

PLAN OF WORK REPORT OF ACCOMPLISHMENT



**University of Nebraska–Lincoln Extension
Institute of Agriculture and Natural Resources
University of Nebraska-Lincoln**

**Submitted
May 15, 2007**

**Federal Fiscal Years
2000 to 2006**

**Plan of Work Report of Accomplishments
University of Nebraska–Lincoln Extension
FY 2000 to 2006**

INTRODUCTION

- A. PROGRAMS (5 FEDERAL GOAL AREAS)**
- B. STAKEHOLDER INPUT PROCESS**
- C. PROGRAM REVIEW PROCESS**
- D. EVALUATION OF THE SUCCESS OF MULTI AND JOINT ACTIVITIES**
- E. MULTISTATE EXTENSION ACTIVITIES**
- F. INTEGRATED RESEARCH AND EXTENSION ACTIVITIES**

**APPENDIX I – “CONNECTS” A TRI-MONTHLY PUBLICATION OF UNL EXTENSION
IMPACTS**

Plan of Work Report of Accomplishments University of Nebraska–Lincoln Extension

I. INTRODUCTION:

University of Nebraska–Lincoln Extension is a division of the University of Nebraska Institute of Agriculture and Natural Resources. Other divisions include Agricultural Research Division and College of Agricultural Sciences and Natural Resources.

This Annual Report describes UNL Extension program impacts and accomplishments for Extension for fiscal year 2005, as required by the Agricultural Research, Extension, and Education Reform Act of 1998. It includes the elements identified in the USDA document, “Guidelines for Land Grant Institution - Annual Report”. This federal Annual Report is based on the current strategic plan of Institute of Agriculture and Natural Resources and on emerging issues identified through stakeholder input in anticipation of beginning the next revision of the Institute of Agriculture and Natural Resources Strategic Plan. This federal Annual Report is for the University of Nebraska–Lincoln Extension programs only, but was developed in conjunction with University of Nebraska Agricultural Research Division’s Annual Report.

UNL Extension Action Teams guide our work and are represented under the five Goal areas. Nebraska Action Teams include: Building Strong Families; Community and Residential Environment; Community Resource Development; Food Production and Natural Resource Systems; Nutrition, Health and Food Safety; and 4-H and Youth Development.

In fiscal year 2005-2006, the University of Nebraska–Lincoln Extension funding in support of the programs described in this plan totals \$49,644,161 of state, non-tax, and federal source expenditures. Smith Lever Federal Formula Funds (including regular E3bc, special needs, and CSRS retirement) provided \$4,628,490 or 9 percent of this total. However, the reports included in this report represent all funding streams not just federal dollars.

Point of Contact:

All correspondence regarding this plan of work should be directed to:

The Dean and Director
University of Nebraska–Lincoln Extension
P.O. Box 830703
211 Agricultural Hall
Lincoln, NE 68583-0703
Voice: 402-472-2966
FAX: 402-472-5557
E-mail: EDICKEY1@UNL.EDU

Elbert C. Dickey
Dean and Director
University of Nebraska–Lincoln Extension

A. PROGRAMS (5 FEDERAL GOAL AREAS)

Goal 1: To achieve an agricultural production system that is highly competitive in the global economy.

Overview: (includes sections a, b, c & d)

Agricultural production is the foundation Nebraska's economy and is of particular importance to our rural communities. University of Nebraska--Lincoln (UNL) Extension's education program in agriculture is delivered as a part of our Food Production and Natural Resources Systems Action Plan. The Action Plan has three primary program elements; integrated crop management, integrated animal systems management, and natural resources and environmental management. Many of the program efforts under this goal overlap with the efforts of the Goal 4 to achieve greater harmony between agriculture and the environment.

The Integrated Crop Management (ICM) work groups address the need for sustainable and profitable agricultural production systems and concerns about environmental stewardship. ICM provides educational programs for management of soil fertility, soil and water resources, pests and crop production in a way that sustains agricultural profitability and promotes environmental stewardship. The ICM program is supported by the educational program of the Natural Resources and Environmental Management Action Team (NREM) work groups. The educational programs offered to support Nebraska's agricultural producers continue to be wide ranging in the breadth of subject matter to address current needs and issues.

The livestock industry plays a significant role in Nebraska's agricultural economy accounting for nearly 65% of the total agricultural receipts in the state. Livestock production offers producers an important means to add value to their grain and other crops. Nebraska has 23 million acres of rangeland and pastures, not counting the crop residues across the state that are used for livestock. Long-term sustainability requires that animal systems be economically viable, ecologically sound, and socially responsible. UNL Extension's Integrated Animal Systems Management (IASM) work groups' education programs encourage producers to manage their operations as holistic units rather than as a set of independent enterprises. The IASM program is also supported by the NREM team with programming that emphasizes proper manure management and comprehensive nutrient management planning that protects the environment.

Much of the state had below normal precipitation in 2006 and the long term effects of several years of drought continued to impact crop and grassland production. The impact of the drought has been especially critical to surface water irrigation water supplies with most irrigation districts unable to deliver a full water supply and with some irrigators receiving no water. This has been a result of four to six years of drought. We continued to have major educational efforts in the state targeting water management and recovery from the drought concerns. Supreme Court settlements of water litigation between states and new state legislation addressing surface water and ground water conflicts has continued to put new emphasis on irrigation water management. As a result many areas of the state are seeing the implementation of irrigation water restrictions. A number of workshops, web pages, satellite programming, and media releases addressed water management issues from the perspective of the producer while recognizing the economic viability of the rural communities is dependent on agriculture. We continue to provide educational programs to help producers make critical water management decisions.

A decision-support computer program (Water Optimizer) became available in early 2005 to help farmers make better informed cropping choices when irrigation water is limited. The computer tool can help determine whether it would be most profitable to grow different crops, irrigate fewer acres, apply less water to existing crops, or change to dryland production. Nearly 700 users downloaded or purchased the tool in 2005. The demonstrations of the Republican River Basin Irrigation Management Project provided locations for summer field days to highlight irrigation water conservation strategies. Participants in the 2006 field days estimated they would be able to save 2.3 inches of water (an estimated 10 to 15% savings) and that knowledge gained at the tours would be worth an average of about \$18,000 per operation.

UNL Extension has continued to deliver its successful Crop Management and Diagnostic Clinic program. In 2006, 488 agribusiness professionals attended Crop Management and Diagnostic Clinics, representing 64 Nebraska counties and 11 states. These individuals impacted approximately 47% of Nebraska's row crop acres and participants valued the clinics equal to \$6.67/acre, bringing the estimated total value of the program to almost \$42,363,144. UNL Extension also partnered with the Nebraska Soybean Board to present Soybean Management Field Days at four locations in 2006. The field day participants represented about 770,065 acres of cropland farmed or managed. The average value placed on the knowledge gained and/or anticipated changes in practices was \$7.95 per acre with a potential aggregated impact of approximately \$6,122,000.

The Nebraska Ranch Practicum continues to be a UNL Extension in-depth educational program offering hands-on learning that emphasizes a systems approach to livestock and natural resource management, integrating animals, range and economic considerations. The eight days of instruction over an eight month period helps participants better understand the seasonality of animal and plant cycle interactions and to provide participants an opportunity to evaluate the outcome of different management scenarios. Participants include ranch managers, veterinarians, extension educators, graduate students, agricultural lenders, appraisers, teachers, consultants, and agency personnel. Participants in the 2005-2006 Practicum influenced decisions on 204,300 acres of range, hayland, and cropland, 21,900 head of cattle, and 560 people through their ownership, consultation, and educational activity. The total economic impact reported by 18 rancher participants in 2006 was \$204,100 or \$11,338 per ranch with a total of 12,975 cows or an average of \$15.73 per head.

The Integrated Crop Management, Integrated Animal Systems Management, and Natural Resources and Environmental Management work groups continue to deliver a variety of educational programs to support Nebraska's agricultural producers and agribusinesses. This report illustrates just a few of those programs and example impacts. With the current water management issues and financial situation facing agriculture in Nebraska these programs are important to individual producers as well as the state as a whole. The work groups continue to strive to deliver programs that meet the needs of Nebraska agriculture and in a way that allows effective learning. The programs supporting this goal must be ongoing to support the continuing changes in agriculture.

e) Total Expenditures and Full-time Equivalent(FTE):

FFY2006	Federal*	State	Local	Other	Total
Funding:	\$ 1,018,268	\$ 4,884,378	\$ 1,755,691	\$ 3,263,379	\$ 10,921,715
FTE**:					72

* FY2005-2006 Federal Formula Funds (includes Smith-Lever regular E3bc, special needs, CSRS retirement)

** Includes both professional and para-professional funded from all sources

Key Theme - Agricultural Profitability

(refers to Plan of Work Goals 1 & 4, Output Indicators 1 & 2, and Outcome Indicators 1, 2 & 3)

- a) The Northeast Nebraska IPM/Crops Newsletter is a weekly update on pest management and crop production that University of Nebraska-Lincoln Extension creates and mails to 200 recipients and makes available on the Internet. An additional 160 receive notice by e-mail that the newsletter is available on the Internet. Hits for the Northeast Research and Extension Center (NEREC) IPM Web site totaled 70,635 in 2006, with the newsletter site receiving 4,184 hits. The newsletter was started to enhance the use of IPM principles such as economic thresholds and proper identification by increasins awareness of current and potential problems in crop production.
- b) Thirty-four newsletter participants responded to a 2006 survey. Twenty-seven of the recipients indicated that information in the newsletter directly resulted in a positive gain to their farming operation. Of those, 9 gave a specific total dollar amount gained of \$80,650. Reasons given for the gain were: reduced fertilizer rates and reduced irrigation costs, timely weed control recommendations in a drought stress year and less use of insecticides when economic thresholds were not reached. Since the newsletter was started in 1983, a total of \$3,505,596 in specific reported benefits has been documented.
- c) Scope of Impact - State Specific
- d) Funding:
UNL Extension
Federal Formula Funds
CSREES IPM Funds

Key Theme - Agricultural Profitability

(refers to Plan of Work Goals 1, 2 & 4, Output Indicators 1 & 2, and Outcome Indicators 1, 2 & 3)

- a) With one operating ethanol plant and four ethanol plants under construction within 60 miles of McCook, questions about concerning how to store and utilize the plants' co-products, specifically wet distillers grains, dried distillers grains, wet corn gluten feed and dried corn gluten feed - available or soon to be available to local beef producers for use in cattle rations. A program was designed to create awareness, availability and ways to use the co-products as well as assist producers in determining if the products would work for them. An overview of the distilling process, differences in products, sample rations, storage techniques and feeding scenarios were discussed utilizing powerpoint presentations. Future supply possibilities were also presented to the 79 people in attendance, representing impact on over 27,000 animals.
- b) In a post program survey with 36 respondents, 80% reported that they would make management changes, most responded that they would include one or more products in their cattle rations depending on price and availability. Of the 20 percent who would not make changes, all of them indicated that they had a better understanding of the distillers' co-products and how they might fit into their operation. Of those indicating a potential savings created from the information presented, it averaged a value of \$17.25 per head. Producers are looking at variety of methods of storing the products to be able to take advantage of seasonal price differences.
- c) Scope of Impact - State Specific

- d) Funding:
UNL Extension
Federal Formula Funds.

Key Theme - Agricultural Profitability

(refers to Plan of Work Goals 1 & 3, Output Indicators 1 & 2, and Outcome Indicators 1 & 2)

- a) The recently passed Energy Policy Act (EPACT, 2005) mandates that up to 7.5 billion gallons of renewable fuel are to be used by 2012. This act will result in a 2 fold increase of co-product production which will displace substantial amounts of forage, corn grain, and soybean meal in ruminant feeding systems. Although the extent to which feeds such as corn distillers grains plus solubles may be fed to ruminants is known, confusion still exists on how to practically formulate the best diets containing these feeds. In addition, there exists considerable concern on the effects of these feeds on both carcass and milk quality even though a substantial number of scientific studies have demonstrated little, if any, negative effects. Lack of such knowledge poses an important problem, because bioenergy policy and livestock production are highly dependent upon each other. Without this knowledge, the Nation's energy and environmental goals as stated in EPACT may not be met. Nebraska specifically, and the region in general, have tremendous opportunity to take advantage of the synergy that currently exists between grain, ethanol, and ruminant livestock industries. This synergy can help to ensure economic development continues in rural communities of Nebraska. The annual Husker Nutrition Conference was held on October 20, 2006 to serve as an educational experience for beef and dairy nutritional professionals located within the state of Nebraska and the surrounding regions. Thirteen speakers addressed the group and presented information on the nation's energy issues and the relationship to Nebraska corn-ethanol production, impact on the livestock industry, and optimal use of corn milling byproducts in both beef and dairy operations. Factors that influence beef quality were also addressed.
- b) The 2006 conference attracted 132 individuals. Fifty-one respondents to a conference survey influenced a total of 3.6 million cattle and 900 livestock operations. Our estimate for all those in attendance is approximately 6.0 million cattle. The morning program presented general information regarding the nation's energy issues and their relation to corn and ethanol production. Participants received information on how ruminant diets may be balanced to contain corn milling co-products and how these diets may be balanced to maximize animal performance, carcass yield and quality as well as milk production. Participants demonstrated a willingness to increase feeding rates of corn milling co-products. Specifically, 15 participants noted a willingness to increase feeding rates of milling co-products from levels currently being used. Potential impact was estimated using the value of the conference expressed as \$/head of cattle by survey respondents. The mean estimate of increased profitability from the new knowledge was \$7.38/hd; thus a potential estimated net impact of up to \$26.6 million.
- c) Scope of Impact - Multiple States
- d) Funding:
UNL Extension
Federal Formula Funds

Key Theme - Agricultural Profitability

(refers to Plan of Work Goals 1 & 3, Output Indicators 1 & 2, and Outcome Indicators 1 & 2)

- a) Profitable and sustainable beef operations require a holistic view and a holistic approach to managing livestock, forage and natural resources. The Nebraska Ranch Practicum is a “hands-on” learning experience that emphasizes a systems approach to livestock and natural resource management, integrating animals, range and economic considerations. The program aims to help participants make better management decisions, monitor progress towards their goals and demonstrate the value and the need to manage an operation from a holistic perspective. The 2005 Nebraska Ranch Practicum included two days of classroom instruction and six days of “hands-on” field instruction at the University of Nebraska’s Gudmundsen Sandhills Laboratory. Sessions were held over an eight-month period beginning in June of 2005 to help participants better understand the seasonality of animal and plant cycles and to provide participants the opportunity to evaluate the outcome of different management scenarios. A designated practicum cow herd and small plots are used to teach management concepts. This is the seventh practicum offered by the University of Nebraska–Lincoln Extension
- b) The 33 participants in the 2005 Nebraska Ranch Practicum influenced decisions on 204,300 acres of upland range, meadows, seeded hayland and cropland and 21,900 head of cows and yearlings. In addition to those numbers, participants have an impact on an additional 560 people, 669,000 acres and 61,425 head of cattle through consultation and other educational activities. The 18 producers who completed the post-program evaluation estimated that value of the practicum at \$15.73 per head. The average cow herd size per producer was 721 head. The total benefit per producer was \$11,341 per operation. The total reported economic impact of the 2005 Nebraska Ranch Practicum was \$204,100.

When asked how they benefitted from the practicum, 95% reported that the profitability of their operation would improve. All participants reported that the sustainability of their operation would improve and they would be better stewards of their natural resources. All participants also reported that new or improved decision-making skills would help them manage more effectively and that their ability to critically evaluate management alternatives have improved. Participants reported gaining new knowledge in 27 identified areas of livestock, range and financial management. Knowledge gained was greatest in the following areas: wildlife habitat evaluation, supplementing minerals, meadow fertilization, meadow grazing management and using complementary forages. In addition, a pre- and post-test indicated that participants improved their knowledge by 25% in livestock, range and economic management concepts.

Participants also reported the following:

- Before the practicum, 31% of participants reported they almost always monitored the nutrient status of their beef cow. After the practicum 58% reported they would almost always monitor the nutrient status of their beef herd.
- Before the practicum, 19% of participants reported they almost always monitored upland range resources. After the practicum 58% reported they would almost always monitor their upland range resources.
- Before the practicum, 12% of the participants reported they would almost always monitor meadow resources. After the practicum 48% reported they would almost always monitor rangeland resources.
- 97% reported their skills and ability to monitor vegetation and livestock have improved.

When participants were asked if they would make management changes as a result of the practicum, 81% indicated they would. Changes they indicated they would make are as follows:

“I will change the way I evaluate range condition.”
“I will provide less mineral to DDG-supplemented cattle.”
“Implement grazing rotations using SandDRIS, monitor key species of grass.”
“Watch body condition score more closely and change my mineral program.”

