

# Impact Writing Examples

(Handout for Hands-On Impact Writing Workshops, Winter/Spring 2000)

*These are examples of NU Cooperative Extension as well as a few research and teaching impacts from IANR submissions to the Impact '99 national database, which is part of the Landgrant/USDA Impact Reporting Project. This format is easily adapted to other impact reporting efforts. The extension impacts are based on EARS report information. After each most of these impact statements is a brief version that illustrates the sort of brief message some audiences demand.*

## **Water Quality and Environment**

### **Issue:(Who cares and why?)**

With more than 8 million irrigated acres, Nebraska is second only to California in irrigated agriculture. Making the most of every drop of water through efficient water use and application is critical to agricultural profitability and water quality protection.

### **What has been done?**

SPLASH, a one-on-one irrigation water management program in Nebraska's Central Platte Valley, helps irrigators reduce water, energy and fertilizer use. Participants receive irrigation management consultation from University of Nebraska Cooperative Extension and Natural Resource Conservation Service staff. Consultations educate producers about innovative irrigation technologies and tried-and-true irrigation best management practices. Since 1993, 93 irrigators who irrigate an average of 380 acres each have participated in the program.

### **Impact:**

Cooperating farmers estimate they've reduced their annual pumping and irrigation costs an average of \$3,600 each, or a total of \$335,000, through this program. This covers an annual water savings of 46.4 million gallons on roughly 35,000 acres irrigated by cooperators. Program organizers also estimate SPLASH prevented about 630,000 pounds of nitrogen fertilizer from leaching into groundwater, saving an additional estimated \$88,200.

One farmer reported that using less water and adequately watering the crop with fewer irrigations "is a real eye opener for a lot of people and can result in water and power savings."

### ***Irrigation program makes a big splash***

An irrigation management program in Nebraska's Central Platte Valley helps irrigators make the most of every drop of water while protecting groundwater. Individual consultations with University of Nebraska Cooperative Extension and Natural Resource Conservation Service staff help participating irrigators reduce water, energy and fertilizer use. Since 1993, 93 irrigators have participated in the program. Cooperating farmers estimate they've reduced their annual pumping and irrigation costs an average of \$3,600 each, or a total of \$335,000, through this program. This includes over 46 million gallons of water saved annually on about 35,000 acres. It's also estimated that SPLASH prevented about 630,000 pounds of nitrogen fertilizer from leaching into groundwater, saving an additional \$88,000.

## **Strengthening Nebraska Communities**

### **Issue: (Who cares and why?)**

Living in sparsely populated areas can leave some rural Nebraskans feeling out of the loop on today's high-speed, worldwide electronic communications. A University of Nebraska program helps rural residents develop the Internet savvy to share information and promote their businesses and communities worldwide.

### **What has been done?**

Modeled after Cooperative Extension's successful Master Gardener program, the Master Navigator program trains rural Nebraskans how to use the Internet. In return, participants agree to volunteer 30 hours training others.

Launched in 1997, the 24-hour training includes communicating via e-mail, creating World Wide Web pages and making a difference in communities. Based on participant feedback, program collaborators added sessions on computer basics and helping to match participants with volunteer opportunities.

NU's Center for Rural Community Revitalization and Development collaborates with the Nebraska Department of Economic Development, the U.S. Department of Agriculture and other NU Institute of Agriculture and Natural Resources units on this project. Local partners include libraries, community colleges, community information technology committees, county extension offices and chambers of commerce.

**Impact:**

In 1997 and 1998, over 250 Nebraskans in 16 communities became Master Navigators and promised to provide at least 4,000 total volunteer hours helping their communities and neighbors learn about and use the Internet. One Master Navigator logged 30 hours and wants to continue volunteering to help older Nebraskans overcome computer intimidation. Another volunteer developed a web site for a local historical society. Volunteers in Fremont are promoting a community-wide information network by posting information about the city on the web.

***Surf's up ... Navigating the Net***

Nebraskans are developing Internet savvy to share information, promote their businesses and help their communities through a University of Nebraska Cooperative Extension program. Modeled after extension's successful Master Gardener program, the Master Navigator program trains rural Nebraskans to use the Internet. In exchange, participants agree to volunteer 30 hours training others. In 1997 and 1998, more than 250 Nebraskans in 16 communities became Master Navigators. They're volunteering at least 4,000 hours to help their communities and neighbors tap and use the Net. For example, one volunteer helped older Nebraskans get comfortable using computers. Another developed a local historical society web site.

