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## **AGENCY OVERVIEW**

**630** NDSU EXTENSION SERVICE

**Date:** 12/13/2006

**Time:** 06:37:56

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## **STATUTORY AUTHORITY**

North Dakota Century Code Chapter 4-08.

## **AGENCY DESCRIPTION**

The North Dakota State University (NDSU) Extension Service is part of a nationwide, university-based educational system that provides research-based educational programs to citizens in all 53 counties and four American Indian reservations in North Dakota. Programs focus on selected needs and issues affecting the state's agriculture, youth, families, communities and natural resources. The staff is located at state, area and local/county offices. The NDSU Extension Service combines funding from federal, state, county and grant sources to specifically address local concerns.

## **AGENCY MISSION**

The purpose of the NDSU Extension Service is "to create learning partnerships that help youth and adults enhance their lives and communities." This purpose is accomplished through the dissemination of research-based information and the implementation of educational programs geared to the changing needs of North Dakotans. Major program areas include agriculture and natural resources; youth development, family and consumer sciences; and community economic development and leadership.

## **AGENCY PERFORMANCE MEASURES**

Per NDCC 4-05.1-19 the State Board of Agricultural Research and Extension (SBARE) presents a status report to the budget section of the legislative council. SBARE's most recent presentation to the budget section was on June 14, 2006. The report they gave and provided in written form included the status of the North Dakota Agricultural Experiment Station and the NDSU Extension Service. A copy of the information is on file in the legislative council office.

## **MAJOR ACCOMPLISHMENTS**

**\*\*Community, Economic Development and Leadership**

**Horizons Program Affects Public Policy** - Citizens in both Ashley and Ellendale, North Dakota learned through the Horizons Leadership program that their grassroots efforts could change public policy. They understood that by working with their local legislators to pass a bill allowing essential function bonds to be used for moderate priced housing in rural areas, they could make an impact on the housing shortage in their region. Because of their efforts, the bill passed, and 20 North Dakota communities are now building new homes. People are going to work in rural areas doing the building and contract work, and all lumber and materials are being purchased through local North Dakota lumberyards. This project started by local citizens has provided an impact of over \$11.2 million dollars to North Dakota's economy.

**Horizons Program Results in Improved Cell Phone Service** - The Horizons leadership program played a valuable role in assisting the North Dakota Public Service Commission with a campaign to improve cell phone service to North Dakotans. As part of a community visioning session sponsored by the Horizons program in Ellendale, North Dakota, local citizens identified poor local cell phone service as more than an inconvenience, but as an actual barrier to business development and expansion of existing institutions. As a result of citizen comments and work with the North Dakota Public Service Commission, an initiative titled "Zap the Gap" was started in North Dakota to improve cell phone service across the entire state.

**Horizons Assists in Giving Youth a Voice** - Citizens in Beach, North Dakota often discussed their frustration over youth leaving the area for greener pastures elsewhere. The Horizons leadership program in Beach decided to address this issue and provided the vehicle to move youth into the spotlight by encouraging their involvement in community development. Because of the community's efforts to engage youth, the Prairie West Development Foundation for Golden Valley County passed a resolution in August 2005 that created a youth relations committee for the purpose of creating a youth voice on the board for the betterment of Golden Valley County. Four young people joined the board in fall 2005.

Rural Leadership North Dakota (RLND) Program Participants Value Networking Opportunities - RLND participants rated networking as the top response in what they liked best about their program experience. Over the two-year program participants visit eight communities across North Dakota and Washington DC, meet numerous seminar speakers/guests, and interact with RLND alumni and current RLND participants. "RLND brings people together and fosters the attitude of 'we can' by sharing and working together – networking." John Zetocha, Oakes - RLND Alumni, 2005 Class

RLND Participant Skill Levels Increase - RLND Class 2005 participants increased their skill level an average of 40 percent in the stated objectives of the eight RLND seminars. This same group increased their skill level an average of 33 percent in leadership skills during the two-year program.

RLND Participant Projects Impact North Dakota - RLND Class 2005 participants initiated 25 projects and completed 72 percent of these projects by October 2005. RLND projects have positively impacted North Dakota communities and organizations by strengthening tourism, improving housing, strengthening economic development and improving quality of life.

