

2012 Montana State University Extension Plan of Work

Status: Accepted

Date Accepted: 06/15/2011

I. Plan Overview

1. Brief Summary about Plan Of Work

As Extension continues to face budget challenges at the local, state and federal levels it becomes even more critical to develop future Plans of Work that acknowledge not only potential reductions in resources, but also adequate structural balance between educational programming and organizational staffing. Montana has been fortunate in that local funding has remained consistent, providing almost thirty-five percent of total operating budgets, while state funding (40% of total operations) has decreased almost fifteen percent over the last twenty-four months and federal funding (approximately 22% of total operations) certainly faces declines in the future.

Now more than ever it is necessary to carefully review demographic information, core program deliverables and emerging trends to establish educational programming that is relevant, timely and of high value to constituents and stakeholders. The 2012-2016 Plan of Work for Montana State University Extension relies on available statistics, public input and historical trends to develop a focus for future activities and to clarify strategic investments of projected resources. This is not done within a vacuum, but rather with careful planning and a commitment to obtaining high value, high return educational outreach that benefits youth, families, clientele groups, business enterprises and communities across the state.

Montana's demographic profile shows a state that is stable in almost all sectors indicated by the slow but steady growth. While the population has increased by slightly over 30,000 in the past 3 years, the state has ranked 44th in the nation during that time.

The demographics of the population have not changed significantly as can be seen by the following statistics:

2009	2010		
White	90.8%	90.3%	
Native American	6.5%	6.4%	
Under the Age of 18	23.1%	22.5%	
Over the age of 65	13.8%	14.6%	
Male/Female Ratio	50%/50%	50%/50%	
Average personal Income		\$30,886	\$34,794
Living in Poverty	13.6%	15.1%	
No health insurance coverage		17.1%	18.2%
Youth Elementary School Age		96,938	97,844
Youth Secondary Age		47,480	43,849

Agriculture continues to be the largest basic industry followed by tourism, mining and gas/oil production. A snapshot of Montana agriculture reveals the top 5 commodities are wheat, cattle/calves, barley, other crops (beans, peas, potatoes, lentils, sugar beets etc), and hay.

As programs are developed, Extension takes into consideration the profile of the people and realizes education can address only a portion of their concerns. With this in mind, eight program initiatives have been identified as a framework around which Extension's limited resources, personnel and financial, can be distributed. These areas are:

- **Childhood Obesity, Nutrition and Healthy Lifestyles** will contribute to Montanans achieving and maintaining a healthy lifestyle by addressing weight issues, nutrition and exercise habits.
- **Youth Development** will contribute to Montana youth developing the confidence, competence and character to become critical thinkers, active citizens, caring human beings, self-sufficient, adaptable to change and connected to community.
- **Global Food Security and Hunger: Ag Sustainability and Profitability** will ensure that Montana farm and ranch owner/operators know how to produce adequate and safe food while sustaining a profit to achieve a desirable quality of life.
- **Family Issues, Resources and Environments** will empower Montanans so they can manage their finances, build sound relationships and attain home environments that establish and maintain strong and healthy families.
- **Community and Economic Development** will assist Montana communities to use proven economic and community development strategies that will improve the conditions impacting business and family life.
- **Climate Change: Natural Resources and Environments** will contribute to Montana's supporting and understanding good land and natural resource stewardship.
- **Sustainable Energy** will contribute to Montanan's understanding and evaluating the growing opportunities to become involved in energy.
- **Food Safety** will ensure Montanan's they are producing and consuming safe food products.

These eight program areas are checked annually through the stakeholder input process. It is the goal of MSU Extension to be a vital and valued resource to the citizens of Montana.

Estimated Number of Professional FTEs/SYs total in the State.

Year	Extension		Research	
	1862	1890	1862	1890
2012	40.7	0.0	0.0	0.0
2013	40.7	0.0	0.0	0.0
2014	40.7	0.0	0.0	0.0
2015	40.7	0.0	0.0	0.0
2016	40.7	0.0	0.0	0.0

II. Merit Review Process

1. The Merit Review Process that will be Employed during the 5-Year POW Cycle

- External University Panel
- Expert Peer Review

2. Brief Explanation

The Merit Review process identified by Montana State University Extension involves an external university panel and an expert peer review. Those who have been asked to serve on the review panel are people who fit both categories well.

