

**V(A). Planned Program (Summary)**

**Program # 5**

**1. Name of the Planned Program**

Health and Well-being

- 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
503	Quality Maintenance in Storing and Marketing Food Products	10%		0%	
703	Nutrition Education and Behavior	40%		22%	
704	Nutrition and Hunger in the Population	15%		0%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	10%		1%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	15%		73%	
723	Hazards to Human Health and Safety	10%		4%	
	<b>Total</b>	100%		100%	

**V(C). Planned Program (Inputs)**

**1. Actual amount of FTE/SYs expended this Program**

Year: 2014	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	1.1	0.0	1.0	0.0
<b>Actual Paid</b>	3.9	0.0	3.0	0.0
<b>Actual Volunteer</b>	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
372654	0	415685	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
372654	0	415685	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
877989	0	2293124	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

- Conduct workshops and meetings. Workshops include ServSafe® Certification food safety, food preservation, HACCP implementation, GAPS preparation, childcare provider training, food assistance outreach, etc.
  - Develop and deliver educational materials and resources and curriculum (i.e., EFNEP, SNAP-Ed, web-based tools and Extension nutrition and health publications).
  - Provide training and technical assistance such as fundamental food safety training for volunteer staffed events, line level employees, and general nutrition and health training for childcare providers; respond to specific questions related to application of food safety principles.
    - Facilitate community advocacy.
    - Faculty participate in relevant multistate committees: NC213, NC1023, NC1183, NC1194, S294, NC170, NE1048, S1056, W2192.

**2. Brief description of the target audience**

School aged youth, child care providers, school staff and other adult mentors of youth, and older adults. Adult lowans in the workforce, participating in food assistance programming, and community health outreach programs. Food growers, foodservice management and staff in commercial and noncommercial operations, consumers, and food stand volunteers will be served.

**3. How was eXtension used?**

eXtension was not used in this program

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	18939	1952426	1853	31205

**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	9	19	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of youth receiving educational programming related to nutrition, physical activity, and health promotion.

Year	Actual
2014	33058

**Output #2**

**Output Measure**

- Number of adults who impact youth receiving educational programming related to nutrition, physical activity and health promotion.

Year	Actual
2014	4401

**Output #3**

**Output Measure**

- Number of adults receiving educational programming related to nutrition, physical activity, and health promotion.

Year	Actual
2014	382487

**Output #4**

**Output Measure**

- Number of professionals working with youth and/or adults receiving training related to nutrition, physical activity, and health promotion.  
Not reporting on this Output for this Annual Report

**Output #5**

**Output Measure**

- Number of hits on Iowa State University Extension nutrition/health pages and publication downloads.  
Not reporting on this Output for this Annual Report

**Output #6**

**Output Measure**

- Number of lowans receiving education related to home food preservation.

<b>Year</b>	<b>Actual</b>
2014	4741

**Output #7**

**Output Measure**

- Number of lowans receiving food safety certification.

<b>Year</b>	<b>Actual</b>
2014	1565

**Output #8**

**Output Measure**

- Number of adult participants in Extension and Outreach programs on food safety.

<b>Year</b>	<b>Actual</b>
2014	9246

**Output #9**

**Output Measure**

- Number of hits on Iowa State University Extension and Outreach food safety project websites.  
Not reporting on this Output for this Annual Report

**Output #10**

**Output Measure**

- Number of grain producers receiving education about Food Safety Modernization Act.

Not reporting on this Output for this Annual Report

**Output #11**

**Output Measure**

- Number of professionals receiving educational programming related to nutrition, physical activity, and health promotion.

<b>Year</b>	<b>Actual</b>
2014	135

**Output #12**

**Output Measure**

- Number of unique visitors on Iowa State University Extension nutrition/health pages and publication downloads.

<b>Year</b>	<b>Actual</b>
2014	200969

**Output #13**

**Output Measure**

- Number of unique visitors on Iowa State University Extension and Outreach food safety project websites.

