-05.1-21, Section 15. We took out the higher ed board that they needed approval from. We didn't think they needed to get approval from that board each time they wanted to make a transfer. On page 5 of the amendments, the explanations appear.

Chairman Timm: On section 13, what you have done is made SBAR more accountable to the board of higher education than to the university? All the old language is from four years ago when we established SBAR?

Rep. Boehm: And to the legislature. Yes.

Moves to adopt amendment. Seconded by Rep. Gulleason.

Voice vote adopted the amendment.

Rep. Wald: Explains amendment 18047.0208. It increases the compensation of the SBAR board members from \$62.50 to \$75 per day. He asked LC what it would cost to raise all the boards to \$75 per day, and he was told it would be \$33,400 for the biennium.

Moves to adopt amendment. Seconded by Rep. Boehm.

Rep. Gulleason: Supports the amendment, but also thinks that this should be done in the OMB budget or wherever that all boards across the board be changed to \$75. So each group doesn't have to come in and ask.

Chairman Timm: I think Rep. Huether talked to me about that. He checked and thought that we passed something two years ago that allows each board to automatically do that on their own initiative. Not certain, but that's what I think he said.

Rep. Wald: In view of what we have done for ourselves and other state employees, I think it is unrealistic to not support this amendment. They should get reimbursed for the loss of their time.

Voice vote adopts the amendment.

Rep. Boehm: There is a lot of discussion on computers and technology. The computer changeover in this department is 5 to 8 years for secretarial and 3 to 5 years for research. There are 3 major websites, with 10 million hits. The increase in the budget is mostly for grants.

Rep. Monson: Those grants have only been applied for and have not been approved. They are special funds. We have gone through this is quite a bit of detail, and there is really no general fund increase.

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House Appropriations Committee  
Bill/Resolution Number SB 2021  
Hearing Date April 5, 2001

Rep. Wald: We did not make any changes in the Upper Great Plains Transportation who asked for an additional \$100,000 that we did not approve. We had a bill the other day that sent money to them. We didn't make any changes to Northern Crops Institute or the Agronomy Seed Farm. The changes relate to extension service, the main station, and the branch stations.

Rep. Wald: Moves DO PASS AS AMENDED. Seconded by Rep. Boehm.

Vote on Do Pass as Amended : 20 yes, 0 no, 1 absent and not voting. Motion passes.

Rep. Boehm is assigned to carry this bill to the floor.

Date: April 3, 01  
Roll Call Vote #: 1

**2001 HOUSE STANDING COMMITTEE ROLL CALL VOTES**  
**BILL/RESOLUTION NO. Appropriations Education and Environment Division**

House \_\_\_\_\_ Committee \_\_\_\_\_

Subcommittee on SB 2071  
or  
 Conference Committee

Legislative Council Amendment Number A

Action Taken Amend 50,000 Removal

Motion Made By Rep Gulleon Seconded By Rep Wald

Representatives	Yes	No	Representatives	Yes	No
Rep. Janet Wentz -Chairman					
Rep. James Boehm - Vice Chairman					
Rep. Ole Aarsvold					
Rep. Pam Gulleon					
Rep. Bob Martinson					
Rep. David Monson					
Rep. Francis J. Wald					

Total (Yes) \_\_\_\_\_ No \_\_\_\_\_

Absent \_\_\_\_\_

Floor Assignment \_\_\_\_\_

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

*Verbal Vote*

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2021

Page 1, line 4, replace the second "section" with "sections", after "4-05.1-16" insert ", 4-05.1-19,", and remove "subsection 1 of section"

Page 1, line 5, remove "changing", remove "voting", and after "membership" insert "and duties"

Page 1, line 6, replace "use of" with "the" and remove "annual"

Page 1, line 7, remove "proceeds"

Page 2, line 15, replace "55,178,597" with "54,818,597"

Page 2, line 17, replace "28,365,985" with "28,005,985"

Page 2, line 20, replace "3,811,153" with "3,782,653"

Page 2, line 26, replace "2,959,679" with "3,259,679"

Page 2, line 27, replace "14,666,145" with "14,937,645"

Page 2, line 28, replace "6,848,485" with "6,903,485"

Page 2, line 29, replace "7,817,660" with "8,034,160"

Page 3, line 3, replace "51,742,895" with "51,599,395"

Page 3, line 4, replace "62,334,583" with "62,389,583"

Page 3, line 5, replace "114,077,478" with "113,988,978"

Page 3, line 12, remove "the state board of higher"

Page 3, line 13, remove the first "education," and remove the second comma

Page 3, line 23, replace "\$650,000" with "\$500,000"

Page 3, after line 25, insert:

**"SECTION 6. LEGISLATIVE INTENT - CARRINGTON RESEARCH CENTER.**

It is the intent of the legislative assembly that the agricultural experiment station develop a modern feedmill and feedlot at the Carrington research extension center that will address genetic, management, marketing, coproduct, and environmental research needs of beef producers.

**SECTION 7. LEGISLATIVE INTENT - MALT BARLEYS.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate from the main research center \$288,000 of funding for the purpose of developing western North Dakota malt barleys for the biennium beginning July 1, 2001, and ending June 30, 2003.

**SECTION 8. LEGISLATIVE INTENT - BEEFLINE INITIATIVE.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate at least \$445,000 of funding for the beeline initiative for the biennium beginning July 1, 2001, and ending June 30, 2003.

**SECTION 9. LEGISLATIVE INTENT - NEW BARLEY VARIETIES.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate at least \$228,000 of funding for the purpose of conducting research to develop new feed barley varieties for the biennium beginning July 1, 2001, and ending June 30, 2003."

Page 4, line 24, replace "who serves in an ex officio" with "or the president's designee"

Page 4, line 25, remove "nonvoting capacity"

Page 4, line 27, remove "who serves in an"

Page 4, line 28, remove "ex officio nonvoting capacity"

Page 5, line 9, remove "who"

Page 5, line 10, remove "serves in an ex officio nonvoting capacity"

Page 6, after line 8, insert:

**"SECTION 13. AMENDMENT.** Section 4-05.1-19 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-19. State board of agricultural research and education - Duties.** Within the policies of the state board of higher education, the state board of agricultural research and education is responsible for ~~the budgeting, supervision, and policymaking responsibilities~~ associated with the ~~supervision of the~~ agricultural experiment station and the North Dakota state university extension service. The board of agricultural research and education shall:

1. Determine the causes of any adverse economic impacts on crops and livestock produced in this state;
2. Develop ongoing strategies for the provision of research solutions and resources to negate adverse economic impacts on crops and livestock produced in this state;
3. ~~Make available financial resources, including grants and salaries, and make available equipment and facilities to implement~~ Develop ongoing strategies for the dissemination of research information through the extension service;
4. Implement the strategies developed under ~~subsection~~ subsections 2 and 3, subject to approval by the state board of higher education;
4. 5. ~~Develop an annual budget for the operation of,~~ with the agricultural experiment station and the North Dakota state university extension service, an annual budget for the operations of these entities;

- 6. 6. Develop, with the agricultural experiment station and the North Dakota state university extension service, a biennial budget request and submit that request to the president of North Dakota state university and the state board of higher education on or before March first of each even-numbered year;
- 6. 7. Maximize the use of existing financial resources, equipment, and facilities to generate the greatest economic benefit from research and extension efforts and to promote efficiency;
- 7. 8. Annually evaluate the results of research and extension activities and expenditures and report the findings to the legislative council and the state board of higher education;
- 8. 9. Advise the ~~administration~~ president of North Dakota state university regarding the recruitment and, selection, and performance of the vice president of agricultural affairs, the extension service director, and the station director; and
- 9. 10. ~~Develop ongoing strategies for the dissemination of research information and the best practices for management of the extension service~~ Present a status report to the budget section of the legislative council."

Page 6, line 9, replace "Subsection 1 of section" with "Section"

Page 6, replace lines 11 through 26 with:

**"4-05.1-21. State board of agricultural research and education -  
Apportionment of research funds.**

- 1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund, not to exceed fifty thousand dollars, for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:
  - a. Seventy percent to research activities affecting North Dakota agricultural commodities that account for at least two percent of the gross sales of all agricultural commodities grown or produced in the state. The percentage of the dollars available for each agricultural commodity under this section may not exceed the percentage that the gross sales of the agricultural commodity bear to the North Dakota gross sales of all agricultural commodities grown or produced during the previous year, as determined by the agricultural statistics service;
  - b. Eighteen percent to research activities affecting North Dakota animal agriculture; and
  - c. Twelve percent to research activities affecting new and emerging crops in North Dakota.
- 2. The state board of agricultural research and education shall solicit proposals for research from the public and private sectors and shall appoint committees to review the proposals and award the agricultural research grants on a competitive basis. Each committee must consist of a majority of agricultural producers selected in consultation with the agricultural commodity groups representing commodities that are the subjects of the proposed research and may include researchers and other individuals knowledgeable about the proposed area of research. Whenever possible, the committees shall require that a grant recipient commit matching funds.

3. The state board of agricultural research and education shall develop policies regarding the award of research grants, including requirements for matching funds, cooperation with other in-state and out-of-state researchers, and coordination with other in-state and out-of-state proposed or ongoing research projects.

**SECTION 15. TRANSFER AUTHORITY.** Upon approval from the state board of agricultural research and education, the director of the North Dakota agricultural experiment station may transfer appropriation authority within subdivisions 1, 4, and 5 of section 1 of this Act of up to \$90,000 of estimated income for beef quality assurance and up to \$60,000 of estimated income for applied research initiatives, for the biennium beginning July 1, 2001, and ending June 30, 2003."

Renumber accordingly

**STATEMENT OF PURPOSE OF AMENDMENT:**

**Senate Bill No. 2021 - Summary of House Action**

	EXECUTIVE BUDGET	SENATE VERSION	HOUSE CHANGES	HOUSE VERSION
<b>Transportation Institute</b>				
Total all funds	\$7,888,427	\$7,888,427	\$0	\$7,888,427
Less estimated income	7,383,348	7,383,348		7,383,348
General fund	\$505,079	\$505,079	\$0	\$505,079
<b>Branch Research Centers</b>				
Total all funds	\$13,772,646	\$14,666,145	\$271,500	\$14,937,645
Less estimated income	5,873,485	6,848,485	55,000	6,903,485
General fund	\$7,899,160	\$7,817,660	\$216,500	\$8,034,160
<b>NDSU Extension Service</b>				
Total all funds	\$33,678,046	\$33,628,046	\$0	\$33,628,046
Less estimated income	19,298,301	19,298,301		19,298,301
General fund	\$14,379,745	\$14,329,745	\$0	\$14,329,745
<b>Northern Crops Institute</b>				
Total all funds	\$1,457,123	\$1,457,123	\$0	\$1,457,123
Less estimated income	732,697	732,697		732,697
General fund	\$724,426	\$724,426	\$0	\$724,426
<b>Main Research Station</b>				
Total all funds	\$55,228,597	\$55,178,597	(\$360,000)	\$54,818,597
Less estimated income	26,812,612	26,812,612		26,812,612
General fund	\$28,415,985	\$28,365,985	(\$360,000)	\$28,005,985
<b>Agronomy Seed Farm</b>				
Total all funds	\$1,259,140	\$1,259,140	\$0	\$1,259,140
Less estimated income	1,259,140	1,259,140		1,259,140
General fund	\$0	\$0	\$0	\$0
<b>Bill Total</b>				
Total all funds	\$113,283,978	\$114,077,478	(\$88,500)	\$113,988,978
Less estimated income	61,359,583	62,334,583	55,000	62,389,583
General fund	\$51,924,395	\$51,742,895	(\$143,500)	\$51,599,395

**Senate Bill No. 2021 - Transportation Institute - House Action**

The House did not change the Senate version of the bill.

**Senate Bill No. 2021 - Branch Research Centers - House Action**

	EXECUTIVE BUDGET	SENATE VERSION	HOUSE CHANGES	HOUSE VERSION
Dickinson Research Center	\$3,132,653	\$3,811,153	(\$28,500)	\$3,782,653
Central Grasslands Research Center	1,413,982	1,413,982		1,413,982
Hettinger Research Center	1,559,583	1,559,583		1,559,583
Langdon Research Center	1,781,894	1,916,894		1,916,894
North Central Research Center	1,511,068	1,511,068		1,511,068
Williston Research Center	1,413,788	1,493,788		1,493,788
Carrington Research Center	2,959,879	2,959,879	300,000	3,259,879

Total all funds	\$13,772,645	\$14,666,145	\$271,500	\$14,937,645
Less estimated income	<u>5,873,485</u>	<u>6,848,485</u>	<u>55,000</u>	<u>6,903,485</u>
General fund	\$7,899,160	\$7,817,660	\$216,500	\$8,034,160
FTE	76.36	76.36	0.00	76.36

**Dept. 628 - Branch Research Centers - Detail of House Changes**

	RESTORE FUNDING 1	CHANGE FUNDING FOR LEARNING CENTER 2	REDUCE FUNDING FOR BEEFLINE 3	PROVIDE FUNDING FOR MODERN FEEDMILL AND FEEDLOT 4	PROVIDE ADDITIONAL FUNDING FOR BEEFLINE AND FEED BARLEY RESEARCH 5	TOTAL HOUSE CHANGES
Dickinson Research Center Central Grasslands Research Center	\$66,500		(\$300,000)		\$205,000	(\$28,500)
Hettinger Research Center Langdon Research Center North Central Research Center Williston Research Center Carrington Research Center				\$300,000		300,000
Total all funds	\$66,500	\$0	(\$300,000)	\$300,000	\$205,000	\$271,500
Less estimated income		(150,000)	(300,000)	300,000	205,000	55,000
General fund	\$66,500	\$150,000	\$0	\$0	\$0	\$216,500
FTE	0.00	0.00	0.00	0.00	0.00	0.00

1 Restores funding to the Dickinson Research Center which was removed by the Senate.

2 Changes funding of \$150,000 from special funds to the general fund for the Langdon Learning Center project. The total authorization for the project is \$810,000, \$300,000 of which is from the general fund and \$510,000 of special funds. The section requiring \$650,000 in cash or pledges before construction can begin is lowered to \$500,000.

3 Funding added in the Senate to the Dickinson Research Center for the beeline initiative is reduced by \$300,000, from \$745,000 to \$445,000. Funding is from Dickinson oil revenues.

4 Provides funding from Dickinson oil revenues for the development of a modern feedmill and feedlot to be established at the Carrington Research Center.

5 Provides funding from additional Dickinson oil revenues, if available, for the beeline initiative and feed barley research. Total funding included in this amendment from Dickinson oil revenues is \$950,000 which is provided for the beeline initiative, the Carrington feedmill and feedlot, and for feed barley research.

**Senate Bill No. 2021 - NDSU Extension Service - House Action**

The House did not change the Senate version of the bill.

**Senate Bill No. 2021 - Northern Crops Institute - House Action**

The House did not change the Senate version of the bill.

**Senate Bill No. 2021 - Main Research Station - House Action**

	EXECUTIVE BUDGET	SENATE VERSION	HOUSE CHANGES	HOUSE VERSION
Salaries and wages	\$40,952,648			
Operating expenses	10,027,903			
Equipment	1,532,748			
Capital improvements	415,300			
Agricultural research grants	2,000,000			
Animal replacement	300,000			
Main Research Station		\$55,178,597	(\$360,000)	\$54,818,597
Total all funds	\$55,228,597	\$55,178,597	(\$360,000)	\$54,818,597
Less estimated income	<u>29,912,912</u>	<u>29,912,912</u>		<u>29,912,912</u>
General fund	\$28,415,985	\$28,365,985	(\$360,000)	\$28,005,985
FTE	351.28	351.28	(1.80)	349.48

**Dept. 640 - Main Research Station - Detail of House Changes**

	REDUCE OPERATING LINE ITEM	REMOVE VACANT POSITIONS <sup>1</sup>	TOTAL HOUSE CHANGES
Salaries and wages			
Operating expenses			
Equipment			
Capital improvements			
Agricultural research grants			
Animal replacement			
Main Research Station	<u>(\$360,000)</u>	<u>                    </u>	<u>(\$360,000)</u>
Total all funds	(\$360,000)	\$0	(\$360,000)
Less estimated income	<u>                    </u>	<u>                    </u>	<u>                    </u>
General fund	(\$360,000)	\$0	(\$360,000)
FTE	0.00	(1.80)	(1.80)

<sup>1</sup> The following vacant FTE positions are removed, but the funding for the positions remains and may be reallocated for other purposes.

	FTE
Assistant professor	(.45)
Information processing position	(.95)
Information systems position	(.25)
Public information position	(.15)
Total FTEs reduced	(1.80)

**Senate Bill No. 2021 - Agronomy Seed Farm - House Action**

The House did not change the Senate version of the bill.

**Senate Bill No. 2021 - Other Changes - House Action**

The State Board of Higher Education is removed from the transfer authority approval process in Section 3.

Section 6 provides intent for the establishment of a modern feedmill and feedlot at the Carrington Research Extension Center.

Section 7 provides intent that \$288,000 be allocated from the Main Research Center for developing western North Dakota malt barleys.

Section 8 provides intent that at least \$445,000 be allocated for the beeline initiative.

Section 9 provides intent that at least \$228,000 be allocated for the development of new feed barley varieties.

This amendment amends Section 12 to reinstate the president of North Dakota State University, the administrator of the Agricultural Experiment Station, and the director of the North Dakota State University Extension Service as voting members of the State Board of Agricultural Research and Education.

The duties of the State Board of Agricultural Research and Education are redefined in Section 13 to include a status report to the Budget Section.

The administrative expenses of the State Board of Agricultural Research and Education are limited to 10 percent of the proceeds of the agricultural research fund, not to exceed \$50,000.

Transfer authority among the Extension Service, Main Research Center, and research centers of up to \$150,000 is authorized in Section 15 for funding of beef quality assurance (\$90,000) and applied research initiatives (\$60,000).

Date: 4-5-01  
Roll Call Vote #: 1

**2001 HOUSE STANDING COMMITTEE ROLL CALL VOTES**  
**BILL/RESOLUTION NO. SB2021**

House APPROPRIATIONS Committee

Subcommittee on \_\_\_\_\_  
or  
 Conference Committee

Legislative Council Amendment Number 18047.0213

Action Taken Motion to adopt amendment

Motion Made By Rep. Boehm Seconded By Rep. Gulleason

Representatives	Yes	No	Representatives	Yes	No
Timm - Chairman					
Wald - Vice Chairman					
Rep - Aarsvold			Rep - Koppelman		
Rep - Boehm			Rep - Martinson		
Rep - Byerly			Rep - Monson		
Rep - Carlisle			Rep - Skarphol		
Rep - Delzer			Rep - Svedjan		
Rep - Glassheim			Rep - Thoreson		
Rep - Gulleason			Rep - Warner		
Rep - Huether			Rep - Wentz		
Rep - Kempenich					
Rep - Kerzman					
Rep - Kliniske					

*Vote 18/0*

Total (Yes) \_\_\_\_\_ No \_\_\_\_\_

Absent \_\_\_\_\_

Floor Assignment \_\_\_\_\_

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

*Passed*

18047.0208

Title.

Fiscal No. 3

Prepared by the Legislative Council staff for  
House Appropriations - Education and  
Environment

April 3, 2001

**PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2021**

Page 1, line 4, replace the second "section" with "sections" and after "4-05.1-16" insert "and 4-05.1-17"

Page 1, line 6, after "education" insert ", the compensation of board members,"

Page 6, after line 8, insert:

**"SECTION 9. AMENDMENT.** Section 4-05.1-17 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-17. Compensation of board members - Expenses.** Each appointed member of the state board of agricultural research and education is entitled to receive ~~sixty-two~~ seventy-five dollars ~~and fifty cents~~ per day as compensation for the time actually spent devoted to the duties of office and is entitled to receive necessary expenses in the same manner and amounts as state officials for attending meetings and performing other functions of office."

Renumber accordingly

**STATEMENT OF PURPOSE OF AMENDMENT:**

**Senate Bill No. 2021 - Summary of House Action**

This amendment changes the per diem of the members of the State Board of Agricultural Research and Education from \$62.50 to \$75.00.

Date: 4-5-01  
Roll Call Vote #: 2

2001 HOUSE STANDING COMMITTEE ROLL CALL VOTES  
BILL/RESOLUTION NO. SB2021

House APPROPRIATIONS Committee

Subcommittee on \_\_\_\_\_  
or  
 Conference Committee

Legislative Council Amendment Number 18047.0208

Action Taken Motion to adopt a amendment

Motion Made By Rep. Wald Seconded By Rep. Boehm

Representatives	Yes	No	Representatives	Yes	No
Timm - Chairman					
Wald - Vice Chairman					
Rep - Aarsvold			Rep - Koppelman		
Rep - Boehm			Rep - Martinson		
Rep - Byerly			Rep - Monson		
Rep - Carlisle			Rep - Skarphol		
Rep - Delzer			Rep - Svedjan		
Rep - Glassheim			Rep - Thoreson		
Rep - Gulleason			Rep - Warner		
Rep - Huether			Rep - Wentz		
Rep - Kempenich					
Rep - Kerzman					
Rep - Kliniske					

Total (Yes) \_\_\_\_\_ No \_\_\_\_\_

Absent \_\_\_\_\_

Floor Assignment \_\_\_\_\_

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

*Passed*

Date: 4-5-01  
Roll Call Vote #: 3

2001 HOUSE STANDING COMMITTEE ROLL CALL VOTES  
BILL/RESOLUTION NO. SB2021

House APPROPRIATIONS Committee

Subcommittee on \_\_\_\_\_  
or  
 Conference Committee

Legislative Council Amendment Number 18047.0214

Action Taken DO PASS AS AMENDED.

Motion Made By Rep. Wald Seconded By Rep. Monson

Representatives	Yes	No	Representatives	Yes	No
Timm - Chairman	✓				
Wald - Vice Chairman	✓				
Rep - Aarsvold	✓		Rep - Koppelman	✓	
Rep - Boehm	✓		Rep - Martinson	✓	
Rep - Byerly	✓		Rep - Monson	✓	
Rep - Carlisle	✓		Rep - Skarphol	✓	
Rep - Delzer	✓		Rep - Svedjan	✓	
Rep - Glassheim	✓		Rep - Thoreson	✓	
Rep - Gulleson	✓		Rep - Warner	✓	
Rep - Huether	✓		Rep - Wentz	✓	
Rep - Kempenich	✓				
Rep - Kerzman	✓				
Rep - Kliniske	✓				

Total (Yes) 20 No 0

Absent 1

Floor Assignment Rep Boehm

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



station for the dissemination of research information through the extension service.

- 4. Implement the strategies developed under subsections 2 and 3, subject to approval by the state board of higher education;
- 4. 5. Develop a seed budget for the operation of, with the agricultural experiment station and the North Dakota state university extension service, an annual budget for the operations of these offices;
- 5. Develop, with the agricultural experiment station and the North Dakota state university extension service, a biennial budget request and submit that request to the president of North Dakota state university and the state board of higher education on or before March first of each even-numbered year;
- 6. Maximize the use of existing financial resources, equipment, and facilities to generate the greatest economic benefit from research and extension efforts and to promote efficiency;
- 7. Annually evaluate the results of research and extension activities and expenditures and report the findings to the legislative council and the state board of higher education;
- 8. Advise the administrator of North Dakota state university regarding the recruitment, evaluation, and performance of the vice president of agricultural affairs, the extension service director, and the station director; and
- 9. Develop ongoing strategies for the dissemination of research information and the best practices for management of the extension service. Present a status report to the budget section of the legislative council.

Page 6, line 9, replace Subsection 1 of section 1 with "Section"  
Page 6, replace lines 11 through 25 with:

"4-05.1-21. State board of agricultural research and education -  
Appropriation of research funds.

- 1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund, not to exceed fifty thousand dollars, for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:
  - a. Seventy percent to research activities affecting North Dakota agricultural commodities that account for at least two percent of the gross sales of all agricultural commodities grown or produced in the state. The percentage of the dollars available for each agricultural commodity under this section may not exceed the percentage that the gross sales of the agricultural commodity bear to the North Dakota gross sales of all agricultural commodities grown or produced during the previous year, as determined by the agricultural statistics service;
  - b. Eighteen percent to research activities affecting North Dakota animal agriculture; and
  - c. Twelve percent to research activities affecting new and emerging crops in North Dakota.
- 2. The state board of agricultural research and education shall solicit proposals for research from the public and private sectors and shall appoint committees to review the proposals and award the agricultural research grants on a competitive basis. Each committee must consist of a majority of agricultural producers selected in consultation with the agricultural commodity groups representing commodities that are the subjects of the proposed research and may include researchers and other individuals knowledgeable about the proposed area of research. Whenever possible, the committees shall require that a grant recipient commit matching funds.

3. The state board of agricultural research and education shall develop policies regarding the award of research grants, including requirements for matching funds, cooperation with other in-state and out-of-state researchers, and coordination with other in-state and out-of-state proposed or ongoing research projects.

SECTION 16. TRANSFER AUTHORITY. Upon approval from the state board of agricultural research and education, the director of the North Dakota agricultural experiment station may transfer appropriation authority within subdivisions 1, 4, and 5 of section 1 of this Act of up to \$90,000 of estimated income for beef quality assurance and up to \$60,000 of estimated income for applied research initiatives, for the biennium beginning July 1, 2001, and ending June 30, 2003."

Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

Senate Bill No. 2021 - Summary of House Action

	EXECUTIVE BUDGET	SENATE VERSION	HOUSE CHANGES	HOUSE VERSION
Transportation Institute				
Total all funds	\$7,288,427	\$7,288,427	00	\$7,288,427
Lease estimated income	7,288,427	7,288,427	00	7,288,427
General fund	00	00	00	00
Branch Research Centers				
Total all funds	\$13,772,845	\$14,086,145	\$271,500	\$14,087,845
Lease estimated income	13,772,845	13,772,845	00	13,772,845
General fund	00	00	00	00
MOBI Extension Services				
Total all funds	\$3,428,846	\$3,428,846	00	\$3,428,846
Lease estimated income	3,428,846	3,428,846	00	3,428,846
General fund	00	00	00	00
Northwest Crops Institute				
Total all funds	\$1,457,323	\$1,457,323	00	\$1,457,323
Lease estimated income	1,457,323	1,457,323	00	1,457,323
General fund	00	00	00	00
Main Research Station				
Total all funds	\$6,178,987	\$6,178,987	\$000,000	\$6,178,987
Lease estimated income	6,178,987	6,178,987	000,000	6,178,987
General fund	00	00	000,000	000,000
Agroforestry State Farm				
Total all funds	\$1,258,140	\$1,258,140	00	\$1,258,140
Lease estimated income	1,258,140	1,258,140	00	1,258,140
General fund	00	00	00	00
Bill Total	\$112,963,978	\$114,077,478	\$688,500	\$113,988,978
Total all funds	112,963,978	114,077,478	688,500	113,988,978
Lease estimated income	112,963,978	114,077,478	688,500	113,988,978
General fund	00	00	000,000	000,000

Senate Bill No. 2021 - Transportation Institute - House Action

The House did not change the Senate version of the bill.

Senate Bill No. 2021 - Branch Research Centers - House Action

	EXECUTIVE BUDGET	SENATE VERSION	HOUSE CHANGES	HOUSE VERSION
Dakota Research Center	\$1,125,803	\$2,111,153	\$985,350	\$2,111,153
Central Great Plains Research Center	1,413,982	1,413,982	000,000	1,413,982
Upper Research Center	1,598,593	1,598,593	000,000	1,598,593
Larson Research Center	1,781,884	1,816,884	335,000	1,816,884
North Central Research Center	1,511,888	1,511,888	000,000	1,511,888
Williston Research Center	1,493,786	1,493,786	000,000	1,493,786
Chapman Research Center	2,658,879	2,658,879	200,000	2,858,879
Total all funds	\$13,772,845	\$14,086,145	\$271,500	\$14,087,845
Lease estimated income	13,772,845	13,772,845	000,000	13,772,845
General fund	00	00	\$271,500	\$271,500
FTE	76.36	76.36	0.00	76.36

Dept. 628 - Branch Research Centers - Detail of House Changes



2001 SENATE APPROPRIATIONS

CONFERENCE COMMITTEE

SB 2021

2001 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB2021

Senate Appropriations Committee

Conference Committee

Hearing Date April 16, 2001

Tape Number	Side A	Side B	Meter #
Tape #1	x		0.0 - 37.6
Committee Clerk Signature <i>Jonnie Peterson</i>			

Minutes:

Senator Solberg, Chair of SB2021 Conference Committee (NDSU Research, Extension Service)

Called the meeting to order at 9:00 a.m. On Monday, April 16th.

Roll Call: Senator Solberg, Chair; Senator Thane (representing Senator Bowman who had an emergency trip to the hospital); Senator Tomac; Representative Wald; Representative Boehm; and Representative Gulleason. All members present.

Representative Wald: Page 5 of the House amendments -- 1-5 footnotes best describes the changes proposed by the House. He led the review: section 14 is housekeeping language. Footnotes on page 5, items pages 2 and 3: #1 restores funding to Dickinson Research Center; #2 changes funding of \$150,000 from special funds to general funds for the Langdon Learning Center; #3 part of item #10 was moved here -- felt the move was appropriate -- better flow; #4 oil revenues for development of feed mill and feedlot at Carrington Research Center; #5 - housekeeping language; #6 restore documentation that budget request go to the president of

Page 2

Senate Appropriations Committee

Bill/Resolution Number SB2021

Hearing Date April 16, 2001

NDSU--- #7-#8- no changes; #9 change administration to president -- and #10 part of language moved to item #3. Section 13 (page 2) moved compensation of board members to 75 dollars.

Senator Solberg: Senate took president out, three people in total off the SBARE --- House?

Representative Wald: 3 back --- president or his/her designee.

Senator Solberg: Let's clear up Board changes --- Senate took out three --- felt too many from the University -- couple more than majority on SBARE -- felt it should be grassroots people and commodity representatives.

Representative Wald: Believe the President of the land grant should have a voice.

Senator Solberg: What about the Vice President for Agriculture and the Research and Extension directors?

Representative Wald: Those two could be negotiated -- president or designee should have a active voice.

Senator Tomac: No problem with leaving the president -- concerns was that SBARE's credibility is being questioned --currently there are leaders from NDSU -- the Extension and Research areas anyway --- all need to be at the table --- but the producers on the board are credible and should be acknowledged.

Representative Wald: My vantage point is that Sharon and Cole do vote.

Senator Solberg: No problem; 1 voting member enough.

Representative Gulleason: Understand concern -- one may be open for negotiating.

Senator Solberg: Feel same as Senator Tomac.

Representative Wald: What would the count be if Sharon and Cole are included.

Jerry Doan, SBARE President was in the audience and answered: 10 producers 4 from the university.

Page 3

Senate Appropriations Committee

Bill/Resolution Number SB2021

Hearing Date April 16, 2001

Representative Boehm: Still outnumber if all are there --- if not a voting member -- not effected.

Senator Tomac: Point will taken -- problem we hear is that SBARE is a NDSU puppet -- last session the ag commissioner was put on ex officio --

Senator Solberg: Think we'll come back --- the compensation #13 -- believe we are moving everyone up there; section 14, sub section 6 -- budget from SBARE -- then to President, then to Board of Higher Education - then to OMB --- need to start in September ---lots of time goes into the budget, if President back on ---other 3; it's an unnecessary step.

Representative Wald: House went through budget with SBARE and Fargo personnel -- regarding the operating budgets -- SBARE had a handle on research but not the fine lines (as appropriate) of operating --- example: computers, the life line etc -- areas where they lacked knowledge are essential to building a budget. This doesn't diminish SBARE's authority --- keeps them better informed.

Senator Solberg: As President, Ag VP, Extension and Research input the budget --- when the budget is done, the end product ready for Board? Last year the Committee worked hard for the Feed lot in Carrington -- but with a May deadline?

Representative Wald: Read a deadline in Section 6?

Senator Solberg: OMB budget deadlines-- in order to compile figures for all budgets OMB needs them and it's six months into the first year of the biennium.

Representative Wald: Delete with Agriculture and ?

Senator Solberg: Like to see president of NDSU and the.

Representative Wald: HB1181 address March 1?

Representative Gulleason: President brings all budgets to the State Board?

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Senate Appropriations Committee

Bill/Resolution Number SB2021

Hearing Date April 16, 2001

Representative Wald: Could be flexible in first sentence rather than President --- wouldn't he want to be in the loop?

Senator Solberg: Voting member of Board -- would be 3.

Representative Wald: When given to the Board -- it's given to the President -- they surely consult with presidents?

Senator Solberg: No secrets for the President -- but does free up time to work on it -- deadlines such as March out -- president could put his own deadlines in. If SBARE is to work -- it needs to be workable -- they need to be able to react quickly to situations.

Representative Wald: # 6, page 3: time frame? No authorization has been taken away --- simply give copy to President and Board --- how does that impact the time frame?

Senator Solberg: He could veto.

Representative Wald: No -- doesn't say veto here now?

Senator Solberg: SBARE can't have limited authorization on initiatives.

Representative Wald: Can read that in here?

Senator Solberg: Submit to the President -- then Board --- who makes the adjustments? Believe the Board does now.

Representative Wald: Won't change anything? Develop -- it's their responsibility -- all it says is give a copy to the president.

Senator Solberg: We read it differently.

Senator Tomac: Let's come back to this.

Senator Thane: After all these years why add president -- appears to be a feel good thing only.

Senator Solberg: Need to come back to two areas now.

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Representative Gullerson: Understand the commodities and producers concern with the process -- process is open, their initiatives haven't been given due considerations, or so they probably felt -- should be their call.

Senator Solberg: Too long a time frame involved.

Senator Tomac: Perhaps hung up on language -- in reality the Consultation Board didn't act quickly enough -- or so it was thought to be that way; so the SBARE was formed --- Appears to be happening again. There is a need to kick in faster -- difficult to get the budget to the governor in August (even for the President).

Representative Wald: It says develop --- Board; how does the effect time frame?

Representative Gullerson: Way it reads -- request to the President -- then Board of Higher Education -- how long does he want to review?

Representative Wald: All same time.

Senator Solberg: If it's only rubber stamping -- why would the president want it --- if not for reviewing --- simply one more step in the process.

Representative Boehm: See concerns -- but it's not here; says president or designee -- won't slow the president's time down - he/designee was there and knows it -- won't slow president's time down -- no drag time; perhaps we should consider it in a different section?

Senator Solberg: Let's move on to the pig farmer now cattle --- the 66,500 restored -- Dickinson dropped swine research, terminated the projects?

Representative Wald: Not the scientist -- had other duties.

Jerry Doan: Verified he moved into beef research.

Senator Solberg: What's he doing?

Senator Tomac: Restored funding --- what will 66,500 buy? Funding removed but not the FTE?

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Senate Appropriations Committee

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Representative Wald: Perhaps OMB can help us there -- Celeste Kubasta, OMB Analyst:

Correct, Senate didn't take out.

Representative Boehm: Senate took dollars and position?

Senator Solberg: Can take position out if you'd like -- 33 thousand per year.

Senator Solberg: Langdon: 150 thousand general funds and House put another 150 and local to 500? Others, such as Minot as well?

Representative Wald: Minot and Williston are capital construction.

Senator Solberg: Learning centers? Increase 150 thousand?

Representative Wald: Williston raised all -- not sure about Minot.

Representative Boehm: It's harder for Langdon to raise that kind of money -- House felt if the facility is really needed, we should provide some help.

Representative Gulleason: Perhaps we could check the history regarding Minot, Carrington, Williston, and Hettinger -- Legislative Council Staff able to provide such information?

Senator Solberg: Requested Don Wolf, Legislative Council Staff Analyst seek such information -- relating to general fund dollars; percentage.

Senator Solberg: Reduced 300 thousand on the beef line initiative?

Representative Gulleason: Redirected to the feed mill in Carrington.

Senator Solberg: Next 3 items: 1) feed lot in Carrington; probably barley program -- SBARE sets up and moves into the situation -- should be able to control the initiatives -- look at the barley situation? There is a move in every session -- SBARE needs to move in accordance to constituents needs.

Representative Boehm: They set the initiative criteria -- should be able to justify, not just want changes.

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Senator Solberg: Believe there is a move in every session accordingly.

Senator Thane: How closely do the research centers work with private industries -- on the barley research with Coors/ Busch? Are we duplicating efforts? Seems like the private sector is one step ahead.

Senator Solberg: I'll check.

Senator Solberg: Adjourned the meeting until the call of the chair.

2001 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB2021

Senate Appropriations Committee

Conference Committee

Hearing Date April 16, 2001

Tape Number	Side A	Side B	Meter #
Tape #1		x	22.0 - 49.9
Committee Clerk Signature <i>Tomie Putsch</i>			

Minutes:

Senator Solberg, Chair of the SB2021 Conference Committee opened the meeting at 2:30 pm on Monday, April 16th.

Roll Call: Senator Solberg, Chair; Senator Bowman; Senator Tomac; Representative Wald; and Representative Guleson present. Representative Boehm absent.

Don Wolf, Legislative Council Analyst distributed copies of information requested earlier in the day regarding general funds, special funds and totals for Minot, Williston, Hettinger and Carrington research stations. ( a copy of which is attached). Senator Solberg went through the figures.

Senator Bowman: Where does the beef line initiative receive dollars from now?

Senator Solberg: Oil money.

Senator Solberg: Senate original request was for 755 -- we too to 445; moved 300 to feed lot --

House amendment added?

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Senate Appropriations Committee

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Representative Wald: 205 thousand increase on anticipated oil revenue.

Senator Solberg: Take down -- if they so choose?

Representative Wald: Soft oil revenue -- need to consider what's the pecking order. Base line first for the Dickinson Station -- beef line and barley benefit.

Senator Solberg: Not sure how -- authorization to spend by the board, Station beef line is a project?

Representative Wald: First initiative?

Senator Solberg: Yes, keep it going 750 thousand to being (Senate) -- bring back; threw in 950 thousand?

Representative Gulleason: Restate your intentions?

Senator Solberg: Use special fund money for the initiative: feed lot/mill in Carrington -- to develop a complete feeding program.

Representative Gulleason: Page 5, House --- #5 provides Beef line - barley but you want to expand overall plan?

Senator Solberg: That's where I got the 950 thousand figure --- thanks. Yes, like to come in on that but tread carefully.

Like to stay away from micro managing SBARE.

Representative Wald: Only concern is base budget -- some stations are based on oil revenue -- they should have first dibs on the dollars --- anything above that bench line.

Don Wolf, Legislative Council Staff Analyst: 755 Dickinson base originally; 745 Senate beef line.

Representative Wald: Bank on the footnote -- 1 million and a half revenue from oil? 750 thousand base -- House another 750 thousand realistic? General 950? Don't know.

Senator Solberg: Kicked up Dickinson Center 2.7 million ---- 3.1 million, a 14% plus increase?

Senator Bowman: 3.3 million plus on engrossed. Some discussion as to why 360 thousand out of central/main stations? See shift to Dickinson and Langdon --- consistency is what's needed --- we're taking away authorization from SBARE -- we're telling them what to do. Appears we're telling them what to do --- let's let them do as they see fit --- or dissolve it!

Senator Solberg: 143,500 out of entire budget --- 350 thousand to 2 different stations.

Representative Gulleon: House asked about carryover dollars -- main station had some 1.4 million --- other 3 some thousand and upwards --- seemed pretty much the trend. We thought there were other projects to be addressed -- example: Langdon Learning Center.

Senator Solberg: Restricted or non restricted funds involved in carry over?

Representative Gulleon: Didn't ask.

Senator Solberg: I'll check on that. Or perhaps Don, you could get that information.

Representative Gulleon: Why we could come to 2 projects --- there was still concern within the commodity groups -- they weren't sure they were being heard -- lot of input from NDSU. As we looked at the list of projects -- we saw 21 different grazing studies now --- not sure they were all responsive to the needs of commodity groups, individuals in ND.

Senator Bowman: Proper for us to mandate rather than work with SBARE? Couldn't we provide feedback to them from our legislative constituents? Work with them during the year?

Senator Solberg: Agree, work on intent rather than putting hard and fast rules down. They need the flexibility to move forward on demand of the people.

Representative Wald: Circumstances do change -- sometimes quickly. Don't believe the SBARE duties are watered down -- #6 we might work on the language --- think everybody is on board --- we are not trying to cut out SBARE.

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Items 1-2-3 are the SBARE mission statement from old --- Main Station was presumed to have had too much authority -- changes were produced --- need to tweak here/there at times.

Senator Solberg: Think we need to do that and talk to our fellow chamber members -- need to come to an agreement.

Representative Wald: Thoughts on local match scenario --- doesn't appear to be a pattern?

Senator Solberg: None, less dollars put in except for Williston --no pattern.

Representative Wald: Williston and Hettinger appear to have done it themselves.

Senator Solberg: Meeting is adjourned until the call of the chair.

2001 SENATE CONFERENCE COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2021

Senate Appropriations Committee

Conference Committee

Hearing Date April 17, 2001

Tape Number	Side A	Side B	Meter #
4	X		0.0-54.4
4		X	0.0-5.3
Committee Clerk Signature <i>Patricia A. Spence</i>			

Minutes:

Senator Solberg opened the third conference committee on SB 2021, NDSU Extension. All committee member present.

**Senator Solberg:** Where we left off was on the beef line initiative and some wordage on that issue. I've worked on the first rough draft and looked at it, looking at the money to be plugged in there, somewhere between \$750,000 and the \$950,000., not sure where we should look at that.

**Representative Wald,** you committee looked at \$300,000 of that beef line for the Carrington feedlot center, it that right?

**Representative Wald:** When the bill left the Senate you had \$745,000 in the beef line initiative. We reduced that by \$300,000 and that is money to be generated, in theory, from the oil revenue from the Dickinson state.

**Senator Solberg:** And that \$300,000.

**Representative Wald:** We are using the \$300,000 to fund the item number four.

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Senate Appropriations Committee

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Senator Solberg: It would be your desire to leave it at \$750,000, and the \$300,000 leave the intent there, is that right?

Representative Wald: We would be comfortable leaving it the way it is.

Senator Solberg: In section 6 legislative intent, it is the intent of the 57th legislative assembly that \$745,000 of special funds be allocated for beef line initiative that would include a modern feed mill and feedlot at the Carrington Research and extension center that will address genetic management with marketing co-products and environmental and research needs. And include outside council from the beef and cattle industry to work with SBAR develop and complete research program with goals and priorities. Any problems with that? What that does is continue on a line but also include the industry to work with SBAR in going forward with this. (attached copy Section 6 intent, hand written).

Representative Wald: So let me understand this you are \$745,000 for beef line and the definition of beef line for this purpose would include the feed mill, the feedlot, and feed barley research all in one project?

Senator Solberg: I did not include the feed barley. We could take a look at that.

Representative Wald: So we are cleaning up about \$200,000. Council you mean consultants.

Senator Solberg: Council to work with the research group.

Representative Wald: That would not impact if you go to the Section 7, page 1, that would not impact the malt barley.

Senator Solberg: That is right, this takes place of Section 6.

Senator Tomac: Does it also replace Section 8.

Senator Solberg: Yes it would. Both Sections 6 & 8. Line 4 that would include for a \$300,000 for a modern feed mill. Of the \$745,000, \$300,000 to the feed mill.

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Senate Appropriations Committee

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Senator Bowman: So \$745,000 total for beef line project.

Senator Solberg: Some of that is strung out to SB 2005.

Representative Wald: When you say Carrington Research station, would the main station have a hand in this or backup capacity, or other stations. Would we be tying the hands of one station?

Senator Solberg: Yes, I would envision that. That is why I included people from outside to bring together the people of the industry and work on the program with goals and objectives and priorities.

Representative Wald: Might you consider resources other than council, would that change your mission in what you are trying to do?

Senator Solberg: Resources or consultants, resource is a very wide term, could consider.

Senator Bowman: All stations could compliment each other, coordinate all the stations.

Senator Solberg: I'm a little nervous to put the whole thing in there and micro manage to the point that SBAR and the industry would get together and be able to put this together satisfactory. If they don't, in two years from now it could be interesting.

Representative Wald: Could you envision that this amendment that some of this research being contracted out with a rancher or farmer.

Senator Solberg: I don't see any problem with that.

Senator Tomac: What you are saying, allocated \$745,000 to the beef line of which they need to do a feed mill at about \$300,000 and to before beef line gets started we want the researchers and SBAR to get together with representatives of the beef industry to fine tune what beef line is and what we will do. Can we have Mr. Wolf put that into intent language instead of us.

Senator Solberg: All agreeable to do this.

Senator Solberg: Next, clear up Section 14, subsection 6.

Representative Wald: On item 6 under duties of SBAR, Mr. Doan brought us some language and we accommodated them. The language read like this, develop biennial budget requests and submit that request to the President of ND State University and the State Board of Higher Education. We put in an addition to that agriculture experiment station person in extension and I feel comfortable in taking that out. Would like it go to the president of the institution, so item 6 would read, develop, then strike the underlined language, a biennial budget request and submit that request to the President of NDSU and the State Board of Higher Education.

Senator Solberg: No problems with those changes all agreeable.

Senator Solberg: Only other area is the barley, the feed and the malt. Lets take the Langdon Research Center. What this does is appropriate another \$150,000 for the learning center in Langdon out of general fund money or within the budget.

Representative Gulleason: It is general fund dollars. We took the \$360,000 out of the main station and distributed it here.

Senator Solberg: No fear that this is going to hurt the core budget from the House?

Representative Gulleason: We looked at the carry over on that budget and felt there appears to be a cushion to do this.

Legislative council: The main research center will have a \$1 million carry over and approximately two thirds of that is restricted as far as what it is used for. For various projects, science lab, soil testing lab, diagnostic lab, that sort of thing, for those purposes.

Representative Wald: Rationale for that the main station present budget \$37.7 million, they requested \$38.8 million and the Executive recommendation was \$40.9 million and that is from the detailed budget book.

Senator Solberg: What amount of that is salary increase?

Representative Wald: Salaries went from \$23.8 million to \$24.5 million.

Representative Boehm: The salary increase was up \$4.2 million.

Representative Wald: The increase we saw was travel went from \$931,000 to \$1.9 million; professional services \$576,000 to \$1.1 million; office supplies from \$169,800 to \$356,000; miscellaneous supplies went from \$1.2 million to \$2.6 million, so there is some pretty hefty increases in some of these line items. Operating budget adjustment went from zero to \$1.2 million.

OMB: That OMB adjustment for the Governor's recommendation and rather let through object codes, it is all lumped into one operating budget adjustment. It was no specified.

Representative Wald: We also took out some positions, some that had been open for three years some longer but left the money in, on page 6, House amendments where we deleted 1.8 FTE's but funding for the positions remains and may be reallocated for other purposes.

OMB: We didn't remove the funding for it because they told us they were using those vacant positions for the additional 1% increase for their salaries. Just removed the position.

Senator Solberg: So this is how basically used to justify the \$150,000.

Senator Tomac: Took out the authorization to hire people, you left in the salary but then expect that salary to go to replace the money or increase the money in Langdon or for what want then added \$150,000 for Langdon.

Representative Wald: The money that the 1.8 positions was left in the salary line item to reallocate for their positions of 1% bonus. No connection in deleting those position and the money freed up in funding.

Senator Solberg: The \$150,000 special funds are for those expected to be raised by the Langdon Center themselves because that reduces their local obligation from \$650,000 to \$500,000, that would be the special funds of \$150,000. We will sit on this for now.

Senator Solberg: We will now go on the barley initiatives. Problems with the barley people/stations on what needs to get done on barley research.

Senator Bowman: Is there someone here from the Barley council that I could ask a couple of questions, we need to get down to why the problems when we are spending this kind of money and not getting satisfaction, need to work out the problem spending \$3 million, need understand the whole picture and not just one side.

Jim Braxton, from Daisy, ND, recently elected Chair of the Barley Council.

Senator Bowman: Frustration between NDSU, the research center and the barley council. I've heard mixed feelings on what is going on with the commitment with research at NDSU, past commitments not fulfilled, possibly of pulling money out and going some place else.

Jim Braxton: On research issues, the research contract with NDSU we had some that did not get fulfilled as should have been executed and asked for some changes at the same time NDSU came back with some directives on intellectual property/rights and some good, they wanted full control and we had some growers felt that we were contributing our money to this we should have some say on these contracts. Our council is in full agreement that we should have say or input on that money and how it is used for research, not much bargaining about it, can't agree.

Senator Bowman: With the revisions of the barley council, speaking strictly for yourself and the people you represent, what do you want this committee to address.

Jim Braxton: There is such a concentration with barley feed, they are having problems with waste management. We need a better concept and development of a better feed starting with

other parts of the world, need to compete with the competitors. It takes a long time, I'm not saying the people at the University haven't been working with us, we have people working on that, it just takes a long time and we need some more support. It is a whole industry that can be added, that was our feeling on supporting this initiative.

Senator Bowman: Was about the malting issue.

Jim Braxton: We support that, the Malting industry is moving further west, we need to put more work on that in the west.

Senator Bowman: In the west region dry land spring barley nurseries, do you work directly with that group, is that for the upper northwest or north central area, are you a part of that works together with a variety of barley?

Jim Braxton: Some of these are multi-funded by different states and researchers. The industry right now standard barley is no longer an approved Malting barley in ND yet is in Idaho, Washington and Western Montana, because of the way it grows and has a different characteristic and they will accept it out there. It works in one area and not the other and why you need the research, it gets that touchy.

Representative Guleson: The intellectual property thing, and we won't be able to resolve this, or I don't anticipate, but how are other commodity groups contracts written in terms of the intellectual property, the soy beans, the potato, on down the line.

Jim Braxton: Appears the wheat people have signed contracts from NDSU are far as they are expending, or just gave it up and said that was fine. There was three quarters of a million dollars worth of research going on there until it was necessary to proceed with the research and go ahead with the existing contracts, and get the results out.

Representative Gullerson: What is the leadership at NDSU doing, if there an effort to bring the two groups together to the table and figure this out.

Jim Braxton: It appears to be a little higher level than that, the growers point is at the presidential level where they want to protect these intellectual properties. If you give to one group you have to give to the other and the same way, difference in funding with a difference in thinking. We are a tax payer entity to a degree and we feel we put vested interest and it is our job to protect and get something for our producers.

Representative Wald: Might we be missing an opportunity in this malting area, and if ND doesn't do it, primarily the western half of the state, we are not only competing with national market but we are close to Montana, Idaho, Wyoming, if we don't pick up the ball and run with in terms of good quality dry land, low protein malting barley, somebody else is going to do it and we will miss the opportunity.

Jim Braxton: Both on the feed barley and the malting barley side, if we don't somebody else will.

Representative Wald: I was told from a good source that two breweries are out looking to contract with farmers and would be paying between 80, 90 and a 1.00 a bushel, from malting barley not feed barley, so if you take millions of bushels of barley times even 80 cents or 50 cents, that is an increase in the farmers pocket. If we don't do it this biennium we are missing a great opportunity.

Senator Tomac: If those breweries are contracting and developing those varieties, why do we need to put money into it, where are we gaining with putting different varieties on the market if they are not going to buy these markets we develop.

Jim Braxton: In western there is two row barley, back in 1984 we had very little work done on triple row barley in ND. The industry did all the funding for barley research. The malting barley contracts, we need quality now with research. We need to show the extra money on the bushel creating other industries in Canada with new varieties like six row barley, need more work to develop the western barley.

Senator Solberg: Maybe tie barley with the beef initiatives on research.

Jim Braxton: There is interest in barley now which needs support as the acres have fallen, need to promote.

Senator Solberg: The malting barley more research western part of the state?

Jim Braxton: Yes, we are working on it out there and the feed side.

Senator Solberg: Property rights, University, standard procedure on these grains?

Jim Braxton: The three universities, all share grower groups.

Senator Solberg: What is the total barley research compared to wheat, comparable with income?

Jim Braxton: It is compared to other major crops and studies.

Senator Bowman: Status of research in Williston, Hettinger?

Jim Braxton: Some need to do more in those regions.

End Tape #4, Side A, meter 54.4, Start Side B, meter 0.0

Jerry Doan, President of SBAR, spoke on subject per request of committee. The intellectual aspect, could be political the right to research to tax the process with the state. Vice-president the is a problem communicating. Need to get the players and redirect, the need to balance with discussions.

Representative Wald: The new variety of malting barley, is it at the Fargo research, Williston, Dickinson, you say the need for more, isn't the entire story that better barley is needed.

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Jerry Doan: Not sure on more dollars to do this, need the figures to look at answers.

Senator Solberg: We need to close this meeting, we will come together one more time to conclude the issues. Meeting closed.

Tape #4, Side B, meter 5.3.

2001 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB2021

Senate Appropriations Committee

Conference Committee

Hearing Date April 18, 2001

Tape Number	Side A	Side B	Meter #
Tape #3	x		24.3 - 54.5
Tape # 3		x	0.0 - 25.0
Committee Clerk Signature <i>Debbie Putsch</i>			

Minutes:

Senator Solberg, Chair of the SB2021 Conference Committee (NDSU Extension, Research), called the meeting to order at 3:30 pm on Wednesday, April 18th in the Harvest Room.

Roll call, present: Senator Solberg, Chair; Senator Bowman; Senator Tomac; Representative Wald; Representative Boehm; and Representative Gulleson.

Senator Solberg: All members present, believe Senator Bowman has been doing a lot of work on this, and we'll let him talk, and give him our undivided attention.

Senator Bowman: Need to get the 143,500 back in to the Core budget which was decreased by the House. He distributed copies of correspondence he had received from Tim Faller, Hettinger Research Extension Center; Cole Gustafson, NDSU; Jay Fisher, North Central Research Extension Center; and Kris Ringwall, Director of Dickinson Research Extension Center (copies are attached). Minot needs to get the 30 thousand they need to purchase the land; with language that would include a working agreement between the Main Station and Minot to get needed

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Senate Appropriations Committee

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funds to Minot to complete the purchase --something the Main Station addresses after we restore the dollars. Restore 66,500 to Dickinson Research Center for the beef man; and 150,00 to Langdon. Think we should discuss this first -- since it goes into the operating line of the main station research center.

Senator Solberg: Discussion on the items?

Representative Gulleon: Looking at the numbers -- the House over what was included in the executive budget.....7.8 to 8 million general fund.

Senator Bowman: The core budget needs the flexibility most --- needs to be able to move dollars where they are most needed. There are those 3 items of concern.

Senator Tomac: Agree to 66,500 House change; 150,000 Langdon as House had, and the 143,500 to restore cuts as the House did -- then put intent language in -- stating that the main station has the ability to use -- help Minot purchase the land --- have a working agreement between the Main Station and Minot 60 thousand dollars not provided --- only allow 30 -- limit to 30?

Senator Bowman: Their problem

Senator Solberg: Yes.

Senator Bowman: 30 thousand -- 2 ways. 320 thousand can't negotiate on land.

Senator Tomac: Concern is that HB1200 said give appraised price -- limited main station to 30 thousand dollar transfer --- transfer savings from elsewhere?

Senator Solberg: Center would be paying for it.

Senator Tomac: Under this scenario limit to 30 thousand?

Senator Bowman: would come from main stations --- not from other stations.

Senator Tomac: Intent is --- don't limit; allow to do?

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Senate Appropriations Committee

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Senator Bowman: Leave figure out --- accept that it is to be done?

Representative Wald: Regarding cuts -- page 5 of amendment --- down 360 Main Station out of where?

Celeste Kubasta, OMB Analyst: Operating.

Senator Bowman: 143,500 back into Core budget.

Representative Boehm: Where was it out?

Senator Bowman: 360,000 --66,500 and 150,000 left 143,500.

Senator Solberg: Talk about 30 thousand?

Senator Tomac: Wise to leave open, with understanding that HB1200 has Williston (24,000) and Minot (60,000) --- which is the appraised value --- plus if more dollars are needed they need to raise it at Minot. Appraised dollar is 60 thousand difference from what's been provided then: 810 appraised per acre and they are asking 1000.

Representative Wald: Minot needs 60 thousand?

Senator Solberg: What they asked for.

Representative Gulleason: Restore 143,500 --- absolutely no cuts from the executive budget --cut to cut? Core dollars --- as stated before there appears to be a duplication of projects --- our research shows there are 21 different grazing studies on-going ...and also a carry over in the Main Station of 1 million.

Senator Bowman made a motion to reinstate 143,500 to core main station budget, leave in 66,500 for Dickinson, 150,000 for Langdon. Senator Tomac: seconded. Discussion; call for the vote: carried by voice vote

Senator Bowman: Beef line initiative is priority of SBARE --- following through with Carrington at 210,000.

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Senator Solberg: Distributed copies of proposed amendments #18047.0215 ( a copy is attached).

On the amendment-- section 6, provides flexibility to put program together -- program will be done, keep initiative in line. The feed mill project at Carrington ready.

Senator Solberg: Discussion on the amendments.

Senator Bowman: All players are together. 210,000 feed mill.

Jerry Doan, President of SBARE was in the audience and recognized by Chair Solberg: That is an estimate on the feed mill, 210,000, zero for feed lot.

Representative Wald: How many head encompassed now and how many more with the feed lot expansion?

Senator Bowman: Information not here -- not researched, groups are working, coming together. Was a time when barley feed by some and corn feed by others, no research being done by a plan ---that is now changing.

210,000 is for the feed mill, not for both the feed mill and the feed lot. Separate items.

Senator Tomac: Why specific mill amount? Why buy prior to having the feed lot? Not knowing the whole program --- build the mill first --- then do a plan?

Senator Solberg: Bottom half of the paragraph puts this in place -- includes to develop complete research program --- limit space.

Senator Tomac: Understand --- why more stringent parameters?

Senator Bowman: Feed mill replacement is necessary.

Jerry Doan, again recognized by Chairman Solberg: It is an antique.

Senator Tomac: No authorization --- except for the mill of 210,000 --- spend what it takes, but not for anything else?

Page 5  
Senate Appropriations Committee  
Bill/Resolution Number SB2021  
Hearing Date April 18, 2001

Don Wolf, Legislative Council Staff Analyst: 745,000 for beef line, 300,000 needs change and #5 additional 25,000. 950,000 total Dickinson oil money for three things. 745 combined beef line and Carrington.

Senator Bowman: 205 is separate.

Senator Tomac: Not comfortable with out dollars --- say numbers, up to ...out of special funds.

Representative Gulleon: Comfortable with language --- gives all the authority for extra 90 thousand is they want research out of feed mill.

Jerry Doan - again recognized by the Chairman: Whole 745,000 beeline (210,000 is feed mill) don't like dollars designated to spend wherever ---like only 90,000 for lot --- total authorization for 745,000 to spend as feel appropriate.

Representative Wald: Like amendment ---as Representative Gulleon, I like the language on page 5 as stated 17th of April in .0215 -- footnote 1-2-3-4-6=5, how much spending? Comfortable with 5 items. Let's vote on 1 and 2 -- missed Minot, allocation okay. 745 special funds, 210 feed mill the rest for feed lot and beef line.

Representative Wald: Buy the feed mill for 210 --- why tie them to 210?

Senator Bowman: Language works as is ----- let's go for it. Move for amendment; second by Representative Wald.

Discussion; call for the vote: Carried by voice vote.

Senator Bowman: Barley research needed -- need to put in climate where it is to be raised -- Fargo growing area not like the western portion of state -- need new plant varieties tested where they will be grown. 205 thousand anticipated oil revenue -- need to know how to address this --- takes up to 10 years to develop a new variety.

Representative Gulleson: Clarify funding --- page 2, section 7 of amendment malting is 288 out of Main, section 8 has feed 228 out of oil dollars ---- you don't want both?

Senator Bowman: Package 205 for barley development --- out of oil dollars.

There needs to be a working relationship -- between researchers and producers.

Representative Wald: Feed barley (footnote 5) strike section 8, 950 thousand?

Senator Tomac: Need section 6 only?

Senator Solberg: Heard yesterday that feed barley was in line with feed lot trials -- that be implements.

Senator Tomac: No talk regarding barley -- 205 thousand there, guess there's no need to go spend? Comfortable that the oil revenue will support barley lots --- SBARE ranking allows the extra funds. We heard the new president of Barley rowers -- testified that they needed help in how to feed, use what we've got --- not in the area of production. Spend on research projects to utilize. The beef line is #1, found that 2-3-4-5-6-& 7 not sure of.

Senator Solberg: language doesn't include funds --- want work relating to west -- should we direct SU --- line is there and ready-- but get it to the west? As industry grows, east to west needs in rain area differ --- much in the east not enough in the west.

Senator Solberg: section 7: reworded, take allocation from work with ---out funding, a start?

Senator Tomac: Understand what Senator Bowman said, do struggle with the micro management -- researcher and producers on SBARE shouldn't need language.

Senator Solberg: Agree, concern that the Barley researchers will pull dollars out of ND.

Senator Tomac: Intricate part of language..

Senator Solberg: SBARE works to a point --- but there's a lack of communication with groups --main station etc.

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Senate Appropriations Committee

Bill/Resolution Number SB2021

Hearing Date April 18, 2001

Senator Tomac: Agree -- suggest language says malt/seed tested in west as soon as possible?

Representative Wald: Heard yesterday --- last paragraph of Jay Fisher (Minot) letter.

We've had 2.30 and 3.00 malting barley -- when brewers want it. Spend 288,000 to develop malt barley, get some new varieties --- all intent language as in section 7 now.

Representative Boehm: SBARE --- had Barley initiative #4; not sure development needs are there.

Senator Bowman: Games brewers play --- we raise the variety they mention --- changes prices when they want it --- use research at our own expense. The game needs to be addressed. Benefit the beer producers --- know they can change prices after we develop the product -- at our expense..

Senator Tomac: My frustration: raised one variety one year -- my carryover had to be sold at discount feed price --- we let them bring dollars to the table to develop, look at #2, spend there and save next biennium.

Senator Solberg: Authorization for Williston in HB1200 not needed here --- delete here.

Senator Solberg: Believe that is as far as we can go today. Let's review the amendments, changes and we will reconvene at the call of the schedulers.

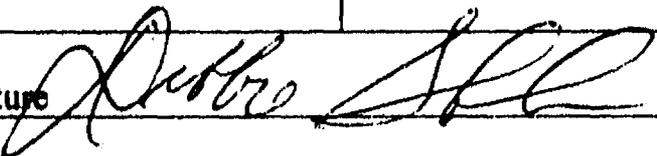
2001 SENATE CONFERENCE COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2021

Senate Appropriations Committee

Conference Committee

Hearing Date April 19, 2001

Tape Number	Side A	Side B	Meter #
2		X	0.0-62.16
Committee Clerk Signature 			

Minutes:

Senator Solberg opened the fifth conference committee on SB 2021. All committee members present.

**Senator Solberg:** Representative Wald do have amendments to pass out.

**Representative Wald:** We have discussed this and studies, it is a give and take proposition.

Amendment, 0216 (attached), which replaces amendment 0215 (attached), the so called Solberg amendment. The only difference is that on page 2, Section 9 is a legislative intent that deals with the land acquisition at the Experiment Station in Minot. This says that any unexpended funds from the Main Research, unencumbered funds \$300,000 in carry over from the Main Station, and that is where that \$60,000 would come from. No change in the amendments before, they are exactly per Senator Solberg's amendment, 0125, handed out yesterday. If a motion would be in order I would move that the House recede from it's amendments and further amend.

**Senator Solberg:** Is there a second? Second by Representative Boehm. Further discussion.

Senator Bowman: In the amendments, did we replace the \$143,500 in the main operating budget? I don't see that in the amendment.

Don Wolf, Legislative Council, those amendments talked about yesterday, none of those are in here, this was just the same amendment.

Representative Wald: These are Senator Solberg's amendment plus Section 9, the Minot Land acquisition.

Senator Tomac: Just a matter of process, I understand what we were attempting to do yesterday, was piece by piece and we had gotten to the amendment you had proposed, Mr. Chairman, and had actually adopted Section 6, but our discussions were on Section 7 & 8 and of course we did have some discussion on the new Section 9. If we are going to follow that format, I would resist the amendments at this time, and adopt them point by point as we go through them. Not ready to vote on Section 7 & 8 at this point. I resist the motion to adopt these amendment.

Senator Solberg: Senator Bowman you did some work on the barley situation.

Senator Bowman: After talking the research stations, what we need to do is address the western barley issue, somewhere we need to write intent that the western research stations to have barley varieties for malting and feed barley. The malting barley they would like to have those varieties as early as possible. The soon they get these new varieties and get them out into their areas, then they can do the research with that variety as it adapts to the weather conditions that we have in western ND that are different from eastern ND. They are working on that right now and if that takes care of the concern that would be satisfactory to me. We don't need to allocate any more money and need the intent.

Representative Wald: If you are referring to Section 7, the language is already there where it says funding for the purpose of developing western ND malt barley.

Senator Solberg: The only thing different is the allocation of the \$288,000.

Senator Bowman: It should be that it is the intent of the fifty-seven legislature that the Main Ag Experiment Station work with the western experiment stations in developing malt barley. You won't be developing the malt barley in two years, that is a given, it takes at the fastest 8-10 years on an average, I don't think you want to put a date to have malt barley done, we need to make sure they understand that we would like to have some of the research out in the western part of ND.

Senator Tomac: I did ask for some information from NDSU and indicated there is two row barley for malt that has a tentative release date of 2 or 3 years from now. No problem with the intent, something needs to be developed, my objection to Sections 7 & 8, is the priority list.

Representative Boehm: The priority list isn't a big deal. I think this is over stepping there authority in telling them what to do.

Senator Bowman: Difference in telling them what to do and asking them to look at the potential of we can do. New barley developed every year. In the west they want to develop a malt barley and that up in Williston they have a technician that has the ability to do a lot of the research on developing a malt barley. Just want them developed faster.

Representative Boehm: Why didn't SBAR do that then, they are number four on the priority list, why didn't they request this?