Three people will conduct the review process, each bringing a wealth of knowledge about Extension, Montana and how Extension can serve the needs of the states citizens.

Each year, the panel will receive a copy of the 5 year plan of work and the Annual Report of Accomplishments to use in reviewing program plans and tracking the resulting impacts. These documents will also serve as a basis for the panel to follow the planning process into the next year so they can assess sequential educational efforts, progress on program goals and plans for gathering impact data. The panel will use electronic methods of communicating, computer and teleconferencing.

Jim DeBree, Jim Johannes and Charles Rust have agreed to serve on the Merit Review panel. They have been selected because of their understanding of the mission of Extension and what outreach from the Land Grant University can mean to youth and adults throughout the state. Each one has had experiences that are important to developing a comprehensive review of the MSU Extension program.

Jim DeBree is a retired Director of Extension from Wyoming, a neighboring state of Montana. Wyoming is a state much like Montana in that it is largely dependent on the natural resources for it's economic base. With Jim's background in Wyoming, he is well equipped to understand the opportunities and pressures on a state like Montana.

Jim Johannes has recently retired from the Montana Extension Service. Jim's Extension experiences encompass every level of the organization from County Agent to administration. His administrative responsibilities included program planning and reporting, program evaluation, county agent supervision, liaison with the 1994 Colleges, and program development with the 7 Indian Reservations in the state. With his breadth of Extension experience, Jim will be able to offer valuable suggestions and feedback.

Dr. Charles Rust is a retired Montana Extension employee who began his career as an Agricultural Economist. His administrative experience included several years as the Program Leader for Agriculture after which he assumed the Extension Director position on an interim basis. Dr. Rust has a wide understanding of the needs of Montana citizens and will provide a keen eye in reviewing Extension plans and reports from that perspective.

While the process for the MSU Extension Merit Review is not complicated, it will provide valuable feedback for program considerations. This is largely due to the people who have been selected to serve on the panel and the knowledge they possess, both individually and collectively, about Extension programming.

III. Evaluation of Multis & Joint Activities

1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

Montana is active in planning and delivering programs in collaboration with other states in the region and nationally. The state is situated among other rural states that share similar issues, so partnering on program development and delivery makes sense. The stakeholder input process used by Montana Extension is not designed to cross state lines, but continual communication by professional faculty in counties of neighboring states serves as a check point for common program needs and concerns. It is not unusual to find clientele from "across the borders" using the closest county office for a resource; this may not be in their own state.

Additionally, specialists from states around the country form collaborations to address common and shared concerns. It is a specialist's role to stay abreast of emerging issues and develop educational efforts that bring them to the attention of those who will be impacted. Specialists also design educational opportunities that address current situations and work with county faculty and clientele so they can effectively address problems or take advantage of opportunities close at hand. Specialists also interface with state, regional and national organizations to stay current in their respective fields.

2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

A multi state collaboration can share techniques that have been effective in reaching under served or under represented audiences. These "best practices" are proven techniques that work and armed with these ideas, planned programs can be more targeted to particular audiences. Examples of programs currently targeting an under-served or under-represented audience are the SNAP-Ed. And EFNEP and Horizons programs. Youth Ag Loans for reservation youth will provide resources to start a herd of cattle or sheep.

3. How will the planned programs describe the expected outcomes and impacts?

Using the "logic model" as the primary planning tool, outcomes and impacts are identified at the beginning of the planning process. This method has become the accepted way of planning Extension programs all across the country, so multi state or joint collaborations start their work with the end result in mind.

Training on using effective evaluation tools to determine outcomes is a continuing process. The "how" to collect the "what" is being established during the planning process. States commonly share successful evaluation techniques and/or replicate studies that describe the impact of program efforts. Montana continues to put a priority on this type of training for both state and county personnel. Specialists are encouraged to provide evaluation processes/tools to be used with programs offered on a statewide basis.