#### \*\*Competitiveness and Profitability of Animal Systems

Beef Cattle Feeding in the Northern Plains - Interest in back grounding and finishing beef cattle in the Northern Plains continue to expand. NDSU Extension Service meets the needs of these producers by holding in-depth training sessions on cattle feeding issues (nutrition, marketing, management and regulatory issues) as well as technical expertise and assistance with expansion, business planning, ration recommendations and nutrient management. Survey data indicates 59 percent of North Dakota feedlots are interested in expansion.

North Dakota Dairy Diagnostic Program - Directed by the NDSU Extension Service dairy specialist and coordinated by ND3P facilitators, dairy families monitor and measure the impact of decisions formulated by their self-selected advisory board. Impact examples: Farm #3 developed a management and nutrition plan that had an annual impact of \$49,550 additional gross income. Farm #4 reorganized labor arrangements over a two-year period to lower costs and improve efficiency. The annual impact was \$71,958 additional gross income. Farm #8 increased net income, after inventory change and depreciation, from \$25,221 to \$436,850 in three years (includes total of three years income).

Dairy Retention and Sustainability - Involved in the newly formed North Dakota Dairy Coalition (NDDC, 2004), a grass-roots organization dedicated to the revitalization our dairy industry, the NDSU Extension Service, the Department of Agriculture, and the Association of Rural Electric Cooperatives provided momentum and support for its evolution. Progressive rural communities understand the significance of livestock growth in their communities, especially the dairy economic multiplier, and have joined the NDDC effort by pre-permitting 13 sites in preparation to welcome new dairy farm families to North Dakota. (A map is available at <http://www.nddairy.com/sites.htm>). Growing requests for information and visitations further attest to increased momentum as other states recognize that North Dakota is serious about its dairy future. Equally notable are comments by prospective dairies with respect to the approach used, not only to appeal to dairy farm families from other states, but our respect for existing dairy producers. In a short time, the NDDC has made significant progress in laying the groundwork for future growth in the North Dakota dairy industry.

#### \*\*Cropping Systems in the 21<sup>st</sup> Century

Cereal Disease Management - Wheat fungicide trials and educational programs conducted by the NDSU Extension Service and Research Extension Centers in 2005 demonstrated that proper selection and timing of an appropriate fungicide resulted in wheat yield increases averaging 10-12 bushels/acre with corresponding increases in test weight and market grade. Economic return from use of the fungicides was between \$30-36/acre in 2005 because of yield and quality improvements achieved. Fungicides were used on an estimated one million acres of wheat in 2005 for an economic return of \$30 - \$36 million.

Crop Diversity and Rotations - Pulse crops and soybean production increases has been a strong research and education program effort in recent years. Rotations including large seeded legumes have become more profitable, plus improved crop pest management including diseases, weeds, insects and increased soil nitrogen fertility. Acreage during the past five years has increased 620 percent for dry peas, 340 percent for lentils, 131 percent for chickpeas and from 2.1 million acres to over 3.5 million acres of soybeans with 2006 acreage expected to go over 4 million.

Weed Management for Enhanced Crop Yields - Weeds are a major threat to profitable crop production, and failure to control weeds and crop volunteers costs growers millions of dollars in lost crop yield and quality. Surveys have shown that wild oats alone can cause a 17 million bushel wheat loss annually. By following NDSU weed control recommendations, an additional 15 million bushels of wheat or \$45 million (before weed control costs) would result. Economic impact of controlling weeds in all cash crops is huge and is a result of effective education and research program efforts.

## **\*\*Farm and Family Economics**

High Input Costs - Managing high input costs has been discussed around the state at crop improvement association meetings, wheat schools, irrigation workshops, advanced crop advisor schools, marketing clubs and lender outlook meetings.

Annie's Project - Annie's Project is a new programming effort that includes a six-session series of farm management meetings for women. Extension specialists and agents have been involved in the series that has been held at select locations in eastern and central North Dakota with plans to expand next year to the balance of the state.

BSE - Beef trade issues and related border closures due to BSE, especially imports from Canada and exports to Japan and other Pacific Rim countries, required considerable programming effort.