**Agricultural Profitability and Sustainability**

**Issue: (Who cares and why?)**

Nebraska is second nationally in cattle and calf production. To stay competitive cattle producers need the latest information on beef nutrition, health care, market and industry trends, research and meat safety. University of Nebraska Cooperative Extension brings education home with courses producers can take on their own schedules.

**What has been done?**

Beef Cow Basics, a series of home-study courses taught from the rancher's perspective, has been offered since 1993 by NU Cooperative Extension in cooperation with private industry. More than 4,000 producers from 40 states have taken the courses.

Courses focus on nutrition and forage use; reproduction, genetics and selection; nutrition, health and management of growing calves; financial issues, such as using records and developing business plans, and people management. Course materials are delivered right to the farm or ranch. Producers work at their own pace and return tests to extension educators for evaluation and feedback. More than 95 percent of participants say it's important for them to be able to study when they have time and to work from home instead of traveling for courses. Course offerings are fine-tuned based on participant feedback. In 1998, the nutrition and forage use course was offered via the World Wide Web.

**Impact:**

A 1998 survey of 165 participants shows beef producers reduced costs an average of \$15 per head after taking the course. Since the course began in 1993, the overall benefit has exceeded \$6 million, based on the number of cows involved.

More than 90 percent of respondents said they would make management changes because of the course. One participant reported cutting calf sickness 50 percent by changing his operation's feeding and health program based on course information. Another said the record-keeping information was helpful because the beef business is all

about knowing costs and making the right decisions.

### ***Learning at home on the range***

Ranchers in Nebraska and other states are sharpening their management skills without leaving home through University of Nebraska Cooperative Extension's beef home study courses. More than 4,000 producers in 40 states have taken the Beef Cow Basics home-study courses since they began in 1993. More than 95 percent of participants say it's important for them to be able to study at home on their schedule instead of traveling for courses. Producers reduced costs an average of \$15 per head after taking the course, a 1998 survey showed. Since 1993, the overall benefit of these courses has topped \$6 million, based on the number of cows involved. One rancher reported reducing calf sickness 50 percent by -changing his feeding and health program based on course information.

### **Agricultural Profitability and Sustainability**

#### **Issue: (Who cares and why?)**

An educational and marketing partnership involving University of Nebraska Cooperative Extension, agribusinesses and farmers is giving farmers and agribusiness people a leg up on profitability.

#### **What has been done?**

Launched in 1989, the Nebraska Soybean and Feed Grains Profitability Project works to fine-tune management techniques to maximize profits through applied on-farm research, marketing groups, educational programs and enterprise record analyses. Participating farmers and agribusinesses make a three-year commitment to the program. University of Nebraska Cooperative Extension educators and specialists currently work with 34 Nebraska farmers and 12 agribusiness people. In the program's first nine years, the NSFGPP served 67 farmers and 14 agribusinesses.

Farmers increase their knowledge and skills, implement new technologies and concepts, and enhance environmental practices. Participants also have closer access to cutting edge technologies such as the Internet and precision farming.

#### **Impact:**

Farmers and consultants currently involved in the Nebraska Soybean and Feed Grains Profitability Project are responsible for more than 205,000 cropland acres. Participating farmers estimated they've each improved profits by more than \$7,000 annually -- for a total of \$245,000. Agribusiness participants estimate an average annual benefit of \$1,375 each.

One participant said the program "brings extension close to the producer in a very practical way." Another said it has "helped producers hone leadership skills, production skills, economic advantage, environmental and conservation awareness."

### ***Ag management and technology tune-up***

Farmers and agribusiness people are fine-tuning management techniques and accessing the latest technologies, such as Internet and precision farming, through the Nebraska Soybean and Feed Grains Profitability Project.

The NU Cooperative Extension project helps participants maximize profits through on-farm research, marketing groups, educational programs and enterprise record analyses. The 34 farmers and 12 agribusiness people currently involved are responsible for more than 205,000 cropland acres. Participating farmers estimated they've each improved profits by more than \$7,000 annually -- for a total of \$240,000. Agribusiness participants estimate an average annual benefit of \$1,375 each.