4. How will the planned programs result in improved program effectiveness and/or

Like Montana, many of its neighboring states have limited resources to apply to any single issue. Past experience has shown that by planning across state lines, it is possible to bring needed expertise to bear on a particular problem. Experience has also shown that this approach is often more comprehensive and thorough in program design and delivery while at the same time, eliminating duplication of time and money.

IV. Stakeholder Input

1. Actions taken to seek stakeholder input that encourages their participation

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey of the general public
- Survey specifically with non-traditional groups

Brief explanation.

The stakeholder input process for MSU Extension gives citizens an opportunity to identify issues and needs that can be addressed through education. In an effort to be thorough in gathering data, both local and state level stakeholders are asked for input.

At the local level, every county and reservation Extension unit in the state has a process to gather input that involves a cross-section of local leadership and citizens (community and organizational) to: 1) provide advice about current and emerging local issues to ensure continued relevance of Extension programs, 2) assist with identification of program delivery and evaluation methods to ensure effectiveness, 3) identify new partners and strengthen relationships with existing partners, and 4) communicate the impact and relevance of MSU Extension's educational programs.

Local stakeholders are chosen because they represent clientele interests within the county/reservation, including the underserved and under-represented, understand Extension and believe education can assist in solving problems and improving quality of life.

The local stakeholder process uses a variety of formats to gather input including but not limited to advisory committees, focus groups, town hall meetings, on-line surveys, strategic planning, consultations with partner organizations and citizen boards, organizational forums. MSU specialists also provide these groups with information about trends and new developments that may impact Montana. This information drives local Extension programs and determines educational efforts from the County/Reservation Offices.

Information gathered through the local process is combined at each of the three Extension Regions so those issues and needs that are common may be addressed through a collaborative approach.

At the state level, the purpose of the Montana Extension Advisory Council (MEAC) is to assist MSU Extension in developing sound, long-range outreach educational programs based on priority needs of local Montana Communities. Specifically, the council's charge is to help Extension faculty and administrators to: Validate state priorities based on educational needs identified by local communities; Review on-going programs in light of identified state priorities; Identify new programs that should be developed to address state priorities; Evaluate the effectiveness and impact of Extension programs, particularly newly developed programs in response to stakeholder input processes; Stimulate communication and cooperation among county, state and national Extension-advisory committees and all other organizations or groups interested in outreach education; Foster delivery and acceptance of MSU Extension education and to promote Extension programs throughout Montana; Inform decision makers about the value of Extension programs.

MEAC members are selected because of their understanding of local and state issues and their interest in education through MSU Extension programs. They are chosen to reflect Montana's economic, geographic and racial diversity to assure a balance of interests and views.

A strategic planning process carried out over the past year has been completed and is currently being reviewed with implementation anticipated for spring/summer. This plan has identified needs and priorities for the extension organization. While the original intent of the strategic planning process was not to assist in determining budget downsizing, it, in the end, will play a significant part in those decisions should they become necessary.

2(A). A brief statement of the process that will be used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief explanation.

MSU Extension will use each of the methods noted depending on the program area and/or the specific situation. At the county level, faculty and their supervisor will determine the most appropriate way to gather information from residents in the county. They will decide, based on county population and its diversity, geographic configuration and other such factors, which can best provide useful feedback for program development and priority setting. Selection for participation in the advisory process will be based on the following criteria. A participant must:

- represent clientele interests within the county/reservation
 - represent the diversity of the county population including underserved and under-represented
 - have a general understanding of Extension and its purpose
- believe education can assist in solving problems and improving the quality of life.

2(B). A brief statement of the process that will be used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Survey of the general public
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Survey of selected individuals from the general public

Brief explanation.

Those groups with whom Extension traditionally works are asked to identify people who can effectively represent their needs and concerns. The same is true for those groups that Extension can not refer to as "traditional". These individuals are asked to come together to discuss the issues identified and assist in setting priorities for the Extension organization.

3. A statement of how the input will be considered

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- In the Staff Hiring Process
- In the Action Plans
- To Set Priorities
- Other (Create a basis for additional resources)

Brief explanation.