Crops Marketing Clubs - Marketing clubs have increased in number to 53 and are being supported with video conference educational programs, a facilitator's conference, and two on-line Commodity Challenge marketing exercises (North Dakota Crops game and North Dakota Cattle Feeders game) to give producers a chance to practice what they have learned.

Building Wealth - The savings rate for Americans continues to be at the lowest rate since the Depression, while use of credit and home equity loans continues to increase. "Living within your means" has become a lost art. Extension educational opportunities such as the "Financial Security in Later Life" and "High School Financial Planning" programs, publications, the "Credit - Using it Wisely" display, and "Marriage and Money" newsletters have been developed to address this issue.

## **\*\*4-H Youth Development**

Archery in the Schools - 4-H youth development is supporting school curriculum with the Archery in the Schools program. More than 20 physical education teachers have been trained to bring the program to their schools. Several Extension agents are working with schools in their communities to extend activities beyond the school day through this outdoor skills program.

Workforce Readiness - Youth who are enrolled in 4-H demonstrate and practice workforce readiness skills. In 2005 for example, 341 youth enhanced public speaking and communication skills in district communication arts events; nearly 2,000 youth demonstrated the ability to carry through on a project by exhibiting 11,561 exhibits at the North Dakota State Fair; and 612 youth practiced decision-making skills in state judging contests.

4-H Program Far-reaching - County Extension staff delivered educational programs to over 42,000 North Dakota youth during the 2005 year. This includes 5,898 youth enrolled in organized community clubs and 1,341 enrolled in 4-H after-school clubs.

## **\*\*Human Development and Family Science**

Children of Divorce - Divorce is a difficult life experience that affects adults and children, often with negative consequences. Children of Divorce is a four-hour educational workshop for parents or caregivers of children who have separated or experienced divorce. The program focuses on the experience of children when divorce occurs, stress and co-parenting. Evaluations of this educational program indicate that participants understand how to help children more, work more cooperatively with ex-spouses and make a greater effort to reduce stress for children after their participation.

Parent Resource Centers - Parent Resource Centers associated with the NDSU Extension Service provide educational programs and resources on parenting and family to regions of the state. A recent study of parent education in North Dakota shows that these centers and the Extension Service are ranked first as the main contact for parenting information in local communities. They were also ranked as the most useful organization in addressing parenting and family issues. These examples highlight the strength and importance of the resources, educational programs and partnerships developed by Extension Parent Resource Centers to benefit children, families and communities.

Dakota Fatherhood Initiative - Three out of four people believe father absence is one of the most significant social problems in America. The NDSU Extension Service, in collaboration with other entities, provides resources and training to strengthen father involvement through the Dakota Fatherhood Initiative. Since 2002, it has hosted four regional conferences and launched many specific activities to support father involvement. Participants have rated the resources and training opportunities to strengthen father involvement very highly and returned to strengthen families in their local communities.

## **\*\*Natural Resources and Environmental Management**

Nutrient Management - The North Dakota nutrient management educational program provides education on manure nutrient utilization. Participatory learning has been shown to provide the greatest impact on farmers' decision making. Therefore, on-farm manure utilization demonstration plots were initiated in North Dakota by NDSU nutrient management specialists and cooperating farmers. Field days were held at four farms across North Dakota that allowed over 120 participants the opportunity to see first-hand how livestock manure can be substituted for commercial fertilizer in crop production systems.

Facility Design, Operation and Maintenance - Two separate series of workshops targeted to technical advisors were held at five locations in North Dakota. The workshops were designed to increase participants' knowledge of livestock siting rules, facility design for animal handling and runoff management, as well as operation and maintenance of a facility after construction. Over 70 participants including Natural Resource Conservation Service employees, 319 watershed coordinators, certified crop advisors and NDSU Extension Service agents reported a high level of satisfaction with the usefulness of information they gained and how it will help them when working with livestock producers.

## **\*\*Nutrition, Food Safety and Health**

Dining with Diabetes: North Dakota Style! - Extension agents partner with local dietitians on this community based nutrition education lesson series for diabetics. Food demonstrations model portion sizes to assist with calorie and carbohydrate control. Changes in knowledge, behavior, attitudes and clinical lab indices are measured over a three-month period. The program has been piloted in Foster, Grand Forks, Walsh, Richland and Cass counties. State partners include the North Dakota Department of Health and the Dakota Medical Foundation.