<b>Year</b>	<b>Actual</b>
2014	1367821

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent of youth participants reporting increased intake of milk.
2	Percent of youth participants reporting increased intake of fruit.
3	Percent of youth participants reporting increased intake of vegetables.
4	Percent of youth participants reporting increased physical activity.
5	Percent of childcare training participants reporting preparedness to apply or teach health promoting dietary behaviors.
6	Percent of adults reporting increased fruit and vegetable intakes.
7	Percent of adults reporting increasing minutes of physical activity.
8	Percent of adult EFNEP/FNP graduates who made a positive change in food resource management skills such as not running out of food.
9	Number of people receiving food safety certification.
10	Percent of adults reporting increased knowledge of safe home food preservation techniques.
11	Percent of adult EFNEP/FNP graduates with a positive change in food safety practices.
12	Number of growers, producers, and food workers completing GAPS, GMPS, HACCP, food safety certification and on-farm BMP programs to increase food safety.
13	Number of food handlers receiving food safety training and education in safe food practices.
14	Percent of adult EFNEP/SNAP-Ed graduates who made a positive change in food resource management skills such as not running out of food.
15	Percent of adult EFNEP/SNAP-Ed graduates with a positive change in food safety practices.

### **Outcome #1**

#### **1. Outcome Measures**

Percent of youth participants reporting increased intake of milk.

Not Reporting on this Outcome Measure

### **Outcome #2**

#### **1. Outcome Measures**

Percent of youth participants reporting increased intake of fruit.

Not Reporting on this Outcome Measure

### **Outcome #3**

#### **1. Outcome Measures**

Percent of youth participants reporting increased intake of vegetables.

Not Reporting on this Outcome Measure

### **Outcome #4**

#### **1. Outcome Measures**

Percent of youth participants reporting increased physical activity.

Not Reporting on this Outcome Measure

### **Outcome #5**

#### **1. Outcome Measures**

Percent of childcare training participants reporting preparedness to apply or teach health promoting dietary behaviors.

#### **2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2014	73

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Dietary and physical activity behaviors can be established as early as 2-4 years of age. Informing child care providers of appropriate food and physical activity behaviors is essential to early childhood development.

**What has been done**

Childcare training has been provided to >1,900 childcare providers in Iowa.

**Results**

Over 73% of participants reported preparedness to make changes in their own childcare settings.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #6**

**1. Outcome Measures**

Percent of adults reporting increased fruit and vegetable intakes.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

### 3b. Quantitative Outcome

Year	Actual
2014	56

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Current program data show that at entry EFNEP and SNAP-Ed clients consumed 1.1 cups of fruits per day and 1.45 cups of vegetables -- well below the DGA recommendation. Additionally, the 2013 Behavioral Risk Factor Surveillance System data show approximately 40% of Iowans consume fruit less than one time per day and 27% consumed vegetables less than one time per day.

#### What has been done

As part of EFNEP and SNAP-Ed, a series of eight to ten nutrition lessons is taught by paraprofessional nutrition educators to low-income families with children age ten and under and pregnant women/teens. These lessons show participants how to choose nutritious foods, stretch their food dollars, handle food safely, be physically active, and prepare nutritious recipes. Lessons three through seven all focus on practicing healthy nutrition behaviors -- Fruits and Veggies: Half Your Plate, Make Half Your Grains Whole, Build Strong Bones, Go Lean with Protein, and Make a Change (addresses sodium, fats, and added sugars).

#### Results

Following participation in at least eight lessons, 56% of participants increased their consumption of fruits and vegetables. On average, fruit and vegetable consumption among EFNEP and SNAP-Ed graduates increased by 0.6 cups.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

### Outcome #7

#### 1. Outcome Measures

Percent of adults reporting increasing minutes of physical activity.

#### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	49

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The 2010 Dietary Guidelines for Americans recommend that adults participate in moderate physical activity for 30 minutes per day on five days per week. The 2013 Behavioral Risk Factor Surveillance System data show that less than half of adult Iowans meet these physical activity recommendations. Furthermore, these data show that 82% of Iowans do not do not meet aerobic and muscle strengthening guidelines. For those with an income below \$15,000 participating those not meeting guidelines increases to 88%.

**What has been done**

As part of EFNEP and SNAP-Ed, a series of eight to ten nutrition lessons is taught by paraprofessional nutrition educators to low-income families with children age ten and under and pregnant women/teens. These lessons show participants how to choose nutritious foods, stretch their food dollars, handle food safely, be physically active, and prepare nutritious recipes. Each lesson has a physical activity component. In particular, lesson 1, Get Moving, focuses on physical activity.

**Results**

Following participation in at least eight lessons, 49% of participants increased the amount of physical activity in which they regularly participate. In addition, by the completion of the program, 79.8% of participants reported meeting the physical activity recommendations set by the 2010 Dietary Guidelines for Americans.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

### **Outcome #8**

#### **1. Outcome Measures**

Percent of adult EFNEP/FNP graduates who made a positive change in food resource management skills such as not running out of food.

Not Reporting on this Outcome Measure

### **Outcome #9**

#### **1. Outcome Measures**

Number of people receiving food safety certification.