Generally speaking, the MSU Extension program is determined locally. Through the advisory process, Extension faculty learns about the needs Montanans have which can be addressed through education. It is critical then, for Extension to have the flexibility to develop programs that can respond to those needs when they are determined to be a priority. In Montana Extension, this may mean faculty must retool or broaden their scope beyond their immediate discipline. If input is used and programs are delivered that address citizen priorities, a basis for additional resources can be developed.

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Childhood Obesity, Nutrition and Healthy Lifestyles
2	Youth Development
3	Global Food Security, Hunger, Ag Sustainability and Profitability
4	Sustainable Energy - Family Issues, Resources and Environments
5	Sustainable Energy - Community and Economic Development
6	Climate Change - Natural Resources and Environment
7	Sustainable Energy
8	Food Safety

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Childhood Obesity, Nutrition and Healthy Lifestyles

2. Brief summary about Planned Program

Statistics show the American population is becoming more sedentary and heavier in weight. These statistics include all ages of people from children to elderly. The number of people considered obese has increased dramatically in the past 10 years. Weight issues and lack of exercise are linked to a number of human health problems including diabetes, high blood pressure and heart disease. Montana stakeholders agree with these trends and view health as being a major concern for both adults and children. This stakeholder input is substantiated with information from the 2000 census which indicates there are many health problems that can be attributed to nutritional deficiencies and poor food choices. Through education, MSU Extension has been committed to helping Montanans establish and maintain healthy lifestyles. The focus of these programs has largely been on food, nutrition and related decision making to achieve a healthy lifestyle.

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 : No

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	10%			
703	Nutrition Education and Behavior	55%			
724	Healthy Lifestyle	35%			
	Total	100%			

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

1. Situation and priorities

The societal costs of poor health due to lack of good nutrition decisions and lack of physical activity are on the rise. When considering obesity, attributable medical expenditures alone, the costs are estimated today at \$125 billion annually in the US. Additional health concerns such as diabetes and heart disease only compound the problems. To help address these issues, Montana Extension continues an educational program that helps youth and adults make well informed decisions about their health as it

relates to nutrition. There are three interrelated primary areas of concentration for this education: obesity (childhood and adult), nutrition and food resource management.

Obesity is the most widespread, serious and complex nutrition related health problem facing Americans, including people who live in sparsely populated states like Montana. Through changes in health related attitudes and behaviors, the rising obesity rates can be reversed.

Stretching the food dollar is a challenge for limited resource families and impacts the health and well-being of youth and adults alike. Almost 20% of all Montana children live in poverty. Working low-income families often lack the time, knowledge and skill to prepare and serve family meals, which are tasty, low-cost and healthful. Studies show people who run out of food or miss meals because they cannot afford them are among the most obese.

Nutrition plays a critical role in the aging process. However, there is a high rate of malnutrition among older adults because they experience a large number of related individual and environmental risk factors. Seventy-three percent of older adults report eating fewer than the recommended daily intake of fruits and vegetables. Sixteen percent report having been told by a doctor that they had diabetes. While all youth and adults need to be concerned about nutrition, those who qualify as seniors are among those most in need.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Employing a health-centered (rather than a weight-centered) approach to well-being, people can improve their health by developing lifestyle habits rather than by trying to achieve a specific body size, shape or weight. Past programming has resulted in impact data that indicates this is the most acceptable and successful approach.

Based on research, it is known that nutrition is an important component to addressing chronic disease issues as well as achieving a healthy lifestyle.

Funding will remain available for nutrition education for limited resource families. Funding has been available for many years and resulting programs have shown significant impacts.

2. Ultimate goal(s) of this Program

To reduce obesity among adults and children by changing attitudes related to food, physical fitness/activity and body image. (To slow and eventually reverse the rising obesity rates and increase the fitness levels through changes in health-related attitudes and behaviors.)

To help limited resource families in acquiring the knowledge, skills, attitudes and changed behavior necessary for nutritionally healthy diets and to contribute to their personal development and the improvement of the total family diet and nutritional well-being. Specifically, low-income families will show measurable improvements in their nutritional intake, knowledge and skills when managing their food budget and resources. Low-income youth will show increased nutrition knowledge and skills. Interagency cooperation will provide more effective nutrition education opportunities for limited income adults and youth.