- c) Scope of Impact - State Specific
- d) Funding:
 - UNL Extension
 - Federal Formula Funds

Key Theme - Agricultural Profitability

(refers to Plan of Work Goals 1 & 4, Output Indicators 1 & 2, and Outcome Indicators 1, 2 & 3)

- a) University of Nebraska-Lincoln Extension offers a variety of educational clinics, workshops and field days across Nebraska each year that provide critical crop production information. Two examples are the Crop Management and Diagnostic Clinics and Soybean Management Field Days. The clinics included seven programs, mostly offered at the university's Research and Development Center near Mead on topics that included field scouting, disease prevention and treatment, fertilizer and irrigation management, weed identification and more. In 2006 the clinics drew 488 participants from 64 Nebraska counties and 11 other states who influence or manage nearly 6.4 million acres. For Soybean Days, extension teams with the Nebraska Soybean Board, the event's sponsor. The event, held at four sites in the state, helps growers increase their market share in the face of growing demand for their crop. The sessions highlighted research, marketing, promotion, new uses and education. In 2006, these events drew 564 participants who are responsible for about 770,000 cropland acres.
- b) The Crop Management and Diagnostic Clinics reached those responsible for nearly 47 percent of Nebraska's row crop acres. Participants estimated the knowledge they gained from the clinic was worth an average of \$6.67 per acre or a total of \$42.4 million, based on the acreage involved. Participants estimated the value of knowledge gained at Soybean Management Field Days at an average \$7.95 per acre, or a total of nearly \$6.1 million based on the acres involved. One participant said knowledge gained at Soybean Days helps him improve his farming and management strategies.
- c) Scope of Impact - State Specific
- d) Funding:
 - UNL Extension
 - Federal Formula Funds
 - User Fees
 - Nebraska Soybean Board

Key Theme - Agricultural Profitability

(refers to Plan of Work Goals 1 & 3, Output Indicators 1 & 2, and Outcome Indicators 1 & 2)

- a) Tight operating margins mean Nebraska crop and livestock producers must find ways to increase profits in their production and marketing decisions. University of Nebraska-Lincoln Extension's Market Journal, an educational outreach television and Web program, provides timely practical information specifically geared to Nebraska agriculture. The focus is on agricultural business risk

management. Topics include decisions related to crop and livestock production; commodity market analysis and strategies; financial and transition business planning; agricultural policy developments; and weather. Resource personnel include experts from the university's Institute of Agriculture and Natural Resources and topic experts from the private sector. The 30-minute program began on the Web in 2001. It now airs weekly on Nebraska Educational Telecommunications, the Dish Network and is available at <http://marketjournal.unl.edu>. Market Journal reaches an estimated 12,000 Nebraska households weekly out of a total audience of about 20,000 households.

- b) Market Journal is estimated to have an annual value to agriculture of \$26 million based on a conservative estimate of reaching 20,000 households with each gaining \$25 worth of value weekly. During a recent severe drought in western Nebraska, extension experts looked to Market Journal to inform cattle producers on grazing, feeding and weaning tips, which one specialist said helped save some Panhandle herds. The program is an effective way to reach large numbers of people quickly and efficiently with the latest information.
- c) Scope of Impact - Multiple States
- d) Funding:
UNL Extension
Federal Formula Funds

Key Theme - Agricultural Profitability

(refers to Plan of Work Goals 1 & 4, Output Indicators 1 & 2, and Outcome Indicators 1, 2 & 3)

- a) University of Nebraska-Lincoln Extension's "Ten Easy Ways to Boost Profit \$20/acre" program was designed to help farmers identify several practices that have a solid research base, have been demonstrated on farms and are underused in some areas of the state. Many of the practices are relatively inexpensive items, often considered to be "cheap insurance." The premise for the Ten to Twenty program is that the additive effect of cheap insurance can cost at least \$20/acre and eat up much of farm profitability. The Ten to Twenty program was presented by a team of 44 educators, specialists and assistants teaching workshops during the winter of 2005 and 2006. Most of the 372 participants were farmers. Farm size ranged from less than 500 acres to over 5000 acres. Participants received a notebook of 22 practices and timely follow-up reminders about practices learned in the workshop. Each workshop was tailor made for the location, featuring 10 of the most appropriate practices.
- b) Twenty-three workshops were evaluated at their conclusion for immediate feedback. Ninety-one percent of the participants were satisfied or very satisfied with the program with 71% saying they would probably make changes and 20% definitely intending to make changes based on what they learned. Two of the 2005 workshops (Wahoo and Geneva) were surveyed again, one year later to determine actual adoption of practices. The respondents tried 57% of the practices. Most of the practices were considered beneficial and over 75% were valued at least equal to our stated value. Wahoo farmers said the practices they tried were worth \$31.27/acre and the Geneva farmers placed the value at \$49.79/acre. **Applying those reduced production costs to their row crop acres generates \$941,598 more profit for those respondents.** If they are typical of those who attended all of the workshops, the potential benefit is \$12.5 million.
- c) Scope of Impact - State Specific

- d) Funding:
UNL Extension
Federal Formula Funds

Key Theme - Agricultural Profitability and Risk Management

(refers to Plan of Work Goals 1 & 4, Output Indicators 1 & 2, and Outcome Indicators 1, 2 & 3)

- a) The wide variety of forages grown in southern Nebraska can be a valuable resource for a beef enterprise. Understanding and utilizing these forages in a year-round grazing program can be a financial benefit to any beef operation. Forage considerations, however, are just one aspect of a sound beef production system. The seasonal variation in forage quality makes matching the nutritional needs of the beef cow with available resources the most critical aspect of beef-forage integration. A three session, four day Beef-Forage System Short Course was designed and delivered to beef producers in southern Nebraska. The Course included classroom instruction, “hands on” field instruction and field tours. The program provided an insight into livestock production and an understanding of the forages grown in southern Nebraska. The program also took into account economic considerations important in the beef production system.
- b) Participants in the short course learned to effectively use decision support tools to evaluate numerous management and marketing alternatives. The goal was to provide beef producers the tools necessary to formulate the best plan for their individual beef-forage operation. The participants in the 2005-2006 Integrated Beef-Forage System Short Course influenced decisions on 29,940 acres of range, irrigated grass pasture and seeded hayland and cropland and 2,325 head of cows. In addition to those numbers, participants have an impact on an additional 171 people, 18,700 acres and 33,750 head of cattle through consultation and other educational activities. The producers who completed the post-program evaluation estimated that value of the short course at \$34.28 per head. The total benefit per producer was \$11,384 per operation. The total reported economic impact of the 2005-2006 Integrated Beef-Forage System Short Course was \$79,688.

When asked how they benefited from the short course, 100% reported that the profitability of their operation would improve, that the sustainability of their operation would improve and 100% reported they would be a better steward of their natural resources. All of the participants also reported that new or improved decision-making skills would help them manage more effectively and their abilities to critically evaluate management alternatives have improved. Participants reported gaining new knowledge in 18 identified areas of livestock, range and financial management. Knowledge gained was greatest in the following areas: managing irrigated pasture, grazing objective and systems and market outlook and strategies. In addition, a pre- and post-test indicated that participants improved their knowledge by 32% in livestock, range and economic management concepts. The participants also indicated they would probably or definitely make management changes as a result of the short course. The indicated management changes are as follows: “Use corn co-products with low quality feed”. “Will monitor body condition score more closely”. “I will focus more on body condition score and the requirements compared to forage availability”. “I will use more alternative forages”. “I will move my calving back to April”. “We purchased 50 cull cow pregnant cows to calve and split after we learned the value of corn stalk”. “I will look at different source of protein than tubs”.

- c) Scope of Impact - State Specific
- d) Funding:
UNL Extension
Federal Formula Funds
User Fees

Key Theme - Agricultural Profitability and Risk Management

(refers to Plan of Work Goals 1 & 2, Output Indicators 1 & 3, and Outcome Indicators 1 & 2)

- a) Producing hay requires a large investment in time, labor and equipment resources. In addition, storage methods affect nutrient quality and quantity. Rations used for beef cattle can be affected by hay quality. Two ranches were sites for demonstrations in 2004 with an additional farm in 2006 for demonstrating hay storage techniques. Hay was tested using the UNL Feed Testing Lab for data to inform producers of the impact of production and storage practices. Two field tours for hay producers to show how to increase ration value and lower storage losses were held in July of 2006 with 39 participants. Ninety youth participated in youth field days receiving a session on hay production and storage, and an additional 35 producers at beef related seminars were educated on the round bale hay production methods and storage options and data results of sandhills storage for alfalfa and native hay.
- b) Based on education received in the field tours, producers on the tour have now changed their hay production and storage methods to improve their average annual loss and improve their cattle rations. Hay producers' practices changed after education include: using net wrap instead of twine, tarping hay, single row spacing rather than piling bales, placement of bales in a north/south direction and selection of a site for good drainage. Fifty-four percent of hay producers indicated a better profit from the change of practices learned at the educational seminar. After education, producers reported an improvement to 2.9% loss. This indicates an average reported savings of 7.75% from an average 9.7% loss in hay production. In dollar amounts, this percent will average a savings of \$115,357 representing 4,430 acres of alfalfa producing 18,606 tons of alfalfa at \$80 a ton. An additional savings of \$28,179 representing 2,525 acres of native hay producing 4,545 tons of hay at \$80 a ton.
- c) Scope of Impact - State Specific
- d) Funding:
UNL Extension
Federal Formula Funds

Key Theme - Agricultural Profitability and Risk Management

(refers to Plan of Work Goals 1 & 3, Output Indicators 1 & 2, and Outcome Indicators 1 & 2)

- a) Skyrocketing energy costs, increased input costs, Federal budget deficits, fluctuating commodity prices, the continuing drought, shifting population demographics and the 2007 Farm Bill discussions are all issues on the forefront of tomorrow's agriculture. In order to remain profitable, producers must increase their marketing and risk management skills, develop and implement a marketing plan, and gain additional confidence in making marketing and risk management decisions. To help producers prepare for these challenges, University of Nebraska-Lincoln Extension offers regional workshops through Extension's Farmers & Ranchers College. During 2005-2006, the workshops were For Women Only: What Every Woman Needs to Know About the Agricultural Family Business; Good to Great in Agriculture: Vision 2010; Winning the Game/Marketing Stored Grain; Risk Assessed Marketing; Pork Production: The Nebraska Model; and Managing Crop Price Risk: Crop Insurance Tools & Crop Marketing Strategies. Fourteen workshops were presented in 11 Nebraska towns from November through March. More than 700 farmers, ranchers and agricultural industry representatives participated in the 2005-2006 regional workshops. The workshops feature lecture-type instruction of a very interactive nature, case scenarios and problem-solving activities. The workshops centered on marketing and risk management and included the following topics: U.S. economic policy, macro environment 2006-2021, factors determining profitability, managing people by generations, WTO trade

implications, developing farm policy, crop marketing price outlook and strategies, crop insurance tools, basis and carry, understanding new generation grain contracts and developing a marketing and risk management plan.

- b) More than 85 percent of the workshop participants said they probably will or definitely will make changes in their farm/ranch business as a result of participating in these educational sessions. Producers attending this season's workshops manage over 650,000 acres of field crops. Survey results indicate that producers estimated the value of the workshops at \$9.79/acre annually, for a potential impact of over \$6,000,000.

Producers participating in the Managing Crop Price Risk: Crop Insurance Tools & Crop Marketing Strategies workshops held in Weeping Water, Syracuse and Davenport, Nebraska also completed a follow-up survey a month after the training and the crop insurance sign-up deadline. Almost one-half of the workshop participants responded to the survey and indicated a benefit of over \$8,700 per business operation thanks to their participating in this workshop. If they are typical of those who attended the six sessions of this workshop, the potential benefit is \$1.2 million.

- c) Scope of Impact - State Specific
- d) Funding:
 - UNL Extension
 - Federal Formula Funds
 - Nebraska Department of Agriculture

Key Theme - Agricultural Profitability and Risk Management

(refers to Plan of Work Goals 1, 2 & 3, Output Indicators 1 & 3, and Outcome Indicators 1 & 2)

- a) Successful farmers need to know how to market their crops. University of Nebraska-Lincoln Extension's 2006 Winning the Game workshops provide the background on a variety of marketing strategies. The primary objectives of the workshops were to help producers: recognize seasonal price patterns, consider preharvest pricing more grain, re-evaluate their insurance coverage to support forward pricing, estimate their storage costs, and consider completing post harvest marketing earlier in the year. Grain marketing workshops were held at 40 locations across the state in the fall and winter of 2005-6 with Nebraska Soybean Board support. The workshops were sponsored by local banks, insurance agents and grain elevators. Participants were asked to make marketing decisions for a hypothetical farm situation using actual prices for a year in the past. The workshops registered a total of 560 participants. The average size of farm among the farmer participants was 1,000 acres. There was significant representation of producers from several size categories, with about 35% of the farms above 1,000 acres
- b) Nearly 35% of the workshop participants reported they had forward priced less than 20% of their expected corn and soybean production in the past. Eighty nine percent reported they expect to forward price more grain as a result of what they learned at the workshop. The participants expecting to increase their forward contracting as a result of the workshop indicated they plan to increase their forward contracting of corn and soybeans from roughly 30%, on the average, to 55% of their expected production. These changes would have increased the average revenue from corn alone by approximately \$3,500 per farm per year over the period 1981-04 based on 600 acres of irrigated corn. Fewer than 10 percent of the workshop participants indicated the workshop did not convince them to increase their forward pricing; however, they reported they had already been forward pricing an average of 44% of their expected corn production and 49% of their soybeans. Twenty-five percent of the participants indicated they plan to meet with their

insurance agent to consider changes to their crop insurance coverage as a result of what they learned at the workshop. More than 60% of the participants indicated they had their previous crop insurance plans confirmed as a result of attending the workshops.

Over 60% of the participants reported they had stored corn past July 1 and 33% reported they had stored soybeans past July 1 representing over 35% of both crops. Of those that had stored grain beyond July 1 in the past, 42% indicated they would no longer store corn past that date in the future based on what they had learned at the workshop and 50% indicated they would no longer store soybeans past July 1. Historical prices for Nebraska corn suggest more than 10 cents per bushel is sacrificed on the average when storing corn beyond July 1.

c) Scope of Impact - State Specific

d) Funding:
UNL Extension
Federal Formula Funds
Nebraska Soybean Board
Agricultural Businesses

Key Theme - Agricultural Profitability and Risk Management

(refers to Plan of Work Goals 1 & 4, Output Indicators 1 & 2, and Outcome Indicators 1, 2 & 3)

a) Soybean rust is a new major disease worry for growers nationwide. University of Nebraska-Lincoln plant pathologists are studying this threat and providing resources to ensure Nebraska farmers are ready to combat soybean rust if it strikes the state. Plant pathologists created a one-stop soybean rust resource Web site at <http://soybeanrust.unl.edu>. Extension teamed with the Nebraska Soybean Board to offer a toll-free phone line with recorded updates and management information and specialists and extension educators developed publications with specifics farmers can use to prepare. UNL plant pathologists in cooperation with extension educators also had 13 field trials in place across Nebraska in 2005. The demonstrations were ready to examine fungicide application and efficacy of different treatments as well as how planting and maturity dates and soybean varieties would influence the disease if it occurred in Nebraska.

b) This Institute of Agriculture and Natural Resources research and extension effort and close collaboration with the Nebraska Soybean Board has helped growers learn about and prepare for this new disease. Research will provide practical, science-based information growers and companies will use to control rust under Nebraska conditions. UNL Extension will use preliminary results and future field trials to devise an integrated soybean rust management research and education program to support Nebraska growers.

c) Scope of Impact - State Specific

d) Funding:
UNL Extension
Federal Formula Funds
Nebraska Soybean Board

Goal 2: A safe, secure food and fiber system.

Overview: (includes sections a, b, c & d)

Food safety is an on-going concern. As a livestock producing state dependent on income revenue from production there is a continual alert for food safety issues that will impact revenue generation. Bio-terrorism scares enhance the concern for food safety. Additionally issues such as irradiation, chronic wasting disease, bovine spongiform encephalopathy (BSE) or "mad cow disease" and use of food products derived from biotechnology are concerns that consumers have identified. Nebraska Extension education programs continue to focus on food safety for a variety of audiences: consumers, the food industry, retailers, farmers and ranchers, and school lunch food service managers. Examples of program impact include:

Since much of Nebraska's income is based on providing a safe food supply for public consumption. Educational programs targeting food managers of restaurants, schools, nursing homes and deli's are crucial. More than 9,000 food service professionals have taken Serv Safe in Nebraska since the program was introduced in the mid-90's. Over 96% of these individuals have passed successfully the Serv Safe tests. This represents millions of safe meals served on a daily basis.

Food allergies are a worldwide health concern and cause as many as 200 deaths and countless allergic reactions each year in the United States alone. Food companies and regulators worldwide rely on the Nebraska expertise. The NU-developed tests and training are helping the food industry protect allergic consumers and reduce product recalls. Companies that use the tests can be confident that their products contain only the ingredients listed on the label. In 2006, a new University of Nebraska-Lincoln Extension food safety program called "What Food Service Workers Need to Know About Food Allergies" was developed and presented to over 130 workers. Evaluations at the end of presentations indicated participants had increased their food allergy knowledge from an average of 3.1 to 4.53 on a 5-point scale. In November 2005, allergy problems received national attention when a 15 year-old girl with a peanut allergy died after being kissed by her boyfriend who had eaten peanut butter. In January 2006, a change in the national food code requiring the listing of possible food allergens on food packaged in food processing plants or food establishments also received a lot of media attention. Realizing the need to educate clientele about allergy problems, the central Nebraska food safety workgroup developed the program, "What Food Service Workers Need to Know About Food Allergies." The first workshop was given in February of 2006. In addition, evaluations were mailed out to participants (n=36) of three workshops about six months later. Eleven (31 %) were returned and all indicated they had trained their staff on food allergies as a result of the program. Twenty-seven percent indicated they had written a policy on food allergies because of the workshop.

Although 4-H livestock exhibitors learn about the animals they raise and show at fairs, they may not have a good understanding of consumer concerns for meat quality and safety. UNL Extension's Assuring Quality – Livestock Quality Assurance Program for Youth teaches 4-H members more about the responsibilities of raising livestock for food and how their care of the animal influences meat quality and food safety. This program is taught annually to an estimated 6,500 youth. Regular assessments report that 80 percent gain valuable knowledge, changing their attitudes about the responsibilities of raising livestock and implementing quality assurance practices. Parents report that their children better understand the time and knowledge needed for animal care.

e) **Total Expenditures and Full-time Equivalent(FTE):**

FFY2006	Federal*	State	Local	Other	Total
Funding:	\$ 277,709	\$ 1,332,103	\$ 478,825	\$ 890,012	\$ 2,978,650
FTE**:					21

* FY2005-2006 Federal Formula Funds (includes Smith-Lever regular E3bc, special needs, CSRS retirement)
 ** Includes both professional and para-professional funded from all sources

Key Theme - Food Safety

(refers to Plan of Work Goal 1, Output Indicator 1, Outcome Indicators 1, 2 & 3)

a, b) The 2006 Nebraska Food Safety Task Force Conference was held on March 29. The conference was designed to provide timely food safety information to Extension educators (10% of the audience), Environmental Health Specialists (food inspectors), food safety personnel from food industries and trade associations and other professionals involved with food safety.

