

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

People and their Wellbeing

- Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		21%	
204	Plant Product Quality and Utility (Preharvest)	0%		6%	
303	Genetic Improvement of Animals	0%		1%	
308	Improved Animal Products (Before Harvest)	0%		1%	
403	Waste Disposal, Recycling, and Reuse	0%		5%	
501	New and Improved Food Processing Technologies	0%		4%	
502	New and Improved Food Products	0%		9%	
503	Quality Maintenance in Storing and Marketing Food Products	0%		4%	
607	Consumer Economics	0%		2%	
608	Community Resource Planning and Development	15%		1%	
610	Domestic Policy Analysis	0%		5%	
702	Requirements and Function of Nutrients and Other Food Components	0%		13%	
703	Nutrition Education and Behavior	20%		1%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	0%		1%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	0%		4%	
724	Healthy Lifestyle	15%		5%	
802	Human Development and Family Well-Being	0%		12%	
806	Youth Development	50%		5%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	51.0	0.0	23.0	0.0

Actual Paid	85.0	0.0	17.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1687157	0	534949	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
2002170	0	437988	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Basic and applied research will focus on: 1) rural and urban family life and lifestyles; 2) human nutrition, with particular emphasis on how foods, our molecular and macro-environments, and food systems interact to impact our well-being; 3) food sciences, including food processing safety, food production waste reduction, and processing technologies to ensure human well-being and nutritious food choices.

Planned program activities include a cascaded approach to creating long-term behavior change. Each of these program areas will include: 1) mass-media educational efforts at reaching the general public (websites, news articles, general contacts); 2) 1-2 hour workshops that focus on increasing knowledge; 3) longer-term (4-6 hour) learning experiences that begin to change attitudes and practices; and 4) in-depth training that involves multiple contact opportunities over an extended period designed to create behavior change. By using this approach, a variety of learners are engaged in programming that best fits their needs.

Examples of program activities include:

- workshops for child care providers to increase their skills in developing social-emotional strengths in young children.
- web-based learning modules designed to give divorced or separated parents the skills to better interact with their families.
- campus-based career camps which enable high school students to interact with faculty while exploring post-secondary options.
- nutrition education workshops to help high-risk families make healthy choices on limited budgets.
- technology-based experiences using apps, social media, etc.) to help engage users in learning around core topics.
- workshops for food service providers and post-harvest producers on cutting-edge resources to enhance food safety and quality.

All of these program activities will be purposefully designed to reach targeted outcomes and achieve long-term impact.

2. Brief description of the target audience

The target audience includes:

- high-risk families
- children and youth
- families of young children (young children defined as those 0-8)
- producers
- food processing and retail establishment owners/workers
- consumers, and
- business/community leaders

3. How was eXtension used?

In 2013 (most recent time for which statistics are available), 112 Nebraska citizens using Ask an Expert asked 135 questions with 84 responses provided by UNL Extension faculty and a total of 417 Ask an Expert questions were answered for out-of-state people by UNL Extension faculty. Nebraska is represented by 281 eXtension members in 55 of the 76 CoPs and 22 who provide leadership for CoPs.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	388314	1755106	140000	28544

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2014

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	171	117	288

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of extension in-depth workshops.

Year	Actual
2014	110

Output #2

Output Measure

- Percentage of Agricultural Research Division HATCH projects in nutrition, family health and well-being, food safety, and career development.

Year	Actual
2014	14

Output #3

Output Measure

- Number of scholarly publications and curricula related to nutritional sciences and family well-being.

Year	Actual
2014	18

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increase adoption of pre-harvest methods for food quality and safety.
2	Nebraska will have access to higher educated workforce to meet the needs of the 21st century workplace.
3	Youth will increase behaviors that result in healthier lifestyles.

Outcome #1

1. Outcome Measures

Increase adoption of pre-harvest methods for food quality and safety.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	4456

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Agriculture is the economic driver in Nebraska's economy accounting for \$12 billion annually. Over half, \$7.2 billion, of this revenue comes from the beef industry. Improving the profitability of beef producers contributes to the economic vitality of Nebraska cities and towns. There are 6.3 million head of cattle and calves in Nebraska, ranking us second nationally. The cow-calf enterprise is a complex production system that integrates human, financial, and natural resources. As world populations continue to grow, the efficient, sustainable conversion of forage and feed resources into high-quality protein products will be increasingly important. Nebraska farmers and ranchers are positioned to be leaders in the production of economical, safe, and healthy food.