Senator Bowman: That is a good question, maybe nobody ever brought it up this way.

Senator Tomac: Question for Rep. Wald, c n Section 7, is the \$228, 000 new funds, if in fact we have two barley researchers that are working to develop new barley varieties, and we need to refocus our research in the west and not the east, why do we continue to do that work in the east.

The concept is good, but throw new money at it, brings some concerns. That \$288,000 instead of just developing varieties for east, but for the west.

Representative Wald: Communication from Chris Ringwald from Dickinson and Gerald Veramin from Williston, talking about the malting effort, and they show you were the \$288,000 would be allocated and how that research money would be spent. If there is enough money in the pipeline I trust they wouldn't be asking for additional funds if they had enough money in the pipeline. If they are going to do this, we need to develop new malting varieties for the farmers in western ND because we will be in competition with surrounding states and other states. If we are going to be involved we better get started this biennium or we may be left out.

Senator Tomac: If we do Section 7, can we scratch Section 8?

Senator Solberg: We can take Section 8 and just go to the intent, that is in Section 6. Section 7, second line, Main Agricultural Experiment Station working in conjunction with those stations in western ND in developing ND malt barley for the biennium beginning July 1, 2001, to July 1, 2003. More words could be put in there.

Representative Wald: I have no problem with that, if you want to strengthen the wordage. I think they would know that if they are going to develop a western ND malting barley, they can't do it in Carrington or Langdon, but in the west, the area the crop will be grown in.

Senator Solberg: The initial breeding will have to be done in the Main Station.

Senator Bowman: If they make that an initiative to do that, they may change some priorities.

Senator Tomac: Read Section 7.

Senator Solberg: Section 7, legislative intent for malt barley, it is the intent of the fifty-seventh legislative assembly that the main agricultural research station to work in conjunction with those

research stations in western ND in developing malt barrel's for the biennium beginning July 1, 2001, to July 1, 2003. Not the perfect wording.

Senator Bowman: Put the time frame in at the end.

Senator Solberg: No, we could probably leave that out.

Senator Bowman: Put a period after 2001.

Senator Solberg: Just take out, and ending June 30, 2003.

Representative Wald: Maybe we can shorten this, use language, it is the intent of the fifty-seventh legislative assembly that the main agricultural experiment station allocate from the main research centers \$288,000 for the purpose of developing western ND malt barley at western branch stations for the biennium beginning July 1.

Representative Boehm: The corp. budget, when we went through this budget, the corp. budget is made up of the previous initiative, the money that goes to those initiatives never quits, it reallocated every year, that why the corp. budget keeps growing. So for us to take this \$288,000 out of the corp. budget should not be a big deal.

Senator Tomac: I agree, is this new money or is this reallocated money, because if it is reallocation money I don't have any problem with that, but if you are taking some of the current barley program, the barley initiative lets take \$288,000 of these dollars and put them over in western ND, but you said you were talking about new money.

Representative Wald: No this comes out of the line item, operating line item. That's why it says allocated from the Main Research Station, the \$288,000 is not new general fund money.

Senator Solberg: What are we going to do with this \$288,000, where are we going to improve what we are doing now with the extra dollars to bring this together.

Representative Boehm: Between SBAR and all the scientists and everybody involved with this study, it should be their decision, if they don't need the money, they shouldn't spend it. We increased the corp. budget by \$1.105 this biennium, this is new money.

Senator Solberg: This says they have to spend \$288,000 on barley.

Representative Boehm: We should put in there just what is needed.

Representative Wald: I would feel very uncomfortable leaving without specifying an amount.

Senator Bowman: What would be the way to write.

Don Wolf: Usually the way that council likes to write it is appropriate the \$288,000 or so much as may be necessary.

Senator Solberg: Section 8.

Representative Gulleason: Just a point on process, are we going to vote on Section 7.

Senator Solberg: We got a motion on the floor from Representative Gulleason, try and goes through these now as amendments and then vote on the amendment to the motions.

Representative Wald: I will withdraw my motion and it is my understanding and vote on the sections separately.

Senator Solberg: Section 7, all in favor, all voting yes. Section 8, discussion followed between members on research, education, and appropriation.

Representative Wald: If you go to page 5, footnote 5, provides funding from additional revenues if available for feed barley research, etc., would you have to specify a dollar amount in Section 8.

Senator Tomac: I see two different directions her, footnote 5 refers to what we call Section 6, and that appropriation was originally \$950,000 we cut the feed barley research out of that initiative because we were going to deal with that in Section 7 & 8, Section 8 as I read it is we reallocate \$228,000 for new feed barley varieties, the initiative is how to feed barley.

Representative Gulleason: Do we add some language to Section 6 that would make it very clear that along side the feed mill and the research that will be done feeding cattle, do we want a feed barley study at the same time, and do we allocation some additional dollars.

Senator Solberg: I agree with you there, and micro management is my fear of saying okay. If we come back in two years and nothing has been done then we will have to put it in legislative intent.

Representative Wald: If our mission is to use barley as a feeding source, Section 8 says new barley varieties.

Senator Solberg: I would suggest that we strike Section 8 and make the proper changes on page 5.

Representative Wald: I would agree with that as long as we have an understanding.

Senator Solberg: Motion on that. Representative Wald moved motion, seconded by Senator Bowman, all in favor, carried.

Senator Solberg: Section 9.

Representative Wald: Minot land acquisition is an opportunity as it is right next to the current station, we can't pass it up. The \$60,000 is the approximate amount between the asking price and the appraised value.

Senator Bowman: We talked yesterday about not putting a figure in there, we do have in the bill the base price to purchase the land. This says no commitment from Minot, and I don't feel that is right. They should have some kind of commitment, they entered into some type of discussion on this land purchase before they knew where the money was coming and bringing a figure at \$1,000 an acre. Put \$60,000 in this bill, this should be a working agreement between the Main Station

and the Minot Experiment Station as how they want to handle that, payback dollars in certain time until commitment is satisfied, needs to be in writing or language.

Senator Solberg: After line 2, the station may make financial arrangements North Central Research Center, strike language down line 4, for the purchase of land in Ward County ND. I'm tired of production agricultural like this is and should get rid of land farther away.

Representative Wald: When are they going to close on this transaction, money to current owner? Time frame and to accommodate.

Senator Solberg: The owner of the land should understand with these appropriations. You want to add an emergency clause on that section, go ahead.

Senator Tomac: Most of this discussion belongs in HB 1200, the bill did not and never has had an emergency clause on it, we are well within the time frame, no testimony that they needed this in an emergency. There should be some local effort for this land purchase. Not sure we need Section 9 for transfer of money.

Senator Solberg: Is there still authority in the original bill whereby the land purchase in Williston, we don't need it in two areas, and HB 1200 for funding of it. We will take it out of the amendment here as it is in both bills. All agreeable. Any other changes.

Senator Tomac: Other issues not addressed, the make up of the Board, senate took everybody out except left the five members of the Ag coalition and five member nominated from extension and the Senate took out the director of extension and the director of the research station and left the vice-president of Ag in, and House put everybody back in. Proposal to allow the only voting member from the University be the president or president's designee and for the next biennium only two legislators from different parties, in voting capacity, to improve communication and get

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Senate Appropriations Committee

Bill/Resolution Number SB 2021

Hearing Date April 19, 2001

feed back. Leave it up to the Legislative Council to make these appointments. I feel they should be from appropriations. The Senate's version plus two legislators.

Senator Solberg: Senator Tomac made this a motion, seconded by Representative Wald. All members is favor

Senator Tomac: Last session we passed some money for some marketing clubs, been beneficial. Needs to be some emphasis on livestock marketing, I would like to propose as a compromise, pilot project in Dickinson for some kind livestock marketing club in ND, leave it is the marketing club, do some work in that area, learning curve.

Senator Solberg: I think this belongs in the extension budget.

Senator Tomac: Would you accept intent language, because the extension budget is in this budget, intent language the extension service allocate resources to pilot livestock marketing or two pilot livestock marketing clubs in western ND without dollars.

Senator Solberg: Will get the amendments done and will bring them to Rep. Wald and to meet with his two people and we will meet with ours, and get together with any changes, without having another conference committee.

Senator Tomac: At this point we have made seven changes.

End Tape #2, Side B, meter 62.16

Representative Wald: I make a motion that the House recede from their amendment and further amend. Seconded by Senator Bowman.

Hearing adjourned. Tape #4, Side A, 2.50

2001 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB2021

Senate Appropriations Committee

Conference Committee

Hearing Date April 23, 2001

Tape Number	Side A	Side B	Meter #
Tape # 1		x	0.8 - 3.4
Committee Clerk Signature <i>Jonnie Putsch</i>			

Minutes:

**Senator Solberg**, Chair SB2021 Conference Committee (NDSU Extension and Research), called the meeting to order at 2:30 pm, Monday April 23rd in the Harvest Room.

**Senator Solberg**: Let it be noted that all members are present (Senator Solberg, Chair; Senator Bowman; Senator Tomac; Representative Wald; Representative Boehm; and Representative Gulleason. Believe everyone has received and had the opportunity to review the amendments as corrected (#18047.0219). ( A copy of this amendment is attached). Are there any questions? Any changes that should be noted?

**Senator Bowman**: Move that we receded from the conference committee recommendation of April 19th. Motion seconded from Representative Boehm. Discussion; call for the vote: Carried by a voice vote taken by Chair Solberg.

**Page 2**

**Senate Appropriations Committee**

**Bill/Resolution Number SB2021**

**Hearing Date April 23, 2001**

**Representative Wald recommends that the House Recede from its amendments, and amend as**

**stated in #18047.0219. Senator Bowman seconded. Discussion; call for the vote: Roll Call**

**Vote: 6 yes; 0 no; and 0 absent and not voting.**

**Senator Solberg thanked the committee members, and adjourned the meeting.**

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HOUSE AMENDMENTS TO ENGROSSED SB 2021 HOUSE APP 04-06-01

- Page 1, line 4, replace the second "section" with "sections", after "4-05.1-16" insert ", 4-05.1-17, 4-05.1-19," and remove "subsection 1 of section"
- Page 1, line 5, remove "changing", remove "voting", and after "membership" insert "and duties"
- Page 1, line 6, after "education" insert ", the compensation of board members," and replace "use of" with "the" and remove "annual"
- Page 1, line 7, remove "proceeds"

HOUSE AMENDMENTS TO ENGROSSED SB 2021 HOUSE APP 04-06-01

- Page 2, line 15, replace "55,178,597" with "54,818,597"
- Page 2, line 17, replace "28,365,985" with "28,005,985"
- Page 2, line 20, replace "3,811,153" with "3,782,653"
- Page 2, line 26, replace "2,959,679" with "3,259,679"
- Page 2, line 27, replace "14,666,145" with "14,937,645"
- Page 2, line 28, replace "6,848,485" with "6,903,485"
- Page 2, line 29, replace "7,817,660" with "8,034,160"

HOUSE AMENDMENTS TO ENGROSSED SB 2021 HOUSE APP 04-06-01

- Page 3, line 3, replace "51,742,895" with "51,599,395"
- Page 3, line 4, replace "62,334,583" with "62,389,583"
- Page 3, line 5, replace "114,077,478" with "113,988,978"
- Page 3, line 12, remove "the state board of higher"
- Page 3, line 13, remove the first "education," and remove the second comma
- Page 3, line 23, replace "\$650,000" with "\$500,000"
- Page 3, after line 25, insert:

**"SECTION 6. LEGISLATIVE INTENT - CARRINGTON RESEARCH CENTER.**

It is the intent of the legislative assembly that the agricultural experiment station develop a modern feedmill and feedlot at the Carrington research extension center that will address genetic, management, marketing, coproduct, and environmental research needs of beef producers.

**SECTION 7. LEGISLATIVE INTENT - MALT BARLEYS.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate from the main research center \$288,000 of funding for the purpose of developing western

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North Dakota malt barleys for the biennium beginning July 1, 2001, and ending June 30, 2003.

**SECTION 8. LEGISLATIVE INTENT - BEEFLINE INITIATIVE.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate at least \$445,000 of funding for the beeline initiative for the biennium beginning July 1, 2001, and ending June 30, 2003.

**SECTION 9. LEGISLATIVE INTENT - NEW BARLEY VARIETIES.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate at least \$228,000 of funding for the purpose of conducting research to develop new feed barley varieties for the biennium beginning July 1, 2001, and ending June 30, 2003."

HOUSE AMENDMENTS TO ENGROSSED SB 2021                      HOUSE APP                      04-06-01  
Page 4, line 24, replace "who serves in an ex officio" with "or the president's designee"

Page 4, line 25, remove "nonvoting capacity"

Page 4, line 27, remove "who serves in an"

Page 4, line 28, remove "ex officio nonvoting capacity"

HOUSE AMENDMENTS TO ENGROSSED SB 2021                      HOUSE APP                      04-06-01  
Page 5, line 9, remove "who"

Page 5, line 10, remove "serves in an ex officio nonvoting capacity"

HOUSE AMENDMENTS TO ENGROSSED SB 2021                      HOUSE APP                      04-06-01  
Page 6, after line 8, insert:

**"SECTION 13. AMENDMENT.** Section 4-05.1-17 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-17. Compensation of board members - Expenses.** Each appointed member of the state board of agricultural research and education is entitled to receive ~~sixty-two~~ seventy-five dollars ~~and fifty cents~~ per day as compensation for the time actually spent devoted to the duties of office and is entitled to receive necessary expenses in the same manner and amounts as state officials for attending meetings and performing other functions of office.

**SECTION 14. AMENDMENT.** Section 4-05.1-19 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-19. State board of agricultural research and education - Duties.** Within the policies of the state board of higher education, the state board of agricultural research and education is responsible for ~~the budgeting, supervision, and policymaking responsibilities~~ associated with the ~~supervision of the~~ agricultural experiment station and the North Dakota state university extension service. The board of agricultural research and education board shall:

1. Determine the causes of any adverse economic impacts on crops and livestock produced in this state;
2. Develop ongoing strategies for the provision of research solutions and resources to negate adverse economic impacts on crops and livestock produced in this state;

- 3. ~~Make available financial resources, including grants and salaries, and make available equipment and facilities to implement~~ Develop ongoing strategies for the dissemination of research information through the extension service;
- 4. Implement the strategies developed under ~~subsection~~ subsections 2 and 3, subject to approval by the state board of higher education;
- 4. ~~5.~~ 5. ~~Develop an annual budget for the operation of,~~ with the agricultural experiment station and the North Dakota state university extension service, an annual budget for the operations of these entities;
- 5. ~~6.~~ 6. ~~Develop,~~ with the agricultural experiment station and the North Dakota state university extension service, a biennial budget request and submit that request to the president of North Dakota state university and the state board of higher education on or before March first of each even-numbered year;
- 6. ~~7.~~ 7. Maximize the use of existing financial resources, equipment, and facilities to generate the greatest economic benefit from research and extension efforts and to promote efficiency;
- 7. ~~8.~~ 8. Annually evaluate the results of research and extension activities and expenditures and report the findings to the legislative council and the state board of higher education;
- 8. ~~9.~~ 9. Advise the ~~administration~~ president of North Dakota state university regarding the recruitment and, selection, and performance of the vice president of agricultural affairs, the extension service director, and the station director; and
- 9. ~~10.~~ 10. ~~Develop ongoing strategies for the dissemination of research information and the best practices for management of the extension service~~ Present a status report to the budget section of the legislative council."

Page 6, line 9, replace "Subsection 1 of section" with "Section"

Page 6, replace lines 11 through 26 with:

**"4-05.1-21. State board of agricultural research and education - Apportionment of research funds.**

- 1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund, not to exceed fifty thousand dollars, for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:
  - a. Seventy percent to research activities affecting North Dakota agricultural commodities that account for at least two percent of the gross sales of all agricultural commodities grown or produced in the state. The percentage of the dollars available for each agricultural commodity under this section may not exceed the percentage that the gross sales of the agricultural commodity bear to the North Dakota gross sales of all agricultural commodities grown or produced during the previous year, as determined by the agricultural statistics service;
  - b. Eighteen percent to research activities affecting North Dakota animal agriculture; and

- c. Twelve percent to research activities affecting new and emerging crops in North Dakota.
- 2. The state board of agricultural research and education shall solicit proposals for research from the public and private sectors and shall appoint committees to review the proposals and award the agricultural research grants on a competitive basis. Each committee must consist of a majority of agricultural producers selected in consultation with the agricultural commodity groups representing commodities that are the subjects of the proposed research and may include researchers and other individuals knowledgeable about the proposed area of research. Whenever possible, the committees shall require that a grant recipient commit matching funds.
- 3. The state board of agricultural research and education shall develop policies regarding the award of research grants, including requirements for matching funds, cooperation with other in-state and out-of-state researchers, and coordination with other in-state and out-of-state proposed or ongoing research projects.

**SECTION 16. TRANSFER AUTHORITY.** Upon approval from the state board of agricultural research and education, the director of the North Dakota agricultural experiment station may transfer appropriation authority within subdivisions 1, 4, and 5 of section 1 of this Act of up to \$90,000 of estimated income for beef quality assurance and up to \$60,000 of estimated income for applied research initiatives, for the biennium beginning July 1, 2001, and ending June 30, 2003."

Renumber accordingly

**STATEMENT OF PURPOSE OF AMENDMENT:**

**Senate Bill No. 2021 - Summary of House Action**

	EXECUTIVE BUDGET	SENATE VERSION	HOUSE CHANGES	HOUSE VERSION
<b>Transportation Institute</b>				
Total all funds	\$7,888,427	\$7,888,427	\$0	\$7,888,427
Less estimated income	7,383,348	7,383,348		7,383,348
General fund	\$505,079	\$505,079	\$0	\$505,079
<b>Branch Research Centers</b>				
Total all funds	\$13,772,845	\$14,868,145	\$271,500	\$14,837,845
Less estimated income	6,873,485	6,848,485	55,000	6,903,485
General fund	\$7,899,160	\$7,817,660	\$216,500	\$8,034,160
<b>NDSU Extension Service</b>				
Total all funds	\$33,678,046	\$33,628,046	\$0	\$33,628,046
Less estimated income	19,298,301	19,298,301		19,298,301
General fund	\$14,379,745	\$14,329,745	\$0	\$14,329,745
<b>Northern Crops Institute</b>				
Total all funds	\$1,457,123	\$1,457,123	\$0	\$1,457,123
Less estimated income	732,697	732,697		732,697
General fund	\$724,426	\$724,426	\$0	\$724,426
<b>Main Research Station</b>				
Total all funds	\$55,228,597	\$55,178,597	(\$360,000)	\$54,818,597
Less estimated income	29,812,612	29,812,612		29,812,612
General fund	\$25,415,985	\$25,365,985	(\$360,000)	\$25,005,985
<b>Agronomy Seed Farm</b>				
Total all funds	\$1,259,140	\$1,259,140	\$0	\$1,259,140
Less estimated income	1,259,140	1,259,140		1,259,140
General fund	\$0	\$0	\$0	\$0
<b>Bill Total</b>				
Total all funds	\$113,263,978	\$114,077,478	(\$86,500)	\$113,686,978
Less estimated income	61,359,563	62,334,563	55,000	62,389,563
General fund	\$51,924,395	\$51,742,895	(\$143,500)	\$51,599,395

**Senate Bill No. 2021 - Transportation Institute - House Action**

The House did not change the Senate version of the bill.

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**Senate Bill No. 2021 - Branch Research Centers - House Action**

	EXECUTIVE BUDGET	SENATE VERSION	HOUSE CHANGES	HOUSE VERSION
Dickinson Research Center	\$3,132,653	\$3,811,153	(\$28,500)	\$3,782,653
Central Grasslands Research Center	1,413,982	1,413,982		1,413,982
Hettinger Research Center	1,559,583	1,559,583		1,559,583
Langdon Research Center	1,916,894	1,916,894		1,916,894
North Central Research Center	1,511,068	1,511,068		1,511,068
Williston Research Center	1,413,788	1,493,788		1,493,788
Carrington Research Center	<u>2,959,679</u>	<u>2,959,679</u>	<u>300,000</u>	<u>3,259,679</u>
Total all funds	\$13,772,645	\$14,666,145	\$271,500	\$14,937,645
Less estimated income	<u>5,873,485</u>	<u>6,848,485</u>	<u>55,000</u>	<u>6,903,485</u>
General fund	\$7,899,160	\$7,817,660	\$218,500	\$8,034,160
FTE	76.36	76.36	0.00	76.36

**Dept. 628 - Branch Research Centers - Detail of House Changes**

	RESTORE FUNDING <sup>1</sup>	CHANGE FUNDING FOR LEARNING CENTER <sup>2</sup>	REDUCE FUNDING FOR BEEFLINE <sup>3</sup>	PROVIDE FUNDING FOR MODERN FEEDMILL AND FEEDLOT <sup>4</sup>	PROVIDE ADDITIONAL FUNDING FOR BEEFLINE AND FEED BARLEY RESEARCH <sup>5</sup>	TOTAL HOUSE CHANGES
Dickinson Research Center	\$68,500		(\$300,000)		\$205,000	(\$28,500)
Central Grasslands Research Center						
Hettinger Research Center						
Langdon Research Center						
North Central Research Center						
Williston Research Center						
Carrington Research Center				<u>\$300,000</u>		<u>300,000</u>
Total all funds	\$68,500	\$0	(\$300,000)	\$300,000	\$205,000	\$271,500
Less estimated income		<u>(150,000)</u>	<u>(300,000)</u>	<u>300,000</u>	<u>205,000</u>	<u>55,000</u>
General fund	\$68,500	\$150,000	\$0	\$0	\$0	\$218,500
FTE	0.00	0.00	0.00	0.00	0.00	0.00

1 Restores funding to the Dickinson Research Center which was removed by the Senate.

2 Changes funding of \$150,000 from special funds to the general fund for the Langdon Learning Center project. The total authorization for the project is \$510,000, \$300,000 of which is from the general fund and \$510,000 of special funds. The section requiring \$650,000 in cash or pledges before construction can begin is lowered to \$500,000.

3 Funding added in the Senate to the Dickinson Research Center for the beeline initiative is reduced by \$300,000, from \$745,000 to \$445,000. Funding is from Dickinson oil revenues.

4 Provides funding from Dickinson oil revenues for the development of a modern feedmill and feedlot to be established at the Carrington Research Center.

5 Provides funding from additional Dickinson oil revenues, if available, for the beeline initiative and feed barley research. Total funding included in this amendment from Dickinson oil revenues is \$950,000 which is provided for the beeline initiative, the Carrington feedmill and feedlot, and for feed barley research.

**Senate Bill No. 2021 - NDSU Extension Service - House Action**

The House did not change the Senate version of the bill.

**Senate Bill No. 2021 - Northern Crops Institute - House Action**

The House did not change the Senate version of the bill.

**Senate Bill No. 2021 - Main Research Station - House Action**

	EXECUTIVE BUDGET	SENATE VERSION	HOUSE CHANGES	HOUSE VERSION
Salaries and wages	\$40,952,648			
Operating expenses	10,027,903			
Equipment	1,532,746			
Capital improvements	418,300			
Agricultural research grants	2,000,000			
Animal replacement	300,000			
Main Research Station		<u>\$55,178,597</u>	<u>(\$360,000)</u>	<u>\$54,818,597</u>
Total all funds	\$55,228,597	\$55,178,597	(\$360,000)	\$54,818,597

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Less estimated income	26,812,812	26,812,812		26,812,812
General fund	\$28,415,985	\$28,365,985	(\$300,000)	\$28,005,985
FTE	351.28	351.28	(1.80)	349.48

**Dept. 640 - Main Research Station - Detail of House Changes**

	REDUCE OPERATING LINE ITEM	REMOVE VACANT POSITIONS <sup>1</sup>	TOTAL HOUSE CHANGES
Salaries and wages			
Operating expenses			
Equipment			
Capital improvements			
Agricultural research grants			
Animal replacement			
Main Research Station	(\$360,000)		(\$360,000)
Total all funds	(\$360,000)	\$0	(\$360,000)
Less estimated income			
General fund	(\$360,000)	\$0	(\$360,000)
FTE	0.00	(1.80)	(1.80)

<sup>1</sup> The following vacant FTE positions are removed, but the funding for the positions remains and may be reallocated for other purposes.

	FTE
Assistant professor	(.45)
Information processing position	(.85)
Information systems position	(.25)
Public information position	(.15)
Total FTEs reduced	(1.80)

**Senate Bill No. 2021 - Agronomy Seed Farm - House Action**

The House did not change the Senate version of the bill.

**Senate Bill No. 2021 - Other Changes - House Action**

The State Board of Higher Education is removed from the transfer authority approval process in Section 3.

Section 6 provides intent for the establishment of a modern feedmill and feedlot at the Carrington Research Extension Center.

Section 7 provides intent that \$288,000 be allocated from the Main Research Center for developing western North Dakota malt barleys.

Section 8 provides intent that at least \$445,000 be allocated for the beefline initiative.

Section 9 provides intent that at least \$228,000 be allocated for the development of new feed barley varieties.

This amendment amends Section 12 to reinstate the president of North Dakota State University, the administrator of the Agricultural Experiment Station, and the director of the North Dakota State University Extension Service as voting members of the State Board of Agricultural Research and Education.

Section 13 changes the per diem of the members of the State Board of Agricultural Research and Education from \$62.50 to \$75.00.

The duties of the State Board of Agricultural Research and Education are redefined in Section 14 to include a status report to the Budget Section.

The administrative expenses of the State Board of Agricultural Research and Education are limited to 10 percent of the proceeds of the agricultural research fund, not to exceed \$50,000.

Transfer authority among the Extension Service, Main Research Center, and research centers of up to \$150,000 is authorized in Section 16 for funding of beef quality assurance (\$90,000) and applied research initiatives (\$60,000).

**PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2021**

That the House recede from its amendments as printed on pages 1250-1256 of the Senate Journal and pages 1368-1373 of the House Journal and that Engrossed Senate Bill No. 2021 be amended as follows:

Page 1, line 4, replace the second "section" with "sections", after "4-05.1-16" insert ", 4-05.1-17, 4-05.1-19,", and remove "subsection 1 of section"

Page 1, line 5, remove "changing", remove "voting", and after "membership" insert "and duties"

Page 1, line 6, after "education" insert ", the compensation of board members," and replace "use of" with "the" and remove "annual"

Page 1, line 7, remove "proceeds"

Page 2, line 15, replace "55,178,597" with "54,818,597"

Page 2, line 17, replace "28,365,985" with "28,005,985"

Page 2, line 20, replace "3,811,153" with "3,782,653"

Page 2, line 26, replace "2,959,679" with "3,259,679"

Page 2, line 27, replace "14,666,145" with "14,937,645"

Page 2, line 28, replace "6,848,485" with "6,903,485"

Page 2, line 29, replace "7,817,660" with "8,034,160"

Page 3, line 3, replace "51,742,895" with "51,539,395"

Page 3, line 4, replace "62,334,583" with "62,389,583"

Page 3, line 5, replace "114,077,478" with "113,988,978"

Page 3, line 12, remove "the state board of higher"

Page 3, line 13, remove the first "education," and remove the second comma

Page 3, line 23, replace "\$650,000" with "\$500,000"

Page 3, after line 25, insert:

**"SECTION 6. LEGISLATIVE INTENT - DICKINSON OIL REVENUE INITIATIVES.** It is the intent of the legislative assembly that \$745,000 of special funds from Dickinson oil revenues be allocated for the beefline initiative, which includes \$300,000 for a modern feedmill and feedlot at the Carrington research extension center that will address genetic, management, marketing, coproduct and environmental research needs, and include outside consultation from the beef cattle industry to work

with the state board of agricultural research and education to develop a complete research program with goals and priorities. The state board of agricultural research and education and researchers shall cooperatively develop the intent of the beefline initiative before implementation of the program.

**SECTION 7. LEGISLATIVE INTENT - MALT BARLEYS.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate from the main research center \$288,000 of funding for the purpose of developing western North Dakota malt barleys for the biennium beginning July 1, 2001, and ending June 30, 2003.

**SECTION 8. LEGISLATIVE INTENT - NEW BARLEY VARIETIES.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate at least \$228,000 of funding for the purpose of conducting research to develop new feed barley varieties for the biennium beginning July 1, 2001, and ending June 30, 2003."

Page 4, line 24, replace "who serves in an ex officio" with "or the president's designee"

Page 4, line 25, remove "nonvoting capacity"

Page 4, line 27, remove "who serves in an"

Page 4, line 28, remove "ex officio nonvoting capacity"

Page 5, line 9, remove "who"

Page 5, line 10, remove "serves in an ex officio nonvoting capacity"

Page 6, after line 8, insert:

**"SECTION 12. AMENDMENT.** Section 4-05.1-17 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-17. Compensation of board members - Expenses.** Each appointed member of the state board of agricultural research and education is entitled to receive ~~sixty-two~~ seventy-five dollars ~~and fifty cents~~ per day as compensation for the time actually spent devoted to the duties of office and is entitled to receive necessary expenses in the same manner and amounts as state officials for attending meetings and performing other functions of office.

**SECTION 13. AMENDMENT.** Section 4-05.1-19 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-19. State board of agricultural research and education - Duties.** Within the policies of the state board of higher education, the state board of agricultural research and education is responsible for the budgeting, ~~supervision,~~ and policymaking ~~responsibilities~~ associated with the ~~supervision of the~~ agricultural experiment station and the North Dakota state university extension service. The board of agricultural research and education board shall:

1. Determine the causes of any adverse economic impacts on crops and livestock produced in this state;

2. Develop ongoing strategies for the provision of research solutions and resources to negate adverse economic impacts on crops and livestock produced in this state;
3. ~~Make available financial resources, including grants and salaries, and make available equipment and facilities to implement~~ Develop ongoing strategies for the dissemination of research information through the extension service;
4. ~~Implement~~ the strategies developed under subsection subsections 2 and 3, subject to approval by the state board of higher education;
4. 5. ~~Develop an annual budget for the operation of,~~ with the agricultural experiment station and the North Dakota state university extension service, an annual budget for the operations of these entities;
5. 6. ~~Develop a biennial budget request and submit that request to the president of North Dakota state university and the state board of higher education on or before March first of each even numbered year;~~
6. 7. Maximize the use of existing financial resources, equipment, and facilities to generate the greatest economic benefit from research and extension efforts and to promote efficiency;
7. 8. Annually evaluate the results of research and extension activities and expenditures and report the findings to the legislative council and the state board of higher education;
8. 9. Advise the administration president of North Dakota state university regarding the recruitment and, selection, and performance of the vice president of agricultural affairs, the extension service director, and the station director; and
9. 10. ~~Develop ongoing strategies for the dissemination of research information and the best practices for management of the extension service~~ Present a status report to the budget section of the legislative council."

Page 6, line 9, replace "Subsection 1 of section" with "Section"

Page 6, replace lines 11 through 26 with:

**"4-05.1-21. State board of agricultural research and education - Apportionment of research funds.**

1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund, not to exceed fifty thousand dollars, for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:
  - a. Seventy percent to research activities affecting North Dakota agricultural commodities that account for at least two percent of the gross sales of all agricultural commodities grown or produced in the state. The percentage of the dollars available for each agricultural commodity under this section may not exceed the percentage that the gross sales of the agricultural commodity bear to the North Dakota gross sales of all agricultural commodities grown or produced during the previous year, as determined by the agricultural statistics service;
  - b. Eighteen percent to research activities affecting North Dakota animal agriculture; and

- c. Twelve percent to research activities affecting new and emerging crops in North Dakota.
2. The state board of agricultural research and education shall solicit proposals for research from the public and private sectors and shall appoint committees to review the proposals and award the agricultural research grants on a competitive basis. Each committee must consist of a majority of agricultural producers selected in consultation with the agricultural commodity groups representing commodities that are the subjects of the proposed research and may include researchers and other individuals knowledgeable about the proposed area of research. Whenever possible, the committees shall require that a grant recipient commit matching funds.
  3. The state board of agricultural research and education shall develop policies regarding the award of research grants, including requirements for matching funds, cooperation with other in-state and out-of-state researchers, and coordination with other in-state and out-of-state proposed or ongoing research projects.

**SECTION 15. TRANSFER AUTHORITY.** Upon approval from the state board of agricultural research and education, the director of the North Dakota agricultural experiment station may transfer appropriation authority within subdivisions 1, 4, and 5 of section 1 of this Act of up to \$90,000 of estimated income for beef quality assurance and up to \$60,000 of estimated income for applied research initiatives, for the biennium beginning July 1, 2001, and ending June 30, 2003."

Renumber accordingly

**STATEMENT OF PURPOSE OF AMENDMENT:**

**Senate Bill No. 2021 - Summary of Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
<b>Transportation Institute</b>						
Total all funds	\$7,888,427	\$7,888,427	\$0	\$7,888,427	\$7,888,427	\$0
Less estimated income	7,383,348	7,383,348		7,383,348	7,383,348	
General fund	\$505,079	\$505,079	\$0	\$505,079	\$505,079	\$0
<b>Branch Research Centers</b>						
Total all funds	\$13,772,645	\$14,666,145	\$271,500	\$14,937,645	\$14,937,645	\$0
Less estimated income	5,873,485	6,648,485	55,000	6,903,485	6,903,485	
General fund	\$7,899,160	\$7,617,660	\$218,500	\$8,034,160	\$8,034,160	\$0
<b>NDSU Extension Service</b>						
Total all funds	\$33,628,046	\$33,628,046	\$0	\$33,628,046	\$33,628,046	\$0
Less estimated income	19,296,301	19,296,301		19,296,301	19,296,301	
General fund	\$14,329,745	\$14,329,745	\$0	\$14,329,745	\$14,329,745	\$0
<b>Northern Crops Institute</b>						
Total all funds	\$1,457,123	\$1,457,123	\$0	\$1,457,123	\$1,457,123	\$0
Less estimated income	732,697	732,697		732,697	732,697	
General fund	\$724,426	\$724,426	\$0	\$724,426	\$724,426	\$0
<b>Main Research Station</b>						
Total all funds	\$55,228,597	\$55,178,597	(\$360,000)	\$54,818,597	\$54,818,597	\$0
Less estimated income	26,812,612	26,812,612		26,812,612	26,812,612	
General fund	\$28,415,985	\$28,365,985	(\$360,000)	\$28,005,985	\$28,005,985	\$0
<b>Agronomy Seed Farm</b>						
Total all funds	\$1,259,140	\$1,259,140	\$0	\$1,259,140	\$1,259,140	\$0
Less estimated income	1,259,140	1,259,140		1,259,140	1,259,140	
General fund	\$0	\$0	\$0	\$0	\$0	\$0
<b>Bill Total</b>						
Total all funds	\$113,283,978	\$114,077,478	(\$86,500)	\$113,988,978	\$113,988,978	\$0
Less estimated income	61,359,563	62,334,563	55,000	62,389,563	62,389,563	
General fund	\$51,924,395	\$51,742,895	(\$143,500)	\$51,599,395	\$51,599,395	\$0

**Senate Bill No. 2021 - Transportation Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Transportation Institute.

**Senate Bill No. 2021 - Branch Research Centers - Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
Dickinson Research Center	\$3,132,653	\$3,811,153	(\$28,500)	\$3,782,653	\$3,782,653	
Central Grasslands Research Center	1,413,982	1,413,982		1,413,982	1,413,982	
Hettinger Research Center	1,559,583	1,559,583		1,559,583	1,559,583	
Langdon Research Center	1,781,894	1,916,894		1,916,894	1,916,894	
North Central Research Center	1,511,068	1,511,068		1,511,068	1,511,068	
Williston Research Center	1,413,786	1,493,786		1,493,786	1,493,786	
Carrington Research Center	2,959,679	2,959,679	300,000	3,259,679	3,259,679	
<b>Total all funds</b>	<b>\$13,772,645</b>	<b>\$14,666,145</b>	<b>\$271,500</b>	<b>\$14,937,645</b>	<b>\$14,937,645</b>	<b>\$0</b>
Less estimated income	5,873,485	6,848,485	55,000	6,903,485	6,903,485	
General fund	\$7,899,160	\$7,817,660	\$216,500	\$8,034,160	\$8,034,160	\$0
FTE	76.36	76.36	0.00	76.36	76.36	0.00

**Dept. 628 - Branch Research Centers - Detail of Conference Committee Changes**

	RESTORE FUNDING 1	CHANGE FUNDING FOR LEARNING CENTER 2	REDUCE FUNDING FOR BEEFLINE 3	PROVIDE FUNDING FOR MODERN FEEDMILL AND FEEDLOT 4	PROVIDE ADDITIONAL FUNDING FOR BEEFLINE AND FEED BARLEY RESEARCH 5	TOTAL CONFERENCE COMMITTEE CHANGES
Dickinson Research Center	\$66,500		(\$300,000)		\$205,000	(\$28,500)
Central Grasslands Research Center						
Hettinger Research Center						
Langdon Research Center						
North Central Research Center						
Williston Research Center						
Carrington Research Center				\$300,000		300,000
<b>Total all funds</b>	<b>\$66,500</b>	<b>\$0</b>	<b>(\$300,000)</b>	<b>\$300,000</b>	<b>\$205,000</b>	<b>\$271,500</b>
Less estimated income		(150,000)	(300,000)	300,000	205,000	55,000
General fund	\$66,500	\$150,000	\$0	\$0	\$0	\$216,500
FTE	0.00	0.00	0.00	0.00	0.00	0.00

1 Restores funding to the Dickinson Research Center which was removed by the Senate.

2 Changes funding of \$150,000 from special funds to the general fund for the Langdon Learning Center. The total authorization for the project is \$810,000, \$300,000 from the general fund and \$510,000 of special funds. The section requiring \$650,000 in cash or pledges before construction can begin is lowered to \$500,000.

3 Reduces funding authority to the Dickinson Research Center for the beeline initiative from \$745,000 to \$445,000.

4 Provides funding from Dickinson oil revenues for the development of a modern feedmill and feedlot to be established at the Carrington Research Center.

5 Provides funding from additional Dickinson oil revenues, if available, for beeline initiative and feed barley research. The Senate authorized \$745,000 for the beeline initiative. This amendment increases the total authorization to \$950,000, including Carrington feedmill and feedlot and beeline and feed barley research.

**Senate Bill No. 2021 - NDSU Extension Service - Conference Committee Action**

The Conference Committee did not change the House or Senate version for North Dakota State University Extension Service.

**Senate Bill No. 2021 - Northern Crops Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for Northern Crops Institute.

**Senate Bill No. 2021 - Main Research Station - Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
Salaries and wages	\$40,852,648					
Operating expenses	10,027,803					
Equipment	1,532,746					
Capital improvements	415,300					
Agricultural research grants	2,000,000					
Animal replacement	300,000					
Main Research Station		\$55,178,597	(\$360,000)	\$54,818,597	\$54,818,597	

Total all funds	\$55,228,597	\$55,178,597	(\$360,000)	\$54,818,597	\$54,818,597	\$0
Less estimated income	<u>26,812,612</u>	<u>26,812,612</u>		<u>26,812,612</u>	<u>26,812,612</u>	
General fund	\$28,415,985	\$28,365,985	(\$360,000)	\$28,005,985	\$28,005,985	\$0
FTE	351.26	351.26	(1.80)	349.46	349.46	(0.00)

**Dept. 640 - Main Research Station - Detail of Conference Committee Changes**

	REDUCE OPERATING LINE ITEM	REMOVE VACANT POSITIONS <sup>1</sup>	TOTAL CONFERENCE COMMITTEE CHANGES
Salaries and wages			
Operating expenses			
Equipment			
Capital improvements			
Agricultural research grants			
Animal replacement			
Main Research Station	<u>(\$360,000)</u>		<u>(\$360,000)</u>
Total all funds	<u>(\$360,000)</u>	\$0	<u>(\$360,000)</u>
Less estimated income			
General fund	<u>(\$360,000)</u>	\$0	<u>(\$360,000)</u>
FTE	0.00	(1.80)	(1.80)

<sup>1</sup> Intent is to remove the vacant FTE positions, but the funding for the positions is to remain for reallocation purposes.

Assistant professor	(.45)
Information processing position	(.95)
Information systems position	(.25)
Public information position	<u>(.15)</u>
Total FTEs reduced	(1.8)

**Senate Bill No. 2021 - Agronomy Seed Farm - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Agronomy Seed Farm.

**Senate Bill No. 2021 - Other Changes - Conference Committee Action**

The State Board of Higher Education is removed from the transfer authority approval process in Section 3.

Section 6 as adjusted in Conference Committee provides intent for the beeline initiative, including the establishment of a modern feedmill and feedlot at the Carrington Research Center.

Section 7 provides intent that \$288,000 be allocated from the Main Research Center for developing western North Dakota malt barleys.

Section 8 provides intent that at least \$228,000 be allocated for the development of new feed barley varieties.

This amendment amends Section 11 to reinstate the president of North Dakota State University, the administrator of the Agricultural Experiment Station, and the director of the North Dakota State University Extension Service as voting members of the State Board of Agricultural Research and Education.

Section 12 changes the per diem of the members of the State Board of Agricultural Research and Education from \$62.50 to \$75.00.

The duties of the State Board of Agricultural Research and Education are redefined in Section 13 to include a status report to the Budget Section.

The administrative expenses of the State Board of Agricultural Research and Education are limited to 10 percent of the proceeds of the agricultural research fund, not to exceed \$50,000.

Transfer authority among the Extension Service, Main Research Center, and research centers of up to \$150,000 is authorized in Section 15 for funding of beef quality assurance (\$90,000) and applied research initiatives (\$60,000).

Date: 4-18-01

Roll Call Vote #: 1

**2001 CONFERENCE COMMITTEE ROLL CALL VOTES  
BILL/RESOLUTION NO. SB 2021**

**CONFERENCE COMMITTEE-Extension service, northern crops institute, upper great plains transportation institute, and the agricultural experiment station**

Legislative Council Amendment Number 10215

recommends that the (SENATE/HOUSE) (ACCEDE to) (RECEDE from)  
the (Senate/House) amendments on (SJ/HJ) page(s) \_\_\_\_\_

having been unable to agree, recommends that the committee be discharged and a new committee be appointed.

*Mike Caruso*  
*leave in*

Action Taken Re-write 143,500 to Open Mtn - 64,500 Open  
& 150 Langer North

Motion Made By  
Senator/Representative Bowman

Seconded By  
Senator/Representative Tomac

Senators	Yes	No	Representative	Yes	No
Senator Solberg			Representative Wald		
Senator Bowman			Representative Boehm		
Senator Tomac			Representative Gulleeson		

Yes \_\_\_\_\_ No \_\_\_\_\_ Absent \_\_\_\_\_

Date: 4-18-01

Roll Call Vote #: 2

**2001 CONFERENCE COMMITTEE ROLL CALL VOTES  
BILL/RESOLUTION NO. SB 2021**

**CONFERENCE COMMITTEE-Extension service, northern crops institute, upper great plains transportation institute, and the agricultural experiment station**

Legislative Council Amendment Number \_\_\_\_\_

- recommends that the (SENATE/HOUSE) (ACCEDE to) (RECEDE from) the (Senate/House) amendments on (SJ/HJ) page(s) \_\_\_\_\_ - \_\_\_\_\_
- having been unable to agree, recommends that the committee be discharged and a new committee be appointed.

*voice vote carried*

Action Taken None Amend

Motion Made By Senator/Representative Bowman Seconded By Senator/Representative Wald?

Senators	Yes	No	Representative	Yes	No
Senator Solberg			Representative Wald		
Senator Bowman			Representative Boehm		
Senator Tomac			Representative Gulleson		

Total Yes \_\_\_\_\_ No \_\_\_\_\_ Absent \_\_\_\_\_

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2021

That the House recede from its amendments as printed on pages 1250-1256 of the Senate Journal and pages 1368-1373 of the House Journal and that Engrossed Senate Bill No. 2021 be amended as follows:

Page 1, line 4, replace the second "section" with "sections", after "4-05.1-16" insert ", 4-05.1-17, 4-05.1-19," and remove "subsection 1 of section"

Page 1, line 5, remove "changing", remove "voting", and after "membership" insert "and duties"

Page 1, line 6, after "education" insert ", the compensation of board members," and replace "use of" with "the" and remove "annual"

Page 1, line 7, remove "proceeds"

Page 2, line 15, replace "55,178,597" with "54,818,597"

Page 2, line 17, replace "28,365,985" with "28,005,985"

Page 2, line 20, replace "3,811,153" with "3,782,653"

Page 2, line 26, replace "2,959,679" with "3,259,679"

Page 2, line 27, replace "14,666,145" with "14,937,645"

Page 2, line 28, replace "6,848,485" with "6,903,485"

Page 2, line 29, replace "7,817,660" with "8,034,160"

Page 3, line 3, replace "51,742,895" with "51,599,395"

Page 3, line 4, replace "62,334,583" with "62,389,583"

Page 3, line 5, replace "114,077,478" with "113,988,978"

Page 3, line 12, remove "the state board of higher"

Page 3, line 13, remove the first "education," and remove the second comma

Page 3, line 23, replace "\$650,000" with "\$500,000"

Page 3, after line 25, insert:

**"SECTION 6. LEGISLATIVE INTENT - DICKINSON OIL REVENUE INITIATIVES.** It is the intent of the fifty-seventh legislative assembly that \$745,000 of special funds from Dickinson oil revenues be allocated for the beefline initiative, which includes \$300,000 for a modern feedmill and feedlot at the Carrington research extension center that will address genetic, management, marketing, coproduct and environmental research needs, and include outside consultation from the beef cattle

industry to work with the state board of agricultural research and education to develop a complete research program with goals and priorities. The state board of agricultural research and education and researchers shall cooperatively develop the intent of the beefline initiative before implementation of the program.

**SECTION 7. LEGISLATIVE INTENT - MALT BARLEYS.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate from the main research center \$288,000 of funding for the purpose of developing western North Dakota malt barleys for the biennium beginning July 1, 2001, and ending June 30, 2003.

**SECTION 8. LEGISLATIVE INTENT - NEW BARLEY VARIETIES.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate at least \$228,000 of funding for the purpose of conducting research to develop new feed barley varieties for the biennium beginning July 1, 2001, and ending June 30, 2003.

**SECTION 9. LEGISLATIVE INTENT - LAND PURCHASE.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station may allocate the sum of \$60,000, or so much of the sum as may be necessary, from 1999-2001 biennium unexpended funds of the main research center for the purchase of land in Ward County, North Dakota."

Page 4, line 24, replace "who serves in an ex officio" with "or the president's designee"

Page 4, line 25, remove "nonvoting capacity"

Page 4, line 27, remove "who serves in an"

Page 4, line 28, remove "ex officio nonvoting capacity"

Page 5, line 9, remove "who"

Page 5, line 10, remove "serves in an ex officio nonvoting capacity"

Page 6, after line 8, insert:

**"SECTION 13. AMENDMENT.** Section 4-05.1-17 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-17. Compensation of board members - Expenses.** Each appointed member of the state board of agricultural research and education is entitled to receive ~~sixty-two~~ seventy-five dollars and ~~fifty cents~~ per day as compensation for the time actually spent devoted to the duties of office and is entitled to receive necessary expenses in the same manner and amounts as state officials for attending meetings and performing other functions of office.

**SECTION 14. AMENDMENT.** Section 4-05.1-19 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-19. State board of agricultural research and education - Duties.** Within the policies of the state board of higher education, the state board of agricultural research and education is responsible for the budgeting, ~~supervision,~~ and policymaking responsibilities associated with the ~~supervision of the~~ agricultural experiment station

and the North Dakota state university extension service. The board of agricultural research and education board shall:

1. Determine the causes of any adverse economic impacts on crops and livestock produced in this state;
2. Develop ongoing strategies for the provision of research solutions and resources to negate adverse economic impacts on crops and livestock produced in this state;
3. ~~Make available financial resources, including grants and salaries, and make available equipment and facilities to implement~~ Develop ongoing strategies for the dissemination of research information through the extension service;
4. ~~Implement the strategies developed under subsections 2 and 3,~~ subject to approval by the state board of higher education;
4. ~~5.~~ Develop an annual budget for the operation of, with the agricultural experiment station and the North Dakota state university extension service, an annual budget for the operations of these entities;
5. ~~6.~~ Develop a biennial budget request and submit that request to the president of North Dakota state university and the state board of higher education on or before March first of each even-numbered year;
6. ~~7.~~ Maximize the use of existing financial resources, equipment, and facilities to generate the greatest economic benefit from research and extension efforts and to promote efficiency;
7. ~~8.~~ Annually evaluate the results of research and extension activities and expenditures and report the findings to the legislative council and the state board of higher education;
8. ~~9.~~ Advise the ~~administration~~ president of North Dakota state university regarding the recruitment ~~and, selection, and performance~~ of the vice president of agricultural affairs, the extension service director, and the station director; and
9. ~~10.~~ Develop ongoing strategies for the dissemination of research information and the best practices for management of the extension service Present a status report to the budget section of the legislative council.

Page 6, line 9, replace "Subsection 1 of section" with "Section"

Page 6, replace lines 11 through 26 with:

**"4-05.1-21. State board of agricultural research and education - Apportionment of research funds.**

1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund, not to exceed fifty thousand dollars, for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:
  - a. Seventy percent to research activities affecting North Dakota agricultural commodities that account for at least two percent of the gross sales of all agricultural commodities grown or produced in the state. The percentage of the dollars available for each agricultural commodity under this section may not exceed the percentage that the

gross sales of the agricultural commodity bear to the North Dakota gross sales of all agricultural commodities grown or produced during the previous year, as determined by the agricultural statistics service;

- b. Eighteen percent to research activities affecting North Dakota animal agriculture; and
  - c. Twelve percent to research activities affecting new and emerging crops in North Dakota.
2. The state board of agricultural research and education shall solicit proposals for research from the public and private sectors and shall appoint committees to review the proposals and award the agricultural research grants on a competitive basis. Each committee must consist of a majority of agricultural producers selected in consultation with the agricultural commodity groups representing commodities that are the subjects of the proposed research and may include researchers and other individuals knowledgeable about the proposed area of research. Whenever possible, the committees shall require that a grant recipient commit matching funds.
  3. The state board of agricultural research and education shall develop policies regarding the award of research grants, including requirements for matching funds, cooperation with other in-state and out-of-state researchers, and coordination with other in-state and out-of-state proposed or ongoing research projects.

**SECTION 16. TRANSFER AUTHORITY.** Upon approval from the state board of agricultural research and education, the director of the North Dakota agricultural experiment station may transfer appropriation authority within subdivisions 1, 4, and 5 of section 1 of this Act of up to \$90,000 of estimated income for beef quality assurance and up to \$60,000 of estimated income for applied research initiatives, for the biennium beginning July 1, 2001, and ending June 30, 2003."

Renumber accordingly

**STATEMENT OF PURPOSE OF AMENDMENT:**

**Senate Bill No. 2021 - Summary of Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
<b>Transportation Institute</b>						
Total all funds	\$7,888,427	\$7,888,427	\$0	\$7,888,427	\$7,888,427	\$0
Less estimated income	7,383,348	7,383,348		7,383,348	7,383,348	
General fund	\$505,079	\$505,079	\$0	\$505,079	\$505,079	\$0
<b>Branch Research Centers</b>						
Total all funds	\$13,772,845	\$14,666,145	\$271,500	\$14,837,645	\$14,837,645	\$0
Less estimated income	6,873,485	6,848,485	55,000	6,903,485	6,903,485	
General fund	\$7,899,360	\$7,817,660	\$216,500	\$8,034,160	\$8,034,160	\$0
<b>NDSU Extension Service</b>						
Total all funds	\$33,628,046	\$33,628,046	\$0	\$33,628,046	\$33,628,046	\$0
Less estimated income	19,298,301	19,298,301		19,298,301	19,298,301	
General fund	\$14,329,745	\$14,329,745	\$0	\$14,329,745	\$14,329,745	\$0
<b>Northern Crops Institute</b>						
Total all funds	\$1,457,123	\$1,457,123	\$0	\$1,457,123	\$1,457,123	\$0
Less estimated income	732,697	732,697		732,697	732,697	
General fund	\$724,426	\$724,426	\$0	\$724,426	\$724,426	\$0
<b>Main Research Station</b>						
Total all funds	\$55,226,597	\$55,178,597	(\$360,000)	\$54,818,597	\$54,818,597	\$0
Less estimated income	26,812,612	26,812,612		26,812,612	26,812,612	
General fund	\$28,413,985	\$28,365,985	(\$360,000)	\$28,005,985	\$28,005,985	\$0
<b>Agronomy Seed Farm</b>						
Total all funds	\$1,259,140	\$1,259,140	\$0	\$1,259,140	\$1,259,140	\$0
Less estimated income	1,259,140	1,259,140		1,259,140	1,259,140	

General fund	\$0	\$0	\$0	\$0	\$0	\$0
<b>Bill Total</b>						
Total all funds	\$113,263,978	\$114,077,478	(\$80,500)	\$113,988,978	\$113,988,978	\$0
Less estimated income	\$1,359,583	\$2,334,583	\$5,000	\$2,389,583	\$2,389,583	\$0
General fund	\$51,824,395	\$51,742,895	(\$143,500)	\$51,599,395	\$51,599,395	\$0

**Senate Bill No. 2021 - Transportation Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Transportation Institute.

**Senate Bill No. 2021 - Branch Research Centers - Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
Dickinson Research Center	\$3,132,653	\$3,811,153	(\$28,500)	\$3,782,653	\$3,782,653	
Central Grasslands Research Center	1,413,982	1,413,982		1,413,982	1,413,982	
Hettinger Research Center	1,559,583	1,559,583		1,559,583	1,559,583	
Langdon Research Center	1,781,894	1,916,894		1,916,894	1,916,894	
North Central Research Center	1,511,068	1,511,068		1,511,068	1,511,068	
Williston Research Center	1,413,788	1,493,788		1,493,788	1,493,788	
Carrington Research Center	2,959,879	2,959,879	300,000	3,259,879	3,259,879	
<b>Total all funds</b>	<b>\$13,772,645</b>	<b>\$14,868,145</b>	<b>\$271,500</b>	<b>\$14,937,645</b>	<b>\$14,937,645</b>	<b>\$0</b>
Less estimated income	5,873,485	6,848,485	55,000	6,903,485	6,903,485	
General fund	\$7,899,160	\$7,817,660	\$216,500	\$8,034,160	\$8,034,160	\$0
FTE	76.36	76.36	0.00	76.36	76.36	0.00

**Dept. 628 - Branch Research Centers - Detail of Conference Committee Changes**

	RESTORE FUNDING 1	CHANGE FUNDING FOR LEARNING CENTER 2	REDUCE FUNDING FOR BEEFLINE 3	PROVIDE FUNDING FOR MODERN FEEDMILL AND FEEDLOT 4	PROVIDE ADDITIONAL FUNDING FOR BEEFLINE AND FEED BARLEY RESEARCH 5	TOTAL CONFERENCE COMMITTEE CHANGES
Dickinson Research Center	\$66,500		(\$300,000)		\$206,000	(\$28,500)
Central Grasslands Research Center						
Hettinger Research Center						
Langdon Research Center						
North Central Research Center						
Williston Research Center						
Carrington Research Center				\$300,000		300,000
<b>Total all funds</b>	<b>\$66,500</b>	<b>\$0</b>	<b>(\$300,000)</b>	<b>\$300,000</b>	<b>\$206,000</b>	<b>\$271,500</b>
Less estimated income		(150,000)	(300,000)	300,000	206,000	55,000
General fund	\$66,500	\$150,000	\$0	\$0	\$0	\$216,500
FTE	0.00	0.00	0.00	0.00	0.00	0.00

1 Restores funding to the Dickinson Research Center which was removed by the Senate.

2 Changes funding of \$150,000 from special funds to the general fund for the Langdon Learning Center. The total authorization for the project is \$810,000, \$300,000 from the general fund and \$510,000 of special funds. The section requiring \$650,000 in cash or pledges before construction can begin is lowered to \$500,000.

3 Reduces funding authority to the Dickinson Research Center for the beeline initiative from \$745,000 to \$445,000.

4 Provides funding from Dickinson oil revenues for the development of a modern feedmill and feedlot to be established at the Carrington Research Center.

5 Provides funding from additional Dickinson oil revenues, if available, for beeline initiative and feed barley research. The Senate authorized \$745,000 for the beeline initiative. This amendment increases the total authorization to \$950,000, including Carrington feedmill and feedlot and beeline and feed barley research.

**Senate Bill No. 2021 - NDSU Extension Service - Conference Committee Action**

The Conference Committee did not change the House or Senate version for North Dakota State University Extension Service.

**Senate Bill No. 2021 - Northern Crops Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for Northern Crops Institute.

**Senate Bill No. 2021 - Main Research Station - Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
Salaries and wages	\$40,952,848					
Operating expenses	10,027,903					
Equipment	1,532,746					
Capital improvements	418,300					
Agricultural research grants	2,000,000					
Animal replacement	300,000					
Main Research Station		25,178,597	(\$360,000)	\$54,818,597	\$54,818,597	
Total all funds	\$55,228,597	\$55,178,597	(\$360,000)	\$54,818,597	\$54,818,597	\$0
Less estimated income	29,812,612	29,812,612		29,812,612	29,812,612	
General fund	\$28,415,985	\$28,365,985	(\$360,000)	\$28,005,985	\$28,005,985	\$0
FTE	351.28	351.28	(1.80)	349.48	349.48	(0.00)

**Dept. 640 - Main Research Station - Detail of Conference Committee Changes**

	REDUCE OPERATING LINE ITEM	REMOVE VACANT POSITIONS 1	TOTAL CONFERENCE COMMITTEE CHANGES
Salaries and wages			
Operating expenses			
Equipment			
Capital improvements			
Agricultural research grants			
Animal replacement			
Main Research Station	(\$360,000)		(\$360,000)
Total all funds	(\$360,000)	\$0	(\$360,000)
Less estimated income			
General fund	(\$360,000)	\$0	(\$360,000)
FTE	0.00	(1.80)	(1.80)

1 Intent is to remove the vacant FTE positions, but the funding for the positions is to remain for reallocation purposes

Assistant professor	(.45)
Information processing position	(.95)
Information systems position	(.25)
Public information position	(.15)
Total FTEs reduced	(1.8)

**Senate Bill No. 2021 - Agronomy Seed Farm - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Agronomy Seed Farm.

**Senate Bill No. 2021 - Other Changes - Conference Committee Action**

The State Board of Higher Education is removed from the transfer authority approval process in Section 3.

Section 6 as adjusted in Conference Committee provides intent for the beefline initiative, including the establishment of a modern feedmill and feedlot at the Carrington Research Center.

Section 7 provides intent that \$288,000 be allocated from the Main Research Center for developing western North Dakota malt barleys.

Section 8 provides intent that at least \$228,000 be allocated for the development of new feed barley varieties.

Conference Committee added Section 9 to provide intent that unexpended carryover funds from the Main Research Center may be used to purchase land in Ward County, North Dakota, for the North Central Research Center.

This amendment amends Section 12 to reinstate the president of North Dakota State University, the administrator of the Agricultural Experiment Station, and the director of the North Dakota State University Extension Service as voting members of the State Board of Agricultural Research and Education.

Section 13 changes the per diem of the members of the State Board of Agricultural Research and Education from \$62.50 to \$75.00.

The duties of the State Board of Agricultural Research and Education are redefined in Section 14 to include a status report to the Budget Section.

The administrative expenses of the State Board of Agricultural Research and Education are limited to 10 percent of the proceeds of the agricultural research fund, not to exceed \$50,000.

Transfer authority among the Extension Service, Main Research Center, and research centers of up to \$150,000 is authorized in Section 16 for funding of beef quality assurance (\$90,000) and applied research initiatives (\$60,000).

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4-20-1  
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PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2021

That the House recede from its amendments as printed on pages 1250-1258 of the Senate Journal and pages 1368-1373 of the House Journal and that Engrossed Senate Bill No. 2021 be amended as follows:

Page 1, line 4, replace the second "section" with "sections", after "4-05.1-16" insert ", 4-05.1-17, 4-05.1-19," and remove "subsection 1 of section"

Page 1, line 5, remove "changing", remove "voting", and after "membership" insert "and duties"

Page 1, line 6, after "education" insert ", the compensation of board members," and replace "use of" with "the" and remove "annual"

Page 1, line 7, remove "proceeds"

Page 2, line 15, replace "55,178,597" with "54,962,097"

Page 2, line 17, replace "28,365,985" with "28,149,485"

Page 2, line 20, replace "3,811,153" with "3,577,653"

Page 2, line 25, replace "1,493,786" with "1,413,786"

Page 2, line 26, replace "2,959,679" with "3,259,679"

Page 2, line 27, replace "14,666,145" with "14,652,645"

Page 2, line 28, replace "6,848,485" with "6,618,485"

Page 2, line 29, replace "7,817,660" with "8,034,160"

Page 3, line 4, replace "62,334,583" with "62,104,583"

Page 3, line 5, replace "114,077,478" with "113,847,478"

Page 3, line 12, remove "the state board of higher"

Page 3, line 13, remove the first "education," and remove the second comma

Page 3, line 23, replace "\$650,000" with "\$500,000"

Page 3, after line 25, insert:

**"SECTION 6. LEGISLATIVE INTENT - DICKINSON OIL REVENUE INITIATIVES.** It is the intent of the fifty-seventh legislative assembly that \$745,000 of special funds from Dickinson oil revenues be allocated for the beefline initiative, which includes \$300,000 for a modern feedmill and feedlot at the Carrington research extension center that will address genetic, management, marketing, coproduct and environmental research needs, barley feeding research, and include outside

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consultation from the beef cattle industry to work with the state board of agricultural research and education to develop a complete research program with goals and priorities. The state board of agricultural research and education and researchers shall cooperatively develop the intent of the beeline initiative before implementation of the program.

**SECTION 7. LEGISLATIVE INTENT - MALT BARLEYS.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate from the main research center \$288,000, or so much of the sum as may be necessary, for the purpose of developing, in conjunction with the research centers, western North Dakota malt barleys.

**SECTION 8. LEGISLATIVE INTENT - LIVESTOCK MARKETING CLUBS.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station may allocate resources for the establishment of two pilot livestock marketing clubs in western North Dakota.

**SECTION 9. LEGISLATIVE INTENT - LAND PURCHASE.** It is the intent of the fifty-seventh legislative assembly that the main research center may enter into a financial arrangement with the north central research center to assist with the purchase of land in Ward County, North Dakota."

Page 4, line 24, after the comma insert "or the president's designee."

Page 5, line 8, overstrike "and"

Page 5, line 10, after "capacity" insert "; and

- L. Two members of the legislative assembly appointed by the chairman of the legislative council. The chairman shall appoint one member from each political faction. The legislative council shall pay the compensation and expense reimbursement for the legislative members"

Page 6, after line 8, insert:

**"SECTION 13. AMENDMENT.** Section 4-05.1-17 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-17. Compensation of board members - Expenses.** Each appointed member of the state board of agricultural research and education is entitled to receive ~~sixty-two~~ seventy-five dollars and ~~fifty cents~~ per day as compensation for the time actually spent devoted to the duties of office and is entitled to receive necessary expenses in the same manner and amounts as state officials for attending meetings and performing other functions of office.

**SECTION 14. AMENDMENT.** Section 4-05.1-19 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-19. State board of agricultural research and education - Duties.** Within the policies of the state board of higher education, the state board of agricultural research and education is responsible for the budgeting, ~~supervision,~~ and policymaking responsibilities associated with the ~~supervision of the~~ agricultural experiment station

and the North Dakota state university extension service. The board of agricultural research and education board shall:

1. Determine the causes of any adverse economic impacts on crops and livestock produced in this state;
2. Develop ongoing strategies for the provision of research solutions and resources to negate adverse economic impacts on crops and livestock produced in this state;
3. ~~Make available financial resources, including grants and salaries, and make available equipment and facilities to implement~~ Develop ongoing strategies for the dissemination of research information through the extension service;
4. ~~Implement~~ the strategies developed under ~~subsection~~ subsections 2 and 3, subject to approval by the state board of higher education;
4. 5. ~~Develop an annual budget for the operation of,~~ with the agricultural experiment station and the North Dakota state university extension service, an annual budget for the operations of these entities;
5. 6. Develop a biennial budget request and submit that request to the president of North Dakota state university and the state board of higher education ~~on or before March first of each even-numbered year;~~
6. 7. Maximize the use of existing financial resources, equipment, and facilities to generate the greatest economic benefit from research and extension efforts and to promote efficiency;
7. 8. Annually evaluate the results of research and extension activities and expenditures and report the findings to the legislative council and the state board of higher education;
8. 9. Advise the ~~administration~~ president of North Dakota state university regarding the recruitment and selection, and performance of the vice president of agricultural affairs, the extension service director, and the station director; and
9. 10. ~~Develop ongoing strategies for the dissemination of research information and the best practices for management of the extension service~~ Present a status report to the budget section of the legislative council."

Page 6, line 9, replace "Subsection 1 of section" with "Section"

Page 6, replace lines 11 through 26 with:

**"4-05.1-21. State board of agricultural research and education - Apportionment of research funds.**

1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund, not to exceed fifty thousand dollars, for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:
  - a. Seventy percent to research activities affecting North Dakota agricultural commodities that account for at least two percent of the gross sales of all agricultural commodities grown or produced in the state. The percentage of the dollars available for each agricultural commodity under this section may not exceed the percentage that the

gross sales of the agricultural commodity bear to the North Dakota gross sales of all agricultural commodities grown or produced during the previous year, as determined by the agricultural statistics service;

- b. Eighteen percent to research activities affecting North Dakota animal agriculture; and
  - c. Twelve percent to research activities affecting new and emerging crops in North Dakota.
2. The state board of agricultural research and education shall solicit proposals for research from the public and private sectors and shall appoint committees to review the proposals and award the agricultural research grants on a competitive basis. Each committee must consist of a majority of agricultural producers selected in consultation with the agricultural commodity groups representing commodities that are the subjects of the proposed research and may include researchers and other individuals knowledgeable about the proposed area of research. Whenever possible, the committees shall require that a grant recipient commit matching funds.
  3. The state board of agricultural research and education shall develop policies regarding the award of research grants, including requirements for matching funds, cooperation with other in-state and out-of-state researchers, and coordination with other in-state and out-of-state proposed or ongoing research projects.