The conference provided a mechanism for those interested in food safety in Nebraska to interact and develop professional relationships with the common goal of strengthening the safety of the food supply. The National Environmental Health Association provided 6 hours of continuing education credits for food inspectors.

The 84 participants gained knowledge about bioterrorism (35% increase), food safety assessment in meat and poultry plants (33% increase), handwashing (24% increase), Listeria in deli's (34% increase) and the legal aspects of food safety (74% increase). Participants stated that they will use the information in local compliance (inspectors), teaching food safety classes (extension educators), and incorporate information into HHSS (public health personnel).

Examples of comments from participants include:

“Appreciated the presentation on handwashing. Very important as we look at adopting the 2005 Food Code in Nebraska”

“Incorporate bioterrorism in farm safety education activities for teens and adults”

“Will incorporate it (handwashing) into ServSafe classes”

“Enhance activities with State Homeland Security”

"More detailed deli inspections"

A follow up survey indicated that Environmental Health Specialists (food inspectors) used the information from the conference to educate food service operators during inspections and to help them with compliance; used recommendations from handwashing presentation with health care providers and custom exempt processing plants, specifically to promote no bare hand contact of food industry (Note: Nebraska Food Code allows bare hand contact); and provided biosecurity information to food service operators. An Emergency Response coordinator used the information to write part of their county Emergency Response Plan. Extension educators have used the information in the ServSafe workshops, specifically addition of current research into the course.

The Nebraska Food Safety Task Force Conference was funded by a FDA grant to enhance food safety knowledge and cooperative efforts of food safety professionals in Nebraska. Dr. Jerry Jaax, Kansas State University gave two presentations: The Bioterrorist Threat: Why should we be

worried? and Agricultural Bioterrorism: Understanding the potential threats to our agricultural infrastructure and our food supply. His presentations provided a background on bioterrorism and specific information on the threat to agriculture and the food supply. Drs. Larry Iske and Mack Bolyard provided a presentation on Food Safety Assessment in Meat/Poultry Plants. They focused on the implementation of HACCP in processing plants. April Shaw, Regional FDA Officer shared the research associated with the 2005 FDA Food Code recommendations for handwashing. Listeria in Retail and Foodservice Establishment was the presentation topic of Dr. Ann Draughon, University of Tennessee. Her presentation focused on a 4 state research project that they have been conducting with deli meat. Bill Marler and Patti Waller from Marler Clark law firm gave the audience an insight into The Legal Aspects of Food Safety. Their law firm mainly handles legal cases associated with victims of food borne illness. From the evaluations, the participants reported the greatest percent of knowledge increase (74%). This presentation was an eye opener for many not involved in the legal ramifications of a food borne illness.

- c) Scope of Impact- State Specific
- d) Funding:
UNL Extension
Federal Formula Funds

Key Theme - Food Safety

(refers to Plan of Work Goal 1, Output Indicator 1, Outcome Indicators 1, 2 & 3)

- a, b) The food service/hospitality industry is the third largest industry in the state of Nebraska. Educational programs targeting food managers of restaurants, schools, nursing homes and deli's are crucial. University of Nebraska-Lincoln Extension has provided ServSafe® training for food service managers across the state since 1994. During 2006 over 700 managers received training. More than 9,000 food service professionals have taken Serv Safe® in Nebraska since the program was introduced. Over 92% of these individuals have passed successfully the Serv Safe® tests. This represents millions of safe meals served on a daily basis.

ServSafe® course is a certification course developed by the National Restaurant Association and delivered to Nebraska food service managers by the University of Nebraska-Lincoln Extension. ServSafe® course was taught across Nebraska (Beatrice, Columbus, Fremont, Grand Island, Kearney, Norfolk, Omaha, O'Neill, Scottsbluff, and a multi-state course in Sioux City, Iowa). There were 700 participants in these ServSafe® courses. Participants indicated that some of the changes they planned to make as a result of this program were: to monitor temperatures more often, wash hands more often and more thoroughly, get smaller containers for cooling food, cool food properly, make sure employees know food safety rules, and stop wiping hands on apron. Evaluations indicate that each participant serves an average of 90 people daily.

- c) Scope of Impact- State Specific
- d) Funding:
UNL Extension
Federal Formula Funds

Key Theme - Food Safety - Consumers

(refers to Plan of Work Goal 1, Outcome Indicator 1)

- a, b)** An educational display with a survey on refrigerator food safety was developed in 2006 for use at the 2006 Husker Harvest Days. Approximately 800 completed the survey and received educational material and a refrigerator thermometer.

Our work group received funding for Food Safety for Meals-on-Wheels. The project involves a research component and an educational component. The research component required the Extension Educators who recruited and collected the data to receive the IRB training before beginning the project. The research component consisted of an observation form to be filled out by the Extension Educator, placement of a temperature data tracker in the refrigerator of the participant and a follow up survey completed by the participant. The research component resulted in 81 meals on wheels participants from 10 counties. Data trackers were used to obtain the refrigerator temperatures of participants. An average refrigerator temperature was 41.3^o F. Data is being compiled and used to develop an educational program targeted meals on wheels personnel and volunteer delivery people.

- c)** Scope of Impact- State Specific

- d)** Funding:
UNL Extension
Federal Formula Funds

Goal 3: A Healthy Well-Nourished Population

Overview: (includes sections a, b, c & d)

Helping Nebraskans make informed healthy lifestyle choices leading to an improved quality of life is the focus of Nebraska Extension educational programs. What follows illustrate Nebraska’s educational efforts to help consumers achieve more healthy lifestyles.

Some of Nebraska’s most needy participate in Nutrition Education Programs (NEP) led by UNL Extension. Temporary Assistance to Needy Families (TANF) and Employment First Programs (welfare to work) of the Department of Nebraska Health and Human Services look to NEP to help insure that their clients know how to eat a healthy, well nourished diet, even if limited dollars are available for food. The belief is that individuals are less likely to be ill if they are eating a healthy diet. A research study which included Nebraska families, shows that \$8.00 health care dollars are potentially saved for each dollar put into the Nutrition Education Program. NEP is composed of two educational efforts: Expanded Food and Nutrition Education Programs (EFNEP) and Food Stamp Nutrition Education Program (FSNEP).

The Nebraska Behavioral Risk Factor Report shows 58 percent of Nebraska adults are obese and 29 percent don’t participate in physical activity during their leisure time. University of Nebraska-Lincoln Extension partnered with Cornhusker State Games (Nebraska Sports Council), Nebraska Health and Human Services System, and Tiger Coaching to offer N-Lighten Nebraska, a team wellness program, from February through May, 2006.

Note: There are no reports for goals 4, 5, and 6 of the Nebraska Plan of Work due to a change in program emphasis.

e) Total Expenditures and Full-time Equivalent(FTE):

FFY2006	Federal*	State	Local	Other	Total
Funding:	\$ 416,564	\$ 1,998,155	\$ 718,237	\$ 1,335,019	\$ 4,467,974
FTE**:					31

* FY2005-2006 Federal Formula Funds (includes Smith-Lever regular E3bc, special needs, CSRS retirement)

** Includes both professional and para-professional funded from all sources

Key Theme - Human Health

(refers to Plan of Work Goal 2, Output Indicator 1, Outcome Indicator 1)

a, b) From October 1, 2005 through September 30, 2006 Nebraska’s Food Stamp Nutrition Education Program (FSNEP) served a total of 3,283 families, 10,459 youth and 885 seniors. Of 10,459 FSNEP youth participants, there was improvement from 26% to 86% of the youth who said they met milk intake recommendations “most of the time” or “almost always.” There were 275 graduates of the Senior NEP program who significantly improved in eating more breads/cereals, eating more whole grains, selecting more fruits and vegetables, and eating dairy foods according to MyPyramid recommendations. In the general adult FSNEP program, 1074 graduates reported these outcomes: 71% improved at least one food resource management skill, 81% improved in one or more nutrition practices and 52% improved in one or more food safety practices.

General nutrition education programs for extension audiences reached a total of 3729 adults and 3850 youth. A variety of Nebraska audiences were reached at health fairs, as participants in ABCs for Good Health programs which include walking programs and nutrition classes, in general community nutrition lessons, and at health conferences. An on-line nutrition website provided Power Point presentations related to MyPyramid and was downloaded 12,034 times in a five month period. Specific examples of some of the program activities follow:

- University of Nebraska-Lincoln Extension partners with Nebraska Health and Human Services System to deliver “ABCs for Good Health” to Every Woman Matters (EWM) clientele. These clientele are female, ages 40-64, and are uninsured or underinsured. The clients participate in two to four sessions with four different lessons being taught which include a protocol for a walking program as well as nutrition education activities. A total of 326 women participated in the ABCs For Good Health classes from July 2005 through June 2006 with 163 ABCs class sessions being taught. Those participants were 81% white, 7% black, and 11% Hispanic. Of those participants who completed the classes, 74% reported they had reached their eating and physical activity goals all or most of the time.

General community nutrition education lessons were focused on improving chronic disease conditions such as diabetes, offering worksite wellness classes, providing nutrition and wellness education sessions in schools, helping children and youth with snacking choices, and improving the nutritional well-being of senior adults. Examples of general nutrition education programs include:

- Improving the Health of Baby Boomers” classes in Omaha reached 280 adults over age 50 who participated in nutrition and food safety education and/or enrolled in a walking program. Changes made included: eat more fruits and vegetables, add more whole heat flour, increase the variety of food I prepare, and add soy products when I cook.
 - In “Living with Diabetes” and “Control Diabetes for Life” classes in northeast Nebraska, 481 participants have gained information about diabetes control. Post-then-pre testing in the Living with Diabetes classes showed that the most significant changes recorded by the attendees were: eating four or more servings of vegetables and fruits each day; limiting sugar, salt and fat in their diets; and understanding that 15 grams of carbohydrate equals one carbohydrate exchange in the diabetic management plan. “Control Diabetes for Life” classes were offered in sixteen locations via two-way interactive distance education and is being offered statewide in 2007.
 - Nutrition education programs offered in school settings reached 1268 children and youth. “Wise Food Decisions” was taught to 51 3rd grade students who were able to report improved fruit and vegetable and making wise food choices in fast food restaurants as a result of the program. “Today’s Nutrition for Today’s Teens” reached 120 middle school youth and resulted in significant improvement in selecting nutritious snacks, making wise choices a the grocery store, and reading food labels.
 - Specific programs to reach Hispanic audiences were planned in some communities. A total of 175 adults attended these programs with approximately 25% of the audience being Hispanic. In one program 13 of 15 individuals showed improvement in one or more nutrition practices such as reading nutrition labels, storing food properly, and making a healthy food choice.
- 120 participants attended a conference hosted by University of Nebraska-Lincoln Extension and gained knowledge related to creating healthy eating environments. Participants had the opportunity to learn from nationally known speakers on topics related to intuitive eating, healthy policy and school health programming.

- 350 people participated in a walking program to increase their walking steps. Seventy-five percent of participants met or exceeded their walking goal. Participants reported increased stamina, weight loss, better attitude and overall feeling of improved health.
- University of Nebraska-Lincoln Extension partnered again with Nebraska Sports Council, Nebraska Health and Human Services System, and Tiger Coaching to offer N-Lighten Nebraska, a team wellness program, from February 1 to May 1, 2006. Statewide, there were 7,968 participants and a total of 1,145 teams. Seventy-nine percent of the weight loss teams reported some progress in weight loss and 77% of teams reported progress in accumulated activity. Approximately 135 extension staff who participated in 2006 increased their daily walking by 4300 steps (approximately 1 2/3 mile).

c) Scope of Impact - State Specific

d) Funding:

UNL Extension

Federal Formula Funds

Key Theme - Human Health

(refers to Plan of Work Goal 2, Output Indicator 1, Outcome Indicator 1)

- a) The Nebraska 4-H Be Smart Don't Start - Be Tobacco Free program has reached over 2,800 people with tobacco health related information. Five separate day camp experiences reached a wide range of elementary and middle-school children from across the state. In addition, six interactive informational booths at large 4-H events reached a very diverse population of fair goers and exhibitors. Information and training was also given to older teens so they would be able to spread the tobacco-free message to their communities throughout the coming school year.

Visual aids, informational handouts, and promotional Frisbees were used to facilitate the learning process. Every resource available was used to increase the experience for the participants. In addition, having a presenter devoted solely to tobacco education made the program even more of a success.

Miss Nebraska's Tobacco Free Tour reached over 10,000 youth in all of Nebraska's 93 counties. A partnership with Nebraska 4-H, Tobacco Free Nebraska and Milford Jr./Sr. High School resulted in presentations developed by Milford 8th and 9th grade students. These students used their skills and materials they developed to reach 150 5-6th graders with the tobacco free message.

- b) At the Dead Timber State Park over 100 youth participated in four separate 45 minute presentations which included topics related to consequences of tobacco use on your lungs, ways to say "No", and how tobacco advertising targets youth. The campers learned about the dangers of tobacco in a relaxed setting outside on a picnic table. The informal surroundings made personal interaction with the kids easy and the learning process even more enjoyable.

The campers at the 2006 Big Red Summer Academic and Unicameral Youth camps had the opportunity to participate in a hands-on 45 minute presentation as a part of a session rotation. The 13-18 year-old campers represented a wide range of students from five states.

Camper comments: "I'm glad I don't smoke so I can breath" - after running in laser tag

Other camps consisted of four 45 minute presentations with 12 to 16 campers and three junior leaders per group. The presentation started with a quick lesson on tobacco and then moved to hands-on application of what the kids just learned and ended with a question and answer session.

Based on student responses to questions, the tobacco facts taught were being internalized by the participants.

A booth was set up in the main arena of the State 4-H Horse Show where the parents and the 4-H'ers came to watch the show and finals. This was a great opportunity to target this particularly high risk population. A number of adults that chewed tobacco stopped at the booth to look at the Mr. Gross mouth. Many smokers stopped with their kids to show them how bad smoking is. It was surprising that even smoking parents realized the danger of smoking and didn't want their children to start.

c) Scope of Impact - State Specific

d) Funding:

UNL Extension

Federal Formula Funds

Key Theme - Farm Safety

(refers to Plan of Work Goal 3, Output Indicator 4, Outcome Indicator 3)

- a) Farm safety day camps continue to be the most wide-spread method of teaching farm safety issues to youth. In 2006, 21 such camps were planned in conjunction with the Progressive Agriculture Foundation Safety Day program. These camps reached 3176 youth and involved nearly 1000 volunteers. Three Nebraska sites were recognized as 10-year camps with the program.
- b) Following an upsurge in ATV fatalities and injuries in the last 5 years, training with ATV's and no riders for younger children has been an emphasis at many camps. In addition to camp surveys that indicate improvements in knowledge and retention of knowledge over 18-24 months, documented evidence has shown that youth have used what they learned at camps in unsafe situations. National, state and local organizations have recommended farm safety camps for children in their areas as an effective method of teaching farm and rural safety.

A chapter in the Progressive Agriculture safety day manual was written to include healthy lifestyles (nutrition and physical activity) in the safety day programs. UNL Extension took the lead in writing and collecting activities for the chapter.

A national focus of "Youth and Tractor Safety" will be featured in FY07, with a slogan of "Bury the Tradition", referring to the tradition of allowing youngsters to ride on tractors.

The poster "252 Reasons Nebraska Holds Farm Safety Day Camps" has been used throughout the year at programs, health fairs, expo's, and day camps. Displays are housed in Minden, Ord, Western, and Scottsbluff. In-depth classes in Hunter Education and ATV Safety have been held for teens, with high rates of certification. Farm Safety Booths were set up at Husker Harvest Days with activities for youth and adults.

c) Scope of Impact - State Specific

d) Funding:

UNL Extension

Federal Formula Funds

Goal 4: To achieve greater harmony (balance) between agriculture and the environment.

Overview: (includes sections a, b, c & d)

Nebraska's natural resources are critical to sustaining the state's population and economy. Abundant natural resources provide for agricultural production that is directly responsible for a majority of the state's economic activity. Approximately 50 percent of the state's land is pasture or rangeland, and nearly 40% is crop land. Agriculture's economic strength is due in part to irrigation, which accounts for over 50 percent of crop production. Responsible management of surface water and ground water resources is required to sustain the irrigated crop production base. The land and water resources of Nebraska also support a myriad of biological resources. Wildlife habitat provides for hunting, fishing, and other forms of outdoor recreation. Stewardship of Nebraska's natural resources is vital for a sustainable future and high quality of life. Nebraskans continue to expect improved management of our natural resources.

One part of UNL Extension's educational effort targets youth. Each year we participate in approximately 15 to 20 water/environment festivals, many of which target 4th and 5th grade students. Festivals using pre-, post-test evaluations report that test scores increase 40 to 50 percent after participation. The wildlife habitat evaluation program has helped youth learn about wildlife management and develop life skills such as decision making, teamwork, and written and oral communication.

With over 8 million acres of irrigation in Nebraska irrigation management education is important to conserve limited water supplies and protect water quality. The drought conditions of 2005 and previous years continued into 2006 putting extreme pressures on water supplies and increased production costs because of the increased costs of pumping irrigation water. University of Nebraska–Lincoln Extension cooperates with Kansas State University and Colorado State University to deliver the annual Central Plains Irrigation Short Course. Nebraska extension irrigation specialists delivered educational programming to help producers address drought and irrigation water management issues. Training materials developed by UNL Extension are used by Natural Resources Districts to train and certify producers on nitrogen and irrigation management in ground water management areas across the state. UNL Extension is involved with many communities in their well head protection plans and provides education for agricultural producers in well head protection areas particularly targeting irrigation and nitrogen management.

Conservation buffers installed in riparian zones protect surface water quality. UNL Extension is cooperating with Natural Resource Districts and Natural Resources Conservation Service to encourage the installation of buffer strips. An extension and research effort is demonstrating the use of woody ornamentals in the buffer strips. The ornamentals can help protect water quality along with producing income.

