

V (A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Food Safety

2. Brief summary about Planned Program

Extension has an active work team for Food Safety Education. Programs include:

- Food safety training for food service managers and employees
- Food safety education for high risk audiences, their caregivers, and health care professionals
- Food safety information for consumers including Farmers' Market vendors and their customers.

Food safety research emphasizes pre-harvest management of livestock to prevent transmission of human pathogens in livestock production and handling and post-harvest detection and management systems to prevent contamination of meat and plant products with human pathogens.

3. Program existence : Mature (More than five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V (B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
701	Nutrient Composition of Food	0%		20%	
703	Nutrition Education and Behavior	25%		40%	
704	Nutrition and Hunger in the Population	1%		0%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	20%		10%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	20%		20%	
724	Healthy Lifestyle	25%		0%	
805	Community Institutions, Health, and Social Services	9%		10%	
	Total	100%		100%	

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

•Food-borne illness in the US is a major economic burden and cause of human suffering and death. Economic and social consequences of food-borne illness are estimated to be over \$3 billion each year,

with lost productivity estimated at \$30-40 billion. It is estimated that food-borne contaminants cause approximately 76 billion illnesses, 325,000 hospitalizations, and 5,000 deaths in the US each year. The risk of food-borne illness is especially important when hazardous food is served in group settings (eating establishments, child and assisted care facilities) and/or to high risk individuals (seniors, young children, pregnant women, and immune-compromised individuals).

2. Scope of the Program

- In-State Extension
- In-State Research
- Multistate Research
- Multistate Extension
- Integrated Research and Extension
- Multistate Integrated Research and Extension

V (D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

•Given accurate knowledge and support, individuals at risk for food-borne illness and major diseases will increase their understanding, change attitudes and behaviors, and ultimately be less at risk, less hungry and healthier.

2. Ultimate goal(s) of this Program

Food Safety Education

- Increase the proportion of consumers who follow key food safety practices.
 - Improve food employee behaviors and food preparation practices that relate directly to food-borne illnesses in retail food establishments.
 - Increase the proportion of high risk consumers and their caregivers who follow key food safety practices.
- Food Safety Research

- Pre-harvest management of livestock to prevent acquisition of human pathogens in livestock production and handling.
- Post-harvest detection and management systems to prevent contamination of meat products with human pathogens.
- Assessment of production systems and regulatory protocols for effective food safety.

V (E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2011	16.0	0.0	6.0	0.0
2012	16.0	0.0	6.0	0.0

Year	Extension		Research	
	1862	1890	1862	1890
2013	16.0	0.0	6.0	0.0
2014	16.0	0.0	6.0	0.0
2015	16.0	0.0	6.0	0.0

V (F). Planned Program (Activity)

1. Activity for the Program

Food Safety Education

- Food Safety training for consumers, high risk audiences and their caregivers.(Eat Well for Less, La Cocina Saludable, Work site Wellness, Safe Home Food Preparation and Preservation, Promotion at Farmers Markets.)
- Food Safety Training for Food Service Managers and Workers (Food Safety Works, ServSafe, Food Safety for Food Bank Workers).Some of these programs are fee-based.

Promoting Food Security

- Multi-lesson series programs-Eat Well for Less, La Cocina Saludable]
- Single event programs targeting limited resource families
- Newsletters-Senior Nutrition News

Research

- Technical and extension publications
- Development of new technologies for improving food safety
- Development of recommendations on diet, exercise or other health related topics

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
<ul style="list-style-type: none"> • Education Class • Workshop • Group Discussion • Demonstrations 	<ul style="list-style-type: none"> • Public Service Announcement • Newsletters • Web sites • Other 1 (Multimedia kiosks)

3. Description of targeted audience

Food Safety Education

- Consumers, High Risk Audiences (pregnant, immune-compromised, elderly).
- Food handlers and their managers at retail food establishments.
- Producers and processors of plant and animal agricultural products.