**SECTION 16. TRANSFER AUTHORITY.** Upon approval from the state board of agricultural research and education, the director of the North Dakota agricultural experiment station may transfer appropriation authority within subdivisions 1, 4, and 5 of section 1 of this Act of up to \$90,000 of estimated income for beef quality assurance and up to \$60,000 of estimated income for applied research initiatives, for the biennium beginning July 1, 2001, and ending June 30, 2003."

Renumber accordingly

**STATEMENT OF PURPOSE OF AMENDMENT:**

**Senate Bill No. 2021 - Summary of Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
<b>Transportation Institute</b>						
Total all funds	\$7,888,427	\$7,888,427	\$0	\$7,888,427	\$7,888,427	\$0
Less estimated income	7,383,348	7,383,348		7,383,348	7,383,348	
General fund	\$505,079	\$505,079	\$0	\$505,079	\$505,079	\$0
<b>Branch Research Centers</b>						
Total all funds	\$13,772,845	\$14,866,145	(\$13,500)	\$14,852,645	\$14,937,845	(\$285,000)
Less estimated income	8,873,485	8,848,485	(230,000)	8,618,485	8,903,485	(285,000)
General fund	\$7,899,160	\$7,817,660	\$216,500	\$8,034,160	\$8,034,160	\$0
<b>NDSU Extension Service</b>						
Total all funds	\$33,678,046	\$33,626,046	\$0	\$33,626,046	\$33,626,046	\$0
Less estimated income	19,298,301	19,298,301		19,298,301	19,298,301	
General fund	\$14,379,745	\$14,329,745	\$0	\$14,329,745	\$14,329,745	\$0
<b>Northern Crops Institute</b>						
Total all funds	\$1,457,123	\$1,457,123	\$0	\$1,457,123	\$1,457,123	\$0
Less estimated income	732,697	732,697		732,697	732,697	
General fund	\$724,426	\$724,426	\$0	\$724,426	\$724,426	\$0
<b>Main Research Station</b>						
Total all funds	\$55,228,597	\$55,178,597	(\$216,500)	\$54,962,097	\$54,818,597	\$143,500
Less estimated income	28,812,612	28,812,612		28,812,612	28,812,612	
General fund	\$26,415,985	\$26,365,985	(\$216,500)	\$26,149,485	\$26,005,985	\$143,500
<b>Agronomy Seed Farm</b>						
Total all funds	\$1,259,140	\$1,259,140	\$0	\$1,259,140	\$1,259,140	\$0
Less estimated income	1,259,140	1,259,140		1,259,140	1,259,140	

5 of 7

General fund	\$0	\$0	\$0	\$0	\$0	\$0
<b>BM Total</b>						
Total all funds	\$113,293,976	\$114,077,476	(\$230,000)	\$113,847,476	\$113,988,976	(\$141,500)
Less estimated income	61,359,583	62,334,583	(230,000)	62,104,583	62,389,583	(285,000)
General fund	\$51,924,393	\$51,742,893	\$0	\$51,742,893	\$51,599,393	\$143,500

**Senate Bill No. 2021 - Transportation Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Transportation Institute.

**Senate Bill No. 2021 - Branch Research Centers - Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
Dickinson Research Center	\$3,132,653	\$3,811,153	(\$233,500)	\$3,577,653	\$3,762,653	(\$205,000)
Central Grasslands Research Center	1,413,982	1,413,982		1,413,982	1,413,982	
Hettinger Research Center	1,559,583	1,559,583		1,559,583	1,559,583	
Langdon Research Center	1,781,894	1,916,894		1,916,894	1,916,894	
North Central Research Center	1,511,068	1,511,068		1,511,068	1,511,068	
Williston Research Center	1,413,788	1,493,788	(80,000)	1,493,788	1,493,788	(80,000)
Carrington Research Center	2,959,679	2,959,679	300,000	3,259,679	3,259,679	
<b>Total all funds</b>	<b>\$13,772,645</b>	<b>\$14,666,145</b>	<b>(\$13,500)</b>	<b>\$14,652,645</b>	<b>\$14,937,645</b>	<b>(\$285,000)</b>
Less estimated income	5,873,485	6,048,485	(230,000)	6,018,485	6,903,485	(285,000)
General fund	\$7,899,160	\$7,817,880	\$216,500	\$8,034,160	\$8,034,160	\$0
FTE	76.36	76.36	0.00	76.36	76.36	0.00

**Dept. 628 - Branch Research Centers - Detail of Conference Committee Changes**

	RESTORE FUNDING <sup>1</sup>	CHANGE FUNDING FOR LEARNING CENTER <sup>2</sup>	REDUCE FUNDING FOR BEEFLINE <sup>3</sup>	PROVIDE FUNDING FOR MODERN FEEDMILL AND FEEDLOT <sup>4</sup>	REMOVE FUNDING FOR WILLISTON LAND PURCHASE <sup>5</sup>	TOTAL CONFERENCE COMMITTEE CHANGES
Dickinson Research Center	\$66,500		(\$300,000)			(\$233,500)
Central Grasslands Research Center						
Hettinger Research Center						
Langdon Research Center						
North Central Research Center						
Williston Research Center					(\$80,000)	(80,000)
Carrington Research Center				300,000		300,000
<b>Total all funds</b>	<b>\$66,500</b>	<b>\$0</b>	<b>(\$300,000)</b>	<b>300,000</b>	<b>(\$80,000)</b>	<b>(\$13,500)</b>
Less estimated income		(150,000)	(300,000)	300,000	(80,000)	(230,000)
General fund	\$66,500	\$150,000	\$0	\$0	\$0	\$216,500
FTE	0.00	0.00	0.00	0.00	0.00	0.00

- Restores funding to the Dickinson Research Center which was removed by the Senate.
- Changes funding of \$150,000 from special funds to general fund moneys for the Langdon Learning Center. The total authorization for the project is \$810,000, \$300,000 from the general fund and \$510,000 of special funds. The section requiring \$650,000 in cash or pledges before construction can begin is lowered to \$500,000.
- Reduces funding authority to the Dickinson Research Center for the beeline initiative from \$745,000 to \$445,000.
- Provides funding from Dickinson oil revenues for the development of a modern feedmill and feedlot to be established at the Carrington Research Center.
- The Conference Committee removed the \$80,000 of special funds that was included in the engrossed Senate bill for purchase of land in the Nesson Valley Irrigation project. The appropriation for this land purchase is included in House Bill No. 1200.

**Senate Bill No. 2021 - NDSU Extension Service - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the NDSU Extension Service.

**Senate Bill No. 2021 - Northern Crops Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Northern Crops Institute.

**Senate Bill No. 2021 - Main Research Station - Conference Committee Action**

EXECUTIVE	SENATE	CONFERENCE COMMITTEE	CONFERENCE COMMITTEE	HOUSE	COMPARISON
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	BUDGET	VERSION	CHANGES	VERSION	VERSION	TO HOUSE
Salaries and wages	\$40,952,648					
Operating expenses	10,027,903					
Equipment	1,532,744					
Capital improvements	418,300					
Agricultural research grants	2,000,000					
Animal replacement	300,000					
Main Research Station		<u>\$55,178,597</u>	<u>(\$218,500)</u>	<u>\$54,982,097</u>	<u>\$54,818,597</u>	<u>\$143,500</u>
Total all funds	\$55,228,597	\$55,178,597	(\$218,500)	\$54,982,097	\$54,818,597	\$143,500
Less estimated income	<u>28,812,812</u>	<u>28,812,812</u>		<u>28,812,812</u>	<u>28,812,812</u>	
General fund	\$28,418,985	\$28,368,985	(\$218,500)	\$28,149,485	\$28,005,985	\$143,500
FTE	351.28	351.28	(1.80)	349.48	349.48	(0.00)

**Dept. 640 - Main Research Station - Detail of Conference Committee Changes**

	REDUCE OPERATING LINE ITEM 1	REMOVE VACANT POSITIONS 2	TOTAL CONFERENCE COMMITTEE CHANGES
Salaries and wages			
Operating expenses			
Equipment			
Capital improvements			
Agricultural research grants			
Animal replacement			
Main Research Station	<u>(\$218,500)</u>		<u>(\$218,500)</u>
Total all funds	<u>(\$218,500)</u>	\$0	<u>(\$218,500)</u>
Less estimated income			
General fund	<u>(\$218,500)</u>	\$0	<u>(\$218,500)</u>
FTE	0.00	(1.80)	(1.80)

1 The Conference Committee added back \$143,500 of the total \$360,000 operating line item reduction made by the House.

2 Intent is to remove the vacant FTE positions, but the funding for the positions is to remain for reallocation purposes.

Assistant professor	(.45)
Information processing position	(.95)
Information systems position	(.25)
Public information position	(.15)
Total FTEs reduced	(1.8)

**Senate Bill No. 2021 - Agronomy Seed Farm - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Agronomy Seed Farm.

**Senate Bill No. 2021 - Other Changes - Conference Committee Action**

The State Board of Higher Education is removed from the transfer authority approval process in Section 3.

Section 6 as adjusted in Conference Committee provides intent for the beefline initiative, including barley feeding research and the establishment of a modern feedmill and feedlot at the Carrington Research Center.

Section 7 provides intent that up to \$288,000 be allocated from the Main Research Center for developing western North Dakota malt barleys.

Section 8 provides intent for the establishment of livestock marketing clubs in western North Dakota.

The Conference Committee added Section 9 to provide intent that the Main Research Center enter into a financial agreement to assist the North Central Research Center with the purchase of land.

The Conference Committee added two members from the Legislative Assembly, one from each political faction as appointed by the chairman of the Legislative Council, to serve on the State Board of Agricultural Research and Education. The president of North Dakota State University, or designee, the administrator of the Agricultural Experiment Station, and the director of the NDSU Extension Service were returned to nonvoting member status, as per the Senate amendment.

7.17  
Section 13 changes the per diem of the members of the State Board of Agricultural Research and Education from \$62.50 to \$75.00.

The duties of the State Board of Agricultural Research and Education are redefined in Section 14 to include a status report to the Budget Section.

The administrative expenses of the State Board of Agricultural Research and Education are limited to 10 percent of the proceeds of the agricultural research fund, not to exceed \$50,000.

Transfer authority among the Extension Service, Main Research Center, and research centers of up to \$150,000 is authorized in Section 16 for funding of beef quality assurance (\$90,000) and applied research initiatives (\$60,000).

The Conference Committee did not include \$205,000 of authority from Dickinson oil revenues for beefline and feed barley research contained in the House version.

Date: 4-19-01

Roll Call Vote #: \_\_\_\_\_

**2001 CONFERENCE COMMITTEE ROLL CALL VOTES  
BILL/RESOLUTION NO. SB 2021**

**CONFERENCE COMMITTEE-Extension service, northern crops institute, upper great plains transportation institute, and the agricultural experiment station**

Legislative Council Amendment Number 18047.0217

recommends that the (SENATE/HOUSE) (ACCEDE to) (RECEDE) from)

the (Senate/House) amendments on (S/H) page(s) 1250 - 1254

having been unable to agree, recommends that the committee be discharged and a new committee be appointed.

Action Taken Do Pass Further Amended

Motion Made By Wald Seconded By Bowman  
Senator/Representative

Senators	Yes	No	Representative	Yes	No
Senator Solberg	✓		Representative Wald	✓	
Senator Bowman	✓		Representative Boehm	✓	
Senator Tomac	✓		Representative Gulleson	✓	

Total Yes 6 No 0 Absent \_\_\_\_\_

REPORT OF CONFERENCE COMMITTEE

SB 2021, as engrossed: Your conference committee (Sens. Solberg, Bowman, Tomac and Reps. Wald, Boehm, Gulleson) recommends that the HOUSE RECEDE from the House amendments on SJ pages 1250-1256, adopt amendments as follows, and place SB 2021 on the Seventh order:

That the House recede from its amendments as printed on pages 1250-1256 of the Senate Journal and pages 1368-1373 of the House Journal and that Engrossed Senate Bill No. 2021 be amended as follows:

Page 1, line 4, replace the second "section" with "sections", after "4-05.1-16" insert ", 4-05.1-17, 4-05.1-19," and remove "subsection 1 of section"

Page 1, line 5, remove "changing", remove "voting", and after "membership" insert "and duties"

Page 1, line 6, after "education" insert ", the compensation of board members," and replace "use of" with "the" and remove "annual"

Page 1, line 7, remove "proceeds"

Page 2, line 15, replace "55,178,597" with "54,962,097"

Page 2, line 17, replace "28,365,985" with "28,149,485"

Page 2, line 20, replace "3,811,153" with "3,577,653"

Page 2, line 25, replace "1,493,786" with "1,413,786"

Page 2, line 26, replace "2,959,679" with "3,259,679"

Page 2, line 27, replace "14,666,145" with "14,652,645"

Page 2, line 28, replace "6,848,485" with "6,618,485"

Page 2, line 29, replace "7,817,660" with "8,034,160"

Page 3, line 4, replace "62,334,583" with "62,104,583"

Page 3, line 5, replace "114,077,478" with "113,847,478"

Page 3, line 12, remove "the state board of higher"

Page 3, line 13, remove the first "education," and remove the second comma

Page 3, line 23, replace "\$650,000" with "\$500,000"

Page 3, after line 25, insert:

**"SECTION 6. LEGISLATIVE INTENT - DICKINSON OIL REVENUE INITIATIVES.** It is the intent of the fifty-seventh legislative assembly that \$745,000 of special funds from Dickinson oil revenues be allocated for the beefline initiative, which includes \$300,000 for a modern feedmill and feedlot at the Carrington research extension center that will address genetic, management, marketing, coproduct and environmental research needs, barley feeding research, and include outside consultation from the beef cattle industry to work with the state board of agricultural research and education to develop a complete research program with goals and priorities. The state board of agricultural research and education and researchers shall

*Handwritten note:*  
Held for review amendments  
4-20-01  
4:05 PM

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2021

That the House recede from its amendments as printed on pages 1250-1256 of the Senate Journal and pages 1368-1373 of the House Journal and that Engrossed Senate Bill No. 2021 be amended as follows:

Page 1, line 4, remove the first "and," replace the second "section" with "sections", after "4-05.1-16" insert ", 4-05.1-17, 4-05.1-19," and remove "subsection 1 of section"

Page 1, line 5, remove "changing", remove "voting", and after "membership" insert "and duties"

Page 1, line 6, after "education" insert ", the compensation of board members," replace "use of" with "the", and replace "annual" with "; to provide an effective date; and to provide an expiration date"

Page 1, line 7, remove "proceeds"

Page 2, line 15, replace "55,178,597" with "54,962,097"

Page 2, line 17, replace "28,365,985" with "28,149,485"

Page 2, line 20, replace "3,811,153" with "3,577,653"

Page 2, line 25, replace "1,493,786" with "1,413,786"

Page 2, line 26, replace "2,959,679" with "3,259,679"

Page 2, line 27, replace "14,666,145" with "14,652,645"

Page 2, line 28, replace "6,848,485" with "6,618,485"

Page 2, line 29, replace "7,817,660" with "8,034,160"

Page 3, line 4, replace "62,334,583" with "62,104,583"

Page 3, line 5, replace "114,077,478" with "113,847,478"

Page 3, line 12, remove "the state board of higher"

Page 3, line 13, remove the first "education," and remove the second comma

Page 3, line 23, replace "\$650,000" with "\$500,000"

Page 3, after line 25, insert:

**"SECTION 6. LEGISLATIVE INTENT - DICKINSON OIL REVENUE INITIATIVES.** It is the intent of the fifty-seventh legislative assembly that \$745,000 of special funds from Dickinson oil revenues be allocated for the beefline initiative, which includes \$300,000 for a modern feedmill and feedlot at the Carrington research extension center that will address genetic, management, marketing, coproduct and

*H-23-01 9.25 AM*  
*Hold for*  
*more change plus*  
*Ann Dobbins*

environmental research needs, barley feeding research, and include outside consultation from the beef cattle industry to work with the state board of agricultural research and education to develop a complete research program with goals and priorities. The state board of agricultural research and education and researchers shall cooperatively develop the intent of the beeline initiative before implementation of the program.

**SECTION 7. LEGISLATIVE INTENT - MALT BARLEYS.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate from the main research center \$288,000, or so much of the sum as may be necessary, for the purpose of developing, in conjunction with the research centers, western North Dakota malt barleys.

**SECTION 8. LEGISLATIVE INTENT - LIVESTOCK MARKETING CLUBS.** It is the intent of the fifty-seventh legislative assembly that the North Dakota state university extension service may allocate resources for the establishment of two pilot livestock marketing clubs in western North Dakota.

**SECTION 9. LEGISLATIVE INTENT - LAND PURCHASE.** It is the intent of the fifty-seventh legislative assembly that the main research center may enter a financial arrangement with the north central research center to assist with the purchase of land in Ward County, North Dakota."

Page 4, line 24, replace "who serves in an ex officio" with "or the president's designee"

Page 4, line 25, remove "nonvoting capacity"

Page 4, line 26, after "university" insert "who serves in an ex officio nonvoting capacity"

Page 5, line 8, overstrike "and"

Page 5, line 10, after "capacity" insert "; and

- I. Two members of the legislative assembly appointed by the chairman of the legislative council. The chairman shall appoint one member from each political faction. The legislative council shall pay the compensation and expense reimbursement for the legislative members"

Page 6, after line 8, insert:

**"SECTION 13. AMENDMENT.** Section 4-05.1-16 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-16. State board of agricultural research and education - Membership - Terms.**

1. The state board of agricultural research and education consists of:
  - a. The president of North Dakota state university, or the president's designee;
  - b. The vice president of agricultural affairs at North Dakota state university, who serves in an ex officio nonvoting capacity;

- c. The administrator of the agricultural experiment station, who serves in an ex officio nonvoting capacity;
  - d. The five persons appointed to the agricultural consultation board by the ag coalition and serving in that capacity on July 1, 1997;
  - e. The five persons appointed to the agricultural consultation board by the extension service's multicounty program units and serving in that capacity on July 1, 1997;
  - f. The two persons appointed to the agricultural consultation board by the president of North Dakota state university as representatives of the state's research extension centers and serving in that capacity on July 1, 1997;
  - g. The agriculture commissioner, who serves in an ex officio nonvoting capacity; and
  - h. The director of the North Dakota state university extension service, who serves in an ex officio nonvoting capacity.
- 2. a. The initial five members appointed by the ag coalition shall select their terms by lot so that one member serves for one year, one member serves for two years, one member serves for three years, one member serves for four years, and one member serves for five years.
  - b. The initial five members appointed by the extension service's multicounty program units shall select their terms by lot so that one member serves for one year, one member serves for two years, one member serves for three years, one member serves for four years, and one member serves for five years.
  - c. The two persons appointed as representatives of the state's research extension centers shall serve only through June 30, 1998.
- 3. At the completion of each initial term, the term of office for each member is five years, beginning on July first. No person may be appointed to a second five-year term.
- 4. a. At least ninety days before the conclusion of the initial term of each member appointed by the ag coalition, the ag coalition shall provide to the state board of higher education a list of one or more names from which the state board of higher education shall appoint a successor. Future appointments to these five positions must be made in the same manner. The state board of higher education shall ensure that four out of the five seats are held by agricultural producers.
  - b. At least ninety days before the conclusion of the initial term of each member appointed by the extension service's multicounty program units, the units through their advisory groups shall provide to the state board of higher education a list of one or more names from which the state board of higher education shall appoint a successor. Future appointments to these five positions must be made in the same manner. The state board of higher education shall ensure that four out of the five seats are held by agricultural producers.

**SECTION 14. AMENDMENT.** Section 4-05.1-17 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-17. Compensation of board members - Expenses.** Each appointed member of the state board of agricultural research and education is entitled to receive ~~sixty-two seventy-five dollars and fifty cents~~ per day as compensation for the time actually spent devoted to the duties of office and is entitled to receive necessary expenses in the same manner and amounts as state officials for attending meetings and performing other functions of office.

**SECTION 15. AMENDMENT.** Section 4-05.1-19 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-19. State board of agricultural research and education - Duties.** Within the policies of the state board of higher education, the state board of agricultural research and education is responsible for ~~the budgeting, supervision, and policymaking responsibilities~~ associated with the ~~supervision of the~~ agricultural experiment station and the North Dakota state university extension service. The board of agricultural research and education shall:

1. Determine the causes of any adverse economic impacts on crops and livestock produced in this state;
2. Develop ongoing strategies for the provision of research solutions and resources to negate adverse economic impacts on crops and livestock produced in this state;
3. ~~Make available financial resources, including grants and salaries, and make available equipment and facilities to implement~~ Develop ongoing strategies for the dissemination of research information through the extension service;
4. Implement the strategies developed under ~~subsection~~ subsections 2 and 3, subject to approval by the state board of higher education;
4. ~~5.~~ 5. Develop ~~an annual budget for the operation of,~~ with the agricultural experiment station and the North Dakota state university extension service, an annual budget for the operations of these entities;
5. ~~6.~~ 6. Develop a biennial budget request and submit that request to the president of North Dakota state university and the state board of higher education ~~on or before March first of each even-numbered year;~~
6. ~~7.~~ 7. Maximize the use of existing financial resources, equipment, and facilities to generate the greatest economic benefit from research and extension efforts and to promote efficiency;
7. ~~8.~~ 8. Annually evaluate the results of research and extension activities and expenditures and report the findings to the legislative council and the state board of higher education;
8. ~~9.~~ 9. Advise the ~~administration~~ president of North Dakota state university regarding the recruitment and, selection, and performance of the vice president of agricultural affairs, the extension service director, and the station director; and
9. ~~10.~~ 10. ~~Develop ongoing strategies for the dissemination of research information and the best practices for management of the extension service~~ Present a status report to the budget section of the legislative council."

Page 6, line 9, replace "Subsection 1 of section" with "Section"

Page 6, replace lines 11 through 26 with:

**\*4-05.1-21. State board of agricultural research and education -  
Apportionment of research funds.**

1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund, not to exceed fifty thousand dollars, for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:
  - a. Seventy percent to research activities affecting North Dakota agricultural commodities that account for at least two percent of the gross sales of all agricultural commodities grown or produced in the state. The percentage of the dollars available for each agricultural commodity under this section may not exceed the percentage that the gross sales of the agricultural commodity bear to the North Dakota gross sales of all agricultural commodities grown or produced during the previous year, as determined by the agricultural statistics service;
  - b. Eighteen percent to research activities affecting North Dakota animal agriculture; and
  - c. Twelve percent to research activities affecting new and emerging crops in North Dakota.
2. The state board of agricultural research and education shall solicit proposals for research from the public and private sectors and shall appoint committees to review the proposals and award the agricultural research grants on a competitive basis. Each committee must consist of a majority of agricultural producers selected in consultation with the agricultural commodity groups representing commodities that are the subjects of the proposed research and may include researchers and other individuals knowledgeable about the proposed area of research. Whenever possible, the committees shall require that a grant recipient commit matching funds.
3. The state board of agricultural research and education shall develop policies regarding the award of research grants, including requirements for matching funds, cooperation with other in-state and out-of-state researchers, and coordination with other in-state and out-of-state proposed or ongoing research projects.

**SECTION 17. TRANSFER AUTHORITY.** Upon approval from the state board of agricultural research and education, the director of the North Dakota agricultural experiment station may transfer appropriation authority within subdivisions 1, 4, and 5 of section 1 of this Act of up to \$90,000 of estimated income for beef quality assurance and up to \$60,000 of estimated income for applied research initiatives, for the biennium beginning July 1, 2001, and ending June 30, 2003.

**SECTION 18. EFFECTIVE DATE.** Section 13 of this Act becomes effective on July 1, 2003.

**SECTION 19. EXPIRATION DATE.** Section 12 of this Act is effective through June 30, 2003, and after that date is ineffective."

Renumber accordingly

**STATEMENT OF PURPOSE OF AMENDMENT:**

**Senate Bill No. 2021 - Summary of Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
<b>Transportation Institute</b>						
Total all funds	\$7,888,427	\$7,888,427	\$0	\$7,888,427	\$7,888,427	\$0
Less estimated income	7,383,348	7,383,348		7,383,348	7,383,348	
General fund	\$505,079	\$505,079	\$0	\$505,079	\$505,079	\$0
<b>Branch Research Centers</b>						
Total all funds	\$13,772,645	\$14,666,145	(\$13,500)	\$14,652,645	\$14,937,645	(\$285,000)
Less estimated income	5,873,485	6,848,485	(230,000)	6,618,485	6,903,485	(285,000)
General fund	\$7,899,160	\$7,817,660	\$216,500	\$8,034,160	\$8,034,160	\$0
<b>NDSU Extension Service</b>						
Total all funds	\$33,628,046	\$33,628,046	\$0	\$33,628,046	\$33,628,046	\$0
Less estimated income	19,298,301	19,298,301		19,298,301	19,298,301	
General fund	\$14,329,745	\$14,329,745	\$0	\$14,329,745	\$14,329,745	\$0
<b>Northern Crops Institute</b>						
Total all funds	\$1,457,123	\$1,457,123	\$0	\$1,457,123	\$1,457,123	\$0
Less estimated income	732,697	732,697		732,697	732,697	
General fund	\$724,426	\$724,426	\$0	\$724,426	\$724,426	\$0
<b>Main Research Station</b>						
Total all funds	\$55,228,597	\$55,178,597	(\$216,500)	\$54,962,097	\$54,818,597	\$143,500
Less estimated income	26,812,612	26,812,612		26,812,612	26,812,612	
General fund	\$28,415,985	\$28,365,985	(\$216,500)	\$28,149,485	\$28,005,985	\$143,500
<b>Agronomy Seed Farm</b>						
Total all funds	\$1,259,140	\$1,259,140	\$0	\$1,259,140	\$1,259,140	\$0
Less estimated income	1,259,140	1,259,140		1,259,140	1,259,140	
General fund	\$0	\$0	\$0	\$0	\$0	\$0
<b>Bill Total</b>						
Total all funds	\$113,283,978	\$114,077,478	(\$230,000)	\$113,847,478	\$113,988,978	(\$141,500)
Less estimated income	61,359,583	62,334,583	(230,000)	62,104,583	62,389,583	(285,000)
General fund	\$51,924,395	\$51,742,895	\$0	\$51,742,895	\$51,599,395	\$143,500

**Senate Bill No. 2021 - Transportation Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Transportation Institute.

**Senate Bill No. 2021 - Branch Research Centers - Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
Dickinson Research Center	\$3,132,653	\$3,811,153	(\$233,500)	\$3,577,653	\$3,782,653	(\$205,000)
Central Grasslands Research Center	1,413,982	1,413,982		1,413,982	1,413,982	
Hettinger Research Center	1,559,583	1,559,583		1,559,583	1,559,583	
Langdon Research Center	1,781,894	1,916,894		1,916,894	1,916,894	
North Central Research Center	1,511,068	1,511,068		1,511,068	1,511,068	
Williston Research Center	1,413,786	1,493,786	(80,000)	1,493,786	1,493,786	(80,000)
Carrington Research Center	2,959,679	2,959,679	300,000	3,259,679	3,259,679	
<b>Total all funds</b>	<b>\$13,772,645</b>	<b>\$14,666,145</b>	<b>(\$13,500)</b>	<b>\$14,652,645</b>	<b>\$14,937,645</b>	<b>(\$285,000)</b>
<b>Less estimated income:</b>	<b>5,873,485</b>	<b>6,848,485</b>	<b>(230,000)</b>	<b>6,618,485</b>	<b>6,903,485</b>	<b>(285,000)</b>
<b>General fund</b>	<b>\$7,899,160</b>	<b>\$7,817,660</b>	<b>\$216,500</b>	<b>\$8,034,160</b>	<b>\$8,034,160</b>	<b>\$0</b>
<b>FTE</b>	<b>76.36</b>	<b>76.36</b>	<b>0.00</b>	<b>76.36</b>	<b>76.36</b>	<b>0.00</b>

**Dept. 628 - Branch Research Centers - Detail of Conference Committee Changes**

	RESTORE FUNDING <sup>1</sup>	CHANGE FUNDING FOR LEARNING CENTER <sup>2</sup>	REDUCE FUNDING FOR BEEFLINE <sup>3</sup>	PROVIDE FUNDING FOR MODERN FEEDMILL AND FEEDLOT <sup>4</sup>	REMOVE FUNDING FOR WILLISTON LAND PURCHASE <sup>5</sup>	TOTAL CONFERENCE COMMITTEE CHANGES
Dickinson Research Center	\$66,500					(\$233,500)
Central Grasslands Research Center						
Hettinger Research Center						
Langdon Research Center						
North Central Research Center						
Williston Research Center					(\$80,000)	(80,000)
Carrington Research Center				300,000		300,000
<b>Total all funds</b>	<b>\$66,500</b>	<b>\$0</b>	<b>(\$300,000)</b>	<b>\$300,000</b>	<b>(\$80,000)</b>	<b>(\$13,500)</b>
<b>Less estimated income</b>		<b>(150,000)</b>	<b>(300,000)</b>	<b>300,000</b>	<b>(80,000)</b>	<b>(230,000)</b>
<b>General fund</b>	<b>\$66,500</b>	<b>\$150,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$216,500</b>

FTE 0.00 0.00 0.00 0.00 0.00 0.00

- 1 Eliminates funding to the Dickinson Research Center which was removed by the Senate.
- 2 Changes funding of \$150,000 from special funds to general fund moneys for the Langdon Learning Center. The total authorization for the project is \$410,000, \$300,000 from the general fund and \$50,000 of special funds. The section requiring \$650,000 in cash or pledges before construction can begin is lowered to \$500,000.
- 3 Eliminates funding authority to the Dickinson Research Center for the beefline initiative from \$745,000 to \$445,000.
- 4 Eliminates funding from Dickinson oil revenues for the development of a modern feedmill and feedlot to be established at the Carrington Research Center.
- 5 The Conference Committee removed the \$60,000 of special funds that was included in the engrossed Senate bill for purchase of land in the Nesson Valley irrigation project. The appropriation for this land purchase is included in House Bill No. 1200.

**Senate Bill No. 2021 - NDSU Extension Service - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the NDSU Extension Service.

**Senate Bill No. 2021 - Northern Crops Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Northern Crops Institute.

**Senate Bill No. 2021 - Main Research Station - Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
Salaries and wages	\$40,952,648					
Operating expenses	10,027,903					
Equipment	1,532,748					
Capital improvements	415,300					
Agricultural research grants	2,000,000					
Animal replacement	300,000					
Main Research Station		<u>\$55,178,597</u>	<u>(\$216,500)</u>	<u>\$54,962,097</u>	<u>\$54,818,597</u>	<u>\$143,500</u>
Total all funds	\$55,228,597	\$55,178,597	(\$216,500)	\$54,962,097	\$54,818,597	\$143,500
Less estimated income	<u>26,812,612</u>	<u>26,812,612</u>		<u>26,812,612</u>	<u>26,812,612</u>	
General fund	\$28,415,985	\$28,365,985	(\$216,500)	\$28,149,485	\$28,005,985	\$143,500
FTE:	351.28	351.28	(1.80)	349.48	349.48	(0.00)

**Dept. 640 - Main Research Station - Detail of Conference Committee Changes**

	REDUCE OPERATING LINE ITEM 1	REMOVE VACANT POSITIONS 2	TOTAL CONFERENCE COMMITTEE CHANGES
Salaries and wages			
Operating expenses			
Equipment			
Capital improvements			
Agricultural research grants			
Animal replacement			
Main Research Station	<u>(\$216,500)</u>		<u>(\$216,500)</u>
Total all funds	(\$216,500)	\$0	(\$216,500)
Less estimated income			
General fund	(\$216,500)	\$0	(\$216,500)
FTE:	0.00	(1.80)	(1.80)

- 1 The Conference Committee added back \$143,500 of the total \$360,000 operating line item reduction made by the House.
- 2 Intent is to remove the vacant FTE positions, but the funding for the positions is to remain for reallocation purposes.

Assistant professor	(.45)
Information processing position	(.95)
Information systems position	(.25)
Public information position	(.15)
Total FTEs reduced	(1.8)

**Senate Bill No. 2021 - Agronomy Seed Farm - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Agronomy Seed Farm.

**Senate Bill No. 2021 - Other Changes - Conference Committee Action**

The State Board of Higher Education is removed from the transfer authority approval process in Section 3.

New Section 6 as adjusted in Conference Committee provides intent for the beefline initiative, including barley feeding research and the establishment of a modern feedmill and feedlot at the Carrington Research Center.

New Section 7 provides intent that up to \$288,000 be allocated from the Main Research Center for developing western North Dakota malt barleys.

New Section 8 provides intent for the establishment of livestock marketing clubs in western North Dakota.

The Conference Committee added new Section 9 to provide intent that the Main Research Center enter into a financial agreement to assist the North Central Research Center with the purchase of land.

The Conference Committee added two members from the Legislative Assembly, one from each political faction as appointed by the chairman of the Legislative Council, to serve for the 2001-03 biennium on the State Board of Agricultural Research and Education. The vice president of agricultural affairs at North Dakota State University, the administrator of the Agricultural Experiment Station, and the director of the NDSU Extension Service were made nonvoting members.

Section 14 changes the per diem of the members of the State Board of Agricultural Research and Education from \$62.50 to \$75.00.

The duties of the State Board of Agricultural Research and Education are redefined in Section 15 to include a status report to the Budget Section.

The administrative expenses of the State Board of Agricultural Research and Education are limited to 10 percent of the proceeds of the agricultural research fund, not to exceed \$50,000.

Transfer authority among the Extension Service, Main Research Center, and research centers of up to \$150,000 is authorized in Section 17 for funding of beef quality assurance (\$90,000) and applied research initiatives (\$60,000).

The Conference Committee did not include \$205,000 of authority from Dickinson oil revenues for beefline and feed barley research contained in the House version.

Date: 4-23-01

Roll Call Vote #: 1

**2001 CONFERENCE COMMITTEE ROLL CALL VOTES  
BILL/RESOLUTION NO. SB 2021**

**CONFERENCE COMMITTEE-Extension service, northern crops institute, upper great plains transportation institute, and the agricultural experiment station**

Legislative Council Amendment Number 18047.0219

- recommends that the (SENATE/HOUSE) (ACCEDE to) (RECEDE from)  
the (Senate/House) amendments on (SJ/HJ) page(s) 1250 - 1256
- having been unable to agree, recommends that the committee be discharged and a new committee be appointed.

Action Taken \_\_\_\_\_

Motion Made By Wald Seconded By Bowman  
Senator/Representative Senator/Representative

Senators	Yes	No	Representative	Yes	No
Senator Solberg	✓		Representative Wald	✓	
Senator Bowman	✓		Representative Boehm	✓	
Senator Tomac	✓		Representative Guleson	✓	

Total Yes 6 No 0 Absent 0

**REPORT OF CONFERENCE COMMITTEE**

**SB 2021, as engrossed:** Your conference committee (Sens. Solberg, Bowman, Tomac and Reps. Wald, Boehm, Gulleon) recommends that the **HOUSE RECEDE** from the House amendments on SJ pages 1250-1256, adopt amendments as follows, and place SB 2021 on the Seventh order:

That the House recede from ~~its~~ amendments as printed on pages 1250-1256 of the Senate Journal and pages 1368-1373 of the House Journal and that Engrossed Senate Bill No. 2021 be amended as follows:

Page 1, line 4, replace the second "section" with "sections", after "4-05.1-16" insert ", 4-05.1-17, 4-05.1-19,", and remove "subsection 1 of section"

Page 1, line 5, remove "changing", remove "voting", and after "membership" insert "and duties"

Page 1, line 6, after "education" insert ", the compensation of board members,", replace "use of" with "the", and remove "annual"

Page 1, line 7, remove "proceeds"

Page 2, line 15, replace "55,178,597" with "54,962,097"

Page 2, line 17, replace "28,365,985" with "28,149,485"

Page 2, line 20, replace "3,811,153" with "3,577,653"

Page 2, line 25, replace "1,493,786" with "1,413,786"

Page 2, line 26, replace "2,959,679" with "3,259,679"

Page 2, line 27, replace "14,666,145" with "14,652,645"

Page 2, line 28, replace "6,848,485" with "6,618,485"

Page 2, line 29, replace "7,817,660" with "8,034,160"

Page 3, line 4, replace "62,334,583" with "62,104,583"

Page 3, line 5, replace "114,077,478" with "113,847,478"

Page 3, line 12, remove "the state board of higher"

Page 3, line 13, remove the first "education," and remove the second comma

Page 3, line 23, replace "\$650,000" with "\$500,000"

Page 3, after line 25, insert:

**"SECTION 6. LEGISLATIVE INTENT - DICKINSON OIL REVENUE INITIATIVES.** It is the intent of the fifty-seventh legislative assembly that \$745,000 of special funds from Dickinson oil revenues be allocated for the beefline initiative, which includes \$300,000 for a modern feedmill and feedlot at the Carrington research extension center that will address genetic, management, marketing, coproduct and environmental research needs, barley feeding research, and include outside consultation from the beef cattle industry to work with the state board of agricultural research and education to develop a complete research program with goals and priorities. The state board of agricultural research and education and researchers shall

cooperatively develop the intent of the beeline initiative before implementation of the program.

**SECTION 7. LEGISLATIVE INTENT - MALT BARLEYS.** It is the intent of the fifty-seventh legislative assembly that the agricultural experiment station allocate from the main research center \$288,000, or so much of the sum as may be necessary, for the purpose of developing, in conjunction with the research centers, western North Dakota malt barleys.

**SECTION 8. LEGISLATIVE INTENT - LIVESTOCK MARKETING CLUBS.** It is the intent of the fifty-seventh legislative assembly that the North Dakota state university extension service may allocate resources for the establishment of two pilot livestock marketing clubs in western North Dakota.

**SECTION 9. LEGISLATIVE INTENT - LAND PURCHASE.** It is the intent of the fifty-seventh legislative assembly that the main research center may enter a financial arrangement with the north central research center to assist with the purchase of land in Ward County, North Dakota."

Page 4, line 24, replace "who serves in an ex officio" with "or the president's designee"

Page 4, line 25, remove "nonvoting capacity"

Page 4, line 26, after "university" insert "who serves in an ex officio nonvoting capacity"

Page 5, line 8, overstrike "and"

Page 5, line 10, after "capacity" insert "; and

- I. Two members of the legislative assembly appointed by the chairman of the legislative council. The chairman shall appoint one member from each political faction. The terms of members are for two years, and members may be reappointed. The legislative council shall pay the compensation and expense reimbursement for the legislative members"

Page 6, after line 8, insert:

**"SECTION 13. AMENDMENT.** Section 4-05.1-17 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-17. Compensation of board members - Expenses.** Each appointed member of the state board of agricultural research and education is entitled to receive ~~sixty-two~~ seventy-five dollars and ~~fifty cents~~ per day as compensation for the time actually spent devoted to the duties of office and is entitled to receive necessary expenses in the same manner and amounts as state officials for attending meetings and performing other functions of office.

**SECTION 14. AMENDMENT.** Section 4-05.1-19 of the 1999 Supplement to the North Dakota Century Code is amended and reenacted as follows:

**4-05.1-19. State board of agricultural research and education - Duties.** Within the policies of the state board of higher education, the state board of agricultural research and education is responsible for the budgeting, ~~supervision,~~ and policymaking ~~responsibilities~~ associated with the ~~supervision of the~~ agricultural experiment station and the North Dakota state university extension service. The board of agricultural research and education ~~board~~ shall:

1. Determine the causes of any adverse economic impacts on crops and livestock produced in this state;
2. Develop ongoing strategies for the provision of research solutions and resources to negate adverse economic impacts on crops and livestock produced in this state;
3. ~~Make available financial resources, including grants and salaries, and make available equipment and facilities to implement~~ Develop ongoing strategies for the dissemination of research information through the extension service;
4. ~~Implement~~ the strategies developed under subsections 2 and 3, subject to approval by the state board of higher education;
4. ~~5.~~ Develop an annual budget for the operation of, with the agricultural experiment station and the North Dakota state university extension service, an annual budget for the operations of these entities;
5. ~~6.~~ Develop a biennial budget request and submit that request to the president of North Dakota state university and the state board of higher education on or before March first of each even-numbered year;
6. ~~7.~~ Maximize the use of existing financial resources, equipment, and facilities to generate the greatest economic benefit from research and extension efforts and to promote efficiency;
7. ~~8.~~ Annually evaluate the results of research and extension activities and expenditures and report the findings to the legislative council and the state board of higher education;
8. ~~9.~~ Advise the administration president of North Dakota state university regarding the recruitment and, selection, and performance of the vice president of agricultural affairs, the extension service director, and the station director; and
9. ~~10.~~ Develop ongoing strategies for the dissemination of research information and the best practices for management of the extension service Present a status report to the budget section of the legislative council."

Page 6, line 9, replace "Subsection 1 of section" with "Section"

Page 6, replace lines 11 through 26 with:

**"4-05.1-21. State board of agricultural research and education - Apportionment of research funds.**

1. The state board of agricultural research and education may use up to ten percent of the proceeds of the agricultural research fund, not to exceed fifty thousand dollars, for administrative expenses and annually shall apportion the remaining proceeds of the agricultural research fund as follows:
  - a. Seventy percent to research activities affecting North Dakota agricultural commodities that account for at least two percent of the gross sales of all agricultural commodities grown or produced in the

state. The percentage of the dollars available for each agricultural commodity under this section may not exceed the percentage that the gross sales of the agricultural commodity bear to the North Dakota gross sales of all agricultural commodities grown or produced during the previous year, as determined by the agricultural statistics service;

- b. Eighteen percent to research activities affecting North Dakota animal agriculture; and
  - c. Twelve percent to research activities affecting new and emerging crops in North Dakota.
2. The state board of agricultural research and education shall solicit proposals for research from the public and private sectors and shall appoint committees to review the proposals and award the agricultural research grants on a competitive basis. Each committee must consist of a majority of agricultural producers selected in consultation with the agricultural commodity groups representing commodities that are the subjects of the proposed research and may include researchers and other individuals knowledgeable about the proposed area of research. Whenever possible, the committees shall require that a grant recipient commit matching funds.
  3. The state board of agricultural research and education shall develop policies regarding the award of research grants, including requirements for matching funds, cooperation with other in-state and out-of-state researchers, and coordination with other in-state and out-of-state proposed or ongoing research projects.

**SECTION 16. TRANSFER AUTHORITY.** Upon approval from the state board of agricultural research and education, the director of the North Dakota agricultural experiment station may transfer appropriation authority within subdivisions 1, 4, and 5 of section 1 of this Act of up to \$90,000 of estimated income for beef quality assurance and up to \$60,000 of estimated income for applied research initiatives, for the biennium beginning July 1, 2001, and ending June 30, 2003."

Renumber accordingly

**STATEMENT OF PURPOSE OF AMENDMENT:**

**Senate Bill No. 2021 - Summary of Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
<b>Transportation Institute</b>						
Total all funds	\$7,888,427	\$7,888,427	\$0	\$7,888,427	\$7,808,427	\$0
Less estimated income	7,383,348	7,383,348		7,383,348	7,383,348	
General fund	\$505,079	\$505,079	\$0	\$505,079	\$505,079	\$0
<b>Branch Research Centers</b>						
Total all funds	\$13,772,845	\$14,686,145	(\$13,500)	\$14,852,845	\$14,937,848	(\$285,000)
Less estimated income	6,873,485	6,848,485	(230,000)	6,618,485	6,903,485	(285,000)
General fund	\$7,899,160	\$7,817,660	\$218,500	\$8,034,160	\$8,034,160	\$0
<b>NDSU Extension Service</b>						
Total all funds	\$33,678,046	\$33,628,046	\$0	\$33,628,046	\$33,628,046	\$0
Less estimated income	19,299,301	19,299,301		19,299,301	19,299,301	
General fund	\$14,378,745	\$14,328,745	\$0	\$14,328,745	\$14,328,745	\$0
<b>Northern Crops Institute</b>						
Total all funds	\$1,457,123	\$1,457,123	\$0	\$1,457,123	\$1,457,123	\$0

**REPORT OF CONFERENCE COMMITTEE (420)**  
**April 23, 2001 4:57 p.m.**

**Module No: SR-72-9100**

**Insert LC: 18047.0219**

Less estimated income	732,697	732,697		732,697	732,697	
General fund	\$724,426	\$724,426	\$0	\$724,426	\$724,426	\$0
<b>Main Research Station</b>						
Total all funds	\$55,226,597	\$55,176,597	(\$216,500)	\$54,962,097	\$54,818,597	\$143,500
Less estimated income	26,812,812	26,812,812		26,812,812	26,812,812	
General fund	\$28,415,985	\$28,365,985	(\$216,500)	\$28,149,485	\$28,005,985	\$143,500
<b>Agronomy Seed Farm</b>						
Total all funds	\$1,259,140	\$1,259,140	\$0	\$1,259,140	\$1,259,140	\$0
Less estimated income	1,259,140	1,259,140		1,259,140	1,259,140	
General fund	\$0	\$0	\$0	\$0	\$0	\$0
<b>BH Total</b>						
Total all funds	\$113,293,978	\$114,077,478	(\$230,000)	\$113,847,478	\$113,988,978	(\$141,500)
Less estimated income	61,359,583	62,334,583	(230,000)	62,104,583	62,389,583	(285,000)
General fund	\$51,924,395	\$51,742,895	\$0	\$51,742,895	\$51,599,395	\$143,500

**Senate Bill No. 2021 - Transportation Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Transportation Institute.

**Senate Bill No. 2021 - Branch Research Centers - Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
Dickinson Research Center	\$3,132,653	\$3,611,153	(\$233,500)	\$3,577,653	\$3,782,653	(\$205,000)
Central Grasslands Research Center	1,413,982	1,413,982		1,413,982	1,413,982	
Hettinger Research Center	1,559,583	1,559,583		1,559,583	1,559,583	
Langdon Research Center	1,781,894	1,916,894		1,916,894	1,916,894	
North Central Research Center	1,511,068	1,511,068		1,511,068	1,511,068	
Williston Research Center	1,413,786	1,493,786	(80,000)	1,493,786	1,493,786	(80,000)
Carrington Research Center	2,959,879	2,959,879	300,000	3,259,879	3,259,879	
<b>Total all funds</b>	<b>\$13,772,645</b>	<b>\$14,866,145</b>	<b>(\$13,500)</b>	<b>\$14,852,645</b>	<b>\$14,937,645</b>	<b>(\$285,000)</b>
Less estimated income	6,673,485	6,648,485	(230,000)	6,918,485	6,903,485	(285,000)
General fund	\$7,899,160	\$7,817,660	\$216,500	\$8,034,160	\$8,034,160	\$0
FTE	76.36	76.36	0.00	76.36	76.36	0.00

**Dept. 628 - Branch Research Centers - Detail of Conference Committee Changes**

	RESTORE FUNDING 1	CHANGE FUNDING FOR LEARNING CENTER 2	REDUCE FUNDING FOR BEEFLINE 3	PROVIDE FUNDING FOR MODERN FEEDMILL AND FEEDLOT 4	REMOVE FUNDING FOR WILLISTON LAND PURCHASE 5	TOTAL CONFERENCE COMMITTEE CHANGES
Dickinson Research Center	\$66,500		(\$300,000)			(\$233,500)
Central Grasslands Research Center						
Hettinger Research Center						
Langdon Research Center						
North Central Research Center						
Williston Research Center					(\$80,000)	(80,000)
Carrington Research Center				300,000		300,000
<b>Total all funds</b>	<b>\$66,500</b>	<b>\$0</b>	<b>(\$300,000)</b>	<b>\$300,000</b>	<b>(\$80,000)</b>	<b>(\$13,500)</b>
Less estimated income		(150,000)	(300,000)	300,000	(80,000)	(230,000)
General fund	\$66,500	\$150,000	\$0	\$0	\$0	\$216,500
FTE	0.00	0.00	0.00	0.00	0.00	0.00

1 Restores funding to the Dickinson Research Center which was removed by the Senate.

2 Changes funding of \$150,000 from special funds to general fund moneys for the Langdon Learning Center. The total authorization for the project is \$510,000, \$300,000 from the general fund and \$510,000 of special funds. The section requiring \$650,000 in cash or pledges before construction can begin is lowered to \$500,000.

- 3 Reduces funding authority to the Dickinson Research Center for the beefline initiative from \$745,000 to \$445,000.
- 4 Provides funding from Dickinson oil revenues for the development of a modern feedmill and feedlot to be established at the Carrington Research Center.
- 5 The Conference Committee removed the \$80,000 of special funds that was included in the engrossed Senate bill for purchase of land in the Nesson Valley irrigation project. The appropriation for this land purchase is included in House Bill No. 1200.

**Senate Bill No. 2021 - NDSU Extension Service - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the NDSU Extension Service.

**Senate Bill No. 2021 - Northern Crops Institute - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Northern Crops Institute.

**Senate Bill No. 2021 - Main Research Station - Conference Committee Action**

	EXECUTIVE BUDGET	SENATE VERSION	CONFERENCE COMMITTEE CHANGES	CONFERENCE COMMITTEE VERSION	HOUSE VERSION	COMPARISON TO HOUSE
Salaries and wages	\$40,952,848					
Operating expenses	10,027,903					
Equipment	1,532,748					
Capital improvements	415,300					
Agricultural research grants	2,000,000					
Animal replacement	300,000					
Main Research Station		<u>\$55,178,597</u>	<u>(\$216,500)</u>	<u>\$54,962,097</u>	<u>\$54,818,597</u>	<u>\$143,500</u>
Total all funds	\$55,228,597	\$55,178,597	(\$216,500)	\$54,962,097	\$54,818,597	\$143,500
Less estimated income	<u>26,812,612</u>	<u>26,812,612</u>		<u>26,812,612</u>	<u>26,812,612</u>	
General fund	\$28,415,985	\$28,365,985	(\$216,500)	\$28,149,485	\$28,005,985	\$143,500
FTE	351.28	351.28	(1.80)	349.48	349.48	(0.00)

**Dept. 640 - Main Research Station - Detail of Conference Committee Changes**

	REDUCE OPERATING LINE ITEM 1	REMOVE VACANT POSITIONS 2	TOTAL CONFERENCE COMMITTEE CHANGES
Salaries and wages			
Operating expenses			
Equipment			
Capital improvements			
Agricultural research grants			
Animal replacement			
Main Research Station	<u>(\$216,500)</u>		<u>(\$216,500)</u>
Total all funds	<u>(\$216,500)</u>	\$0	<u>(\$216,500)</u>
Less estimated income			
General fund	<u>(\$216,500)</u>	\$0	<u>(\$216,500)</u>
FTE	0.00	(1.80)	(1.80)

1 The Conference Committee added back \$143,500 of the total \$360,000 operating line item reduction made by the House.

2 Intent is to remove the vacant FTE positions, but the funding for the positions is to remain for reallocation purposes.

Assistant professor	(.45)
Information processing position	(.85)
Information systems position	(.25)
Public information position	(.15)
Total FTEs reduced	(1.8)

**Senate Bill No. 2021 - Agronomy Seed Farm - Conference Committee Action**

The Conference Committee did not change the House or Senate version for the Agronomy Seed Farm.

**Senate Bill No. 2021 - Other Changes - Conference Committee Action**

The State Board of Higher Education is removed from the transfer authority approval process in Section 3.

New Section 6 as adjusted in Conference Committee provides intent for the beefline initiative, including barley feeding research and the establishment of a modern feedmill and feedlot at the Carrington Research Center.

New Section 7 provides intent that up to \$288,000 be allocated from the Main Research Center for developing western North Dakota malt barleys.

New Section 8 provides intent for the establishment of livestock marketing clubs in western North Dakota.

The Conference Committee added new Section 9 to provide intent that the Main Research Center enter into a financial agreement to assist the North Central Research Center with the purchase of land.

The Conference Committee added two members from the Legislative Assembly, one from each political faction as appointed by the chairman of the Legislative Council, to serve on the State Board of Agricultural Research and Education for a two-year term with the possibility of reappointment. The vice president of agricultural affairs at North Dakota State University, the administrator of the Agricultural Experiment Station, and the director of the NDSU Extension Service were made nonvoting members.

Section 13 changes the per diem of the members of the State Board of Agricultural Research and Education from \$62.50 to \$75.00.

The duties of the State Board of Agricultural Research and Education are redefined in Section 14 to include a status report to the Budget Section.

The administrative expenses of the State Board of Agricultural Research and Education are limited to 10 percent of the proceeds of the agricultural research fund, not to exceed \$50,000.

Transfer authority among the Extension Service, Main Research Center, and research centers of up to \$150,000 is authorized in Section 16 for funding of beef quality assurance (\$90,000) and applied research initiatives (\$60,000).

The Conference Committee did not include \$205,000 of authority from Dickinson oil revenues for beeline and feed barley research contained in the House version.

Engrossed SB 2021 was placed on the Seventh order of business on the calendar.

2001 TESTIMONY

SB 2021

North Dakota State University

# Biennial Budget

2001-2003

**NDSU Extension Service**

**N.D. Agricultural Experiment Station**

**Northern Crops Institute**

Prepared for the  
**Senate Appropriations Committee**

*David Nething, chairman*

**S.B. 2021**

January 4, 2001

**NDSU**

North Dakota State University

North Dakota State University

# Biennial Budget

2001-2003

NDSU Extension Service

N.D. Agricultural Experiment Station

Northern Crops Institute

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  - NDSU Extension Service as outlined in remarks by Sharon Anderson, Director.
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# N.D. Agricultural Experiment Station

Dr. Cole Gustafson, Associate Dean, Research

Senate Appropriations Committee Hearing  
January 4, 2001

## 1999-2001 Biennium

*"It's about people!"* — NDSU President Joe Chapman

### ■ Cornerstone: Sustaining the Vision<sup>1</sup>

1. President Chapman has laid the foundation and outlined the benefits to North Dakota for NDSU to attain Carnegie "Research and Doctoral Extensive" designation. Since agriculture is the largest component of NDSU's research portfolio, doubling our program presents a challenge — but also a great opportunity.
  - SBARE recognized the need, emphasize graduate programs, last session.
  - Under the first year of Dr. Chapman's tenure, external funding for agriculture has increased 24%.
2. North Dakota commodity organizations have a renewed interest in research and are beginning to develop long-term research plans.
3. New technologies are increasingly available to North Dakota agriculture.
4. Value-added agriculture is key to North Dakota's economic growth.

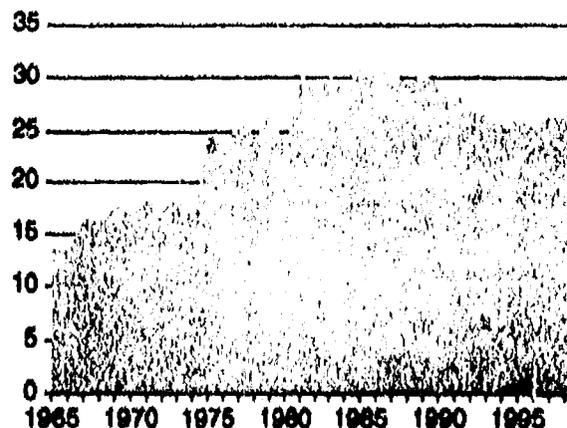
### ■ Cornerstone: Economic Development Connection

1. Ag research has not grown in real terms since the mid-1970s.

Public investment in agricultural research in North Dakota is similar to the trends observed for the United States. The research budget for the North Dakota Agricultural Experiment Station was nearly \$30 million in 2000. *These funds have not increased in real terms since the mid-1970s.*

Figure 1

North Dakota Agricultural Experiment Station Expenditures, 1965-1999 (millions of 1999 dollars)



Source: ND Agricultural Experiment Station

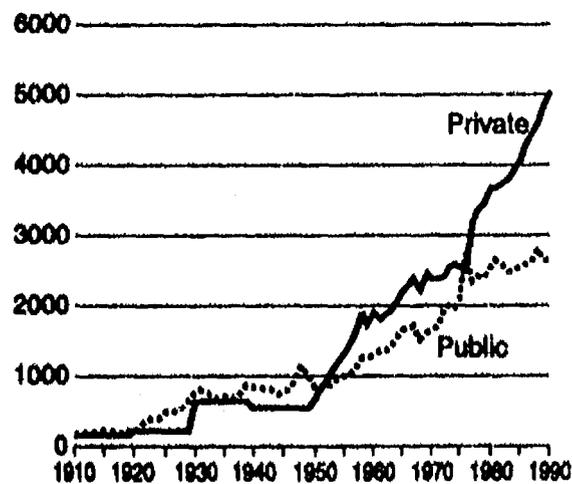
2. Public investment in agricultural research now lags private industry.

Public investment in agricultural research has grown at an average rate of 2.6 percent from 1950 to 1993.

Private R&D has grown at an average rate of 3.7 percent over the same period.

Figure 2

U.S. - Private and public agricultural R&D expenditures (millions of 1999 dollars)



Source: Huffman and Evenson, 1993

3. Basic and applied agricultural research still pays big dividends.

Many studies have estimated the rates of return to society's investment in agricultural research.

These rates of return are higher than rates available from many alternative investments, suggesting that market failure exists in agricultural R&D (i.e., there is underinvestment in agricultural research).

Figure 3

Investment	Social Rate of Return (%)
All public agricultural research	40-60
Public basic research	60-90
Private research	30-45
Public Extension	20-40

Source: Fuglie et al., 1996.

4. North Dakota producers have benefitted even more from public agricultural research because private agribusiness concentrates on Corn Belt and southern crops.

Even with today's depressed prices in many markets, farmers and ranchers are faring much better than they would have without the productivity gains realized over the last 50 years. Had farmers not accepted new technologies over this period, North Dakota's net farm income would have been nearly \$2.2 billion less in 1996. Instead of the actual \$1.1 billion income in 1996, farm incomes using 1960 technology would have been a negative \$1.1 billion.

### ■ Past SBARE Initiatives

In the last session, the Legislature provided funding to support 21 new SBARE initiatives. Considerable progress has been made on each of these projects.

- Initiatives
- \$100,000 bio-tech initiative, matching funds
- Animal Care Facility

### ■ Cornerstone: Education Excellence – Our Core Program

Successes in NDSU's core agricultural research programs equal/exceed those of the initiatives (see Impacts Report, 1999-2000)

- Released new wheat variety, Alsen.
- Awarded Patents for E. Coli gene mapping/ bio-imaging.
- Won national grants for beef selenium, precision agriculture, bio-technology, and water quality (highly competitive with only 10% acceptance rates!).
- Established new centers for Food Safety, Bio-imaging, Trade and Macro Policy, Bison, North Dakota Agricultural Weather Network (NDAWN) and Learning Center at Langdon.

### ■ Cornerstone: Flexible and Responsive System – 2001 Experiment Station Issues

For all NDSU agricultural research programs to move forward, we need:

- more budget flexibility
- funding to continue past initiatives and core budget

### ■ Cornerstone: Funding and Rewards – 2001 Costs to Continue

Following Gov. Schafer's request, a "hold-even" budget was developed. Criteria for identifying program re-directions were:

- cuts were not across the board—were not all operating dollars
- need for program, impact to other core programs
- value to state
- ease of implementing (open positions, reassignments)
- partner with others (external support, sharing)

In making these decisions, input was received from:

- advisory boards evaluated options within departments/centers
- initial cuts reviewed by depts./centers
- SBARE evaluated options within departments/centers

In general, faculty/staff positions in VMS (Veterinary & Microbiological Sciences), ABEN (Ag & Biosystems Engineering), Plant Sciences, Entomology, Soil Science, and Cereal Science will be terminated/redirected. Specific positions were identified internally, but have not been made public because of the anxiety it would create. In remaining departments, external funds will be sought to maintain existing programs.

*SBARE has reviewed this proposal and concluded that their highest priority for this legislative session is to reinstate these programs.*

■ **2001 Core Budget**

In order to provide needed budget flexibility and continue all past legislative initiatives from '95-'99, SBARE has determined an increase in annual operating budgets of scientists from \$2,200 to \$6,600 per year is needed. These monies will facilitate:

- greater dissemination of our research results by internet and video conferencing
- continue past initiatives, pending SBARE review
- increased responsiveness to emerging problems

# NDSU Extension Service

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Dr. Sharon Anderson, Director

Senate Appropriations Committee Hearing

January 4, 2001

## 1999-2001 Biennium

*"It's about people!"* — NDSU President Joe Chapman

### ■ Cornerstone 1: Economic Development Connection

#### ■ Entrepreneurship

- Alliances and partnerships — shared farm enterprises
- Agriculture entrepreneurship — Tilling the Soil of Opportunity (in-depth business training for agriculture producers and clients)
- Mini-Society — youth entrepreneurship through schools and 4-H
- Agritainment — farm and ranch entertainment
- Food Entrepreneurship — food processors
- Master Internet Volunteer (MIV) — Extension agents in 36 counties train volunteers who train other community citizens
- Soil Conservation Committee — awarded \$580,000 in grants to 26 soil conservation districts
- Equine — special programs for horse owners
- Identity-preserved wheat — advance contracting
- Value-added
- By-product usage
- Biotechnology - production through consumption

#### ■ Enhanced agriculture

- Backgrounding and feedlot management — finishing cattle
- Western North Dakota potatoes — irrigation
- Small farms — part-time and niche farmers
- Beef Quality Assurance (BQA) — over 1,000 certified
- Dairy Diagnostic program — 49 farmers working with advisory teams
- Dakota Lean Lamb Cooperative — marketing quality product
- Risk management
  - Marketing clubs — 24 clubs, local group of 12-20 producers
  - Changing the Way You Farm — interdisciplinary workshops, 1999-2000
  - Financial management programs — Money 2000, high school financial planning, Quicken
  - Rural Families in Transition — regional and statewide efforts
- Leadership Development
  - Partner In Governor's leadership initiative
  - Business retention and expansion

■ **Cornerstone 2: Education Excellence**

- Impact statements from eight program areas (see Impacts Report, 1999-2000)
- Strengthen expertise of Extension agents
- Use of technology
- Multicounty and multistate programs

■ **Cornerstone 3:  
Flexible and Responsive System**

- 2000 flood — rural and urban problems addressed immediately and on-going
- Disease and insect management
- Client questions
- Animal health

■ **Cornerstone 4: Accessible System**

- 52 county offices, research extension centers, area specialists
- Technology — connected offices, web pages, e-mail, GPS/GIS, Group Decision Center, video conferencing, wireless communication, high definition television
- Native American audiences — special projects
- Low resource audiences — EFNEP and FNP, federally funded
- Youth — in school, after school, camps, workshops
- Delivery approaches — IVN, technology, meeting times, newsletters, distance education
- Technology training for soil conservation supervisors and staff

■ **Cornerstone 5: Funding and Rewards**

- County, State and Federal
- Grants
- Partnerships

■ **Cornerstone 6: Sustaining the Vision**

- Continual internal and external planning process
- Citizen involvement in program planning

# **State Soil Conservation Committee**

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Senate Appropriations Committee Hearing  
January 4, 2001

## **Soil Conservation District Assistance Program**

- The State Soil Conservation Committee awarded 24 grants (\$580,000) affecting 26 soil conservation districts for the 1999-2001 biennium.
- Participating soil conservation districts use funds to add staff time for more one-on-one contacts with landowners.
- Walsh County SCD is planting 161 acres to trees and shrubs.
- Foster County SCD is developing a multicounty watershed monitoring and assessment project on the Pipestem Creek.
- Barnes County SCD Eco-Ed camps have reached more than 6,000 students, 684 parents/chaperones and 300 teachers in 24 soil conservation districts.
- Dunn County SCD designed grazing systems on 105,895 acres since 1993.
- Divide County SCD worked with the Public Service commission to plant 1,700 trees in the Noonan mine spoils.
- Oliver County SCD implemented a tree saw program for windbreak renovation.
- Sheridan County SCD is offering a fall seeding program with their no-till drill in conjunction with the NDSU research seed plot trials.
- Griggs County SCD is assisting with the planning and implementation of six livestock waste management facilities.
- Western and Central Stark SCD's assisted the city of Dickinson in establishing five living snow fences for snow control and beautification.

# Information Technology

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Senate Appropriations Committee Hearing  
January 4, 2001

## A Vision for NDSU Agriculture

Advances in information technology (IT) are expanding educational, cultural and business opportunities for North Dakotans. Its full potential may not yet be understood, but the leadership being shown by communities, such as Watford City, Hettinger, and Langdon, demonstrates the importance of addressing this opportunity. NDSU Agriculture's involvement in this issue includes expanding its use of IT, as well as participating with communities as they expand their access to and use of IT.

### Connecting to the State Network

A critical component to successfully using IT is having a high speed (broad-band) connection to the Internet. The establishment of the state network by the North Dakota Legislature in 1999 will pay dividends for years. It is on this foundation that NDSU Agriculture is building much of its IT effort. Initially, the network is allowing NDSU Agriculture to connect many of its nearly 70 sites located across the state with high speed Internet access. However, the ongoing cost of being connected to the network, especially at locations that cannot share the cost with other state or county government offices, is a concern. Such sites include the Research Extension Centers and Extension offices that are not located in courthouses. An important assumption is that Extension offices located in county courthouses will be treated as part of county government and will continue to receive local support.