To raise the ability of youth and adults to make sound decisions related to nutrition, food choices and physical activity to achieve a healthy lifestyle.

To slow the decline of muscle mass in women, especially those over age 30.

To develop programs that focus on healthy living for rural families and concentrate on the topics of nutrition, physical activity, body image and related parenting practices.

To develop and deliver an obesity prevention curriculum that will change the behaviors of parents and children thereby significantly reducing the likelihood of children becoming overweight.

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
2012	2.6	0.0	0.0	0.0
2013	2.6	0.0	0.0	0.0
2014	2.6	0.0	0.0	0.0
2015	2.6	0.0	0.0	0.0
2016	2.5	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

- Conduct train the trainer workshops
- Conduct workshops, seminars, meetings
- Facilitate meetings, discussion groups, focus groups
- Develop local and state partnerships
- Develop MontGuides (fact sheets), publications, website materials, video based materials
- Conduct web based, interactive training/education opportunities

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 ● One-on-One Intervention ● Demonstrations ● Other 1 (MontGuides (Fact Sheets)) 	<ul style="list-style-type: none"> ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

- Low income adults and children under the age of 19
- Low income youth, ages 5-12
- Adults that are FSP eligible

Youth from FSP eligible households
Teachers in the Montana School System
Middle to older aged women, especially those living in rural areas
Parents and youth living in rural areas

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- **EFNEP/FSNP:**
The NEP curriculum will be used to teach a series of 8-12 sessions to adults who are enrolled.
The NEP youth curriculum will be used to teach 6-7 lessons to youth in workshops (after school, in school, summer camps, park programs).
Develop and maintain local and state partnerships and collaborations.

- **Strong Women:**
Certify 10 county agents so they are qualified to conduct strength training classes.
Conduct two 14 week sessions in each county with qualified leaders to deliver the program.

- **Healthy Lifestyles:**
To reach adult and youth audiences in rural communities with health fairs and school/community based programs that will provide medical screenings and classes.
To track people who follow up with a physician or professional as a result of information gained at the health fair or similar activity.

- **4-Health:**
Design and introduce curriculum targeted at childhood obesity and healthy lifestyles for youth ages 8-12.
Provide training for parents on relevant information, effective parenting skills and strategies and a strong social support network that encourages them to solve everyday problems relating to the health and well-being of their pre-teen children.

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	<p>EFNEP/FSNP:</p> <p>Number of adults gaining awareness and knowledge regarding the importance of: Healthy eating (more fruits and vegetables, whole grains) Increasing physical activity Food Safety practices Food resource management practices Food planning and preparation</p> <p>Number of youth increasing knowledge regarding the importance of: Eating a variety of foods Healthy eating Increased physical activity Food safety principles (hand washing)</p> <p>Number of adults: Improving the family diets by choosing/preparing healthier choices (more fruits/vegetable/whole grains). Improving food safety practices (storing and thawing foods properly) Improving food resource management practices (meal planning, shopping with list) Improving nutrition practices (reading food labels)</p> <p>Participants will: Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes. Increase their confidence in the ability to manage food resources as well as other resources.</p>
2	<p>HEALTHY LIFESTYLES:</p> <p>As a result of having medical screenings at a health fair, participants will follow up with their physician or health professional. People will make better nutrition and food choices and engage in regular physical activity.</p>
3	<p>STRONG WOMEN:</p> <p>Participants will improve physical measurements (maintaining or lowering BMI) and reducing resting heart rate. Amount of increase in weight resistance over the course of the program as measured by specific exercises (bicep curl) and amount of weight lifted (2# increasing to 5#).</p>
4	<p>4-HEALTH:</p> <p>Rural parents of 4-H 8-12 year olds will gain knowledge about healthy diets, physical activity and improved body image while enhancing their understanding, skills and potential roles as positive change agents for their pre-teen children. Rural 4-H families will have greater levels of knowledge related to nutrition, body image and physical activity. Parents will assist their pre-teens in making healthier choices and practicing healthier behaviors after participating in 4-Health programs. Rural families will have decreased rates of childhood obesity.</p>