What has been done

Extension assisted processors in implementing food safety controls and new technologies for the reduction of food-borne hazards through the following:

- conducted five "Implementing Your Company's HACCP Plan" workshops with approximately 100 company employees and coordinated programming for three additional workshops. These workshops provided the employees with the tools to implement and manage HACCP in their facility to meet USDA regulations and reduce the risk of food-borne hazards.
- developed a workshop for controlling STEC in small meat (beef) processing operations.
- assisted two small meat processing businesses with establishment of grant of inspection and assisted approximately 30 very small meat processing businesses with HACCP plans, food safety plans, and responses to regulatory noncompliance.
- assisted with arrangements for a field study on antimicrobial interventions for reducing STEC on

veal carcasses during the slaughter process.

Extension also improved the understanding of livestock producers and meat processors on quality, consistency, and value of market animals and processed meat products through:

- a Pork 101 course designed to improve the quality, consistency and value of pork.
- a carcass boxed beef cut-out demonstration and beef value demonstration for Nebraska Cattlemen.
- a display on beef carcass grades, cuts and value for the Mobile Meat Laboratory during the Ak-Sar-Ben Livestock Expo.
- carcass contests for the Nebraska State Fair and the Ak-Sar-Ben Livestock Expo.
- a cured meats contest for the Nebraska Association of Meat Processors.
- four projects for clients involving the Food Processing Center and how to introduce a new product or ingredient.
- presentations with instructions for identification of retail meat cuts used in youth contests involving over 500 young people.

Results

Nebraska Extension faculty organized registration for eight workshops and taught and served as the lead instructor for five "Implementing your Company's HACCP Plan" workshops for industry in Nebraska, Kansas, Missouri and South Dakota. Two workshops were for a major beef processor in Liberal, KS. One-on-one assistance was provided to 15 small meat processing businesses for HACCP plan development, reassessment, and implementation of food safety procedures. Two small business companies were assisted with HACCP plans for establishment of federal meat inspection in their facility.

Nebraska Extension developed curriculum and an instructional video and presentation for process controls for E. coli O157 and non-O157 STEC in beef. A workshop curriculum with presentations and demonstrations was developed and pilot tested at a meeting with South Dakota small business meat processors and South Dakota State Meat Inspection personnel. An overview of STEC and this workshop curriculum was presented at the National Association of State Meat and Food Inspectors 2014 Annual Meeting. Extension organized the logistics for a research project for the reduction of STEC on bob veal calves during the slaughter process at Fresno State University. The project evaluated antimicrobial treatments applied to the hide during the slaughter process. An abstract poster session was presented at the 2014 Beef Industry Food Safety meeting.

Workshops provided participants with the tools to implement and manage HACCP in their facility to meet USDA regulations for HACCP and food safety. HACCP workshop participants indicated that they felt more comfortable in utilizing the HACCP principles in their programs and indicated that they would be using them regularly. The overall comfort levels of the participants for working with HACCP plans increased after completion of the course. Individual assistance was provided to small business meat processors with HACCP plans, and SOPs that would meet government regulations. Standard procedures for the control of E. coli will provide small business beef and veal processors with tools to train employees and improve slaughter process controls.

Extension organized and conducted carcass contests for the Nebraska State Fair and the Ak-Sar-Ben Livestock Show involving over 450 exhibitors. It organized and conducted Meat Evaluation and Identification contests for PASE and the Nebraska Career Development Events (CDE) and developed presentations on retail meat cut identification that are new for the youth CDE Meats Contest and the 4-H PASE Meats for the Consumer Contest to be published on the Web.

Extension conducted a workshop, including presentations and cutting demonstrations, for vocational agriculture instructors (FFA) on new retail cuts and laboratory practicums for the career development events. Exhibitors received carcass information to better understand the carcass quality characteristics and value difference of their show animal. Contest participants are exposed to meat evaluation and food safety to increase their knowledge on these subjects and to help them better understand career opportunities in the meat industry.