### Web-based Video-conferencing

NDSU Agriculture currently is providing leadership for a project that is developing video-conferencing capability at the Research Extension Centers at Hettinger, Langdon, and Minot and the Divide County Extension office in Crosby. This project is supported in part with a grant from the Department of Commerce, and is a collaborative effort with NDSU Information Technology Services (ITS), North Dakota Information Technology Department, North Dakota Interactive Video Network, and various groups from the communities involved in the project. Although the project will initially use the video capability to deliver educational programs about marketing and risk management to agricultural producers, additional uses will be identified as the technology becomes operational. For example, staff at the Hettinger REC are planning a series of "brown-bag" activities to demonstrate the video capabilities to various groups in the community. The hope is that the exposure to IT will spawn additional ideas from members of the community on how they will want to use the technology. This video-conferencing project would not be possible without the state network and the collaboration of federal, state and local public and private entities.

### Computerized Learning Centers

Access to IT is only one component to its successful use; knowing how to use it is equally important. NDSU Agriculture has been involved in establishing computerized learning centers at several sites — most recently at the Hettinger,

North Central and Carrington RECs and Extension offices in Burke, Burleigh and Grand Forks counties. These sites provide the communities opportunities to learn more about computer usage, IT, and the potential of the Internet. Equipment funds also were used this past year to upgrade the bank of portable training computers in Agriculture Communication.

### **IT Training**

Audiences for IT training can be categorized into two major groups: 1) NDSU agriculture faculty, specialists, researchers, agents, staff and administrators, and 2) clientele/individuals wanting to learn more about and adopt additional IT as part of their educational, family, and business activities.

Training opportunities for NDSU Agriculture employees include

- sessions offered by Agriculture Communication and NDSU Information Technology Services;
- formal training that often is incorporated into the activities of professional associations;
- informal/on-the-job experiences; and
- formal training offered by private vendors.

The goal is to assure that NDSU educators, researchers, and staff use IT, and that this, in turn, will stimulate clientele interest in IT. Continuing support for ongoing IT growth is needed to assure employees understand the need to be up-to-date on using IT.

IT training for clientele has changed over time. Several examples are mentioned here.

- The highly successful Master Internet Volunteer (MIV) program provides IT training to Extension agents who, in turn, offer training to members of their communities. Extension agents who participate in this program are rewarded with a laptop computer and projector for their county office. Members of the community who are trained by the agents are expected to then help others in their commu-

nity in exchange for a reduction or refund of the registration fee. An Extension educator in Pembina County now has primary responsibility for this program, demonstrating that, with IT, it is no longer necessary that these educational programs originate from the NDSU campus.

- Steps are being taken to expand the MIV program to encompass education about e-commerce.
- Another IT training program for clientele involves working with soil conservation officers and staff. An Extension educator from Burke County is providing co-leadership for this effort. Again, the leadership is originating from a county office.

These two efforts are consistent with and demonstrate the points that Extension lists as part of Cornerstone 2: Education Excellence; these include "strengthen expertise of extension agents," "multi-county programs," and "use of technology."

### **Ongoing IT Needs**

The need to invest in IT is not going to decline in the foreseeable future. In an NDSU Agriculture IT planning effort this year, the following were identified as key needs.

- Replacing and upgrading the organization's approximately 1,400 computers and peripheral equipment on a regular basis;
- Providing internal technical support;
- Offering training opportunities for the approximately 1,100 faculty, specialists, researchers, agents, staff and administrators who comprise NDSU Agriculture; and
- Opportunities to explore and use emerging IT, such as the capabilities of the state network, video-conferencing, and the Internet.

IT is creating opportunities for North Dakota and NDSU. A strategy of ongoing investment in people and technology will offer the best opportunity for its successful application.

# A Progress Report

## on Legislative Initiatives

1995-1997 Biennium • 1997-1999 Biennium • 1999-2001 Biennium

from the NDSU Extension Service  
and the North Dakota Agricultural Experiment Station

### 1) 1999-2001 Crop Protection — \$443,300

One research specialist and one graduate research assistant have been added in the Plant Pathology department and a graduate research assistant has been added to the Plant Sciences department to address continuing disease concerns such as scab and white mold. The help has allowed researchers to expand field and greenhouse testing of experimental cereal crop lines for resistance to scab. The assistant hired in Plant Pathology supports the Extension work of plant pathologist Marcia McMullen and agronomist Mike Peel. The funding has also allowed researchers to expand screening of soybean breeding material for diseases. Additional research focuses on improving chemical applications for disease control. At the Langdon Research Extension Center, hiring of a pathologist has been delayed as the center evaluates and redirects its efforts. The center has purchased equipment and supplies to enhance disease research. An added technician, a part-time student worker and a temporary visiting faculty member in Agricultural and Biosystems Engineering are continuing to work on improved techniques for applying fungicide on barley and wheat heads. Additional research focuses on exploring non-chemical alternatives for controlling scab. Two graduate students in the Entomology department are advancing research on control of sunflower midge. Early work is revealing when the midge is active and where in a field the pest is found. This and other information will lead to recommendations for an integrated system for controlling sunflower midge.

Continued efforts are required to ensure that new plant varieties are resistant to disease threats, and new disease threats continue to emerge that need to be addressed. An example: In 1999, white mold became epidemic when climate and heavy inoculum levels caused losses of more than \$100 million. Research is needed on crop rotation, genetics and fungicide management to manage this disease. Economic and societal concerns dictate that chemical controls be applied as precisely and effectively as possible. Continued research will refine that process and may reveal economical non-chemical methods of disease control. For sunflower midge, continued study is needed to integrate control methods, prediction systems and midge tolerant hybrids.

### 2) 1999-2001 Grain Quality Education — \$135,464

The grain quality initiative provides education and research support to producers and the industry. Brian Sorenson was recently hired to fill this position. During the first year of the biennium, however, Mike Peel assumed strong leadership for grain quality education work through Extension meetings, publications, a Web Site, and work with the industry.

The need for this initiative continues to be strong. Producers want information on quality features desired by manufacturers, and the industry needs to share desired qualities of the raw products. Although a great deal of work is being done in this area, much more will be accomplished through the filling of this position.

**NDSU**

North Dakota State University  
Fargo, North Dakota 58105

December 2000

**3) 1999-2001 Animal Disease Prevention Research  
— \$175,833**

Continuation of funding in this area allowed the hiring of new faculty member, Ana C. Bratanich. In her affiliation with the NDSU Veterinary Diagnostic Laboratory, she supervises diagnostic bacteriology, virology and serology laboratories. These laboratories detect disease agents in samples submitted to the laboratory for diagnosis by producers and veterinarians across the region. The laboratory handles nearly 10,000 cases annually. Bratanich is also establishing a research program that will examine viruses and virus/host interactions at the molecular level. An understanding of these most basic biological functions may lead to new ways to control important animal and human diseases.

New forms of disease continue to emerge while old forms change and adapt to control strategies. With many pathogens becoming resistant to antibiotics and other treatments, concerns about the transmission of diseases from animals to humans are growing. Continuation of these funds is important to support the NDSU Veterinary Diagnostic Laboratory's role in collaborating with other health agencies to look for trends in animal health problems and to spot potential outbreaks of livestock disease.

**4) 1999-2001 Foundation Seed Production  
— \$105,801**

NDSU's foundation seed program serves as a pipeline for distributing genetically pure seed of new varieties across the state. Rapid distribution of foundation seed helps the state's producers use the newest varieties to stay ahead of diseases and pests and provide processors with the necessary qualities. The program also generates revenue for additional crop research. Continuation of funds for this effort maintained the staff of technicians and part-time help required to raise and process seed at the Langdon, North Central and Williston Research Extension Centers.

**5) 1997-1999/1999-2001 Range Research and Extension — \$437,700**

Initiatives in the current and previous biennium support two research specialists, a data processing specialist and six graduate research assistants to support research on grazing systems, range nutrition and annual forages for pasture. Researchers have

found that improving rangeland condition can increase beef production by nearly 10 pounds per acre resulting in more than \$7 per acre in added income. Researchers continue to study the impact of slow-release fertilizers to improve rangeland. Research has focused on understanding and implementing grazing management systems to stimulate grass growth and improve rangeland condition. Early results show improvements in the plant community, a 40 to 96 percent increase in stocking rates, a 65-pound increase in average calf weaning weight and improved per-acre revenue from \$1.99 to \$17.71. A large-scale grazing study has been established on two cooperator ranches that will answer questions about the impact of winter grazing on native rangeland. Extension programs include 12 two- and three-day workshops involving 130 ranches and about 400,000 acres of rangeland. Field demonstrations show growth patterns and nutritional quality of selected cool- and warm-season grasses.

North Dakota has more than 12 million acres of rangeland, 3 million acres of Conservation Reserve Program land, 2.5 million acres of hayland and almost 1 million acres of non-agricultural permanent cover land. As new techniques in grazing management are developed, more efficient grazing programs are studied and public demand to maintain or enhance public grasslands increases, the need for research and Extension efforts will continue.

**6) 1999-2001 Molecular Marker — \$260,830**

One technician has been hired; equipment has been purchased, installed and calibrated; and the molecular marker lab is ready to begin operation. The lab will allow plant breeders and plant scientists to move rapidly and efficiently develop new high-yield, high-quality disease-resistant varieties for producers. Screening plants at an early stage of development significantly increases the efficiency of plant breeding and related research by eliminating lines with undesirable characteristics early in the selection process.

New equipment will continually need to be purchased as technologies change and older equipment becomes obsolete. Supplies required are expensive and need to be continually replaced. The support the laboratory provides will be key in developing future crop varieties with improved production and processing characteristics.

### 7) 1999-2001 Corn Breeding — \$172,331

A faculty position in this area was filled by Marcelo Carena in July 1999. He is aggressively seeking outside funding to increase the breadth and depth of the project. To provide further insight into the needs of this industry in the region, the SBARE Corn Granting Committee is serving as an advisory committee to this position. Working relationships have been developed with the North Dakota Corn Growers Association, Minnesota Corn Growers Association and the Tri State Corn Growers Association. In addition to work with traditional field corn, new research includes specialty and white corn. Funds are being solicited for a winter breeding nursery to significantly increase the amount of germplasm produced.

In the past year, a disease nursery has been added in cooperation with Iowa State University. Researchers infested 624 inbred selections with leaf diseases and screened them for resistance. Seventy-five inbred lines from the Corn Belt, Canada, Mexico and Yugoslavia were introduced into the breeding program for testing. The number of plots for experimental line testing was increased by 37 percent to 4,934. Industry participation in the NDSU public testing program increased by 16 percent (number of hybrids and 36 percent (number of companies). Agreements and cooperative testing with private companies will help determine the real potential of NDSU lines in the marketplace.

The production of corn for grain has expanded rapidly in North Dakota, providing corn for livestock feeding and a raw material for value-added industries. Key to that expansion has been the development of corn varieties with good agronomic characteristics for this region and good nutrient and processing characteristics. Continued support for this position will ensure continued progress in developing corn hybrids that are well-adapted to this region and have qualities that processors want.

### 8) 1999-2001 Coproduct Utilization — \$198,726

Two 3/4-time technicians and four graduate students have helped researchers initiate studies to learn the feeding potential of coproducts from sugar, corn, bakery, potato, wheat and meat industries. In many cases, coproducts of agricultural processing present a waste management challenge for the industry. Research will reduce this challenge for processors. The result will be reduced processing cost which

may translate into improved prices for producers. The research will also provide a wider variety of competitively priced feedstuffs for livestock producers. In one instance, early research with bakery products has reduced the need for a processor to pay for transportation and disposal of a coproduct and provided a low-cost feed for an area producer.

As the agricultural processing sector in the region continues to grow, additional research will be needed to reduce waste management concerns and help livestock producers take advantage of feeding opportunities. At the same time, technology in existing processing industries is changing and as a result the composition and form of coproducts are changing. An example: Molasses has long been a coproduct of sugar processing and a staple in livestock diets. Recent advances have allowed processors to increase the amount of sugar extracted from molasses. New research is being conducted into the feed value of this de-sugared molasses. Study is also needed to adapt coproducts research from other regions to North Dakota production and management systems.

### 9) 1999-2001 Plant Disease — \$178,747

Two graduate research assistants hired in the Plant Pathology department and two in the Plant Sciences department have speeded progress in the management of wheat head blight and foliar diseases. Germplasm from the spring wheat and durum breeding programs have been assessed for tan spot resistance. Support has also been used to expand the scab screening effort with the goal of producing scab-resistant wheats. Additional efforts have contributed to research and screening of breeders' lines for resistance to foliar diseases that have caused \$50 million to \$70 million in annual losses in each of the past two years. The support has also contributed to studies on the basic biology and management of sclerotinia white mold, a disease that has caused more than \$100 million in losses.

Continued research is needed to address these serious threats and deal with emerging plant diseases. An on-going research effort in genetics and breeding, fungicide application and improved management practices is necessary to reduce significant losses.

### **12) 1999-2001 Cropping Systems — \$56,000**

A research specialist is helping scientists at the Carrington Research Extension Center continue to glean valuable information from a long-term cropping systems study initiated in 1986. In large plots managed using conventional equipment, researchers are evaluating three four-year crop rotations, three tillage systems and four strategies of nitrogen fertilization. Data have identified various strengths and weaknesses associated with cropping systems strategies. Some combinations of tillage, crops and crop sequences have proven especially difficult to manage due to weed pressure and stand establishment problems. Other systems have reduced outside nitrogen inputs and reduced disease pressures.

Cropping systems research is a long-term investment that is necessary to answer crop production problems that are due to biological factors that build up over time. The biological influences of the system, similar to those experienced by producers, are just now becoming fully expressed and other strategies have yet to be evaluated. Impacts of livestock enterprises on a cropping system and efficient utilization of livestock wastes are other issues to be explored.

### **13) 1999-2001 Cereal Quality — \$172,327**

A graduate research assistant in the Plant Pathology department is helping to develop a system to forecast wheat foliar disease based on a prediction of daily infection period. A graduate researcher in the Plant Sciences department has also been added. Researchers are learning how the biology of wheat and the tan spot fungus interact. That knowledge may lead to new control methods. An Entomology graduate research assistant is helping researchers study ways to control orange wheat blossom midge in durum wheat. Their studies may lead to ways of identifying genetic resistance to the pest in durum and biological controls for wheat midge.

Although progress has been made, losses are estimated at \$50 million to \$70 million annually from foliar diseases. Development of the forecasting system will allow producers to spray fungicides only when necessary, reducing costs and impacts on the environment. For the wheat midge, more work is needed to better understand the interaction between the pest and durum wheat. The efficiency of the screening process needs to be improved, and a greatly expanded number of durum germplasm sources need to be screened for resistance.

### **14) 1999-2001 Livestock Production Systems — \$186,306**

Pabitra Dash, a post doctoral research associate in the Animal and Range Sciences department, is developing computer models for beef, swine and sheep production that can be used by producers, consultants and others to guide decisions on management and investments. Portions of the beef model are in early stages of testing. Other researchers are assembling information that will be used in the subsequent models. A graduate research assistant in the Animal and Range Sciences department is assisting with genetic information that will be used in the model and is interviewing beef producers to gather production and management information. A graduate research assistant in the Agribusiness and Applied Economics department is studying the labor constraints in beef production units. Another graduate research assistant in the Agricultural and Biosystems Engineering department is evaluating methods of waste management in cow/calf operations to give cost impact results for the beef production model.

As production systems change and new technology is developed, the production models will need to be changed so that they can be used to help producers make valid decisions. Also, the more current and detailed information that is used in the models, the more accurate they will be.

### **16) 1999-2001 Swine Research/Dickinson Research Extension Center — \$66,500**

This program supported a research scientist who investigated how alternative crops grown in southwestern North Dakota can be used in swine rations. This work has involved several commodities, including field peas, canola, naked oats, barley, corn and soybean. Various combinations of alternative crop commodities and traditional crop commodities have been combined with the various life cycles of swine to produce recommendations for the swine industry. The work has established feed values for these commodities, leading to feeding recommendations and increased utilization of North Dakota alternative crops. This research also supported educational efforts within pork production in the region.

This work is completed and the program will be terminated at the conclusion of the current project.

As noted in a response from the North Dakota Pork Producers, "The pork industry has undergone some very tough times resulting in fewer pork producers in North Dakota. Thereby making it less viable to continue research at the center along with budget restraints. The NDPPC very much appreciate the efforts that everyone there has made over the past many years to help pork producers do better with their swine operations." The scientist is being transferred to new responsibilities in the development of a focused beef cattle research program within North Dakota.

#### **17) 1999-2001 Research Extension Center Enhancement — \$169,302**

This initiative partially meets the need for new equipment and maintenance on existing equipment at NDSU's seven research extension centers. Funds are also being used for upkeep on new facilities constructed at the Carrington, Hettinger, North Central and Williston centers. Added funds also give centers more budget flexibility so they are better able to respond to local research needs.

#### **18) 1999-2001 Insecticide Evaluation — \$97,917**

Continued support of specialists in the insecticide evaluation program allows them to work closely with regulatory agencies to obtain minor use approval of both chemical and biological control agents, giving producers broader options for controlling pests in their crops. The program also supports NDSU's grasshopper pest management research. The program is important because many of the crops grown in North Dakota represent small markets for farm chemical manufacturers. Often those manufacturers are reluctant to invest the effort required to have their products labeled for such minor use. Continued development of alternative crops and emergence of new pests will require continued work in this area.

#### **19) 1999-2001 Sheep Research Program/Hettinger Research Extension Center — \$34,200**

Researchers are finding that properly managed sheep grazing systems on rangeland can reduce infestations of some weeds like leafy spurge while contributing to overall rangeland health. Continuing this program ensures that new and existing sheep producers will receive new information on sheep and grazing management. That's important as many

producers initiate sheep production enterprises to bolster farm income. Changes in the sheep industry, like the shift from an emphasis on wool production to meat production, consumer demand for sheep products and integration of sheep into economically and environmentally sustainable farming systems, make continuing this program essential.

#### **20) 1999-2001 Irrigated High-Value Crop Production — \$356,183**

A new faculty member in the Plant Sciences department, Harlene Halterman-Valenti, was hired in September 2000. A technician in the department has been transferred to this project. New research will focus on identifying crops that can be grown under irrigation and determining how to efficiently maximize yield, quality and profitability. Designing profitable crop rotations that fit into newly developing irrigated areas of the state will also be a priority. A research specialist at the Carrington Research Extension Center helped develop a new research site that has capabilities to apply precise amounts of irrigation water across more than 40 different experimental zones. This 10-acre site will help determine optimum applications of irrigation water and fertilizers to grow high-value crops in North Dakota. Experiments focused on potatoes, dry edible beans, carrots and onions. Additional research included crop cultivar evaluation trials on producer fields, grass seed production and plant disease management studies. In Kidder County, researchers developed a site to study groundwater under irrigated potato production. An on-campus laboratory was improved to conduct extensive measurements of soil hydraulic and physical properties at the off-campus sites. Researchers are also analyzing previously collected data to estimate water use for potatoes in Williams County. They are also developing studies at Oakes on potato planting configurations and water quality. Additional efforts focus on improved irrigation scheduling techniques. A microbiologist hired in the Plant Pathology department is assisting in research on controlling late blight and pink rot, diseases that are particularly important in potatoes grown under irrigation. In 1998, late blight caused about \$78 million in damage to the state's potatoes, a loss that would have been much more severe if not for NDSU's diagnostic laboratory and research program.

An expanding irrigation agriculture demands research-based information on crop and variety selection, fertility practices and irrigation water

management practices. Producers and others are also requesting information on the environmental impacts of irrigation. Continued support is necessary to develop methods for disease control in crops raised under irrigation. As this is a new research effort, additional equipment such as planters, harvesters and sprayers will be needed.

#### 21) 1999-2001 Potato Development — \$203,155

Continued support for this research program ensures a steady supply of new potato lines for breeding while testing those lines for agronomic and processing qualities. This makes sure that timely development of new potato varieties continues and that those released to producers are free from disease, and well suited to growing conditions in this region and to the demands of processors. Unlike commercial potato breeding efforts, NDSU helps provide seed for potatoes that fill key niche markets

#### 1997-2001 Market Opportunities for Biotechnologically Enhanced Crops in North Dakota — \$100,000

This initiative has allowed researchers to begin assessing end-user markets for emerging genetically modified crops, their potential impact on world commodity trade, and changes in marketing channels to maintain product identity. Support for a graduate research assistant has allowed researchers to develop a model to determine the values of wheat to wheat processors in terms of end-use traits. In addition, wheat end-users have been surveyed to determine key traits they desire. The world wheat simulation model developed at NDSU is being modified to predict trade and price effects of genetically modified wheat. Researchers are also compiling policies and regulations from around the world relating to genetically modified crops. Research determined the logistical costs and uncertainties relating to genetically modified crops. Highest costs were associated with segregation and testing. A conference addressing the economic, policy and production aspects of biotechnologically enhanced crops and livestock products for educators, decision makers, producers and agribusiness is scheduled for the spring of 2001.

Added research is needed to expand the ability of newly-developed models to other genetically modified products available to Northern Plains growers.

Research is also necessary to identify optimal contracting strategies for Northern Plains growers and agribusiness. Researchers also plan to investigate consumer preferences concerning acceptance of foods containing genetically enhanced small grains. Additional study is also necessary to examine the implications of alliances between universities and agribusiness and other end-user institutions in the development of genetically modified varieties.

#### 1999-2001 Dairy Diagnostic Team Program — \$50,000

From June 1999 to May 2000, John Johnson served as statewide coordinator of this program which is part of the NDSU Extension Service. Rachel Rottorath has served in that capacity since August. Under their leadership and with help from Extension, diagnostic teams have been formed to help 47 farms improve profitability by decreasing feed costs per hundredweight of milk from an average of \$4.64 to \$4.33. Production of milk has also risen from an average of 15,500 pounds to 17,800 pounds per cow. To date, 26 producers have set goals that, when combined, will produce an additional \$934,000 in gross revenue.

Requests for diagnostic teams far exceed the availability of present program staff. The program needs one facilitator for every 15 farm families in addition to the statewide program coordinator to maintain the program. With requests for assistance from more than 60 additional farms, four facilitators need to be added to meet the demand.

#### 1997-1999/1999-2001 State Soil Conservation Committee and SSCC Leadership and Environmental Law Education and District Grants — \$60,000

In 1997, the budget and management of the North Dakota State Soil Conservation Committee was incorporated into the NDSU Extension Service. Scott Hochhalter transferred into the NDSU Extension Service as soil conservation coordinator and has provided leadership for the committee as well as for the 56 soil conservation districts. As part of the NDSU Extension Service, the N.D. State Soil Conservation Committee allocates and monitors the technician grant program. Under the program, educational training has been given to soil conservation supervisors and clerks in leadership, conservation law, policy development and personnel management.

A special education effort is under way to train supervisors and clerks in technology relating to e-mail, databases and World Wide Web management. The NDSSCC has also developed a Web page.

Conservation continues to be a major concern in North Dakota as it relates to soil, water, trees and other natural resources. The committee plans to aggressively work with conservation leaders to provide continued training and leadership.

### ● **1997-1999 Extension Crop Protection — \$270,000**

Janet Knodel was hired in January 1998 as the area Extension specialist located at the North Central Research Extension Center in Minot and has provided regional leadership in implementing new crop production systems and their best pest management strategies for insect pests and plant diseases. Her hiring signaled the arrival of entomology and plant pathology expertise in western and north central North Dakota. The initiative has supported research on agronomic and pest management practices like pest monitoring with insect traps, fertility, plant depth or rate, and how these variables affect crop yield. Numerous field crop tours, meetings, field days, scout schools and on-farm visits give producers, crop consultants and others in the industry information about new alternative crops and their best production systems. In addition, the initiative ensures that producers have the latest in new technology to combat pests and enables the discovery and development of new cropping systems and pest management methods. James D. Harbour was hired in November 1997 as an area Extension specialist at the Carrington Research Extension Center. He resigned in March of 1999. Although the position has not been refilled, there is a continuing need for expertise to address crop protection issues in this area of North Dakota that has a highly diverse mix of crops.

### ● **1997-1999 Crop Production Systems**

#### ■ **Weed Control — \$140,000**

Brian Jenks was hired in December 1997 as a weed scientist at the North Central Research Extension Center in Minot. His work assisted in a regional effort to label a new herbicide in 1999 and 2000 to control

many economically important weeds in sunflower. He is helping obtain needed weed control tools in other crops such as cramoie, canola, flax, pea, lentil, chickpea and dry bean. Studies at the center showed that high populations of Canada thistle were reduced as much as 90 percent with pre-harvest or post-harvest applications of Roundup. Reducing Canada thistle infestations will reduce herbicide costs and losses due to weed competition. The EPA has granted approval of most products requested for weed control in canola over the past two years, removing a major roadblock to expansion of canola production in the United States. North Dakota had 1.2 million acres of canola this year and produces 70 percent of all canola in the United States.

#### ■ **Wheat Breeding — \$155,000**

A second wheat breeder, Bill Borzonsky, was added to expand breeding efforts in sawfly-resistant hard red spring wheat, specialty wheats and hard white spring wheat and to provide back-up for the existing breeder. Previously, these three types of wheat represented only a very small effort in the existing breeding program. Benefits will be improved resistance to sawfly, a pest that is expected to increase in significance as reduced tillage becomes more widespread. Wheat varieties for niche markets will expand options for wheat farmers in the state. The germplasm base in all these programs has increased significantly. A technician for the project is supported by the N.D. Wheat Commission.

In 1999, "Argent," the only North Dakota released hard white spring wheat and 35 advanced North Dakota lines were evaluated for yield and disease performance at Casselton and Prosper. In February 2000, selections were made from 750 segregating white wheat populations grown in New Zealand to combine high quality, low disease and high yield potential. Two advanced lines exhibited significantly higher yield than "Argent" in two of the four tests and one line exhibited improved disease resistance across all tests. Twelve lines exhibited bread-making characteristics equivalent to or better than "Argent" and one line for potential noodle products has been identified.

#### ■ **Barley Research — \$167,500**

This initiative supports the double-haploid breeding program that may reduce the length of time needed to develop new varieties by up to three years. The program is used primarily for the Fusarium head blight resistance breeding effort. Experimental

barley lines have been developed with resistance to septoria leaf blotch, a foliar disease that has had a significant impact on barley yields in eastern North Dakota. Most funding is directed to one laborer and for vomitoxin testing. As a result of the program, good resistance to scab is on the horizon for barley. In two-rowed varieties, progeny from crosses of more than 2,000 selections were screened for fusarium head blight reaction at Osnabrock in 2000. DON, or vomitoxin, testing helped identify "Conlon as a cultivar that accumulates relatively low levels of the toxin in harvested grain

Continued support is necessary to maintain the plant breeder's ability to collect Fusarium head blight in the field and greenhouse and test for vomitoxin on prospective new varieties. There is a continued need for improved varieties with resistance to scab and other diseases.

#### ■ Durum Wheat Quality — \$125,000

A new cereal scientist, Frank Manthey, was hired for efforts in durum quality improvement. With the help of a half-time post-doctoral research associate and two graduate students, he is addressing the concerns of producers, millers, pasta processors and consumers. He evaluated about 45 advanced lines (315 samples) for grain, milling, semolina and pasta quality. He also evaluated about 650 early generation nursery lines per year for grain and semolina quality. A primary focus is to evaluate the quality of durum lines being developed by the NDSU durum breeder. Quality demands continue to change, and research is developing new tests that will allow for screening early breeding generations for strong gluten, color stability and reduced stickiness of pasta dough and cooked pasta. Additional research focuses on how agronomic practices affect processing qualities of durum wheat. The effects of herbicide treatments, sprouted kernels and rainfall just before harvest are being studied. Manthey and his team are also examining adjustments that can be made at the mill and the pasta processor that can improve product quality. Finally, he is studying pasta as a carrier for healthful ingredients such as flaxseed. North Dakota produces 70 to 75 percent of the durum wheat grown in the United States, and NDSU's Durum Wheat Quality and Pasta Processing Laboratory is the only laboratory of its kind located at a university.

### 1997-1999 Value-Added Research and Extension

#### ■ High-Value Crops — \$189,000

With the help of a new Extension specialist, a part-time research technician and part-time summer labor, research and demonstration projects were initiated on potato production for the french fry industry to enable potential irrigators and potato growers to economically raise this crop. Producers currently contract with two processors and grow exclusive varieties for a third. Two \$1 million potato storage facilities are being constructed, and the development of a processing plant is being considered. A pilot project is linking the region's wheat producers as preferred suppliers with food producers. In 1999, 1,500 acres of identity-preserved wheat were grown under irrigation in the project that aims to target stringent quality specifications for lucrative premiums. There is a potential for 50,000 acres or more of identity-preserved irrigated and dryland wheat to be produced in the region for this market.

Additional value-added industries being investigated include dairies, alfalfa processing, livestock feeding and malting barley.

As a result of the irrigation initiative the Williston Research Extension Center conducted research and demonstration projects on potatoes for the french fry industry, on irrigated malting barley, on identity preserved wheat and on value added safflower and durum in partnership with the Montana State University Eastern Agricultural Research Center in Sidney, Mont. The center has hired a half time research technician and part time summer labor for the work. The initiative also provided equipment for studying high value crops under field conditions. The economic impact of the irrigation initiative has begun with added potato acreage, new potato storage facilities and possibly a potato french fry processing plant in the near future. Irrigated malt barley production has increased from none to 500,000 bushels in 1999 to an estimated 2 million bushels in 2000. An identity preserved irrigated wheat project has the potential to enable MonDak wheat producers to become preferred suppliers of identity preserved wheat products to food processors. The initiative has resulted in newly developed and installed sprinkler irrigation systems by area farmers.

Projects need to continue to attract and develop the agricultural processing sector in the MonDak region. Four 40-acre irrigation systems are needed to establish irrigated cropping systems research in Nesson Valley and a research technician is needed to assist in the new irrigated cropping systems research.

### ■ Bison — \$100,000

The addition of a half-time technician and some part-time assistance at the Carrington Research Extension Center has allowed work to progress on feeding methods, efficiency and carcass value. Portions of the center's bison research facility opened less than a year ago and has only generated some observations to date with no studies having reached completion. Data from the bison research effort may be having an impact as more bison are being fed with higher energy diets resulting in lower cost of gain. Considering bison is a \$70 million industry in the state, modest improvements could have significant effects on the feeding of bison bulls. Bison research efforts have been conducted during the construction phase of the facilities through use of producer based animals and facilities.

The feedlot portion of the facility developed with initiative funding is just nearing completion. A continuation of the program is necessary if any data is to be generated on bison nutrition. Producers have no biological data on bison to base management decisions so this project is vitally important to North Dakota bison producers as well as those throughout the United States and Canada. This research facility is the focal point of an expanded bison research and education program that will make the best use of information generated from this project.

### ● 1995-1997 Potato Research — \$173,000

The replacement of the breeder and the increased infusion of operating funds resulted in a dramatic increase in the number of potato lines evaluated by the breeding program. In 1994, about 60,000 lines were evaluated. Last year, 118,000 North Dakota lines, plus 60,000 seedlings from Texas, Oregon, Michigan, Minnesota and Idaho were tested here. This increased evaluation effort will allow for the more rapid development of red, russet and white potato varieties for North Dakota seedsmen and potato producers. For instance, a current top prospect for future research has insect resistance, high yield capacity, and enhanced starch content along with the superior chip quality for which North Dakota potatoes are famous. High vigor is also common in hybrids developed for late blight resistance. Increased operating and equipment funds are necessary to maintain an efficient and productive potato research program.

### ● 1995-1997 Swine Extension and Research

Scott Carter was hired as swine specialist in December 1995 with funding from this initiative. He established swine nutrition research at NDSU relating to non-conventional grain sources. He also established an outreach program for bringing swine production technology and techniques to North Dakota producers. A technician was hired in December 1996 to collect and analyze swine data for faculty members. Carter left in July 1997, and Thomas Socha was hired in October 1998. He has worked closely with the North Dakota Pork Producers Association and the Cloverdale Growers Alliance Cooperative to improve and expand pork production in the state. He is evaluating terminal sire lines for muscle quality and is determining the muscle quality of pigs sold to Cloverdale Foods to establish minimum standards of quality that can be implemented by Cloverdale and other packers.

### ● 1995-1997 Cereal Science — \$367,000

One technician was hired to assist the hard red spring wheat breeder and a research specialist in plant pathology was added for screening wheat and durum for scab resistance. These positions and increased operating funds have allowed scientists in hard red spring wheat, barley and durum wheat to significantly increase their research efforts. They have increased testing of exotic lines from Brazil, Morocco, the Middle East, China and other locations. A screening nursery at Prosper, N.D., was established where lines can be subjected to heavy scab infection. In 1999, 3,000 durum lines were tested there. Researchers use 7,800 hill plots to evaluate advanced lines, segregating populations and introduced germplasm of hard red spring wheat there. This nursery creates a scab epidemic by inoculation and periodic misting. Funds have also allowed testing of durum wheat and barley lines in China during the off-season in an area where scab is an annual naturally occurring epidemic. In 1999, researchers evaluated 2,000 durum accessions from the world collection and 300 lines from the durum wheat breeding project there. More than 500 barley lines will be tested there this season. An irrigated nursery for barley was established near Osnabrock. More than 10,000 lines were screened for scab resistance there in 2000. A shuttle breeding strategy is being used in the barley breeding program. Resistant barley lines are identified in the Osnabrock nursery and then sent to China for rescreening. Resistant lines are then brought back to North Dakota for further testing. Forecasting models for

wheat foliar diseases have been developed and deployed for producer use. The wheat pest survey conducted since 1995 provides information about the crop condition, diseases and insects as well as yield and quality damage.

The threat of Fusarium Head Blight and foliar diseases continues with devastating losses occurring in many locations. Continued efforts in the development of resistance, spray techniques and forecasting is essential. In barley, scab-tolerant lines have been identified, but continued research is needed to develop agronomically acceptable varieties.

This initiative also supports five graduate students conducting insect research. With support from this initiative, improved aphid sampling plans were developed to assist spring wheat growers and crop consultants. Sampling guidelines were developed for white grubs in continuous cropping systems that guide insecticide application decisions. Researchers are studying European corn borers to determine how best to predict population levels and management.

Unlike the Corn Belt where two generations of European corn borers is the norm, some European corn borers have only a single generation in North Dakota while others have two, complicating management decisions. Researchers are developing management systems for controlling grasshoppers in legume cover crops used in annual crop-fallow rotations.

As production practices change and new technologies become available and as new insects invade, insect challenges to quality cereal production remain. BT corn provides a new opportunity, but its suitability and ecological implications to the region need to be investigated. The orange wheat blossom midge remains a problem. And the recent introduction of the cereal leaf beetle to western North Dakota show that we face the threat of new invasive pests.

# Proposed Optional Budget 2001-2003

**NDSU Extension Service**

**N.D. Agricultural Experiment Station**

**Northern Crops Institute**

**Senate Appropriations Committee**

January 4, 2001

**NDSU**

North Dakota State University

January 4, 2001

In this document you will find the proposed 2001-2003 biennial budget for the North Dakota Agricultural Experiment Station, NDSU Extension Service and Northern Crops Institute.

Our priorities for funding, as established by the State Board of Agricultural Research and Education (SBARE), are in priority order as follows:

1. Reinstate the cost to continue dollars for the hold-even budget.
2. Provide flexibility by investing in the core operating and salary budgets for these organizations.
3. Address important issues through a series of initiatives.

Thank you for your consideration. Please feel free to contact my office at any time regarding this document or with any other questions you may have.

Sincerely,



Patricia A. Jensen  
Vice President, Dean and Director  
Agricultural Affairs  
North Dakota State University  
701/231-7656

## Total Estimated Cost to Continue

(General Fund Only)  
Extension, NCI and Research

	(1) 2.5% Per Year Operating Inflation	(2) Estimated Cost to Continue 2000-2001 Salary Increases	(3) Risk Management Insurance	(4) Total Estimated Cost to Continue (1) + (2) + (3)	(5) Executive Recommendation
NDSU Extension Service	\$110,635	\$130,244	\$24,597	\$265,476	\$0
Northern Crops Institute	4,159	8,047	634	12,840	\$0
Main Experiment Station	70,339	341,902	37,419	449,660	\$146,840
Dickinson REC	2,942	21,075	3,000	27,017	\$0
Central Grasslands REC	4,708	9,643	1,714	16,065	\$0
Hettinger REC	6,224	9,537	1,229	16,990	\$15,761
Langdon REC	4,802	9,735	1,429	15,966	\$0
North Central REC	1,966	9,956	1,429	13,351	\$0
Williston REC	5,661	10,323	1,429	17,413	\$17,413
Carrington REC	4,159	18,115	2,714	24,988	\$0
<b>Subtotal</b>	<b>\$215,595</b>	<b>\$568,577</b>	<b>75,594</b>	<b>\$859,766</b>	<b>\$180,014</b>

## Cost to Continue — NDSU Extension Service

**Total new state general fund resources** \$265,476 no new FTE  
**Executive Recommendation** \$0

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Salaries	\$130,244
Operating	\$110,635
Risk Management Insurance	\$ 24,597

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The impact of the cost to continue reductions for the 2001-2003 biennium for the NDSU Extension Service will include increased user fees for producers, crop consultants and other clients; less support staff which means an increase in clerical work done by agents, area specialists and state specialists; delayed hiring after potential retirements in critical subject matter areas; reduced support to the North Dakota soil conservation community (supervisors and clerks); and decreased service to the people involved in our educational programs.

Reinvestment into these same positions is important because, as a tax-supported organization, raising user fees to extremely high dollars defeats the purpose of our broad-based educational efforts; support staff are leading our organization to high levels of computer and other technical skills; many positions are currently being left unfilled and delaying hires provides significantly less service to North Dakota citizens, especially agricultural producers; and our goal is to strengthen our educational delivery especially in rural North Dakota for economic and personal reasons, not to decrease this service. Therefore, this reinvestment is critical to addressing the changing needs in North Dakota.

## Cost to Continue — N.D. Agricultural Experiment Station

**Total new state general fund resources** \$449,660  
**Executive Recommendation** \$146,840

### Hold-even Budget

In spite of limited resources, the ND Ag Experiment Station is extraordinarily productive and responsive to the emerging needs and problems of North Dakota producers and rural communities. In the past year, Alsen, a new scab resistant wheat variety, was released in response to a disease that has caused upwards to \$800 million in yield losses alone in damages to North Dakota small grain farmers. NDSU livestock reproductive physiology researchers were highlighted in USDA's largest national competitive grants program. Our internationally-renowned food safety program developed the first academic minor in the discipline and has been featured in numerous news articles. A mix of state, federal, and grant resources support our programs, external funding from grants increased 24 percent last year. This rising level of "match-funding" signifies strong stakeholder demand for our public research programs.

The State Board of Agricultural Research and Education (SBARE), which was created by the 1997 legislature, has thoroughly reviewed the programs of the North Dakota Experiment Station and concluded that now is not the time to reduce programs or funding. If additional funds are not provided to cover our "Restoration/Costs to Continue," the following program cuts and changes will be necessary. In many cases, user fees will be increased in an attempt to raise more income and additional grants will be sought. In the last legislative session and in recent meetings with commodity groups, especially the Livestock Endowment Foundation, significant concern has been expressed over increased reliance on income monies as they detract from our research mission and emphasis on state issues.

### Main Station

- **Agriculture Communication:** The Department will attempt to generate more revenue through increased activities for non-ag units and increased participation in ag grants; the department also expects to reduce salary when positions can be refilled at a lower salary than currently is being paid.
- **Veterinary & Microbiological Sciences:** The Department will be forced to eliminate a staff position; among the consequences will be increased user fees for the North Dakota Veterinary Diagnostic Laboratory.
- **Agricultural & Biosystems Engineering:** The Department will reduce ABEN research programming in irrigation systems management technology for optimizing productivity/profitability of cropping rotations (including high value crops) with minimized environmental impacts.
- **Plant Pathology:** Funds from a bean pathology or barley pathology faculty position will be redirected to support work in white mold.
- **Plant Sciences:** Technicians in spring wheat, durum, potato breeding, and barley breeding will be placed partially on grant funds. The impact will be that monies spent on research directed at breeding for disease resistance in four major crops in North Dakota will be directed toward salaries. This will slow progress in breeding efforts directed toward scab resistance in spring wheat, durum, and barley, and blight resistance in potato.
- **Entomology:** Research focus on sunflower entomology will be reduced.

## Proposed Optional Budget, 2001-2003

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- **Soil Science:** Researcher involving soil problems/management will be reduced (filling dept. chair position internally).
- **Agricultural & Applied Economics:** The Department will reduce clerical support and increase operating budget reliance on external grant funds. Impacts will include reduced paper copies of research reports and other departmental publications, increased response time to internal and external requests for information, reduced clerical support for teaching activities, and increased effort devoted to procuring external funding for departmental operations and salary.
- **Animal and Range Sciences:** One technician will be shifted to grant funds or released. If shifted to a grant, the individual will have to fulfill the obligations of the grant and the faculty member(s) who the technician was assisting will have to do more of their own support work. This will reduce the amount of research and outreach the faculty member(s) will be able to accomplish and provide producers.
- **Cereal Science:** Reassess staff position in hard red spring wheat and durum quality program.

### Research Extension Centers

- **Central Grasslands:** Increase user fees to achieve our hold even budget.
- **Hettinger:** Partially reduce technical employee in the sheep research and plant science programs.
- **Williston:** Cut the personnel support category and reduce off-station research and variety testing programs in northwest North Dakota.
- **North Central:** Cut \$11,922 from a weed science research specialist's salary which reduces the specialist from full-time to part-time thereby reducing the research scientist's capacity to conduct as much producer-driven, integrated research at the center or off-station. Will attempt to replace this amount with fee dollars to maintain a full-time employee.
- **Dickinson:** Reorganize and reduce swine research by shifting efforts from swine to beef.
- **Langdon:** \$12,000 full-time and \$2,537 part-time salaries (off-station variety testing) will shift to grant funding. Research which generates localized information for immediate producer decisions will be reduced.
- **Carrington:** Research in crop management will be reduced thereby reducing the speed by which we are able to refine and improve efficiencies in crop production techniques for farmers in the region.

## Cost to Continue — Northern Crops Institute

**Total new state general fund resources** \$12,840  
**Executive Recommendation** \$0

The Northern Crops Institute (NCI) accomplishes its mission of serving the state of North Dakota and the region by conducting educational and technical programs that develop and maintain markets for northern grown crops. In order to cover the \$12,840 in Costs to Continue, NCI will need to generate additional revenues. Increased course fees of \$100 to \$200 per course per participant will be charged. NCI course fees are currently established for competitiveness with other organizations offering similar types of educational programs for professionals. Increased course fees could decrease NCI's competitiveness and decrease access to grain buyers and food processors from the U.S. and around the world. Other disadvantages that NCI faces are 1) higher transportation rates to attend courses in North Dakota compared to educational organizations located in more urban airline hubs and 2) limited resources compared to our competitors, especially the Canadian International Grains Institute in Winnipeg that has a similar mission to the NCI.

Additional user fees would be charged to the NDSU Animal and Range Sciences Department and NDSU Research Extension Centers to cover some of the costs accrued through milling of feed for their use. Increased fees for feedmill users would increase costs for other groups within NDSU agriculture; this does not lessen the financial burden on the entire budget for NDSU Experiment Station.

If Costs to Continue were reinvested, NCI would not be required to increase course fees to users, which would enable NCI to remain more competitive in educational training for buyers and processors of northern grown crops and livestock researchers in North Dakota. NCI is an influential part of the North Dakota agricultural chain, which extends from the farm to the markets of the world.

# Core Programs and Staffing — NDSU Extension Service

## Investing in the Changing Needs of North Dakotans

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<b>Total new state general fund resources</b>	<b>\$613,457</b>	<b>no new FTE</b>
<b>Executive Recommendation</b>	<b>\$574,094</b>	
Salaries	\$249,831	
Operating	\$363,626	
Operating includes:		
Educational programming	\$125,000	
Technology	\$100,000	
Instructional materials	\$88,626	
Travel	\$50,000	

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### ■ Situation

The NDSU Extension Service is an evolving organization, constantly changing to meet the needs of North Dakotans. Many of these needs can be anticipated but others emerge quickly and must be dealt with in a quick and flexible manner. The NDSU Extension Service continues to be a unique organization that is locally based and addresses local issues yet has resources available at the federal, state and county levels.

When considering information obtained from recent multicounty advisory committee meetings, the Extension Program Directions Committee, State Board of Agricultural Research and Education (SBARE) discussions, census data and agriculture statistics, the role of the NDSU Extension Service in the new century will need to focus on continued strong educational efforts in agriculture, youth and family development, and community leadership development as well as be expanded in the area of economic development, particularly in rural areas, utilizing technology.

North Dakotans consider their local extension offices and the research extension centers positive places to learn, to discover new ideas and alternatives, and to secure new information. This initiative addresses the resources needed to be a proactive, flexible, responsive educational entity for our citizens in an ever changing environment.

### ■ Common Themes

Common themes that were gathered from the various groups listed above focus on the following areas:

- The needs of North Dakota citizens require a continuing high level of expertise in extension's major program areas which are agriculture and natural resources, youth and family development, and community leadership development. Although programs are planned in all of these subject matter areas, issues such as fusarium head blight, the orange wheat blossom midge, youth at risk, food-borne illnesses, Sclerotinia (white mold), the 1997 flood, and declining market prices must be addressed quickly and without much notice.

- North Dakota citizens want to access a broad range of subject matter information through their extension office, especially using technology and distance education. They want this information to have immediate relevancy and be available at their convenience.
- Although crop and livestock production issues are still critically important, producers need enhanced skills in marketing, risk management, business arrangements, globalization and labor issues.
- Many rural North Dakotans are seeking ways to increase their income and maintain their lifestyle by using technology to develop business opportunities. The NDSU Extension Service can provide leadership in helping citizens develop these skills.
- Many rural North Dakota communities are struggling to sustain themselves. Community and agricultural leadership is needed to help create new ideas, develop plans and implement strategies. The staff of the NDSU Extension Service serves as an important link in this process.
- The NDSU Extension Service staff can provide leadership by facilitating discussions relating to public issues at the local level. The issues may or may not be controversial in nature.
- Although it is often said that youth are the foundation of the state's future, the truth remains that youth are invaluable in addressing today's critical needs. The NDSU Extension Service must continue to provide leadership for educational programming that involves youth in current issues, that promotes positive youth development and that addresses critical issues relating to North Dakota children and adolescents.

## ■ Program Support

The NDSU Extension Service seeks new state general fund resources for the 2001-2003 biennium targeted to the following areas:

- **Strengthen the educational competencies of extension agents.** To address current issues in a rapid and flexible manner, extension agents must receive educational training and updates from specialists and faculty members through face-to-face meetings as well as through the use of technology. The 21st century extension agent must be current.
- **Agent specialization.** All extension agents would select an area of subject matter expertise and become more specialized in delivering that subject matter within the county, throughout a multicounty area or across the state. Each agent would identify a plan for developing that expertise.
- **Skill enhancement.** All extension agents would enhance their skills in management and marketing, and in issues relating to positive youth development in North Dakota. Although agents would have other specific areas of specialization, these two program areas affect most producers and families in the state and need added emphasis.
- **Enhanced technology in program delivery.** All county and area extension staff must increase their skills in the use of technology. These skills are needed to secure information for their professional development and to provide educational experiences for a wide variety of clientele. Skills targeted during this biennium would include the World Wide Web, video-conferencing, video-streaming, electronic mail and list-serve groups, NDSU's Group Decision Center and highly technical presentations.

- **Expand MIV.** The Master Internet Volunteer (MIV) program would be expanded to least 40 counties. Currently, 36 offices have implemented the program. Volunteers who are involved in 30 hours of training taught by the extension agents, in turn provide 30 hours of technical training to local citizens.
- **Boost technology skills of soil conservation community.** Extension would continue to increase the technology skills of the soil conservation community, and assist supervisors and employees in using technology to be proficient in their leadership and conservation educational needs.
- **User-friendly offices.** County and area extension offices would become more "user friendly" for the local citizens. Provisions would be made to make computer technology available in county offices for individuals who do not have access in their homes, to provide programs when convenient to the user, and to create a learning center environment (e.g. computer bank) in at least 10 locations in the state working cooperatively with the local county commissioners.

- **Training to work better with changing community structures and promote economic development.** County and area staff would receive additional training in entrepreneurship for both youth and adults, community goal setting and public issues leadership. These skills are needed to address the changing community structures within North Dakota and to promote rural economic development. At least six extension agents would lead efforts in these program areas.

These steps would allow the staff of the NDSU Extension Service to provide on-time, quality education to the citizens of North Dakota.

# Core Programs and Staffing — N.D. Agricultural Experiment Station

**Total New State General Fund Resources: Main Station – \$1,189,300**  
**Executive Recommendation     \$1,112,987**

The foundation of North Dakota's economy is facing rapid technological and structural change. Agricultural producers in other regions of the country are benefitting from new production technologies, varieties, and niche markets. While large agribusiness firms initiated many projects in other regions, they have not been very active in North Dakota. Thus, greater public investment in North Dakota agricultural research is required if we are to remain competitive with other producing regions. The return on agricultural research investment exceeds 30 percent, benefiting all agricultural producers. The new spring wheat variety Alsen alone has a benefit/cost ratio of 7 to 1. Agricultural research is fundamental to a thriving agricultural economy to sustain and expand our rural communities.

Although new opportunities are one priority, additional investment in fundamental agricultural research is also needed to assist producers facing new virulent crop and livestock disease strains and changing market demands. NDSU faculty require more funding to increase accessibility out-state, be more responsive to emerging production problems, disseminate research findings "real-time" to our most advanced producers, and advise more graduate students to assist NDSU in reaching Carnegie I research status.

Specific programs to be developed with these funds include:

## Main Station

- **Agriculture Communication:** Explore and implement procedures that assist researchers and specialists disseminate their information in formats that meet the current desires/needs of taxpayers; provide more training and consulting with faculty, specialists, agents, staff throughout NDSU agriculture.
- **Veterinary and Microbiological Sciences:** Enhancement of the core budget will restore some flexibility in responding to emerging disease problems in North Dakota livestock, and will allow researchers greater opportunities to focus on specific problems such as scours and Johne's Disease.
- **Agricultural and Biosystems Engineering:** Added funding will support ongoing professional development/learning; and efforts to maintain economic viability of ag production, create economic opportunity in ag, and conserve and protect soil and water resources.
- **Plant Pathology:** White mold research will be supported by providing a graduate student and operating money for faculty to travel to plots, data processing, research, supplies, repairs, fees, and freight.
- **Plant Sciences:** Funding will increase technical support for the molecular marker lab. Graduate student assistantships would be assigned to research projects depending upon predominant crop problems facing ND crop producers.
- **Entomology:** A return to previous levels in the core budget will be directed to supporting departmental research projects, primarily by funding graduate student stipends.

- **Soil Science:** Added state support would allow replacement and improvement of equipment and other infrastructure components – expenditures that are not supported by grants.
- **Agricultural and Applied Economics:** The extra \$5,700 would be held within the department's operating budget to assist younger faculty (without large grants) with additional travel, page charges, and some student help.
- **Animal and Range Sciences:** Additional funding will be used to support student and seasonal labor. Some of the funding will be used for travel within the state and for chemical and other supplies necessary to do research. Some funds will be used for maintenance and replacement of laboratory and livestock farm equipment that is necessary for the conduct of research.
- **Cereal Science:** Enhance wheat quality research.

### **Research Extension Centers**

- **Central Grasslands:** Support will enhance cooperative research activities with main station scientists. Central Grasslands' base increase is \$37,580. Executive Recommendation is \$35,168.
- **Hettinger:** Funds will reduce the impact of greatly increased costs of DOT charges; use additional funds to give further support to the graduate student programs at this center. Hettinger's base increase is \$43,355. Executive Recommendation is \$40,574.
- **Williston:** Permit continuation of off-station research at current levels without reducing programs that promote value-added and high-value crop production in northwest North Dakota. Williston's base increase is \$40,572. Executive Recommendation is \$37,969.
- **North Central:** Funding will be used to conduct research on new crops, crop pests, and problem invasive weeds (such as spotted knapweed and purple loosestrife) that are serious threats to our region. Advisory board members and extension agents have strongly encouraged us to conduct research in areas infested with these new problems. North Central's base increase is \$33,885. Executive Recommendation is \$31,711.
- **Dickinson:** Funds would be used to support the agronomy and range research programs. Dickinson's base increase is \$69,133. Executive Recommendation is \$64,697.
- **Langdon:** Added funding would reduce the pressure to obtain grants and/or raise seed income, resulting in land and labor use on labor intensive systems and rotation studies which require several years' work before the information is usable. Langdon's base increase is \$37,409. Executive Recommendation is \$35,008.
- **Carrington:** Additional funding will be directed toward the basic operational and support infrastructure for the primary crops and livestock research programs. Carrington's base increase is \$61,730. Executive Recommendation is \$57,769.

## Core Programs and Staffing — Northern Crops Institute

**Total New State General Fund Resources: \$32,068**  
**Executive Recommendation: \$30,010**

### ■ Mission

The Northern Crops Institute (NCI) supports North Dakota agriculture through expanding and maintaining domestic and international markets for northern grown crops. Specialized training courses and technical services are designed to respond to changing industry demands and to the world marketplace. The Northern Crops Institute receives funding from the state legislatures of North Dakota, South Dakota, and Minnesota, and check-off funding from agricultural commodity groups in these three states and Montana. NCI also partners with USDA/FAS, U.S. Wheat Associates and U.S. Grains Council and other professional cereal science groups. These collaborative efforts are an important cornerstone in the success of the NCI.

### ■ Investing in Market Development for North Dakota

NCI is an influential part of the North Dakota agricultural chain, extending from local farms to the markets of the world. International competition has increased both for agricultural market share and for NCI's program market share, requiring a new level of sophisticated promotion and marketing efforts. NCI hosted over 800 course participants, trade delegations, and visitors from 43 countries during 1999. In the past two years, over 325 participants plus representatives of their regions and interpreters, have been educated through NCI short courses, bringing together grain traders, flour millers, feed

manufacturers, food processors, government officials and others. Over 300 days of staff time were devoted to technical processing of regional commodities. Staff members also provide valuable technical assistance to users of regional commodities as international consultants.

Challenges to the NCI's efforts include many factors. International and domestic travel becomes increasingly more important to the survival of NCI's programs, while the cost of travel steadily increases. NCI must compete effectively with similar organizations such as the Canadian International Grains Institute (CIGI) located in Winnipeg, which has an annual budget of \$2.5 million (U.S.) and a much larger staff than NCI. Staff competencies must remain cutting edge in order to maintain NCI's reputation for technical excellence. Additional funds will enable NCI staff to strengthen their marketing and technical capabilities through increased professional development and staff training opportunities. Increased resources for brochures and mailings that promote NCI programs and recruit potential participants are required to maintain enrollment in courses and to market other NCI services. If Costs to Continue of \$12,840 are reinvested, NCI will not be required to increase course fees to users. Funding this priority will increase marketing and promotion capabilities to remain competitive.

### ■ Continuing Service to the North Dakota Livestock Industry

The NCI serves North Dakota's livestock industry by manufacturing feed for stock and research livestock at NDSU and a number of the NDSU Research Extension Centers. Salaries for

## Proposed Optional Budget, 2001-2003

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feedmill staff are paid from special funds. Utility costs and repairs at the NCI Feedmill average \$20,000 to \$25,000 more per biennium than are covered in the current general fund. Increasing the core operating budget through the general fund will enable the NCI feedmill program to continue milling, pelleting, bagging and delivering feed for commercial and research animals at the NDSU Main Experiment Station and several Research Extension Centers. User fees would not need to be charged to those units, thus increasing their operating costs.

## Extension and Agricultural Experiment Station Initiatives

As Ranked by the State Board of Agricultural Research and Education

1. **BeefLine.** This initiative integrates beef-related research and Extension efforts across the state and sets priorities for research and education programs to address emerging concerns and opportunities. \$450,000  
Executive Recommendation: \$0
2. **Crop Production, Diversification and Protection.** White mold control research, studies on insect transmission of plant disease, research to improve fertility management, added technical support for the Molecular Marker Laboratory, and two graduate students for crop production and plant genetics would be supported. \$336,000  
Executive Recommendation: \$0
3. **Agricultural Financial Management.** This Extension Service initiative would provide educational opportunities for staff and producers to help them improve their risk and financial management skills and increase their knowledge of contracts, alliances, labor negotiations and niche marketing. \$140,761  
Executive Recommendation: \$0
4. **Barley.** Improved feed barleys, malt barleys for western North Dakota, feeding research with barley and development of barley feeding enterprises are key elements in this initiative. \$228,000  
Executive Recommendation: \$0
5. **Wheat Quality.** A post-doctoral candidate and two Ph.D. candidates will assist in research to develop new food and industrial markets for durum and hard red spring wheat. \$190,000  
Executive Recommendation: \$0
6. **Cooperative Canola Research.** Funded research will focus on the influence of crop rotations, previous disease levels and other factors on disease and disease control in canola. Large demonstration plots will be used to compare pest control strategies and enhanced production methods. \$110,000  
Executive Recommendation: \$0
7. **Irrigation.** Under this initiative, researchers will develop irrigated crop management technologies that maximize yield, quality and profitability while making efficient use of resources and properly managing use of agricultural chemicals and other inputs to protect the environment. \$100,000  
Executive Recommendation: \$0
8. **Changing Face of Rural Communities.** This effort will provide an individual to lead educational efforts relating to technology, including the Master Internet Volunteer program, e-commerce and entrepreneurship programs and other business opportunities. Another will support technology needs of staff in county Extension offices and at Research Extension Centers. \$272,000  
Executive Recommendation: \$0
9. **North Dakota Agricultural Weather Network Center.** Funds would maintain the more than 50 NDAWN stations across the state that provide data for producers, researchers, energy companies, contractors and others. \$40,000  
Executive Recommendation: \$0
10. **Langdon Learning Facility.** This initiative provides funds to operate a new building that will house an office area, computer classrooms dedicated to distance education and a large meeting room with interactive videoconferencing ability. \$32,000  
Executive Recommendation: \$15,000

## ■ Capital Project

**Langdon Learning Center.** This 10,000 square foot facility at the Langdon Research Extension Center will provide a focal point for community outreach, distance education and agricultural research in a 10-county area of northeastern North Dakota. The center will help facilitate value-added economic development projects and rural community sustainability in the region. The project is ranked 13th on the State Board of Higher Education's list of capital projects.

**\$300,000**

**Executive Recommendation: \$150,000**

# Executive Recommendation: 2001-2003

## N.D. Agricultural Experiment Station

### NDSU Main Station BUDGET SUMMARY

Funding Source	1999-01 Appropriation	2001-03 Executive Recommendation
General Fund	\$26,076,382	\$28,415,985
Federal Funds	4,782,004	4,782,004
Special Funds	15,774,663	22,030,608
<b>TOTAL</b>	<b>\$46,633,049</b>	<b>\$55,228,597</b>
<b>LINE ITEM</b>		
Salaries and Wages	\$37,754,309	\$40,952,648
Operating Expenses	4,193,330	10,027,903
Equipment	1,532,746	1,532,746
Capital Improvements	852,664	415,300
Agriculture Research Grants	2,000,000	2,000,000
Animal Replacement	300,000	300,000
<b>TOTAL</b>	<b>\$46,633,049</b>	<b>\$55,228,597</b>

### Branch Research Centers

By Line Item	1999-01 Appropriation	2001-03 Executive Recommendation
Dickinson Res Ext Center	\$2,744,804	\$3,132,653
Central Grasslands Res Ext Center	\$1,384,499	\$1,413,982
Hettinger Res Ext Center	\$1,303,355	\$1,559,583
Langdon Res Ext Center	\$1,081,797	\$1,781,894
North Central Res Ext Center	\$1,307,598	\$1,511,068
Williston Res Ext Center	\$1,130,381	\$1,413,786
Carrington Res Ext Center	\$2,449,383	\$2,959,679
<b>TOTAL</b>	<b>\$11,401,817</b>	<b>\$13,772,645</b>
<b>By Funding Source</b>		
General Fund	\$7,060,029	\$7,899,160
Special Funds	4,341,788	5,873,485
<b>TOTAL</b>	<b>\$11,401,817</b>	<b>\$13,772,645</b>

### Agronomy Seed Farm

By Line Item	1999-01 Appropriation	2001-03 Executive Recommendation
Agronomy Seed Farm	\$1,202,339	\$1,259,140
<b>TOTAL</b>	<b>\$1,202,339</b>	<b>\$1,259,140</b>
<b>By Funding Source</b>		
Special Funds	\$1,202,339	\$1,259,140
<b>TOTAL</b>	<b>\$1,202,339</b>	<b>\$1,259,140</b>

# **NDSU Extension Service**

## **BUDGET SUMMARY**

<b>Funding Source</b>	<b>1999-01 Appropriation</b>	<b>2001-03 Executive Recommendation</b>
General Fund	\$12,975,020	\$14,379,745
Federal Funds	7,736,359	6,236,000
Special Funds	9,008,387	13,062,301
<b>TOTAL</b>	<b>\$29,719,766</b>	<b>\$33,678,046</b>

<b>Line Item</b>		
Salaries and Wages	\$24,965,080	\$26,183,226
Operating Expenses	3,656,836	6,216,970
Equipment	517,850	697,850
Soil Conservation Grants	580,000	580,000
<b>TOTAL</b>	<b>\$29,719,766</b>	<b>\$33,678,046</b>

**Northern Crops Institute**  
**BUDGET SUMMARY**

<b>Funding Source</b>	<b>1999-01 Appropriation</b>	<b>2001-03 Executive Recommendation</b>
General Fund	\$688,579	\$724,426
Special Funds	408,074	732,697
<b>TOTAL</b>	<b>\$1,076,653</b>	<b>\$1,457,123</b>

<b>Line Item</b>		
Salaries and Wages	\$885,123	\$985,010
Operating Expenses	118,650	399,233
Equipment	72,880	72,880
<b>TOTAL</b>	<b>\$1,076,653</b>	<b>\$1,457,123</b>

**CHAPTER 21**

**HOUSE BILL**

(Appropriations Committee)  
(At the request of the Governor)

**EXTENSION SERVICE, CROPS INSTITUTE,  
TRANSPORTATION INSTITUTE, EXPERIMENT CENTERS,  
AND SEED FARM**

*(Requesting this section be codified into the ND Century Code.)*

**SECTION 3. 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 during the biennium beginning July 1, 2001, and ending June 30, 2003.

*(Recommended changes.)*

**SECTION 5. TRANSFER AUTHORITY.**

Upon approval of the state board of agricultural research and education and  
research station may be transferred  
appropriate, directors, may transfer appropriation authority, within subdivisions 4, 5,  
with notification to  
and 6 of section 1 of this Act, and shall notify the office of management and budget  
within ten days.

**SENATE BILL**  
(Appropriations Committee)  
(At the request of the Governor)

**SECTION 24**

5. Develop a biennial budget request and submit that request to the state board of higher education on or before March first of each even-numbered year;

11-27-00

**ONE LINE ITEM BUDGET**

Change Main Station, Extension, and NCI budgets to one line item like the branch stations to allow internal flexibility to attain maximum efficiency in these programs.

12-22-00

# impacts of the

NDSU Extension Service

N.D. Agricultural Experiment Station

*an Annual Report to the North Dakota  
State Board of Agricultural Research  
and Education*

July 1, 1999 – June 30, 2000

**NDSU**

North Dakota State University

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# impact

## Meeting the challenges of crop production

*Changing climate conditions, pests and prices make crop production a challenge. Through these challenges NDSU Extension specialists and agents respond by helping the state's producers find ways to improve the profitability and sustainability of crop production.*

■ **Diversifying our strengths.** Relying on small grains as principal crops has led to increased weather, disease and market risk for North Dakota farmers. Since 1996, NDSU Extension Service specialists and agents have helped producers diversify. In the past four years the state has seen acres planted to canola increase 344 percent, to soybeans 112 percent, to flax 167 percent, to field peas 264 percent, to lentils 200 percent, to mustard 140 percent, to edible beans 14 percent, to corn 37 percent and to sunflower 30 percent. This change increased gross income to North Dakota farmers by about \$185 million — about \$11.19 per acre.

■ **Cutting costs and weeds while boosting family time.** NDSU's Extension sugarbeet specialists developed a method of applying postemergence herbicides to sugarbeets that cuts application rates by 66 to 75 percent. In 1998, the year this "micro-rate" management technique was introduced, 64 percent of the growers in the Red River Valley used it, saving an estimated \$30 to \$40 per acre. The lower rates and cost savings permit aerial spray applications when fields are too wet for conventional sprayers. Unlike full-rate applications which must be done in the late afternoon or evening to avoid crop damage, micro-rate applications can be done during the day, freeing up time for growers to spend with their families.

■ **Winning a war on weeds.** Wild oat can cause a 17 million bushel wheat loss in a year — a loss of more than \$50 million. Wheat loss from foxtail, wild buckwheat, wild mustard, field bindweed

### NDSU Extension Service Program Areas:

#### ■ **Competitiveness and Profitability of Crop Production**

- 1) 4-H Youth Development
- 2) Community, Economic Development and Leadership
- 3) Competitiveness and Profitability of Animal Production
- 4) Farm and Family Economics
- 5) Human Development
- 6) Natural Resources and Environmental Management
- 7) Nutrition, Food Safety and Health



*The NDSU Extension Service creates learning partnerships that help adults and youth enhance their lives and communities.*

and Canada thistle may exceed 40 million bushels or \$120 million. NDSU weed scientists look for solutions to existing problems and new concerns, such as herbicide-resistant weeds. Extension specialists, area agronomists and Extension agents use research data to educate growers on the most efficient practices for weed control. By following NDSU recommendations for controlling wild oat, an additional 15 million bushels would be obtained by growers. In 1999, one grower said NDSU weed control recommendations saved him \$27,000 in herbicide costs.

■ **Farming precisely.** In 1994, the year the NDSU Extension Service established a program on precision farming, only 10,000 acres were treated with a variable-rate fertilizer application. Since then, NDSU research found that zone sampling based on land elevation gave producers similar information to more expensive grid sampling, making the use of site-specific techniques more practical. Today, a third of sugarbeet acres in the Red River Valley are managed with site-specific technology. Variable rate technology is also spreading to other parts of the state with significant acreage near Jamestown and Dickinson.