Agriculture to Health - The health benefits of North Dakota crops are being marketed to consumers through the development of research based educational materials. Flaxseed, dry beans, healthful oils (canola, soybean, flaxseed and sunflowers) and whole grains (wheat, oats, barley, buckwheat) have been featured. State partners include the USDA Agricultural Research Service Human Nutrition Research Center at Grand Forks and commodity groups.

Calcium Education - Over 1,000 children participated in a multi-session calcium education project conducted in 13 North Dakota counties in 2005. Pre/post surveys indicated increased knowledge and improved attitude toward milk and dairy products. About 63 percent of the participants reported drinking three or more glasses of milk per day compared to 46 percent on the pre-test. On the pre-test, 16 percent of the participants reported drinking soda pop every day compared to 8 percent on the post-test. About 92 percent planned to drink more milk in the future, 74 percent planned to eat more cheese and 73 percent planned to drink less soda pop.

Walking Program - About 34 percent of North Dakotans are completely physically inactive outside of work. To help modify this trend, Extension programs are promoting increased physical activity. In the past two years, 1,949 people have participated in the WALKNWND program. Since May 2004, they have walked a total of 682,949,160 steps or about 341,475 miles based on a web-based data collection system.

Eat Your Fruits and Vegetables - The "5 Plus 5" recognition program promotes eating five to nine servings of fruits and vegetables, and getting physical activity on five or more days of the week. In 2005, 18 community coalitions were recognized for developing a multi-faceted plan to improve health through the encouragement of increased physical activity and consumption of fruits and vegetables with the potential to reach 74 percent of the state's population.

Food Safety for Teens - Since 2001, more than 4,000 students across North Dakota have completed a series of "Teens Serving Food Safely" lessons and passed the exam with a score of 80 percent or higher. About 64 percent of participants had been involved in food preparation for the public. In a follow-up survey one month later, 83 percent reported washing their hands more often when preparing food, 53 percent had shared their knowledge about food safety with others, and 40 percent had applied what they learned when preparing food for the public.

## **FUTURE CRITICAL ISSUES**

Adjustments for Costs to Continue include the following:

05-07 EQUIPMENT>\$5,000= \$75,000.

**REQUEST SUMMARY**630 NDSU EXTENSION SERVICE  
Biennium: 2007-2009

Bill#: HB 1020

Date: 12/13/2006

Time: 06:37:56

Description	Expenditures 2003-2005 Biennium	Present Budget 2005-2007	Budget Request Change	Requested Budget 2007-2009 Biennium	Optional Budget Request
<b>BY MAJOR PROGRAM</b>					
COOP EXTENSION SERVICE	34,512,317	38,474,196	-47,310	38,426,886	3,235,800
<b>TOTAL MAJOR PROGRAMS</b>	<b>34,512,317</b>	<b>38,474,196</b>	<b>-47,310</b>	<b>38,426,886</b>	<b>3,235,800</b>
<b>BY LINE ITEM</b>					
NDSU-EXTENSION SERVICE	33,762,098	37,608,499	188,387	37,796,886	3,110,800
SOIL CONSERVATION COMMITTEE	750,219	865,697	-235,697	630,000	125,000
<b>TOTAL LINE ITEMS</b>	<b>34,512,317</b>	<b>38,474,196</b>	<b>-47,310</b>	<b>38,426,886</b>	<b>3,235,800</b>
<b>BY FUNDING SOURCE</b>					
GENERAL FUND	14,085,986	15,452,605	161,931	15,614,536	3,235,800
FEDERAL FUNDS	6,677,210	6,857,327	-256,437	6,600,890	0
SPECIAL FUNDS	13,749,121	16,164,264	47,196	16,211,460	0
<b>TOTAL FUNDING SOURCE</b>	<b>34,512,317</b>	<b>38,474,196</b>	<b>-47,310</b>	<b>38,426,886</b>	<b>3,235,800</b>
<b>TOTAL FTE</b>	<b>270.57</b>	<b>256.86</b>	<b>.00</b>	<b>256.86</b>	<b>15.45</b>