Livestock manure management is a critical environmental issues. Several program efforts are helping producers effectively use the nutrients in their crop production enterprises. A comprehensive nutrient management plan curriculum was developed and is being using to train agriculture professionals and producers. Recommendations for manure nutrient availability were developed cooperatively with seven manure testing laboratories. Four of the five labs doing the most manure samples for Nebraska have now implemented the recommended interpretations.

Natural resources and environment programming will continue be a high priority for UNL Extension. The programming will be provided by Natural Resources and Environment, Integrated Crop Management, Integrated Animal Systems Management, and Community and Residential Environment Action work groups. One of the challenges the work groups have is the documentation of impact. The work groups are able to demonstrate outputs, but have more difficulty identifying outcomes and impacts. The impacts for these programs often require long-term documentation. The following program descriptions are a small sample of program efforts having an impact in Nebraska.

e) **Total Expenditures and Full-time Equivalents(FTE):**

FFY2006	Federal*	State	Local	Other	Total
Funding:	\$ 694,274	\$ 3,330,258	\$ 1,197,062	\$ 2,225,031	\$ 7,446,624
FTE**:					52

* FY2005-2006 Federal Formula Funds (includes Smith-Lever regular E3bc, special needs, CSRS retirement)

** Includes both professional and para-professional funded from all sources

Key Theme - Agricultural Waste Management

(Refers to Plan of Work Goal 1, Output Indicator 2, and Outcome Indicator 2)

- a) Revisions to Nebraska Department of Environmental Quality (NDEQ) Title 124 “Rules and Regulations For The Design, Operation and Maintenance Of On-site Wastewater Treatment Systems” require every active onsite wastewater treatment job site to have a certified professional present at the location. This is a significant change from historical procedures, in which anyone could install, repair, and/or pump an onsite wastewater treatment system. Professionals must now demonstrate competency to become certified by passing certification exams administered by NDEQ. Historically, no demonstration of competency was required. This created an environment in which individuals lacking an adequate understanding of onsite wastewater treatment could work; sometimes resulting in decisions being made and actions being taken that put the environment and human health at risk.

University of Nebraska-Lincoln Extension developed Nebraska-specific, science-based curriculum for Nebraska onsite wastewater certification categories. Curriculum covered Title 124 “Rules and Regulations For The Design, Operation and Maintenance Of On-site Wastewater Treatment Systems” as well as the reasons for and the science behind the regulations. A Practitioner’s Manual was developed for each certification category. In a partnership effort, UNL Extension worked closely with NDEQ to ensure that the curriculum covered concepts important to onsite wastewater advancement in Nebraska. Certification training classes were delivered across the state during the second half of 2005, and early 2006. Pumper, Installer/Soil Evaluator, and Inspector classes were held in Scottsbluff, North Platte, Grand Island, Mead, Norfolk, Lincoln, and Kearney in 2005. Individuals attended day-long training as follows: pumper class - 124 individuals, installer/soil evaluation class - 392 individuals, and inspector class - 113 individuals. Installer classes were held in Omaha and Lincoln in early 2006. Seventy-nine individuals attended.

- b) Long-term outcomes were measured through a follow-up evaluation survey of 2005 and early 2006 certification training classes. Surveys were sent to all class participants several months after attending. Lag time depended on which class was attended, and ranged from 10 months (Scottsbluff) to 5 months (Kearney) after 2005 classes were offered. Omaha and Lincoln 2006 attendees received evaluation surveys 6 and 7 months after attending training, respectively. Follow-up evaluations indicated long-term outcomes of behavior change resulting in environmental and human health risk reduction had occurred. Individuals evaluating classes "agreed" or "strongly agreed" with survey questions as follows:

The Practitioner’s Manual has been useful (2005 and 2006 data)

- 95 percent - pumper class participants
- 99 percent - installer/soil evaluator class participants
- 100 percent - inspector class participants

As a result of training, I changed the way I pump and dispose of septage - 76 percent - pumper class participants (only 2005 training had pumper classes). The changes most often listed included: dumping in city treatment facility, completing required record-keeping, and better land application methods when this option was used.

As a result of training, I changed the way I install systems - 70 percent - installer/soil evaluator class participants (includes 2005 and 2006 data). The changes most often listed included: designing and sizing systems better; paying more attention to, and adjusting for the water table; doing perc tests and using test results in design; and installing legal systems (“to meet code and guideline requirements”)

As a result of training, I changed the way I inspect systems - 89 percent - inspector class participants (only 2005 training had inspector classes). Changes most often listed included: checking for whirlpools and writing (wording) inspection reports. Research/science indicates that behavior changes reported by participants will result in protection of the environment and human health.

- c) Scope of Impact - State Specific
- d) Funding:
 - UNL Extension
 - Federal Formula Funding
 - Nebraska Department of Environmental Quality
 - User Fees

Key Theme - Energy Conservation

(Refers to Plan of Work Goal 1, Output Indicator 2, and Outcome Indicator 2)

- a) Rising energy prices and changes in water use regulations across Nebraska placed producers in a strategic disadvantage when preparing for the 2006 growing season. Projections suggested that energy cost for pumping irrigation water could increase by 20-30 percent compared to 2005. At the same time producers in western Nebraska faced water availability problems because of water use restrictions imposed by their local Natural Resources District or low water levels in the surface water reservoirs.

University of Nebraska-Lincoln Extension sponsored four educational meetings in the winter of 2005-2006 at York, O’Neill, Holdrege, and Scottsbluff to provide producers with information on how to determine if excess energy was being used to pump irrigation water, how to manage irrigation systems to conserve water and energy, and how to evaluate crop selection choices. Specific topics covered at the workshops included how to estimate irrigation energy costs, recommendations on use of soil water sensors and ETgages to schedule irrigations, sprinkler package selection, furrow irrigation management, and how to use the Water Optimizer spreadsheet to make cropping decisions for 2006.

- b) Overall, the meetings were attended by 97 participants representing approximately 207,000 acres of irrigated land. Post-program surveys indicated that attendees placed an average value of the meeting at \$11.53 per acre for a minimum savings of \$2.38 million per year. In addition, respondents indicated that irrigation management tools and equipment discussions would help them conserve an average of 1.5 acre-inches of water per year. Seventy-five percent of attendees indicated that the topics covered answered most if not all of their questions and 70 percent indicated they probably or definitely would make changes in their management practices as a result of the meeting. One of the producers said "You saved me \$4,000 because I was going to change my nozzle package, but now I won't!"

c) Scope of Impact - State Specific

d) Funding:
UNL Extension
Federal Formula Funds

Key Theme - Integrated Pest Management

(Refers to Plan of Work Goal 4, Output Indicator 2, and Outcome Indicators 1 & 2)

a) Pest Management Professionals (PMPs) who provide pest control services need continuing education to perform their jobs efficiently, to protect the environment and public health. They also need training to meet federal and state pesticide certification and licensing requirements. University of Nebraska-Lincoln Extension offers the Nebraska Urban Pest Management Conference annually to meet this training need. The conference gives PMPs the opportunity to certify/recertify and obtain necessary licenses. The 14th Nebraska Urban Pest Management annual conference was held on Jan. 26-27, 2006 in Lincoln. It was designed for those who are involved in structural pest management, wood-destroying insects, wildlife damage management, public health pest management, grain fumigation, the food processing industry, sanitation and other related areas. The 2006 conference featured 34 speakers and 57 topics covering pest control in structures, grain fumigation and public health. These topics covered pest identification, pest biology, damage identification, decision-making process, pesticide label interpretations, and laws/regulations for pesticide storage, transportation and calibration. Two laboratory hands-on sessions included identification of occasional invaders, stored and pantry pests. This conference drew 185 pest management professionals, dealers, exhibitors and educators from 13 states including Nebraska. Attendees represented 78 pest management companies, 98% of the companies were based in Nebraska. Attendance was comprised of 63% pest control professionals, 23% public health professionals, 7% public school pest control professionals and 7% extension educators.

b) Approximately 62% of the conference attendees completed a follow-up survey and responded as follows:

- Overall, 95% of the attendees were using knowledge gained at the conference.
- 99% said the conference had positive impact on their business practices.
- 79% gained more knowledge on pesticide regulations.
- 94% acquired essential information on pests.
- 61% have become familiar with non-chemical methods.
- 75% improved their work efficiency.
- 70% follow pesticide safety practices.
- 75% appreciate the IPM practices.
- 51% improved their pesticide use practices.
- 56% felt confident to meet certification standards.
- 42% had increased their revenue.

c) Scope of Impact - Multiple States

d) Funding:
UNL Extension
Federal Formula Funds
CSREES IPM Funds
User Fees

Key Theme - Natural Resource Management

(Refers to Plan of Work Goals 2 & 4, Output Indicator 2, and Outcome Indicators 1 & 2)

- a) Record fuel prices and water restrictions have Nebraska farmers searching for strategies to maximize benefits from available irrigation water. To help them succeed, ten University of Nebraska-Lincoln Extension field demonstrations, with seven field tours at the sites, were conducted around the state to teach irrigation options specifically adapted for Nebraska crops, soils, and irrigation issues. The primary goal of the program is to demonstrate research-based irrigation management strategies in farmer fields and provide a hands-on practical teaching environment for farmers and consultants to learn how to implement these practices. A key objective is to make irrigation scheduling and management as easy as keeping fuel in the tank using the fuel gauge. Other water saving techniques like no-till farming and irrigation level vs. nitrogen level interactions were part of the program, as well.

Seven of the ten irrigation demonstration sites were in farmer fields in 2006, and three were on the Nebraska College of Technical Agriculture (NCTA) farm. The plot locations included three at Curtis, two at Ainsworth, and one each at Arapahoe, Benkelman, Madrid, Axtell, and Holdrege. Four sites had line source sprinkler systems installed to demonstrate irrigation strategies for corn, soybeans, and grain sorghum. Three sites had soil moisture monitoring equipment installed to track the soil moisture and allow the producers and crop consultants to work with the equipment. Two furrow sites (one corn and one soybeans) demonstrated different irrigation application amounts, and one site demonstrated the relationship between varying amounts of irrigation water and nitrogen. The data generated from the sites will also be used for Extension programs in the future. Seven field tours were conducted from mid August through early September. This work was partly supported by the Bureau of Reclamation.

- b) Following each of the field tours, participants were asked to complete a post-meeting survey. About 185 people attended the tours (70 percent were estimated to be farmers) and 95 returned surveys. The results show:

- * 98% learned new information relating to management strategies to conserve irrigation water.
- * 94% think the knowledge they gained will help them save irrigation water.
- * The average irrigation water the farmers think they can save is 2.3 inches/acre.
- * \$15.78 per acre was the average reported value of the knowledge the producers gained.
- * 97% of the farmers plan to improve their management based on the knowledge and/skills learned.

The farmers participating manage an average of 1,173 acres of cropland. The average reported value of the knowledge gained by the producers completing the survey was \$18,513 per operation. If this average was extended to all of the 130 producers attending, the value of the education gained would be more than \$2.4 million per year. The reported potential water savings of 2.3 in/acre by the farmers would be a 15-20 percent savings from the typical irrigation water usage and would be more than 29,200 acre-feet/year.

- c) Scope of Impact - State Specific

- d) Funding:
UNL Extension
Federal Formula Funds
U. S. Bureau of Reclamation

Key Theme - Natural Resource Management

(Refers to Plan of Work Goals 2 & 4, Output Indicator 2, and Outcome Indicators 1 & 2)

- a) The 2006 Conservation Security Partnership (CSP) was implemented to inform and educate crop and livestock producers about the eligibility and application requirements for the 2006 CSP sign up. The Natural Resources Conservation Service (NRCS) funded a grant to UNL Extension to conduct educational meetings to achieve this goal. The 2006 CSP sign-up was announced for the Upper Little Blue and Middle Republican watersheds in Nebraska. The CSP program pays farmers and ranches for high levels of natural resource conservation and management in their crop production and grazing systems.

At public information meetings participants (crop and livestock producers and landowners/landlords) were taught using a lecture style and Q&A. Topics included the CSP eligibility requirements, the enrollment levels (tiers), the enhancement payments concept, self-assessment process, the water quality documentation process, and the application process they needed to follow. Over 960 people attended information meetings in the Little Blue Watershed and another 210 attended in the Middle Republican watershed. In addition to these meetings, many extension educators conducted numerous one-on-one help sessions to teach producers about the program eligibility requirements and the self-assessment process.

- b) The CSP Partnership information and education efforts had a large impact on getting farmers in Nebraska to apply for this program. Knowledge and information gained was used to complete accurate and timely applications to enroll qualified acres of their agricultural operations. In 2006 Nebraska was awarded contracts only in the Upper Little Blue Watershed. Nebraska ranked fourth nationally in number of contracts signed at 348, and ranked first in value of contracts at \$5,000,000. The CSP Partnership assisted in bringing significant financial resources to qualified producers, making a lasting 5-10 year impact to on-farm income. Total for Nebraska income over the 10-year program is estimated at \$40,000,000.
- c) Scope of Impact - State Specific
- d) Funding:
 - UNL Extension
 - Federal Formula Funds
 - Natural Resources Conservation Service

Key Theme - Natural Resources Management

(Refers to Plan of Work Goal 4, Output Indicator 2, and Outcome Indicators 1 & 2)

- a) The Nebraska Master Gardener program has been part of University of Nebraska-Lincoln Extension since 1976. Its original purpose was to help extension educators answer numerous horticultural questions received during the growing season. The program has expanded to encourage volunteers to help with other horticulture-related projects at UNL and in their local communities. Master Gardener projects encourage consumers to properly select plant material and use management techniques to reduce water waste, improve and/or reduce pesticide applications and conserve Nebraska's natural resources, along with traditional garden craft questions. During the first year of participation, Nebraska Master Gardeners receive 40 hours of research-based horticultural training from UNL Extension. The initial training topics include plant selection (tree, shrub, flower, turfgrass, vegetable), landscape management, and wildlife and pest (insects, diseases, weeds) management. First-year participants give back 40 hours of volunteer service. After the initial year of training, volunteers are required to attend 10 hours of continuing education and volunteer 20

- b) In 2006, there were 485 active Master Gardeners in 58 of Nebraska's 93 counties. They contributed approximately 21,000 volunteer hours and made more than 48,500 educational contacts. Their volunteer hours are equivalent to 10 full-time positions. Volunteer hours and contacts were made through various activities including: planting and maintaining demonstration gardens, collecting data on research projects, helping with county and state fair activities, speaking to community groups, leading garden tours, collecting plant samples, answering phone questions and teaching children's programs. Not included in the 48,500 contacts are hundreds of educational contacts made through the media, including radio, television and newspapers.
- c) Scope of Impact - State Specific
- d) Funding:
UNL Extension
Federal Formula Funds

Key Theme - Water Quality

(Refers to Plan of Work Goal 1, Output Indicator 3, and Outcome Indicators 1 & 2)

- a) Irrigation water in Pierce County has an average concentration of nitrate-nitrogen of 11 parts per million (ppm). With the safe drinking water standard designated by the Environmental Protection Agency (EPA) at 10 ppm, drinking water supplies are in danger. Many years of over-application of nitrogen (N) fertilizer is one cause of these high levels. Nitrogen applicators needed education to fulfill requirements of the Lower Elkhorn Natural Resource District. University of Nebraska-Lincoln Extension staff conducted educational training addressing nitrogen applications for peak profit per acre and rate with respect nitrogen reduction, yield and profit. Educational training sessions were held across Pierce County in 11 locations with the focus of reducing nitrogen applications and in the long term reducing the nitrogen reaching ground water. Two hundred eighteen producers were taught as part of this program in the winter of 2006. The presentations focused on new UNL research dealing with peak profit per acre and nitrogen fertilizer application rates. The key was to show producers how they could reduce nitrogen fertilizer application rates while maintaining yield and improving their profitability.
- b) Randomly selected producers attending the programs were surveyed six months after the training. From the returned surveys 78% stated they found the information useful. When asked what changes they made as a result of the session, one producer said "We were careful to use only what we calculated the corn plant could use. We put [nitrogen] on at five different times." Another producer said "I used less commercial N." This producer said he applied 10% less total nitrogen in 2006 than he did in previous years. When asked, as a result of the training, what changes they will make for next year (2007), 38% said they plan to reduce nitrogen fertilizer application rates up to 20 percent with a majority of these respondents indication a 5 to 10 percent reduction. Fifty percent of corn producers in Pierce County attended and with 38% reducing nitrogen applications, that is 137,000 to 275,000 lbs less nitrogen applied for 2007. This equates to a saving of \$55,000 to \$110,000 across the county or \$250-\$500 per producer. Other producers said:
 - "I put smaller amounts and spread it out over a period of time."
 - "I used less, paid closer attention on timing and plant utilization."
 - "I used the least amount [on nitrogen] I needed to raise a good crop."
 - "[for next year] we will look at cost/reward ratio and make our decision based upon that."
- c) Scope of Impact - State Specific

- d) Funding:
UNL Extension
Federal Formula Funding

Key Theme - Water Quality

(Refers to Plan of Work Goal 1, Output Indicator 3, and Outcome Indicators 1 & 2)

- a) Shell Creek drains approximately 300,000 acres in parts of Boone, Colfax, Madison, and Platte Counties, and has a history of flooding that has frequently caused damage along its length. It has been on the Nebraska EPA Section 303(d) list of impaired waters for fecal coliform bacteria and other impairments. Soil erosion is a major problem throughout the watershed. Using a variety of delivery methods, cooperative educational programming led by UNL Extension in the Shell Creek Watershed primarily focuses on the water quality benefits of BMPs; management needed to ensure BMP success; and the availability of enhanced and/or special cost-share funding for BMP adoption or installation within the targeted areas. This educational effort and special cost-share funding is a partnership among: UNL Extension; PrairieLand Resource, Conservation and Development Council; Shell Creek Watershed Improvement Group; Natural Resources Conservation Service; and the Lower Platte North Natural Resources District. The Shell Creek Watershed project is a U.S. Environmental Protection Agency Section 319 project, funded through the Nebraska Department of Environmental Quality. Additional funds are also provided from the Nebraska Environmental Trust.
- b) Key accomplishments in 2005 and 2006 include:
- Sixteen out-of-service wells were properly decommissioned thus protecting water quality and human health and safety. One of these wells was a 36-inch diameter, 50-foot deep dug well that the landowner discovered when the front wheel of his tractor dropped into it. He did not know that this well was there, despite having grown up on that farm. Decommissioning of 17 additional wells is pending, contingent on licensed contractor availability.
 - Seven sub-standard or failing septic systems were upgraded to current standards. Before upgrading, septic tank effluent was surfacing in at least two of these systems, while another system had no drainfield and the effluent was piped directly to Shell Creek. Nearly one-half million gallons of domestic wastewater annually is now being properly treated because of these upgrades, substantially reducing the risks to public health and the environment.
 - Thirteen producers contracted for the implementation of no-till planting on 1,743 acres of cropland for a period of at least five years. This conversion will result in an estimated soil erosion reduction of over 5,000 tons annually.
 - Conservation buffer practices were installed on a total of 121.8 acres of cropland. The conversion of this land to permanent vegetative cover will reduce soil erosion on the order of 1,000 tons per year and provide excellent wildlife habitat. These practices and additional benefits include:
 - Four stream-side filter strips installed by two individuals on 36.3 acres that will filter the runoff from approximately 1,100 upslope acres.
 - A 6.0 acre riparian forest buffer that will filter the runoff from approximately 200 upslope acres and may provide future income from the sale of some of the trees that were planted.
 - Nine grassed waterways, totaling 28.0 acres, installed by five individuals, will filter and direct the runoff from approximately 300 acres of upslope cropland.
 - A nearly 5-acre field windbreak that may contribute to increased yields by reducing wind velocity on the adjacent crop.
 - Two buffers that provide 31.3 acres of habitat especially suited for northern bobwhite quail.
 - Contour buffers totaling 15.3 acres on one individual's farm that will help reduce soil erosion by slowing the flow of runoff water and trapping sediment carried by the runoff.