■ **Scab busters.** Fusarium head blight, or scab, is a destructive fungal disease that reduces wheat yield and quality. An epidemic in 1993 and losses in subsequent years cost the state's economy an estimated \$2.5 billion. NDSU joined scientists from 13 other states to evaluate fungicides and other control methods. Based on their work, the EPA granted emergency exemptions for the use of two systemic fungicides to control scab in wheat. NDSU faculty also learned that angling spray nozzles forward and backward improved fungicide coverage on wheat heads. Extension agents and area and state specialists educated producers on control measures for scab with demonstrations, meetings and press releases. The net return for wheat producers in North Dakota and northwest Minnesota in 1998 from use of the fungicides and the improved application techniques was about \$19.9 million.

■ **No small potatoes.** A map of soil and water resources available for irrigated potatoes in the Jamestown area and a clearinghouse of information on high-value crops, including potatoes, developed by NDSU specialists and Extension agents were instrumental in bringing a new potato-processing plant to North Dakota. Meanwhile Extension information efforts have supported the existing potato industry in the Red River Valley, and NDSU specialists are helping Williston area producers explore the potential of growing irrigated potatoes there. Irrigated potato acreage in the state grew from 5,000 acres in 1988 to more than 35,000 acres. The Jamestown plant yielded \$20 million in new direct revenue to producers, an increase of more than \$170 million in gross business volume and the creation of about 1,700 new jobs.

■ **What's the problem here?** New technology is making it easier for local Extension agents to work with state specialists to diagnose producers' problems or improve management. For example, in the north central part of the state, a producer contacted an area specialist with concerns about his canola crop. The specialist diagnosed the problem as sulfur deficiency and had the diagnosis confirmed by electronically sending digital pictures to a state specialist. Based on the diagnosis, the producer applied a treatment to correct the problem at a cost of about \$8 per acre. The resulting increase in yield improved income by about \$57 per acre.

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# impact

## Preparing today's young leaders

*North Dakota continues to be an excellent place for kids. The state has good parents, good schools and good communities. That's not to say there aren't problems. Family and economic stress can take a toll. New research points to the risks of drug use and other delinquent behavior for rural as well as urban kids. And as adults, today's kids will face a more complex world than ever before. NDSU Extension Service specialists, agents and volunteers help youth develop the lifelong skills that will help them make the transition to adulthood. Positive lifestyles, character, decision making and career preparation are elements of 4-H youth development programs.*

### NDSU Extension Service Program Areas:

#### ■ 4-H Youth Development

- Competitiveness and Profitability of Crop Production
- Community, Economic Development and Leadership
- Competitiveness and Profitability of Animal Production
- Farm and Family Economics
- Human Development
- Natural Resources and Environmental Management
- Nutrition, Food Safety and Health



*The NDSU Extension Service creates learning partnerships that help adults and youth enhance their lives and communities.*

■ **Who we reach.** Last year there were 6,697 youth enrolled in North Dakota's 537 4-H clubs. Special Interest, short-term programs offered by the NDSU Extension Service reached 22,931. There were 23,392 youth enrolled in school enrichment programs coordinated by Extension agents in cooperation with school officials. Other programs including individual study, camps and child care education programs reached another 1,020. A total of 39,033 youth participated in NDSU Extension Service programs. Extension staff received help from 6,489 adult and youth volunteers in delivering those programs.

■ **Character Counts!** The NDSU Extension Service uses the "Character Counts" program to teach six pillars of character: trustworthiness, respect, responsibility, fairness, caring and citizenship. In the past year, about 700 individuals were trained to use the curriculum to reach an estimated 20,300 youth. Several communities are conducting campaigns to involve the entire community in character education efforts. Teachers report that as a result of the program, youth treat themselves, others and property with more respect, show more responsibility, are more truthful, help each other, are more cooperative and argue less. A Jamestown teacher commented, "This is the first project people can remember where schools and the community are on the same side and helping to support youth and the project."

■ **Helping children of divorce.** More than 47 percent of marriages performed in North Dakota in the last 10 years have ended in divorce. In some counties, the

rate is more than 80 percent. Children from those marriages are at risk for school dropout, early sexual activity, delinquency and other social or emotional problems. The NDSU Extension Service worked with the Village Family Service Center to develop Children of Divorce, a parenting program to help parents recognize potential problems and increase their commitment to children's well-being. The program is now offered in most North Dakota counties, and nearly 5,000 individuals have participated. More than 80 percent of the participants said the program helped them understand how children are affected by divorce, said the program would influence their decisions and planned to make a stronger effort to work with their ex-spouse.

■ **Technology helps teens help communities.** The NDSU Group Decision Center's networked computers allow participants to share and discuss ideas in an "electronic democracy." 4-H has used the center to allow 60 teens from across the state to discuss issues in local communities that affect them. As a result, a forum process has been developed that allows teens to discuss freely and anonymously how they view their lives. With encouragement from the first group of participating teens, the concept is being brought to 10 North Dakota communities. Research suggests that youth need to be connected to their community. This effort will allow teens to freely discuss community issues, have a voice in decisions that affect them and foster an environment that views local teens as a resource to their communities.

■ **Money matters.** The U.S. personal savings rate is at an all-time low, and credit card debt continues to cause problems for families. The NDSU Extension Service High School Financial Planning Program was offered by Extension agents in more than 30 schools reaching nearly 1,300 students.

■ **Growth through gardening.** The 4-H Kids Garden Project in New Town on the Fort Berthold Reservation combines science, diet and culture. The 18 participating youth learned gardening skills and how to prepare and eat fresh produce through this summer gardening program. They learned responsibility and practical work skills in weekly sessions and learned about the importance of farming to the Mandan and Hidatsa tribes from community elders. Several youngsters have planted gardens at home, and adults have shown new interest in gardening.

■ **Career Jumpstart.** With leadership from the NDSU Extension Service-Cass County, the Automotive and Diesel Technician Internship was established in 1997. Beginning in the junior year, students may take related course work and participate in on-site paid work experience. The program helps students see the relationship between school and work, helps them develop social and technical skills, and provides graduation credit. In just over two years, the program has grown from five students and three dealerships to 12 students, eight auto dealerships, two diesel dealerships and two collision centers. One student completed the program and is attending a technical college with financial support from a dealership. Parents, supervisors and teachers have observed changes in career awareness, an improved focus on academics and greater maturity among participants. The National Honda Corporation, Russ Honda Nissan, Selland Motors, ABRA Auto Body, Fargo Public Schools and the National 4-H Council helped establish the program.

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# impact

## You are what you eat

*We've all heard that old saying. Research shows that it is more true than ever. Health problems ranging from heart disease and cancer to diabetes have links to nutrition. The more nutritious your diet, the healthier you're likely to be. NDSU Extension Service specialists and agents bring the considerable nutrition and health expertise of the nation's Land-Grant colleges into every community in the state to improve the nutrition in our diets, the safety of our food and health of us all.*

### NDSU Extension Service Program Areas:

#### ■ Nutrition, Food Safety and Health

- Competitiveness and Profitability of Crop Production
- Community, Economic Development and Leadership
- Competitiveness and Profitability of Animal Production
- Farm and Family Economics
- 4-H Youth Development
- Human Development
- Natural Resources and Environmental Management



*The NDSU Extension Service creates learning partnerships that help adults and youth enhance their lives and communities.*

- **Safe, new food.** Food processing entrepreneurs received assistance and training from the NDSU Extension Service in workshops and individual consultations. The pH and water activity of more than 75 North Dakota food products have been checked as a voluntary safety measure. Additional workshops to help guide food entrepreneurs are planned for later this year, and a web site and other materials are being developed in collaboration with Pride of Dakota.
- **A nutritious boost.** Last year more than 687 families were enrolled in Extension's Expanded Food and Nutrition Education Program (EFNEP) which assists limited-resource families and youth to acquire the knowledge, skills and attitudes necessary for nutritionally-sound diets and good health. EFNEP is conducted with the USDA and has a 30-year history in North Dakota. Last year, 89 percent of EFNEP graduates reported improved nutrition practices, 82 percent improved food resource management practices and 63 percent showed improvements in food safety practices. About 56 percent of the families are Native Americans.
- **Promoting healthy habits.** The 5 Plus 5 program encourages individuals to eat fruits and vegetables five times a day as part of a healthy diet and to be physically active for 30 minutes, five days a week. The NDSU Extension Service is a partner with the Healthy Heart Council of the N.D. Department of Health and several other agencies in promoting the 5 Plus 5 program. Evaluations show positive results. In Williams County all participants reported making healthier food choices

and 46 percent said they increased the number of times they engaged in moderate physical activity. The program is being adapted for use with teenagers and will incorporate e-mail, interactive Internet sites, chat-room conversations with nutrition specialists and other methods of distance education.

- **Learning in the garden.** Native American youth from the New Town community learned gardening skills and how to prepare and eat fresh produce through a summer gardening program conducted by staff from the NDSU Extension Service and the Fort Berthold Community College. They learned responsibility and practical work skills in weekly sessions. And they learned about their ancestors' agrarian lifestyle from community elders. As a result of the project, several youngsters also planted gardens at home and adults in the community have shown new interest in gardening.
- **Serving food safely.** About 1,200 foodservice employees from about 100 North Dakota communities have participated in food safety Hazard Analysis and Critical Control Point (HACCP) workshops since 1996. Surveys indicate about 62 percent of participants have used the materials to train other employees and 57 percent have modified food cooling procedures. About 55 percent have implemented HACCP principles.
- **Meat safety on a deadline.** The NDSU Extension Service hosted workshops in Fargo and Minot for federally-inspected meat processing plants to help them meet the January 2000 deadline for implementing a HACCP-based food safety system.
- **Pyramid power.** Second graders at Jamestown and Park River received education in nutrition, food safety and physical activity using a set of new lessons developed by the NDSU Extension Service. About 42 percent of the 185 students indicated they were eating more fruits and vegetables as a result of studying about the Food Guide Pyramid. About 86 percent tried some new foods. About 36 percent indicated they are physically active more often.

■ **A healthy stretch.** Administered by the NDSU Extension Service in 43 counties, the Family Nutrition Program (FNP) is the education arm of USDA's Food Stamp Program and reaches about 66 percent of the state's food stamp recipients. Participants learn to save money on food, eat nutritionally balanced diets, and prepare safer, more wholesome foods. Last year, FNP staff members made 32,473 face-to-face contacts and taught food purchasing lessons to 2,788 people. A follow-up survey found that 78 percent of participants saved money — from \$4 to \$130 per month last year. One participant lost 80 pounds by following FNP nutrition guidelines.

■ **Special Assignment: Pizza.** With fewer youngsters experiencing agriculture first hand, this program is designed to help children understand where their food comes from. This year, more than 2,400 fourth graders took part in events at Williston, Grand Forks and Devils Lake. The project features seven hands-on stops that show how agricultural products and nutrition are related to pizza. Students played "Squeal of Fortune," a game that teaches about pork, and identified vegetables by touching them. A teacher's packet helps teachers integrate the day of learning into classroom lessons. The program is offered by the NDSU Extension Service in cooperation with the N.D. Farm Bureau.

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# impact

## Livestock leaders

*Livestock production is big business in North Dakota, accounting for 15.4 percent of the total agricultural cash receipts — \$549 million — in 1998. And livestock production is the original value-added enterprise, adding value to the state's abundant crop, forage and rangeland resources. More than 44 percent of North Dakota's land use is associated with rangeland, pasture land and hayland. NDSU Extension Service programs help livestock producers cut costs, boost returns and find new opportunities.*

■ **Range boosters.** Ranchers learned to improve their rangeland management skills and developed year-long forage use strategies in 10 workshops in the past two years. More than 120 ranchers participated and nearly 45 percent have tried new grazing strategies. More than 70 percent plan to increase their stocking rate by 15 percent using new grazing strategies. The economic impact would be \$1.6 million.

■ **Go team!** The Dairy Diagnostic Program, established in 1996 and managed through the NDSU Extension Service, has helped 47 farms assemble advisory teams. Implementing the teams' advice has increased production, cow numbers and milk components; and reduced somatic cell counts, costs and rebreeding problems. Twenty-three producers increased their combined annual gross revenue by \$922,700. Twenty-one farms expanded or are investigating expansion to achieve economies of size and improve income.

■ **Certified quality.** The North Dakota Beef Quality Assurance (BQA) Program developed for North Dakota cow-calf producers certified more than 900 beef cattle operations through more than 30 workshops this winter. Those producers market more than 126,000 head of feeder cattle annually—13 percent of the state's calves. Certified producers raise cattle with practices that improve the quality of meat to the final consumer. An early result is a heightened interest in North Dakota BQA-certified cattle by BQA-certified feedlots in the Nebraska Corn-Fed Beef Program.

### NDSU Extension Service Program Areas:

#### ■ **Competitiveness and Profitability of Animal Production**

- Competitiveness and Profitability of Crop Production
- Community, Economic Development and Leadership
- Farm and Family Economics
- 4-H Youth Development
- Human Development
- Natural Resources and Environmental Management...
- Nutrition, Food Safety and Health



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- **Disease squeeze.** Johne's is a bacterial disease that causes weight loss and chronic diarrhea primarily in cattle, but also affects sheep, goats, bison and elk. More than 1,000 producers, Extension agents and veterinarians received training on recognizing and controlling Johne's since the NDSU Extension Service launched an awareness program in 1997. As a result the penalty for self-reporting the disease was removed and the N.D. Board of Animal Health created an advisory committee to establish a voluntary control program. The NDSU Extension Service was a charter member. Before 1999, only 65 cases of Johne's disease had been identified in North Dakota. With awareness up and the penalty removed, more cattle producers are taking steps to control the disease. Last year, more than 110 farms and ranches were identified with Johne's disease.
- **Premium sheep.** The NDSU Extension Service helped the Dakota Lean Lamb Cooperative organizers facilitate informational meetings and developed specifications for "Dakota Lean Lamb." The 126 producers in the cooperative from North Dakota, South Dakota, Minnesota and Montana could provide nearly 19,000 lambs to the enterprise. Lambs are being sold over the Internet, lean lamb products are being developed and the cooperative is working on marketing contracts for premium markets. Extension specialists serve as technical advisors.
- **Weed eaters.** Leafy spurge costs North Dakota \$87.5 million annually. Herbicides are not cost effective on large infestations. The NDSU Extension Service is demonstrating that sheep readily graze leafy spurge and can reduce the weed's population and density. After adjusting for improved fencing costs, the total net return per acre for controlling leafy spurge by adding sheep grazing to a cattle operation was up to \$176 on a 50-acre infestation. The bottom line: leafy spurge control can become a money-making operation rather than an economic drain.
- **Feed 'em here.** The NDSU Extension Service showed that it cost up to 3 cents less per pound to finish cattle in North Dakota compared to an out-of-state feedlot. Extension information prompted a group of cattle producers to pool funds and custom feed more than 1,300 head in North Dakota feedlots. With help from Extension specialists and agents, they realized a return of more than 31 percent last year. Another group will build a 7,000-head feedyard in Bowman County this summer. Other producers will earn a premium of up to 3 cents per pound for cattle that meet processing specifications of a new local processing company. More than 130 producers attended Extension feedlot schools last year. One participant estimated that better health practices, bunk management and feeding practices cut his cost of gain by up to 5 cents per pound.
- **Waste management.** NDSU Extension Service specialists inspected more than 70 beef, dairy, swine and bison operations to advise producers on applicable regulations and modifications necessary to bring their operations into compliance with waste management regulation. An example of the results: One producer constructed clean-water diversions, drain modifications and a storage pond to control feedlot runoff based on NDSU recommendations. The producer also developed a manure nutrient management plan after attending one of the 10 Extension workshops. Of the more than 120 producers who attended the workshops, 80 percent said they intend to test for nutrient concentrations, give manure nutrient credits and keep better records.

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# impact

## Building communities

*North Dakotans care. They care about their communities, their neighbors, their youth, the environment and the future of their state. With staff in every county, the NDSU Extension Service is part of local communities and is committed to helping people diversify their incomes to increase family income and community vitality and to build local leadership capacity.*

■ **Agritainment.** Three workshops on farm and ranch recreation drew more than 110 participants that had started or were considering starting rural bed and breakfasts, cabins for pack trips, hunting lodges, guiding and working ranches, U-picks and trail riding. Two participants recognized opportunities for tax and labor cost savings. Of the 89 participants who returned evaluations, all said the workshop was useful. Thirty percent said the workshop helped them decide whether or not to start a recreation business. About the same number had already started their businesses. More than half of those planned to make changes based on workshop information.

■ **Learning the law.** More than 200 soil conservation district supervisors boosted their knowledge of soil conservation district law by 30 percent in NDSU Extension Service workshops. The workshops gave them background on the role of statutes in conservation, policy development, working relationships with other agencies, understanding conservation-related issues and personnel management.

■ **New turf.** A farmer between Grand Forks and Fargo shifted production from traditional crops to sod. With help from the NDSU Extension Service on maintenance, variety and cultivar selection, fertilizer and soil testing, he now sells all he can grow. This year, North Dakota will produce its first field of turfgrass for seed. The NDSU Extension Service assisted a company in planting plots to explore the potential for turfgrass seed production. If the commercial field does well this year and next, the company may add acres and set up a processing plant.

### NDSU Extension Service Program Areas:

#### ■ Community, Economic Development and Leadership

- Competitiveness and Profitability of Crop Production
- Competitiveness and Profitability of Animal Production
- Farm and Family Economics
- 4-H Youth Development
- Human Development
- Natural Resources and Environmental Management
- Nutrition, Food Safety and Health



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- **No-tears onion study.** In 1999, two varieties of onion were planted at NDSU's Williston Research Extension Center and the Eastern Agricultural Research Center in Sidney, Mont. Samples showed good potential for dehydration. This year, onions are being grown near Bagley, Minn., and at NDSU research extension centers in Carrington, Williston, and Oakes. The research may bring joint venture partners and markets closer to North Dakota. The work builds on an earlier study by a group of North Dakota and Minnesota onion growers and the NDSU Extension Service that indicated market potential for dehydrated onions and other vegetables used in Mexican food.
- **Western potatoes.** Since 1997, the NDSU Extension Service and communities in northwestern North Dakota have conducted tours and conferences to showcase the region's favorable business climate and potential for producing high-value crops. Contracted potato acreage has increased from 70 acres in 1997 to 1,600 acres in 2000. Today producers contract with two french fry processors and are growing exclusive varieties for a third. A \$2 million potato storage facility is being constructed. The increased potato acreage contributes about \$2 million dollars to the local economy. Market and production studies to serve the potato chip, table stock and dehydrated markets began in 1999.
- **Income booster.** A store in Williston is buying selected vegetables from a group of farm families that is diversifying their operations to boost income. Success this year may lead to sales in five other stores next year. In addition, a major wholesaler in Minot is monitoring the project for possible future sales. NDSU Extension Service specialists organized field tours for grocery store owners and helped the families obtain grants to assist with wholesale market development costs.
- **We mean business.** The Business Retention and Expansion Visitation Program brings NDSU Extension Service business specialists to communities to help them develop plans for keeping businesses healthy. Surveys of 11 community project coordinators from 1995 to 1998 show that 75 of the 176 action items identified by local task forces with specialists' help are being implemented. Another 41 have been completed. Action items vary from developing plans for changing business owners to designing new marketing strategies for the community.
- **Youth learn to start businesses.** More than 120 teachers, 4-H leaders, NDSU Extension Service agents and other leaders who work with youth in grades 3 through 7 participated in a national youth entrepreneurship program called Mini-Society. The NDSU Extension Service coordinates the training on a state wide basis for the Ewing Marion Kauffman Foundation. Students learn economic concepts like scarcity, allocation methods, supply and demand, and how they relate to the marketplace.
- **Superhighway bound.** A downtown technology center is being established in Cavalier to provide information and training to residents on opportunities for economic growth through technology. The facility was the result of an event sponsored by the NDSU Extension Service in Pembina County and the Cavalier Chamber of Commerce.
- **Help!** An Enderlin couple developed a 12-volt "Help Me" emergency sign for use in vehicles and are currently looking for a company to manufacture and market it. To help them gather feedback on the product, the NDSU Extension Service's Institute for Business and Industry Development helped them write a questionnaire and worked with the N.D. Department of Transportation to put the sign in fleet cars. Specialists also helped prepare grant applications for design, prototype and business plan development.

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# impact

## Attending to financial health

*North Dakota's farm families need to adjust and adapt to rapid economic changes that are occurring throughout the state, nation and world. The state's families follow national trends of decreasing savings and increasing debt. The NDSU Extension Service has launched educational programs to help individuals, farmers, ranchers and families develop skills and strategies that will help them remain financially secure members of North Dakota's economy.*

### NDSU Extension Service Program Areas:

#### ■ Farm and Family Economics

- Competitiveness and Profitability of Crop Production
- Community, Economic Development and Leadership
- Competitiveness and Profitability of Animal Production
- 4-H Youth Development
- Human Development
- Natural Resources and Environmental Management
- Nutrition, Food Safety and Health



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■ **Money in the millennium.** On average, North Dakotans in the Money 2000 program saved more than \$1,300 and reduced their debt by nearly \$5,700. Money 2000 is a national program to encourage citizens to increase personal savings or decrease debt. The NDSU Extension Service began offering the program in 1997 through local Family and Community Education clubs and eventually reached more than 1,500 people. The 371 participants officially enrolled in the state program receive a newsletter designed to help them reach their financial goals and can participate in activities to monitor their progress.

■ **Financial lessons.** After participating in the High School Financial Planning Program, 29 percent of students began saving and 15 percent saved more. More than a third improved their skills for tracking spending, felt more confident about managing their money and improved their knowledge of savings and investments. Forty-seven percent knew more about the cost of credit. The national program has been offered free to N.D. high school teachers by the NDSU Extension Service since 1992 and has reached more than 7,000 students in more than 200 schools. As one student says, "The financial materials benefitted me because my checkbook and savings were a mess. I have learned the importance of keeping good records for future planning."

■ **Tax class.** All the participants in a tax management program said it helped them improve management of their tax liabilities. Ninety-nine percent said the program helped them comply with tax regulations. The three-hour program was offered by the

NDSU Extension Service and the IRS at nine locations over the North Dakota Interactive Video Network to 189 agricultural producers and tax preparers.

- **Computerizing records.** More than 80 percent of participants surveyed said they would change their farm, home or business recordkeeping based on an NDSU workshop. Using portable computers, instructors brought the eight-hour workshop to 365 people in 19 communities in 1999. The workshop's goal is for participants to be able to go home and immediately improve their financial recordkeeping on the computer. More than 1,400 people have been trained since 1996.
- **Learning to share.** As the cost of owning farm machinery continues to rise, the NDSU Extension Service is helping producers learn how to share assets. Specialists and agents developed an educational program on alliances for more than 450 producers in 16 counties. The educators estimate that at least 20 percent of the participants will develop some form of alliance or partnership in the next two years.
- **Building market savvy.** More than 330 producers are learning to boost profitability by improving marketing and price-risk management through involvement in 22 marketing clubs. The clubs, organized by the NDSU Extension Service, are facilitated by Extension agents and farm business management instructors. One club, in Mooreton, divided itself into two teams and set up simulated farms based on county averages. The team that does the best job of marketing wins a steak dinner. The competition has prompted participants to learn about marketing plans, planning, storage and risk management.
- **Tough transitions.** A series of seminars in Barnes County is easing the transition for farm families that are leaving agriculture. In 1998, lenders in the county estimated that up to half of their agricultural borrowers would not be able to meet interest and principal payments. Two seminars organized by the NDSU Extension Service and other partners reached more than 100 families with information on financial and emotional

issues of leaving farming. A survey indicates that 75 percent of participants planned to communicate more with their family. Others planned to contact an auctioneer about the sale of a farm, visit with a loan officer about restructuring debt, contact a health care professional about the emotional aspects of leaving farming or contact Job Service about employment and training options.

- **Beef booster.** The NDSU Extension Beef Integrated Resource Management (IRM) program has helped more than 150 producers in North Dakota, Minnesota and Montana establish production and recordkeeping systems. A team of specialists helps assess financial and production resources and develop a management plan for boosting profitability. In addition, data from the program helps NDSU specialists identify key production and financial management concerns of beef producers and design educational programs to emphasize these areas.
- **Digging for data.** NDSU Extension Service economists compile information to develop budgets and reports that guide agricultural decisions. Data come from the North Dakota Agricultural Statistics Service; marketing specialists; seed, fuel, equipment and fertilizer dealers; agronomists; and North Dakota Farm Business Management Education instructors. Last year more than 8,000 crop budgets were printed and used by farmers, lenders, consultants, agribusinesses and educators to make planting decisions and evaluate crop alternatives. Reports on debt and financial health of producers guide public policy debates. Consultants, researchers and government agencies use the information to plan their programs as well.

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# impact

## Protecting North Dakota's natural wonders

*Soil, water, air, plants and animals are intricately interwoven as essential elements of our lives. They provide for our very existence and provide aesthetic values and recreational opportunities. These resources also contribute to the livelihoods of North Dakotans in agriculture, industry, eco-tourism and other occupations. The NDSU Extension Service uses research-based information to educate the voters, agricultural producers, industry professionals and others of the consequences of actions, or inactions, on natural resources.*

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### NDSU Extension Service Program Areas:

#### ■ **Natural Resources and Environmental Management**

- Competitiveness and Profitability of Crop Production
- Community, Economic Development and Leadership
- Competitiveness and Profitability of Animal Production
- Farm and Family Economics
- 4-H Youth Development
- Human Development
- Nutrition, Food Safety and Health



*The NDSU Extension Service creates learning partnerships that help adults and youth enhance their lives and communities.*

■ **Managing manure.** A livestock producer in northeastern North Dakota developed clean water diversions, drain modifications and a storage pond to control feedlot runoff to meet North Dakota Department of Health requirements. NDSU Extension Service experts helped design the improvements. The producer was one of more than 70 beef, dairy, swine and bison operators that specialists advised on waste management regulations and how to improve manure management. The same producer developed a manure nutrient management plan for his farm based on recommendations from one of 10 workshops held around the state last year. More than 80 percent of the 120 workshop participants said they planned to implement changes in their manure management practices based on workshop recommendations.

■ **Breaking the wind.** More than two-thirds of North Dakota's windbreaks need renovation to maintain the environmental, economic and aesthetic benefits they provide. Four workshops and tours presented by the NDSU Extension Service, the Natural Resources Conservation Service and the North Dakota Forest Service helped 130 landowners and natural resource managers learn about renovation techniques. A survey indicated that more than 80 percent of participants will renovate windbreaks in the next two years. More than 40 percent indicated they plan to increase the amount of renovation because of the workshop.

■ **For the birds.** Kidder County was recently named a top-10 hot spot for bird watching in a national birding magazine. NDSU Extension Service agents cooper-

ated with the North Dakota Game and Fish Department to develop a birding workshop. Residents learned about birds and wildlife in the area, landscaping to attract birds and wildlife, feeding birds and bird houses. More than 60 people attended, and continued response has prompted plans for a county birding tour.

- **Training pesticide users.** Nearly two decades ago, the North Dakota Legislature asked the NDSU Extension Service to train and certify users and dealers of restricted use pesticides that the Environmental Protection Agency had deemed as high risk to humans or the environment. Since then more than 250,000 certifications have been granted. Participants learn safe pesticide use, environmental stewardship and efficient use of pesticides. Today the program manages about 5,000 commercial certifications and 15,000 private certifications through annual training in every county. Last year about 75 private applicator and 20 commercial applicator training sessions were conducted by NDSU Extension staff.
- **Eating a weed problem.** Sheep can reduce leafy spurge populations by 75 percent after four years of grazing. If sheep are grazed with cattle, leafy spurge is cut by 43 percent after four years, according to an NDSU Extension Service research and demonstration project. Controlling large infestations of this noxious weed with sheep allows landowners to minimize herbicide costs and add a diversifying enterprise to their operations. With good management on large infestations of leafy spurge, sheep can boost return per acre by up to \$241 over 10 years. Using herbicides to control infestations of leafy spurge on more than 25 to 50 acres is seldom cost effective. The weed costs North Dakota nearly more than \$87 million a year.
- **Native plant opportunity.** A graduate of Extension's Master Gardener course produced vegetables to sell at a local farmers market. When the physical demands became too much, she shifted

efforts to growing herbs for the aromatic market. With background from the NDSU Extension Service, she carved out a niche in the aromacology market using native herbs and herbs from Norway.

- **Intensive demonstration.** Producers in north central North Dakota are learning that intensive grazing can boost grass production, increase organic matter, improve water retention and improve wildlife habitat. A grazing demonstration project in Sheridan County, developed jointly by the NDSU Extension Service and the North Dakota Wetland Trust, was the focus of an intensive workshop this spring attended by more than 40 producers from the region. One landowner is adopting so many of the practices featured in the project that his farm will become a second demonstration site. The project has prompted collaboration with the Natural Resources Conservation Service, the U.S. Fish and Wildlife Service, and Ducks Unlimited.
- **Learning the benefits.** In Logan County, producers learned about cost-share programs designed to encourage grass seeding, wetland restoration, use of dormant seeded crops and improved waste management. Those practices have environmental benefits and can often boost farm productivity. A workshop introduced 18 producers to various agencies and their programs and illustrated how the programs can benefit farming systems.

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# impact

## People Helping People

*North Dakota has a well-deserved reputation as a good place for families and children. But there are problems. Shrinking rural towns, fast-growing cities, an aging population and economic difficulties on the farm are among the factors stressing families and individuals in North Dakota. The NDSU Extension Service works to promote healthy families who contribute to positive individual development, a quality workplace and workforce, and caring communities.*

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### NDSU Extension Service Program Areas:

#### ■ Human Development

- Competitiveness and Profitability of Crop Production
- Community, Economic Development and Leadership
- Competitiveness and Profitability of Animal Production
- Farm and Family Economics
- 4-H Youth Development
- Natural Resources and Environmental Management
- Nutrition, Food Safety and Health



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■ **Family Resources.** The West Dakota Parent and Family Resource Center provided educational programs to more than 2,400 youth and adults in eight counties of southwestern North Dakota. The center, established in 1997 and one of four in the state, is a collaborative effort of Region VIII Children's Services Coordinating Committee, NDSU Extension Service and Dickinson Public Schools. Its resource lending library consists of more than 600 audio, video and print titles. One user shares, "Thank you for loaning me these books. I'm not much for reading books, but I had a hard time putting this one down. Maybe my life and relationships with my son and other family members wouldn't be in such turmoil if I would have had this to read years ago and my parents would have had it when we were young."

■ **Helping Families in the Farm Crisis.** A day-long Business of Family Farming workshop in Williston in January helped families cope with the farm crisis. Dr. Val Farmer, clinical psychologist, discussed dealing with the farm crisis and NDSU Extension Service family science specialists outlined how stress affects the family on the farm. More than 80 people attended the workshop, and 80 percent said the information and resources for helping them cope with farm stress were very useful. Also, 96 percent stated they were more confident in their ability to face challenges in their family or community. In addition to the NDSU Extension Service, other sponsors included Mercy Medical Center, the Williston Basin Resource Conservation and Development Council, Lutheran Rural Response, Williams County Farmers Union and the Adult Farm Business Management Education Program.

- **Making the Pieces Fit.** The Parent Education Resource Center in Grand Forks helps citizens balance work and family. It is one of four centers in the state and a collaborative effort of the NDSU Extension Service and the Region IV Children's Services Coordinating Committee. More than 600 people participated in a series of on-site seminars at area businesses that have addressed technology, stress management, family communication, roles and boundaries, and taking care of yourself.
- **Risk Reducer for Youth.** A training seminar designed by NDSU Extension Service specialists to help communities develop strategies for managing youth risk behavior was conducted in Hettinger with 15 community leaders and teachers. As a result, the local Extension agent helped form a youth advocacy coalition that is working in schools and churches to promote the Character Counts program and provided parenting information at parent-teacher conferences. The coalition recently received a \$12,000 grant to hire a community youth coordinator that will work with the NDSU Extension Service to implement a mentor program, organize volunteers and provide activities for youth.
- **Stress Relief.** Employees of the Natural Resources Conservation Service increased communication on the job and used more effective ways to handle stress after receiving instruction on managing stress from the NDSU Extension Service. In the last year, five half-day seminars on stress management were conducted for more than 250 NRCS employees. The employees discussed sources of stress, how to manage personal relationships and strategies for reducing stress.
- **News Parents Can Use.** Parents learn child safety tips, how to help their children with homework, how to cope with sibling rivalry, about the influence of media on children, effective discipline and other topics from a monthly newsletter, Parenting Pipeline. The NDSU Extension Service prints the newsletter and county Extension agents work with local schools to arrange for it to be sent home with children in kindergarten, second, fourth and sixth grades. Last year the newsletter reached more than 42,000 families.
- **Family Connections.** This NDSU Extension Service web site provides updates on family-related issues and programs, resources and information on family issues ranging from parenting teenagers to managing finances, links to other family-related sites, and allows persons to subscribe to an electronic newsletter. NDSU Extension Service specialists and graduate students developed this new Web-based approach to parent and family life education. Access the site at [www.ext.nodak.edu/parenting/Family\\_Connections.htm](http://www.ext.nodak.edu/parenting/Family_Connections.htm)
- **Directory Assistance.** A directory of information and assistance resources for North Dakota families facing economic and social concerns was assembled by the NDSU Extension Service, Lutheran Social Services of North Dakota and other organizations. Directories were prepared for eight social service regions of the state and all 52 North Dakota counties. Copies of the Rural Crisis Response Resource Directories were distributed throughout the state to social service agencies, churches, public organizations and others providing services to children and families. Other partners in the effort were Catholic Family Service, Evangelical Lutheran Church of America, Lutheran Church-Missouri Synod, United Methodist Church, United Church of Christ, Salvation Army and the Mental Health Association.

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# Impact

## Technology

*North Dakota has long been known for wide-open spaces. New technology is helping bridge those spaces, bringing North Dakotans closer to one another and to the world. The NDSU Extension Service is playing a crucial role. Extension staff use new technology to provide information to people in a form that is accessible and convenient. They are also helping adults and youth learn to use technology for learning, marketing, purchasing and communicating worldwide.*



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### NDSU Extension Service Program Areas:

- Competitiveness and Profitability of Crop Production
- 4-H Youth Development
- Community, Economic Development and Leadership
- Competitiveness and Profitability of Animal Production
- Farm and Family Economics
- Human Development
- Natural Resources and Environmental Management
- Nutrition, Food Safety and Health

- **Masters of the Internet.** The Master Internet Volunteer program has been offered in 17 counties. The NDSU Extension Service provides training in exchange for at least 30 hours of volunteer time. Volunteers work with Extension county offices and community organizations to help others learn and make use of the Internet. To date, 166 people have completed the training and are working on their volunteer commitments. More than 2,300 volunteer hours have been recorded. Volunteers have taught classes on using the Internet to farmers and students; staffed public access computers at Extension offices, libraries and other locations; developed web pages for community organizations; given demonstrations; and written newspaper articles about the Internet.
- **Youthful teachers.** Twelve Cavalier Future Business Leaders of America, youth in grades 9-12, assisted NDSU staff in teaching adults in the Master Internet Volunteer program. The effort resulted in closer relationships between adults and youth and a new level of respect for the skills, work ethic and respect they possess. One student was subsequently hired by a businessman in the course.
- **E-commerce.** Master Internet Volunteers in McKenzie County used their Internet skills to develop home-based businesses. One advertises Badlands log cabin vacations through a web site. Another launched a home-based web design business. Others help co-workers with e-mail and web questions at work. In Rolette County, a volunteer developed a site to relay community information related to schools, churches, city government, emergency contacts, area

businesses, community events and local tourist attractions like the area's fall foliage and the community's RagTop Festival.

- **Precision teaching.** NDSU Extension Service specialists are using the precision agriculture tools of Global Positioning Systems and Geographic Information Systems to help producers hone their production and protect the region's ground and surface water. They're also finding that GPS/GIS can be powerful teaching tools. Tech-savvy students are anxious to learn more about the GPS/GIS. As part of the lessons, more than 450 students have learned about groundwater and surface water issues and high-tech agricultural careers.
- **High-speed on-ramps.** County Extension offices have long been the local connection to NDSU. The Internet can make the local connection to the world. A limitation has been the capacity of local connections. Dial-up modems and other connections that were once at the cutting edge of digital communication may now be bottlenecks to today's high-volume flow of information. Some of NDSU's Research Extension Centers and more than 40 of the state's county Extension offices now have high-speed direct connections to the Internet. The NDSU Extension Service is committed to continued progress.
- **Food business.** Extension specialists are developing a web site for North Dakota food entrepreneurs and food processors. The site will be a one-stop source of information on all aspects of food processing from business start-up to food safety. State and national sources of information such as the FDA, the USDA and the Pride of Dakota will be linked to the page.
- **Accounting.** During the past few months more than 360 producers and homeowners learned how to use Quicken software to manage their home and business accounting records. Agricultural economics specialists utilized Extension's mobile computer training bank, enabling them to provide participants with hands-on training. The workshops were held at 20 different communities across North Dakota.
- **Web diet.** Information from the World Wide Web can be like a diet: healthy, satisfying staples or dangerous, worthless junk. Deciding which is which can be a challenge. NDSU Extension Service's food and nutrition web site includes Extension brochures, publications and videos and has links to other credible and accurate web sites which help North Dakotans wade through the millions of sometimes questionable food, nutrition and health sites.
- **May we serve you?** In 1999, NDSU Extension Service and NDSU Agriculture web sites served nearly 3.5 million requests for information. Requests represent users "clicking on" web pages. The user may be a homemaker in Willams County looking for information on food safety, an Extension agent in Pembina County downloading a publication on scab for a producer or a researcher halfway around the world looking at information from a collaborator at NDSU. The NDSU Agriculture web page, [www.ag.ndsu.nodak.edu/](http://www.ag.ndsu.nodak.edu/), is a starting point for electronic information from the NDSU Extension Service. Links take you to information on topics ranging from agriculture and natural resources to business and community leadership to family, home and youth. You can reach the Cass County Master Gardener page with information on lawns, gardens, flowers and trees and shrubs. Look for the North Dakota Small Grains page with information on crop concerns and management. You can also find projected crop budgets for 2000 that will help producers make planting and other management decisions.

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*NDSU is an equal opportunity institution*

## Agronomy Seed Farm

*The Agronomy Seed Farm produces foundation seed for the seed producers of North Dakota and cooperates in the research efforts of main station scientists. Research and outreach efforts focus on the evaluation and development of new crop varieties and providing data on varieties grown under eastern North Dakota growing conditions.*

■ **Firm foundation.** The Agronomy Seed Farm's foundation seed production provides seedstock that fuels the certified seed industry and serves as a springboard for nearly all crop production in the state that relies on public breeding programs.

■ **Wheat boost.** The release of Alsen, the first scab-resistant hard red spring wheat variety, highlights the role the Agronomy Seed Farm plays in seed production. The farm produced, conditioned and distributed more than 13,000 bushels for foundation seedstocks.

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## Carrington Research Extension Center

*The Carrington REC conducts research to enhance the productivity, competitiveness and diversity of agriculture in central North Dakota.*

- **Seed source.** As part of the center's foundation seedstocks project, staff produce and distribute seedlots representing at least eight crops, 20 varieties and 14,000 bushels annually.
- **Disease testing.** Sclerotinia has become a significant problem affecting crop yield and quality in sunflower, soybean, canola, dry edible bean and other broadleaf crops. The center developed two misting nursery areas that ensure disease pressure. Those areas will help researchers develop resistant or tolerant plant varieties, evaluate fungicides and study other management practices that will minimize the effects of the disease.
- **Meat and potatoes.** Researchers are feeding byproducts from the new AVIKO potato processing plant near Jamestown in the finishing diets of beef steers. In preliminary tests, the cattle grew better than expected and feed costs were dramatically reduced. Further studies will determine the optimum amount of this high-moisture feed during winter feeding and the economic relationship with other feeds.
- **Bison feeding.** The first bison feeding studies are underway at the center's new Bison Nutrition Unit with 60 animals in six treatments. Feed costs, feed efficiency and carcass information will be compiled for the feeding period to give producers key information for refining their feeding systems. Additional trials will focus on protein and mineral requirements of bison and the effect of forage quality on performance.
- **Boosting barley feeding.** Researchers found that animal performance and economic return are improved when barley is tempered and rolled compared to dry rolling. Tempering is the addition of 10 percent moisture to the barley and allowing it to steep 12 to 24 hours before rolling. The process reduces fine particles and improves gain and feed conversion.
- **Crambe feeding advances.** Crambe meal is consistently the lowest cost natural protein source in North Dakota. Recent studies at the Carrington and Dickinson RECs suggest it can be used successfully in range cake as a protein source. In the tests, crambe meal did not alter feed intake, digestion or animal performance. Because of the sharp flavor, researchers recommend limiting the meal to half or less of the range cake formulation. Crambe meal is available from two sources in the region.
- **Variety development.** Staff at the center are part of an NDSU research team that develop, evaluate and distribute improved crop varieties. The environment and production region that the center and its off-station sites represent have produced research data that has been critical in determining variety release decisions on new varieties of spring wheat, barley, durum, oats, flax, soybean and dry edible bean. This same program has been instrumental in the expansion of a number of alternative crops in recent years including canola and field pea.

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## Central Grasslands Research Extension Center

*The Central Grasslands REC conducts research on grassland ecosystems as they relate to livestock production systems in the Coteau region of North Dakota.*

- **Grazing makes cents.** Long-term research at the center shows that seeding marginal-highly erodible land to grass and grazing with beef cattle can return an average profit that is more than \$36 higher than if the land were planted to small grains. More than 3 million acres of marginal-highly erodible land in the state has been reseeded to perennial grass in the past 13 years through the Conservation Reserve Program. If 50 percent of these acres remain in grass for grazing it would give a \$36 million boost annually to the state's economy.
- **Grazing's value.** An eight-year economic study of grazing CRP showed an average cost to maintain a cow and calf for a month of \$80.97 on an estimated 1.75 acres. With 5.2 million acres in the Coteau region, that translates into more than \$235 million spent annually in communities and businesses in the region. Those figures will help formulate decisions about how to manage the region's productive but fragile natural resources.
- **Feeding a new crop.** Researchers at the center found that producers could substitute naked oat hay for up to 37 percent of corn silage in backgrounding diets for beef heifers. Although costs of production and yield will vary, during the study naked oats produced 2.9 tons per acre and cost \$89.56 to produce while the corn produced 2.2 tons per acre (on a similar dry matter basis) and cost \$139.60.
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## Dickinson Research Extension Center

*Researchers at the Dickinson REC conduct research on integrated crop and livestock farming methods for dryland agriculture in southwestern North Dakota.*

- **Grazing for the grass.** Researchers at the center are studying the effects of grazing on the structure and dynamics of grassland ecosystems. They've found that carefully timed rotational grazing can boost rangeland health and growth with a subsequent boost to livestock production. Their research showed that rotational grazing can cut adult grasshopper populations up to 96 percent. The grazing systems also increased weaning weight by an average of 65 pounds per calf while increasing the stocking rate from 40 to 96 percent. The research is also being used by other agencies to develop plans and policies to improve the health and productivity of grasslands in the state.
  - **What's my alternative?** Producers looking for new crops to diversify their farms and boost income receive valuable information from the center. Researchers demonstrated that producers in the region could gross \$144 per acre by growing garbanzo beans and \$90 per acre with field peas. Soybeans grossed only \$50 per acre. They also showed that switching from low- to high-yielding alfalfa varieties could boost gross income by \$136 when alfalfa was valued at \$65 per ton.
  - **Motivation for rotation.** Researchers demonstrated improved wheat production systems that relied on rotations to help limit disease problems. Good crop rotations boosted revenue from \$27 to \$56 per acre.
  - **Swine feeding options.** North Dakota crops like barley, naked oat, field pea and canola allow producers to diversify and improve crop rotations. Researchers are studying the use of those crops in swine diets. The results give livestock producers flexibility in designing low-cost rations and boost markets for North Dakota-produced crops.
  - **Longer grazing, bigger dollars.** Researchers are studying grazing systems that allow cows to graze native forage and unharvested corn longer into the fall. Extending the fall and winter grazing season could save the North Dakota beef industry \$7 million per month in reduced feed costs.
  - **Closer tabs on beef.** Computerized tools developed by researchers at the center help producers track their cattle from birth to the packing plant. Those tools help beef producers make decisions that boost production and financial performance. Information from the programs allows producers to select breeding animals based on performance goals and market specifications. Beef sires enrolled in the program showed a range of \$79 in net feed lot return per calf, illustrating the potential that improved genetics holds for many herds.
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## Hettinger Research Extension Center

*The Hettinger REC conducts applied research in agriculture and environmental science that enriches the lives of North Dakotans and supports economic development.*

- **Leafy spurge crackdown.** Researchers at the center have been part of a regional effort to find new ways to control leafy spurge. The researchers demonstrated major reductions in leafy spurge stem counts as a result of combining sheep and beef cattle in grazing systems. Researchers also developed a model that showed a positive net income of \$124,000 for a 5,000-ewe spring lambing cooperative that would be owned by beef producers. Sheep from the cooperative would be used in grazing systems to cut leafy spurge infestations. Scientists also concluded a trial on leafy spurge control with Plateau herbicide that showed an 83 percent reduction in spurge stem counts 20 months after a single application.
  - **Crop support.** The center played a key role in this year's release of two superior hard red spring wheat varieties, Reeder and Parshall, with Reeder being targeted to growing conditions in southwestern North Dakota. If Reeder were to replace only half of the current acreage of older varieties in the western third of the state, producers' annual income in that area should grow by an estimated \$4.7 million.
  - **Alternatives.** Producer demand for alternative crop research prompted researchers to study improved methods of production in canola, chickpeas, corn and sunflowers. Preliminary results indicate that canola should be seeded at a lighter rate than currently recommended and grain corn should be seeded with wider row spacing. Researchers are also seeking federal registration for the use of Ultima 160 herbicide on buckwheat for grassy weed control.
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## Langdon Research Extension Center

*The Langdon REC assists producers in developing cropping systems that increase productivity and profitability while conserving the region's natural resources. The research should be used to enhance agricultural based economic development efforts that help producers add value to their raw commodities and strengthen the region's communities.*

- **Delivering durum.** The center plays a pivotal role in evaluating and developing wheat varieties in the NDSU wheat breeding program. All durum varieties released by NDSU have come from nurseries at the center.
- **Potatoes too.** The center also has a major role in the development of new potato varieties. Since the early 1950s, all potato varieties released by NDSU were selected from nurseries at Langdon. Seventy percent of the potatoes grown in the Red River Valley are NDSU varieties.
- **Plant disease detectives.** The favorable environment for disease in eastern and central North Dakota and the potential impact of crop losses make the center's disease research critical to the region's farmers. Research trials at the center and in neighboring counties provide information to help make crop variety recommendations and give producers a look at varieties under local conditions.
- **Fueling a canola boom.** Variety trial research for improved yield and quality performance and disease research for canola at the center have supported dramatic growth in canola acres in the state. Canola has consistently provided more net profit to producers than other traditional crops. Cavalier County, home of the Langdon Research Extension Center, is the leading producer of canola in North Dakota.
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## North Central Research Extension Center

*The North Central REC near Minot conducts research to increase agricultural productivity and profitability in north central North Dakota.*

- **Thistle busters.** The number of acres in North Dakota infested with Canada thistle has tripled in recent years. Researchers at the center demonstrated that pre-harvest and post-harvest applications of herbicide cut Canada thistle densities by up to 93 percent. They've developed recommendations for application timing in relation to thistle regrowth to ensure that as many thistles as possible are killed.
- **Minor crop weed whackers.** North Dakota farmers often have few options for controlling weeds in minor crops. Researchers at the center provided efficacy and crop tolerance data to support registration of new products in sunflower, pea lentil, chickpea, crambe and flax. They have also conducted residue trials to provide data for the EPA. In 1999, registration was granted for the use of Spartan herbicide in sunflower to help control Kochia based partially on data from the center. Researchers are conducting studies on the use of Roundup pre-harvest and Raptor postemergence in sunflower to give producers new tools to control broadleaf weeds.
- **Optimizing canola.** North Dakota produces more than 70 percent of the canola in the United States — an estimated 1.2 million acres this year, up from 18,000 acres in 1991. Researchers at the center developed recommendations for swathing canola. Swathing before 15 to 20 percent of seeds had changed color resulted in smaller seed size, lower yield, reduced oil content and quality discounts because of too many green seeds. About a 200 pound yield gain per acre worth about \$20 can be achieved and green seed content is limited to less than 2 percent when recommendations are followed.
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## Williston Research Extension Center

*The Williston REC conducts research to increase agricultural productivity in the semi-arid region of northwestern North Dakota while achieving a balance between profitability and conservation.*

- **Safflower power.** Poast, a grass herbicide, will be approved for use on safflower this year as a result of research at the center. That approval will give producers a new tool to manage weed infestations. Montola 2003 safflower was developed through a collaboration between the center and the Eastern Agricultural Research Center in Sidney, Mont. The variety was produced on 5,000 acres this year for the birdseed and health oil markets. In addition, researchers are looking at safflower and annual legumes as a possible replacement for fallow.
- **Potato development.** Center staff conducted research and demonstration projects on potatoes for the french fry industry. Contracted potato acreage has increased from 70 acres in 1997 to 1,600 acres this year, contributing about \$2 million to the local economy. Today producers contract with two french fry processors and are growing exclusive varieties for a third. Two \$1 million potato storage facilities are being constructed and development of a french fry processing plant is being considered.
- **Irrigated barley.** In a partnership with Anheuser-Busch, researchers developed recommendations for growing malting barley under irrigation. No irrigated barley was grown in the region before 1999 when about 500,000 bushels were harvested. An estimated 2 million bushels are being produced under irrigation this year.
- **Identity-preserved wheat.** A pilot project is showing that the region's wheat producers may become preferred suppliers of wheat products to food producers. Food processors currently pay 20- to 30-cent per bushel premiums for wheat that meets their specifications. The premiums could be even more lucrative if wheat in the region met additional quality specifications. This year, 1,500 acres of wheat are being grown under irrigation in the pilot project. If the project is successful, 50,000 acres or more of irrigated and dryland wheat could be contracted in the region.

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## Department of Agribusiness and Applied Economics

*The department provides objective economic analysis to support informed decision making in areas of resource allocation, business management and public policy for the people of North Dakota and beyond.*

- **International trade.** Researchers evaluated world wheat markets for the next decade using a computer simulation model. The model indicates that worldwide demand for wheat will grow faster than supply during that period, leading to a 36 percent price increase for durum and a 23 percent price increase for other classes of wheat. Another study focused on the impact that China's entry into the World Trade Organization would have on the world wheat industry. The study indicated that the net increase in U.S. export value would be from \$127 million to \$577 million.
- **Food safety pays.** Mandatory Hazard Analysis of Critical Control Points (HACCP) regulations for small meat processors and packers are good for business, research shows. Although prices did not increase significantly to compensate for HACCP expenses, firms were more profitable after implementing the program because less product had to be handled twice or discarded.
- **Barley competition.** Canadian barley producers can grow barley for significantly less than their U.S. counterparts. The study, incorporating yield and exchange rate risk, characterized regional cost advantages in terms of probabilities. The study provides background for continuing debate on agricultural trade issues between the United States and Canada.
- **Adding value to communities.** Researchers found that new value-added agricultural processing plants generally did not result in a population boom for the communities where they are located. The research showed that the plants helped stem population loss, enhanced incomes and improved job opportunities.
- **Flood study.** In general, restoring wetlands and creating water impoundments may not be cost-effective methods for reducing flood damage in some portions of the Red River Valley, researchers found. Economists studied the benefits and costs of water storage in two Red River Valley watersheds using hydrologic modeling, wetland restoration studies, National Wetland Inventory data, local land rental values and data on site-specific historical flood damage.
- **Farm status.** Economists examined the performance of more than 530 North Dakota farms using 16 financial measures. The data provided background for emergency financial assistance programs, research and extension efforts targeted at improving farm financial performance, and efforts by agencies and organizations that serve farm families.

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## Department of Agricultural and Biosystems Engineering

*The Agricultural and Biosystems Engineering Department develops and extends knowledge in engineering and technology that advances the productivity of agriculture, value-added processing, utilization of agricultural commodities, and the sustainable management of environmental resources.*

- **Cooking with crambe.** Crop processors are showing interest in research that shows preparing crambe by cooking can improve expeller-based oil extraction. Researchers determined the optimal cooking conditions. Dehulling, cooking and expelling in combination achieved oil yields of up to 87 percent.
- **More from flax.** Foods with flaxseed lignin have the potential to reduce the risks of various cancers. Researchers developed mechanical processes to obtain flaxseed fractions containing rich levels of the lignin SDG. The level of SDG extracted from Omega flaxseed was nearly doubled.
- **Low-fat snack.** Sunflower seeds may be better for your health in the future which may also result in added income for North Dakota producers. NDSU scientists used pressing and solvent extraction methods to remove 95 percent of the original oil in confection sunflower seeds.
- **Computer eye.** Sometimes computers can see things we can't. Engineers are developing computer imaging, sensing and analysis technology that will help producers and processors be more precise. One system determined spray coverage for wheat and barley heads and played a key role in developing new fungicide application guidelines for controlling scab. New advances make the system accurate to within 2 percent. Another system provides on-the-go sugar content analysis of sugarbeets. A similar system can measure protein content in cereal grains.
- **Yield monitoring.** Researchers designed and tested a sugarbeet yield monitor that operates in conjunction with global positioning systems. It has 95 percent accuracy and will help producers better manage fertility and pest problems.
- **Studying irrigation rotations.** A two-tower center pivot system was installed at the Carrington Research Extension Center for irrigation scheduling, fertility management and crop variety studies. The work will help researchers determine management practices to produce the best yield and quality for potatoes, onions and dry beans.
- **Manure meter.** Engineers evaluated a nitrogen meter for determining the nutrient value of manure as it is removed from storage for application to fields. The meter proved accurate for beef and swine but poor for dairy manure. The meter could help producers take advantage of the nutrient content in manure and better manage soil fertility.
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## Department of Agriculture Communication

*The department helps faculty and staff develop and deliver educational messages by fostering superior communication through leadership and service. The department helps faculty reach key audiences using a blend of traditional communications techniques and emerging technology.*

- **Daily dose.** Specialists in the department help faculty and staff reach consumers and agricultural producers through the media. A news release service provided the state's media with more than 300 stories ranging from meeting announcements and tips on livestock and crop production to information on nutrition and food safety. Radio interviews were distributed via cassette to the state's radio stations and video footage was provided to several television stations. Crop production updates were delivered daily during the growing season through a partnership with DTN and Farmdayta. Staff are using the Internet to shift from mail delivery to instant electronic delivery.
- **Bringing NDSU to North Dakota.** Department specialists help faculty and staff use new technology to reach producers, families and consumers across the state. In 1999, video specialists helped sugarbeet and food and nutrition experts make video and audio presentations over the web. Now the department's technical experts are working with the North Dakota University System and the state's Interactive Video Network to develop video conferencing capabilities across the state. Equipment is being installed on the NDSU campus and at NDSU's Hettinger, Langdon and North Central (Minot) Research Extension Centers.
- **Rural technology.** North Dakotans are keenly aware of the economic and intellectual opportunities that advances in communications technology hold. The department's specialists are helping seize those opportunities. In cooperation with Extension staff and local groups, computerized learning centers have been developed at NDSU's Williston and Hettinger Research Extension Centers and in Burke County. Additional centers will soon be available at NDSU's Carrington, Langdon and North Central (Minot) Research Extension Centers and in Grand Forks and Burleigh Counties. The centers provide local resources for learning about the Internet, computerized business applications, databases, word processing and other computer applications.
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## Department of Animal and Range Sciences

*The department's research focuses on improving the efficiency and profitability of livestock agriculture and improving the management and conservation of rangeland resources. Faculty bring expertise in the areas of beef production, nutrition, physiology, range science, sheep, dairy, meats, genetics, breeding and statistics.*

- **The need for feed.** Nutritionists search for ways to use North Dakota crops and products in livestock rations. The result is a greater array of products for producers formulating low-cost rations and growing markets for local products. Researchers found that wet corn gluten feed increases feed intake and gain in steers fed barley-based finishing diets. Field peas have energy equal to or greater than corn in lamb finishing diets, and they don't have to be processed to be used well by beef calves. De-sugared molasses, a byproduct of sugar processing, increases intake in forage- and grain-based diets for sheep and beef cattle.
- **Feed efficiency.** Researchers continue to evaluate the nutritional needs of livestock in North Dakota's climate and production systems to help producers achieve peak production. Nutritionists revised protein recommendations for high growth potential lambs and for gestating and lactating beef cows on diets of low-quality hay.
- **Helping rangelands.** Researchers are studying the complexity of native rangeland ecosystems to develop long-term workable management plans. As opposed to many simple rangeland restoration attempts that are expensive and difficult to maintain over the long term, the research may yield sustainable plans that increase plant species diversity and improve wildlife habitat in old fields, CRP acres and rangeland. Additional research will help land managers and policymakers assess the risks associated with range management practices like grazing, haying, habitat enhancement and preservation, and wetland restoration.
- **Meeting of the minds.** Scientists at NDSU are collaborating with medical researchers to determine the effect of bison and beef on arterial plaque formation.
- **The next step.** Researchers have developed a nutrition regimen for cattle that enhances overall animal and mammary development and increases their lifelong lactation potential. The program provides energy at times when heifers can make the best use of it and reduces it when they're not as likely to put it to good use. The regimen results in about a 10 percent increase in lifelong lactation performance. For the dairy industry, that's about 70 million more pounds of milk or about \$8.8 million to the dairy economy of North Dakota. For beef, the increase could result in a 20-pound increase in the weaning weight of calves — a potential \$13 million boost to the state's beef industry.
- **Cell phones?** Scientists are learning how cells communicate with one another in livestock embryos. An improved understanding of this process could lead to improved techniques for transferring embryos and improved embryo survival during early pregnancy. Embryo transfer is commonly used for research and to enhance reproduction in high-value animals.
- **Regulations.** The development of blood vessels in the uterus and embryo is crucial to the development of a healthy fetus and subsequent offspring. Researchers are studying how the development of those blood vessels is regulated. Their research may lead to improvements in livestock fertility and methods to produce offspring that are healthier and of optimum size — large enough for good health and small enough to avoid birthing problems.

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## Department of Biochemistry and Molecular Biology

*Research in the department focuses on biochemistry, biophysics, molecular biology and biotechnology. The department is well equipped for the isolation and analysis of macromolecules and small molecules of biological interest. In addition, the Biopolymers Service Center of the NDSU Biotechnology Institute is housed in the biochemistry department. This facility contains instrumentation that is used extensively for the characterization of proteins, metabolite analysis and the cloning of genes and preparation of gene probes.*

- **Plant protection.** North Dakota sunflower and lentil producers may soon have new chemical tools to protect their crops. The department's IR-4 Laboratory measured the levels of benomyl in lentil and thiophanate-methyl in sunflower seed, providing key data to support EPA registration of those fungicides. The IR-4 program is a nationwide cooperative project that provides data for registration of pesticides for use on crops with low acreage (minor crops) and major crops with a special local need. The NDSU laboratory is currently conducting projects involving pesticides for use on potato, onion, flax, safflower, strawberry, dill seed, cranberry, pea and radish.
- **Blotting out tan spot.** Researchers are studying tan spot in wheat, a disease that causes an estimated \$50 million in damages annually in North Dakota. The researchers are learning how toxins produced by the pathogen interact with wheat. The studies may lead to improved fungicides and wheat varieties with improved resistance, and help scientists respond more quickly as new races of the pathogen emerge.
- **Ring rot.** The pathogen that causes ring rot, a bacterial disease of potatoes, can now be detected with molecular tools developed by NDSU scientists. The researchers are developing tests that work under field conditions. The research will help the state's potato industry detect the presence or absence of the disease so its spread can be limited and North Dakota can sell potatoes in foreign markets allowing only ring rot-free tubers.
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## Department of Cereal Science

*The department is one of only two academic departments in the United States dealing with cereal grains. The emphasis of research is to promote the quality and expanded uses of cereals and other foods. Research efforts focus on cereal processing, chemistry, biochemistry, malting, brewing, milling and cereal technology.*

- **Pasta improvements.** Researchers developed recommendations for reducing the amount of cracking in pasta. They found that selecting varieties with strong gluten strength and drying pasta using a high-heat drying cycle are key. Scientists also developed recommendations for the amount of sprouted wheat that can be used in pasta without affecting color, cooking loss and firmness.
- **Adding flax.** Flax is gaining a reputation as a health-promoting food. Getting it into your diet can be a challenge. Researchers developed procedures for adding ground flaxseed to pasta. They are studying how adding flaxseed may affect quality and storage characteristics of pasta. Preliminary results indicate adding flaxseed to pasta has little impact on long-term storage.
- **In the malt shop.** Beer brewers believe that the soluble nitrogen content of current malting barley varieties is too high and has a negative affect on brewing and final beer quality. Research in the department indicates that adjustments in the malting process can reduce the amount of soluble nitrogen. That research may lead to continued and broader acceptance of adapted barley varieties grown in the region for malting.
- **Exploring gluten.** Researchers studied the various proteins in gluten, the combination of proteins that give bread dough its strength and stretchy qualities. They're hoping to find what environmental factors impact the proteins and learn how the proteins affect breadmaking. The work may lead to recommendations for growers that could result in improved processing characteristics and better products for consumers.
- **Flower power.** Purple Coneflower, also known as Echinacea, has been shown to enhance the immune system. Researchers found the plant is a good antioxidant and it protects sunflower oil and vitamin C from degrading. Preliminary research in the department also shows Echinacea has some anti-microbial properties.

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## Department of Entomology

*The Department of Entomology improves the welfare and the quality of life in North Dakota and the world by gaining a better understanding of an insect's taxonomic status, life cycle, ecology and how production agriculture affects insects. NDSU entomologists also strive to discover tools to regulate pest populations and increase the agricultural economy while at the same time minimizing health and environmental risks.*

- **To burn or not to burn?** Historically, northern tallgrass prairies are burned every 4-5 years. This may not be optimal management for certain insect species and other practices may be as conducive to the long-term health of the prairies. NDSU entomologists are studying the effects of burning, grazing and haying on insect and prairie health. Their findings will help stewards of the land make informed decisions on how to manage conservation areas.
- **Old enemies and emerging problems.** Scientists are devising management plans for the European corn borer, an insect of increasing importance, and an old foe, the Colorado potato beetle. Researchers also investigated the potential for infestations of Lygus bugs in sugarbeet and sunflower and are developing control options for that pest. They have also been monitoring populations of the sugarbeet root maggot for changes in susceptibility to pesticides and are on the lookout for new, invasive pests such as the cereal leaf beetle.
- **What's this?** Accurate identification of insect species is essential to all research and pest management efforts. With more types of insects than all other plant and animal species combined, the work of identifying and classifying insects is continuous. In 1999 the Pentomidae and several other groups were surveyed in the region.
- **Beetles battle leafy spurge.** In collaboration with state and federal agencies, entomologists have been educating land managers on the value of using flea beetles to control leafy spurge. The effort has resulted in requests for more than 60 million flea beetles for redistribution in North Dakota and neighboring states. The effort has prompted a wider interest in using insects to control pests of field crops, lawns and gardens. Researchers are studying areas where flea beetles have been particularly successful in controlling the weed to determine the long-term impact. They're also looking at other insects that might control leafy spurge where beetles have failed.

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## Department of Food and Nutrition

*The department has a dynamic research program related to food science and nutrition.*

*Faculty have expertise in maternal and child nutrition, mineral nutrition, multicultural nutrition issues, experimental foods, sensory evaluation, geriatric nutrition, nutrition in clinical care and hotel/motel management.*

■ **Adding appeal to peels.** Potato processors see red ink when they look at all the potato peels that go to waste every day, but researchers at NDSU see added potato potential. Researchers found that an extract from the peels may have potential as a preservative. They tested the product in mayonnaise, cookies and pastries with good results. The product may also work as a browning agent in microwave foods. They are also looking for uses for the remaining starch, fiber and minerals in the peels. Potential products include animal feed and cat litter.

■ **Safer produce.** Fresh fruits and vegetables can carry pathogens that cause food poisonings, and they are seldom subjected to many of the processes designed to reduce or eliminate bacteria. NDSU researchers are developing recommendations for using common household products to clean fresh produce. The result will be an inexpensive way of washing fruits and vegetables in the home that may be more effective than some commercial processes now in use.

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## Department of Plant Pathology

*Faculty in the Department of Plant Pathology have expertise in host-parasite genetics, molecular biology, epidemiology, tissue culture, soil and seed-borne diseases, microbial ecology, integrated disease management and physiology of bacterial, fungal and viral diseases. The research emphasis within the department is on small grains, potatoes, oilseeds, beans and prairie forestry.*

- **Scab fight.** In the last decade, fusarium head blight epidemics in wheat and barley rank among the worst ever recorded for any crop during this century with losses estimated at \$2.6 billion. Plant pathologists developed screening techniques and tested thousands of lines with breeders. This cooperative effort led to the release of scab tolerant wheat varieties that could save growers millions of dollars. Scientists were also part of a 14-state team of researchers evaluating fungicides and methods of control. Currently thousands of acres of wheat are treated with fungicides to control scab using new spray techniques developed by NDSU researchers. In barley, researchers have mapped genes for resistance and identified lines with lower levels of infection and vomitoxin.
- **What's the forecast?** Regional research on wheat disease resulted in the NDSU wheat forecasting system. The system helps farmer and crop consultants make tough decisions by predicting the likelihood of disease infection based on environmental conditions and crop growth stage.
- **Fighting diseases.** The last decade in North Dakota has been characterized by wet conditions favorable to serious plant disease epidemics. In 1999, North Dakota potato growers experienced one of the worst late blight epidemics in history. About a billion pounds of potatoes valued at \$76 million were lost. Sclerotinia head rot affected more than 80 percent of the sunflower fields in eastern North Dakota. Sclerotinia also damaged canola and dry edible beans. Losses were estimated at nearly \$100 million. A new race of leaf rust became established on scab-resistant varieties of wheat in 1999 with losses estimated at \$21 million. Plant pathologists are looking for ways to manage these disease problems through an integrated approach that includes resistant plant varieties, fungicides and improved production techniques.