## **Food Safety, Health and Wellness**

### **Issue: (Who cares and why?)**

Nationwide, foodborne illness strikes between 6.5 million and 33 million Americans and causes as many as 9,000 deaths annually. Assuring food served in restaurants, schools and nursing homes is as safe as possible is the aim of a University of Nebraska Cooperative Extension program.

### **What has been done?**

Since 1994, NU Cooperative Extension has offered ServSafe training to more than 3,000 food service managers in Nebraska, including 500 managers during fiscal 1997-98. Extension teams with the Nebraska Department of Agriculture and the Nebraska Health and Human Services System to offer the program throughout the state to teach participants safe food handling procedures. ServSafe's success prompted extension to develop and launch new training for cooks and wait staff in 1998.

### **Impact:**

Statewide, 95 percent of ServSafe participants passed a national certification test following training. Managers report increasing their knowledge of safe food handling techniques that can reduce the risk of foodborne illness by about 33 percent. Each ServSafe manager shared information with an estimated 15 fellow employees, multiplying the training's impact. State inspectors report observing more food safety practices being used in food service establishments where managers have attended ServSafe.

### ***Safe food on the go***

Americans eat nearly half their meals away from home. That makes the safety of food served at restaurants, school cafeterias and nursing homes more important than ever. To help assure the food you eat away from home is safe, NU Cooperative Extension teaches safe food handling procedures to food service managers statewide through the ServSafe program.

More than 3,000 Nebraska food service managers have been trained through this program since 1994. Statewide, 95 percent of ServSafe participants passed a national certification test following training. Each ServSafe manager shared information with an estimated 15 employees, multiplying the training's impact. State inspectors report that more food safety practices are used in food service establishments where managers have attended ServSafe.

## **Children and Youth Development**

### **Issue: (Who cares and why?)**

Character development is critical for fostering children's overall sense of well-being, recent studies show. A University of Nebraska Cooperative Extension program helps children sort right from wrong and encourages them to use universally accepted values to strengthen their character.

### **What has been done?**

Since 1996, the Character Counts! program through Nebraska 4-H has reached thousands of Nebraska kids, ages 4 to 18, with activities in schools, day camps, child care, civic groups, 4-H and other organizations. The national program, originally developed by the Josephson Institute of Ethics, teaches trustworthiness, respect, responsibility, fairness, caring and citizenship as the six pillars of character. Age-appropriate games, role playing, discussions and examples make these character concepts understandable.

In the past two years, 1,900 Nebraska youths and adults have been trained to teach Character Counts! In 1998, 20,000 children received 15 hours of Character Counts! educational programming in their classrooms. The curriculum reached another 123,000 kids through one-time exposure at day camps, the Nebraska State Fair and civic groups. More than 700,000 adult Nebraskans have learned about Character Counts! indirectly through radio, television, newspaper and other sources.

### **Impact:**

More than 80 percent of the teachers and facilitators who use the program report an overall positive difference in

children they teach, a recent survey showed. Behavior changes include children being more helpful to others, more truthful and less likely to blame others. The program also influences adults. Seventy-five percent of the teachers and facilitators responding said they changed their own behavior as a result of the training.

In Lincoln County, Neb., a mental health therapist who uses Character Counts! with school-age patients reported a 9-year-old client tapped his Character Counts! knowledge when he found a money-filled envelope. The boy asked his grandmother to help him contact the police to find the owner. Instead, they used the deposit slip in the envelope to find the bank customer and return to money.

### ***Building character***

A program through Nebraska 4-H helps children sort right from wrong and encourages them to use universally accepted values to strengthen their character. Launched by NU Cooperative Extension in 1996, the Character Counts! Program has reached thousands of Nebraska kids with activities in schools, day camps, child care, civic groups, 4-H and other organizations. Developed by the Josephson Institute of Ethics, the program teaches respect, trustworthiness, responsibility, fairness, caring and citizenship as the six pillars of character.

More than 80 percent of the teachers and facilitators who use the program report an overall positive difference in children they teach, a recent survey showed. And 75 percent of adult teachers and facilitators responding said they changed their own behavior thanks to the training.