In aggregate, nearly \$360,000 in incentive, land rental, cost-sharing, and other payments is being infused into the Shell Creek Watershed as a direct result of this programming.

- c) Scope of Impact - State Specific
- d) Funding:
 - UNL Extension
 - Federal Formula Funds
 - Nebraska Department of Environment Quality, U.S. Environmental Protection Agency
 - Nebraska Environmental Trust

Key Theme - Water Quality

(Refers to Plan of Work Goal 1, Output Indicator 3, and Outcome Indicators 1 & 2)

- a) The City of Omaha has a National Pollutant Discharge Elimination Systems Phase I permit, which requires it to manage stormwater for quantity and quality. These same regulations are being applied to all the communities and counties in the Papillion Creek Watershed. Soil and sediment losses due to stormwater runoff from construction sites contributes greatly to the decline in water quality in the Omaha metro area lakes and creeks. Violations of these regulations have resulted in fines. To help the building industry better understand and follow the regulations, an Erosion and Sediment Control Seminar was held. The Erosion and Sediment Control Seminar is conducted to teach building industry professionals about stormwater management regulations and applying best management practices to reduce soil and sediment losses from construction sites thereby improving the water quality of the Omaha metro area lakes and creeks. Two hundred twenty professional engineers, consultants, grading contractors, developers, home builders, architects and federal, state and local agency personnel attended. A representative from U.S. Congressman Lee Terry's office attended. Ninety-one percent of the returned evaluations supported having a seminar in 2007. The seminar was offered as continuing education for engineers and architects.
- b) One hundred twenty-six participants of the 2006 seminar completed evaluations with the following feedback:
 - 98% indicated the seminar was useful.
 - 96% said their knowledge increased.
 - 91% said they would apply their new knowledge in their work.
 - 91% requested a 2007 seminar.

A six-month post-seminar survey showed that participants had applied the knowledge they gained at the seminar in:

planning projects, preparing project plans, drawings and narratives, in applying for permits for clients, staying on top of monitoring requirements, correcting construction project erosion control failures, enhanced reporting, educating others, changed Storm Water Pollution Prevention Plans (SWPPP) signs to meet regulations, implementing different best management practices, implementing SWPPP manual for project filing and record-keeping, using new erosion control materials to prevent soil losses, using new silt fencing techniques to prevent soil losses, setting up permit programs, and in reviewing contractor submittals and listing contractor responsibilities on contractor drawings and in specifications.

- c) Scope of Impact - State Specific
- d) Funding:
 - UNL Extension
 - Federal Formula Funds
 - User Fees
 - Nebraska Department of Environmental Quality

Goal 5: To enhance economic opportunities and the quality of life among families and communities.

Overview: (includes sections a, b, c & d)

Multiple issues impact communities, families, children and youth in Nebraska. Economically some communities in Nebraska are strong and proactive while others struggle to remain viable. Those that struggle usually lack one or more of the following elements: well paying jobs, thriving main street businesses, adequate population bases, necessary technology and/or a leadership core to achieve viability in the 21st century. Families face their own challenges. Some are impacted by lack of resources such as time or money, while some parents work long hours to support their families. Some youth, because of lessening time with parents or other mentoring adults, are seeking positive role models and ways to positively use their out of school time. Seventy percent of young children are not provided nurturing child care in community or private setting.

There are multiple UNL Extension programs helping communities and families and youth make informed decisions:

- The “Methamphetamine: One of Nebraska's Greatest Challenges” educational program was presented to over 4000 people from more than 100 professional, civic, social, church, school, governmental and community groups. In a pre- post- evaluation from over 100 people, a significant difference in knowledge was gained on each of seven questions. Anywhere from 71% to 94% of those reporting indicated an increase in their understanding about meth from the pre- to post-test. The most important things that participants indicated they had learned were how quickly one can become addicted and the devastating effects and changes on the user which makes them more determined to share the information with others. Over half of those completing evaluations had never attended an Extension program. This has resulted in continued requests for educational programs from community and schools who have not previously worked with Extension. Inmates at the Nebraska Women's Correctional Facility indicated they had never received educational information on meth nor did they understand the consequences of its use. This drug has dramatically changed their lives.

Participants were asked to identify simple prevention strategies they would implement. Some strategies listed include: educate family and others, stay aware by looking for signs of use, watch for suspicious activity, use and distribute the house watch form, and talk to their children. Each person that implements a simple strategy helps to reduce the use of meth and increase the awareness of its devastating effects.

Purdue University has adapted the Nebraska program and is using it in community educational forums. Georgia State Correctional facilities have requested permission to adapt the litter safety DVD and flyer for use with prisoners in litter pickup.

The Extension team continues to co-present with law enforcement. Officers have incorporated Extension materials into their programs. Numerous copies of the Extension participant and NebFacts as well as the PowerPoint CD and litter pickup DVD have been distributed. Educational programs were presented at four national and three statewide conferences. Three special audiences included FYC Partnership Senator Luncheon, Congressman Osborne's meth awareness tour, and the Nebraska Women's State Correctional Facility.

- 4-H Clubs will foster opportunities for families and youth involvement in the community. “4-H is what kept me involved in my community”. This is a common theme among Nebraska 4-H'ers and particular quote from 2006. Eighty-six percent of Nebraska 4-Her's report being involved in community service projects through their 4-H experience. One hundred percent of 4-H'ers, one in three Nebraska youth, are given the opportunity to be involved in their community. This data

reflects the full range of 9-19 year old 4-H members. Community involvement and leadership is valued in Nebraska 4-H. We are developing young people to be contributing members of their community. Ninety-two percent of 4-H members agree they are comfortable sharing with others and are listened to in their community. Ninety-two percent also feel good about what they have accomplished in 4-H. Community involvement is a big part of all 4-H'ers experience.

- Guardianship training for those appointed guardians in Nebraska has been offered since 2004. In cooperation with the Nebraska Supreme Court and the Nebraska Bar Association, quarterly trainings are offered in 10 of 12 judicial court districts in the state. In the eleventh district the training is offered monthly and in the last district, training is offered by VIE in Omaha. Eleven Extension Educators offered the training in 23 counties. The curriculum was approved by the Administrative Office of the Nebraska Supreme Court. Nearly 800 guardians/conservators have been trained for the state of Nebraska this year.

In addition to trainings, the program has been presented at the National Extension Association Family Consumer Sciences Conference and at the Nebraska State Bar Association annual conference. It has been sold to three other states.

Guardians serve a much needed role in the care of the elderly, people with mental or physical disabilities, or children who can't make decisions for themselves. This enhanced training is helping guardians better prepare to serve in their ward's best interest. Guardians say the training increased their knowledge and helped them better understand their responsibilities and how to deal with certain situations. "This class helped me figure out my legal obligations as guardian to my father and to the court," said one guardian, "I learned a ton. A key point was how to complete the paperwork, and when and where to send it to."

Evaluations from 2006 documented a statistically significant change in the knowledge and behavior of the 586 guardians were surveyed. Evaluations demonstrated a change of $p < .05$ level on seven objectives, with the greatest changes noted in understanding of both their court responsibilities and abilities needed to meet them, followed by increased knowledge of their responsibilities as guardians.

Guardians state the most important lessons learned are: overall understanding of duties of Guardians, guidelines regarding responsibilities, legal aspects and obligations to both the ward and the court and record keeping of finances and annual forms required by the court.

Guardians expect to do better at these items: keeping better records and obtaining more information; not co-mingling Wards' monies; seeing the Ward more often than originally planned; being more confident in decision-making; and making sure paperwork gets filled out and turned into the courts on time.

Evaluations given six months after training found that participants are applying for funding the ward is eligible to receive; reporting ward's assets, not guardian's; not co-mingling funds; overseeing fee-based services; talking to ward daily and to ward's community support person weekly; keeping appropriate records necessary to provide information for annual court reports.

e) **Total Expenditures and Full-time Equivalents(FTE):**

FFY2006	Federal*	State	Local	Other	Total
Funding:	\$ 2,221,675	\$ 10,656,824	\$ 3,830,599	\$ 7,120,099	\$ 23,829,197
FTE**:					159

* FY2005-2006 Federal Formula Funds (includes Smith-Lever regular E3bc, special needs, CSRS retirement)

** Includes both professional and para-professional funded from all sources

Key Theme - Community Development

(refers to Plan of Work goal 6, Outcome Indicator 7)

a) Economic leakage from rural communities is a continual challenge for Nebraska. Dollars leaving the community and being spent in larger trade centers results in economic hardship for the community and local business owners. The consumer preference study is an applied research model in which Extension staff collaborate with a local task force to help merchants learn more about factors that affect their customers' shopping decisions and to reduce economic leakage. Since 1997 studies have been completed in 36 communities in Nebraska and Colorado and included over 650 businesses and 7,000 consumers.

b) FY06 consumer preference studies in two communities in Burt County involved 10 businesses and 1250 consumers. Individual business consultation meetings were conducted following the general studies and focus group sessions. Twelve month follow-up evaluations indicate that communities and business owners do, in fact, utilize study results to make decisions about community issues and individual business concerns. As a result, three Tekamah business owners have made changes to conform to the preferences of local consumers. One reported that business is up 10%. This same owner secured approximately \$200,000 in grants and low interest loans for new refrigeration equipment.

Communities also benefit from these studies. The results of one question in the Oakland survey helped a local committee gauge the outcome of the swimming pool issue on the ballot of last fall's election. A renewed emphasis on business development was undertaken by the Oakland Chamber of Commerce. Tekamah community leaders found out that numerous consumers indicated they would like to be more involved in planning the future of that community. Both the economic development corporation and the Chamber are focusing on consumer views and concerns by taking action to improve the downtown shopping environment and developing a plan to attract visitors to the community.

c) Scope of Impact - State Specific

d) Funding
UNL Extension

Key Theme - Community Development

(refers to Plan of Work Goal 6, Output Indicator 6, Outcome Indicator 7)

a) NebraskaEDGE is a community-based entrepreneurial training program designed to encourage the expansion of small businesses, including agriculture operations. The entrepreneur's course is 12 sessions delivered over 12 to 15 weeks (40-44 hours). It is for those individuals who want to

expand an existing business and need the skills to make it grow. Participants develop a comprehensive business and management plan during the course to act as the road map for future growth.

- b) In 2006, 138 individuals from three states were enrolled in NebraskaEDGE. One hundred percent of those completing the course evaluation indicated that they would recommend this course to other business owners as they build their businesses. Sixty nine percent of the participants graduated from the courses with completed business plans for their own business. Twenty one percent finished the course sessions but did not complete their business plan. This figure includes 10 banking representatives who participated in the class as course audits only. Eighty percent of the participants indicated that they were “very” or “more than satisfied” with the course. Ninety percent of the participants indicated that the value of this course in relation to their business was “excellent” or “more than good”.

In a five year review of NebraskaEDGE, At least 90% of respondents said the course helped them meet these key goals: enhance business skills, increase self-confidence in business, increase dedication to business, become better employee and increase networking opportunities. Participants reported increasing their knowledge of business planning and management including: preparing a business plan, 87%; importance of planning, 85%; target my customers, 68%; conduct industry research for my business, 64%; importance of risk management and how risk can affect my business, 63%; how to manage my cash flow, 63%. Participants reported at least 50% increase in knowledge of the business community and greater community interaction with other businesses and professional since EDGE.

- c) Scope of Impact - State Specific
- d) Funding
UNL Extension

Key Theme - Community Development

(refers to Plan of Work Goal 7, Outcome Indicator 8)

- a) University of Nebraska–Lincoln Extension implemented computer training sessions for county elected officials and courthouse staff. Educators with program focuses in information technology authored and received a second round of grant funding from the Nebraska Secretary of State Grant Review Board to support training in an additional 15 counties.
- b) Throughout 2006 approximately 236 participants from 17 counties completed e-government training. Pre and post training tests show a significant increase of skills have been gained. Anticipated impact is the development of Web sites that will allow citizens to transact business on customer-centered and user-friendly local government Web portals.

Impact varies across the state, according to local interests and Extension involvement. Technology committees have been formed; Web sites and IT service has been enhanced. In northeast Nebraska two counties improved their Web sites, while three are in the process of getting their sites designed and online. One educator worked with her county supervisors to get a secure, redundant computer network funded and installed to protect employees’ identities and county data. Zoning administrators participating in the trainings have added regulations and forms to the county Web sites. Many assessors indicate they are making plans to add searching capabilities for finding county property taxes and land values online.

The counties in which staff adopted the applications taught are more efficient: For example: Several county and district officials learned how to setup their mailing lists in Excel and then merge the records into Word letters, which saves a tremendous amount of staff time.

- c) Scope of Impact - State Specific
- d) Funding
UNL Extension

Key Theme - Community Development

(refers to Plan of Work Goals 7, Outcome Indicator 8)

- a) Since 2001, University of Nebraska–Lincoln Extension Educators have provided e-Commerce training to more than 750 businesses across the state. Evaluations from participants in the various programs are very positive. Participants indicated they value the information learned and use it in making business decisions.
- b) In 2006, 157 businesses participated in a variety of e-commerce classes. Over 80 percent of the participants reported increased knowledge in the following areas of e-commerce: learning new information available on the Web, the e-commerce industry, locating information on Web businesses, finding new information on the Web, becoming more familiar with the Web, using the Web for business, developing and promoting a Web site, learning about competition vial the Web, and the impact of having a Web presence.

Basic e-commerce applications were demonstrated in classes held in Hartington, Laurel and Norfolk. Participant comfort levels increased in response to those demonstrations. The results of a follow-up evaluation four months later indicate that 65% of the respondents integrated several of the applications into their own businesses. Eighteen percent took the next step by registering their domain names, while another six percent got their Web sites up and running.

Because of eBay’s popularity, Extension developed a 6-hour training program to teach people the principles of selling items through Internet auctions. Forty-five people completed trainings presented in seven rural communities. Overall they felt the principles learned saved them a tremendous amount of time and frustration in trying to navigate online auctions by trial and error. In the Harrison and Falls City classes 80% of the participants actually listed items to sell on an Internet auction site. After the classes 40 percent planned to expand their markets by selling through Internet auctions, while six percent indicated they planned to create new businesses with Internet auctions as the basis.

Volunteers in Oakland are working with Extension to develop a community and business Information portal. The portal offers home-based and very small businesses a way to maintain an affordable Web presence. The intent is to replicate the portal structure in other areas of the state.

- c) Scope of Impact - State Specific
- d) Funding
UNL Extension

Key Theme - Community Development

(refers to Plan of Work Goal 6, Outcome Indicator 7)

- a) Improved customer service for travelers and tourists in rural areas is the goal of *Red Carpet Service*. Excellent service, positive first impressions and accurate referrals to local sites increase potential customer traffic and enhance the frequency rate of repeat travelers and tourists. A larger volume of customer traffic ultimately improves the profitability of many local businesses with the community. The three customized 90 minute sessions function as a train-the-trainer model for local stakeholders. The program's goals are for the front-line employees to gain enthusiasm, confidence and commitment to meet traveler needs by understanding the importance of tourism, discussing customer service techniques, practicing skills in giving directions and referrals to local sites and businesses and knowledge of available resources. Following the initial program the sponsoring organization receives all of the program material (teaching outlines, visuals, activity sheets and customized lists) to repeat the program in the future.
- b) The *Red Carpet Service* class was taught in seven locations during 2006, reaching 176 participants. (Classes in Furnas/Harlan Counties, Scotts Bluff County, Western Trails Historic and Scenic Byway (Garden County), Keith County, Dawson County, Garfield/Valley Counties, and Brown/Rock/Keya Paha Counties.)

