

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

**Program # 2**

**1. Name of the Planned Program**

Safe Food and Human Nutrition

**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%		15%	
703	Nutrition Education and Behavior	30%		20%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	15%		15%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	30%		30%	
723	Hazards to Human Health and Safety	0%		10%	
724	Healthy Lifestyle	10%		0%	
802	Human Development and Family Well-Being	0%		10%	
	<b>Total</b>	100%		100%	

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

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	112.0	0.0	17.0	0.0
Actual	114.0	0.0	24.0	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
236018	0	307296	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
945338	0	2841288	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
9087040	0	523800	0

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

#### 1. Brief description of the Activity

- Develop new rapid methods for the surveillance, detection, isolation, and quantification of microbes and chemical residues in animals, plants, and food products.
- Develop risk monitoring techniques to detect potential hazards in the distribution chain.
- Validate the efficacy of techniques in controlling and eliminating microbial and chemical hazards.
- Disseminate food safety and bio-security information through extension and research seminars, workshops, and resident and distance education programs, using a variety of media options and communication tools.
- Offer safe food production, handling, and sanitation education to groups involved in all levels of food production and service.
- Identify best management practices to prevent foodborne illness and to enhance the security of the food supply throughout the food chain.
- Develop technology to reduce the hazards and improve the quality of animal food products, which will complement the development of HACCP programs by USDA.
- Develop, complement, and maintain an aggressive technology transfer system that effectively communicates work about Safe Food and Human Nutrition to consumers, students, industry, government, and other scientific investigations.

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

- Growers and processors of agricultural commodities, commercial and non-commercial food service personnel, market and home gardeners, other food handlers, retail markets, consumers, and educator;
- Families and individuals of all ages living in Kansas, including populations with limited resources; low literacy skills; varying ethnicities; disabilities, diseases, or impairments; and documented or identifiable health disparities;
- Economic stakeholders, and policy and funding agencies;
- Health care, education, and nutrition professionals;
- K-State Research & Extension faculty and staff with responsibilities for food and/or nutrition;
- Government; and
- Consumer groups (i.e., STOP).

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

#### 1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	500	0	500	0
<b>Actual</b>	637	0	350	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	2	20	
<b>Actual</b>	0	18	18

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

**Output Target**

**Output #1**

**Output Measure**

- Number of rapid methods developed for the surveillance, detection, isolation, and quantification of microbes and chemical residues in animals, plants, and food products

Year	Target	Actual
2010	2	2

**Output #2**

**Output Measure**

- Number of therapeutic, chemical, and physical treatments developed for animals and plants and their products to eliminate or reduce contamination with potential hazards

Year	Target	Actual
2010	2	4

**Output #3**

**Output Measure**

- Number of ServSafe certification workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	30	14

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

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

O. No.	OUTCOME NAME
1	Number of participants demonstrating increase in knowledge level and attitude of clientele in safe food production, handling, and sanitation programs; best management practices to prevent foodborne illness; and social, economic, and communications issues related to food safety and agricultural bio-security
2	Percent of participants in food service manager certification class who successfully complete the exam.
3	Number of food service employees who complete employee level food safety course.
4	Number of foodservice facilities with trained employees

### **Outcome #1**

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

Number of participants demonstrating increase in knowledge level and attitude of clientele in safe food production, handling, and sanitation programs; best management practices to prevent foodborne illness; and social, economic, and communications issues related to food safety and agricultural bio-security

Not Reporting on this Outcome Measure

### **Outcome #2**

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

Percent of participants in food service manager certification class who successfully complete the exam.

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

- 1862 Extension

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

Change in Knowledge Outcome Measure

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

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	300	80

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

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

The National Restaurant Association has estimated that the average cost of a foodborne illness outbreak to an establishment is about \$75,000. The economic value of foodservice educational programs can be calculated by multiplying the number of establishments reached through the programs by the estimated economic burden of an outbreak (\$75,000).

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

KSRE in collaboration with the Kansas Restaurant and Hospitality Association (KRHA) provided ServSafe Training in Kansas during January-December 2010. Two of the 2010 ServSafe classes offered were conducted in Spanish to reach out to Spanish speakers in the foodservice industry

##### **Results**

Two hundred sixty-five (265) foodservice employees completed the training, which extends knowledge gain beyond the 212 passing the certification exam. In addition, 21 extension professionals received training and/or technical help to establish or maintain professional ServSafe certification and/or licensing to be qualified to teach the ServSafe Certification Course.

#### 4. Associated Knowledge Areas

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

#### Outcome #3

##### 1. Outcome Measures

Number of food service employees who complete employee level food safety course.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	250	372

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

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

Food safety education is necessary to help maintain health care cost, and to help ensure public health and maintain quality of life for all Kansans.

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

In 2010, KSRE provided more than 72 contact hours of food safety entry-level training. Twenty-one ServSafe Employee Level classes were conducted in 18 counties training 372 entry level foodservice employees. The employee level classes provide an end-of-session assessment of knowledge gained.

###### **Results**

Participants indicated that they had increased knowledge and skills of best food safety practices. More than 90% of the participants indicated they plan to use what they learned at work and/or at home. Participants reported they intend to wash their hands, check food temperatures, increase the use of thermometers and be more cautious of cross contamination and food left out at room temperature. Seventy-five percent of ServSafe participants indicated they improved their food safety knowledge and plan to adopt new practices.

#### 4. Associated Knowledge Areas

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

**Outcome #4**

**1. Outcome Measures**

Number of foodservice facilities with trained employees

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	157

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

**Issue (Who cares and Why)**

The National Restaurant Association has estimated that the average cost of a foodborne illness outbreak to an establishment is about \$75,000. The economic value of foodservice educational programs can be calculated by multiplying the number of establishments reached through the programs by the estimated economic burden of an outbreak (\$75,000).

**What has been done**

In 2010, K-State Research and Extension/Kansas Restaurant and Hospitality Association (KSRE/KRHA) trained employees from 157 Kansas foodservice operations.

**Results**

In 2010, 157 facilities reported having ServSafe trained employees which translates to a huge economic value considering the estimated cost of a foodborne illness outbreak per establishment! The public value of food safety best practice training is that Kansans are provided a safer dining environment, as well as the potential for fewer hospitalizations, reduced medical cost, fewer days of work missed due to illness, and increased productivity.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

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

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

- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

### **Brief Explanation**

{No Data Entered}

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Other (see below)

## **Evaluation Results**

### **Key Items of Evaluation**

Program Focus Teams (PFTs) are working with staff from the Office of Educational Innovation and Evaluation (OEIE). Self-assessment questions have been shared for PFTs to review their Action Plans. OEIE staff have been contracted to strengthen teams' understanding of the evaluation process and to help teams develop evaluation tools. We believe our beginning investment in evaluation will strengthen ability in PFTs, and across our K-State Research and Extension system.