Extension helped to improve processed meat quality and profitability of small and very small meat processing businesses and organized and conducted the evaluation of processed meat products for the Nebraska Cured Meats Competition. Evaluations were conducted on over 250 processed meat products. Association members will be able to utilize the product ideas and meat processing techniques to improve the variety and quality of products they sell in their business.

Extension established programs for occupational safety, lock-out and tag-out programs, developed a HACCP plan for the production of Landjaeger snack sticks, and reassessed 13 HACCP plans for Loeffel Meat Laboratory.

4. Associated Knowledge Areas

KA Code	Knowledge Area
201	Plant Genome, Genetics, and Genetic Mechanisms
204	Plant Product Quality and Utility (Preharvest)
308	Improved Animal Products (Before Harvest)
608	Community Resource Planning and Development
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2

1. Outcome Measures

Nebraska will have access to higher educated workforce to meet the needs of the 21st century workplace.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
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2014

42250

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nebraska 4-H strives to help young people achieve their greatest potential by introducing high-quality youth development experiences into the lives of Nebraska youth and families. Engagement in 4-H results in youth who are making positive decisions related to their health and their future goals. Further, they are advocates and leaders determined to leave a lasting impact on Nebraska communities.

By taking part in Nebraska 4-H, youth are preparing for a successful future by focusing on five key areas: 1) Science, 2) Agricultural Literacy, 3) Career Development and College Readiness, 4) Community Engagement, and 5) Healthy Living.

What has been done

Program efforts in each of the five areas follows:

Nebraska 4-H is developing science interests, skills, and abilities in the areas of agriculture, energy, environmental stewardship, and technology. Signature program efforts included Outdoor Skills in partnership with Nebraska Game and Parks, GEAR-Tech 21 Robotics, Animals Inside and Out, Embryology, Corral your Future, Animal Science Day Camps and Companion Animal programs. These programs, each involving a minimum of 10 contact hours, were delivered to more than 4,500 young people. An additional 3,400 youth were reached through participation in the Nebraska State Fair Largest Classroom.

Nebraska 4-H is helping youth focus on their future success and preparing youth to make informed decisions about their college and career path. Signature program efforts included Connecting the Dots, Big Red Summer Academic Camps, Building Your Futures, Leap into Careers, and other college readiness programming delivered to more than 3,500 young people.

Nebraska 4-H ensures that youth have knowledge and an appreciation of agriculture, Nebraska's largest industry. Signature program efforts included the Ag-Citing Science school enrichment program delivered to nearly 700 youth and 15 Agricultural Literacy Festivals, which reached more than 5,500 young people.

Nebraska 4-H is fostering youths' commitment and contribution to their communities. Signature program efforts included 7 Habits of Highly Effective Teens, We the People, and Focus on Citizenship, which reached approximately 250 young people.

Nebraska 4-H is committed to preparing youth to pursue a post-secondary education. Annually, former 4-H'ers who participated in 4-H through their high-school career are surveyed regarding their post-secondary plans after their first semester in college. Results are presented below.

Results

In Nebraska, one in three age-eligible youth across all 93 counties are enrolled in 4-H, for a total enrollment of approximately 140,000 youth. Of those youth, nearly 50,000 participated in school enrichment experience; over 33,000 Nebraska youth were members of a 4-H Club; and nearly

11,000 youth and adults participated in 4-H camping programs. In addition, 12,000 volunteers shared their time and resources with Nebraska 4-H.