Retrospective post- then pre- evaluation shows that participants in *Red Carpet Service* classes have increased their knowledge, understanding and ability to provide customers with tourism information in all 11 areas surveyed. On average, respondents showed a 41.5% increase with the greatest change indicated in the following areas:

- Knowledge of the main attractions and "hidden treasures" in your area (+60%)
- Ability to share information about several "hidden treasures" in the area (+58%)
- Knowledge of where additional local tourism resources are located (+51%)

2500 copies of the Nebraska Department of Economic Development's "Service Sells" DVD has been distributed statewide via the nine Nebraska Scenic Byways. *Red Carpet Service* and the University of Nebraska Rural Initiative are specifically featured as resource providers for customer service training.

- c) Scope of Impact: State Specific
- d) Funding
UNL Extension

Key Theme - Community Development

(refers to Plan of Work goal 6, Outcome Indicator 7)

- a) The Nebraska Rural Institute is a three-day educational program featuring educational seminars, technical direction and important networking opportunities to build leadership skills. the main focus is to bring those working in the area of rural community development together to share ideas on how to keep rural communities alive.
- b) Over 200 adults and youth participated in the 2006 Nebraska Rural Institute that was held in Ainsworth. *Ride into the Sandhills—Rich in Natural Resources, Progressive Business and Rural Hospitality* was the theme. The institute received an average rating of 3.5 on a scale of one to four (with four being excellent). Participants gave the mobile workshops high marks. Presenters, facilitators and panelists included many Extension personnel.

Investing in rural youth was also a focus of the 2006 institute. Sessions included a panel of area youth who worked to strengthen community development ; a presentation on encouraging youth to be active citizens; and a panel of young entrepreneurs who have returned to work in their rural communities. A podcasting training for youth was conducted during the institute to demonstrate how youth can become engaged in the community using technology.

- c) Scope of Impact - State Specific
- d) Funding
UNL Extension
Federal Formula Funds

Key Theme - Community Development

(refers to Plan of Work Goal 7, Output Indicator 9, Outcome Indicators 7 and 8)

- a) The adoption of technology by rural residents, agricultural producers and business owners has created a critical need for education in the basic use of information technologies and software applications for both business and home. More and more people indicate the need to learn how to create spreadsheets to be used in analyzing problems and for decision-making. Many are no longer surfing the Web as a past-time; rather they're seeking useful and reliable information about a variety of topics and issues pertinent to daily life. Learning to communicate via the Internet using e-mail has become a reality for young and old alike. Overall 111 people completed teliliteracy training specific to e-knowledge and e-agricultural.
- b) In northeast Nebraska 76 people participated in classes to build basic computer and Internet skills. One educator taught Excel to 28 participants representing agricultural production, rural entrepreneurs and business owners. Respondents indicate a substantial change in behavior as well as an application of the knowledge gained. Those responding reported that they were able to take the information and apply it to a specific home or business-based problem such as feed inventories and home budgets. In a follow-up survey conducted four months after the training 89% of the respondents indicated they applied what they learned to their business. However, they also applied the information to their home office and/or personal record-keeping system. Adult learners in two basic computer operations and hardware classes reported applying the information learned in both the home and workplace. By participating in these basic workshops, people report becoming more self-confident and comfortable using computers and information technologies.
- c) Scope of Impact - State Specific
- d) Funding
UNL Extension
Federal Formula Funds

Key Theme - Family Resource Management

(refers to Plan of Work Goal 8, Output Indicator 10, Outcome Indicators 9, 10, 11 & 12)

- a, b) • Numerous programs have been given to help adults put their legal and financial affairs in order. Topics covered include: first time home ownership, credit cards, budgeting, estate planning, identity theft prevention and investments. Over 350 adults have been involved in these financial programs. Over one hundred participants returned surveys after attending "Credit Cards: Friend or Foe?" They reported making the following changes in their personal practices: not carrying driver's license and credit cards together; taking original Social

Security Card out of wallet; reading entire credit card contract to be aware of all the point in the contract; wrapping credit card and recording purchases to check against fraud.

- The 2003 Medicare Reform Act created changes that prompted confusion for Medicare beneficiaries and their families. As a member of the Nebraska Medicare Prescription Drug Coalition, UNL Extension faculty personally educated over 5,599 beneficiaries and caretakers about Medicare's new prescription drug benefit and enrolled 1077 beneficiaries, saving them approximately \$1,207,850.00 annually which gives a savings of over \$1100.00 per beneficiary annually.

One educator shared *"Of the 30 people I counseled in Medicare Part D, if they would have to pay full cost for their meds, the total cost would have been \$73,122.00 a year. After enrolling in Medicare Part D (either with me or with the information I provided) they will be spending only \$40,062.04 with a savings of \$33,059.96 or 45%!"*

- Nearly 1000 unique visitors were reported to have visited the new website of the Building Strong Families financial team, PayDownDebt.unl.edu. This web site includes a step by step process to help individuals reduce debt. Included is an interactive worksheet to figure debt reduction and how long it will take to eliminate debt. A flier to market the website is being distributed statewide. The site has been used in FCS classes, at health fairs and credit union programs, reaching another 500 individuals.
- Through these programs nearly 650 youth learned financial concepts including wants and needs, budgeting, checking and debit cards, how credit works, how to count money and make change, the impact of time on savings and the influence of advertising on spending. At the Making Cents of It camp, pre-and post-tests showed students gained (at $p < .05$) on all seven concepts. They also learned the impact of financial decisions that they make, including things that can effect their lifestyle, the cost of credit, and the importance of preparing for a career. Participant comments included: "Having children is expensive." "Be careful not to buy too many wants."

The 2006 "Real World Money" gave youth an opportunity to learn about making money decisions through an interactive financial simulation. Since 2004 over 180 students have participated in the day long program. Workshops included interactive experiences on credit and how the mind influences money decisions.

Six knowledge levels were measured in a pre/post evaluation and all showed significance at the .05 level. These knowledge levels were: how to balance a ledger, how to write checks, making purchase decisions, need to track spending, knowing where money goes in family living, need for saving, impact of emergencies, and differences between wants and needs. The largest gain was in "how to balance a ledger" with an average increase of 1.88 on a five point scale. The second largest gain was in knowledge of how to track spending (1.26 points) followed by where money goes in family living (1.0 point).

- c) Scope of Impact - State Specific
- d) Funding
UNL Extension
Federal Formula Funds

Key Theme - Human Development and Family Well Being

(refers to Plan of Work Goal 9, Output Indicator 11, Outcome Indicators 10, 11 & 12)

- a, b)** Listening sessions in Nebraska identify programming aimed at strengthening families and developing strong connections among youth and families as one of Nebraskan's greatest concerns. Three action teams have collaborated to develop and deliver programming strategies to address these needs. These strategies include: Family Treasures book, national satellite training, UNL for Families website and TIPS columns.

Based on the strong families research, UNL extension faculty wrote the popular press book Family Treasures. It contains activities for families to do at home to increase each of the strengths in their family. The first printing of 1000 books is nearly depleted, with plans to reprint soon. A curriculum CD is being developed to help group facilitators better use the book. Professionals appreciate the activity-based teaching materials. At a presentation at the annual meeting of NEAFCS, participants said they would use the book to teach classes to build family strengths, use the inventory during National Family Week, start Family Nights at their church, use the website, and put information in the newspaper.

To introduce educators to Family Treasures, a nation-wide satellite video-conference was held. There were 258 participants at 33 different sites from eight states. A CD of this conference has extended the value of the training.

The UNL for Families website has been accessed 110,205 times during the past 13 months with 51,591 visits. Of these accesses, over 20,000 (18.68%) have been the TIPS columns.

The UNL for Families team shares writing responsibilities for the TIPS (To Improve Parenting Skills) columns, which are used in newspapers state-wide and are posted on the website (see above). These columns cover many topics of interest to families. They are short, single concept, and include questions or activities that helps families apply what they have just read.

- c)** Scope of Impact - State Specific
- d)** Funding
UNL Extension
Federal Formula Funds

Key Theme - Human Development and Family Well Being

(refers to Plan of Work Goal 9, Output Indicator 11, Outcome Indicators 10, 11 & 12)

- a, b)** Building Nebraska Families (BNF) provides education to the hard-to-employ rural clients of Nebraska's Health and Human Services System welfare to work program. By learning necessary family management and life skills, families are better able to manage family resources and maintain their family while securing and sustaining employment and can more effectively utilize a community network.

In the reporting period of October 1, 2005 - September 30, 2006 34 BNF participants completed the program. Completion means they are self-sufficient and no longer receiving welfare to work monies. This groups mean average monthly income of \$379.94 at entry was significantly different than their mean income of \$1201.41.

Upon reviewing the graduates entry versus exit behavior checklists significant changes can be seen in 6 of 20 behaviors measured. Those that were significantly different dealt with feeling

positive about their life, coping with change, able to listen to bad news without getting angry, setting goals, seeking help to solve problems, and feeling less depressed.

At least six months after completing BNF, graduates were contacted for a follow up. The information gathered showed that BNF clients continue to improve their family and life skills after graduating from the program. The statistical analysis showed that BNF graduates continued to feel positive about their life, were able to cope with change, can listen to bad news without getting mad, were setting goals for themselves, plan ahead, praise their children, use positive communication, have fun together as a family, learned better financial management skills, were hopeful about the future, and felt less depressed. In fact, in some cases the mean scores for these behaviors increased since graduation. This suggests that the BNF program is accomplishing its goals of helping families develop and use these skills once they leave the program.

Since the inception of the program in 1999, BNF Extension Educators have graduated a total of 220 (21.6%) of 1020 participants enrolled. One hundred twenty-four participants have been re-enrolled into BNF and are not counted twice in the 1020.

From October 1, 2005 - September 30, 2006, 321 participants received at least one educational contact for a total of 3385 teaching contacts. BNF Extension Educators had educational contacts with 1127 individuals which includes 660 children. In addition, the 34 graduates completed a total of 237.24 assignment hours. BNF families are not typically those who complete assignments so this is a significant accomplishment.

As BNF came to a close, it became more and more evident how it had impacted families across Nebraska and how it had become known as a program that works for families. The networking and partnerships developed continue to be felt through calls, concerns about families and referrals from other agencies. BNF's visibility has benefitted Extension as a new audience was tapped both in participants and agencies that had not been aware of Extension.

c) Scope of Impact - State Specific

d) Funding
UNL Extension
Federal Formula Funds

Key Theme - Human Development and Family Well Being

(refers to Plan of Work Goal 9, Output Indicator 11, Outcome Indicators 10, 11 & 12)

a, b) Communication and understanding others are the keys to successful relationships, whether it is at home, or on the job or in the community. Each person has a different personality style and different ways of communicating. One program developed from the research of personality differences is Matrixx-Real Colors Communication Styles. Through this program, participants gain a better understanding of themselves and of others. Regardless of the audience, participants in this educational program consistently report:

- over 90% are better able to understand communication/personality styles.
- over 80% report increased communication skills by understanding different styles and plan to apply what they have learned to improve relationships in their lives.

Participants indicate they will make changes in the way they communicate with family members, change ways of disciplining a child and be more accepting of things that irritate them about others. Over 1700 participated in Real Colors this past year.

- Nearly 600 youth and their parents participated in Juvenile Diversion programs this past year.

Communications skills, family strengths, goal setting, conflict resolution, and Real Colors are key components of these classes. One class requires families to do one of the family strength activities as their homework assignment. Results from another class showed a significant (at $p < .05$) increase in understanding when asked to identify the 6 factors of strong families, define communication, relate how their personality affects communication, identify communication skills and ways to improve communication.

- Character on the Job, Self-esteem, Communication, Stress, Conflict Management were examples of programs given to 2350 individuals across the state. These were designed to develop personal life skills for families and on the job.

c) Scope of Impact - State Specific

d) Funding
UNL Extension
Federal Formula Funds

Key Theme - Human Development and Family Well Being

(refers to Plan of Work Goal 9, Output Indicator 11, Outcome Indicators 10, 11 & 12)

- a, b) Twenty-one poverty simulations and three Understanding Poverty programs were presented to over 1300 youth and adults this year. About 88% of the participants surveyed indicated that they changed their attitude about poverty and will take some action to help those in poverty or to help themselves stay out of poverty. These actions include: go to college, learn to manage money better, be sensitive to students as an educator, learn more about resources available, give to food pantry, find places to volunteer, and donate to charities. The simulation is popular with high schools as a way to help young people understand the need to set educational and career goals. The simulation has been adapted to the Nebraska Department of Education standards to increase the learning experience. Concordia University offers this for students studying to become teachers and Hastings College implemented this program for a community issues class.

Words such as "frustrated", "stressed", "desperate", "overwhelmed", "scared" were used to express participants' feelings immediately following the simulation. Many students stated they did not realize just how easy it was to spiral down with bill paying, resort to illegal activities, lose their temper, etc. These feelings will help young people learn to set goals for themselves but also help them have an increased empathy for those with less. When asked "Did your attitude change during the simulation?", the following was reported: 22% - a great deal, 66% - changed somewhat and 12% - not at all. When attitudes change, it is more likely that actions may follow as there is a greater understanding of the issue. College students felt the simulation gave them a much greater feel for what their students may be experiencing and they would be able to have a greater compassion for them.

c) Scope of Impact - State Specific

d) Funding
UNL Extension

Key Theme - Leadership Development and Training

(refers to Plan of Work Goal 4, Output Indicator 4, Outcome Indicator 5)

a) LeadershipPLENTY is built on the core value that people working together can tackle community issues. Originally sponsored by the PEW Partnership for Civic Change, the curriculum is organized into nine modules: identifying individual talents, community asset identification, group development, effective meeting management, dealing with conflict, developing partnerships, turning ideas into action, communicating for change and valuing evaluation. The program is customized at each location to reflect local needs. Typically each module is three to six hours in length with the entire program covering nine months. The program culminates with the development of a group action plan for a community project. At each location the program is sponsored and supported by a public/private collaboration.

b) Eighty-four adults and youth people participated in some form of LeadershipPLENTY in 2006. Participants include high school students, senior citizens, business people, farmers, teachers, accountants, bankers, Chamber directors, economic development professionals and community leaders. Leadership skills including but not limited to managing groups conducting effective meetings, conflict resolution, action planning were learned and applied to solving community issues. Although results vary at each site, responses to evaluations often reflect themes, similar to those identified by the Seward and Butler County sites. Evaluations in these locations indicate these attitudinal changes:

- 76% increase their volunteer hours
- 36% expect to run for public office
- 44% increase their donations
- 72% indicated an increase in knowledge of entrepreneurship
- 100% reported increased confidence in attracting new residents to their communities

All of the Seward and Butler County participants are members of at least one community organization by the time of graduation so that the skills learned are practiced in an experiential environment.

Evaluations from the Beyond Builders:LeadershipPLENTY sessions conducted in Omaha indicate that 54% of those participants' knowledge and understanding of leadership came from this course. Eighty-three percent of respondents anticipated working with new partners/resources through the sessions to address neighborhood issues. When asked about the impact of the Omaha program, one individual stated: "All sessions have valuable information. I was wanting to become more involved in the Omaha community and this program provided the background knowledge and discussion that provides the support for me to pursue active community involvement."

Past LeadershipPLENTY participants are impacting economic development in their organizational roles. One organized engineered passage of a lodging tax in Garden County resulting in approximately \$5000 of additional revenue annually used for tourism marketing and promotion. A team of first year LeadershipPLENTY graduates in Butler County moved an interlocal agreement forward to create funding for two economic development coordinator positions worth approximately \$65,000. An outcome of this was the recruitment of an call center to David City.

c) Scope of Impact - State Specific

d) Funding
UNL Extension
Federal Formula Funds

Key Theme - Leadership Development and Training

(refers to Plan of Work Goal 4, Outcome Indicator 5)

- a) The Nebraska Association of County Officials (NACO) Executive Director, Larry Dix, has stated that due to the new Nebraska term limits law and the routine one-third turnover of officials seeking re-election, it is critical for Nebraska to continuously generate new local and state leaders. Newly elected officials no longer have a term in which to “learn the ropes.” Instead they are thrust into leadership positions that demand the knowledge, skills and resources generally possessed by seasoned leaders.
- b) The NACO and University of Nebraska–Lincoln faculty and Extension educators then put together and conducted a statewide survey for county officials, both elected and appointed, to determine their training needs. County officials without e-mail addresses were mailed paper copies of the survey, while officials with e-mail addresses were sent a Web hyperlink for an online survey. In rural counties information technologies aren’t widely used by the county commissioner/supervisors. Two-hundred-seventy-one public officials completed and returned paper surveys, while 270 individuals completed the online survey—a response rate of 50 percent. An example of the assessment results: When asked *what kind of training can help public officials do their job more effectively?* The following were deemed most important:
- 34% listening skills
 - 30% decision making for the common good
 - 27% using Internet and email
 - 27% increasing the tax base through economic development
 - 27% conducting business more efficiently

When asked *what skills would make your job easier?* The following suggestions were made:

- 63% communication skills
- 51% conflict resolution
- 50% setting goals and objectives
- 45% time management
- 38% team building
- 36% identifying differences in personalities
- 33% delegation
- 33% determining leadership styles

Eighty-five percent of public officials prefer to have training delivered face-to-face, with a much smaller number desiring either interactive audio/video conferencing, DVD-at-home or Web-based training.

To build continued awareness and support for this educational program, the NACO invited the Extension educators to present a program called “21st Century Leaders” to approximately 120 county clerks and treasurers at their annual summer meeting. Following further analysis of the survey, the Extension educators and Chair of the Department of Agricultural Economics presented an in-depth report to the NACO Executive Board. The board passed a motion to move forward with developing a training program for public officials. As one board member put it “16 years ago I wouldn’t have thought this was necessary, but today I don’t see how we can get along without it.” A special committee is being gathered to work with Extension to develop a training program for current and future county officials.

- c) Scope of Impact - State Specific
- d) Funding
UNL Extension

Key Theme - Parenting

(refers to Plan of Work Goal 9, Output Indicator 11, Outcome Indicators 10, 11 & 12)

- a, b)** Parents Forever, an education class for parents who are divorcing, is continuing to be taught to help parents learn skills to cope with the impact of divorce on children. This past year, 236 parents participated in Parents Forever. 166 youth participated in Kids Talk About Divorce.