**REQUEST DETAIL**

Date: 12/13/2006

630 NDSU EXTENSION SERVICE

Bill#: HB 1020

Time: 06:37:56

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<b>TOTAL FUNDING SOURCES</b>	<b>34,512,317</b>	<b>38,474,196</b>	<b>-47,310</b>	<b>38,426,886</b>	<b>3,235,800</b>

**CHANGE PACKAGE SUMMARY**

630 NDSU EXTENSION SERVICE

Biennium: 2007-2009

Bill#: HB 1020

Date: 12/13/2006

Time: 06:37:56

Description	FTE	General Fund	Federal Funds	Special Funds	Total Funds
<b>AGENCY BUDGET CHANGES</b>					
Cost To Continue	.00	161,931	-256,437	47,196	-47,310
6 Soil Conservation	.00	0	0	0	0
<b>Agency Total</b>	<b>.00</b>	<b>161,931</b>	<b>-256,437</b>	<b>47,196</b>	<b>-47,310</b>
<b>OPTIONAL REQUEST</b>					
10 OPT 15 PCT INCR	15.45	3,235,800	0	0	3,235,800
<b>Optional Total</b>	<b>15.45</b>	<b>3,235,800</b>	<b>0</b>	<b>0</b>	<b>3,235,800</b>

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**BUDGET CHANGES NARRATIVE**

630 NDSU EXTENSION SERVICE

Date: 12/13/2006

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<b>Change Group:</b> A	<b>Change Type:</b> A	<b>Change No:</b> 6	<b>Priority:</b> 1
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Soil Conservation -

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The Soil Conservation line item originally included only grants that provide technical assistance funds to Soil Conservation Districts. Since then, a portion of the salaries and operating expenses of employees that have joint Extension and Soil Conservation appointments have also been included in this line item. This adjustment is to transfer the salaries and operating budgets to the Extension line item, resulting in the Soil Conservation line item including only the grants.

<b>Change Group:</b> A	<b>Change Type:</b> A	<b>Change No:</b> 100	<b>Priority:</b>
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OMB Bio-products -

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The executive recommendation includes \$300,000 general funds and 1.0 additional FTE to focus on Bio-products.

An engineering faculty position (60% research: 40% Extension) will focus on biomass-based systems that hold great potential for becoming the preferred sources for liquid fuels. Educational information regarding the harvest, collection and transport systems for raw products including crops, crop residues, animal production co-products, by-products from food processing, etc, will be provided to clientele. Consumer education regarding the end use of bio-fuels and other bio-products will also be provided.

An economics faculty position (60% Extension: 40% research) will provide clientele with educational information regarding production costs, logistics and market analysis for bio-based products. Educational efforts addressing efficient processes for supply chain management and efficient processing strategies will also be undertaken.

Bio-products were ranked number 2 on the SBARE priority list.

<b>Change Group:</b> A	<b>Change Type:</b> A	<b>Change No:</b> 101	<b>Priority:</b>
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OMB Operating and Equipment Pool -

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The executive budget includes an increase of \$100,000 general funds for an operating expense and equipment pool for the NDSU Extension Service.

The NDSU Extension Service has a responsibility to serve the entire state. State specialists located at the NDSU campus in Fargo provide program leadership and support to Extension agents and clientele through technology and face-to-face engagement. Technology, travel and other program costs continue to increase. An increase in Extension operating funding is needed to effectively serve the entire state. Equipment funds are needed to address plant diagnostic and other equipment needs.

This operating and equipment pool was ranked number 2 on the SBARE priority list.

<b>Change Group: A</b>	<b>Change Type: A</b>	<b>Change No: 102</b>	<b>Priority:</b>
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OMB Scab -

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The executive budget includes \$50,000 general funds for temporary salaries related to Scab monitoring.

Crop scouts (summer work for students under the guidance of Extension personnel) located throughout the state will aid in identifying development of scab and other pests in various production regions in the state. Disease development will be monitored and compared to predictive crop models. These highly successful forecasting models continue to be improved as additional information is added to the model.