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## Department of Plant Sciences

*Expertise in the department includes genetics, physiology, crop breeding, weed science, production, horticulture and forestry. The department plays a critical research and extension role for the state and region by developing new crop cultivars and cost-effective weed control strategies and educating clientele about these developments and general crop production.*

- **Scab-resistant wheat developed.** Alsen, the first hard red spring wheat variety in the United States that combines fusarium head blight (scab) resistance with high grain quality was released in February. Seed increase efforts were accelerated by about 15 times, and 30,000 bushels were allocated to seed producers through their county crop improvement associations to speed the delivery of Alsen to North Dakota producers. Alsen could improve income for North Dakota spring wheat producers by up to \$100 million annually. The new variety has Type 1i resistance from the Chinese spring wheat Sumal3, which means individual florets may be infected, but the infection does not spread to the rest of the head. Genes from South American hard red spring wheat that has Type 1 FHB resistance (florets are not infected) are being incorporated into adapted NDSU lines.
- **Progress in durum and barley.** Scientists have successfully incorporated genes from Sumal3 into durum, a transfer that is extremely difficult because durum and hard red spring wheat do not have the same number of chromosomes. The winter nursery in China has been especially beneficial in both durum and barley fusarium head blight research.
- **New barley varieties.** Drummond, a new six-row variety currently under consideration by industry for malting potential, was released. Conlon, a two-row variety released several years ago, was approved as a malting variety in June and will result in several million dollars of additional annual income to barley producers, especially in central and western North Dakota.
- **Other plant varieties released.** Killdeer oat, Arthur navy bean, Barnes soybean and Dakota Pearl potato were all released in the past year. The varieties should generate about \$125 million in new income annually to North Dakota producers. Horticultural ornamentals adapted to the state's harsh climate were released for sale to urban and rural consumers by nurseries.
- **Triple play on leafy spurge.** About 1.2 million acres are infested with leafy spurge in North Dakota. Scientists have discovered that a three-way herbicide mix provided 98 percent control 24 months after treatment, compared to less than 60 percent control using single herbicide mixtures. This cost-effective and environmentally friendly combination will reduce both the cost of annual treatments and the use of herbicides.
- **Micro-rates bring mega-benefits.** Weed scientists developed micro-rate herbicide applications where two or more herbicides are applied at about an eighth of the labeled rate in two or more applications. This technique reduced herbicide use and herbicide costs on sugarbeet by about \$20 per acre. In 1999, 94 percent of the sugarbeet producers in North Dakota and Minnesota applied micro-rates for an annual savings of about \$39 million. A newly developed micro-rate combination for corn has reduced herbicide costs \$16 per acre. If applied to half of the corn in North Dakota, the technique could reduce production costs by \$12 million per year. Micro-rate studies with small grain, dry bean and soybean show promise, reducing production costs \$2 to \$6 per acre annually.

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## Department of Soil Science

*Efforts in soil science are at the forefront of environmental and natural resource issues such as land use, soil contamination, groundwater quality and waste disposal. The Department of Soil Science conducts applied research to deal with soil management problems faced by farmers and ranchers.*

- **Essential tests.** The department's soil testing laboratory cooperates with all private soil testing laboratories in the state to maintain accuracy and consistency. The laboratory also supports research on soil fertility management and plant nutrition problems under dryland and irrigated conditions. NDSU researchers share their information with the fertilizer industry, and extension programs update farmers and ranchers around the state. As a result of that effort, North Dakota growers apply \$250 million worth of nitrogen and phosphorus fertilizers a year and realize an estimated net benefit of \$1.4 billion.
- **Planting test.** Accurate planting is a key to top yields in sugarbeets. NDSU's mechanical testing of planters has resulted in a \$3 million benefit for sugarbeet growers.
- **What's the weather?** The North Dakota Agricultural Weather Network (NDAWN) has grown from six remote automatic weather stations in 1989 to 52 stations in the year 2000. It provides hourly data accessible on the Internet to farmers, ranchers, government officials, media, researchers and the general public ([www.ext.nodak.edu/weather](http://www.ext.nodak.edu/weather)). This has greatly benefitted growers who rely on this timely and accurate information before applying herbicides, fungicides and pesticides. The system is also linked to disease forecasting systems developed by NDSU researchers and now used by producers to help make crop management decisions.
- **Exploring new technology.** Improved seeding technology to get crops off to a fast start and an increase in crop residue to protect fields from erosion are having an impact on soil management. These technologies can reduce field operations and conserve soil and water. Researchers are also looking at tillage systems that help grain legumes become established under high-residue conditions. Because the same pathogen that causes scab in wheat and barley causes stalk rot in corn and helps break down stalks after harvest, researchers are studying the relationship between scab and the decomposition of plant residues. Likewise, because many soil-saving measures also conserve moisture, scientists are studying ways to reduce springtime soil moisture to reduce iron chlorosis in soybeans.
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## Department of Veterinary and Microbiological Sciences

*The department uses technology and molecular biological approaches in research efforts that contribute to the improved understanding, diagnosis, prevention and treatment of animal diseases. The efforts benefit both producers and consumers.*

■ **Virus attack.** Researchers are studying the virus that causes Porcine Reproductive and Respiratory Syndrome (PRRS), a deadly swine disease first diagnosed in the United States a little over a decade ago. They're looking to the basic viral functions and genes to determine how the virus reproduces and mutates so rapidly. Their work may provide a first step toward finding ways to diagnose and control the disease.

■ **Diagnostic laboratory.** Last year, the NDSU Veterinary Diagnostic Laboratory handled nearly 10,000 cases. Most were from North Dakota and northern Minnesota, but some came from states across the country. Most came from veterinarians facing diagnostic mysteries. Staff conduct post-mortem examinations of animals and test submitted samples for diseases or toxins. Few cases take longer than three days. In addition to providing diagnostic support for veterinarians, the laboratory collaborates with the state veterinarian and the North Dakota Board of Animal Health to look for trends in animal health problems and to spot potential outbreaks of livestock disease.

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# Northern Crops Institute

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*Prepared for the  
Senate Appropriations Committee*

January 4, 2001



## **Mission**

*The Northern Crops Institute (NCI) supports North Dakota and regional agriculture and value-added processing by conducting educational and technical programs that expand and maintain domestic and international markets for northern-grown crops.*

- NCI is a sophisticated technical support organization that assists existing and potential buyers to gain a better understanding of the marketing, grading, quality, utilization, and processing of northern-grown crops.
- NCI is recognized worldwide as a leading training facility for United States and international professionals who buy and process North Dakota crops.
- NCI contributes to economic growth of North Dakota by conducting educational and technical programs that help to increase sales and use of North Dakota crops.
- NCI contributes to economic vigor through value-added processing for North Dakota, regional and United States companies that investigate new uses for North Dakota crops.
- NCI cooperates with commodity check-off groups in the region and provides technical assistance for their market development efforts.
- NCI partners with USDA/FAS, US Wheat Associates, US Grains Council, American Soybean Association and other professional cereal and food science-related groups.
- NCI designs customized training courses and technical services that respond to changing industry demands and to the world marketplace.
- NCI enhances the education of NDSU and regional university students through emphasis on globalization and lectures/demonstrations using processing equipment that is not available for education at other state facilities.
- NCI utilizes experts from the region, nation and world in its programs.
- NCI programs provide customized training for regional agricultural producers.
- NCI receives funding from the state legislatures of North Dakota, South Dakota, and Minnesota, and check-off funding from agricultural commodity groups in these three states and Montana.
- NCI carries out its mission by conducting short courses for international and U.S. buyers and processors, hosting visiting foreign trade team delegations, providing technical assistance domestically and globally, and providing orientations to regional agriculture on a regular basis.

## **Cost to Continue**

Additional revenues will need to be generated to compensate for the \$12,840 in cost-to-continue that is not included in the executive recommendation. If cost-to-continue is added to the general fund appropriation, NCI will be more competitive because it will not need to raise fees.

## **Competition**

Like all entities today, NCI operates in a very competitive environment, with increased competition for sales of our regional commodities from around the world and other regions of the U.S. NCI has responded to this increasing competition by providing technical services, promoting sales of regional crops, and assisting organizations and companies in developing programs and workshops that meet their needs worldwide.

NCI competes effectively with similar organizations, such as the Canadian International Grains Institute (CIGI) in Winnipeg, which has an annual budget of \$2.5 million (US), a much larger staff than NCI, and the ability to offer courses tuition-free. NCI competes with the food processing industry to hire staff who are technically competent and experienced in processing. To maintain and expand technical and marketing competencies, NCI staff participate in professional development and staff training opportunities. Because of the increasingly competitive environment for educational programs, NCI must conduct substantial marketing for its programs. Significant resources are required to maintain and grow programs.

## **Investing in NCI's Core Programs**

### **Investing in Market Development for the Region**

NCI is an influential part of the regional agricultural chain, extending from local farms to the markets of the world. International competition has increased both for agricultural market share and for NCI's program market share, requiring a new level of sophisticated promotion and marketing efforts. In the past two years, nearly **500** participants plus representatives of their regions and interpreters, have been educated through NCI short courses. These courses bring together grain traders, flour millers, feed manufacturers, food processors, government officials and others. Over **200** days of staff time were devoted to technical processing of regional commodities for **30** projects. Staff members also provide valuable technical assistance to users of regional commodities as international consultants.

### **Promotion of regional agriculture and northern-grown crops**

- NCI hosted over 1,800 visitors, course participants and lecturers from 62 countries in 1999 and 2000:

Algeria	Angola	Argentina	Belgium	Bosnia & Herzegovina
Brazil	Canada	Chile	China	Colombia
Czech Republic	Egypt	Estonia	France	Germany
Hong Kong	Hungary	India	Indonesia	Italy
Jamaica	Japan	Jordan	Kazakhstan	Kenya
Korea	Kuwait	Latvia	Lithuania	Malta
Madagascar	Mexico	Montenegro	Morocco	Netherlands
Oman	Pakistan	Peru	Philippines	Poland
Portugal	Romania	Russia	Senegal	Slovakia
Slovenia	South Africa	Spain	Sweden	Taiwan
Tanzania	Trinidad	Tunisia	Turkmenistan	United Arab Emirates
United Kingdom	U.S.A.	Uzbekistan	Venezuela	Vietnam
West Indies	Yemen			

- NCI's 2000 Grain Procurement Management for Importers course attained its largest enrollment in several years with 33 participants from 15 countries.

- NCI's 1999 Grain Procurement course in Tunisia opened up the regional market for HRS wheat because it enabled participation by Algerians and Libyans.

- 77 regional agri-business people attended NCI's International Protocol Workshop in January that served as a guide to international business customs and behavior.

- North Dakota country elevator managers attended a seminar co-sponsored by NCI and North Dakota Wheat Commission that focused on changing needs of customers who buy grain in the region.

- 25 graduate students in Animal and Range Science from universities in North Dakota, South Dakota, and Minnesota attended the Feed Manufacturing course at the NCI Feedmill.

- NCI staff promote northern grown crops, courses, and technical services by speaking and educating at international, national, regional, and state gatherings, including 30 regional commodity group and growers meetings in North Dakota, Montana, South Dakota, and Minnesota during the biennium, and in Albania, Algeria, Bulgaria, Guatemala,

Honduras, Italy, Japan, Mexico, Morocco, Netherlands, Russia, Singapore, Taiwan, Tunisia, Venezuela and the USA.

- NCI promotes northern grown crops and services through its website, [www.northern-crops.com](http://www.northern-crops.com), direct mailings, convention booths, presentations and other media.

### **Continuing Service to the Livestock Industry**

NCI serves the region's livestock industry by manufacturing feed for livestock at NDSU and a number of the NDSU Research Extension Centers. NCI staff have taught feed manufacturing courses for NDSU and other regional universities. One-sixth of NCI's resources are used for feed milling, service to animal research, and education in the area of feed milling.

NCI is pleased to offer these services at little cost to the users, NDSU Experiment Station, branch stations and the NDSU Animal and Range Science department. However, this does come at a cost and we would like to be able to manufacture the feed without having to increase fees to the mill users. Funding the recommended core operating budget through the general fund will enable the NCI feedmill program to continue milling, pelleting, bagging and delivering feed for commercial and research animals at the NDSU Main Experiment Station and several Research Extension Centers.

# Impact

## Examples of Success

**Korean bakers and millers** switched to a flour blend made primarily with hard red spring wheat, in one case replacing a formulation of 100% Canadian western red spring wheat that had been used for the past 10 years. This change occurred after a six-member team of Korean bakers spent a week at the NCI comparing the performance of U.S. hard red spring, hard red winter and Canadian wheat flours in pan bread production.

**Libya purchased U.S. durum wheat** after U.S. sanctions were lifted and Libyan officials participated in an NCI grain procurement course in Tunisia in 1999. Tunisia was the perfect place to train and host buyers from Libya and Algeria who had not had U.S. trade visitors because of trade and travel sanctions. Libya's interest in U.S. durum wheat was rekindled and in November, 1999, Libya made its first purchase of U.S. durum since sanctions were lifted. Algeria is one of the largest export markets for U.S. durum wheat. Tunisia's import needs should also be up due to a smaller domestic crop. The course was also held in Morocco, the third largest export market for U.S. durum.

NCI does not buy or sell crops – we make it easier for everyone else to do so. NCI programs focus on issues that assist in developing and maintaining markets for agricultural producers in N.D. and the region. We provide technical information on crop utilization by means of educational programs, technical processing and consulting, and special services.

Results from educational programs are long-term. One must look at what the NCI does in the same way as one looks at 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.

Given that, the NCI is involved in cooperative activities with market development commodity groups that subsequently lead to sales. Increasingly high crop quality is being required by an increasing number of international grain purchasers and processors. This is a direct result of international privatization of grain procurement that has occurred during the past decade. The Institute now provides technical assistance and training to private buyers in addition to a limited number of governmental agencies. NCI is able to demonstrate quality attributes of the region's crops and teach buyers how to purchase from the U.S. system.

Customers look for the best value (price, quality, consistency, and reliability) when making crop purchases. Suppliers need to meet their customers' demands in order to make a sale, especially a repeat sale. Continued education and market development activities are required to maintain markets in addition to expanding them.

NCI is the prime source of educational and technical programs for northern grown crops. Demand continues to increase for its programs and services. Such demand is also a reflection of the success of its activities to date and the credibility of the information provided through its programs.

## **Visioning for the Future**

Northern Crops Council and the NCI staff participated in separate sessions at the NDSU Group Decision Center to focus on priorities for the next three to five years.

Three common themes resulting from both sessions were:

- Programs
- Partnerships
- Advancing NCI's Technical and Marketing Capabilities

## **2001-2003 Goals**

- Continue programs that continue to be effective
- Survey regional commodity groups to determine programming needs
- Develop and offer new programs, domestically and internationally
- Enhance and expand partnerships regionally, nationally, and globally
- Examine new models for delivering programs
- Develop staff capabilities in new areas of technical expertise, and delivery techniques
- Expand marketing campaign for educational programs and technical processing

## **Conclusion**

NCI has expanded its program base to better serve the promotion and market development efforts for food and feed grains produced in this region. Expanded programs, new marketing strategies, enhancing NCI's auditorium technology and Internet connectivity, remodeling several processing laboratories, acquisition of new processing equipment for all NCI laboratories and mills have contributed to expanded capabilities. These have resulted in increased participation in NCI programs by regional, national, and international buyers and processors.

We continue to examine new models for offering programs and information that will encourage crop purchases from North Dakota and the region. Competition continues to increase – competition from other regions of the U.S., competition from other nations, and competition for funds. The need for technical information is more important than ever, as time is more limited.

On behalf of the Northern Crops Council and our staff, I would like to express my most sincere thanks for the financial support and leadership provided by the North Dakota Legislature. This support is greatly leveraged by contributions from the other three states and commodity check-off organizations in the region for the benefit of our producers. By working together with agricultural commodity check-off groups in the state and region and resources at NDSU and elsewhere, the NCI will continue to provide assistance in maintaining and enhancing markets for producers' crops.

I conclude by encouraging you to include the Cost-to-Continue of \$12,840 in the NCI general fund in addition to supporting the budget request before you.

Thank you.

Respectfully submitted,  
Patricia Berglund, Ph.D.  
Director  
Northern Crops Institute

## 1999 and 2000 Accomplishments

### Educational Programs

#### 1999 and 2000 Short Courses

NCI short courses educated nearly 500 participants plus representatives of their regions and interpreters. NCI offers short courses in partnership with U.S. Wheat Associates, American Soybean Association, American Society for Brewing Chemists, Association of Operative Millers, American Association of Cereal Chemists, U.S. Grains Council, and National Pasta Association.

#### 1999

<b>Specialized Durum Milling Course</b> 6 participants: all USA.	February 22-26
<b>Advanced Grain Procurement Strategies</b> 15 participants: Brazil (1), Egypt (1), Hong Kong (1), Indonesia (3), Japan (1), Oman (1), Peru (1), Philippines (4), Vietnam (1).	April 26-30
<b>NCI/AACC Pasta and Noodles: Raw Materials and Processing</b> 25 participants: Canada (1), Mexico (1), USA (23).	May 11-13
<b>NCI/USW Grain Procurement Management</b> Offered in Tunisia: 36 participants: Algeria (17), Tunisia (17), Libya (2). Offered in Casablanca: 33 participants: all from Morocco.	May 25-28 May 31-June 1
<b>Algerian Scientific Exchange on Durum Quality</b> 1 participant: Director of Algerian Office of Cereals Quality Laboratory	June 21-23
<b>ASA Hungarian Feed/Poultry Short Course</b> 6 participants: Estonia (2), Hungary (3), Lithuania (1).	July 26-30
<b>Pillsbury Extrusion Course</b> 25 participants: all USA	August 3-4
<b>On-Farm Feed Mixing -- Is It Right for You?</b> 4 participants: all North Dakota	September 15
<b>Grain Procurement Management for Importers</b> 20 participants: Angola (1), Czech Republic (1), Egypt (6), India (1), Jordan (2), Latvia (1), Lithuania (3), Nigeria (2), Poland (1), Switzerland (1), and UAE (1).	Sept 20-Oct 1
<b>AACC Pasta and Noodles: Raw Materials and Processing (Rome, Italy)</b> 26 participants: Belgium, France, Germany, Italy, Kuwait, Netherlands, Slovenia, Sweden, Switzerland, UAE, U.K.	October 13-14
<b>NCI/USDA Macedonian Wheat Milling/Quality and Uses</b> 2 participants from Macedonia; 1 interpreter.	October 18-29

**2000**

<b>International Business Protocol</b> 78 participants. All USA	January 20
<b>PRC Malting Barley &amp; Brewing Study Team</b> 13 participants. People's Republic of China	April 12-14
<b>Montenegrin Wheat Quality Evaluation Program</b> 2 participants, 1 interpreter. Montenegro	April 17-20
<b>Frozen Dough Development—Korean</b> 7 participants. Korea	May 10-12
<b>Feed Manufacturing Technology—U. S.</b> 24 graduate students from University of MN, SDSU, NDSU	May 22-24
<b>Cargill Wheat Quality Awareness</b> 4 participants. USA	May 30-June 2
<b>NCI/AOM Durum Wheat Milling</b> 5 participants. USA & Canada	June 13-16
<b>Durum Wheat Milling &amp; Pasta Processing Technology</b> 11 participants. 2 interpreters. Russia	June 19-29
<b>ND Country Elevator Seminar</b> 52 participants. USA	July 25
<b>Latin American Malt Quality Evaluation</b> 13 participants. 2 interpreters. Colombia, Peru, Venezuela, Jamaica, Trinidad, Brazil	August 15-17
<b>Pasta and Noodles: Raw Materials and Processing</b> 30 participants. USA, Canada, Trinidad	Sept. 6-8
<b>Grain Procurement Management for Importers</b> 33 participants. 2 interpreters. Egypt, Pakistan, India, Taiwan, Algeria, Russia, Netherlands, Sweden, France, Philippines, Japan, South Africa, Yemen, Angola, Poland	Sept. 18-29
<b>NCI/ASBC Barley Malt Quality Evaluation</b> 11 participants. USA, Argentina, Canada	October 10-13

**NCI assisted in hosting the following Trade Team Delegations:**

**1999**

Korean Pan Bread Flour Development Team	April 19-22
Taiwan Noodle Wheat and Flour Team	April 29
Chinese Feed Team	May 21
Chinese Soybean Outlook Team	June 6-7
Chinese Marketing Team	June 14-15
Sub-Saharan African Wheat Team	June 17
European Spring Wheat Team	June 24
Baltic/Hungarian Feed and Poultry Team	July 26-30
Korean Barley and Sorghum Team	September 1-3
Taiwan Barley/Sorghum Milling Team	September 16-18
Moroccan Durum Mission	September 23
Romanian Livestock Feed Manufacturing Team	October 3-6

**2000**

PRC Barley Team	April 13-16
Algerian Trade Team	May 9-11
Taiwan Agricultural Trade mission	May 25-27
European Spring Wheat Team	June 20-22
Colombian Trade Mission	July 5-7
Brazilian Trade Team	July 16-19
East African Trade Team	August 9
Mexican Barley Team	August 17
Nisshin Millers (Japan)	August 17
Japanese Food Agency	August 22-24
Central American Wheat Inspection Team	September 20
ASA East European Feed Manufacturing Team	September 27-29
Nippon Flour Millers	October 23

## Technical Assistance

NCI conducted technical work for numerous food processing companies who use northern-grown commodities.

- NCI conducted over 28 technical processing projects for users of regional commodities. Over 200 days of staff time were devoted to processing for food companies who use northern-grown commodities.
- Staff members provided technical service to users of regional commodities in Albania, Algeria, Bulgaria, Guatemala, Honduras, Italy, Japan, Mexico, Morocco, Netherlands, Russia, Singapore, Taiwan, Tunisia, Venezuela, and the USA.
- NCI feedmill produced 20,000 tons of feed for research animals since 1991.
- Durum Mill is used for many research and private projects.
- NCI staff have leadership roles in many national professional groups including American Association of Cereal Chemists, Wheat Quality Council, Association of Operative Millers, American Feed Industry Association, and Analytical Oil Chemists Society.
- Several NCI staff lecture and provide demonstrations for NDSU and other regional universities.

## Feedmill Research and Education

NCI's feed production facility is an integral component of the livestock research efforts of North Dakota State University and the North Dakota Agriculture Experiment Station. Researchers routinely utilize its capabilities to produce complete feeds or specialty concentrates and supplements in their continued efforts to assist regional producers in capturing value for their crops and livestock. Feed products are produced in meal or pelleted form, depending on need and research objectives.

The facility also provides the NDSU livestock units with support rations for everyday maintenance of animals. The facility was completed in November 1990 and has produced in excess of 20,000 tons of feed. Average yearly production is 2,000-2,500 tons and of that one third is for research rations and two thirds for maintenance rations. Scientists from sister institutions in South Dakota (SDSU) and Minnesota (MSUC) have also had research rations produced by the facility. This interstate cooperation highlights the uniqueness of the facility as a regional processing center.

Educational outreach in the form of classroom learning opportunities or on-site exchange of technical expertise continues to be an important part of the vision of NCI's feed production center. NCI has assisted the U.S. Grains Council, the American Soybean Association and U.S. AID in providing educational programming in the areas of feed manufacturing technology and feedmill management to several hundred short course participants, both here and abroad.

In the spring semester of 2000, the NCI feedmill specialist taught ARSC 496-Feed Manufacturing Technology for the NDSU Animal and Range Science Department. In May of 2000 NCI feedmill staff offered Animal Science graduate students from NDSU, SDSU and UMN an intensive two-day course to strengthen their understanding of feed manufacturing technology and to provide them with some basic skills in feed preparation.

## **Durum Mill Research and Education**

Northern Crops Institute Durum Mill was installed approximately 9 years ago, was modified in 1997 and continues to be upgraded. Modifications in 1997 included installation of a wheat tempering system, spouting for semolina and flour streams and a feed mechanism to the first break system. More recent mill modifications include:

- Sifter modifications for more thorough clean-out of samples.
- Installation of vacuum system to increase efficiency of clean-up.
- Installation of computer software to determine power usage.
- Investigation of additional modifications for data collection, thermal fumigation, etc.

### **Recent uses of the durum mill include:**

- Teaching five durum wheat milling short courses during the biennium.
- Milling durum samples annually for the Wheat Quality Council durum wheat quality study.
- Proprietary milling projects for durum millers and other regional processors.
- Tempering larger quantities of hard red spring wheat prior to milling (using unique durum mill tempering facilities).
- Preparing samples for demonstrations in NDSU and NCI milling courses, and other presentations.
- Evaluating interaction effects of five milling variables on durum wheat in the first break system.
- Determining mill balance, a measure of uniformity of mill operation over an extended period of time.
- Determining roll speed differential on semolina and flour yield and quality using the entire mill. Milling of approximately 100 samples of durum, supplied by commercial elevators and terminals to develop NIR equations for predicting semolina and flour yield, semolina speck count, and semolina color on durum wheat for export.

## Administration

■ Located on campus of North Dakota State University at Fargo. Not part of NDSU academic programs.

■ Administrative responsibility to:

Dr. Patricia T. Berglund  
Director  
Northern Crops Institute  
North Dakota State University

Vice President Patricia Jensen  
Vice President and Dean of Agriculture  
North Dakota State University

Dr. Joseph Chapman  
President  
North Dakota State University

## Governance: Northern Crops Council 2000-2001

ND Commissioner of Agriculture  
NDSU President  
ND Wheat Commission  
MN Soybean Growers Association  
MN Barley Research/Promotion Council  
ND Oilseed Council  
ND Barley Council  
ND Soybean Council  
SD Wheat Commission  
MT Wheat & Barley Committee  
SD Corn Utilization Council  
Roman Meal Milling Co.  
American Crystal Sugar Company

Roger Johnson  
Dr. Joseph Chapman  
Maynard Satrom, Chair  
Sherwood Peterson, Vice-Chair  
Chuck Gunnerson, Past Chair  
Stan Buxa  
Charles Ottem  
Matt Mechtel  
Richard Kuecker  
Brian Kaae  
Don Pugh  
Dr. Joel Dick  
David Berg

## Cooperation

The broad spectrum of short courses presented by NCI requires input from outside experts. Guest speakers participating in NCI programs contribute to the success of its activities. The following represent contributing resources:

- **NDSU**
  - Department of Cereal Science
  - Department of Agribusiness and Applied Economics
  - Department of Plant Sciences
  - Department of Animal and Range Sciences
  - College of Business
  - Extension Service
- South Dakota State University
- University of Minnesota
- Montana State University
- USDA Federal Grain Inspection Service and Foreign Agricultural Service
- Grain trade
- Financial institutions
- Regional commodity check-off organizations
- Grain/feed processors
- Food industry
- North Dakota Mill & Elevator
- Port of Duluth
- Minneapolis Grain Exchange
- Individual producers
- Country and terminal elevators

## Facilities

NCI is a \$1.4 million facility containing:

- auditorium (simultaneous language translation) with state-of-the-art technology
- pasta extrusion/drying lab
- food processing/twin screw extrusion lab
- analytical lab
- commodity grading lab
- baking lab
- conference room

NCI in the past 10 years completed new additions namely:

Durum Pilot Mill	\$1.4 million
Feed Mill	\$1.4 million
Feed Mill Classroom	\$50,000
Feed Mill Quality Control Lab, Meeting Room, and Lobby	\$45,500

These facilities have allowed expansion of NCI program base to include feed grain processing and utilization, and durum wheat milling/semolina production technology.

It is important to note that commodity check-off groups in the region provided major funding towards the completion of these facilities.

## Regional Funding (2000-2001)

NCI budget comprised of a mix of funds from the four state region.

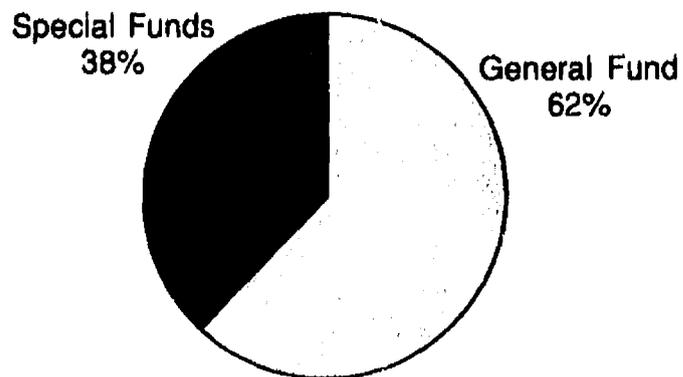
	1999-2000 FY00	2000-2001 FY01	Biennium	Percent of Total Funding
<b>ND General Fund</b>	<b>\$ 325,145</b>	<b>\$ 343,434</b>	<b>\$ 668,579</b>	<b>(62.7%)</b>
<b>Other State Revenue</b>				<b>(37.3%)</b>
MN General Fund	70,000	70,000	140,000	
SD General Fund	25,000	25,000	50,000	
<b>Other State Appropriated:</b>	<b>\$ 95,000</b>	<b>\$ 95,000</b>	<b>\$ 190,000</b>	
<b>Commodity Check-off Contributions</b>				
ND Wheat Commission	\$15,000	\$25,000	\$40,000	
ND Soybean Council	2,200	5,000	7,200	
ND Corn Utilization Council	10,000	fund in spring	10,000	
MN Wheat Council	2,500	2,000	4,500	
MN Barley Council	3,000	2,000	5,000	
MN Soybean Council	10,000	10,000	20,000	
MT Wheat and Barley Commission	30,000	30,000	60,000	
Northarvest Bean Growers	1,500	1,500	3,000	
SD Wheat Commission	25,000	25,000	50,000	
SD Corn Utilization Council	7,500	10,000	17,500	
<b>Commodity Check-off Funds:</b>	<b>\$ 106,700</b>	<b>\$ 110,500</b>	<b>\$ 217,200</b>	
<b>Total Other State and Commodity Contributions</b>			<b>\$ 407,200</b>	
<b>Total Revenues (ND and Other State Revenue)</b>			<b>\$ 1,075,779</b>	

## Federal Funding

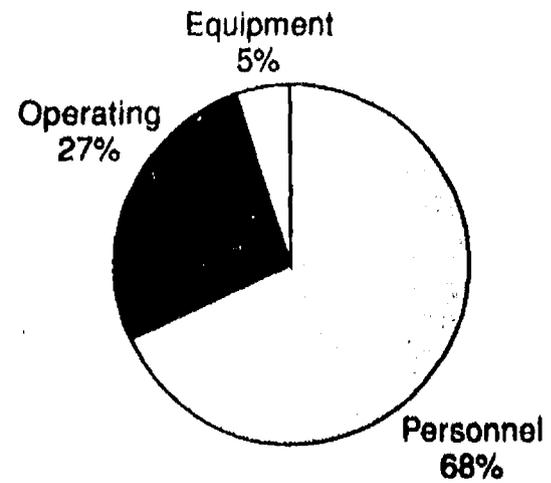
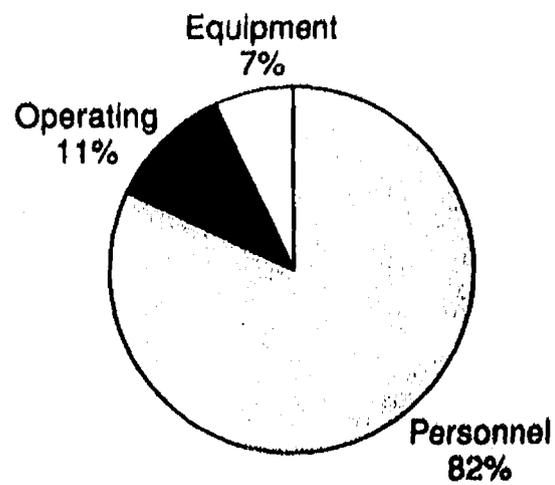
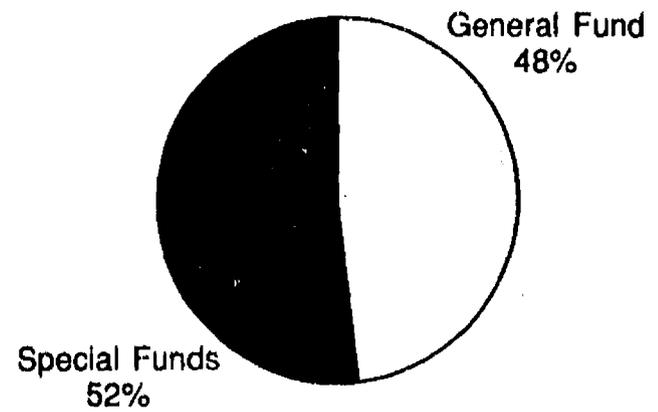
- NCI does not receive ongoing federal funding support directly.
- Federal funds to build durum mill, and feed mill are one time contributions (grants) for these projects only.
- Foreign Agricultural Service/USDA indirectly funds NCI educational programs by providing matching funds for check-off dollars to support overseas market development activities to: U.S. Wheat Associates, U.S. Grains Council, American Soybean Association and others.

## Comparison of NCI Revenue and Expenses

### 1999-2001



### 2001-2003



**Department 630 - NDSU Extension Service  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Executive Budget	275.81	\$14,379,745	\$19,298,301	\$33,678,046
1999-2001 Legislative Appropriations	282.81 <sup>1</sup>	12,975,020	16,744,746	29,719,766 <sup>2</sup>
Increase (Decrease)	(7.00)	\$1,404,725	\$2,553,555	\$3,958,280

<sup>1</sup> The 1999-2001 appropriation is based on 267.8 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 282.81 positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$138,083 from the general fund for the agency's share of the \$422,400 funding pool appropriated to the Main Research Center for salary adjustments for employees of the Agricultural Experiment Station, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute and \$1,807, \$19,730 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000.

**Major Items Affecting NDSU Extension Service 2001-03 Budget**

	General Fund	Other Funds	Total
1. Provides funding for core programs, primarily for training and expanding programs, a State Board of Agriculture Research and Education priority.	\$574,094		\$574,094
2. Provides funding for operating and equipment from increases in gifts, grants, contracts, and other local funds.		\$3,050,947	\$3,050,947
3. Removes funding for federal funds and reclassifies federal funds to special funds and removes seven FTE research positions as a result of the decreased funding.		(\$1,500,359)	(\$1,500,359)

**Major Legislation Affecting the NDSU Extension Service**

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the NDSU Extension Service and report any adjustments to OMB.

Section 5 of Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the NDSU Extension Service to the 2003-05 biennium.

**Department 630 - NDSU Extension Service  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Schafer Executive Budget	275.81	\$14,379,745	\$19,298,301	\$33,678,046
1999-2001 Legislative Appropriations	282.81 <sup>1</sup>	12,975,020	16,744,746	29,719,766 <sup>2</sup>
Increase (Decrease)	(7.00)	\$1,404,725	\$2,553,555	\$3,958,280

2001-03 Hoeven Executive Budget	275.81	\$14,379,745	\$19,298,301	\$33,678,046
Hoeven Increase (Decrease) to Schafer	0.00	\$0	\$0	\$0

<sup>1</sup> The 1999-2001 appropriation is based on 267.8 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 282.81 positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$138,083 from the general fund for the agency's share of the \$422,400 funding pool appropriated to the Main Research Center for salary adjustments for employees of the Agricultural Experiment Station, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute and \$31,807, \$19,730 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000.

**Major Schafer Recommendations Affecting NDSU Extension Service 2001-03 Budget**

	General Fund	Other Funds	Total
1. Provides funding for core programs, primarily for training and expanding programs, a State Board of Agriculture Research and Education priority.	\$574,094		\$574,094
2. Provides funding for operating and equipment from increases in gifts, grants, contracts, and other local funds.		\$3,050,947	\$3,050,947
3. Removes funding for federal funds and reclassifies federal funds to special funds and removes seven FTE research positions as a result of the decreased funding.		(\$1,500,359)	(\$1,500,359)

**Major Hoeven Recommendations Affecting NDSU Extension Service 2001-03 Budget  
 Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation

**Major Legislation Affecting the NDSU Extension Service**

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the NDSU Extension Service and report any adjustments to the Office of Management and Budget.

Section 5 of Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the NDSU Extension Service to the 2003-05 biennium.

**Department 630 - NDSU Extension Service  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Schafer Executive Budget	275.81	\$14,379,745	\$19,298,301	\$33,678,046
1999-2001 Legislative Appropriations	282.81 <sup>1</sup>	12,975,020	16,744,746	29,719,766 <sup>2</sup>
Increase (Decrease)	(7.00)	\$1,404,725	\$2,553,555	\$3,958,280

2001-03 Hoeven Executive Budget	275.81	\$14,379,745	\$19,298,301	\$33,678,046
Hoeven Increase (Decrease) to Schafer	0.00	\$0	\$0	\$0

<sup>1</sup> The 1999-2001 appropriation is based on 267.8 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 282.81 positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$138,083 from the general fund for the agency's share of the \$422,400 funding pool appropriated to the Main Research Center for salary adjustments for employees of the Agricultural Experiment Station, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute and \$31,807, \$19,730 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000.

**Major Schafer Recommendations Affecting NDSU Extension Service 2001-03 Budget**

	General Fund	Other Funds	Total
1. Provides funding for core programs, primarily for training and expanding programs, a State Board of Agriculture Research and Education priority.	\$574,094		\$574,094
2. Provides funding for operating and equipment from increases in gifts, grants, contracts, and other local funds.		\$3,050,947	\$3,050,947
3. Removes funding for federal funds and reclassifies federal funds to special funds and removes seven FTE research positions as a result of the decreased funding.		(\$1,500,359)	(\$1,500,359)

**Major Hoeven Recommendations Affecting NDSU Extension Service 2001-03 Budget  
 Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation

**Major Legislation Affecting the NDSU Extension Service**

Section 4 of Engrossed Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the NDSU Extension Service and report any adjustments to the Office of Management and Budget.

Section 6 of Engrossed Senate Bill No. 2021 requires the State Board of Agricultural Research and Education to report to the Budget Section on specified performance and accountability measures of the NDSU Extension Service.

Section 7 of Engrossed Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the NDSU Extension Service to the 2003-05 biennium.

**Summary of Legislative Changes Resulting From First House Action**

See Statement of Purpose of Amendment (attached).

SB 2021

## SENATE APPROPRIATIONS COMMITTEE

January 4, 2001

Mister Chairman, and Members of the Committee:

I am Marlene Kouba, Chairman of the North Dakota State Soil Conservation Committee. I live on a farm northwest of Regent in the southwest corner of the state where we raise durum, buckwheat and canola.

Several years ago, the Legislature combined the ND Extension Service with the State Soil Conservation Committee and it has been working very well in a satisfactory relationship. There are seven members on the committee---five district supervisors and two appointed by the Governor.

During the last two bienniums, the Soil Conservation Committee has been allocated \$580,000. These monies have been distributed as technical grants to about 25 of the districts--depending on those with the most urgent needs. To receive any money, each district writes an application for a grant requesting up to \$25,000. A point system is then used to choose which districts will receive a grant. The members of the Committee judge the applications individually and award the money to the districts with the most total points. Those who receive grants file quarterly reports on their progress. However there are 58 soil conservation districts that request funds to hire a technician or help them with their work.

Here are a few of the many accomplishments of some of the districts that received money in the 1999-2000 biennium:

- ✓ The State Soil Conservation Committee awarded 24 grants affecting 26 soil conservation districts (some were combined).
- ✓ Participating districts use funds to add staff for more one-on-one contacts with landowners.
- ✓ Walsh County Soil Conservation District (SCD) planned, and is planting, 161 acres of trees and shrubs.
- ✓ Foster County SCD is developing a multi-county watershed monitoring and assessment project on the Pipestem Creek.
- ✓ The Dunn County SCD worked with the Public Service Commission to plant 1,700 trees in the Noonan mile spoils.
- ✓ The Oliver County SCD implemented a tree saw program for windbreak renovation.
- ✓ The Sheridan County SCD is offering a fall seeding program with their no-till drill in conjunction with the NDSU research seed plot trials.
- ✓ The Griggs County SCD is assisting with the planning and implementation of six livestock waste management facilities.
- ✓ The Western and Central Stark SCD's assisted the city of Dickinson in establishing five living snow fences for snow control and beautification.
- ✓ Barnes County SCD Envirothon (environmental education) camps have reached more than 6,000 students, 684 parents/chaperones and 300 teachers in 24 soil conservation districts.

The Committee has expanded into the world of technology. Last winter NDSU developed a videotape that covers the laws and regulations in the handbook that District

Supervisors use. Each District has their own copy so it can be used anytime by new supervisors or to refresh the knowledge of more experienced ones.

Numerous Districts have their own websites but a statewide website was developed during this past summer so now all of them can be attached to it to provide more unity. It is [www.ag.ndus.nodak.edu/ndsccc/sscc](http://www.ag.ndus.nodak.edu/ndsccc/sscc).

In December and January there are a series of two technology sessions being held in 8 locations around the state to teach Basic Computer Information to supervisors and staff. More than 150 people attended the first session. The training is a valuable communication tool for the districts. There is a high retention level since it is hands-on training. It has been informational to beginners as well as those who are more experienced.

Governor Schafer listed \$580,000 for our Committee in his last Budget. We are hoping that Governor Hoeven will give us the same consideration and that you will also allow us that much or more to help our districts and farmers promote conservation throughout the state.

I hope this has given you a little insight on the relationship of the ND Extension Service, the Soil Conservation Committee and the work that the districts are doing.

Are there any questions?

SOIL CONSERVATION DISTRICT	1997-1999	1999-2001	SOIL CONSERVATION DISTRICT	1997-1999	1999-2001
Adams County			Mercer County	\$23,000	
Barnes County	\$20,000	\$25,000	Morton County		
North Central (Benson County)	\$25,000	\$25,000	Fort Berthold (Mountrail County)		
Moune River (Bottineau County)	\$15,000	\$17,500	Mountrail		
Turtle Mountain (Bottineau County)	\$15,000	\$17,500	Nelson County	\$10,000	\$10,000
Rowman-Slope			Oliver	\$23,000	\$25,000
Burke	\$23,000	\$25,000	Pembina County		
Butte County			Pierce County		
Cass County			Ramsey County		
Cavalier County	\$15,000	\$15,000	Ransom County		
James River (Dickey County)			Renville County	\$23,000	\$25,000
Divide County	\$23,000	\$25,000	Richland		
Dunn County	\$23,000	\$25,000	Rolette County		\$25,000
Eddy County		\$25,000	Wild Rice (Sargent County)		
Emmons County			Sheridan County	\$25,000	\$25,000
Foster County	\$23,000	\$25,000	Cedar (Sioux County)	\$25,000	
Golden Valley			Central Stark County	\$15,000	\$16,000
Eastern Grand Forks County			Western (Stark County)	\$15,000	\$16,000
Western Grand Forks County	\$23,000	\$23,000	Steele County	\$17,500	\$25,000
Grant County	\$25,000		Stutsman County		
Griggs County	\$25,000	\$25,000	Towner County	\$23,000	\$25,000
Slope-Hettinger		\$25,000	Trail County		
Kidder County	\$25,000	\$25,000	Three Rivers (Walsh County)		
LaMoure County	\$12,500		Walsh County	\$23,000	\$25,000
Logan County	\$15,000		Ward		
North McHenry County			Wells County	\$25,000	
South McHenry County			Williams County		
McIntosh County	\$25,000	\$25,000			
McKenzie County			<b>TOTALS</b>	<b>\$580,000</b>	<b>\$580,000</b>
Lower Yellowstone (McKenzie County)					
South McLean County			<b>Total Funds Requested</b>	<b>\$1,019,640</b>	<b>\$1,064,750</b>
West McLean County		\$15,000			

**HOUSE APPROPRIATIONS COMMITTEE**  
**Education and Environment Division**  
**March 6, 2001**

**Chairman Wentz, and Members of the Committee:**

I am Marlene Kouba, Chairman of the North Dakota State Soil Conservation Committee. I live on a farm northwest of Regent in the southwest corner of the state where we raise durum, buckwheat and canola.

Several years ago, the Legislature combined the ND Extension Service with the State Soil Conservation Committee and we have been forming a satisfactory working relationship. There are seven members on the committee--five district supervisors and two appointed by the Governor.

During the last two bienniums, the Soil Conservation Committee has been allocated \$580,000. These monies have been distributed as technical grants to about 25 of the districts--depending on those with the most urgent needs. To receive any money, each district writes an application for a grant requesting up to \$25,000. The Committee uses a point system to choose which districts will receive a grant. The members of the Committee judge the applications individually and award the money to the districts with the most total points. Those who receive grants file quarterly reports on their projects. However, there are up to 58 soil conservation districts that request funds to hire a technician or help them with their work.

During this past winter, the Committee has updated the grant application and revised the point system so that it better fits the requests. We will now give them up to 60 points rather than the former 10 points per application so that it fine-tunes the numbers submitted and we will better understand the districts financial situation and needs.

In 1999, 24 grants were awarded to 26 soil conservation districts (some were combined). The needs of the districts are increasing each year along with the accomplishments they are completing. They are making one-on-one contacts with landowners; planting thousands of trees as windbreaks, living snow fences for snow control, and beautification; monitoring watersheds; purchasing equipment such as a tree saw for windbreak renovation when the trees are dying in the fields and a no-till drill for research seed plots; planning and implementing livestock waste management facilities; and promoting environmental education camps in schools that have reached 6,000 students 684 parents/chaperones, and 300 teachers in 24 soil conservation districts.

The committee has expanded into the world of technology. One year ago area workshops were held for District Supervisors. During those sessions, NDSU developed a videotape that covers the laws and regulations in the 3-inch thick handbook that the supervisors use. Each District has their own copy so it can be used anytime by new supervisors or to refresh the knowledge of more experienced ones.

Numerous Districts have their own websites but a statewide website was developed during the past summer so now all of them can be attached to it plus numerous programs of NDSU to provide more unity. There have been reports of other states using it for information as well. The site is [www.ag.ndus.nodak.edu/ndscc/sscc](http://www.ag.ndus.nodak.edu/ndscc/sscc).

In December and January there were a series of two technology sessions held in 8 locations around the state to teach Basic Computer Information to District employees. The planner and teacher was County Extension Agent Dan Folske of Bowbells. There were 123 supervisors and 130 staff or family members who attended the 23 workshops. All agreed that the knowledge gained would

benefit them in being more comfortable and knowledgeable about using a computer. There is a high retention level since it is a hands-on training. Hand-written notes were not needed as clear handouts were distributed. The programs were informational to beginners as well as those who are more experienced. Some who attended did not even know how to turn on a computer but left knowing how to send e-mail, check sources on Internet, and write letters. Many members requested more classes of other computer-related topics for this coming year. I also took the classes and found them very informative and easy to comprehend.

It is time once again for the Districts to complete their applications for a grant for funding a technician for the coming two years. One new idea is for numerous districts to band together to possibly hire a technician to study area Total Maximum Daily Loads (TMDLs) regarding the amount of a pollutant that water can have and still pass the standards. This information would then be available if a new hog, poultry, or livestock facility would want to be built in North Dakota.

The Committee is hoping that you will give us the same allocation of \$580,000 as the past two sessions, or more if possible, to help our districts and farmers promote conservation throughout the state.

We would like to ask a small favor of you. The budgets of Higher Education have been combined so that there will no longer be line items. Would it be possible to keep the Soil Conservation Committee as a separate item under the Extension budget? We enjoy being with them but we are still a different entity.

I hope this has given you a little insight on the relationship of the ND Extension Service, the Soil Conservation Committee, and the work that the districts are doing.

Are there any questions?

Below is a list of all the Districts in the state and the grants they received in the last two bienniums.

SOIL CONSERVATION DISTRICT	1997-1999	1999-2001
Adams County		
Barnes County	\$20,000	\$25,000
North Central (Benson County)	\$25,000	\$25,000
Mouse River (Bottineau County)	\$15,000	\$17,500
Turtle Mountain (Bottineau County)	\$15,000	\$17,500
Bowman-Slope		
Burke	\$23,000	\$25,000
Burlington County		
Cass County		
Cavalier County	\$15,000	\$15,000
James River (Dickey County)		
Divide County	\$23,000	\$25,000
Dunn County	\$23,000	\$25,000
Eddy County		\$25,000
Emmons County		
Foster County	\$23,000	\$25,000
Golden Valley		
Eastern Grand Forks County		
Western Grand Forks County	\$23,000	\$23,000
Grant County	\$25,000	
Griggs County	\$25,000	\$25,000
Slope-Hettinger		\$25,000
Kidder County	\$25,000	\$25,000
Lakota County	\$12,500	
Logan County	\$15,000	
North McHenry County		
South McHenry County		
McIntosh County	\$25,000	\$25,000
McKenzie County		
Lower Yellowstone (McKenzie County)		
South Nelson County		
West Nelson County		\$15,000

SOIL CONSERVATION DISTRICT	1997-1999	1999-2001
Mercer County	\$23,000	
Morton County		
Fort Berthold (Mountrail County)		
Mountrail		
Nelson County	\$10,000	\$10,000
Oliver	\$23,000	\$25,000
Pembina County		
Pierce County		
Ramsay County		
Ransom County		
Renville County	\$23,000	\$25,000
Richland		
Rolette County		\$25,000
Wild Rice (Sargent County)		
Sheldon County	\$25,000	\$25,000
Cedar (Sioux County)	\$25,000	
Central Stark County	\$15,000	\$15,000
Western (Stark County)	\$15,000	\$15,000
Sieck County	\$17,500	\$25,000
Stutsman County		
Towner County	\$23,000	\$25,000
Trail County		
Three Rivers (Walsh County)		
Walsh County	\$23,000	\$25,000
Ward		
Wells County	\$25,000	
Williams County		
<b>TOTALS</b>	<b>\$490,000</b>	<b>\$490,000</b>
<b>Total Funds Requested</b>	<b>\$1,019,640</b>	<b>\$1,094,750</b>

Department 640 - NDSU Main Research Center  
 Senate Bill No. 2021

	FTE Positions	General Fund	Other Funds	Total
2001-03 Executive Budget	351.28	\$28,415,985	\$26,812,612	\$55,228,597
1999-2001 Legislative Appropriations	351.28 <sup>1</sup>	25,972,518	20,556,667	46,529,185 <sup>2</sup>
Increase (Decrease)	0.00	\$2,443,467	\$6,255,945	\$8,699,412

<sup>1</sup> The 1999-2001 appropriation is based on 341.25 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 351.28 FTE positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$16,760, \$13,161 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000. The appropriation amount has been reduced by \$197,790 from the general fund relating to the allocations made from the funding pool included in the Main Research Center appropriation totaling \$422,400 from the general fund for additional salary adjustments for employees of the branch research centers, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute. In addition, \$103,864 from the general fund was carried forward from the 1997-99 biennium.

**Major Items Affecting NDSU Main Research Center 2001-03 Budget**

	General Fund	Other Funds	Total
1. Provides funding for core programs, including research and development, which are a State Board of Agriculture Research and Education priority.	\$1,112,987		\$1,112,987
2. Increases the salaries and operating line items to reflect increases from gifts, grants, and contracts.		\$4,874,767	\$4,874,767
3. Increases funding for salaries and operating from the utilization of additional revenue and reallocation of costs.		\$1,008,040	\$1,008,040
4. Increases funding for costs to continue (salaries and operating).	\$146,840		\$146,840

**Major Legislation Affecting the NDSU Main Research Center**

Section 3 of Senate Bill No. 2021 authorizes the State Board of Higher Education to transfer appropriation authority from the Main Research Center to the branch research centers.

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the NDSU Main Research Center and report any adjustments to OMB.

Section 5 of Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the NDSU Main Research Center to the 2003-05 biennium.

**Department 640 - NDSU Main Research Center  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Schafer Executive Budget	351.28	\$28,415,985	\$26,812,612	\$55,228,597
1999-2001 Legislative Appropriations	351.28 <sup>1</sup>	25,972,518	20,556,667	46,529,185 <sup>2</sup>
Increase (Decrease)	0.00	\$2,443,467	\$6,255,945	\$8,699,412

2001-03 Hoeven Executive Budget	351.28	\$28,415,985	\$26,812,612	\$55,228,597
Hoeven Increase (Decrease) to Schafer	0.00	\$0	\$0	\$0

<sup>1</sup> The 1999-2001 appropriation is based on 341.25 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 351.28 FTE positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$16,760, \$13,161 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000. The appropriation amount has been reduced by \$197,790 from the general fund relating to the allocations made from the funding pool included in the Main Research Center appropriation totaling \$422,400 from the general fund for additional salary adjustments for employees of the branch research centers, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute. In addition, \$103,864 from the general fund was carried forward from the 1997-99 biennium.

**Major Schafer Recommendations Affecting NDSU Main Research Center 2001-03 Budget**

	General Fund	Other Funds	Total
1. Provides funding for core programs, including research and development, which are a State Board of Agriculture Research and Education priority.	\$1,112,987		\$1,112,987
2. Increases the salaries and operating line items to reflect increases from gifts, grants, and contracts.		\$4,874,767	\$4,874,767
3. Increases funding for salaries and operating from the utilization of additional revenue and reallocation of costs.		\$1,008,040	\$1,008,040
4. Increases funding for costs to continue (salaries and operating).	\$146,840		\$146,840

**Major Hoeven Recommendations Affecting NDSU Main Research Center 2001-03 Budget  
 Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation.

**Major Legislation Affecting the NDSU Main Research Center**

Section 3 of Senate Bill No. 2021 authorizes the State Board of Higher Education to transfer appropriation authority from the Main Research Center to the branch research centers.

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the NDSU Main Research Center and report any adjustments to the Office of Management and Budget.

Section 5 of Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the NDSU Main Research Center to the 2003-05 biennium.

Department 640 - NDSU Main Research Center  
 Senate Bill No. 2021

	FTE Positions	General Fund	Other Funds	Total
2001-03 Schafer Executive Budget	351.28	\$28,415,985	\$26,812,612	\$55,228,597
1999-2001 Legislative Appropriations	351.28 <sup>1</sup>	25,972,518	20,556,667	46,529,185 <sup>2</sup>
Increase (Decrease)	0.00	\$2,443,467	\$6,255,945	\$8,699,412

2001-03 Hoeven Executive Budget	351.28	\$28,415,985	\$26,812,612	\$55,228,597
Hoeven Increase (Decrease) to Schafer	0.00	\$0	\$0	\$0

<sup>1</sup> The 1999-2001 appropriation is based on 341.25 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 351.28 FTE positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$18,760, \$13,161 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000. The appropriation amount has been reduced by \$197,790 from the general fund relating to the allocations made from the funding pool included in the Main Research Center appropriation totaling \$422,400 from the general fund for additional salary adjustments for employees of the branch research centers, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute. In addition, \$103,864 from the general fund was carried forward from the 1997-99 biennium.

**Major Schafer Recommendations Affecting NDSU Main Research Center 2001-03 Budget**

	General Fund	Other Funds	Total
1. Provides funding for core programs, including research and development, which are a State Board of Agriculture Research and Education priority.	\$1,112,987		\$1,112,987
2. Increases the salaries and operating line items to reflect increases from gifts, grants, and contracts.		\$4,874,767	\$4,874,767
3. Increases funding for salaries and operating from the utilization of additional revenue and reallocation of costs.		\$1,008,040	\$1,008,040
4. Increases funding for costs to continue (salaries and operating).	\$146,840		\$146,840

**Major Hoeven Recommendation Affecting NDSU Main Research Center 2001-03 Budget  
 Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation.

**Major Legislation Affecting the NDSU Main Research Center**

Section 3 of Engrossed Senate Bill No. 2021 authorizes transfer appropriations authority between the Main Research Center, the branch research centers, and the Agronomy Seed Farm.

Section 4 of Engrossed Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the NDSU Main Research Center and report any adjustments to the Office of Management and Budget.

Section 6 of Engrossed Senate Bill No. 2021 requires the State Board of Agricultural Research and Education to report to the Budget Section on specified performance and accountability measures of the NDSU Main Research Center.

Section 7 of Engrossed Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the NDSU Main Research Center to the 2003-05 biennium.

**Summary of Legislative Changes Resulting From First House Action**

See Statement of Purpose of Amendment (attached).

**STATEMENT OF PURPOSE OF AMENDMENT:****Senate Bill No. 2021 - Funding Summary**

	Executive Budget	Senate Changes	Senate Version
<b>Transportation Institute</b>			
Salaries and wages	\$4,057,364		\$4,057,364
Operating expenses	2,418,063		2,418,063
Equipment	263,000		263,000
Grants	1,150,000		1,150,000
<b>Total all funds</b>	<b>\$7,888,427</b>	<b>\$0</b>	<b>\$7,888,427</b>
Less estimated income	7,383,348	0	7,383,348
<b>General fund</b>	<b>\$505,079</b>	<b>\$0</b>	<b>\$505,079</b>
<b>FTE</b>	<b>27.75</b>	<b>0.00</b>	<b>27.75</b>
<b>Branch Research Centers</b>			
Dickinson research center	\$3,132,653	\$678,500	\$3,811,153
Central grasslands research center	1,413,982		1,413,982
Hettinger research center	1,559,583		1,559,583
Langdon research center	1,781,894	135,000	1,916,894
North central research center	1,511,068		1,511,068
Williston research center	1,413,786	80,000	1,493,786
Carrington research center	2,959,679		2,959,679
<b>Total all funds</b>	<b>\$13,772,645</b>	<b>\$893,500</b>	<b>\$14,666,145</b>
Less estimated income	5,873,485	975,000	6,848,485
<b>General fund</b>	<b>\$7,899,160</b>	<b>(\$81,500)</b>	<b>\$7,817,660</b>
<b>FTE</b>	<b>76.36</b>	<b>0.00</b>	<b>76.36</b>
<b>NDSU - Extension Service</b>			
Salaries and wages	\$26,183,226	(\$26,183,226)	
Operating expenses	6,216,970	(6,216,970)	
Equipment	697,850	(697,850)	
Grants	580,000	(580,000)	
<b>NDSU - extension service</b>		<b>33,628,046</b>	<b>33,628,046</b>
<b>Total all funds</b>	<b>\$33,678,046</b>	<b>(\$50,000)</b>	<b>\$33,628,046</b>
Less estimated income	19,298,301	0	19,298,301
<b>General fund</b>	<b>\$14,379,745</b>	<b>(\$50,000)</b>	<b>\$14,329,745</b>
<b>FTE</b>	<b>275.81</b>	<b>0.00</b>	<b>275.81</b>
<b>Northern Crops Institute</b>			
Salaries and wages	\$985,010	(\$985,010)	
Operating expenses	399,233	(399,233)	
Equipment	72,880	(72,880)	
<b>Northern crops institute</b>		<b>1,457,123</b>	<b>1,457,123</b>
<b>Total all funds</b>	<b>\$1,457,123</b>	<b>\$0</b>	<b>\$1,457,123</b>
Less estimated income	732,697	0	732,697
<b>General fund</b>	<b>\$724,426</b>	<b>\$0</b>	<b>\$724,426</b>
<b>FTE</b>	<b>8.00</b>	<b>0.00</b>	<b>8.00</b>
<b>Main Research Station</b>			
Salaries and wages	\$40,952,648	(\$40,952,648)	
Operating expenses	10,027,903	(10,027,903)	
Equipment	1,532,746	(1,532,746)	
Capital improvements	415,300	(415,300)	
Agricultural research grants	2,000,000	(2,000,000)	
Animal replacement	300,000	(300,000)	
<b>Main research station</b>		<b>55,178,597</b>	<b>55,178,597</b>

Total all funds	<u>\$55,228,597</u>	<u>(\$50,000)</u>	<u>\$55,178,597</u>
Less estimated income	<u>26,812,612</u>	<u>0</u>	<u>26,812,612</u>
General fund	<u>\$28,415,985</u>	<u>(\$50,000)</u>	<u>\$28,365,985</u>
FTE	351.28	0.00	351.28
Agronomy Seed Farm			
Agronomy seed farm	\$1,259,140		\$1,259,140
Total all funds	<u>\$1,259,140</u>	<u>\$0</u>	<u>\$1,259,140</u>
Less estimated income	<u>1,259,140</u>	<u>0</u>	<u>1,259,140</u>
General fund	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
FTE	2.90	0.00	2.90
Bill Total			
Total all funds	\$113,283,978	\$793,500	\$114,077,478
Less estimated income	<u>61,359,583</u>	<u>975,000</u>	<u>62,334,583</u>
General fund	<u>\$51,924,393</u>	<u>(\$181,500)</u>	<u>\$51,742,893</u>
FTE	742.10	0.00	742.10

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**Senate Bill No. 2021 - Transportation Institute - Senate Action**

The Senate did not change the executive recommendation for the Transportation Institute.

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**Senate Bill No. 2021 - Branch Research Centers - Senate Action**

	Executive Budget	Senate Changes	Senate Version
Dickinson research center	\$3,132,653	\$678,500	\$3,811,153
Central grasslands research center	1,413,982		1,413,982
Hettinger research center	1,559,583		1,559,583
Langdon research center	1,781,894	135,000	1,916,894
North central research center	1,511,068		1,511,068
Williston research center	1,413,786	80,000	1,493,786
Carrington research center	2,959,679		2,959,679
Total all funds	<u>\$13,772,645</u>	<u>\$893,500</u>	<u>\$14,666,145</u>
Less estimated income	<u>5,873,485</u>	<u>975,000</u>	<u>6,848,485</u>
General fund	<u>\$7,899,160</u>	<u>(\$81,500)</u>	<u>\$7,817,660</u>
FTE	76.36	0.00	76.36

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

	Provide Funding for Learning Center <sup>1</sup>	Remove Funding for Operating Expenses	Provide Funding for Beefline <sup>2</sup>	Reduce Funding	Provide Funding for Land Purchase <sup>3</sup>	Total Senate Changes
Dickinson research center			\$745,000			\$678,500
Central grasslands research center				(\$66,500)		
Hettinger research center						
Langdon research center	150,000	(15,000)				135,000
North central research center						
Williston research center					80,000	80,000
Carrington research center						
Total all funds	\$150,000	(\$15,000)	\$745,000	(\$66,500)	\$80,000	\$893,500
Less estimated income	150,000	0	745,000	0	80,000	975,000
General fund	\$0	(\$15,000)	\$0	(\$66,500)	\$0	(\$81,500)
FTE	0.00	0.00	0.00	0.00	0.00	0.00

<sup>1</sup> Estimated income is increased by \$150,000 for construction of the Langdon Learning Center. A total of \$810,000 is provided for the project, \$150,000 of which is from the general fund. A section is added providing that the center must raise \$650,000 before construction may begin.

<sup>2</sup> Provides authorization for the beefline initiative from additional income.

<sup>3</sup> Provides authorization to purchase 160 acres of land in the Nesson Valley irrigation project from other income.

Senate Bill No. 2021 - NDSU - Extension Service - Senate Action

	Executive Budget	Senate Changes	Senate Version
Salaries and wages	\$26,183,226	(\$26,183,226)	
Operating expenses	6,216,970	(6,216,970)	
Equipment	697,850	(697,850)	
Grants	580,000	(580,000)	
NDSU - extension service		33,628,046	33,628,046
Total all funds	\$33,678,046	(\$50,000)	\$33,628,046
Less estimated income	19,298,301	0	19,298,301
General fund	\$14,379,745	(\$50,000)	\$14,329,745
FTE	275.81	0.00	275.81

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

	Change to One Line Item	Reduces Funding	Total Senate Changes
Salaries and wages	(\$26,183,226)		(\$26,183,226)
Operating expenses	(6,216,970)		(6,216,970)
Equipment	(697,850)		(697,850)
Grants	(580,000)		(580,000)
NDSU - extension service	33,678,046	(50,000)	33,628,046
Total all funds	\$0	(\$50,000)	(\$50,000)
Less estimated income	0	0	0
General fund	\$0	(\$50,000)	(\$50,000)
FTE	0.00	0.00	0.00

**Senate Bill No. 2021 - Northern Crops Institute - Senate Action**

	Executive Budget	Senate Changes	Senate Version
Salaries and wages	\$985,010	(\$985,010)	
Operating expenses	399,233	(399,233)	
Equipment	72,880	(72,880)	
Northern crops institute		1,457,123	1,457,123
Total all funds	\$1,457,123	\$0	\$1,457,123
Less estimated income	732,697	0	732,697
General fund	\$724,426	\$0	\$724,426
FTE	8.00	0.00	8.00

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

	Change to One Line Item	Total Senate Changes
Salaries and wages	(\$985,010)	(\$985,010)
Operating expenses	(399,233)	(399,233)
Equipment	(72,880)	(72,880)
Northern crops institute	1,457,123	1,457,123
Total all funds	\$0	\$0
Less estimated income	0	0
General fund	\$0	\$0
FTE	0.00	0.00

**Senate Bill No. 2021 - Main Research Station - Senate Action**

	Executive Budget	Senate Changes	Senate Version
Salaries and wages	\$40,952,648	(\$40,952,648)	
Operating expenses	10,027,903	(10,027,903)	
Equipment	1,532,746	(1,532,746)	
Capital improvements	415,300	(415,300)	
Agricultural research grants	2,000,000	(2,000,000)	
Animal replacement	300,000	(300,000)	
Main research station		55,178,597	55,178,597
Total all funds	\$55,228,597	(\$50,000)	\$55,178,597
Less estimated income	26,812,612	0	26,812,612
General fund	\$28,415,985	(\$50,000)	\$28,365,985
FTE	351.28	0.00	351.28

**Department No. 640 - Main Research Station - Detail of Senate Changes**

	Change to One Line Item	Reduce Funding	Total Senate Changes
Salaries and wages	(\$40,952,648)		(\$40,952,648)
Operating expenses	(10,027,903)		(10,027,903)
Equipment	(1,532,746)		(1,532,746)
Capital improvements	(415,300)		(415,300)
Agricultural research grants	(2,000,000)		(2,000,000)
Animal replacement	(300,000)		(300,000)
Main research station	55,228,597	(50,000)	55,178,597
Total all funds	\$0	(\$50,000)	(\$50,000)
Less estimated income	0	0	0
General fund	\$0	(\$50,000)	(\$50,000)
FTE	0.00	0.00	0.00

**Senate Bill No. 2021 - Agronomy Seed Farm - Senate Action**

The Senate did not change the executive recommendation for the Agronomy Seed Farm.