In an effort to improve parenting skills, Parents Forever focuses on the impact of divorce on children. The concepts that are taught during the six sessions focus on grief and loss for children, how children react to divorce according to age and stage of life, communication skills to improve dialogue between parents and with children, parenting styles, behavior techniques for parents and children, and forming a co-parenting plan.

One hundred percent (100%) of parents recognized the effect of divorce on their children. One hundred percent (100%) of adults were introduced to parenting skills that were new skills. One couple remarried due to the skills they learned in class. Judges have seen a reduction in the number of families in court after the divorce with custodial issues. The use of the parallel plan has shortened the length of time in custody and financial disputes by about 12%.

In a survey taken 6-18 months after the class, parents showed a 56.6% gain in skills in communicating with "I" messages, 75.9% could talk more favorably about the other parent, 98% of the adults comments: "Every parent should take this class!"

- c)** Scope of Impact - State Specific
- d)** Funding
UNL Extension

Key Theme - Parenting

(refers to Plan of Work Goal 9, Output Indicator 11, Outcome Indicators 10, 11 & 12)

- a, b)** A variety of family programs were presented to over 1000 parents. Participants at family nights receive an educational program to increase parenting skills along with a meal and free child care. Taking time from a busy schedule to eat with their family and learn more about their role as parents is a significant accomplishment, given how hard it is to get parents to attend classes.

Evaluations at the end of each program indicate that parents are selecting ideas that have been shared to take home and put into practice. They are also able to identify their personal family strengths: "We have fun wherever we go." "We love, trust and feel comfortable with and around each other." "Being able to be together - even if we aren't doing much." "1. Love of God 2. Spending time together." "We care about one another."

- c)** Scope of Impact - State Specific
- d)** Funding
UNL Extension

Key Theme - Youth Development/4-H

(refers to Plan of Work Goals 2,3 & 5, Output Indicators 2 & 3, Outcome Indicators 3 & 4)

- a, b)** During the last ten years, character education has become a standard in all Nebraska 4-H Youth Development programming. With that in mind, approximately 118,000 youth, or one in every three Nebraska youth, received character education programming in 2006. Specific traits of

character and life skills are focused on through varying programs. In 2006, over 5,400 4-H'ers participated in projects specific to character development. Extension and 4-H have become a resource to communities in training other organizations, including schools, in character education programming. Our impact on character development is beyond the 4-H audience, to all Nebraska youth.

In a recent needs assessment survey, Nebraska 4-H volunteers reported that they observe a high level of character demonstrated among their 4-H members. 4-H offers opportunities for youth, especially teens, to display and share positive character through mentoring and leadership opportunities. The 4-H club structure fosters a teamwork environment that promotes life skill development. One 4-H'er is quoted as saying "4-H has made me a more responsible person". In another recent survey, 92% of Nebraska 4-H'ers say they accept responsibility for their behavior and nine of ten 4-H'er's agree they use deductive reasoning for problem solving. Together, this data shows an attitude of positive behavior and lack of blaming others.

c) Scope of Impact - State Specific

d) Funding
UNL Extension

Key Theme - Youth Development/4-H

(refers to Plan of Work Goals 2,3 & 5, Output Indicators 2 & 3, Outcome Indicators 3 & 4)

a, b) Nebraska 4-H again conducted a Unicameral Youth Conference to raise the awareness of the possibility to engage in policy leadership at a high level. Nearly 4,000 Nebraska 4-H'ers serve in official leadership roles through their club experience. Many more serve in unofficial roles such as committee chairs, project leaders, and community service coordinators. Adult leaders have self reported in a recent survey that they value and strive for strong, quality youth adult relationships. One 4-H'er says "I feel like 4-H has made a huge impact on my future plans". It is Nebraska 4-H philosophy that surrounding young people with positive relationships, providing them opportunities to develop life skills, and helping them gain subject matter knowledge will build community leaders. Data that has been and is being gathered supports our efforts in this area.

c) Scope of Impact - State Specific

d) Funding
UNL Extension
Federal Formula Funds

B. STAKEHOLDER INPUT PROCESS

A. Actions taken to seek stakeholder input

The six Action Plan teams of Nebraska–Lincoln Extension are required to seek program input from a minimum of five key stakeholders annually (determined to represent a significant population, organization or be a key political leader). This stakeholder input is achieved in a variety of ways including face-to-face meetings and telephone or written surveys. In addition, a number of advisory committees associated with University of Nebraska Departments and Research and Extension Centers provide excellent input to both our Extension programming and the research projects of the Agricultural Research Division.

Action teams when meeting with stakeholders are requested to seek the following information:

1. Are the educational goals of this action plan of the highest priority?
2. Does the action plan represent work which is complementary, but not duplicative, of work of educational entities?
3. Are there potential collaborators for these educational goals of action plans?
4. Are you as stakeholder aware of potential sources of grant/contract funding?
5. Are there educational goals of this action plan that should be targeted for elimination or hand-off to other entities?

Another key part of University of Nebraska–Lincoln Extension’s stakeholder input process in 2006 was participation in the Institute of Agriculture and Natural Resources (IANR) strategic planning input process. UNL Extension as a division of IANR had representatives present, and received resulting data, from the listening sessions held in 2006. Feedback from four listening sessions was shared with the action plan teams of UNL Extension.

Our institution considers itself fortunate that faculty (Specialists, Educators and Researchers) are engaged in one-on-one working relationships with many of the governmental, educational and business leaders of the state. This engagement provides access to information about trends and issues that impact Nebraska citizens.

B. Brief statement of the process used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them.

Several venues are used to identify individuals and groups who give input to the programming process:

- It is the responsibility of the teams to identify at least five external stakeholders that are familiar with the subject matter and the related issues impacting residents of the state. Generally these stakeholders are representatives of organizations/agencies that partner with UNL Extension. Stakeholders represent over eighty different agencies/organizations with whom Extension works. As an example of input received, the 4-H Youth Development action team shared the following:
 - Stakeholders were invited to participate in local information gathering sessions and participate in online feedback. The information gathered was used in guiding our new approach to systematic programming. Science, Engineering and Technology, Life Skills, Healthy Lifestyles, and Career Education are now the focus of 4-H programming in Nebraska. These align with the National 4-H mandates.
- A Nebraska 4-H needs assessment was conducted as a statewide random survey to

approximately 100 Nebraskans to gain stakeholder input into volunteer development and management planning. Stakeholders have been involved in a strategic data collection process aimed at identifying the impact of Nebraska 4-H.

- For each of the IANR listening sessions the host Extension Educators were asked to identify key stakeholders in their communities to be invited to the listening session. In addition, many of the listening sessions issued a general invitation to the public to attend.
- Representatives from commodity groups, the green industry, and related industrial entities are part of the advisory committees of departments of the Institute of Agriculture and Natural Resources. These advisory groups provide input to the departmental and extension/research programmatic goals.
- UNL Extension Action Plans and departmental action plans all support the strategic plan of the Institute of Agriculture and Natural Resources and contribute to the same goals and outcomes. Extension Action Plan team meetings held in the fall, 2006, included research/extension faculty and department heads. Additionally several of the Action Plan teams hold regular communication through telephone bridge calls or face to face meetings.

C. How collected input was analyzed

Meetings and reports submitted by the Extension Action Plan teams indicate that while their goals are generally seen by stakeholders as in alignment with the needs of Nebraskans, modifications need to be ongoing to insure that the Plan of Work goals are positioned to have Extension partner with other educational entities. The general tone of stakeholder reviewers is that the educational goals of Action Plan teams are focused on high priority issues. Encouragement from stakeholders to not duplicate, but partner with other educational entities remains a key item as does the need to market and promote educational efforts that are undertaken.

Additional themes that remain consistent are:

- UNL Extension needs to be able to respond more rapidly
- Bring other partners to the 'table' for planning and implementation
- Continue to utilize technology for program delivery
- Market your programs more widely
- Do not duplicate programming of other entities

D. Is the Stakeholder Input Process Useful

UNL Extension believes that stakeholder input is essential to the implementation and delivery of educational programs that are on target. Through the involvement of stakeholders:

- UNL Extension programs are better marketed across the state
- Co-sponsorship of programs with other entities becomes more likely as others learn about programs
- Collaborating entities become program participants
- Collaborating entities become sources of matching funds to deliver educational programs

The IANR listening sessions continue to be helpful in identifying priority issues to be incorporated into educational programs. Throughout all the listening sessions held in 2006 the issues of highest priority for educational programming are economic development community vitality and water (quality and quantity).

C. PROGRAM REVIEW PROCESS

During 2003 the existing eleven action teams merged their educational goals into six action teams. These six action teams and work groups within each action plan are required to update their plans on an annual basis using the input of stakeholders and the evaluation results from programs delivered.

D. EVALUATION OF THE SUCCESS OF MULTI AND JOINT ACTIVITIES

A. Did the planned programs address the critical issues of strategic importance, including those identified by the stakeholders

Nebraska uses a “continuous listening” process for its planning effort. This system insures that the plan of work is reviewed and updated regularly. The accuracy of the action plans is verified by:

- Action teams meet face to face at least twice annually
- Several action teams use monthly phone bridge calls to insure that they are on track
- Action team leaders dialogue with subject matter department administrators annually to insure that the goals of the action teams are in congruence with research and extension goals of the University departments
- Action teams meet with their stakeholders
- Action teams refine programs to be delivered to insure that content goals support needs identified by stakeholders and demographic trends.

B. Did the planned programs address the needs of under-served and under-represented populations of the state

Below are examples of programs initiated through input of stakeholders to address needs of under-served and under-represented populations.

- University of Nebraska–Lincoln Extension has built a strong partnership with Little Priest Tribal College and Nebraska Indian Community College. Because of these partnerships teens have gotten more involved in outside activities and are interacting with other youth and adults outside their schools. Program leaders say teens are more motivated and more interested in learning about activities.
- An Extension Assistant in Dawson county worked with hispanic youth as a target effort to increase hispanic youth participation. The goals for the group included developing leadership skills, providing activities for Hispanic teens to participate in, and to become more involved in the community.
- The Preventive Health and Wellness Education action team exemplifies the work that is being done to impact under-served and under-represented populations. Through input from Department of Health and Human Services stakeholders, who are case managers for welfare to work families, a program was implemented in 1999 to educate welfare to work families, primarily single mothers. This welfare to work program, called Building Nebraska Families (BNF), works one-on-one with the most difficult of the families moving off of the welfare roles. Eleven FTE of Extension Educators have been hired through a contract with the Nebraska Department of Health and Human Services to work with these families. BNF is being studied by Mathematica as best addressing the needs of welfare to work families. The request of Mathematica is to continue this study through 2007 insuring long-term data. Program graduates say that, thanks to the program, they feel better about themselves, improved their time management and problem solving skills and are able to earn more money at their jobs. (Note that funding for the program ended in December 2006)

- Four colleges and universities (including UNL Extension) and seven public school districts joined forces to increase the number of minority, bilingual, and English as a Second Language (ESL) endorsed teachers in northeast Nebraska using collaboration and a distance delivered undergraduate degree program.
- Programming in Spanish is a goal in targeted geographic regions for specific audiences, i.e. food safety training for food preparation employees.

C. Did the planned programs describe the expected outcomes and impacts

Goals identified in the plan of work submitted in 2000 which includes output and outcome indicators, as well as proposed impacts, are used as planning tools. The action teams collect impact data based upon the indicators identified. Some of the action teams are embarking on a process to collect this data through their web sites. It is generally felt that planned programs addressed the expected outcomes. Action teams are growing in their ability to use technology and teaching tools through learning web sites that are available 24-7, i.e. <http://lancaster.unl.edu/food/>, <http://beef.unl.edu/>. Polycoms and WebEx is also being utilized as teaching mediums.

D. Did the planned programs result in improved program effectiveness and/or efficiency

Documentation of program impacts reinforce the effectiveness of UNL Extension programs. Several impact reports (Connect and Connections) developed for stakeholders are included with this document to substantiate the difference that Extension programs are making.

Efficiency is seen in the increasing number of multi-action team, multi-department and multi-state educational programs that are being delivered. Efficiency is exhibited by the Educators and Specialists as they continually work to develop programs that can be delivered in multiple sites, using multi mediums. The aggressive efforts of faculty to use electronic media to deliver educational programs is helping achieve efficiency, but more importantly is allowing program clientele to participate in programming on their own time and in their own space. An output of the new focused education concept is in the increase in relationships with departments and colleges external to traditional extension partners: i.e. College of Architecture, College of Fine and Performing Arts, Admissions, Journalism and Computer Science.

**U.S. Department of Agriculture
 Cooperative State Research, Education, and Extension Service
 Supplement to the Annual Report of Accomplishments and Results
 Actual Expenditures of Federal Funding for Multistate Extension Activities and Integrated Activities
 (Attach Brief Summaries)**

Fiscal Year: 2006

Select One: Interim Final

Institution: University of Nebraska-Lincoln Extension and Ag Experiment Station

State: Nebraska

	Integrated Activities (Hatch)		Multistate Extension Activities (Smith-Lever)		Integrated Activities (Smith-Lever)	
<i>Established Target %</i>	25	%	25	%	25	%
<i>This FY Allocation (from 1088)</i>	\$3,132,095		\$4,898,516		\$4,898,516	
<i>This FY Target Amount</i>	\$783,024		\$1,224,629		\$1,224,629	
Title of Planned Program Activity						
Goal 1: Integrated Crop Management Integrated Livestock Systems Management Sustainable Agricultural Production Systems	\$517,486		\$495,872		\$601,096	
Goal 2: Food Processing and Food Service Management Food Safety	\$69,325		\$22,928		\$77,360	
Goal 3: Human Nutrition, Health and Safety	\$8,577		\$49,394		\$21,118	
Goal 4: Natural Resource Management and Protection Environmental Protection Environmental and Natural Resources Policy	\$253,299		\$495,188		\$401,694	
Goal 5: Family Strengths	\$20,474		\$177,140		\$132,712	
Total	\$869,161		\$1,240,522		\$1,233,980	
Carryover						

Certification: I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays represented here accurately reflect allowable expenditures of Federal funds only in satisfying AREERA requirements.

Elbert C. Dickey May 15, 2007
Director of University of Nebraska-Lincoln Extension **Date**

Gary L. Cunningham May 15, 2007
Director of University of Nebraska-Lincoln Ag Experiment Station **Date**

E. MULTISTATE EXTENSION ACTIVITIES

Goal 1

Most of the multistate activities outlined in the Plan of Work to support the Integrated Crop Management, Integrated Livestock Systems Management, Integrated Pest Management, and Sustainable Agricultural Production Systems are continuing. Some highlights include:

- Cropping systems program coordination among Extension faculty in Kansas, Nebraska, South Dakota, and North Dakota. A joint inservice training was conducted in 2006.
- New methods and technologies to control and improve reproductive success in beef cattle were the focus of the University of Nebraska–Lincoln Extension's "Applied Reproductive Strategies in Beef Cattle Symposium" held in Nevada, Texas, Missouri and Nebraska. This program was organized as an educational opportunity to help people in the beef industry gain a greater understanding of the reproductive processes involved in both female and male beef cattle and provide management strategies to optimize reproductive efficiency.
- The four state commercial horticultural workshop continues to be held at St. Joseph, MO for producers in Nebraska, Kansas, Iowa, and Missouri.
- The 2006 Central Plains Irrigation Shortcourse was hosted by Nebraska, Kansas and Colorado State University.
- Nebraska continues to provide leadership for the Livestock and Poultry Environmental Stewardship curriculum project. Fifteen states are involved in this national education program. The program team has provided training since 2001 for state teams.
- The 22nd annual Four State Beef Conference was held in 2006. Nebraska, Missouri, Kansas, and Iowa cooperate to plan, conduct and host this event.
- Nebraska has taken on a leadership role for the Five State Dairy conference since 2002 with support from Illinois, Iowa, Minnesota, North and South Dakota.
- Nebraska has been instrumental in the planning for Integrating Forage and Livestock workshops with Illinois, Iowa, Indiana, Kansas, Missouri, North and South Dakota, and Ohio.
- Nebraska continues to provide leadership for a Four State Sugarbeet-Bean Group consisting of teams from Colorado, Montana, Nebraska and Wyoming.
- Nebraska has served as the host institution for the North Central Sustainable Agriculture Research and Education (SARE) program. The interaction among the twelve North Central states' extension programs in carrying out the SARE Professional Development Program adds value to each of the individual state programs.

Goal 2

Most of the multi-state activities outlined in the Plan of Work to support the Pre and Post Harvest Plant and Animal Food Safety, Food Processing and Food Service Management are continuing. Some highlights include:

- Nebraska continues to provide leadership in HACCP and Food Safety programming by developing videos for use in meat processing facilities to train employees. English, Spanish, Korean, Vietnamese and Chinese versions were produced and distributed to all small meat processors in the United States.
- Cooperation since 1993 between Kansas and Nebraska Food Safety faculty members has delivered workshops to Kansas and Nebraska Processors. A special emphasis has been placed on providing low cost workshops for small and very small meat and poultry operations (less than 500 employees.) To meet this need, UNL Extension recently organized a team of faculty at Nebraska and Kansas State to obtain funding to expand HACCP training and to include UNL Extension in Missouri and South Dakota in these programming efforts.
- University of Nebraska's Food Processing Center provides "Better Process Control School"

- to participants and processors from all fifty states.
- Nebraska has been instrumental in inservice education of consumer food safety and food irradiation along with Arkansas, California, Florida, Kansas, Minnesota, Pennsylvania and Texas.

