

**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	75%		25%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	25%		75%	
	<b>Total</b>	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	1.8	0.0	7.5	0.0
Actual Paid Professional	1.8	0.0	6.0	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
67400	0	235800	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
101000	0	353800	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

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 (ServSafe, TAPS, 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?**

News releases were contributed to Families, Food and Fitness CoP. The Ask an Expert feature of eXtension was also used in this program.

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

**1. Standard output measures**

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	1800	263000	2000	12000

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

**Patent Applications Submitted**

Year: 2012  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2012	Extension	Research	Total
<b>Actual</b>	2	1	3

**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	Based on post-surveys, 50 percent of teens will report changes in food handling practices to reduce risk of foodborne illness outbreaks
2	Seventy-five percent of foodservice and food industry participants in ServSafe, HACCP or other food sanitation courses will pass the examination and become certified.
3	Based on post-surveys, 50 percent of adult participants in consumer food safety classes will report intent to change one or more food handling behaviors.

## **Outcome #1**

### **1. Outcome Measures**

Based on post-surveys, 50 percent of teens will report changes in food handling practices to reduce risk of foodborne illness outbreaks

### **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>
2012	64

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

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

"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. 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**

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**

Since 2003, 8,233 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 86% on the post-test. About 58% of participants had been involved in the preparation of food for the public, and 91% prepare food for themselves or others every week. On the one-month follow up survey, 64% were more careful about cleaning and sanitizing, 44% had shared their knowledge about food safety with others, 72% reported washing their hands more often when preparing food and 37% 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**

Seventy-five percent of foodservice and food industry participants in ServSafe, HACCP or other food sanitation courses will pass the examination and become certified.

Not Reporting on this Outcome Measure

## **Outcome #3**

### **1. Outcome Measures**

Based on post-surveys, 50 percent of adult participants in consumer food safety classes will report intent to change one or more food handling behaviors.

### **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>
2012	58

### **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. Interest in food preservation has increased with rising food prices and renewed interests in local foods and gardening. Many younger adults lack experience with food preservation techniques and are seeking training so they preserve foods safely.

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

A Barbeque Boot Camp program was initiated that brought together Extension, meat science, and food safety specialists and faculty from the Department of Animal Science, along with Extension agriculture and family and consumer science agents from across North Dakota. The boot camps

were held in four locations in North Dakota.

Educational programs in grilling, food safety and food preservation took place in classroom-type settings. Participants received a food thermometer and educational materials to use at home. Food preservation classes were held in nine counties.

### **Results**

The BBQ Boot Camp reached 734 participants and overall, about 4,000 people in the past four years. Post-test scores showed that participants significantly increased their knowledge and indicated they would change their behavior. According to a follow-up survey, 83% of participants reported that they use meat thermometers and 58% of participants said they had changed their meat purchasing decisions after attending the program.

Nearly 600 people attended food preservation classes, some in hands-on classes and some in lecture/discussion. According to evaluations, 97% of attendees reported learning something new and indicated plans to use the information. About 72% planned to make jams/jellies, 39% planned to can fruit, 59% planned to freeze vegetables and 59% planned to can salsa and pickles.

## **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

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

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

- Natural Disasters (drought, weather extremes, etc.)
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

### **Brief Explanation**

Even though North Dakota suffered drought in 2012, Food Safety goals for 2012 were met.

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

### **Evaluation Results**

This study analyzed student interest in food safety-related degrees and careers following exposure to marketing and educational interventions. Following expert review and approval by the university's Institutional Review Board, pre- and post-surveys were administered to high school students enrolled in food-related classes in seven high schools (n=138; 51% females). Participants were assigned to one of three treatment groups. Treatment interventions (video, brochure, hands-on game) were introduced to students immediately upon completion of the pre-survey. A follow-up survey was conducted three

weeks later. Participants (18%) agreed with the statement "plan to enroll in a food safety program" (up 2% from Survey One). However, 79% of the participants do not know whether or not the college they may attend offers a food safety program. The percentage of individuals who have decided on a major increased to 39%, following an intervention (up 7%). The number of undecided individuals was greatest at the freshman level (38%). The percentage of individuals who have decided on a major was greatest among those in the video group (52%), compared to those in the brochure (27%), or game (21%) groups. Participants (54%) ranked annual income as the most influential factor in selecting a major. More females (16%) than males (10%) currently are working in food-related jobs.

To address the U.S. national need for food-safety experts, a variety of educational interventions should be utilized to target high-school students as early as freshman year.

### **Key Items of Evaluation**