**Senate Bill No. 2021 - Other Changes - Senate Action**

The bill provides for changes in the voting membership of the State Board of Agricultural Research and Education and provides for a limit of 10 percent on the funds in the agricultural research fund that can be used for administrative expenses. A section is added requiring the North Dakota State University Extension Service and the Agricultural Experiment Station to report to the Budget Section on specified performance and accountability measures.

**Department 628 - Branch Research Centers  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Executive Budget	76.36	\$7,899,160	\$5,873,485	\$13,772,645
1999-2001 Legislative Appropriations	76.36 <sup>1</sup>	7,060,029	3,922,788	10,982,817 <sup>2</sup>
Increase (Decrease)	0.00	\$839,131	\$1,950,697	\$2,789,828

<sup>1</sup> The 1999-2001 appropriation is based on 72.1 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 76.36 FTE positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$6,431, \$5,052 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000. In addition, the appropriations amounts include \$46,686 from the general fund for the agency's share of the \$422,400 funding pool appropriated to the Main Research Center for additional salary adjustments for employees of the Agricultural Experiment Station, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute. The 1999-2001 appropriation amounts do not include \$419,000 of additional spending authority resulting from Emergency Commission action during the 1999-2001 biennium.

**Major Items Affecting Branch Research Centers 2001-03 Budget**

	General Fund	Other Funds	Total
<b>Dickinson Research Center</b>			
1. Provides funding for core programs, primarily to support the agronomy and range research programs, which is a State Board of Agriculture Research and Education priority.	\$64,697		\$64,697
2. Provides funding for agronomy work laboratory and chemical storage building.		\$100,000	\$100,000
3. Provides funding from projected increase in oil income for equipment.		\$127,700	\$127,700
<b>Central Grasslands Research Center</b>			
4. Provides funding for core programs, primarily to enhance cooperative research activities with the main station scientists, which is a State Board of Agriculture Research and Education priority.	\$35,168		\$35,168
<b>Hettinger Research Center</b>			
5. Provides funding for core programs, primarily to reduce impact of increased costs of Department of Transportation costs and support the graduate student program, which is a State Board of Agriculture Research and Education priority.	\$40,574		\$40,574
<b>Langdon Research Center</b>			
6. Provides funding for core programs, primarily to reduce the pressure to obtain grants and/or raise seed income, resulting in land and labor use on labor-intensive systems and rotation studies which require a period of several years to obtain usable information, which is a State Board of Agriculture Research and Education priority.	\$35,008		\$35,008
7. Provides funding for construction of the Langdon learning facility and to provide an additional \$15,000 from the general fund for operating costs.	\$165,000	\$510,000	\$675,000
<b>North Central Research Center</b>			
8. Provides funding for core programs, primarily for research on new crops, crop pests, and problem-invasive weeds, which is a State Board of Agriculture Research and Education priority.	\$31,711		\$31,711
9. Provides funding, relating to increases from gifts and contracts, to be used for salaries and operating expenses.		\$150,585	\$150,585

**Williston Research Center**

- |   |          |          |
|---|----------|----------|
| 10. Provides funding for core programs, primarily for research that promotes value-added and high-value crop production, which is a State Board of Agriculture Research and Education priority. | \$37,009 | \$37,000 |
| 11. Provides funding for operating from additional grants.  | \$68,863 | \$68,863 |

**Carrington Research Center**

- |   |           |           |
|---|-----------|-----------|
| 12. Provides funding for core programs, primarily for the primary crops and livestock research programs, which is a State Board of Agriculture Research and Education priority. | \$57,769  | \$57,769  |
| 13. Provides funding for construction of a heated laboratory, office, and storage building for research purposes.   | \$130,000 | \$130,000 |

**Major Legislation Affecting the Branch Research Centers**

Section 3 of Senate Bill No. 2021 authorizes the State Board of Higher Education to transfer appropriation authority from the Main Research Center to the branch research centers and between the branch research centers.

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the branch research centers and report any adjustments to OMB.

Section 5 of Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the branch research centers to the 2003-05 biennium.

**Department 628 - Branch Research Centers  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Schafer Executive Budget	76.36	\$7,899,160	\$5,873,485	\$13,772,645
1999-2001 Legislative Appropriations	76.36 <sup>1</sup>	7,060,029	3,922,788	10,982,817 <sup>2</sup>
Increase (Decrease)	0.00	\$839,131	\$1,950,697	\$2,789,828

2001-03 Hoeven Executive Budget	76.36	\$7,899,160	\$5,873,485	\$13,772,645
Hoeven Increase (Decrease) to Schafer	0.00	\$0	\$0	\$0

<sup>1</sup> The 1999-2001 appropriation is based on 72.1 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 76.36 FTE positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$6,431, \$5,052 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000. In addition, the appropriations amounts include \$46,686 from the general fund for the agency's share of the \$422,400 funding pool appropriated to the Main Research Center for additional salary adjustments for employees of the Agricultural Experiment Station, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute. The 1999-2001 appropriation amounts do not include \$419,000 of additional spending authority resulting from Emergency Commission action during the 1999-2001 biennium.

**Major Schafer Recommendations Affecting Branch Research Centers 2001-03 Budget**

	General Fund	Other Funds	Total
<b>Dickinson Research Center</b>			
1. Provides funding for core programs, primarily to support the agronomy and range research programs, which is a State Board of Agriculture Research and Education priority.	\$64,697		\$64,697
2. Provides funding for agronomy work laboratory and chemical storage building.		\$100,000	\$100,000
3. Provides funding from projected increase in oil income for equipment.		\$127,700	\$127,700
<b>Central Grasslands Research Center</b>			
4. Provides funding for core programs, primarily to enhance cooperative research activities with the main station scientists, which is a State Board of Agriculture Research and Education priority.	\$35,168		\$35,168
<b>Hettinger Research Center</b>			
5. Provides funding for core programs, primarily to reduce impact of increased costs of Department of Transportation costs and support the graduate student program, which is a State Board of Agriculture Research and Education priority.	\$40,574		\$40,574
<b>Langdon Research Center</b>			
6. Provides funding for core programs, primarily to reduce the pressure to obtain grants and/or raise seed income, resulting in land and labor use on labor-intensive systems and rotation studies which require a period of several years to obtain usable information, which is a State Board of Agriculture Research and Education priority.	\$35,008		\$35,008
7. Provides funding for construction of the Langdon learning facility and to provide an additional \$15,000 from the general fund for operating costs.	\$165,000	\$510,000	\$675,000

**North Central Research Center**

- |  |           |           |
|--|-----------|-----------|
| 8. Provides funding for core programs, primarily for research on new crops, crop pests, and problem-invasive weeds, which is a State Board of Agriculture Research and Education priority. | \$31,711  | \$31,711  |
| 9. Provides funding, relating to increases from gifts and contracts, to be used for salaries and operating expenses.   | \$150,585 | \$150,585 |

**Williston Research Center**

- |   |          |          |
|---|----------|----------|
| 10. Provides funding for core programs, primarily for research that promotes value-added and high-value crop production, which is a State Board of Agriculture Research and Education priority. | \$37,969 | \$37,969 |
| 11. Provides funding for operating from additional grants.  | \$68,863 | \$68,863 |

**Carrington Research Center**

- |   |           |           |
|---|-----------|-----------|
| 12. Provides funding for core programs, primarily for the primary crops and livestock research programs, which is a State Board of Agriculture Research and Education priority. | \$57,769  | \$57,769  |
| 13. Provides funding for construction of a heated laboratory, office, and storage building for research purposes.   | \$130,000 | \$130,000 |

**Major Hoeven Recommendations Affecting Branch Research Centers 2001-03 Budget Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation.

**Major Legislation Affecting the Branch Research Centers**

Section 3 of Senate Bill No. 2021 authorizes the State Board of Higher Education to transfer appropriation authority from the Main Research Center to the branch research centers and between the branch research centers.

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the branch research centers and report any adjustments to the Office of Management and Budget.

Section 5 of Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the branch research centers to the 2003-05 biennium.

House Bill No. 1181 authorizes funds within the agriculture research fund to be used for reasonable administrative expenses.

Department 626 - Branch Research Centers  
 Senate Bill No. 2021

	FTE Positions	General Fund	Other Funds	Total
2001-03 Schafer Executive Budget	76.36	\$7,899,160	\$5,873,485	\$13,772,645
1999-2001 Legislative Appropriations	76.36 <sup>1</sup>	7,060,029	3,922,788	10,982,817 <sup>2</sup>
Increase (Decrease)	0.00	\$839,131	\$1,950,697	\$2,789,828

2001-03 Hoeven Executive Budget	76.36	\$7,899,160	\$5,873,485	\$13,772,645
Hoeven Increase (Decrease) to Schafer	0.00	\$0	\$0	\$0

<sup>1</sup> The 1999-2001 appropriation is based on 72.1 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 76.36 FTE positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$6,431, \$5,052 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000. In addition, the appropriations amounts include \$46,686 from the general fund for the agency's share of the \$422,400 funding pool appropriated to the Main Research Center for additional salary adjustments for employees of the Agricultural Experiment Station, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute. The 1999-2001 appropriation amounts do not include \$419,000 of additional spending authority resulting from Emergency Commission action during the 1999-2001 biennium.

Major Schafer Recommendations Affecting Branch Research Centers 2001-03 Budget

	General Fund	Other Funds	Total
<b>McIntosh Research Center</b>			
1. Provides funding for core programs, primarily to support the agronomy and range research programs, which is a State Board of Agriculture Research and Education priority.	\$64,697		\$64,697
2. Provides funding for agronomy work laboratory and chemical storage building.		\$100,000	\$100,000
3. Provides funding from projected increase in oil income for equipment.		\$127,700	\$127,700
<b>Central Grasslands Research Center</b>			
4. Provides funding for core programs, primarily to enhance cooperative research activities with the main station scientists, which is a State Board of Agriculture Research and Education priority.	\$35,168		\$35,168
<b>Hettinger Research Center</b>			
5. Provides funding for core programs, primarily to reduce impact of increased costs of Department of Transportation costs and support the graduate student program, which is a State Board of Agriculture Research and Education priority.	\$40,574		\$40,574
<b>Langdon Research Center</b>			
6. Provides funding for core programs, primarily to reduce the pressure to obtain grants and/or raise seed income, resulting in land and labor use on labor-intensive systems and rotation studies which require a period of several years to obtain usable information, which is a State Board of Agriculture Research and Education priority.	\$35,008		\$35,008
7. Provides funding for construction of the Langdon learning facility and to provide an additional \$15,000 from the general fund for operating costs. (The Senate authorized an additional \$150,000 of special funds for this project and removed the \$15,000 from the general fund for operating costs.)	\$165,000	\$510,000	\$675,000

**North Central Research Center**

8. Provides funding for core programs, primarily for research on new crops, crop pests, and problem-invasive weeds, which is a State Board of Agriculture Research and Education priority.	\$31,711	\$31,711
Provides funding, relating to increases from gifts and contracts, to be used for salaries and operating expenses.		\$150,585

**Williston Research Center**

10. Provides funding for core programs, primarily for research that promotes value-added and high-value crop production, which is a State Board of Agriculture Research and Education priority.	\$37,969	\$37,969
11. Provides funding for operating from additional grants.		\$68,863

**Carrington Research Center**

12. Provides funding for core programs, primarily for the primary crops and livestock research programs, which is a State Board of Agriculture Research and Education priority.	\$57,769	\$57,769
13. Provides funding for construction of a heated laboratory, office, and storage building for research purposes.		\$130,000

**Major Hoeven Recommendations Affecting Branch Research Centers 2001-03 Budget  
Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation.

**Major Legislation Affecting the Branch Research Centers**

Section 3 of Engrossed Senate Bill No. 2021 authorizes transfer appropriation authority between the Main Research Center, the branch research centers, and the Agronomy Seed Farm.

Section 4 of Engrossed Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the branch research centers and report any adjustments to the Office of Management and Budget.

Section 6 of Engrossed Senate Bill No. 2021 requires the State Board of Agricultural Research and Education to report to the Budget Section on specified performance and accountability measures of the branch research centers.

Section 7 of Engrossed Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the branch research centers to the 2003-05 biennium.

Section 9 of Engrossed Senate Bill No. 2021 authorizes up to 10 percent of the proceeds of the agricultural research fund to be used for administrative expenses.

House Bill No. 1181 authorizes funds within the agricultural research fund to be used for reasonable administrative expenses not to exceed \$50,000 annually. (This bill has passed the House.)

House Bill No. 1200 provides \$320,000 from the general fund to the North Central Research Extension Center and \$85,000, \$81,000 from the general fund, to the Williston Research Extension Center for the purpose of purchasing land for research extension purposes. (This bill has passed the House.) Engrossed Senate Bill No. 2021 authorizes \$80,000 of special funds to the Williston Research Extension Center for the same 160 acres of land in Williams County.

**Summary of Legislative Changes Resulting From First House Action**

See Statement of Purpose of Amendment (attached).

SB.2021

HETTINGER RESEARCH EXTENSION CENTER AGENCY NO.643  
**BUDGET PRESENTATION TO:  
SENATE APPROPRIATIONS COMMITTEE**

by  
Timothy C. Faller, Director

I ask for your support of SB 2021 which includes the Hettinger Research Extension center budget at the level as proposed by previous Governor Schafer. If the revenue picture brightens there are unmet needs in this proposed budget. The Governor's proposed budget is in line with the priorities set by SBARE which are supported by all the entities that you will hear from today.

There are seven Research Extension Centers and the Agronomy Seed Farm which are strategically located around North Dakota. Their geographical locations respond to specific needs of different growing seasons, clientele, and economies of our state. The Hettinger center located in southwest North Dakota responds to disciplines involving sheep production, range utilization, crop production, and Ag. Economic/farm ranch management.

I am sure that many times you wonder how the dollars that you appropriate filter down to helping people and economies. I would like to share with you an outcome of one of the SBARE priority initiatives from last biennium. In its infancy SBARE worked hard to sort wants from needs, one of the findings was the need for more support of graduate students research programs out in the state. Similarly there was justification for increased range research statewide. You provided funds to support the SBARE supported range initiative last session. Those funds provided for five new graduate student programs of research in range. The students programs were tied to the budgets of the DREC, CGREC, and HREC. Their programs of research must be directed by faculty from on campus in Fargo, thus a true team structure was created involving the centers, students and campus departments. The first students of this initiative graduate in the summer of 2001, leaving behind their work for the benefit of producers of our state.

Starting with the 1995-1997 legislative session additional funds were provided to the Research Extension Centers to assist with the purchase of big ticket farm and scientific equipment items that are used in the day to day operation of our research programs. Dr. Gustafson and the center Directors have adopted a rotational structure that allows the center directors to be forward thinkers in developing future budgets addressing the big ticket needs that each center faces. In the current budget request the: Carrington, Williston, and Hettinger centers will address specific equipment needs. This is very helpful but to be mindful of the magnitude of these costs, we have to look at a new plot combine costing in excess of \$100,000., a new 120 hp farm tractor in excess of \$120,000.. A new Combine or a pay loader is in excess of \$150,000.. We still many times must purchase good used equipment to stretch these much needed additional funds to meet our needs, **We ask your support in the continuation of these special equipment funds.** This rotation does cause variation in center to center budget increases if compared on a percentage basis.

Strengthening the core program is a high priority of SBARE. Core program funds provided to the Hettinger Center will be used to continue adequate support to the range initiative and offset increases in vehicle use charges assessed by the department of transportation.

SB 2021

Central Grasslands Research Extension Center Agency No. 642  
Budget Presentation To:  
Senate Appropriations Committee  
By  
Paul E. Nyren, Director

Chairman Nething, members of the Senate Budget Committee, my name is Paul Nyren and I am the Director of the Central Grasslands Research Extension Center. I am here today to support SB 2021.

I would like to take this opportunity to thank the Senate Appropriations Committee and the ND legislators for your past support of the NDSU Agricultural Experiment Station and the Central Grasslands.

I would also like to thank you for the language in the past appropriations bill which allowed the carryover of other funds from the past biennium. This language is very important to the continued functioning of the Research Extension Centers and the Main Station. As you know each of the Research Centers generate a substantial portion of their budget through the sale of foundation seed and salvage value of products generated in the research process. This includes both crops and livestock and through the authorization granted by this legislation these monies are used for equipment, operating and in some cases salaries.

As with other businesses our carryover is similar to a saving account or insurance fund helping to protect us against the vagaries of the weather and markets. Having income carryover allows the Centers to be flexible in the design of their research projects to allow for delayed income or research which decreases the salvage value of the commodity. It is important that we put research above income and having carryover from one biennium to the next insures that we can do this.

The mission of the Central Grasslands Research Extension Center is to conduct research that will maximize the use of the native grasslands while preserving them for future generations. These ecological studies take time to conduct. The grazing intensity trial now in its 12<sup>th</sup> year of study is only recently beginning to produce data to show that removing all livestock from these prairies is detrimental not only to the overall production but the species diversity of the grassland. You heard Tim speak earlier about the graduate student initiative funded by the last legislature. Research being conducted by one of these students has shown significant differences in the type and distribution of roots under the "no grazing" treatment which would indicate that these areas are becoming more fragile and susceptible to erosion following a wildfire.

While some types of research can be imported into North Dakota from other areas ecological research on crops and livestock cannot. It must be conducted where the environmental factors, climate, soils, etc. are similar to those of the producers who will use the results of the research. NDSU Agricultural Experiment Station is the research and development arm of the agricultural industry in North Dakota. We thank you for your continued support of the most important component of a strong North Dakota economy.

SB 2021

**Material Prepared For Presentation To  
NORTH DAKOTA SENATE  
APPROPRIATIONS COMMITTEE**

Economic development through agriculture is proceeding along several fronts in the MonDak region. Sugarbeet production has expanded from 35,000 acres to 50,000 acres. A potato research and demonstration project over the past three years has resulted in 1500 acres of commercial potato production for J. R. Simplot Co. and Aviko, USA, and two newly built potato storage facilities at 29 mile corner north of Williston and near Sidney, MT. New sprinkler irrigation has been developed on 25,000 acres over the last five years adding revenue and creating jobs in the MonDak region. Malt barley production has increased from nil to a half million bushel in 1999 to 1.2 million bushels in 2000 with three million bushel barley production projected for 2001 and the potential for new malt barley storage and malt plant facilities. An identity preserved wheat project with the Northern Star Companies of Michigan has the potential for our grain growers to become preferred suppliers of value added identity preserved wheats and barley to end users. Moo Juice, an industrial dairy near Sidney, MT has been a driver in attracting other dairies and creating interest by cheese factories in our region. The dairy has also created a high quality value added alfalfa hay market for locally produced alfalfa. Other potential dairies are under consideration at Parshall (NorthWest Dairy), Williston (Western Star Dairy) and Wolf Point, MT (Lustre Dairy). Durum production has steadily increased in the MonDak region to over two million acres and offers great potential for durum mills and specialty pasta plants in our area such as Semolina Specialties in Crosby.

Value added safflower oils developed cooperatively at the Sidney and Williston centers has increased the potential markets for safflower and provides an alternative dryland crop to small grains. In cooperation with Yellowstone Bean Co., irrigated dry bean production has been increased from 2500 to 8000 acres over the past two years to add two million dollars to our area economy. Other expanding crops include the annual legumes peas and lentils marketed through Superior Grains, Crosby, ND, West Dakota Feed & Seed in Ross, ND and Agricore in Ray, ND.

The regional research partnership established in 1994 between North Dakota and Montana has resulted in the addition of three irrigation scientists at the USDA-ARS, Sidney, MT, a value added research chemist at the MSU Eastern Ag Research Center, Sidney, MT and a value added extension specialist at our NDSU Williston Research Extension Center.

A developing partnership with the Ft Peck Tribal College, Poplar, MT will promote economic development of the land and water resources on tribal lands in eastern Montana and strengthen our regional agriculture-based economic development efforts.

**The Fifth International Safflower Conference will be hosted at our Williston station July 23-27, 2001 to promote global markets for safflower. The WREC hosts an economic development conference each winter at our Ernie French Center and each summer WREC participates in an Ag Open and ag tours of our area to encourage partnerships and alliances among growers, economic development groups, agribusinesses and food processors.**

**We look forward to our continuing economic development efforts to build and diversify our agricultural economy and thank you for your support and investment in agricultural research and extension.**

**Jerald W. Bergman  
NDSU Williston Research Extension Center  
Williston, ND  
January 4, 2001**

SB 2021

# NDSU VIC STURLAUGSON TECHNOLOGY/LEARNING FACILITY

**"Located at the Langdon Research Extension Center (LREC), the facility will provide the opportunity to combine agricultural research/extension, information/communication technology and local/regional economic development for the nine county region."**

## Justification

- ✓ This Request for the technology facility came from citizens in the region through a formal needs survey conducted by economic developers in NE North Dakota.
- ✓ This resource is paramount for the LREC and it's partners to carry out a plan for programming modeled after the six cornerstones outlined by the *"The Report of the Roundtable for the ND Legislative Council Interim Committee on Higher Education."*

## Learning Center Function

- ✓ Administrative and scientist office space
- ✓ NDSU Research & Extension outreach meeting room
- ✓ Community & Economic Development wing (vision of the NDSU LREC becoming much more engaged with the region)

## Enhanced Programming

- ✓ Production agriculture research will be supported better for both in house scientists and visiting scientists.
- ✓ Redirection of LREC agricultural programming to include efforts on ag based economic development (value added agriculture).
- ✓ More involvement with economy diversification through technology based economic development.
- ✓ Community development enhancement such as workforce training, long distance education, etc. to enhance the quality of our rural lifestyle.

## Additional Operating for Learning Center

- ✓ Requested \$32,000 for the 2001-2003 biennium of which \$24,000 is for actual operating (utilities etc.).
- ✓ Governor included \$15,000 per biennium in his budget for actual operating for center.
- ✓ Difference (approx. \$9,000) will be made up by usage fees for technology, training, education etc.
- ✓ Indications are new communications fees will vary from \$8,000 to \$10,000/yr. beginning in the next biennium (2003-2004). A plan will be in place that would include additional technology fees, and/or, cuts prior to the next session to cover these costs.

## Regional Support

- ✓ \$298,000 of local support committed to date (1½ months of fund raising).

## Senate Appropriations Request

- ✓ Reinstate authorization of Vic Sturlaugson Technology/Learning Center project back to original \$800,000 from the governor's proposed \$660,000. Additional authorization would be funded through the general fund or from special funds.
- ✓ Failure to increase the authorization would result in the elimination of the community/economic development wing and jeopardize our vision of becoming a more engaged institution in this region.

Randy Melby

## NDSU VIC STURLAUGSON TECHNOLOGY/LEARNING FACILITY

Located at the Langdon Research Extension Center (LREC), the facility will provide the opportunity to combine agricultural research/extension, information /communication technology and local/regional economic development for the nine county region.

### Justification

- ✓ This Request for the technology facility came from citizens in the region through a formal needs survey conducted by economic developers in NE North Dakota.
- ✓ This resource is paramount for the (LREC) and it's partners to carry out a plan for programming modeled after the six cornerstones outlined by the "The Report of the Roundtable for the ND Legislative Council Interim Committee on Higher Education."

### Learning Center Function

- ✓ Administrative and scientist office space
- ✓ NDSU Research & Extension outreach meeting room
- ✓ Community & Economic Development wing (Engages LREC with rural community economic development effort in the region)

### Enhanced Programming

- ✓ Production agriculture research will be supported better for both in house scientists and visiting scientists.
- ✓ Redirection of LREC agricultural programming to include efforts on ag based economic development (value added agriculture).
- ✓ More involvement with economy diversification through technology based economic development.
- ✓ Community development enhancement such as workforce training, long distance education, etc. to enhance the quality of our rural lifestyle.

### Operating for Learning Center

- ✓ Governor included \$15,000 per biennium in his budget for actual operating for center.
- ✓ Senate Appropriations took operating funds out thinking building would not be operable until next biennium. Our expectations are to be in the facility by June 1, 2002.
- ✓ With increased community involvement, there will be compensation for operating from community sources

### Regional Support

- ✓ \$311,500 of local support committed to date.

### House Appropriations Request

- ✓ We ask the House Appropriations Committee to consider increasing the appropriation for the Vic Sturlaugson Technology/Learning Center project back to \$300,000 as recommended by the ND State Board of Higher Education in it's capital improvement's priority list.
- ✓ Reinstate the \$15,000 operating as proposed from the governor's budget recommendations should the facility be operable by June 1.

SB 2021

## ND Cattlemen's Beef Research Committee

The opportunity to offer a "110%" budget proposal, encompassing real growth in research spending is welcome and long overdue. Even at the 110% level, many desirable and valuable research projects cannot be funded. It should be a major goal of agricultural interests not only to accomplish this increase, but to use it as a floor to build on in future budgets. It is a tribute to the people on its farms and ranches burdened by climate and distance to market to have generated such a large portion of wealth to North Dakota's economy. North Dakota is struggling in a new world order of fitting our excess agricultural production into a global based economy.

The Beef Cattle Initiative is a well thought out and well put together document, assessing the needs and directions our North Dakota beef cattle industry must take. Three meetings of researchers, administrators and livestock producers have independently assessed all areas of production in view of our own vision of the industry's future.

The proposals fall in three general categories: (1) To get better utilization of present range and winter feed knowledge by cattle producers, particularly those producers with less than 100 beef cows who represent about 3/4 of all producers and about 36% of all cows. (2) To learn more about various feeding practices and feeds which can both lower costs and boost gross returns. (3) To do genetic research and feeding trials needed to position ND producers for a revolution in beef marketing which will result in nearly all fed cattle being sold on a carcass specification basis.

As the participants in the meetings analyzed the research proposals, it became clear that the one ranked most important-preparing for the marketing revolution-would be impossible to accomplish without a method of getting all beef cattle produced in NDSU research herds finish fed under controlled conditions. Without such data, the success of genetic and management programs designed to meet various carcass grids cannot be evaluated. Nor can we determine which of the various grids may be most adaptable to ND production practices and which might be the most profitable in ND.

It also became clear that many of the proposed feeding trials; whether they were backgrounding proposals, finish feeding or feeding co-products trials, would work more successfully if we had a semi-commercial feedlot with an adequate feed mill.

Therefore, we believe that even at the expense of postponing many important new projects there is a single new one-time cost project that will improve beef cattle research for decades. That project is the development of a modern feed mill and feedlot at the Carrington station which can handle all large group feeding trials and which can finish all animals in NDSU beef herds. You have been given cost estimates of such a feedlot along with some preliminary design sketches.

### What is missing?

1. We must adapt to the impacts of society's new environmental concerns.
2. We need scientific data to combat excessive and unwarranted regulations.

Iowa Beef Processors (IBP), the nation's largest packer which harvests 25% of all fed beef production, has announced both a new grid marketing system and a proposal to sell "case-ready" beef products. IBP states that they regard this as the most important thing in the packing industry since boxed beef. Walmart, which has a meat department in its "Super Stores", is entirely replacing meat cutting departments in each store with case-ready beef as rapidly as they can.

What this means is that ND feeder cattle producers, even as they continue to market calves off the cow or after backgrounding, will have to produce a uniform group of feeder cattle which, when fed by someone else, will meet some particular carcass criteria. Cattle feeders will be unwilling to feed commodity cattle about which they have no knowledge to a shrinking "commodity beef market" without large price discounts. It will take time, but NDSU research will be able to give cow/calf operators information which will result in the majority of their calves meeting one of several carcass grids. In this new global based economy we must fit (not force) our products to their often different standards of acceptance. To do this, NDSU will need feeding, carcass and environmental data on all of its research.

The passage of the State Meat Inspection Act should result in the development of several small packing plants selling to local consumers. A semi-commercial research feedlot can demonstrate to ND producers how to feed beef for these plants. The end seller isn't going to pass that value back unless that ranch operator can become more allied throughout the chain of production after that calf leaves the ranch. We need to document where and who adds that value.

The State Meat Inspection Act plus the proposed Carrington feedlot may provide some farmers with the incentive to develop efficient but relatively small feedlots. A few large lots may be developed. ND may never be a major cattle feeding state, most producers may continue to sell after backgrounding. However, even a small increase in cattle feeding can, for local markets, be a very important economic factor in declining rural communities.

The logical facility to carry on the study of beef's value and emerging environmental impacts is the Beef Cattle Unit of the Carrington Irrigation Research Station fulfilling both a research and education need. The original mission of the Carrington beef unit was to study how beef cattle could compliment irrigation in North Dakota. Most of the pros and cons of establishing a cow herd in an irrigated setting have been evaluated. It is time to move on.

Beef cattle ranchers have always been caring stewards of the land but now their existence is threatened by new demands. We must pick up the pace of change. We need a better database from which they may draw. Let them not drown in untested environmental demands or fail from the lack of sharing in the added value returns of their end product-beef.

#### **The proposed feedlot will:**

1. Make possible essential genetic and management research for "end use" of beef which we cannot do now.
2. Make present and proposed feeding research more effective.
3. Stimulate both beef feeding and small packer development which can have a large local impact.
4. Develop feed used for co-products of added value processing plants in the grain sector thus increasing grain returns.
5. Answer the important environmental questions for the ranchers and the general public.

At some stage in the game it will require some reinvestment. For the North Dakota beef cattle industry that time is now.

SB 2021 Conference Comm:

		<u>GF</u>	<u>SF</u>	<u>Total</u>	
<u>Minot</u>	95	300,000	300,000	600,000	
	97	<u>50,000</u>	<u>200,000</u>	<u>250,000</u>	
		350,000	500,000	<u>\$ 850,000</u>	
<u>Williston</u>	AM <del>98</del>	50,000	100,000	150,000	Interim Committee
		<u>-0-</u>	<u>515,000</u>	<u>515,000</u>	
		<u>50,000</u>	<u>615,000</u>	<u>665,000</u>	
<u>Hettinger</u>	MSH 91		<u>\$ 260,000</u>	<u>260,000</u>	Interim Committee?
<u>Carrington</u>	'86		<u>\$ 650,000</u>	<u>\$ 650,000</u>	

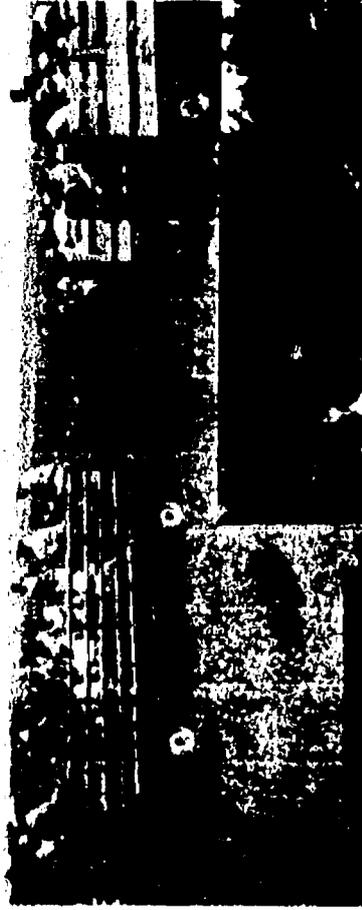
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It is the intent of the 57th Reg. Assembly  
 that \$145,000 of special funds be allocated  
 for Bee Line Initiative that would include  
 a modern seed mill and feedlot at the  
 Crowsfoot Research and Extension Center that  
 will address genetic, management, marketing,  
 co-product and environmental research needs  
 and include outside Council from the  
 bee cattle industry to work with  
 SBARE to develop a complete research  
 program with goals and priorities.

North Dakota State University  
Research Extension Center

# Living on Mission

On the  
Road to  
Success



Horizons

Our

Seeking  
Your

Support



DICKINSON  
RESEARCH CENTER

NORTH DAKOTA  
STATE UNIVERSITY



# Dickinson Research

## Extension Center

# Horticultural/Urban Inquiries

Other Research

Tree & Shrub Survival

• Varieties/Varieties

• Growth & Shade

• Potatoes, GMO

• Potatoes, non-GMO

• Xeric/Arboreal/Arboreal

• Trials

• Data

• Forestry Arboretum

95

96

97

98

99

00

# Dickinson Research Extension Center

## Herbs and Minerals Summary

## Other Research

• Barley vs. Oats

• Flax vs. Peas

• Chromium vs. Selenium

• Selenium vs. Vanadium

• Sugar vs. Beets

• Alfalfa

• Sunflower

• Carrots

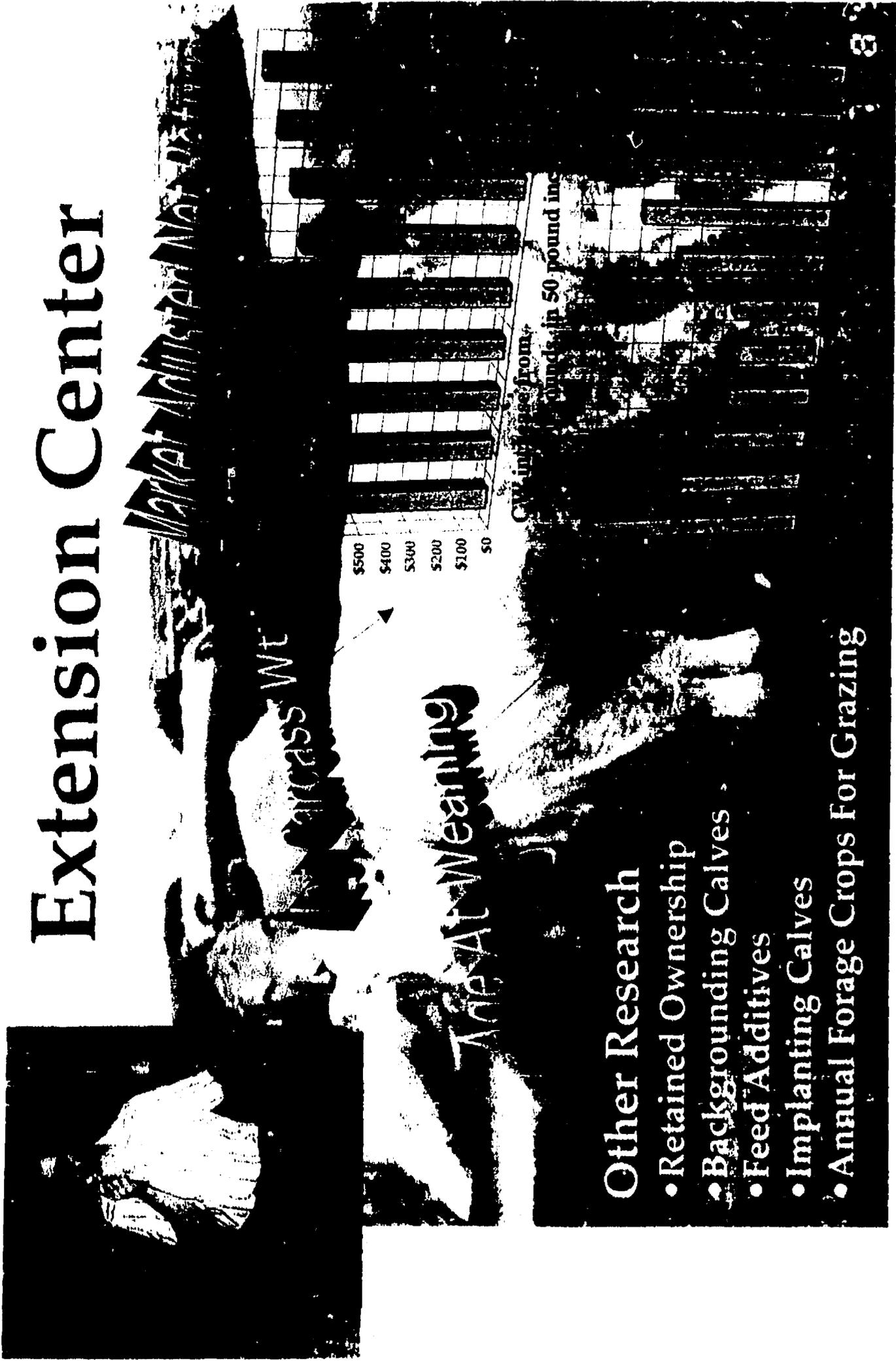
• Apples

• Peaches

• Apricots

• Milk vs. Depression

# Dickinson Research Extension Center



- Other Research**
- Retained Ownership
  - Backgrounding Calves
  - Feed Additives
  - Implanting Calves
  - Annual Forage Crops For Grazing

Carass WT

Age At Weaning

\$500  
\$400  
\$300  
\$200  
\$100  
\$0

Calves from  
bands in 50 pound inc

Market Information Network

# Dickinson Research Extension Center

## Other Research

- Nutritional Curves of Plants In

## Northern Great Plains

- Grass Management Concepts

## Twice-over-Pasture-Rotation

## Animal Production

## With Perennial Forages

### LEGEND:

1- Season long starting prior to 3rd leaf

2- Season long starting after 3rd leaf

3- Twice over started after 3rd leaf

Net Return/Acre



Net Return/Concentrate



# Dickinson Research Extension Center

## CHALLENGES

To Sustain/Enlarge The Human  
Resource Base And Provide  
A Positive Quality of Life For  
Agricultural Production and Value Added Oppor-  
tunities

- In Range
- In Agronomy
- In Beef



DICKINSON  
RESEARCH CENTER

ND  
NORTH DAKOTA  
STATE UNIVERSITY



# Dickinson Research Extension Center

# QUESTIONS

21<sup>ST</sup> CENTURY  
HOMESTEADING

- Bio-Diversity
- Forage Based Cropping Systems
- High Vegetative Rotation Systems
- Crop/Livestock Systems

> Enhanced Product Value

Environmentally Sustainable

Meet the World Demand for Meat

# Dickinson Research Extension Center

# WORKING NEEDS

Authorization For

Major Beef Research To  
Create Value Added Opportunities

Already Done--Thank You!



An Initiative For The Beef Industry



The DREC lost \$66,500 general fund  
revenues directed towards this effort.  
Need: Reinstate \$66,500



Madam Chair Members of the Committee.

Ryan Brooks

Farmer Rancher Bowman, N.D. Slope Co.  
Chair Livestock Subcommittee SBARE

Previous Biennium initiatives

Co Product Utilization \$198,726.

Initiate Studies to learn feeding potential  
of co products from the Sugar, corn, bakery  
Potato, wheat & meat industries.

In many cases these coproducts present  
a challenge to industry because they are  
considered waste.

This initiative supports 2 3/4 time technicians  
and 4 grad students. Since funds were  
received in July 1999 those positions have  
been filled. There has been interaction with  
8 different cooperators from 2 departments and  
4 research and extension centers. \$157,850 in  
grant monies have been added to the original  
\$198,726 investment to this initiative, resulting  
in a total of \$356,576. to help integrate the  
Livestock, cropping, and agricultural processing  
industries.

Results.

Research has demonstrated that coproducts  
Such as Potato Processing waste, wet beet pulp, bread crusts,  
concentrated separator byproduct or desugared molasses.

Wheat middlings, Soy hulls, and others can be efficiently included in various phases of the beef industry. This presents an opportunity for profit to the processing industry because now instead of having the expense of disposing the waste there is an opportunity to actually sell it. It also creates an opportunity to the livestock industry in the form of reduced feed costs. That spells profit.

To date over 1850 copies of alternative feed bulletin have been distributed providing new information to our producers in North Dakota.

Projects conducted or in progress  
(See sheet)

there have been several publications printed

4. Refereed Journal Articles

11 abstracts

6 bulletins

1- Thesis and Dissertation

16. Field day Reports.

Share

EXPERIENCES Since Inception of SBARE

Spent First Year digging into Research and Extension Programs Much to absorb. Had to start Planning for Legislative Session before we really had a chance to get a full grasp.

Found out that NDSU Extension & Research are very integrated. We discovered that Every department had reduced staff from previous years because of budgeting restraints. Some departments such as Soils had a large reduction in staff. It became apparent early on that keeping top personnel in place was difficult because we went way competitive in comparison to other universities. Also there was an issue of enough flexibility within the base budget to conduct research in an efficient and timely ~~with~~ manner. All that has led up to our #1 and #2 priorities brought forth in this session. Costs to continue and base budget. The wheels more slow. It's taken us almost 4 years to address issues that became obvious early on.

We've spent a lot of time prioritizing. It isn't a perfect process but I feel all areas including my own area of 3 west North Dakota have been fairly represented. I'm involved in advisory boards from Hettinger and Dickinson Research centers. Dickinson for example has 4 or 5 different Advisory groups, representing all segments of agriculture. That's true grass roots input that filters back up to the top of the system and ultimately shapes our research and extension programs. I'm also a member of the Unit 10 Extension Advisory Council.

The board has been very dedicated. I don't see missing faces at meetings very often. I've missed only 3 meetings since I've become involved due to health problems. I drove up to Fargo last May from Rochester Minn. to an SBARE meeting addressing our #1 and #2 priorities because I felt those two issues were that important.

I appreciate the flexibility the legislature has given us to make the system better. I have a frustration when legislators choose to eliminate like items or ~~or~~ <sup>like</sup> initiatives that are lower priorities over initiatives that are higher priority. As I said earlier we have spent a lot of time prioritizing and putting these issues in the order we feel they fit the best. I would hope that you as legislators would honor that process in my view that would be a true acknowledgement of our hard work on SBARE.

SB 2021  
Conf Com 4-18**April 18, 2001****TO: Sen. Bill Bowman (fax: 701-328-2872)****FROM: Cole Gustafson, NDSU**

I am following up on our phone conversation this morning about additional monies for our barley program.

At the moment, we have two barley breeders, Dr. Rich Horsley and Dr. Jerry Franckowiak. Development of new barley malt varieties for western North Dakota and feed varieties for the entire state are high priority. Seed demand this spring, including a large contract by several malting companies, indicate that Conlon (which received AMBA recommendation in 2000) will probably become a leading malt variety grown in western North Dakota. High yielding feed lines have been developed and are in the process of selection for eastern North Dakota.

If additional monies for barley research are made available, it is my opinion that they would be most useful if used to fund additional research of barley at the Main Station where our present infrastructure and greenhouses exist. New varieties have to be developed here before they are field tested at each of the Research Extension Centers (REC's). We have several very promising barley lines on the horizon, but they need additional quality, pathology, and agronomic testing before field trials occur. The molecular marker lab which was funded in the last biennium has been very instrumental in accelerating this process.

The REC's could use some additional funding (15% of total new funds) for eventual field testing. This money would be used to assure the new varieties are agronomically suited to each micro-climate of the state. The current malt and feed barley proposals being discussed in the legislature would lead to duplication of research efforts at the REC's and not provide enough funding to support initial research at the Main Station.

Other crops have similar opportunities for growth, including oilseeds which have experienced significant acreage increases. NDSU Agriculture is very comfortable with SBARE's review of our entire crop research programs and allocation of program funds. It is very difficult at this juncture to foresee emerging problems that may require additional research this crop year and next, but they will occur.

Please feel free to contact me if you have any additional questions. My phone number at work is 231-7096 and home is 280-9413.

**NDSU****NORTH DAKOTA STATE UNIVERSITY**

North Central Research Extension Center

5400 Highway 83 S.  
Minot, ND 58701-7645

701.857.7670

Fax 701.857.7676

jfisher@ndowext.nodak.edu

SB 2021  
Conf Com 4-18

April 18, 2001

The Honorable Bill Bowman  
The State Senate  
Bismarck, ND 58501

Dear Senator Bowman:

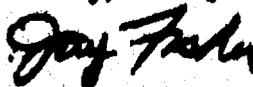
Barley research conducted at the North Central Research Extension Center (NCREC) at Minot consists of cooperative research with two barley breeders at NDSU. Dr. Rich Horsley and Dr. Jerry Frankowiak work with 6-rowed and 2-rowed barley varieties respectively. The initial crosses between parental barley lines are made by these 2 breeders and their technical support staff at NDSU in Fargo. The F2 through F10 or so generations are then planted in various locations across the region in places like NCREC. The agronomist and technical staff at NCREC care for, monitor, harvest and take notes on factors such as heading date, plant height, yield, % plump, protein, etc. We at research extension centers then, are part of this network of research information gathered for the North Dakota barley research effort. Plant pathologists, entomologists, cereal chemists, soil fertility specialists and weed control specialists on campus and at the research extension centers are part of this cooperative work as well.

Malting barley can be either 6-rowed or 2-rowed. North Dakota has traditionally been known for its 6-rowed malting barley varieties. New interest is beginning with 2-rowed varieties from North Dakota. The American Malting Barley Association (AMBA) and brewing company preference determines which varieties are "acceptable malting varieties" and which are not. This system can be frustrating to breeders, agronomists, elevator operators and farmers alike. Varieties with good yield and agronomic characteristics are then classed as "feed varieties." Often, high protein (too high to make good malt) or low % plump kernels (too thin to make good malt) cause feed barley classification.

Hard red spring wheat, durum wheat and oat projects at NDSU all follow a very similar variety development system. It takes the breeders of each of these crops at least 10 generations of breeding work to potentially come up with a new variety. Often this is accomplished with greenhouse and winter nursery work in warmer climates to hasten the process. The breeding and variety development process is on-going and needs to be diligent to keep up with Mother Nature's disease, insect and weed developments. It can not be turned off and on like a faucet.

Consequently, Senator Bowman, I believe successful breeding programs rely upon adequately funded breeders, greenhouses, support staff and research colleagues at the NDSU level first, assisted by adequately funded agronomists and technical support staff at research extension centers.

Sincerely,



Jay Fisher, Director

North Central Research Extension Center

SB 2021  
Copy OK 4-18

# Rush

Date: April 18, 2001

To: Senator Bill Bowman and Representative Francis Wald

From: Kris Ringwall, Director  
Dickinson Research Extension Center

Jerald Bergman, Director  
Williston Research Extension Center

Re: Recent Barley efforts

- conducted a study comparing forage and conventional barley and pea (barley grown alone and with pea) for forage and grain yield and quality, and at multiple seeding rates.
- continue testing barley, under the direction of Drs. Franckowiak and Horsley from NDSU. Malt and feed barley cultivars are included and data relevant to both uses (feed and malt) are collected. Tests include agronomic performance of intermediate and advanced breeding lines, plus evaluation of malting and brewing quality.
- continue regional efforts at utilizing germplasm from other states.
- conducted a study on barley, oat, pea, lentil, and cereal-legume mixtures. This was to determine proper harvesting stage for the various treatments.
- compared several barley cultivars developed for forage, for production and yield.
- completed a study where forage yield and quality, as well as contribution of the various plant parts (leaf blade and sheath, culm, and inflorescence) were compared to yield, of 12 barley cultivars.
- continue the cool season forage trial conducted annually at Dickinson, Carrington, Fargo, Langdon, Minot, and Williston.
- continue a study where the potential of grazing barley and other crops are being determined.
- continue crop rotation work with barley rotated with other northern crops and evaluate root rot.
- manage an advanced 2-rowed barley nursery under the direction of Jerry Franckowiak.
- test malt barley under irrigated conditions in cooperation with the MSU Eastern Agricultural Research Center and Busch Agricultural Resources.

All these studies are presented at local field days, published in annual reports and other scientific proceedings. Funding sources include state, federal and grant support.

**Proposed work: Developing Western North Dakota Malt Barleys**

Developing strategies and materials that take into account the dynamic environments and markets yet provide the specificity that producers want for their particular situation will be a challenge but also a tremendous opportunity. The following is the proposed work and budget.

- Develop and test early generation two-row and six-row barley lines in western North Dakota selected for low protein, desirable malting traits, and optimum yield under semi-arid dryland conditions including use of the double-haploid breeding program to reduce the time needed to develop new varieties. Early generational quality tests for malt barley characteristics will be developed to permit rapid screening of early generation material.
- Develop and test early generation two-row and six-row barley lines in western North Dakota for shorter-stiffer-strawed high yielding with desirable malting traits and disease resistance for production under overhead sprinkler and gravity flood irrigation systems including use of the double-haploid breeding program to reduce the time needed to develop new varieties.
- Develop management strategies under dryland, flood-irrigated, and overhead sprinkler irrigation will be developed which optimize production of malt-quality barley. This will involve comparison studies of contrasting cultural practices (e.g., sowing rate and date), fertilizer formulations and rates (particularly as related to N, K, and Cl nutrition), germplasm (i.e., adaptation trials), harvest management, and cropping systems.

<b>Budget (annual):</b>	Germplasm adaptation trial: 2 sites	\$ 6,000
	Fertilizer study: 2 site (I'd suggest 2 annually)	\$10,000
	Sowing rate/date study: 1 site	\$ 4,000
	Cropping system/harvest management	\$10,000
	Travel	\$10,000
	Data entry	\$ 3,000
	Publication	\$ 1,000
	Technical Support	\$22,000
	Graduate Student	\$22,000
	Misc.	\$13,000
	<b>Total</b>	<b>\$101,000</b>

<b>Biennial Grand Totals</b>		
	Dickinson and Williston R&E Centers (New Revenue)	\$202,000
	Main Station Germ plasm development (General Fund)	\$ 86,000
	<b>Total</b>	<b>\$288,000</b>

cc: Cole Gustafson

SB 2021  
Copy Com 4-18

To: Sen. Bill Bowman

From: Tim Faller, Hettinger Research Extension Center

Re: Barley Program

At the REC's we rely on the on-campus breeders for the early developmental stages of varieties. They do their work utilizing the greenhouses and the molecular marker lab, which are not available at REC sites. At that point they make selections that go out to nurseries both in state and nationally. Information from the nurseries is the backbone of what goes forward for potential release to our farmers and the industry in general. There are not breeders at REC's probably the closest to a breeder is Jerry Bergman at Williston.

Eric Eriksson the Agronomist at Hettinger has both malt and feed varieties at sites in Scranton, Regent, New Leipzig, Selfridge, and Mandan as well as his main site on the center at Hettinger. Experimentals are not planted at off-station sites until the year prior to potential release for security purposes. He maintains two nurseries for the on-campus breeders and one national nursery at Hettinger.

Our agronomy program at Hettinger has not had a funding increase since 1983, so yes the answer is that more funds could improve that program but we do not want it to come at the loss of the main-station program or to circumvent the SBARE process which is dynamic. Having peer review from lay people who make their living in North Dakota Agriculture is a strong concept. Eric has been successful raising grant funds to increase our agronomy program but most times that source is very focused so that if the money doesn't come from the barley industry it will not influence their future either.

If we are going to move the process forward it really requires some infusion of new hard money and taking the funds from the main station and trying to drive the process in reverse will not accomplish the anticipated goal. Some legislative intent directing focus on the needs of the people in the west can be valuable but we all have to work as a team.

I will have my cell phone on (701) 567-3030 call if I have confused you, good luck!

Tim

**Department 649 - Agronomy Seed Farm  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Executive Budget	2.90	\$0	\$1,259,140	\$1,259,140
1999-2001 Legislative Appropriations	2.90 <sup>1</sup>	0	1,202,339	1,202,339
Increase (Decrease)	0.00	\$0	\$56,801	\$56,801

<sup>1</sup>The 1999-2001 appropriation is based on three FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 2.9 FTE positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

**Major Items Affecting Agronomy Seed Farm 2001-03 Budget**

	General Fund	Other Funds	Total
1. Provides funding for the building of 10 hopper-type bulk seed storage bins and leg equipment including concrete pads.		\$105,000	\$105,000

**Major Legislation Affecting the Agronomy Seed Farm**

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the Agronomy Seed Farm and report any adjustments to OMB.

Section 5 of Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm to the 2003-05 biennium.

**Department 649 - Agronomy Seed Farm  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Schafer Executive Budget	2.90	\$0	\$1,259,140	\$1,259,140
1999-2001 Legislative Appropriations	2.90 <sup>1</sup>	0	1,202,339	1,202,339
Increase (Decrease)	0.00	\$0	\$56,801	\$56,801

2001-03 Hoeven Executive Budget	2.90	\$0	\$1,259,140	\$1,259,140
Hoeven Increase (Decrease) to Schafer	0.00	\$0	\$0	\$0

<sup>1</sup>The 1999-2001 appropriation is based on three FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 2.9 FTE positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

**Major Schafer Recommendations Affecting Agronomy Seed Farm 2001-03 Budget**

	General Fund	Other Funds	Total
1. Provides funding for the building of 10 hopper-type bulk seed storage bins and leg equipment including concrete pads.		\$105,000	\$105,000

**Major Hoeven Recommendations Affecting Agronomy Seed Farm 2001-03 Budget  
 Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation.

**Major Legislation Affecting the Agronomy Seed Farm**

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the Agronomy Seed Farm and report any adjustments to the Office of Management and Budget.

Section 5 of Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm to the 2003-05 biennium.

**Department 640 - Agronomy Seed Farm  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Schafer Executive Budget	2.90	\$0	\$1,259,140	\$1,259,140
1999-2001 Legislative Appropriations	2.90 <sup>1</sup>	0	1,202,339	1,202,339
Increase (Decrease)	0.00	\$0	\$56,801	\$56,801

2001-03 Hoeven Executive Budget	2.90	\$0	\$1,259,140	\$1,259,140
Hoeven Increase (Decrease) to Schafer	0.00	\$0	\$0	\$0

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**Major Hoeven Recommendations Affecting Agronomy Seed Farm 2001-03 Budget  
 Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation.

**Major Legislation Affecting the Agronomy Seed Farm**

Section 3 of Engrossed Senate Bill No. 2021 authorizes transfer authority between the Main Research Center, the branch research centers, and the Agronomy Seed Farm.

Section 4 of Engrossed Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the Agronomy Seed Farm and report any adjustments to the Office of Management and Budget.

Section 7 of Engrossed Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the Agronomy Seed Farm to the 2003-05 biennium.

**Summary of Legislative Changes Resulting From First House Action**

See Statement of Purpose of Amendment (attached).

SB 2021

**SENATE APPROPRIATIONS COMMITTEE HEARING - JANUARY 4, 2001**

**Agronomy Seed Farm Testimony - Tom Teigen**

- >The Agronomy Seed Farm has operated on self generated sales income since its inception in 1950.
  
- >The 2001-2003 biennial budget is similar to the previous biennial budget. It contains a capital improvement item to allow for the construction of additional hopper bins to add to the bulk seed handling capabilities of the farm.
  
- >The existence of the seed farm and the successful operation of four of the Research Centers is dependent to varying degrees on the successes of the NDAES breeding programs. The breeding programs are centered in the plant sciences department but heavy contributions are made by plant pathology, cereal science, soil science, and others.
  
- >Therefore, since our foundation seed operations rely on the release of new varieties as well as demand for older, established varieties; we encourage your support of the main station budget. We need the continued and orderly release of new varieties to continue to function in our role to rapid increase and distribute improved genetic varieties to the seed industry of ND.

**Department 638 - Northern Crops Institute  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Executive Budget	8.00	\$724,426	\$732,697	\$1,457,123
1999-2001 Legislative Appropriations	8.00	668,579	408,074	1,076,653 <sup>1</sup>
Increase (Decrease)	0.00	\$55,847	\$324,623	\$380,470

<sup>1</sup>The 1999-2001 appropriation amounts include \$6,450 from the general fund for the agency's share of the \$422,400 funding pool appropriated to the Main Research Center for additional salary adjustments for employees of the Agricultural Experiment Station, NDSU Extension Service, Northern Crops Institute, and the Upper Great Plains Transportation Institute and \$155, \$38 of which is from the general fund, for the agency's share of the \$1.4 million funding pool appropriated to the Office of Management and Budget (OMB) for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000.

**Major Items Affecting Northern Crops Institute 2001-03 Budget**

	General Fund	Other Funds	Total
1. Increases funding for core programs, including promoting North Dakota crops and providing training, which are a State Board of Agriculture Research and Education priority.	\$30,010		\$30,010
2. Increases funding, primarily from increased fees, grants, and contracts, for salaries and operating to maintain current budget base.		\$285,949	\$285,949

**Major Legislation Affecting the Northern Crops Institute**

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the Northern Crops Institute and report any adjustments to OMB.

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 Senate Bill No. 2021**

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 Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation.

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**Summary of Legislative Changes Resulting From First House Action**

See Statement of Purpose of Amendment (attached).



**Testimony in support of the Northern Crops Institute  
Before the Senate Appropriations Committee  
January 4, 2001**

Chairman Nething and members of the Senate Appropriations Committee, my name is Neal Fisher, and I am the Administrator of the North Dakota Wheat Commission. I am here today to seek your continued support for the Northern Crops Institute (NCI) budget request for the next biennium.

The programs of the NCI and the North Dakota Wheat Commission complement each other in the promotion and expansion of domestic and international markets for wheat, durum and other northern grown crops. As an original sponsor of the NCI and as an annual funding source, the North Dakota Wheat Commission strongly supports the mission and accomplishments of the Northern Crops Institute. NCI provides educational and technical service programs that are an integral part of the Commission's market development efforts and those of U.S. Wheat Associates, our national, producer-directed market development organization. U.S. Wheat Associates contracts through the North Dakota Wheat Commission and directly with NCI for technical services and customer education programs to carry out its mission worldwide. In this role the NCI is an important economic development tool that assists private enterprise in marketing the North Dakota wheat and durum crops, which generate over \$4.0 billion in economic activity for the state of North Dakota each year.

More specifically, the North Dakota Wheat Commission works with the NCI to educate foreign buyers about the intrinsic quality and milling and baking aspects of hard red spring and durum wheats. NCI is located adjacent to and works in conjunction with the Cereal Science Department at NDSU to provide the most up to date research information possible to our international and domestic customers. This comprehensive service package helps North Dakota wheat and durum producers remain competitive in an increasingly competitive global grain market.

The look of the customer has changed dramatically in recent years, in both domestic and foreign markets. A hand full of countries still rely on government buying agencies, but increasingly today's buyers are private flourmills, larger scale bakeries and pasta processors. Today's consumer is also more aware of the variety and quality options that are more readily available. Those upscale tastes and preferences must also be factored into today's buying decisions. In the end these developments create more demand for quality wheats but also require a better understanding of their functionality in the processing industry.

The competition today is also much more intense. As you know, spring wheat and durum farmers face their most direct competition worldwide from the Canadian Wheat Board (CWB). The CWB's equivalent to the NCI is the Canadian International Grains Institute (CIGI), whose purpose is also to work with foreign customers to expand markets for Canadian wheat. Since the CIGI budget is four times larger than that of the NCI, it allows the Canadians to recruit prospective customer participants at lower cost to the participating customer or sponsoring company. This is yet another example of "raising the bar" in the competitive environment of the international wheat market.

In order to remain competitive the NCI is seeking additional funding for costs to continue in the amount of \$12,000 in this budget request. The North Dakota Wheat Commission respectfully requests your continued support of the NCI and asks that you to look favorably on this budget request.

4023 State Street  
Bismarck, ND 58503-0890

Fax: 701/328-5115  
e-mail: [ndwheat@ndwheat.com](mailto:ndwheat@ndwheat.com)  
web site: <http://www.ndwheat.com>

SB2021

## **Testimonial on behalf of the Northern Crops Institute**

**By Matt Mechtel  
Page, ND**

**My first experience with the Northern Crops Institute (NCI) came in my first year as a board member of the North Dakota Soybean Council. I was asked to host a Chinese trade delegation that was interested in soybean production in the state of North Dakota. The comments I received after that tour were incredibly positive and similar to the comments I have heard from others who have been guests of NCI.**

**NCI offers foreign purchasers something they can not find anywhere else-- education about the quality of northern-grown crops. It is often an uphill battle for North Dakota producers to promote and market crops grown in this region. NCI, I believe, has become a great promotional and educational resource to the very end-users that consume our products. Courses such as the Grain Procurement Management for Importers Course educate the end-users to help them identify the traits they should request when purchasing their grain needs.**

**Basically, NCI is one of the many things that puts North Dakota on the map. Courses such as the Protocol Workshop help producers like myself learn about the culture of other countries with which we will potentially be doing business. This is becoming more important with the advent of identity-preserved markets.**

**As a new board member of NCI, I can see that the programs and workshops being offered by the NCI are a direct benefit to my bottom line as a producer. Each trade delegation that leaves the NCI after a course has a new found respect for North Dakota producers and, I believe, will go back to their respective countries and demand the purchase of North Dakota products.**



**Testimony in support of the Northern Crops Institute  
Before the House Appropriations Committee  
March 6, 2001**

Madam Chair and members of the House Appropriations Committee, my name is Neal Fisher, and I am the Administrator of the North Dakota Wheat Commission. I am here today to seek your continued support for the Northern Crops Institute (NCI) budget request for the next biennium.

The programs of the NCI and the North Dakota Wheat Commission complement each other in the promotion and expansion of domestic and international markets for wheat, durum and other northern grown crops. As an original sponsor of the NCI and as an annual funding source, the North Dakota Wheat Commission strongly supports the mission and accomplishments of the Northern Crops Institute. NCI provides educational and technical service programs that are an integral part of the Commission's market development efforts and those of U.S. Wheat Associates, our national, producer-directed market development organization. U.S. Wheat Associates contracts through the North Dakota Wheat Commission and directly with NCI for technical services and customer education programs to carry out its mission worldwide. In this role the NCI is an important economic development tool that assists private enterprise in marketing the North Dakota wheat and durum crops, which generate over \$4.0 billion in economic activity for the state of North Dakota each year.

More specifically, the North Dakota Wheat Commission works with the NCI to educate foreign buyers about the intrinsic quality and milling and baking aspects of hard red spring and durum wheats. NCI is located adjacent to and works in conjunction with the Cereal Science Department at NDSU to provide the most up to date research information possible to our international and domestic customers. This comprehensive service package helps North Dakota wheat and durum producers remain competitive in an increasingly competitive global grain market.

The look of the customer has changed dramatically in recent years, in both domestic and foreign markets. A hand full of countries still rely on government buying agencies, but increasingly today's buyers are private flourmills, larger scale bakeries and pasta processors. Today's consumer is also more aware of the variety and quality options that are more readily available. Those upscale tastes and preferences must also be factored into today's buying decisions. In the end these developments create more demand for quality wheats but also require a better understanding of their functionality in the processing industry.

The competition today is also much more intense. As you know, spring wheat and durum farmers face their most direct competition worldwide from the Canadian Wheat Board (CWB). The CWB's equivalent to the NCI is the Canadian International Grains Institute (CIGI), whose purpose is also to work with foreign customers to expand markets for Canadian wheat. Since the CIGI budget is four times larger than that of the NCI, it allows the Canadians to recruit prospective course participants at lower cost to the participating customer or sponsoring company. This is yet another example of "raising the bar" in the competitive environment of the international wheat market.

The North Dakota Wheat Commission respectfully requests your continued support of the NCI and asks that you to look favorably on this budget request.

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Bismarck, ND 58503-0600

Fax: 701/328-5115  
e-mail: ndwheat@ndwheat.com  
web site: <http://www.ndwheat.com>

**Department 627 - Upper Great Plains Transportation Institute  
 Senate Bill No. 2021**

	FTE Positions	General Fund	Other Funds	Total
2001-03 Schafer Executive Budget	27.75	\$505,079	\$7,383,348	\$7,888,427
1999-2001 Legislative Appropriations	23.50 <sup>1</sup>	486,991	6,268,442	6,755,433 <sup>2</sup>
Increase (Decrease)	4.25	\$18,088	\$1,114,906	\$1,132,994

2001-03 Hoeven Executive Budget	27.75	\$505,079	\$7,383,348	\$7,888,427
Hoeven Increase (Decrease) to Schafer	0.00	\$0	\$0	\$0

<sup>1</sup> The 1999-2001 appropriation is based on 25 FTE positions. Section 7 of 1999 House Bill No. 1021 authorizes the State Board of Higher Education to adjust FTE positions as needed. The 23.5 FTE positions shown above represent the employee positions reported to the Office of Management and Budget (OMB).

<sup>2</sup> The 1999-2001 appropriation amounts include \$4,571 from the general fund for the agency's share of the \$422,400 funding pool appropriated to the Main Research Center for additional salary adjustments for employees of the Agricultural Experiment Station, NDSU Extension Service, Northern Crops Institute, and Upper Great Plains Transportation Institute and \$202 of special funds for the agency's share of the \$1.4 million funding pool appropriated to OMB for assisting agencies in providing the \$35 per month minimum salary increases in July 1999 and July 2000.

**Major Schafer Recommendations Affecting Upper Great Plains Transportation Institute 2001-03 Budget**

	General Fund	Other Funds	Total
1. Restores one-time special funding of \$288,000 for the biennial strategic transportation analysis program.			
2. Increases funds for the aspen program as follows:		\$362,356	\$362,356
1 FTE programmer	\$169,712		
1 FTE hardware/technician	96,040		
Operating expenses	96,604		
Total	\$362,356		
3. Increases funds for the advanced traffic analysis center as follows:		\$155,227	\$155,227
1 FTE traffic engineer	\$108,309		
Operating expenses	46,918		
Total	\$155,227		
4. Provides funding for an increase in grants and contracts to be used for the North Dakota biennial strategic transportation analysis program.		\$252,218	\$252,218
5. Increases funds for the North Dakota biennial strategic transportation analysis program as follows:		\$208,854	\$208,854
1 FTE associate research fellow	\$127,080		
.25 FTE secretary	34,787		
Operating expenses	39,987		
Equipment	7,000		
Total	\$208,854		

**Major Hoeven Recommendations Affecting Upper Great Plains Transportation Institute 2001-03 Budget  
 Compared to the Bill as Introduced (Schafer Budget)**

The Hoeven recommendation does not change the Schafer recommendation.