Outcome # 1

1. Outcome Target

EFNEP/FSNP:

Number of adults gaining awareness and knowledge regarding the importance of:
Healthy eating (more fruits and vegetables, whole grains)

Increasing physical activity

Food Safety practices

Food resource management practices

Food planning and preparation

Number of youth increasing knowledge regarding the importance of:

Eating a variety of foods

Healthy eating

Increased physical activity

Food safety principles (hand washing)

Number of adults:

Improving the family diets by choosing/preparing healthier choices (more fruits/vegetable/whole grains).

Improving food safety practices (storing and thawing foods properly)

Improving food resource management practices (meal planning, shopping with list)

Improving nutrition practices (reading food labels)

Participants will:

Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes.

Increase their confidence in the ability to manage food resources as well as other resources.

2. Outcome Type : Change in Condition Outcome Measure

2012:7000

2013:7000

2014:7500

2015:7500

2016:5000

3. Associated Knowledge Area(s)

- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

HEALTHY LIFESTYLES:

As a result of having medical screenings at a health fair, participants will follow up with their physician or health professional.

People will make better nutrition and food choices and engage in regular physical activity.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:2800 2013:2900 2014:2800 2015:2800 2016:4000

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

STRONG WOMEN:

Participants will improve physical measurements (maintaining or lowering BMI) and reducing resting heart rate. Amount of increase in weight resistance over the course of the program as measured by specific exercises (bicep curl) and amount of weight lifted (2# increasing to 5#).

2. Outcome Type : Change in Knowledge Outcome Measure

2012:100 2013:150 2014:150 2015:150 2016:150

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

4-HEALTH:

Rural parents of 4-H 8-12 year olds will gain knowledge about healthy diets, physical activity and improved body image while enhancing their understanding, skills and potential roles as positive change agents for their pre-teen children.

Rural 4-H families will have greater levels of knowledge related to nutrition, body image and physical activity. Parents will assist their pre-teens in making healthier choices and practicing healthier behaviors after participating in 4-Health programs.

Rural families will have decreased rates of childhood obesity.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:350

2013:400

2014:400

2015:400

2016:200

3. Associated Knowledge Area(s)

- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Government Regulations
- Competing Programmatic Challenges

Description

With a more visible emphasis on childhood obesity, it is likely there will be more interest and resources in addressing overweight and obesity issues in youth.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Strong Women program is planning an evaluation process using the model developed by Dr. Raidl - ID. The 4-Health program will be using a child self-evaluation process and questionnaire.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Youth Development

2. Brief summary about Planned Program

Young people grow up with or without our help. Youth development should be seen as an ongoing, inevitable process in which all youth are engaged and all youth are invested. It includes maturing and developing one's capacities, and it's far too important to be left to chance. Positive youth development occurs from an intentional process that promotes positive outcomes for young people by providing opportunities, choices, relationships, and the support necessary for youth to fully participate. Youth development takes place in families, peer groups, schools and in neighborhoods and communities.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
307	Animal Management Systems	5%			
801	Individual and Family Resource Management	5%			
802	Human Development and Family Well-Being	10%			
806	Youth Development	80%			
	Total	100%			

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

1. Situation and priorities

During the stakeholder input process, youth issues continue to surface to be a priority of Montanans. The 4-H mission mandates of citizenship, healthy living and science, engineering and technology form the programmatic structure of the Montana 4-H program in providing opportunities for life skill development focused on enhancing the development of youth who will be prepared to be contributing members of their families, communities and world. Stakeholders recognize the 4-H program has proven to be an effective

venue for youth to learn life skills. They know from personal experience that 4-H benefits youth. Additionally, the Positive Youth Development study conducted by Tufts University (2008), names 4-H as a successful youth development program helping youth become confident, competent, caring and connected and of character.

