V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Childhood Obesity

☑ 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
702	Requirements and Function of Nutrients and Other Food Components	15%		35%	
703	Nutrition Education and Behavior	25%		3%	
724	Healthy Lifestyle	25%		14%	
802	Human Development and Family Well-Being	10%		34%	
806	Youth Development	25%		14%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	37.0	0.0	15.0	0.0
Actual Paid Professional	22.0	0.0	11.0	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
502433	0	243156	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
599073	0	86209	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

The Institute will conduct research and deliver extension education programs that will enable Nebraskans to increase their consumption of foods that match their specific MyPyramid recommendations and increase their physical activity levels. A variety of teaching strategies will be used for program delivery including face-to-face education, distance learning technologies, and use of eXtension programming.

In addition, long-term research strategies are aimed at 1) using use genome-based technologies to develop individualized nutritional strategies that will impact chronic "lifestyle" diseases and obesity, and 2) developing bioactive foods that provide health-promoting functionality when consumed.

2. Brief description of the target audience

The target audience includes:
- high risk families,
- children,
- families of young children (young children defined as those 0 - 8), and
- adults interested in increasing their overall health.

3. How was eXtension used?

In 2012, 21,00 visits to eXtension originated from Nebraska resulting in 67,000 eXtension web page viewings. In addition, 325 Ask an Expert questions originated from Nebraska and 523 responses were supplied by UNL Extension faculty. We have 147 faculty and staff that are members of 45 of 59 CoPs and 17 who provide leadership for CoPs.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	8000	16000	25000	50000

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

Patent Applications Submitted

Year:	2012
Actual:	1

Patents listed
INHIBITORS OF FATTY ACID UPTAKE AND METHODS OF USE.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	5	18	23

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of scholarly publications and curricula related to childhood obesity.

Year	Actual
2012	14

Output #2

Output Measure

- Number of extension in-depth workshops.

Year	Actual
2012	35

Output #3

Output Measure

- Percentage of Agricultural Research Division HATCH projects in childhood obesity, fundamental nutritional sciences, and family well-being.

Year	Actual
2012	3

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Youth will consume foods that match their MyPyramid recommendations.
2	Youth will increase the number of minutes spent in daily physical activity to recommended levels.
3	Adults will apply behavior change strategies to increase weight loss
4	Nebraska will have access to higher educated workforce trained in the new biology with skills applied to addressing critical science in child obesity

Outcome #1

1. Outcome Measures

Youth will consume foods that match their MyPyramid recommendations.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	24000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In Nebraska, over $498 million dollars are spent annually on obesity related health care. Obesity and physical inactivity are risk factors for heart disease and stroke, diabetes, and some cancers. In Nebraska, overweight and obesity affect 65% of adults and 33% of youth. The obesity issue translates into missed work, higher health care costs, and a negative impact on Nebraska's economy.

What has been done
One-on-one education, group meetings, on-line programs, social media, web sites, and educational applications (apps) are tools being used to share MyPlate recommendations to young people. Programs such as "5-4-3-2-1-Go!" were offered by Extension faculty statewide and emphasize the healthier eating and decreased screen time. In addition, 4-H programs have the overall goal of increasing healthy behaviors.

iCook is a new program under development. There are six sessions in the curriculum that have been pilot tested by a 5-state collaborative team through a USDA AFRI grant. The lessons are based off of UNL Extension Curricula titled Fast Foods and Youth in Motion. Each lesson includes culinary skill development, a specific nutrient focus, physical activities, family engagement and dinner time talking strategies.

Results
In 2012, 24,000 young people were reached with educational programs aimed at increasing the consumption of foods that match MyPlate guideline by UNL Extension. Of these, 89% reported increased knowledge of the food groups and eating a broader variety of foods.