### **Pest Management**

#### **Issue: (Who cares and why)**

Farmers in two small areas of Nebraska began noticing a couple of years ago that one insecticide application wasn't controlling western corn rootworm beetles. By 1994, beetles survived up to three insecticide applications, at increased rates -- potential signs of an insecticide resistance problem. University of Nebraska entomologists launched research to pinpoint the problem and determine the extent and mechanisms of resistance in hopes of preventing its spread.

#### **What's Been Done:**

NU and USDA entomologists studied sites across Nebraska, tested beetles from across the state and pinpointed problem areas in York and Phelps counties. They then conducted field trials testing the performance of different insecticides, mapped the extent of Nebraska's resistance problem and tested beetles collected from across the Corn Belt. They found that rootworm beetles in the two Nebraska areas had developed resistance to organophosphate and carbamate insecticides. So far, it appears the resistance hasn't spread beyond Nebraska's problem areas. In the laboratory, the team is tracing the biochemistry of the mechanisms of resistance. Preliminary results indicate the two beetle populations have different biochemical means for insecticide resistance.

#### **Impact:**

Western corn rootworm is a major Corn Belt pest that costs producers millions of dollars annually in crop loss and controls. Through this research, NU entomologists developed a diagnostic test kit to quickly identify whether beetles are insecticide resistant. Entomologists now can collect beetles in a field, place them in test kit vials and have answers in four hours. Research on the biochemical resistance mechanisms is key to identifying which insecticides are still effective with different resistant populations. These findings will be the basis for recommendations to producers about effective control strategies.

### **Designing and Creating Healthy Food**

#### **Issue: (Who cares and why?)**

Omega-3 fatty acids are known to help reduce the risk of heart disease. A University of Nebraska researcher has unscrambled the mystery of how to economically produce eggs high in these beneficial fatty acids.

#### **What has been done?**

An NU Institute of Agriculture and Natural Resources poultry scientist originally produced Omega eggs high in

omega-3 fatty acid by feeding hens a diet containing flax seed, a significant source of omega-3 fatty acids. It worked but wasn't efficient. Through further research, she identified nutrient modifications that enable hens to lay eggs more efficiently on the flax diet. She developed a complete management plan outlining every step in efficient Omega egg production. This system provides good nutrition for chickens, produces a consistent product and addresses food-safety issues.

Each Omega egg contains 350 milligrams of omega-3 fatty acids. NU research shows that eating up to two Omega eggs a day can reduce the amount of serum triglycerides in a person's blood by 14 percent. High triglyceride levels are one risk factor for cardiovascular disease. Omega eggs also have been shown to increase the ratio of good to bad cholesterol and decrease the risk of cardiovascular disease by reducing the occurrence of blood clots.

**Impact:**

NU is patenting this Omega egg production system, which allows egg producers who use it to produce Omega eggs for 2 cents to 3 cents a dozen more than regular eggs. The university is working to license the program to a commercial egg producer. The system provides an economical system for producing this specialty egg product and also should benefit consumers by making Omega eggs more available, perhaps at lower prices than in the past.

***NU's patents system for producing Omega eggs***

An IANR poultry scientist has unscrambled the mystery of how to economically produce eggs rich in beneficial omega-3 fatty acids. These fatty acids help reduce heart disease risk. This scientist devised a complete management system for economically producing the so-called Omega eggs. NU patented the Omega egg production system and has licensed the technology for processed egg products. The university is negotiating a nationwide license with specialty egg producers.

**Animal Health and Well-Being**

**Issue: (Who cares and why?)**

Quickly, accurately detecting pseudorabies, even when it's latent or dormant, is critical to the success of a national campaign to eradicate the devastating swine disease. Effective control and the fate of entire swine herds can hinge on knowing for certain whether a single pig actually carries the highly contagious disease.

**What has been done?**

The University of Nebraska's Veterinary Diagnostic Center has been a leader in developing advanced pseudorabies detection and diagnostic techniques since the Pseudorabies National Eradication Campaign began in 1989. In the late 1980s, the Nebraska center was the only lab capable of advanced pseudorabies testing and the first to apply DNA Polymerase Chain Reaction (PCR) technology to the disease. These powerful tests provide fast, accurate results when single pigs test positive in standard tests within otherwise negative herds. These single positives generally are false but regulators and producers must be sure. NU's advanced tests accurately determine whether these single reactors actually are infected. Quarantine decisions for entire herds can be made with certainty, based on results.