Leadership, volunteerism and community service were listed as high priorities as well. Parents know that youth learn how to lead, follow and be a contributing member of a team if they belong to 4-H. They can apply this knowledge to contribute to the community in which they live. Teaching young people the skills to be effective community leaders and develop a sense of volunteerism is important to Montana and its residents.

2. Scope of the Program

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

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

1. Assumptions made for the Program

There is a continuing need for youth to learn skills they can use over time. The 4-H program has been providing positive youth development and teaching life skills to young people for nearly a century and will continue to do the same in the future. Youth learn best by being involved in hands-on experiences. Youth need safe places and relationships with caring adults. The recent economic crisis and worldwide issues have affected all the systems that impact youth. Parents have less income and are forced to change their lifestyles, communities are challenged to provide for their citizens, future careers and employable skills have changed and new laws are enacted affecting communities, school and public policies.

2. Ultimate goal(s) of this Program

- Competence: learning advance skills in some important subjects of interest;
- Character: learning clear consistent moral precepts that effectively guide behavior;
- Caring: possessing a willingness to respond to the needs and concerns of others;
- Confidence: possessing a willingness to take on new challenges and expect success;
- Contribution: a willingness to give back to self, family, community and the institutions of a civil society;
- Connections: making a difference in the lives of others through service

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
2012	12.0	0.0	0.0	0.0
2013	12.0	0.0	0.0	0.0

Year	Extension		Research	
	1862	1890	1862	1890
2014	12.0	0.0	0.0	0.0
2015	12.0	0.0	0.0	0.0
2016	12.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

- Conduct Workshops and Clinics that provide active learning in subject matter related to projects
- Conduct/facilitate meetings that focus on facilitation and leadership skills
- Develop curriculum and supporting Teaching Tools for volunteers to use
- Provide training for youth and adult volunteers
- Partner with youth serving groups on state and local levels
- Provide/develop web based education and information access

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 ● One-on-One Intervention ● Demonstrations ● Other 1 (Field trips) ● Other 2 (Camps) 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension ● Other 1 (Facebook)

3. Description of targeted audience

- Youth ages 5-19
- Parents of youth involved in 4-H
- Adult volunteers involved in Youth Development Work: 4-H program and other group volunteers.
- Professionals involved in Youth Development Work: 4-H program and other agencies, schools and organization professionals
- School administration and teachers
- Youth who live on reservations and are between the ages of 5-21.
- Youth ages 5-19 who have parents involved in the military.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Life Skill Development:
Statewide, 10,000 youth will be involved in 300 experiential learning activities including workshops, clinics, seminars and club meetings.
 - Leadership/Volunteer Development:
An estimated 250 youth and 450 adults will be able to apply leadership skills and positive youth development practices in their roles of organizational, project or other leadership positions. Professional and volunteer staff in a majority of the counties will follow and adhere to established financial and audit guidelines. Teenage youth will exhibit leadership and communications skills within the 4-H program and at other times outside 4-H program.
 - JUNIOR AGRICULTURE LOAN PROGRAM:
Approximately 8 reservation youth will apply for the Montana Department of Agriculture - Junior Ag Loan Program to borrow money to purchase livestock to start their own herd. They will receive the necessary training to complete the process.
 - Military Partnerships: The number of military youth participating in 4-H clubs, activities, and events will increase to 500. Military youth who participate in 4-H will demonstrate acquisition of or improvement in one or more of these areas: communication, problem-solving, decision-making, building peer groups, building strong family relationships, stress management and self care, resiliency and critical thinking.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	<p>LIFE SKILL DEVELOPMENT Because of their involvement in 4-H projects, activities and events, 100% of 4-H members will show an increase in knowledge and skills and improved practices learned; 50% of 4-H members will re-enroll; 85% of the youth involved in experiential learning activities will gain knowledge and skills about the topic they have selected; (project subjects) youth will exhibit having more confidence, feeling more competent and self-assured and feeling more connected to their families and communities.</p>
2	<p>LEADERSHIP/VOLUNTEER DEVELOPMENT</p> <p>Eighty percent (80%) of Extension agents attending professional development opportunities will increase knowledge in volunteer management. Sixty percent (60%) of the 4-H volunteers participating in trainings will learn the duties of organizational leaders, project leaders and other leadership positions within the program so 4-H clubs and activities will use positive youth development practices. Sixty percent (60%) of the county 4-H Councils will learn and use the established financial management and review guidelines for handling public money. Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills. Fifty percent (50%) of Extension professionals will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation. Fifty percent (50%) of volunteers attending trainings will adopt practices that support the 8 critical elements of 4-H education programs. Fifty percent (50%) of 4-H councils in Montana will adopt the financial management and review guidelines. Fifty percent (50%) of participating youth will apply developed practices of leadership. Agents and volunteers participating in professional development opportunities will provide a safe, positive environment for youth to gain life skills and meet developmental needs through participation in 4-H programs. Montanan's will have a more accurate and positive impression of the 4-H Youth Development Program.</p>
3	<p>JUNIOR AGRICULTURE LOAN PROGRAM Youth will complete the finance and beef management trainings needed to complete the application. Youth making application to borrow money will use it for the purchase of livestock so they can start or expand their herd.</p>
4	<p>Life Skill Development; Communications/Public Speaking: Through their involvement in 4-H: 50% of the members will participate in communication/public speaking activities; know how to find information for a speech or talk; 60% can select a topic, speak loud enough to be heard and organize thoughts necessary to give a speech or talk.</p>
5	<p>Life Skill Development; Science, Engineering and Technology: Participants will develop technology competencies in videography, robotics and GPS; develop science processing skills; use technology applications as tools to learn science through hands-on projects, activities and events.</p>
6	<p>Military Partnerships: Because of their involvement with 4-H, participants involved in Military 4-H clubs, activities or events will learn science, engineering and technology skills through projects, activities and events. Partnerships will be formed/enhanced with the military so youth can take part in 4-H programming</p>