<b>Change Group: O</b>	<b>Change Type: A</b>	<b>Change No: 10</b>	<b>Priority: 10</b>
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OPT 15 PCT INCR -

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An increase of \$8,295,600, or 15 percent over the 2005-07 general fund base, would provide funds to address priorities of the State Board of Agricultural Research and Education and related needs of North Dakota agriculture. The Extension Service is including \$3,235,800 (of the \$8,295,600) in their optional package

SBARE ranked all of the projects for Extension, Main Station, and Branch Stations together since a lot of the projects are joint efforts. Please refer to the ranked projects by reviewing the narrative in all of the agencies.

SBARE Ranking - Extension Service \$3,235,800

#2 ranked: Bio-products  
\$300,000 Total General Fund Increase  
(\$80,000 salary and fringe benefits, .4 new FTE) – Engineering Faculty  
(\$120,000 salary and fringe benefits, .6 new FTE) – Economics Faculty  
(\$100,000 operating funds)

An engineering faculty position (60% research: 40% Extension) will focus on biomass-based systems that hold great potential for becoming the preferred sources for liquid fuels.

Educational information regarding the harvest, collection and transport systems for raw products including crops, crop residues, animal production co-products, by-products from food processing, etc, will be provided to clientele. Consumer education regarding the end use of bio-fuels and other bio-products will also be provided.

An economics faculty position (60% Extension: 40% research) will provide clientele with educational information regarding production costs, logistics and market analysis for bio-based products. Educational efforts addressing efficient processes for supply chain management and efficient processing strategies will also be undertaken.

#2 ranked: Extension Operating and Equipment  
\$100,000 Total General Fund Increase  
(\$100,000 operating funds)

The NDSU Extension Service has a responsibility to serve the entire state. State specialists located at the NDSU campus in Fargo provide program leadership and support to Extension agents and clientele through technology and face-to-face engagement. Technology, travel and other program costs continue to increase. An increase in Extension operating funding is needed to effectively serve the entire state. Equipment funds are needed to address plant diagnostic and other equipment needs.

#3 ranked: Scab  
\$50,000 Total General Fund Increase  
(\$50,000 salaries for students)

Crop scouts (summer work for students under the guidance of Extension personnel) located throughout the state will aid in identifying development of scab and other pests in various production regions in the state. Disease development will be monitored and compared to predictive crop models. These highly successful forecasting models continue to be improved as additional information is added to the model.

#4 ranked: 4-H Youth Development and Leadership  
\$550,000 Total General Fund Increase  
(\$350,000 salary and fringe benefits, 2.0 new 4-H FTE)  
(\$200,000 salary and fringe benefits, 1.0 leadership new FTE)

4-H programs reach more than 40% of North Dakota's youth. In many rural areas, 4-H is the only youth program beyond public schools. In addition to developing technical knowledge, 4-H participants gain life skills. Two state specialist positions are essential to ensure that the 4-H program continues to meet the needs of future generations of North Dakota's youth. One position is in the area of agriculture and natural resources programming for youth. This position will interact with numerous faculty members to prepare curricula for use by Extension field staff and volunteers. The other position will develop new programs to help youth become more involved in their communities, and help adults and youth work together more effectively. Development of programs that help youth find effective, positive ways to contribute to their communities while avoid risky behaviors will also be undertaken.

Effective leaders are vital to the success of communities and a growing economy. At times, agricultural commodity groups, rural towns and local units of government have few people willing to step forth to take on leadership roles needed to champion efforts for the future. Our work indicates that there are people who care deeply about the future of their community of place or community of interest, but they do not believe they have the skills or confidence to lead efforts. Through organized community leadership programs like Rural Leadership North Dakota (RLND) or Horizons, the NDSU Extension Service has demonstrated capacity to prepare emerging agricultural and other rural leaders from throughout the state. These programs help build skills through intensive training seminars, study tours and community projects. The greatest impact comes from participants leading economic and community projects in their own regions. They learn by accomplishing and provide hope for their communities. This request is for the coordinator position. The person in this role will not only oversee the current program, but will work with colleagues and others to develop additional programs to expand local leadership development efforts. This specialist will continue to pursue the support for this program from other private and public sources.