V (G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2011	25000	150000	2500	0
2012	25000	150000	2500	0
2013	25000	150000	2500	0
2014	25000	150000	2500	0
2015	25000	150000	2500	0

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

2011:0 2012:0 2013:0 2014:0 2015:0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2011	10	20	0
2012	10	20	0
2013	10	20	0
2014	10	20	0
2015	10	20	0

V (H). State Defined Outputs

1. Output Target

- Number of trainings in food safety held.

2011:1000 2012:1000 2013:1000 2014:1000 2015:1000

- Grant dollars (external) received to support Food Safety

2011:500000 2012:500000 2013:500000 2014:500000 2015:500000

- Number of individuals reached by newsletters distributed on food safety.

2011:500000 2012:500000 2013:500000 2014:500000 2015:500000

- Number of individuals trained via workshops in food safety

2011:10000 2012:10000 2013:10000 2014:10000 2015:10000

- Number of partnering agencies in Colorado who collaborated in food safety efforts.

2011:200 2012:200 2013:200 2014:200 2015:200

- Number of volunteers supporting food safety

2011:200 2012:200 2013:200 2014:200 2015:200

- Number of curricula developed or reviewed that support food safety

2011:20 2012:20 2013:20 2014:20 2015:20

- User Fees Generated through Food Safety work.

2011:30000 2012:30000 2013:30000 2014:30000 2015:30000

V (I). State Defined Outcome

O. No	Outcome Name
1	Percent of participants at trainings in Food Safety indicating an increase in knowledge gained
2	Percent of participants reporting a change in attitude regarding Food Safety.
3	Percent of participants indicating a change in behavior as a result of Food Safety training
4	Number of new technologies in pre-harvest livestock management adopted to reduce and/or avoid contamination of meat and/or plant products with human pathogens.
5	Number of new technologies in handling and/or post-harvest detection and management systems adopted to prevent contamination of meat and plant products with human pathogens.

Outcome # 1

1. Outcome Target

Percent of participants at trainings in Food Safety indicating an increase in knowledge gained

2. Outcome Type : Change in Knowledge Outcome Measure

2011:70 2012:70 2013:70 2014:70 2015:0

3. Associated Knowledge Area(s)

- 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
- 724 - Healthy Lifestyle
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Percent of participants reporting a change in attitude regarding Food Safety.

2. Outcome Type : Change in Action Outcome Measure

2011:70 2012:70 2013:70 2014:70 2015:0

3. Associated Knowledge Area(s)

- 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
- 724 - Healthy Lifestyle
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

Percent of participants indicating a change in behavior as a result of Food Safety training

2. Outcome Type : Change in Knowledge Outcome Measure

2011:70 **2012:70** **2013:70** **2014:70** **2015:0**

3. Associated Knowledge Area(s)

- 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
- 724 - Healthy Lifestyle
- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Number of new technologies in pre-harvest livestock management adopted to reduce and/or avoid contamination of meat and/or plant products with human pathogens.

2. Outcome Type : Change in Action Outcome Measure

2011:5 **2012:5** **2013:5** **2014:5** **2015:5**

3. Associated Knowledge Area(s)

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

4. Associated Institute Type(s)

- 1862 Research

Outcome # 5

1. Outcome Target

Number of new technologies in handling and/or post-harvest detection and management systems adopted to prevent contamination of meat and plant products with human pathogens.

2. Outcome Type : Change in Knowledge Outcome Measure

2011:5 **2012:5** **2013:5** **2014:5** **2015:5**

3. Associated Knowledge Area(s)

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

4. Associated Institute Type(s)

- 1862 Research

V (J). Planned Program (External Factors)

1. External Factors which may affect 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.)

Description

To better align with NIFA priorities, the Planned Program Area previously reported as Nutrition and Food Safety has been separated into two program areas. Targets are estimated by dividing the previously reported numbers between the two program areas.

Research programs are dependent on funding from external agencies.

V (K). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

Description

Regular pre-post evaluations are used. Formative evaluations are often used during a program to adjust focus and direction. Case studies are used to clearly demonstrate impact.

2. Data Collection Methods

- Sampling
- On-Site
- Case Study
- Observation
- Tests

Description

Pre-post tests. Standard survey methods.