As part of UNL Extension's nutrition programming, Nebraska's Nutrition Education Program (NEP)

offered school enrichment kits to 11 counties and reached 9,804 youth. In 2013, kits will be available in 51 counties. As a result of the school enrichment kits: 41% of Kindergarteners showed improvement in their hand washing knowledge. Ninety-eight percent of 1st graders correctly identified a food from the fruit/veggie food groups, 94% of 2nd graders correctly identified food groups in a sack lunch picture, 94% of 3rd graders identified food should be thrown in the trash if they think it is spoiled, 62% of 4th graders read food labels on the foods they ate, and 75% of 5th graders correctly identified the steps of Fight BAC! One Nutrition Education Program (NEP) Extension Assistant noted: "A 4th grader told me she taught her family how to read food labels and they stopped eating some foods because the food label helped them learn they weren't nutritious. It?s important to teach youth nutrition because they have such an impact on the food choices of a family."

In 2012, 16,804 youth participated in the SNAP-ED program. Before SNAP-Ed, 45% of youth reported that they ate breakfast or a snack before school that day compared to 82% of youth after SNAP-Ed. Youth also increased their knowledge in regards to the MyPyramid recommendations and the Dietary Guidelines. Of the 2,895 youth who participated in EFNEP, 72% of 997 youth increased knowledge of the essentials of human nutrition. Approximately 1,676 youth impacted through the Eating Smart from the Start program in Nebraska, 50% of childcare providers are purchasing and serving more fruits and vegetables.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #2

1. Outcome Measures

Youth will increase the number of minutes spent in daily physical activity to recommended levels.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	24000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
While making appropriate food choices is one part of the overall obesity issue, increasing physical activity is another part of that equation. Increased physical activity can lower risk for disease and illness which will eventually lead to lower long term medical costs for families and communities.

What has been done
Creating Balance with Food & Fitness is a program that addresses: balancing calories to manage weight, knowing which foods and nutrients to increase and decrease, and increasing physical activity levels. The 7 week program was piloted statewide in Spring, 2012 by Extension Educators live via webinar and archived on the eXtension website. Participants showed statistically significant improvements in physical activity levels, eating more fruits, vegetables and whole grains, using Nutrition Facts Labels, setting specific goals, and drinking more water. Created by Extension Specialists, Educators, and Assistants, this dynamic four-part curriculum is on the UNL Marketplace and provides over 25 hours of programming.

Results
Of those 24,000 youth who participated in nutrition education programs offered through UNL Extension in 2012, 78% of youth reported that they are almost always physically active every day and 76% percent reported knowing the amount of physical activity they need each day.

4. Associated Knowledge Areas

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

Outcome #3

1. Outcome Measures

Adults will apply behavior change strategies to increase weight loss

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual

2012	670

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In Nebraska, overweight and obesity affect 65% of adults. As stated previously, 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.

What has been done
In addition to the previously mentioned programs focused on increasing adherence of MyPlate guidelines and increasing physical activity, another program offered by UNL Extension designed to increase weight loss is Control Diabetes for Life. This is an educational program broadcast to several locations throughout the state and recorded for later viewing. Participants learn to control diabetes while preparing nutritious and delicious foods that are low in sugar and fat. This six-hour program helps participants establish new goals for diabetes self- management, control their blood sugar levels, and understand how physical activity contributes to the good health of a diabetic. Control Diabetes for Life has reached 4,500 people in its nine year history, providing a way to reach low income people diagnosed with diabetes and is offered free of charge in coordination with Nebraska Department of Health and Human Services and the University of Nebraska-Lincoln Extension.

Results
As a result of the "Control Diabetes for Life" program, participants reported statistically significant changes in: selecting and modifying new recipes to help families develop tastes for healthier foods and how to modify components in casseroles; developing techniques to use when cooking with sugar substitutes; understanding complications due to low levels of Vitamin D; understanding that being diagnosed with diabetes can increase the likelihood of experiencing winter time blues and/or depression and ability to identify causes of seasonal "blue" mood. Results of a one-year follow up survey showed that program participants had significantly either improved of greatly improved in the following areas: exercising (58%), using diabetes appropriate foods on special occasions (71.7%), avoiding nighttime lows in blood sugar (61.3%).