Goal 3

Most of the multi-state activities outlined in the Plan of Work to support the Human Nutrition, Health and Safety and Health Care are continuing. Some highlights include:

- Extension specialists working in air quality have developed and maintained a multi state program between Kansas State and Nebraska.
- In service education for Nebraska, Kansas, South Dakota and North Dakota have focused on learning skills for evaluation of programs. Approximately twenty-five Extension faculty members participated in an annual inservice education program sharing skills and program resources.
- An Extension specialist serves as editor of the ten states mountain region for the development and distribution of an annual report for the Food Stamp Nutrition Education program.

Goal 4

Many environmental issues are not state specific and require that educational programs be multi state based. Nebraska continues to be active in multi state programming. Some key examples are:

- The atrazine education program in the Blue River Basin of Nebraska and Kansas is continuing. The upper Blue River Basin is in Nebraska and the drainage flows into Kansas. Atrazine levels in the lower basin are an issue because the water is used for drinking water supplies. Kansas State University and the University of Nebraska continue joint research and extension programs to address the issue. Inservice education has been provided for extension educators and workshops and tours targeting producers have been conducted.
- The University of Nebraska, University of Missouri, Kansas State University, and Iowa State University cooperated to prepare a proposal to CSREES to continue the regional water quality coordination project in 2006.
- Nebraska has taken the lead in drought mitigation education working with Colorado and Wyoming.
- The 12th annual North Platte River Basin Water Policy Conference was held in 2006 in Wyoming. The conference was organized by the University of Nebraska and co-sponsored by the University of Wyoming and irrigation districts in Nebraska and Wyoming. The conference has continued to address issues associated with the Platte River UNL Agreement proposals. Key issues are water supply and critical habitat for endangered species.
- The “Prevention and Control of Wildlife” handbook was edited by faculty members from the University of Nebraska and University of California and a USDA-APHIS staff member. The handbook continues to be used as a major resource to address wildlife damage management throughout the United States, Canada, Mexico and other countries.
- With the issue of prairie dog infestations across the country the Interagency Prairie Dog Coordinating Committee has been conducting inservice training, presentations and producing publications and guides. Committee members represent Arizona, Colorado, Kansas, Montana, Nebraska, North and South Dakota, New Mexico, Oklahoma, Texas and Utah.
- Four states (Iowa, Nebraska, North and South Dakota) are involved with enhancing natural resources education for Tribal Colleges. You will see this effort increasing over the next few years.
- Nebraska hosted the 9th Annual Winery and Grape Growers Forum partnering with Colorado, Illinois, Iowa, Kansas, Missouri, South Dakota, Wisconsin and Wyoming.

- Nebraska hosted the four state Turf Grass Conference partnering with Iowa, Kansas and South Dakota.

Goal 5

Most of the multi-state activities outlined in the Plan of Work to support Family Strengths, Family Housing, Telecommunications for Rural Areas and Community Strengths are continuing. Some highlights include:

- An Extension housing program including Nebraska, Kansas and Iowa is focused on helping clientele receive immediate responses to housing questions. A 800 number telephone response program is organized by Extension faculty in these states to save time answering questions.
- An Extension faculty member serves as a member of the leadership team for the North Central Extension Leadership Development program.
- The NxLevel course, “Tilling the Soil of Opportunity,” was introduced in 2000 as a curriculum for agriculturally based entrepreneurs. The curriculum is specifically designed for the producer searching for innovative ideas and enhance marketing opportunities. Direction for the development of the curriculum was provided by the University of Nebraska’s Center for Applied Rural Innovation and the University of Colorado at Denver’s Colorado Center for Community Development. Inservice training for faculty in interested states started in 2000 and continues through 2006.
- UNL Extension continues to partner with the University of Nebraska State Museum to develop the Wonderwise 4-H project, a series of informal science education modules that focus on bringing engaging science activities to youth, especially those in rural communities. The project were piloted in eleven states (Nebraska, Kansas, Oklahoma, Wyoming, Montana, North Dakota, South Dakota, Michigan, Minnesota, Illinois, and Iowa) reaching an out-of-school audience of over 284,000 youth enrolled in 4-H camps, clubs, and special programs. The goals of the Wonderwise 4-H project are 1) To motivate 8- to 12-year old youth, particularly girls, to pursue an interest in and awareness of scientific activities and careers, 2) To create a positive image of women and minority scientists for youth participating in 4-H, 3) To improve the diversity and quality of 4-H’s out-of-school science materials by offering materials that are inquiry-based, multicultural, and tie science activities to the work of real scientists, 4) To help youth make connections between agricultural topics and their underlying scientific principles, and 5) To instill in youth a better appreciation of empirically-based knowledge and enhance children’s ability to use scientific reasoning. Each Wonderwise 4-H project module focuses on one woman scientist and one science topic, and includes an activity book package, a video, and a CD-ROM. The next partnership will be on evolution.
- In a unique coordinating effort between Nebraska, New Mexico, North Carolina, and Minnesota youth from around the country can participate in a virtual 4-H camping experience through goCybercamp.org. This adventure allows youth from all 50 states to participate in various 4-H camp activities right from their own home or school, meet new friends, share a virtual cabin and project interests while learning about nature, natural resources, nutrition, safety, along with many other camping experiences.
- Nebraska hosted the National 4-H Science and Technology conference in July 2006. Over 200 youth and adult participants from 27 states participated in focused subject matter learning experiences that were about 11 hours long. Youth also completed a community service project by rehabbing 100 computers to be given to low income families.

F. INTEGRATED RESEARCH AND EXTENSION ACTIVITIES

Below are a few examples of integrated Research and Extension activities.

Goal 1

Activity: Integrated Crop Management

Topic: Organic Farming Project

Issue: Organic farming is one of the fastest growing segments of U.S. agriculture. In Nebraska, certified organic crop and pasture acreage nearly doubled from 1997 to 2003, according to the U.S. Department of Agriculture. To capitalize on this expanding market, the state's farmers need practical, science-based information about growing food organically under Nebraska conditions.

What has been done: The University of Nebraska-Lincoln in 2005 initiated a project to expand organic farming research and education, enhance collaborations with growers and develop science-based information for organic food production. As part of a \$750,000 grant, Institute of Agriculture and Natural Resources researchers are establishing the university's first certified organic research plots at four research farms around the state where scientists are studying locally important organic production issues. Scientists are working closely with organic farmers. Advisory committees of organic producers are helping to guide research and scientists are conducting studies on cooperating certified organic farms. Education is a key part of this project. A UNL Extension educator is coordinating the project and is sharing research results and organic concepts with farmers and students. The overall aim is to incorporate organic farming concepts into IANR's extension, research and teaching.

Impact: This research and education effort is laying the foundation to help the university meet the increasing need for practical, science-based information about organic farming in Nebraska. Establishing certified organic test plots will take three years but will make possible long-term research on organic systems and allow researchers to provide localized information for producers. Initial educational activities are reaching a new Extension audience.

Funding:

UNL Agricultural Research Division

UNL Extension

USDA Cooperative State Research, Education and Extension Service

Activity: Integrated Livestock Systems Management

Topic: Ethanol Wet Co-product Feed Payoffs

Issue: Nebraska is the nation's third largest ethanol producer and the largest ethanol producing state west of the Mississippi. Turning grain into fuel is big business for the Cornhusker state and making the best use of co-products from this production is critical to the industry's success.

What has been done: University of Nebraska-Lincoln animal scientists pioneered research on how to feed cattle wet co-products from ethanol and corn processing. Their research in the 1990s proved the feasibility, benefits and economic advantages of feeding wet gluten feed, wet distillers grains and steep liquor to cattle directly instead of drying and shipping them to dried feed markets. They found that drying actually reduces co-products' nutritional value. Feeding co-products wet saves drying costs for processors and provides an economical feed for cattle producers. Nebraska scientists, who are leaders in co-product feeds research, continue studies that have helped the cattle industry make the best use of these co-products. Their findings have been instrumental in encouraging some ethanol plants to locate in Nebraska. Extension faculty have conducted numerous educational programs for cattle feeders and cow-

calf producers that have addressed co-product use. The 2006 Husker Nutrition Conference specifically addressed feeding of co-products to ruminants.

Impact: Thanks largely to this research, wet co-products from ethanol and corn processing have become a major source of cattle feed in Nebraska, a leading cattle feeding state. Use of wet feeds provides major and ongoing economic benefits. It's estimated that, from 1992 through 2004, the cumulative benefit to Nebraska from feeding co-products wet instead of dry was \$400 million. Feeding wet co-products saves cattle feeders \$10 to \$20 per head; selling co-products wet instead of drying them reduces ethanol production costs about 5 percent. The 2006 Husker Nutrition Conference attracted 132 individuals, who influences a total of 3.6 million cattle and 900 livestock operations. Specifically, 15 participants noted a willingness to increase feeding rates of milling co-products from levels currently being used. Participants responding to a conference survey indicated that knowledge gained at the conference had the potential for increasing profitability by \$7.38 per head (average of all respondents); thus, a total estimated impact of up to \$26.6 million.

Funding:

Nebraska Corn Board
Nebraska Ethanol Board
UNL Agricultural Research Division
UNL Extension

Activity: Sustainable Agricultural Production Systems

Topic: Alternative Crops for the Nebraska's Panhandle's Arid High Plains Climate

Issue: Alternative, higher value crops can broaden crop options for farmers and bolster regional economies, but new crops also are risky. Farmers need information about producing unfamiliar crops under local conditions as well as their market potential.

What has been done: University of Nebraska–Lincoln agricultural scientists and UNL Extension staff have identified and are educating producers about promising alternative crops for the Nebraska Panhandle's arid high plains climate. The effort focuses on alternatives with higher value potential for growers and the region's economy. Studies have revealed how best to plant, manage and harvest several new crops. Scientists identify existing varieties best suited to local growing conditions or breed new varieties for the region and explore a new crop's market potential. New crops being grown in the Panhandle as a result of these efforts include: proso and foxtail millet and sunflowers for birdseed; chickpeas for human food; turf and forage grass seed, and chicory. Brown mustard and canola for environmentally friendly biodiesel production are among the latest crops being studied.

Impact: New crops have expanded farmers' production options and added millions of dollars to the region's economy. Birdseed crops now grow on 250,000 Panhandle acres and birdseed production is a \$20 million a year industry, including several processing plants that extension staff helped attract to the region. Panhandle growers produce about 1,500 acres of grass seed valued at \$1 million annually. The region's 900 acres of chicory, valued at \$1 million annually, are processed at the nation's only chicory processing plant in Scottsbluff, which opened in 2001. The Panhandle now produces 10,000 acres of chickpeas and with 80 percent of U.S. chickpeas imported, there's room to grow.

Funding:

UNL Agricultural Research Division
UNL Extension

Goal 2

Activity: Food Processing and Food Service Management of Food Safety

Topic: Listeria Monocytogenes Controls in Ready-to-Eat Meat Products

Issue: Small and very small rural businesses are challenged by a lack of education in the application of ingredients for *L. monocytogenes* control and a lack of published, validated research on products they produce. This project was designed to reduce the risk of *Listeria monocytogenes* in HACCP systems and to implement product formulation changes for ready to eat meat (RTE) products produced by small and very small meat and food processors in the Great Plains.

What has been done: The goal of this effort has been to increase the knowledge and skills of processors who operate small and very small business in rural locations by validating their processes for ready-to-eat (RTE) meat and poultry products to control *L. monocytogenes* through the use of antimicrobial ingredients; by providing training and information on product reformulation for *Listeria* control; by assuring that safe ready-to-eat products are acceptable to rural clientele; and by incorporating new *Listeria* knowledge into a national workshop training model. Extension professionals and researchers in the Great Plains states have worked cooperatively to conduct *L. monocytogenes* validation experiments in RTE meat and poultry products. Information obtained from these experiments has been incorporated into hands-on workshops provided to processors operating in rural Great Plains regions. Processors are taught how to incorporate antimicrobial ingredients into formulations to produce products having similar quality characteristics of existing products. Educational programs and training opportunities to integrate new *Listeria* knowledge into pre-requisite programs and HACCP plans have been provided through meetings, educational material, and one-on-one technical assistance. From these workshops and meetings, a national workshop model will be developed that can be used by Extension professionals to assist meat and poultry processors nationwide.

The four states (Nebraska, Kansas, Missouri, and South Dakota) have designed studies to better understand the use of the antimicrobial ingredients sodium lactate plus sodium diacetate; and buffered sodium citrate and sodium diacetate. The studies are designed to determine the effect of these antimicrobials on the outgrowth of *Listeria monocytogenes* during refrigerated storage and the changes in product quality of ready to eat meats. Each state selected a product commonly produced by small business processors, including boneless ham, course ground hot dogs, bologna, and snack sticks. Each state is currently implementing the studies and collecting data. In addition, the four states have conducted workshops targeted at small business meat processors addressing the control of *Listeria monocytogenes* in ready to eat meats and the USDA regulations concerning ready to eat meat and poultry.

Impact: The work on this project is continuing. The majority of small business meat and poultry processors produce ready to eat meat products including hot dogs and deli products that present a greater risk for foodborne illness from *Listeria monocytogenes*. These processors normally produce products without antimicrobial ingredients or other interventions for the control of *Listeria monocytogenes*. This work is expected to demonstrate to small businesses that they can include antimicrobial ingredients in their ready to eat meat products without affecting product quality. Including antimicrobial ingredients in ready to eat meat products would provide the easiest method for small meat and poultry processors to reduce the risk of listeriosis for their products. In addition, this work should make it easier for very small meat processors to comply with USDA regulations for *Listeria monocytogenes* control in ready to eat meat products.

Funding:

UNL Agricultural Research Division

UNL Extension

USDA CSREES

Goal 3

Activity: **Human Nutrition, Health and Safety**

Topic: Food Labeling Decisions

Issue: For most people, food labels provide helpful nutritional information. For people with food allergies, accurate labels can be a matter of life and death.

What has been done: An international study by University of Nebraska-Lincoln food scientists found that highly refined soybean oil does not trigger reactions in soy-sensitive people. Refined soy oil is commonly used in foods worldwide. Findings don't apply to cold-pressed soy oil, which has higher levels of protein, or allergens, that may present a risk to soy-allergic consumers and should be labeled. These UNL Food Allergy Research and Resource Program scientists shared their findings internationally with policymakers, congressional staffers, industry, farmers and consumers.

Impact: The UNL findings provided scientific evidence for European Union food allergen labeling decisions in 2005 and the U.S. Food Allergen Labeling and Consumer Protection Act of 2004. The EU temporarily exempted highly refined soy oil from food allergen labeling regulations. Earlier, U.S. regulators exempted highly refined vegetable oils derived from known allergens, such as soybeans or peanuts, from the federal food allergen labeling law that took effect this year. These decisions helped preserve farmers' widest possible access to world markets and expanded the types of foods soy-allergic people know they can safely consume.

Funding:

UNL Agricultural Research Division

UNL Extension

United Soybean board

Private food companies

Goal 4

Activity: **Natural Resources Management and Protection**

Topic: Water Optimizer

Issue: Continuing drought, interstate water compacts, and new state legislation have led to limitations on available irrigation water supplies. Nebraska irrigators facing water shortages must make difficult and complex choices about how best to use limited water.

What has been done: An agricultural economist and a biological systems engineer at the University of Nebraska-Lincoln developed the Water Optimizer. This decision-support computer program became available in late 2005 to help farmers make better-informed cropping choices such as determining whether it would be most profitable to grow different crops, irrigate fewer acres, apply less water to existing crops or go to dryland farming. Growers load information about their operation such as the amount of water available, soil type, irrigation system type and fuel type for irrigation. They also enter production costs, irrigation costs, crop prices and crop type. The Water Optimizer is available on the Web at <http://extension-water.unl.edu/> or on a DVD/CD set and was promoted at dozens of UNL Extension meetings in 2005 and 2006.

Impact: This Institute of Agriculture and Natural Resources-developed tool is helping Nebraska farmers make more informed choices that conserve water and help maintain producer profits. Over 700 users have

downloaded or purchased the tool. By running "what if" scenarios, growers can see the best options for farming with limited water whether it be growing different crops, irrigating fewer acres, applying less water to existing crops or going to dryland farming.

Funding:

UNL Agricultural Research Division
UNL Extension

Activity: **Environmental Protection**

Topic: **Manure and Antibiotics**

Issue: Applying manure to cropland enriches soil and puts waste to good use. Today's manure may contain traces of antibiotics used in livestock production and there's growing interest in knowing what happens to antibiotics in the environment.

What has been done: UNL IANR agricultural scientists teamed with a USDA Agricultural Research Service researcher at UNL to study the fate of antibiotics. Manure from confined cattle fed the recommended dose of oxytetracycline, an antibiotic commonly used in beef cattle rations, was applied to irrigated corn plots at UNL recommended or twice the recommended rates. Soil was sampled at different depths and water from the bottom of 8-foot deep sealed columns of soil was tested. Traces of oxytetracycline were detected in topsoil for 17 months after manure application. Levels decreased over time and the antibiotic was undetectable after 18 months. Two years of testing found no oxytetracycline in water collected 8 feet under the test plots. This information has been used in providing education to state regulators and livestock feeders. It will ultimately be valuable input to the development of Comprehensive Nutrient Management Plans.

Impact: The research provided one of the first overviews of what happens to antibiotics in manure that is applied to irrigated cropland. It provides the foundation for further studies to better understand potential health and environmental implications. The information has been key to helping both regulators and producers understand the potential issues relative to antibiotics in manure.

Funding:

UNL Agricultural Research Service
UNL Extension
USDA ARS
US EPA

Goal 5

Activity: **Family Strengths**

Topic: **Rural Immigrants**

Issue: Rural immigrants furthering their education while working face many challenges.

What has been done: University of Nebraska–Lincoln Research and Extension faculty hope to improve the chances of success by identifying what helps or hinders rural immigrants' educational pursuits. This study of bilingual Latinos in Northeast Nebraska pursuing online classes at UNL showed significant family or community support and access to child care are keys to success.

Impact: Participants with more support and those who were integrated into their communities reported less stress and depression. These results and further research should help provide better services for rural immigrants and women seeking an education.

Funding:

UNL Agricultural Research Division

UNL Extension

UNL College of Education and Human Sciences