**Major Legislation Affecting the Upper Great Plains Transportation Institute**

Section 4 of Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the Upper Great Plains Transportation Institute and report any adjustments to the Office of Management and Budget.

Section 5 of Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute to the 2003-05 biennium.

Department 627 - Upper Great Plains Transportation Institute  
 House Bill No. 2021

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Equipment	7,000		
Total	\$208,854		

Major Hoeven Recommendations Affecting Upper Great Plains Transportation Institute 2001-03 Budget  
 Compared to the Bill as Introduced (Schafer Budget)

Hoeven recommendation does not change the Schafer recommendation.

Major Legislation Affecting the Upper Great Plains Transportation Institute

Section 4 of Enrolled Senate Bill No. 2021 authorizes the State Board of Higher Education to adjust or increase full-time equivalent positions for the Upper Great Plains Transportation Institute and report any adjustments to the Office of Management and Budget.

Section 7 of Engrossed Senate Bill No. 2021 authorizes the carryover of any unexpended general fund appropriation and excess income received by the Upper Great Plains Transportation Institute to the 2003-05 biennium.

**Summary of Legislative Changes Resulting From First House Action**

Statement of Purpose of Amendment (attached).



**UPPER GREAT PLAINS TRANSPORTATION INSTITUTE  
NORTH DAKOTA STATE UNIVERSITY**

*Rec'd 1-11-01*

January 8, 2001

Senator David Nething, Chairman  
Senate Appropriations Committee  
Legislative Council  
Capitol Building  
Bismarck, ND 58505

Dear Senator Nething:

I would like to call your attention to an error in the Upper Great Plains Transportation Institute's testimony at the budget hearing on Senate Bill 2021 before your committee on Thursday, January 4, 2001. Dennis McLeod submitted written testimony stating that the Executive Branch had budgeted \$100,000 of General Fund and \$200,000 of DOT funds for the *ND 2001-2003 Strategic Transportation Analysis Program*. I verbally confirmed this before your committee as well. Both the written statement and the verbal confirmation were in error. There was a mis-communication between NDSU and the Executive Branch that led to this error. The testimony should have reflected that special funds are budgeted for this project.

I apologize for the misinformation. I want to emphasize that in no way was it intentional on the part of anyone from NDSU. Nor do I believe that it was intentional on the part of anyone from the Executive Branch. Please let me know if there is anything else we need to do to correct this situation.

The Institute and the Advisory Council still strongly support the Strategic Analysis Program and we would appreciate any support you and your committee can give us. If you have any questions please call me at 701/231-8343.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gene Griffin', is written over a horizontal line.

Gene Griffin

c: Dennis McLeod  
Keith Bjerke

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## **Senate Bill 2021**

**Upper Great Plains Transportation Institute  
North Dakota State University**

**Mr. Chairman, committee members. For the record my name is Dennis McLeod, Chairman of the Transportation Institute's Advisory Council (see list on the back side) established by this Legislature. I have spent my entire professional career working in transportation, which gives me a special vantage point to evaluate the Institute's performance and speak to the importance of the work conducted there.**

**The state of North Dakota is more critically dependent on transportation than any other state I'm familiar with, Montana being the exception. Our geographical location, relative to our markets, in combination with our basic industrial sectors of manufacturing and production agriculture, make it extremely important that we understand and manage transportation to the best of our ability. Further, our sparse rural population presents a real transportation challenge that will continue to become more formidable in the future. What's more, our growing urban centers are beginning to experience fundamental transportation problems such as providing the necessary infrastructure and managing congestion.**

**The Institute has a strong record of achievement in transportation issues important to the state. It has conducted work which all parties can rely on for accuracy and objectivity. The work that it does is critical to the state. It improves our competitiveness and increases efficiency necessary to our economic viability. What's more, their work keeps us abreast of major transportation policy issues. The most critical project of late has been the Strategic Transportation Analysis for Grain and Oilseeds.**

**This program is extremely important to North Dakota's economic future. We will be evaluating different transportation and logistics issues important to the state each biennium. The Advisory Council recently voted to evaluate the manufacturing sector, including agricultural processing, this next biennium, subject to funding. The logistical challenges facing manufacturing are significant. Further, the development of a viable truck/rail intermodal facility in North Dakota is crucial to the continued development and expansion of manufacturing as well as some types of agricultural marketing. This past biennium we were able to get this project started with federal and private funds. You each have received preliminary results of this analysis revealing significant changes are taking place in transportation which will have long term effects on N.D.**

**The proposed funding for the program for the next biennium consists of \$100,000 of General Fund recommended by Governor Hoeven, \$100,000 committed from NDSU by President Chapman and Vice President Boudjock, and an additional \$200,000 of Federal planning funds from the North Dakota DOT. We are grateful for the broad based support we have received for this program and respectfully request that this committee appropriate the \$100,000 of General Funds and approve authority for the remaining balance of the program.**

**I would like to close by emphasizing how important the work of the Institute is to the state. The Advisory Council encourages your strong support.**

**Advisory Council  
Upper Great Plains Transportation Institute**

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**Senate Bill 2021**

Senate Appropriations Committee  
Harvest Room  
Thursday, January 4, 2001

Upper Great Plains Transportation Institute  
North Dakota State University

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Mr. Chairman, committee members. In a recent speech the CEO of Hewlett Packard said that two fundamentals will drive the future, information technology and mobility. I presume what she meant was that communication of ideas, knowledge, and data is not very valuable without the movement of commodities, transportation of products, delivery of services, and the mobility of people. I believe that is why this legislature had the wisdom to establish an Institute at NDSU to focus on transportation. I would like to report to you the accomplishments of North Dakota's Transportation Institute and also discuss goals for the next biennium. But first I would like to touch briefly on the importance of transportation and how the Institute addresses it in the thematic area of *Rural and Small Urban Transportation and Logistics*.

The Transportation Institute has four underpinning goals that drive the program. These goals are to: (1) enhance economic efficiency, (2) increase competitiveness, (3) improve mobility, and (4) promote safety through the traditional university functions of education, research, and service. Each of these goals, individually, and collectively underscore the importance of transportation.

However, transportation is often taken for granted because of the long term nature of the infrastructure, and the success that the U.S. has had in developing a sophisticated and reliable transportation system. These misconceptions make it difficult at times to rally the support necessary for a strong transportation effort. Yet transportation is critical to our very existence in a modern socioeconomic system. It is the great facilitator allowing participation socially and economically. It improves our quality of life. It makes education available to all. It provides the mobility for health care and emergency services. Further, it is a major cost component of many industrial sectors, 30% plus for agriculture and is similar for manufacturing.

Further exacerbating the problem, many people think that transportation is not complex or highly technical. It is both. Sophisticated supply chain management, a strategy for improving competitiveness involving complex management decisions, state-of-the-art communications, just-in-time delivery, and electronic data interchange. Intelligent transportation systems utilize a host of complex technologies and is on the cutting edge of emerging technologies. Energy technologies will likely revolutionize transportation in the next 20 years. Routing and scheduling programs are dramatically changing how customers are served.

Two main points emerge. Transportation is extremely important and very high tech. The investment the state makes in the Institute is not only necessary, it has, and will continue to pay big dividends.

### **Program Accomplishments and Goals**

The Institute makes its contribution to transportation through several programs. The most essential and critical to North Dakota is the **Core Research Program**. The program focus areas include agricultural transportation, railroad economics, motor carrier management, rural and small urban transit, statewide and regional planning, rural and small urban ITS, low volume roads, and logistics in rural and small urban areas.

There were several major accomplishments this past biennium including: (1) Changing Farm-to-Market Grain Transportation Flows (2) Prototype Grain Highway Network Model: Implications for Highway Planning in Rural Areas; (3) Small Railroad Investment Needs and Financial Options; and (4) Transportation of the Less Fortunate. One of the more important accomplishments was the initiation of the *Strategic Transportation Analysis Program*. This study focused on four issues related to the grain and oilseed industry, shuttle trains, heavier rail cars, truck/rail intermodal facilities, and logistics/location analysis.

A major goal for the next biennium is to conduct an analysis of the logistical and other transportation issues for the manufacturing sector (includes agricultural processing) which contributes 15% to North Dakota's economy. However, this will be dependent on funding. The analysis will be client driven. It is envisioned that the analysis will consist of supply chain management case studies of several manufacturing enterprises, an educational effort providing manufacturing management with a understanding of how to better manage logistics to create a competitive advantage, and a thorough evaluation of manufacturing intermodal facility needs. The Institute will continue to develop other research and service projects as funding is available.

Another important program is the **Mountain-Plains Consortium (MPC)** sponsored by the U.S. DOT. The ultimate goal of the MPC is to increase the number of Americans who are prepared to design, deploy, and operate complex transportation systems and to develop the knowledge necessary to improve transportation that will enhance America's economic competitiveness in the 21<sup>st</sup> Century. NDSU is the lead university of the consortium and includes Colorado State University, University of Wyoming, and University of Utah.

Important accomplishments include: (1) expansion of the number of academic departments and disciplines involved in its transportation educational programs; (2) solidified partnerships with state transportation departments in the region; and (3) a partnership with the University of Manitoba, the Southwest University Transportation Center at Texas A&M, and the University of Denver, to develop the Mid-continent Transportation Knowledge Network. The purpose of the network is to foster exchange of transportation knowledge among Canadian, American, and Mexican institutions, professionals, and students. MPC faculty also continued to teach base line graduate courses. In addition, MPC helped to develop a plan for a new undergraduate specialization/minor in Transportation & Logistics. In addition, MPC continued its strong transportation research effort during the year, completing nine research project reports.

MPC goals for the next biennium include expanding MPC to include representation from South Dakota universities; continuing to develop the mid-continent corridor partnership with University of Manitoba and Texas A&M; expanding the graduate transportation program options to cover more

disciplines; and growing the off-campus masters degree program currently delivered to North Dakota Department of Transportation employees in Bismarck and Fargo.

A third program, the **Advanced Traffic Analysis Center (ATAC)** was established in 1998 as a technology support center for small to medium size urban areas through funding from the US DOT. The Center resources include a traffic lab equipped with powerful computers and state-of-the-art traffic analysis software, and serves as a training facility. Federal ITS funding for the ATAC program must be matched dollar-for-dollar. Therefore, ATAC funding is achieved through a strong partnership between the UGPTI, NDSU, ND DOT, and Fargo-Moorhead COG.

Several major studies and activities were conducted during the biennium to assist North Dakota DOT and North Dakota cities. Examples include: (1) improving traffic signal timing on several arterial streets in Bismarck, Fargo, and West Fargo; (2) analyzing roadway layout options for the I-29 and 32<sup>nd</sup> Ave. S and Flying J area; examining traffic delays and safety concerns related to I-29 construction in Fargo; (3) developing a business plan for Intelligent Transportation Systems in Commercial Vehicle Operations in North Dakota; and (4) providing training to ND DOT and ND cities on use of advanced traffic analysis software and the use of video for traffic management.

One goal for the next biennium is to increase awareness and the level of use of ATAC services among NDDOT, ND cities and other small to medium sized cities in the region and nation. This will also entail adding focus areas as needed in adaptive traffic signal control, artificial intelligence, and GIS. By doing so, the ATAC will achieve a financially viable program. A further goal is to encourage smaller cities to adopt ITS technologies that make sense for them.

The **DOT Support Center (DOTSC)** is a new program for the Institute. DOTSC was created specifically to partner NDSU with NDDOT to take advantage of the core competencies at each institution. NDSU brings a multifaceted wealth of knowledge and ability to the partnership to assist the NDDOT in researching and solving critical and topical transportation issues. The initial program will consist of a student design center and an information technology center.

The student design center program integrates NDSU engineering students with real world DOT designs and engineering issues. Teams of engineering students work under the direction of DOT designers to prepare plans, estimates and studies for transportation projects. The goal of the program is to familiarize students with the North Dakota Department of Transportation and topical transportation issues. Another goal is to encourage students to enter the transportation field upon graduation and stay and work in North Dakota with either public or private engineering institutions.

The information technology (IT) center also integrates NDSU Computer Information System (CIS) and Management Information System (MIS) students with real world DOT IT issues and projects. Students will be teamed with NDDOT computer analysts to work on various IT projects and programs. The goal of the program is similar to that of the student design program.

The **TEL8** program has made an important contribution to transportation in North Dakota and the region through distance learning, graduate education, technology transfer, and service. TEL8's state-of-the-art video conference system, administered at NDSU, particularly highlights TEL8's unique partnership among the state Departments of Transportation and the MPC transportation

research universities in our region. These two organizations have different but very complementary roles in improving transportation infrastructure and activities, and the development of the TEL8 network brought them together within a formal structure. This partnership has provided avenues of exploration for new opportunities between the two groups as well as providing concrete educational, training and research interaction.

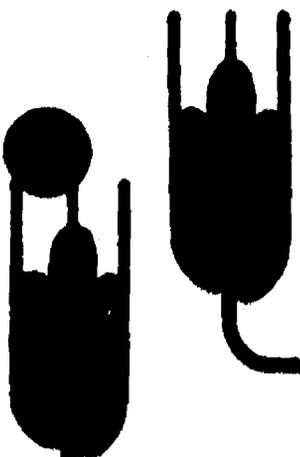
Several programs over the TEL8 network the past biennium should be noted. Two DOT sponsored seminar series, InfoX and TransX, have provided DOT employees and others with basic and timely job-related information. Further, several National Highway Institute courses, MPC graduate classes, and specialized conferences were specifically developed for TEL8 and delivered over the system.

One goal for the next biennium is the expansion of programming activities emphasizing the educational opportunities the network provides with its regional partnership amongst universities and DOTs. A second goal is to maintain state-of-the-art telecommunications technology enabling the most effective transfer of information, research, and knowledge. Thirdly, TEL8 seeks to provide additional student-practitioner interaction for students and researchers at NDSU. Finally, TEL8 will continue supporting network expansion including state and regional entities.

Another recently developed program is the **Field Systems Motor Carrier Program (FSG)**. The ultimate goal of the FSG is to improve the safety of our nation's highways. The FSG helps to accomplish this through the development and maintenance of software systems used by Federal and State motor carrier safety specialists, as well as private industry professionals. In the last several years, seven interrelated roadside, investigative, and analytical software programs in use by specialists nationwide were developed and are maintained through the FSG. These systems are considered to be mission critical to the Federal Motor Carrier Safety Administration, and are steadily updated and refined to reflect regulatory changes, enforcement policy changes, as well as computer technology changes. In addition, researchers in the FSG conduct a considerable amount of research to further enhance the efficiency and effectiveness of its software programs.

In the next two years, the FSG is exploring several areas for future development. It is anticipated that each of these areas will begin testing in the near future, with full implementation expected in the next five to six years. First, in order for current users of the FSG software to transfer data between field locations and state/national information systems, they must use a physical connection or a phone line. Researchers in the FSG are working toward wireless communication solutions for the software systems that will allow the users to send and receive data from any location. The second future development will be to further enhance the various software programs to be web-based in order to operate smoothly across a variety of systems, as well as to provide the user easy access to relevant information. The third goal is to explore the use of voice-recognition technology in the FSG software systems. This would allow for much faster and easier entry of data. The final area of emphasis is to continue the research into methods to improve the data and algorithms that make up certain components of the software, and to search for further areas where improvements can be made.

The Institute is proud of its accomplishments these past two years. We look forward to a challenging next two years and hope that we can report the same degree of success in the 2003 session.



# NORTH DAKOTA GRAIN DEALERS ASSOCIATION

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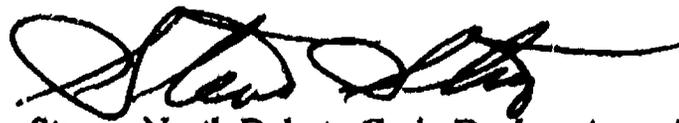
TESTIMONY ON SB 2021, TRANSPORTATION INSTITUTE  
MARCH 6, 2001, 4:30 P.M.  
HOUSE APPROPRIATIONS, EDUCATION AND ENVIRONMENT DIVISION  
REPRESENTATIVE JANET WENTZ, CHAIRMAN

The North Dakota Grain Dealers Association is a 90-year-old voluntary membership organization in which nearly all the country grain elevators in North Dakota hold membership. We have been on the Upper Great Plains Transportation Institute Advisory Council since its creation more than 30 years ago.

Transportation has been, and likely always will be important to our state. Since Territorial days we've had wrangles with railroads. Producing much, but consuming little, means our bulk commodities must move in large volumes to processors and consumers.

NDGDA supports the general fund request for the Institute and also the additional \$100,000 for the Strategic Transportation Analysis Program. The information gathered from that program thus far in the current biennium has been helpful to elevator operators, farmers, and those working with our state's transportation system. A continuation of this program, this time focusing on a different part of the North Dakota economy, will pay dividends.

As railroads push for larger and larger shipments, the role of intermodal facilities in our state can become more important for identity-preserved specialty crops or high-value segments of more general crops.



Steve Strege, North Dakota Grain Dealers Association



**The Upper Great Plains Transportation Institute** focuses its efforts on delivering more efficient transportation to people in small urban and rural transportation settings.

Our goals, simple, yet broad-based, are able to underpin six programs through education, research and service. We seek, always, to:

- Enhance economic efficiency
- Increase competitiveness
- Improve mobility
- Promote safety

### Mission

*- make a significant contribution to rural and small urban transportation and logistics through interdisciplinary university education, research, and service*

The Institute... through... programs... within... principles... philosophy... conditions... Objectives... improve... national... advanced... systems...

### CORE RESEARCH PROGRAMS

- The heart of the Institute's operation is its research to the long-run success of the transportation system. The program is a concentration of research programs important to North Dakota through:
- Agricultural transportation
  - Statewide and regional planning
  - Rural and small urban transit
  - Low volume roads
  - Railroad economics
  - Intelligent transportation systems
  - Motor carrier management and safety
  - Logistics in economic development

The objective of this program is to conduct research to add value to North Dakota business transportation and logistics, provide knowledge to improve North Dakota's transportation infrastructure, and improve mobility and safety for our citizens.

Director: Gene Griffin 701.231.8343  
gene.griffin@ndsu.nodak.edu

### MOUNTAIN-PLAINS CONSORTIUM

The Mountain-Plains Consortium offers education to those who will design, deploy and operate complex transportation systems. Those in the consortium develop the knowledge and skills to enhance services...



Director: Aymann Samadi 701.231.8101  
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### ADVANCED TRANSPORTATION

#### TRAVEL CENTER

The Center... improve the ability of the North Dakota DOT to employ and operate a transportation system to satisfy the needs of North Dakota...

- Low volume roads and bridges
- Environmental impact, tourism and recreational travel
- Intermodal freight transportation and logistics
- International traffic

Director: Denver Tolliver 701.231.7190  
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### ADVANCED TRAFFIC CENTER

The Center... planning, simulation, state-of-the-art network analysis and traffic simulation tools. Making advanced analysis tools available to a wider group of users, especially small-medium size urban areas.

- Enhancing transportation decisions by using state-of-the-art network analysis and traffic simulation tools.
- Making advanced analysis tools available to a wider group of users, especially small-medium size urban areas.

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## **S.B. 2021**

**Presented by: Jon Mielke, Executive Secretary  
Public Service Commission**

**Before: Senate Appropriations Committee  
Senator David Nething, Chairman**

**Date: January 4, 2001**

### **TESTIMONY**

Chairman Nething and committee members, my name is Jon Mielke. I am the Public Service Commission's executive secretary. I am also the director of the Commission's Licensing Division and its primary staff person on railroad matters.

State law designates the PSC as the entity that is responsible for representing state shipping interests in federal railroad proceedings. Given staffing and budgetary considerations, it is very important that we partner with other entities when we get involved in major cases. Typical partners include farm and commodity groups, industry associations, and the Transportation Institute. We simply could not be successful in many of our endeavors if it were not for the technical expertise that is available from the Institute.

I would like to call your attention to one piece of work that is just now being completed by Institute personnel. The study addresses some of the impacts of the evolving shuttle train system of marketing grain. Its findings should be of great interest to farm and industry groups in North Dakota and to the Legislature.

Generally speaking, a shuttle train is a train of about 110 cars that must be loaded in 15 hours. It involves shipping approximately 350,000 bushels of

grain from one origin to a single destination. Shuttle train shippers have about a nine-cent rate advantage over other elevators.

There are nine shuttle train loaders in North Dakota today and we expect that another six to ten facilities will be built in or immediately adjacent to the state in the very near future. These facilities are located almost exclusively on the Burlington Northern Santa Fe and are typically constructed with special incentives that are provided by the railroad.

It is estimated that each of these facilities must handle about 15 millions bushels of grain per year to be viable. If each of these facilities does eventually handle 15 million bushels, they will collectively handle about half of the grain that is shipped each year by the state's grain elevators.

The impacts of this concentration within the state's grain industry are enormous. Farmers will move grain farther with larger trucks. Many more small elevators will close. More branch lines will be abandoned. State and local roads and bridges will be called on to handle freight that once moved over the railroads' collector system.

Information concerning this transition is vitally important to policy makers and to the private sector. This is the type of information that the Transportation Institute can and does compile. Its budget deserves your full support.

Mr. Chairman and committee members, the preliminary results of this shuttle train study are attached to our testimony.

I would be happy to respond to any questions that you might have.

## 2001-2003 North Dakota Strategic Transportation Analysis Program

### Manufacturing

This program was initiated in 1999 to address transportation and logistical issues critical to North Dakota business sectors on a biennial basis. The grain and oilseed sector was the first to be analyzed during the present biennium. Manufacturing, which includes food processing, heavy machinery, and hard goods, was selected by the Institute's Advisory Council for analysis in the 2001-2003 biennium. Additionally, the intermodal needs of specialized agricultural marketing will be evaluated. It is anticipated there will be five components to the program in the next two years:

- ✓ Case studies of North Dakota manufacturing firms
- ✓ Logistics training program for manufacturers and carriers
- ✓ Student intern program
- ✓ Intermodal facilities evaluation
- ✓ Statewide and local strategy development

The case studies will consist of a detailed logistical analysis of several representative North Dakota manufacturing firms. The analysis will focus on how these firms can be more competitive through the application of logistics as a management tool. This component will provide a better understanding of the issues facing manufacturers. Further, these firms will be able to share their insights with other manufacturers in the state.

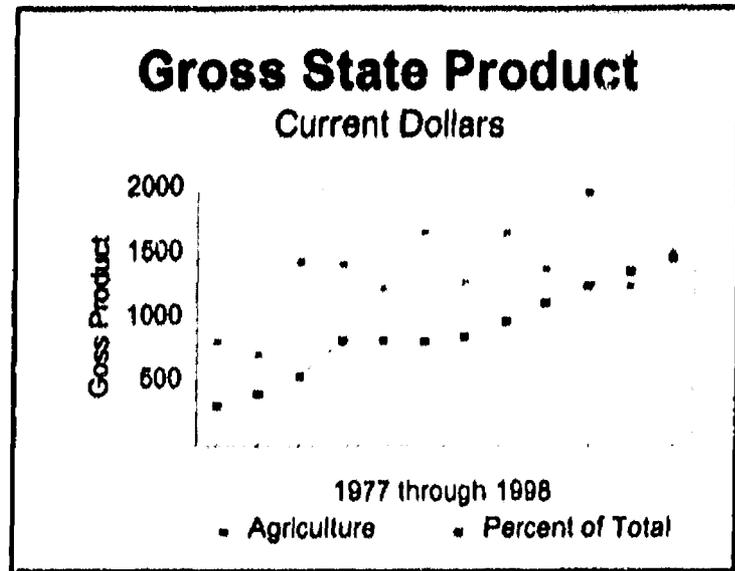
A customized logistics training program will be developed specifically for manufacturers and the carriers that serve them. The objective of this program is to jump start an improved utilization of logistics as a competitive tool. Third party consultants may be utilized in this component.

A student intern program will be developed to provide manufacturers with students who are minoring in logistics in the College of Business and the Department of Agribusiness and Applied Economics. This will not only provide the industry with student help, but will also serve as a recruitment tool.

An analysis of the role of intermodal facilities will also be conducted. This will include an extensive market analysis in combination with an operational analysis of specific sites.

Strategies that will improve the competitive position of the manufacturing and agricultural sectors will be developed on a statewide and local basis. This may include issues such as state support of facilities, development of shipping cooperatives, and infrastructure planning and investment.

This study is being conducted because of the important role that manufacturing and specialized agricultural marketing currently plays in North Dakota's economy, in addition to the perceived growth that will take place in the next 5 to 10 years. Manufacturing accounted for 8.5% of the state's gross product in 1998 amounting to \$1,464,000,000. This equaled agriculture's contribution to the state's economy that particular year (Figure 1). Further manufacturing employed nearly 22,000 people in the state in 1997.



**Figure 1. North Dakota Gross State Product for Selected Sectors.** Source: US Bureau of Economic Analysis

It is important to note that growth in manufacturing has been steadily upward for the past six years. If this trend continues, manufacturing will become an even more important primary sector in North Dakota's economy.

Another growth area is specialized agricultural marketing. This is particularly true of the type that requires intermodal service involving containers and trailers. As identity preserved and other types of specialized agricultural marketing has increased so has the demand for intermodal service. This parallels a national phenomena.

Intermodal refers to movements of truck-equipped containers and trailers on flatbed rail cars. The opportunity to combine the business, infrastructure, and environmental efficiencies of short-haul truck moves with longer-haul rail carriage makes intermodal the fastest growing mode of choice. Container traffic accounted for 1 in 4 shipments of goods (moved 500 miles or more) in the North American transportation system during 1997. Export market dependence on this flexible mode is evident as seaborne container volumes increased by 240 percent between 1989 and 1999, to 232 million tons (11.6 million containers) in 1999. The cost advantages and adaptability of container shipping has become an integral part of many businesses, especially high-value agricultural and manufacturing ventures, which employ JIT (just-in-time) inventory and distribution schemes in their cost management strategies.

Finally, it is important to understand that smaller firms have a greater issue in managing their value chain through the wise application of logistics. Firms located in North Dakota then face two challenges - a locational disadvantage and the challenge that smaller firms have in implementing logistics strategies. With your assistance this study will provide the knowledge and assistance necessary to mitigate these challenges and to provide an opportunity to improve the states competitive advantage.

**North Dakota  
Grain and Oilseed  
1999-2001 Biennial Strategic Transportation Analysis**

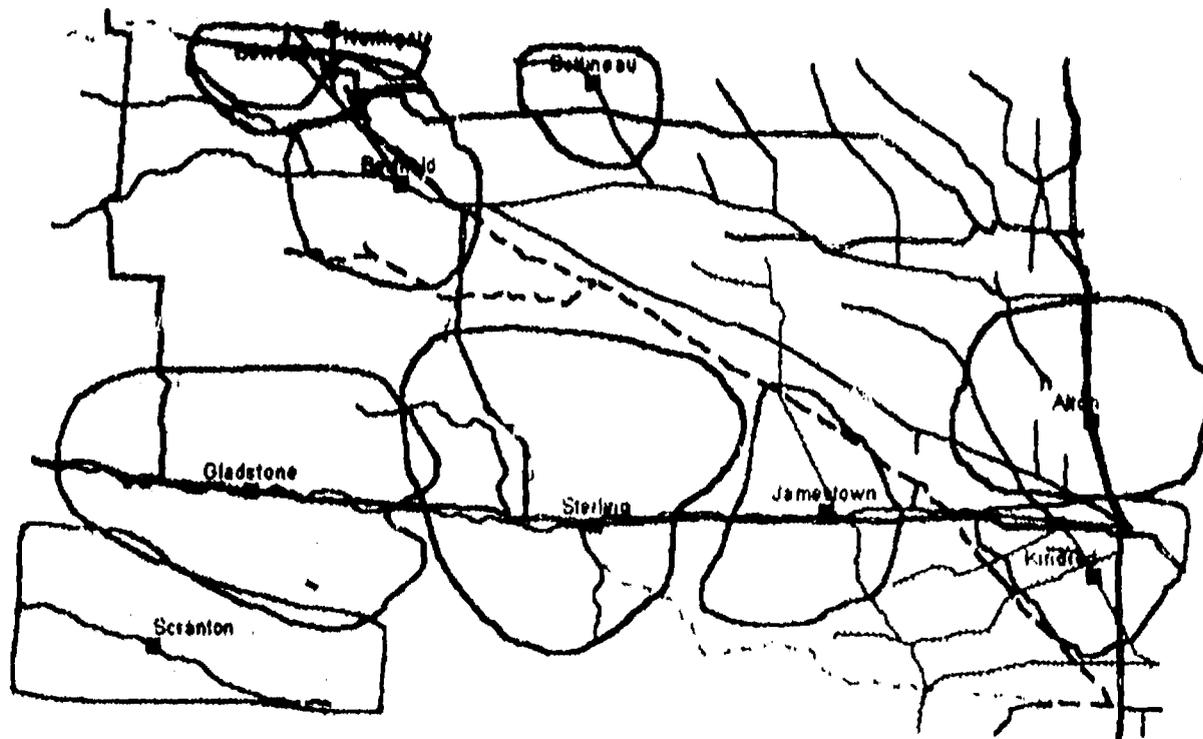
## **PRELIMINARY RESULTS**

**Shuttle Trains  
Heavy Rail Cars  
Intermodal Facilities  
Location Analysis**

**Upper Great Plains Transportation Institute  
North Dakota State University**

**December 2000**

# POTENTIAL DRAW AREA FOR SHUTTLE EQUIPPED ELEVATORS



Estimated Bushel Requirement for Ten Shuttle Facilities: 135,000,000 Bushels  
 ➔ 20 percent of ND Annual Grain Production

Land Area in the Estimated Shuttle Facility Draw Areas: 22,751,000 Acres  
 ➔ 45 percent of ND Land Area

Wheat in the Estimated Shuttle Facility Draw Areas: 121,478,000 Bushels  
 ➔ 38 percent of Annual ND Wheat Production

## LOCAL IMPLICATIONS:

- ◆ **Longer Producer Truck Deliveries requires more Local Road/Bridge Spending**
- ◆ **Communities within Shuttle Draw Areas may lose Local Elevator**
- ◆ **Branch Lines within Shuttle Draw Areas may be Abandon**
- ◆ **Short Line Traffic may be Drawn to Class I Railroad Main Lines**
- ◆ **Local Processor Procurement Price Impacted by the more Competitive Rail Rate**

## Draw Area Estimate Based on these Assumptions:

- Rail Rates - Wheat, Effective September 1, 2000
- Elevator Infrastructure as of September 1, 2000
- Delivery made via Producer Semi-Truck Trailer
- Shuttle Rate 9.1¢ per Bushel Discount to Unit Train Rate
- Shuttle Rate Applicable for All Shipments
- Handling Costs Equal among Markets
- Producer Market Choice Based on Revenue Maximization
- Elevator Price=Minneapolis Price less Rail Freight
- Producer Revenue=Elevator Price less Truck Delivery Cost

## POTENTIAL DRAW AREA FOR SHUTTLE EQUIPPED ELEVATORS

The local grain industry in North Dakota includes 440 elevators, 2 Class I rail carriers, 3 short line railroads, 106,500 road miles, 3,900 rail miles, several local processors, and thousands of farmers. In looking to the future of North Dakota's local grain industry infrastructure it is important to (1) view our local infrastructure as a part of global grain marketing network (2) determine, with the best current knowledge, what resources our segment of that much larger network will require, and (3) rationally allocate available resources to maximize returns to our segment of the network.

Shuttle rail rates are currently the most competitive rail rate. These lower rail rates were recently made available to shippers equipped to meet specific volume, transaction, and operational commitments. Primary destinations are export facilities, and a few domestic processors/feeders. Shippers may order a package of 6, 12 or 24 trains of 100 cars for consecutively delivered trains. For example, a ND elevator shipping wheat would commit to load over 2 million bushels in 9 weeks with the six-trip package. Rate/efficiency incentives for a 24-trip shuttle train were estimated to be 15 cents per bushel. **In the context of rail rates, an elevator in central North Dakota shipping wheat to Portland would pay \$1.21 per bushel to ship a unit train or \$1.06 per bushel to ship a shuttle train.**

Facility infrastructure requirements, economic incentives, investment requirements, and financing packages are unique to each shuttle venture. Based on an earlier UGPTI study, a \$6 million green field facility required approximately 10 million bushel handle for profitable returns. **Discussions with grain companies and railroads suggest a target of 12 to 15 million bushels for a shuttle facility. This bushel requirement compares to the current average annual handle of 1.2 million bushels for the ND elevator population, and average annual handle of 5.6 million bushels for the state's largest elevators. Therefore, redistribution of bushels within the local elevator industry seems imminent.**

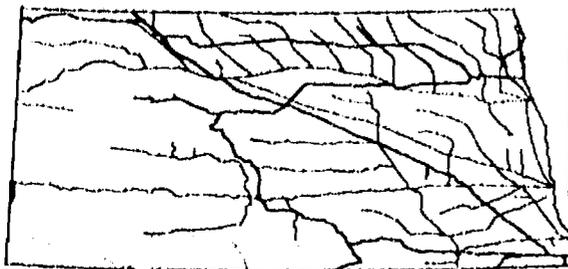
Investment in shuttle facilities and the ability of these facilities to utilize the more competitive rates in attracting grain has the potential to strongly influence future local grain flow patterns. As these local grain flow patterns adjust to new market signals, demands on the local grain gathering system will need to be addressed. **The purpose of this component of the Strategic Freight Analysis was to provide a market-based synopsis of the potential impact of shuttle train shipments on North Dakota's local grain industry.**

HRS wheat, durum, barley, and corn were considered in this economic analysis of shuttle rail rates on the local grain marketing. In the base case, wheat, the boundary of grain draw areas estimated for the ten shuttle facilities encompassed 45 percent of the total ND land area. Regarding production, approximately 88.6 million bushels of HRS wheat and 32.9 million bushels of durum were contained in the estimated shuttle draw areas. The ten draw areas encompassed about 38 percent of ND HRS wheat production and slightly more, 39 percent, of the state's durum production. In the cases of barley and corn, the shuttle facilities have the potential to accumulate 26.5 million bushels (24 percent of average ND production) and 14.2 million bushels (19 percent of average ND production), respectively, based on the estimated boundaries of the draw areas.

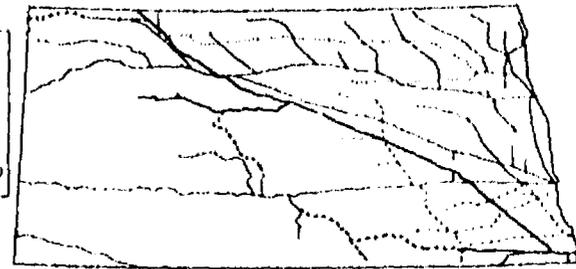
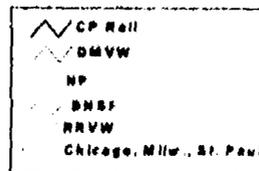
Considering these four crops, the ten shuttle facility draw areas have the potential to originate about 162 million bushels. In relative terms, **2 percent of the elevators may originate up to 32 percent of the average annual production of wheat, barley, and corn. This market share of ND production translates to an average 16.5 million bushels per facility. This potential concentration of bushels has implications for local roads, short line railroads, bridge infrastructure, local processors, local communities, and the ND elevator industry.**

## HEAVY LOADING RAIL GRAIN CARS - IMPACTS ON NORTH DAKOTA

Since 1980, there have been more than 1,200 miles of rail line abandoned in the state of North Dakota. Eased abandonment regulations and increased shipment sizes contributed to this abandonment. The figures below compare the North Dakota rail networks of 1980 and today. The current trends of shuttle train shipment and a shift to 286,000 pound cars are likely to lead to further rail abandonment.

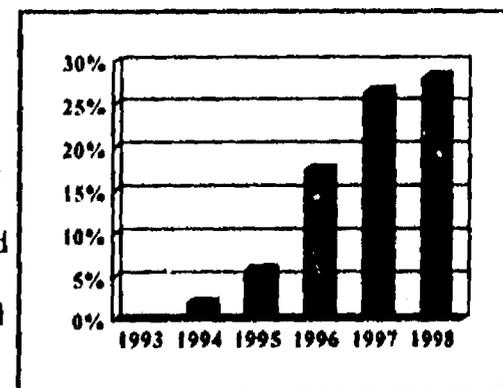


ND Rail System - 1980



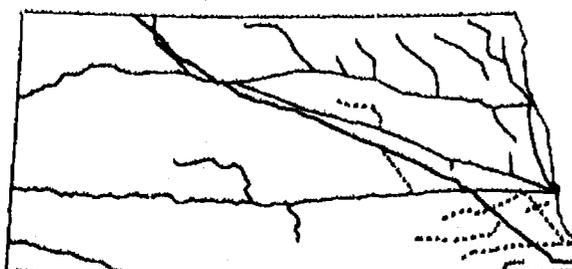
ND Rail System - 2000

Larger rail cars can create several efficiencies for railroads, including: (1) reduced car and locomotive ownership costs, (2) reduced labor costs, (3) reduced fuel costs, (4) reduced car and locomotive maintenance costs, and (5) increased system capacity. To some extent, these efficiencies are passed on to shippers - averaging about \$.03 per bushel for wheat shipped to the PNW. Moreover, this has led to an accelerated use by grain shippers.

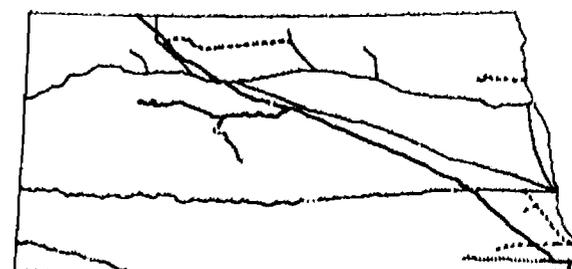
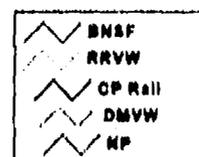


Percent of US Grain Hopper Car Tonnage Originated in 286,000 Lb. Cars

A recent study suggests that the rail in place should be at least 90 pounds per yard to accommodate 286,000 pound cars. Railroads operating lines that have rail that is lighter than this are likely to face a future decision of upgrading or abandoning these lines. The rate of return available for upgrading a particular line will depend traffic and the cost of upgrade. The following figures show the rail network that consists of more than 90 pound rail and the network that currently loads 286,000 pound cars.



ND Rail Lines with Avg Rail Weights Above 90 Lbs.



ND Rail Lines where 286K Cars are Currently Loaded

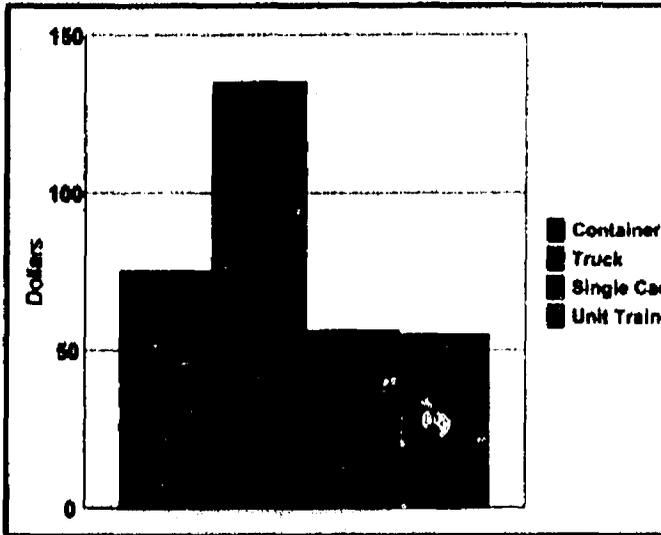
To the extent rail abandonment occurs in the future, impacts in affected communities may include:

- increased shipper transportation costs, and a resulting reduction in producer income
- reductions in gross business volume and personal income
- increased highway maintenance costs
- decreased economic development opportunities

However, rate savings passed on to producers as a result of shipping in larger sizes and larger cars may offset the impacts of reductions in personal income and gross business volume to some extent. Moreover, in areas where shuttle facilities are built, and where larger rail cars are used, shippers and communities will benefit from the changes.

- North Dakota's grain producers rely on an efficient rail system to move their products to export and domestic markets. In the 1999-2000 crop year, approximately 69 percent of all North Dakota grains and oilseeds transported to export and domestic markets moved by rail.
- A large component of the North Dakota rail system is light-density branch lines. Currently, nearly 2/3 of all North Dakota route mileage is comprised of light-density branch lines.
- A recent shift to larger grain hopper cars may threaten the viability of the state's light-density branch line network. The old industry standard of 263,000 pound cars that are capable of handling 100 tons of grain is being replaced by 286,000 pound cars that are capable of handling 111 tons of grain. Many light-density branch lines are not able to handle these larger cars because of light rail, shallow ballast, and/or deferred tie maintenance. Railroads operating over such lines are likely to face a future choice between upgrading such lines and abandoning them.
- Larger rail cars can create several efficiencies for railroads, including: (1) reduced car and locomotive ownership costs, (2) reduced labor costs, (3) reduced fuel costs, (4) reduced car and locomotive maintenance costs, and (5) increased system capacity. At the same time, they can cause accelerated deterioration of track and its components, and potential upgrading costs. For railroad mainlines the benefits outweigh the costs, explaining the recent shift to the larger cars.
- Because of the savings available to railroads on mainline routes, there has been a major shift to the 286,000 pound cars since the early 1990s. In 1993, less than one percent of all grain tonnage moved in 286,000 pound cars. In 1998, more than 28 percent of all grain tonnage moved in 286,000 pound cars. Similarly, in North Dakota, no North Dakota grain tonnage moved in 286,000 pound cars, while 19 percent did in 1998.
- Railroads will decide whether to upgrade rail lines to handle 286,000 pound cars by comparing the rate of return of upgrading with the rates of return available in alternative investments. The rates of return from upgrading will consider the revenues available from upgrading in comparison to those available with abandonment, the costs of upgrading, and the duration of benefits received from upgrading. The revenues available from upgrading will depend on the net change in line traffic resulting from upgrading where the alternative is abandonment. The net change in traffic will in turn depend on the proximity of competitors' rail lines to the line under consideration, the availability of truck for transporting to destination markets directly, and other investment decisions by railroads (e.g. location of shuttle train facilities, and competitor decisions regarding abandonment).
- To the extent that rail abandonment occurs in the future, impacts in affected communities may include: (1) increased shipper transportation costs, and a resulting reduction in producer income, (2) reductions in gross business volume and personal income, (3) increased highway maintenance costs, and (4) decreased economic development opportunities. However, rate savings passed on to producers as a result of shipping in larger sizes and larger cars may offset the impacts of reductions in personal income and gross business volume to some extent. Moreover, in areas where shuttle facilities are built, and where larger rail cars are used, shippers and communities will benefit from the changes.

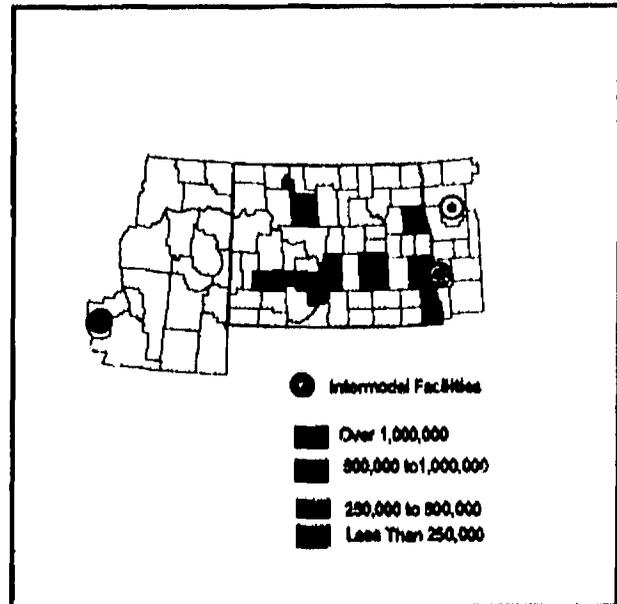
## IMPORTANCE OF INTERMODAL SERVICE TO FUTURE COMMODITY PROCESSING AND MARKETING



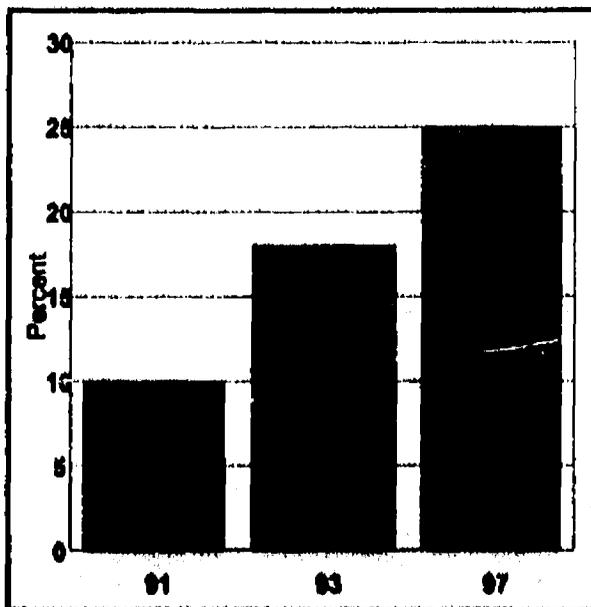
**Estimated Freight Rates Per-Ton From Central Iowa to Japan (Reichert & Vachal).**

An option for an intermodal movement of freight may reduce freight costs for shippers. This option would provide opportunity for North Dakota businesses to compete in markets where competition is located closer to the customer. Lower transportation costs are realized by using each mode for the portion of the trip for which it is best suited. Intermodal shipping reduces shipping costs and provides opportunity for competition in both domestic and international markets. Identity preserved and value added product for export is a growing market.

Container intermodal shipping is an important option for competing in the global and domestic market. The Thief River Falls, MN intermodal loading facility closed in 2000 and there are no intermodal loading facilities in North Dakota. The closest loading facilities for North Dakota shippers are in Dilworth, MN, Minneapolis, MN, and Billings, MT. The distance to a loading facility is the most important part of making intermodal shipping economically feasible.



**Intermodal Facilities & Value of Manufacturing Shipments (\$1,000) by County (Bureau of Census).**



**Container Share of Markets in North America Moving 500 Miles or More. (Vachal, 2000)**

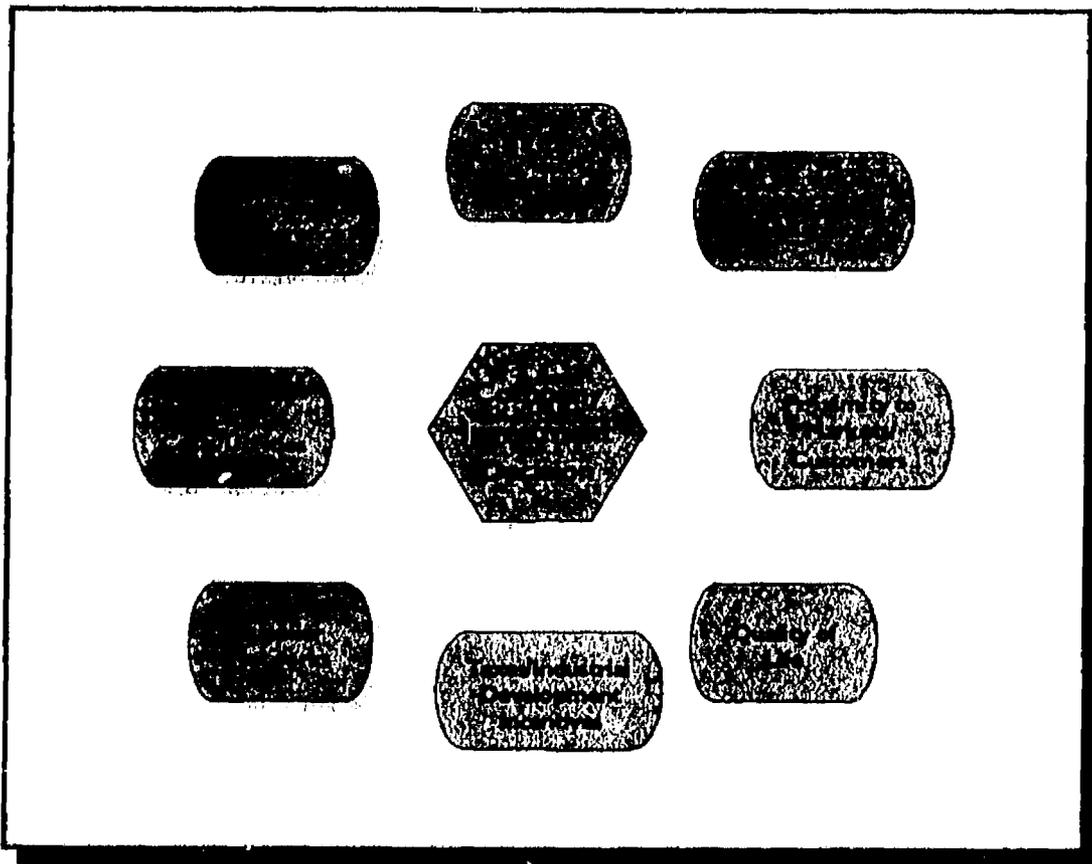
The use of intermodal is increasing in the United States. Intermodal marketers reported loadings of trailers and containers increased by 23.5 percent in 1996 and again by 18.7 percent in 1997. The increase in container usage in the U.S. indicates the need for North Dakota shippers to have access to this successful transportation method for export and long haul domestic movements. The Public Use Waybill shows North Dakota's intermodal shipping is decreasing.

- ◆ Typically drayage to an intermodal loading facility is 100 miles or less. Intermodal shipping options in North Dakota are limited by availability of loading facilities. There are no intermodal loading facilities in North Dakota. The closest loading facilities are in Dilworth, MN, Minneapolis, MN, and Billings, MT. A reasonable distance to a loading facility has been identified as an important part of making intermodal shipping economically feasible.
- ◆ Two studies have identified potential intermodal traffic in eastern North Dakota. Leeper et al. (1996) estimated over 22,000 lifts of trailers and containers by year 5 of opening a facility in the Grand Forks area. Leeper based the estimates on letters of support from area shippers. Also this support was based on service levels that meet the requirements of the shippers. Vachal (2000) estimated that as many as 27,000 lifts could exist in the year 2000 and by 2005 there could be over 47,000 lifts at an intermodal facility in eastern North Dakota if service and rate levels were competitive.
- ◆ A telephone survey of existing manufacturers and processors is in progress for the entire state. This survey will identify the potential intermodal and truck freight for the entire state of North Dakota.
- ◆ The Dilworth, MN facility presents problems for both the railroad and shippers. The location of the intermodal loading facility is difficult for shippers to access because of location. The limited volume of the facility provides the railroad with little incentive to provide competitive rates or timely service, therefore shippers do not consistently use the facility. Options may exist to move the facility to another location that may provide easier access and growth potential.
- ◆ The food industry's increasing demand for identity preserved commodities, along with the agriculture community pursuit of value added ventures, provides economic opportunity for North Dakota farmers and businesses. Transportation for a portion of North Dakota commodities will continue to change from unit trains to either truck or container. For export and long domestic less-than-trainload shipments a rail or intermodal option may lessen transportation costs making the product more competitive.
- ◆ Partnering between private and public sectors for building and operating an intermodal transloading facility has been done in other states. Costs of a facility may be offset by economic activity and expansion. This partnering is an economic development tool that could serve to strengthen existing business and provide another transportation option for those considering a value added venture.

## LOGISTICAL FACTORS INFLUENCING THE SUCCESS OF VALUE ADDED PROCESSING FACILITIES

Company investment decisions are based on profit maximizing goals. As North Dakota competes for these investment dollars, logistical advantages such as land values, labor and costs, may be nullified by logistical disadvantages such as freight rates and intermodal access. It is important to identify and understand how to improve North Dakota's competitive position.

Specifically, the factors to examine when considering the location of one particular component of the network, for example, a value added processing facility, include:



### DESCRIPTION OF LOCATION FACTORS

#### *Labor Climate*

Items to consider regarding the labor climate include both the availability of labor that is needed, as well as the cost. In addition, the degree of unionization, the skill level, the work ethic, and the average productivity of available labor should be examined, as well as the rate of unemployment in the area.

#### *Transportation Availability*

The main items to study regarding transportation availability include whether or not there is interstate highway access and/or rail facilities. In addition, the number of carriers willing and/or able to serve the area needs to be considered.

### ***Proximity to Markets/Customers***

Regarding proximity to markets/customers, the main areas to examine include the freight transportation cost to move the product to the applicable markets, and the market size/demand that can be served on a same-day or next-day basis.

### ***Quality of Life***

The quality of life at a location affects both the well-being of employees and the quality of their work. Areas to examine include the climate, housing, health care, crime, education, and recreation opportunities.

### ***Taxes/Industrial Development Incentives***

When considering a location, one should study the state/local taxes, the inventory/property taxes, and the personal taxes that are in place. Similarly, an examination of any tax incentives (reduced rates or abatements), or any available financing should occur. Finally, other considerations may include reduced water/sewage rates or rent-free buildings available.

### ***Supplier Networks***

The availability and cost of raw materials from supply sources, as well as the cost of transporting the materials to the location in question should be considered.

### ***Land Costs/Utilities***

The availability and cost of utilities, the cost of land, the cost of construction, and particular building codes should all be examined.

### ***Company Preference***

Finally, an examination of any company preferences that exist should occur. These may include a company policy to locate near competitors or other similar firms that may allow for common access to such things as labor, marketing resources, or key suppliers.

2021

# Summary

## Proposed Optional Budget 2001-2003

As approved by the State Board of Agricultural Research and Education

NDSU Extension Service  
N.D. Agricultural Experiment Station  
Northern Crops Institute

### ■ Priority 1 Cost to Continue

Proposed Total Estimated Cost to Continue:  
\$859,766

This priority restores cuts and reallocations outlined in the Governor's 2001-2003 budget. Without funding for this priority, research positions will be reduced in Veterinary and Microbiological Sciences, Plant Sciences, Soil Sciences, Animal and Range Sciences, and Cereal Science. In other areas, resources and staff will be reallocated, support staff may be reduced and user fees may be added or increased. Extension programs will increase user fees and hiring to fill positions will be delayed, undermining efforts to strengthen educational programs for all North Dakotans. At the Northern Crops Institute, loss of this funding would make increased user fees necessary and force an increase in charges for courses and programs. These changes could make the NCI's programs less competitive and decrease access to grain buyers and food processors. This priority also includes estimated mandated salary increases.

NDSU Extension Service: \$265,476  
Northern Crops Institute: \$12,840  
Main Experiment Station: \$449,660  
Research Extension Centers: \$131,790

### ■ Priority 2 Increased Core Budget

Proposed Increase to Core Budget: \$2,158,489

This increase in the core budget would make existing staff more competent, efficient and effective. Additional operating funds, staff development opportunities, travel, technology training, cooperative efforts, student help and equipment would be supported. The priority would also give programs additional resources and staffing to disseminate their research and information, add flexibility to programs to allow them to address emerging issues and challenges, and improve technology for distance learning, teleconferencing and sharing of ideas and information.

NDSU Extension Service: \$613,457  
Northern Crops Institute \$32,068  
Main Experiment Station \$1,189,300  
Research Extension Centers \$323,664

# NDSU

North Dakota State University, Fargo, ND 58105  
September 2000

## ■ Priority 3 Extension and Agricultural Experiment Station Initiatives

As Ranked by the State Board of  
Agricultural Research and Education

1. **BeefLine.** This initiative integrates beef-related research and Extension efforts across the state and sets priorities for research and education programs to address emerging concerns and opportunities. \$450,000
2. **Crop Production, Diversification and Protection.** White mold control research, studies on insect transmission of plant disease, research to improve fertility management, added technical support for the Molecular Marker Laboratory, and two graduate students for crop production and plant genetics would be supported. \$336,000
3. **Agricultural Financial Management.** This Extension Service initiative would provide educational opportunities for staff and producers to help them improve their risk and financial management skills and increase their knowledge of contracts, alliances, labor negotiations and niche marketing. \$140,761
4. **Barley.** Improved feed barleys, malt barleys for western North Dakota, feeding research with barley and development of barley feeding enterprises are key elements in this initiative. \$228,000
5. **Wheat Quality.** A post-doctoral candidate and two Ph.D. candidates will assist in research to develop new food and industrial markets for durum and hard red spring wheat. \$190,000
6. **Cooperative Canola Research.** Funded research will focus on the influence of crop rotations, previous disease levels and other factors on disease and disease control in canola. Large demonstration plots will be used to compare pest control strategies and enhanced production methods. \$110,000
7. **Irrigation.** Under this initiative, researchers will develop irrigated crop management technologies that maximize yield, quality and profitability while making efficient use of resources and properly managing use of agricultural chemicals and other inputs to protect the environment. \$100,000
8. **Changing Face of Rural Communities.** This effort will provide an individual to lead educational efforts relating to technology, including the Master Internet Volunteer program, e-commerce and entrepreneurship programs, and other business opportunities. Another will support technology needs of staff in county Extension offices and at Research Extension Centers. \$272,000
9. **North Dakota Agricultural Weather Network Center.** Funds would maintain the more than 50 NDAWN stations across the state that provide data for producers, researchers, energy companies, contractors and others. \$40,000
10. **Langdon Learning Facility.** This initiative provides funds to operate a new building that will house an office area, computer classrooms dedicated to distance education and a large meeting room with interactive videoconferencing ability. \$32,000

## ■ Capital Project

**Langdon Learning Center.** This 10,000 square foot facility at the Langdon Research Extension Center will provide a focal point for community outreach, distance education and agricultural research in a 10-county area of northeastern North Dakota. The center will help facilitate value-added economic development projects and rural community sustainability in the region. The project is ranked 13th on the State Board of Higher Education's list of capital projects. \$300,000

**2000-2001 Allocations**  
 (Figures based on data from the ND Ag Statistics Service)

Commodity	Cash Receipts*	% of Cash Receipts (Total)	% of Cash Receipts (Major crops)	Allocations
Wheat	\$728,253	26.1409	35.2853	\$152,212.64
Sunflower	238,477	8.5602	11.5547	49,844.31
Soybean	208,585	7.4872	10.1063	43,596.25
Sugarbeet	181,885	6.5288	8.8127	38,015.95
Beans	146,293	5.2512	7.0881	30,576.43
Potato	135,107	4.8497	6.5462	28,238.80
Corn	125,792	4.5153	6.0948	26,291.56
Canola	118,880	4.2672	5.7600	24,847.31
Barley	118,784	4.2638	5.7553	24,827.04
Hay	61,845	2.2200	2.9966	12,926.64
<b>Subtotal</b>		<b>74.0843</b>	<b>100.0000</b>	<b>\$431,376.93</b>
Livestock	647,425	23.2395		
Flaxseed	27,260	.9785		
Oats	6,865	.2464		
Rye	4,223	.1516		
Other	36,205	1.2997		
<b>Total</b>	<b>2,785,879</b>	<b>100.0000</b>		

\*In thousands

Total Revenue: \$666,252.76 (from ND Tax Dept. – Joan Galster)  
 Less set aside for admin. 50,000.00  
 Available for grants \$616,252.76

Major crops (70%) \$431,376.93  
 Livestock (18%) 110,925.50  
 New & Em. Crops (12%) 73,950.33  
 Total \$616,252.76

HOUSE APPROPRIATIONS COMMITTEE  
FIFTY-SEVENTH LEGISLATIVE ASSEMBLY OF NORTH DAKOTA

Testimony of Tim Bryan  
in favor of SB 2021

March 6, 2001

REPORT BY CROPS SUB-COMMITTEE  
STATE BOARD OF AGRICULTURAL RESEARCH AND EDUCATION

Areas of Focused Investigation and Study

1. Producer and commodity group participation in research decisions, particularly refine and integrate the role of the granting committees regarding long term effects of Agricultural Research Fund (gas tax) projects.
2. Evaluate the potential of molecular breeding techniques.
3. Continue to review opportunities and risks regarding bio-technology and genetically modified organisms.
4. Emphasize marketing as a key element of future research efforts, particularly niche market opportunities and identity preserved traits.
5. Continue breeding efforts regarding major problems - fusarium head blight, other disease and insect issues, sprouting, quality, and special market opportunities.

Additional Background Information Considered

1. Efforts being utilized in other states.
2. Commodity characteristic development required by producers and by consumers (market development).
3. Production and marketing systems that fit together on a farm (integration) to maximize economic opportunities.
4. Long range view of the future of agriculture and North Dakota farms.

Two Significant Achievements

1. Release of Alsen hard spring wheat.
2. Establishment of molecular marker laboratory.



# Alsen *Spec Sheet*

- Alsen is a hard red spring wheat variety that in field trials conducted throughout multiple years has demonstrated a level of resistance to *Fusarium* head blight (scab) better than virtually all commercial varieties currently available. Alsen also has displayed resistance to other troublesome diseases affecting cereal production in the northern plains such as wheat stem and leaf rust.
- Alsen is the result of a three-way cross involving the NDSU experimental lines ND674, ND688 and ND2710, which represents the best source of scab resistance but is not agronomically acceptable. One of the parents of ND2710 is Sumai3, a Chinese line recognized by wheat breeders worldwide as having superior scab resistance. The scab resistance (type 2) exhibited by Alsen and its parents restricts the disease from spreading in the wheat spike, even if a kernel becomes infected.
- Alsen, an awned cultivar, is relatively tall for a semidwarf, with a heading date and plant height similar to Grandin. Alsen possesses excellent lodging resistance, satisfactory shattering resistance and good test weight. In the 1999 hard red spring wheat variety trials conducted across the state at NDSU Research Extension Centers, Alsen's yield was comparable to Grandin, Verde and Keene at Dickinson. At Hettinger, Alsen's yield performance was similar to Dandy and Parshall and slightly better than 2375. In 1999 northeastern North Dakota trials at the Langdon Research Extension Center, Alsen's average yield was better than that of McVey, AC Barrie and Gunner. Alsen has outperformed 2375 by more than 5 bushels an acre. The summary of agronomic performance based on results of the 1999 variety trials across all locations show that Alsen's test weight averaged 59.2 pounds per bushel, compared to 56.4 pounds for McVey, 59.8 pounds for Gunner, 59.8 pounds for 2375 and 59 pounds for AC Barrie.
- Two years of data coming from many North Dakota locations show Alsen's wheat protein averaged 15.1 percent, similar to that of Grandin. Trenton's averaged 15 percent.
- The data show that Alsen's average flour yield ranged from 67 to 69.4 percent during the two years of testing. By comparison, Grandin's flour extraction ranged from 67.9 to 71.6 percent, and Trenton's, from 68.5 to 70.8 percent. The falling number test produced the following results: Alsen, 379 to 409; Grandin, 403 to 421; and Trenton, 390 to 397.
- The data show that Alsen's average flour protein content ranged from 13.9 to 14.2 percent; the average for Grandin also ranged from 13.9 to 14.2 percent, and Trenton's flour protein content ranged from 13.5 to 14.4 percent. The following results relate to wet gluten content: Alsen, 37.4 to 37.6 percent; Grandin, 36.3 to 37.1 percent; and Trenton, 34.7 to 37.8 percent.

**NDSU**

North Dakota State University  
Department of Plant Sciences (701) 231-7973  
Fargo, ND 58105

February 2000

State Board of Agricultural Research  
Member Biographical Sketch  
200J-01

Name Tim G. Bryan  
Address Route 1, Box 127  
Bowbells, North Dakota 58721

Farm Managing general partner, TLCB Farm (family farm partnership,  
Tim, Laureen, and Carolyn Bryan)

Crop/Livestock involvement Hard spring wheat, durum wheat, winter wheat, canola, barley, oats, and  
yellow mustard (4500-4900 planted acres) and 6 registered elk (Big Springs  
Elk Ranch)

Association with groups or organizations Recent past memberships:  
North Central Research Extension Center (Minot) advisory board  
NCREC capital campaign steering committee (new headquarters bldg)  
NDSU Extension MPU 1 advisory council (chrm)  
Current memberships:  
State Board of Agricultural Research and Education  
SunPrairie Grain producer board (Minot and Bowbells)  
Dakota Growers Pasta Company Resolutions Committee (western district)  
Burke County Crop Improvement Assn  
Burke Marketing Club (chrm)  
US Durum Growers Assn  
ND Grain Growers Assn  
Northern Canola Growers Assn  
Northwest Farm Managers Assn  
Customer focus / product development, Deere & Co, Harvester (small grains)  
4-H family, Colette (wife) is volunteer leader, William (son) is club member

Value Added (128,000 bu) Dakota Growers Pasta Company  
Harvest States Wheat Milling Defined Membership  
United Spring Wheat Processors Cooperative (Spring Wheat Bakers)

Local government School Board of Bowbells Public School District

Education BA, JD University of North Dakota

N.D.Cent.Code § 4-05.1-16(4) (b) :

At least ninety days before the conclusion of the initial term of each member appointed by the extension service's multicounty program units, the units through their advisory groups shall provide to the state board of higher education a list of one or more names from which the state board of higher education shall appoint a successor. Future appointments to these five positions must be made in the same manner. The state board of higher education shall ensure that four out of the five seats are held by agricultural producers.

# **The Agricultural Research Fund**

**Progress and results from  
projects funded during  
fiscal year 1998-1999**

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