

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

**Program # 4**

**1. Name of the Planned Program**

Food Safety

- 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
504	Home and Commercial Food Service	50%		50%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	50%		50%	
	<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>	1.8	0.0	6.0	0.0
<b>Actual Paid</b>	2.3	0.0	5.6	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
0	0	54856	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	54856	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
186738	0	553694	0

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

**1. Brief description of the Activity**

Implement programs for children and adults based on Fight BAC, Thermy, Produce Safety and BAC Down campaigns; USDA food preservation rules; and implement food safety programs for foodservice and processors (HACCP).

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

- Children in school and youth program settings
- Teen food handlers in high school and community
- Adults in home settings
- Volunteer food handlers in community settings
- Professionals in foodservice and food processing environments

**3. How was eXtension used?**

eXtension was used as background/resource material in the creation and implementation of programs.

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

**1. Standard output measures**

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1073	525000	3344	31560

**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	2	1	0

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

**Output Target**

**Output #1**

**Output Measure**

- {No Data Entered}

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

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

O. No.	OUTCOME NAME
1	Number of teens reporting changes in food handling practices to reduce risk of foodborne illness outbreaks.
2	Number of adult participants in consumer food safety classes reporting intent to change one or more food handling behaviors.

## **Outcome #1**

### **1. Outcome Measures**

Number of teens reporting changes in food handling practices to reduce risk of foodborne illness outbreaks.

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

- 1862 Extension

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

Change in Action Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2014	489

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

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

According to a 2002 U.S. Department of Labor report, 22% of employed 15- to 17-year olds work in eating and drinking establishments. According to the National Restaurant Association pocket fact book in 2004, one-third of all employed 15 to 17 year olds work in eating and drinking establishments.

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

"Teens Serving Food Safely?" is a statewide NDSU Extension Service food safety education effort designed to improve young food handlers' food safety knowledge and skills and decrease the risk of foodborne illness outbreaks associated with food service establishments. The "Teens?" curriculum consists of five lessons based on the Fight BAC? and Thermy? national food safety campaign concepts, with pre/post and follow-up evaluation procedures. Youth benefit from the curriculum's experiential learning model, obtaining information and tools to share with their families.?

#### **Results**

About 489 students participated in the multisession "Teens?" program in the last year. According to the past year's results, on average, knowledge scores increased from 54% on the pre-test to 85% on the post-test. About 56% of participants had been involved in the preparation of food for the public, and 81% prepare food for themselves or others every week. On the one-month follow up survey, 67% were more careful about cleaning and sanitizing, 48% had shared their knowledge about food safety with others when preparing food and 38% have applied their knowledge when serving food for the public.

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

<b>KA Code</b>	<b>Knowledge Area</b>
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

## **Outcome #2**

### **1. Outcome Measures**

Number of adult participants in consumer food safety classes reporting intent to change one or more food handling behaviors.

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

- 1862 Extension

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

Change in Action Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2014	260

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

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

Consumer food handling remains an issue of concern, and evaluations focused on outdoor grilling, a popular cooking method, and food preservation. Grilling is one of the healthier methods of preparing food; however, food safety issues, including quality issues and lack of thermometer use, have been cited as issues.

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

A Barbeque Boot Camp program was initiated that brought together Extension, meat science, and faculty from the Department of Animal Science, along with Extension agriculture and family and consumer science agents from across North Dakota. In 2014, the boot camps were held in three locations in North Dakota and reached 220 participants.

A Food Safety Modernization Act (FSMA) workshop that brought together state and local regulators, faculty and businesses attracted about 40 participants. Food entrepreneurship modules were updated and placed online ([www.ag.ndsu.edu/food](http://www.ag.ndsu.edu/food))

#### **Results**

The BBQ Boot Camp has reached about 4,400 people during the past five years. Previous post-test scores showed that participants significantly increased their knowledge and indicated they

would change their behavior. Follow-up surveys have shown that 83% used the thermometer they received and 58% had changed their meat purchasing decisions after attending the program.

Among the participants in the introductory FSMA workshop, 81 percent said the regulations would directly affect their businesses, 44 percent said the rule for good manufacturing practice and hazard analysis would affect their businesses, and 37 percent said the standards for growing, harvesting, packing, holding would affect their business. About 56 percent said they knew how to write a food safety plan, and 52 percent had done things to address the FSMA guidelines. Their greatest concern in implementing the guidelines was lack of understanding of the guidelines (59 percent) and record-keeping requirements (32 percent). About 40 percent indicated interest in an online course related to HACCP.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

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

##### External factors which affected outcomes

- Appropriations changes
- Government Regulations
- Competing Public priorities

##### Brief Explanation

As new rules and regulations are passed, changes are made to our programs content and delivery.

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

##### Evaluation Results

We will continue to collect data on our Teens Serving Food Safety program, which was recognized with a national food safety education award. We plan to implement and evaluate a new Extension program for agents to deliver grilling program. We also will monitor the use of the online modules for the food entrepreneurship program. Since 2003, 9,233 North Dakota teens have been trained and received completion certificates based on the "Teens Serving Food Safely" curriculum. According to the past year's results, on average, knowledge scores increased from 54% on the pre-test to 85% on the post-test. Teenage food handlers continue to score very low (54%) on the initial examination. This age group, who commonly work in foodservice operations, are a group that needs ongoing training to prevent foodborne illness outbreaks in commercial settings.

##### Key Items of Evaluation