

V(A). Planned Program (Summary)

Program # 8

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
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	55%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	35%			
806	Youth Development	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	3.6	0.0	0.0	0.0
Actual Paid Professional	1.2	0.0	0.0	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
14362	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
87028	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct train the trainer workshops, clientele workshops/clinics aimed at food safety, food preservation classes and meeting beef quality assurance standards
- Facilitate meetings with partners, organizations and agencies (local and state)
- Conduct interactive video conferences, web based deliveries etc.

2. Brief description of the target audience

- Restaurant and other Food Service Managers/Employees; volunteers at food serving operations.
- Home food preservers and people involved with food preparation
- Livestock producers
- Commodity Associations

3. How was eXtension used?

Extension professionals and clientele use eXtension as a resource for specific information and educational materials.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2252	88540	1120	13746

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

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	2	0	2

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Food Safety: Provide train the trainer sessions for County Extension Agents so they can conduct food safety education classes for audiences such as county sanitarians, school food service personnel, volunteers, food banks etc. (Number of people attending) Make resources available for individual study - web, publications etc.. (Number distributed.)

Year	Actual
2013	2340

Output #2

Output Measure

- Food Preservation: Provide training and updates to County Extension Agents so they can conduct training/education on food preservation to home food preservers. (number of people attending) Prepare publications/MontGuides on Food Preservation practices and number distributed. People using canners will have the pressure gauges tested. (number being tested)

Year	Actual
2013	1997

Output #3

Output Measure

- Beef Quality Assurance (BQA) Number of people attending beef quality assurance, production and marketing programs. Number of classes, demonstrations and tours provided related to BQA. Number of people participating on interactive video programs, hits on the web site, publications distributed etc. Number of people participating in workshops about the Steer of Merit Program. Number of carcasses receiving Steer of Merit Certificates.
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Food Safety People working in the food industry will use accepted food safety practices as they handle food, e.g., storing and thawing foods properly, hand washing, controlling time and temperature, ensuring proper personal hygiene, prevent cross-contamination, proper cleaning and sanitizing, etc. There will be a decline in the economic and health consequences of food borne illnesses
2	Food Preservation: Home food preservers will use accepted preservation practices in their home processes. There will be a decline in the economic and health consequences of food borne illnesses and spoilage. Master Food Reservers will answer food preservative questions after being trained by Extension.
3	Beef Quality Assurance (BQA) Ranchers/producers will adhere to BQA protocols for raising beef. Ranchers/producers will become BQA certified. Consumers are assured of a readily available and wholesome supply of beef. Youth producers will raise beef to become Steer of Merit Certified

Outcome #1

1. Outcome Measures

Food Safety People working in the food industry will use accepted food safety practices as they handle food, e.g., storing and thawing foods properly, hand washing, controlling time and temperature, ensuring proper personal hygiene, prevent cross-contamination, proper cleaning and sanitizing, etc. There will be a decline in the economic and health consequences of food borne illnesses

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	2340

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Each year there are over 100 million documented cases of food-borne illness, from which 15,000 people die. The financial costs of food-borne illness are tremendous; public tax money must cover lost wages, health care and investigative costs. Basic food safety training on controlling time and temperature when handling food, ensuring proper cleaning and sanitizing reduces the incidence of food-borne illness. Many food service groups, including school systems, Head Start and food banks, now require food safety training. Montanans have identified food safety training as having an important role in value added agriculture, community and economic development, workforce preparation, youth development, safe food operations for tourism and trade, and health promotion.

What has been done

Three levels of training were provided to a total of 2340 people over 488 total client hours. Level 1 training provides food service workers with the knowledge and skills to earn a certificate of completion for Basic Food Safety Training. Participants learn about safe food handling, controlling time and temperature, proper personal hygiene, preventing cross-contamination and proper cleaning and sanitizing. Level 2 training provides a manager's certification and uses an activity-based approach that covers the impact of safety on an operation, the flow of food through the operation and managing a food-safe operation. Level 3 Training provides Train-the-Trainer and other updates for agents, registered sanitarians and other food safety professionals who are interested in providing food safety training. The Head Start Program on the Fort Peck Reservation contacted Extension to provide training to 39 volunteers and staff and to answer questions and respond to concerns related to food safety throughout the year.

Results

Results of food safety training were measured using pre- and post-surveys. In all classes, 100 percent of adults and students reported they learned something about food safety. 98 percent who completed the Level 2 training classes passed the exam and received their ServSafe Food Protection Manager Certification. In one county a high school teacher conducted site visits to food establishments where students had completed ServSafe Food Protection Manager Certification training, and documented that all were following safe food handling skills. These high school students, with the Manager Certificate, have an advantage when applying for jobs in the food service industry. Of those participating in the Fort Peck training, an overall increase in knowledge of 17% was recorded. Ninety-four percent indicated they learned something new and would use the training in their work.

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
806	Youth Development

Outcome #2

1. Outcome Measures

Food Preservation: Home food preservers will use accepted preservation practices in their home processes. There will be a decline in the economic and health consequences of food borne illnesses and spoilage. Master Food Reservers will answer food preservative questions after being trained by Extension.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	1997

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montana has an abundance of nutritious seasonal, wild and homegrown foods. Sustainable food trends and the current economic downfall have increased interest in home food preservation as an important and popular cultural activity. Recent national surveys reveal a high percentage of

home food processors are using practices that put them at high risk for food-borne illness and economic losses due to food spoilage. MSU Extension and CREES-USDA have long been recognized as credible sources for science-based recommendations for home food preservation. As a result, a renewed effort to provide enhanced programming for home food preservers is necessary.