#4 ranked: Waste Management  
\$120,000 Total General Fund Increase  
(\$40,000 salary and fringe benefits, .2 new FTE)

(\$56,000 salary and fringe benefits, .4 new FTE)  
(\$24,000 operating)

An 80% research: 20% Extension faculty member in Agricultural and Bio-systems Engineering will provide educational support to the North Dakota livestock industry regarding waste management. This includes training Extension agents and other agriculture professionals who help producers adopt best-management practices and ensure their operations are in compliance with current regulations. Opportunities to generate revenue from new uses of livestock waste will also be explored.

A 60% research: 40% Extension waste management specialist located at Carrington will work with animal production, feedlot, engineering colleagues and others in developing economical and efficient systems, and providing information to producers and others.

#6 ranked: Swine  
\$150,000 Total General Fund Increase  
(\$120,000 salary and fringe benefits, .6 new FTE)  
(\$ 30,000 operating)

At one point in time, North Dakota produced over 500,000 market hogs per year and had more than 2,000 producers. Presently North Dakota produces 160,000 market hogs and has 450 producers. However, because of its economic impact, interest in increasing swine production in the state has grown recently. Each dollar of return from pigs marketed turns over 3.49 times for feed, labor trucking, veterinary service, utilities, etc. This industry needs technical expertise, management assistance and an unbiased resource that can help the state develop its hog industry. A 60% Extension: 40% research swine specialist is needed to fill this role.

#6 ranked: Agricultural Business Development  
\$420,000 Total General Fund Increase  
(\$320,000 salary and fringe benefits, 2.0 new FTE)  
(\$100,000 operating)

There is great potential in North Dakota for converting commodities and waste streams into higher value products. Prospects for whole new industries in renewable energy and bio-products (such as lubricants, materials, and plastics) are particularly appropriate for our state. With the development of new crops and the co-products of new industries, there is significant potential for enhanced livestock production and processing. This initiative will support developing new technologies and providing intense business assistance to existing and emerging companies and to entrepreneurs. The two positions will work closely with companies and entrepreneurs in the areas of business planning, marketing, financing, development of strategies, etc.

#7 ranked: Livestock Development  
\$192,000 Total General Fund Increase  
(\$160,000 salary and fringe benefits, .8 new FTE)  
(\$32,000 operating)

There are many driving forces that support the need for a livestock industry specialist including the desire of many agricultural producers to grow their existing enterprises and/or diversify their operations, utilization of potential feedstuffs that are presently shipped to other states for their livestock operations, opportunities to enhance production of feedstuffs to service a growing North Dakota industry, use of co-products emerging from the rapidly expanding bio-energy/bio-products enterprises as feedstuffs, and utilization of grazing capacity in range and managed areas. An 80% Extension: 20% research faculty position will focus efforts to help North Dakota livestock industries expand. This will include business planning assistance, working with local units of government on zoning and site issues, assessing the economic potential and provide information that can be used for timely decision-making.

#7 ranked: Horticulture  
\$200,000 Total General Fund Increase  
(\$200,000 salary and fringe benefits, 1.0 new FTE)

The annual economic impact of the horticulture industry in North Dakota is approximately \$471 million. While most of this impact comes through the ornamental and turf sector, interest in commercial horticulture is also growing. Several areas have identified irrigated high value crops (horticulture) as a priority economic development opportunity. This industry involves both agricultural and urban clientele, yet horticulture Extension support is limited in western North Dakota. An Extension horticulturist needs to be established to serve western North Dakota.

#7 ranked: Pest Management  
\$32,000 Total General Fund Increase  
(\$32,000 salary and fringe benefits, .2 new FTE)

This 80% research: 20% Extension area pest management specialist position is critically needed to provide information to area growers affected by crop diseases. The position will be located at the Carrington Research Extension Center (REC). The Carrington REC is located in the center of great crop diversity and is significantly affected by severe outbreaks of many major diseases.

#9 ranked: Multiple Land Use  
\$400,000 Total General Fund Increase  
(\$400,000 salary and fringe benefits, 2.0 new FTE)

This natural resource conservation specialist will work closely with the North Dakota State Soil Conservation Committee, the North Dakota Association of Soil Conservation Districts, local soil conservation districts, research and Extension specialists throughout the state, the Natural Resources Conservation Service and others in developing programs to assist farmers and landowners in using science-based land management principles and to seek economic opportunities for multiple land use.