#### **2. Associated Institution Types**

- 1862 Extension
- 1862 Research

#### **3a. Outcome Type:**

Change in Action Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	1565

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

It is estimated 48 million people experience a foodborne illness each year with 3,000 deaths resulting from these illnesses. Providing food handlers and decision makers involved in food production, processing and service from farm to fork with knowledge about risks can help in reducing incidents of foodborne illness by leading to better practices.

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

Over 1,800 Iowans (n = 1,890) participated in an 8-hour workshop about safe food handling practices.

##### **Results**

Of the 1,890 who participate in the 8-hour certification course workshop, 82.8% (n = 1,565) were successful in earning certification.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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
723	Hazards to Human Health and Safety

## **Outcome #10**

### **1. Outcome Measures**

Percent of adults reporting increased knowledge of safe home food preservation techniques.

### **2. Associated Institution Types**

- 1862 Extension
- 1862 Research

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	48

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Interest in home food preservation has increased due to the local food movement and economy. According to the National Center on Home Food Preservation, 1 in 5 U.S. households can their own food; however, many are unaware of the food safety issues that home food preservation encompasses.

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

In addition to the > 4,500 people who called with food preservation questions, 636 adults participated in food preservation education programming. Of these 636 adults, 91 completed the statewide comprehensive food preservation program, 40 had their pressure canner tested and 545 attended a general food preservation class.

#### **Results**

Of those who took part in the online food preservation lessons, there was a: 50% increase in those who reported high or very high knowledge about foodborne illness, a 40% increase in those stating high or very high knowledge of safe food handling practices, and a 55% increase in those reporting high or very high knowledge of recommended canning practices after viewing the

lessons.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
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
723	Hazards to Human Health and Safety

#### Outcome #11

##### 1. Outcome Measures

Percent of adult EFNEP/FNP graduates with a positive change in food safety practices.

Not Reporting on this Outcome Measure

#### Outcome #12

##### 1. Outcome Measures

Number of growers, producers, and food workers completing GAPS, GMPS, HACCP, food safety certification and on-farm BMP programs to increase food safety.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2014	197

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Increased reported outbreaks of food borne illness have raised awareness of need for on farm food safety plans. In addition, pending Produce Rules as a result of the Food Safety Modernization Act have led to increased requests for farm food safety programs based on GAPs. Further, many retail foodservices are requesting some documentation of food safety assurances.

**What has been done**

A 6-hour workshop has been offered to fresh produce growers with a certificate of completion given at the end of the session. The workshop covers pre- and post-harvest GAPs. A pre-post workshop assessment is given to assess changes in knowledge.

**Results**

All producers (100%) answered questions about record keeping of farm food safety practices and water testing after the workshops compared to 41.9% and 46.3%, respectively, who answered these questions correctly prior to the training.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
503	Quality Maintenance in Storing and Marketing Food Products
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

**Outcome #13**

**1. Outcome Measures**

Number of food handlers receiving food safety training and education in safe food practices.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	5379

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

It is estimated 48 million people experience a foodborne illness each year with 3,000 deaths resulting from these illnesses. Providing food handlers and decision makers involved in food production, processing and service from farm to fork with knowledge about risks can help in reducing incidents of foodborne illness by leading to better practices.

**What has been done**

Over 5,000 (n= 5,379) participated in food safety sessions related to produce safety, general food safety, and safe handling of food when working in retail outlets.

**Results**

Participants indicate food safety training prepares them to minimize risks of food borne illness in their work settings.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

**Outcome #14**

**1. Outcome Measures**

Percent of adult EFNEP/SNAP-Ed graduates who made a positive change in food resource management skills such as not running out of food.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	84

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Effective food resource management is critical to healthy eating behaviors among families with low-incomes. Whether their food resources consist of public benefits or earned income, families need to build skills to maximize available resources to gain the most nutrition for their dollar. Nearly 13% of Iowans are food insecure.

**What has been done**

As part of EFNEP and SNAP-Ed, a series of eight to ten nutrition lessons is taught by paraprofessional nutrition educators to low-income families with children age ten and under and pregnant women/teens. These lessons show participants how to choose nutritious foods, stretch their food dollars, handle food safely, be physically active, and prepare nutritious recipes. Participating families learn shopping and meal planning strategies that minimize waste and stretch expensive ingredients.