In addition to playing a key role in Nebraska's eradication efforts, the NU Institute of Agriculture and Natural Resources center tests samples for state veterinarians and diagnostic labs across North America. The center also provides advice on national eradication campaign diagnostic policies and procedures, and serves as a national reference center for pseudorabies PCR diagnosis.

**Impact:**

The advanced tests and procedures developed by Nebraska scientists have helped regulators, veterinarians and producers make significant progress in the fight against pseudorabies. Many labs across North America and abroad now use Nebraska's tests and procedures. Nebraska is 99 percent free of pseudorabies and is expected to be pseudorabies-free by fall 1999. NU's Veterinary Diagnostic Center continues to provide national leadership in

pseudorabies testing and diagnosis. The national campaign is on target to meet its goal of eradicating pseudorabies from U.S. swine by the end of 2000.

### ***Help in the pseudorabies fight***

NU's Veterinary Diagnostic Center has played an important role in the National Pseudorabies Eradication Campaign to eliminate the disease from the nation's swine herds. The center is a leader in developing advanced pseudorabies detection and diagnostic techniques and was the first to offer some specialized tests. The advanced tests and procedures developed by NU veterinary scientists have helped regulators, veterinarians and producers make significant progress in the fight against pseudorabies. Many labs nationwide and abroad have adopted NU's tests and procedures.

### **Modern Educational Strategies**

#### **Issue: (Who cares and why?)**

Finding solid academic and social niches in a large university is key to staying in school, earning good grades, getting involved in campus activities and graduating. This is especially true for students leaving small, familiar towns for a big-city campus miles away.

#### **What has been done?**

University of Nebraska-Lincoln housing officials worked with the College of Agricultural Sciences and Natural Resources and the College of Human Resources and Family Sciences to develop a program that helps freshmen in these colleges live, learn and grow together during the challenging first year of college.

In 1997, the Achievement, Commitment and Excellence (ACE) program opened its doors by housing some freshmen students in one dorm where they are surrounded by other freshman with similar interests. They have access to support services such as tutoring and advising, upper class mentors and dinners with faculty. Students take a leadership and personal development class to help them become leaders on campus and in their communities following graduation. In 1998, ACE enrollment increased from 48 to 68 students.

#### **Impact:**

In its first year, the ACE program had a 92 percent retention rate -- 44 of the 48 freshmen participants returned as sophomores in 1998. This compares to a 79 percent UNL-wide retention rate for freshmen who became sophomores in 1998. One participant, a national FFA vice president, described ACE's emphasis on life skills such as teamwork, community service and leadership as "an awesome opportunity to grow as a person."

### ***Stacking the deck for success***

A new program is helping freshmen ace the transition from home to college. NU's College of Agricultural Sciences and Natural Resources and College of Human Resources and Family Sciences teamed with UNL housing officials to launch the Achievement, Commitment and Excellence program to help freshmen in these colleges. Participants say ACE helps them succeed academically and get involved in campus activities. In its first year, 92 percent of participants returned to UNL as sophomores compared to a 79 percent rate university-wide.

### **Innovative Use of Information and Educational Technology**

#### **Issue: (Who cares and why?)**

As grain and livestock prices fluctuate, farmers and ranchers across the country seek ways to increase their profit potential by controlling the prices they receive for their products. Understanding why markets fluctuate helps producers better predict when to sell their product for the best price.

#### **What has been done?**

The University of Nebraska developed a 15-week distance education course, Marketing Agriculture, to help farmers and ranchers understand how to aggressively market their commodities. Participants learn about forward cash contracting, using futures markets and options to reduce risk, and how world events and historic price patterns affect current markets.

Participants receive a weekly videotape containing two or three one-hour lessons that incorporate up-to-date information. Producers can watch tapes at home at their convenience, view them as often as they like and can keep them for future reference. Those with Internet access can watch each class session live on the Internet as it's being taped. To date, over 1,500 people from more than 25 states have taken the course. In addition, course videotapes have been used in workshops conducted by elevators and other organizations.

**Impact:**

Farmers and ranchers across the country say their profits increased after they applied what they learned in the course. One participant credited a \$67,500 income increase to the course. Another participant said profits tripled as a result of learning how to market his grain differently.