A wildlife specialist is needed to work with North Dakota and federal wildlife agencies and organizations, as well as research and Extension colleagues to develop programs that address problems and opportunities in multiple land uses such as coexisting wildlife/livestock systems. Objectives will include development of educational programs and information that will help sustain North Dakota ranches and farms while increasing the appreciation for the contribution of agriculture to wildlife and wildlife habitat, as well as to develop science-based information for wildlife management.

#9 ranked: Livestock/Range  
\$138,000 Total General Fund Increase  
(\$126,000 salary and fringe benefits, .3 for each of the 3 new FTE)  
(\$12,000 operating)

Three livestock/range specialists (70% research: 30% Extension) will compare whole systems management of organic, natural, grass-fed and conventional beef production systems as well as the relationship of these systems to the environment. Educational support leading to the potential adoption of these systems will also be provided. This work will also help determine market causes affecting cattle sales. Feedlot research will focus on evaluating co-product use for efficient livestock production. One specialist will focus on animal health issues. The specialists will be located at the Central Grasslands REC near Streeter the Hettinger REC, and the Main Station.

#9 ranked: Parenting  
\$200,000 Total General Fund Increase  
(\$200,000 salary and fringe benefits .45 for each of 5 new FTEs)

In rural and urban North Dakota communities, parents are working multiple jobs, divorcing at high rates, and having difficulty effectively rearing their children. Through a pilot program, the Extension Service has developed parenting resource centers at Bismarck, Dickinson, Fargo and Grand Forks. Each of the centers serves a multi-county region. Collections of materials on effective parenting are providing the basis for programs and can also be used for self-study. The impacts of these centers are significant. This request will allow keeping the existing centers up to date and creating an additional center at Minot.

#11 ranked: Food Industry

\$100,000 Total General Fund Increase

(\$80,000 salary and fringe benefits, .4 new FTE)

(\$20,000 operating)

This 60% research: 40% Extension faculty position will work in the area of enhanced processing of existing and new crops; have expertise in processing/engineering/plant operations; collaborate with colleagues throughout the system to ensure that supply chains as well as processing are optimized; and provide educational support and technical assistance to existing and emerging food industry businesses.

#12 ranked: Sustainable Agriculture

\$126,000 Total General Fund Increase

(\$126,000 salary and fringe benefits, .7 new FTE)

North Dakotans support current production agriculture but also see a need to explore long-term sustainability. The Dickinson REC is exploring new sustainable agricultural opportunities through research and Extension efforts, including coordination of the Professional Development Program sponsored by the USDA Sustainable Agriculture Research and Education Program. These research and Extension programs will help rural North Dakotans develop new sustainable systems to enhance the economic viability of rural areas and to meet their economic, social and environmental needs within a diversified agriculture. Additional support for these efforts is needed, as is a strong program of direct outreach to farmers and ranchers. One 70% Extension: 30% research sustainable agricultural specialist is needed at Dickinson to provide this support and outreach to southwestern North Dakota.

#13 ranked: Web Design and Information Specialists

\$32,800 Total General Fund Increase

(\$32,800 operating)

To effectively utilize the Internet as a source of information for producers and businesses in North Dakota, efficient, user-friendly Web-based information is needed. Continual updates and new training opportunities are needed to carry out this important work. Information design is critical to allow interested individuals to obtain the much needed material that enables their businesses to remain competitive in the global economy.

Unranked: North Dakota State Soil Conservation Committee

\$125,000 Total General Fund Increase (Grant Program)

To effectively meet the technical assistance needs in Soil Conservation Districts, the North Dakota State Soil Conservation Committee requests increased funding in the Soil Conservation District Assistance Program (SCDAP). Environmental demands have increased interest in conservation planning by North Dakota producers. This requires enrolling producers in the right program; planning and designing the conservation practice; and submitting the plan to USDA for approval. Soil Conservation Districts depend on the SCDAP to accomplish this task. These funds would also be used as match for section 319 of the Clean Water Act Non-Point Source Pollution program.