Results of specific program efforts follow:

- 87% of youth in the GEAR-Tech 21 program are excited to learn more about science and two in three youth are interested in a career in science.
- 81% of youth in Animals Inside and Out can successfully identify multiple animal by-products and 87% reported an increased interest in Animal Science.
- 79% of youth in the Outdoor Skills program agree that science is important in solving everyday problems and 84% learned problem-solving skills they can use in school.
- 80% of youth were able to correctly identify the source for milk, vegetables, proteins, and grains.
- 72% of youth knew agriculture is the largest industry in Nebraska.
- 78% could identify someone they know who has a career in agriculture.
- 98% of youth participating in Connecting the Dots understand their opportunities for post-secondary education in Nebraska; a 24% increase from before the program.
- 62% reported an interest in attending the University of Nebraska-Lincoln in the future.
- 75% plan to live and work in Nebraska after college.
- 78% of youth in the 7 Habits of Highly Effective Teens have developed a personal mission statement and goals; an increase of 35% from before the program.
- 98% of youth in community-engaged programs report that they value differences in others.
- 78% report having an opportunity through 4-H to contribute to their community.
- 96% are pursuing post-secondary education.
- 32% are attending the University of Nebraska-Lincoln.
- 93% have identified a major and 64% report that their selection was influenced by their 4-H project participation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #3

1. Outcome Measures

Youth will increase behaviors that result in healthier lifestyles.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	48250

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nebraska ranks 10 in the United Health Foundation's America's Health Rankings for 2014. Obesity increased to 29.6% and diabetes increased by 10% from 8.4 percent to 9% of adults. This has a negative impact on Nebraska's economy because of missed work and higher health care costs. In addition, because parents are often the food providers in the home, negative food behavior of adults leads to negative behavior in children and a more serious obesity spiral.

Despite these sobering statistics, changes are occurring. In the past year:

- children in poverty decreased by 27% (from 19.6% to 14.3%).
- immunization coverage among children increased by 9% (from 72.6% to 79%) of children ages 19 to 35 months. Nebraska has the second best child immunization coverage in the nation.
- preventable hospitalizations decreased by 13% (from 63.8 to 55.8 per 1,000 Medicare beneficiaries).

What has been done

Nebraska Extension provides food, nutrition, and health programming to an array of audiences through a variety of teaching methods. Extension provides resources for use in daily life and in environmental, economic, health, and community crises and emergencies.

Program participants are impacted through one-on-one education, group settings, health fairs, on-line and distance programs, social media such as Pinterest, Facebook, Instagram and Twitter, newsletters, blogs, web page development, mobile applications, and media. USDA/NIFA/AFRI grants with multi-state partners are focused on childhood obesity, food safety, and food security.

Nebraska Extension provided timely, relevant, and research-based information to media outlets, peer-reviewed publications, and presentations, and won individual and team awards at state, regional, and national levels. Collaborators include multi-state groups, Nebraska Department of Health and Human Services (DHHS), county and district health departments, USDA, Nebraska Department of Education, Community Action Partnerships, Action for Healthy Kids, Restaurant Associations, hospitals, and senior programs.

Nebraska Extension and the DHHS Supplemental Nutrition Assistance Program offers lessons in the areas of diet quality, food safety, and food resource management for the culturally diverse, limited-resource audiences in either individual or small groups.

Nebraska 4-H helps youth understand the impact of personal decisions. Signature program efforts included 4-H Healthy U, the Healthy Living Skill-a-thon, and a new 4-H Foods Contest at

the Nebraska State Fair. These programs reached approximately 250 young people. Additionally, hands-on activities in the areas of nutrition, physical activity, hand washing, food preservation, food preparation, and decision making were delivered to 11,500 youth.

In 2014, approximately 38,000 youth and 15,000 adults were reached with programming related to healthy lifestyles. Extension publications in this content area have been downloaded over 48,000 times and newsletter listserv subscribers total almost 9,000. Since 2010, <http://food.unl.edu> had over 5.2 million page views and 2.6 million users. Creating healthier eating patterns, increasing physical activity levels, improving health management practices, and reducing foodborne illness are top priorities to reach the goal of improving health and reducing social and economic costs for Nebraskans.

Results

Program examples and their results follow.

Food Smart Families: Helping Youth Make Healthier Choices: More than 1,000 hours were devoted to teaching healthy living programs to over 14,000 youth across Nebraska. A grant-funded initiative, the 4-H Food Smart Families program, reached 2,945 youth. As part of this undertaking, 14 youth ambassadors were trained to assist with presentations. Sessions were conducted at 11 sites across the state. Because of program participation youth agreed to strongly agreed that they:

- Learned what foods they should eat everyday (96%).
- Learned how to make healthy food choices (94%).
- Thought their family has prepared healthier meals (90%).
- Learned cooking skills (86%).
- Learned skills for buying food on a budget (80%).