**Results**

Among families graduating from the EFNEP and SNAP-Ed lesson series, 84% improved their food resource management. This data point is measured through questions related to frequency of planning meals, comparing prices, using a grocery list and running out of food at the end of the month.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

**Outcome #15**

**1. Outcome Measures**

Percent of adult EFNEP/SNAP-Ed graduates with a positive change in food safety practices.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2014	66

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Previous EFNEP and SNAP-Ed data show that low-income families do not, seldom, or sometimes (as opposed to most of the time or almost always) practice food safety management skills such as thawing and storing food properly. These are skills that can prevent or alleviate illness.

**What has been done**

As part of EFNEP and SNAP-Ed, a series of eight to ten nutrition lessons is taught by paraprofessional nutrition educators to low-income families with children age ten and under and pregnant women/teens. These lessons show participants how to choose nutritious foods, stretch their food dollars, handle food safely, be physically active, and prepare nutritious recipes. Each lesson includes a component relating to food safety with particular focus on minimizing food waste without compromising food safety.

#### **Results**

At entry to the program 21% of program participants demonstrated acceptable food safety practices (i.e. thawing and storing foods properly). Following participation in at least eight lessons 66% of participants demonstrated acceptable food safety practices (i.e. thawing and storing foods properly) at exit.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

#### **V(H). Planned Program (External Factors)**

##### **External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

##### **Brief Explanation**

A slow recovery from the recession continues to constrain income growth and limit economic mobility, and Iowa's high proportion of multiple job holders reduces time available for participation in Extension programs. An increasingly diverse population challenges our ability to meet diverse learning needs. Staff and trained volunteers, as well as local Extension councils, are not as prepared as needed to engage and implement educational programming with increasing diverse (e.g., race, socioeconomic status, gender, age) audiences. Economic challenges and increasing numbers of New Iowans led to investigation by food entrepreneurs of ways to grow food based businesses. Additionally, there are fewer trained volunteers to implement programs as widely and as effectively as desired. A new programming model was implemented this year to address changing demographics within the state, creating new geographic areas for staff. This change has impacted relationships with organizations that serve parents and families as staff transition. Due to EFNEP program evaluation changes during Iowa Fiscal Year 14, evaluation data were not available. Additionally, enrollment in Live Healthy Iowa Kids decreased greatly due to programming changes. Federal and state legislation continues to impact appropriations and policy for nutrition and health programming initiatives. Healthcare

reform will also modify the landscape for programming in this plan of work; additional opportunities in preventive health care may be available for ISU extension. The Food Safety Modernization Act has raised awareness about risks from improper handling of food along the food chain, particularly proposed standards related to fresh produce. Further, Iowa's recent adoption of Food Code 2011 Supplement requires one employee at each foodservice establishment to have certification in food safety through an approved program (i.e., ServSafe). In this state, a grocery store chain has begun employing Registered Dietitians in stores (currently 100). This trend has created competition for programming in rural communities that had been traditionally served by ISU Extension staff. Increasing interest in indirect delivery methods continue for individuals and work organizations. In response ISU Extension has designed several websites and social media pages with monitoring of the use of these pages through "unique visitors" rather than page "hits." Several of the education materials are available on the Spend Smart, Eat Smart, Food Safety, and Nutrition and Health websites. Furthermore, indirect contacts made through the EFNEP program have been reported elsewhere and are no longer included in this report.

## **V(I). Planned Program (Evaluation Studies)**

### **Evaluation Results**

Impacts were realized for school aged youth, child care providers, school staff and other adult mentors of youth, adults, and older adults, food growers, foodservice management and staff, and food stand volunteers. Specific examples include the high pass rates (82%) on the national ServSafe certification exam and food preservation knowledge surveys which indicates the food safety programs have led to increases in knowledge, with ultimate goal of changes in behavior. Increases in numbers of lowans participating in food safety programming indicates there is considerable interest in improving safe food handling practices at all links of the food chain.

EFNEP and SNAP-Ed participants showed high rates of behavior change this year with the majority of participants increasing consumption of fruits and vegetables as well as improvements in physical activity, food resource management and food safety practices.

### **Key Items of Evaluation**

Criteria for educational offerings include a review of a number of statuses, including research- or evidence-base, timeliness, relevance, uniqueness (services not offered by other organizations), sequential design, and potential for impact. Key evaluation indicators regarding the education offered were focused on improving participants' attitudes, skills, and behaviors and measured through childcare training- participant survey collected post-training and then entered into online system for statewide analysis; numbers participating in food safety certification programs; number and percent of those that achieved food safety certification; and the number of those taking part in food preservation programming; and assessment of food preservation programming through a post-pre evaluation method.