Estimates from the Department of Health and Human Services calculate the value of diabetes education at $900 per person saved in medical costs and loss of earning due to illness. Control of Diabetes for Life sessions for the November 2011-November 2012 had 670 participants in formal program settings. The calculated savings in medical costs for 800 participants (accounting for minimal amounts of on-line and TV participation) would equate to $720,000.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #4

1. Outcome Measures

Nebraska will have access to higher educated workforce trained in the new biology with skills applied to addressing critical science in child obesity

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	6800

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
With an increased need for scientists across the nation, a primary interest of Nebraska 4-H is to provide opportunities for youth to pursue science, engineering, technology, and applied math. It is anticipated that these traits and excitement will create a robust science pipeline that will be prepared to meet the challenges of multi-disciplinary issues like obesity. As a primary food producing state, Nebraska farmers and related agribusiness representatives must have access to a highly educated and trained work force in order to take advantage of new information, incorporate new technologies, and adjust to changing economic, social, and environmental conditions that increasingly suggest that the food we eat is directly linked to our overall health status.

What has been done
Nebraska 4-H is working to increase young people's interest and skill level in science by providing hands on learning experiences that encourage the development of science skills and abilities leading to an increase in science literacy amongst 4-Her's. We are doing this by developing comprehensive programming, curriculum, professional development, and resource materials for youth and adults. For example, as a result of Nebraska 4-H Science programming, nearly 800 youth participated in the 3rd Annual Robotics Expo. The Expo featured 48 teams from around the state competing in the FIRST Lego League, the CEENBoT competition, and the new Jr.First Lego League competition for youth ages 6-9.

In addition, 74 summer Gear Tech T-21 4-H Robotics Camps were held nationwide in 2012 serving nearly 1,800 youth. An additional 44 new Nebraska robotics clubs were started in 2012 with a total of nearly 5,000 youth participating in the project. Each of these experiences is a high dosage program focusing on science, engineering, and technology skills.

A holistic engineering curriculum centered on robotics the 4-H Robotics: Engineering for Today and Tomorrow curriculum was written, produced, and evaluated. The curriculum consists of three separate tracks, virtual robotics, junk drawer robotics, and platforms, each with three levels of content.

The University of Nebraska offers 27 undergraduate programs of study and two pre-professional programs in agriculture and natural resources, and 15 Master of Science and 12 Ph.D. programs. Our programs include agribusiness, animal science, agronomy, biochemistry, biological systems engineering, fisheries and wildlife, food science and technology, pre-veterinary medicine, professional golf management, etc.

Results

Nebraska 4-H is developing science interests, skills and abilities in the areas of agriculture, energy, environmental stewardship and technology. Results of a statewide survey of 4-H participants reported that 88 percent of 4-H'ers agreed or strongly agreed that they can explain their science-related decisions to others. Eighty-nine percent agreed or strongly agreed that science is important in solving everyday problems. Ninety-nine percent agreed or strongly agreed that good scientists work together to solve problems. Sixty-nine percent felt they learned skills they could use to solve problems in school.

In 2012, there were over 424 Baccalaureate and over 170 Masters/Doctoral degrees conferred at the University of Nebraska in agricultural and natural resources related areas. Over 85% of our Baccalaureate degree students find jobs in their fields or continue with their professional education; approximately 70% take their first job in Nebraska.

4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
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

Brief Explanation

Nebraska's support of higher education and UNL Extension allowed us to meet our goals as planned. UNL Extension continues to be cognizant of over-arching issues such as feeding nine billion people, global water supplies, and how those will impact our work related to childhood obesity.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

UNL 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 2012, 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/

Key Items of Evaluation