Discovery Neighborhood: Youth Food Safety Education Program: A six- lesson food safety curriculum was developed for K-5th graders using conversation map methodology and experiential learning activities. Each lesson focuses on one FightBac! food safety concept with age-appropriate activities. Cartoon characters help youth learn curriculum concepts, and each lesson has an optional food activity that reinforces main concepts. A family newsletter is also distributed for youth to share at home. The curriculum was piloted in after-school settings in three different communities. Participants in the pilot showed an increase in knowledge for:

- hand washing (17%).
- cleaning and positive identification of items that contaminate surfaces (12%).
- separating (10%).
- cooking (30%).

The curriculum can be used in after-school or in-school settings and is now available throughout Nebraska and for purchase nationally at: <http://go.unl.edu/7gti>.

Worksite Wellness: Adults Achieving Healthier Outcomes: Working in partnership with Nebraska DHHS and WorkWell, Nebraska Extension designed and delivered a seven-week series of "food and fitness" webinars intended to meet workplace wellness requirements and to be offered at a low individual fee. Offered twice during the year (spring and fall), a total of 172 employees from 40 companies/organizations enrolled. The format allowed Extension educators to collaborate on programming and ensured consistent message delivery. Webinars could be viewed live or recorded, which provided flexibility in viewing and increased participation. Post-pre program survey results (45% return rate) included:

- About 82% of survey respondents viewed all webinars.
- Overall improvements were noted in healthier eating habits (73%), increased physical activity levels (51%), and weight loss (14%).
- Approximately 90% agreed to strongly agreed that the information was useful, up-to-date, and they learned something worthwhile.

Potential savings for rural Nebraskans totals nearly \$6.8 million on prescription costs because of extension's Medicare education and enrollment assistance since 2005. In its 14-year history, calculated savings in medical costs for Control Diabetes for Life participants equates to \$6.3 million.

SNAP-Ed reached 5,324 adults (78% of graduates improved in one or more food resource management skills and 84% improved in at least one nutrition practice) and 20,436 youth. EFNEP reached 1,938 adults (81% improved in at least one food resource management skill and 86% improved in at least one nutrition practice) and 1,912 youth.

Nebraska 4-H Inspiring Healthier Living programs results indicate:

- 90% know the value of a healthy, balanced diet.
- 89% reported plans to encourage their families to eat meals together.
- 93% learned how to deal with stress in positive ways.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
703	Nutrition Education and Behavior
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities

Brief Explanation

Research and extension have been able to successfully meet goals as planned in the area of people and their well-being. Nebraska Extension continues to be cognizant of over-arching

issues such as feeding 9 billion people, global water supplies, and how those will impact our work related to educating Nebraskans on healthier lifestyles and creating a well-educated workforce.

Research and extension faculty continue to be watchful for emerging issues and world conditions that could change food systems and the global trust that consumers have of U.S. agriculture. In addition, UNL faculty are at the forefront of basic research in food allergies, food safety through the food chain, and microbiome profiling.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Nebraska Extension has developed an impact report for each of its Action Teams. These can be found on our Extension impact page at: <http://www.extension.unl.edu/makingadifference>.

The Nebraska Agricultural Experiment Station measures its success in our ability to provide Extension with cutting-edge research results that impact Nebraska. In addition, we have begun to use a commercial product (Academic Analytics) to assess faculty productivity measures.

Key Items of Evaluation

Nebraska Extension continues to identify signature outcomes and indicators in each of its programming areas and is collecting statewide data to assess progress made toward achieving those outcomes. In 2014, each extension Action Team completed an outcome report highlighting their efforts and the impact of those efforts on clientele. These reports have been instrumental in working with stakeholders, who in turn used them to advocate on behalf of the extension program. Additional efforts are underway to enhance the skills of Action Team leaders in order to strengthen selected indicators and evaluation strategies.

Information regarding Academic Analytics can be found at: <http://www.academicanalytics.com/>