What has been done

Extension utilizes many strategies for addressing the need for safe food preservation information and skills. Personal communication with consumers via telephone, email and face-to-face has helped deliver targeted answers on specific needs. MontGuides are distributed at county fairs, health fairs, worksite wellness programs and other educational events, making them the most widely distributed of all MontGuides. Testing the accuracy of pressure canners is vitally important for assuring safely preserved food. Many offices provide this service for clients. Providing information and/or hands-on workshops allows consumers to learn comprehensive information and skills, and presents the opportunity to practice these skills under the mentoring of the agent.

Results

All participants receiving Extension instruction received information about the principles and science of food borne illnesses and food preservation methods and how to apply those principles to safely preserve food by methods including boiling water, canning, pressure canning, pickling, freezing and drying. Sixty percent indicated they learned at least two ways to improve their preservation techniques. Even experienced canners indicated they learned something new. Offices that tested pressure gauges found many needed to be replaced or adjusted. In one county, 12 of 21 were faulty and six more needed to be adjusted. Broad-reaching impacts include 36 agents receiving certification in the Master Food Preservation program provided by national expert, Dr. Elizabeth Address. Certification enables agents to train volunteers to become Master Food Preservers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
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806	Youth Development

Outcome #3

1. Outcome Measures

Beef Quality Assurance (BQA) Ranchers/producers will adhere to BQA protocols for raising beef. Ranchers/producers will become BQA certified. Consumers are assured of a readily available and wholesome supply of beef. Youth producers will raise beef to become Steer of Merit Certified

Not Reporting on this Outcome Measure

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 Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

MontGuides related to food safety and food preservation are the most commonly requested of all categories of MontGuides. They are widely distributed at Health Fairs, Farmers Market's, schools and community events and are utilized in Master Gardener programs. Because the files can be downloaded for free and copies are frequently made, it is difficult to know exactly how many are utilized in a given year. Many county offices indicate that they receive questions via phone calls and drop-ins on an almost daily basis. The fact that many Montanans know Extension offers the latest science-based, best-practice information related to these areas, is a testament to 100 years of work in this field, and the persistence of agents who use radio, newspaper ads, newsletters and blogs to deliver information proactively. From the first days of Extension in Montana, agents were called upon to answer questions and provide training in food safety and preservation. Many businesses who sell pressure gauges and other equipment refer consumers new to food preservation to Extension to begin. In almost any community, you will quickly be directed to Extension for assistance in this area.

Because many encounters in this program area are informal, there is limited data, except as related to ServSafe Training classes where pre- and post- surveys are completed. That data indicates:

- 100 percent of adults and students learned something new about food safety
- 98 percent who completed the Level 2 training classes passed the exam and received their ServSafe Food Protection Manager Certification
 - In one county a high school teacher conducted site visits to food establishments where students had completed ServSafe Food Protection Manager Certification training, and documented that all were following safe food handling skills.
 - High school students with the Manager certificate have an advantage when applying for jobs in the food service industry.

Classes and formal training related to food preservation reveal:

- Participants receive Information related to the principles and science behind food borne illnesses and food preservation methods.

- Participants learn how to apply those principles safely to preserve foods through boiling water, canning, pressure canning, pickling, freezing and/or drying.
- 60% learned at least two new ways to improve their food preservation techniques.

In one community a ServSafe food safety class was offered to the High School Consumer Science class. The Program was so well received that the school has decided to offer the program annually to junior students.

Master Food Preservation training was conducted by Dr. Elizabeth Andress who was a speaker at the Montana's Annual Conference. Those certified will now be able to train additional trainers and further expand the program.

Finally, Beef Quality Assurance is not being reported here as it was covered under Livestock Programs and Youth Development. Quality Assurance Training is required for all youth in Market Livestock programs. Extension Beef Specialists work regularly with producers to insure the highest quality and safety of Montana beef.

Key Items of Evaluation

Pre- and post- survey data was used to evaluate this program. In addition, anecdotal evidence was used since much of the Extension work around preservation is based on drop-in/call-in experiences with individual clients. Many agents spend time each day answering questions and testing pressure gauges. They are stopped in the grocery store and at the county fair to share expertise. Food safety and preservation related MontGuides are collectively the most requested publications from Extension.

FOOD SAFETY

- 100 percent of youth indicated post-training that they understood how their personal hygiene and touching surfaces while preparing food was related to transfer of germs.
- 90 percent of adults in ServSafe Training learned the importance of controlling time and temperature when handling food, ensuring proper personal hygiene, preventing cross-contamination and proper cleaning and sanitizing.
- 90 percent indicated they would use their new knowledge to improve safety practices

FOOD PRESERVATION

- MontGuides related to food preservation are among the most requested.
 - Agents report having drop-ins and related phone calls on a nearly daily basis
- One high school will be offering Level 1 ServSafe Food Safety Class annually to all junior students enrolled in Consumer Science class.

In one county, the FCS agent worked with the Lion's Club to implement changes to their food handling practices including having food handlers wear gloves and changing how they bagged cotton candy at their Concession Booth. For their help the Pondera County Shooting Sports program received a \$1,000 donation.

One youth was hired by a local caterer following his Level 1 safety certification.