Outcome # 1

1. Outcome Target

LIFE SKILL DEVELOPMENT

Because of their involvement in 4-H projects, activities and events, 100% of 4-H members will show an increase in knowledge and skills and improved practices learned; 50% of 4-H members will re-enroll; 85% of the youth involved in experiential learning activities will gain knowledge and skills about the topic they have selected; (project subjects) youth will exhibit having more confidence, feeling more competent and self-assured and feeling more connected to their families and communities.

2. Outcome Type : Change in Action Outcome Measure

2012:20000 2013:20000 2014:20000 2015:20000 2016:20000

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

LEADERSHIP/VOLUNTEER DEVELOPMENT

Eighty percent (80%) of Extension agents attending professional development opportunities will increase knowledge in volunteer management.

Sixty percent (60%) of the 4-H volunteers participating in trainings will learn the duties of organizational leaders, project leaders and other leadership positions within the program so 4-H clubs and activities will use positive youth development practices.

Sixty percent (60%) of the county 4-H Councils will learn and use the established financial management and review guidelines for handling public money.

Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills.

Fifty percent (50%) of Extension professionals will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation.

Fifty percent (50%) of volunteers attending trainings will adopt practices that support the 8 critical elements of 4-H education programs.

Fifty percent (50%) of 4-H councils in Montana will adopt the financial management and review guidelines.

Fifty percent (50%) of participating youth will apply developed practices of leadership.

Agents and volunteers participating in professional development opportunities will provide a safe, positive environment for youth to gain life skills and meet developmental needs through participation in 4-H programs.

Montanan's will have a more accurate and positive impression of the 4-H Youth Development Program.

2. Outcome Type : Change in Action Outcome Measure

2012:2500 2013:3000 2014:3000 2015:3000 2016:3000

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being
- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

JUNIOR AGRICULTURE LOAN PROGRAM

Youth will complete the finance and beef management trainings needed to complete the application. Youth making application to borrow money will use it for the purchase of livestock so they can start or expand their herd.

2. Outcome Type : Change in Action Outcome Measure

2012:10 2013:10 2014:10 2015:10 2016:8

3. Associated Knowledge Area(s)

- 307 - Animal Management Systems
- 801 - Individual and Family Resource Management
- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Life Skill Development; Communications/Public Speaking:

Through their involvement in 4-H: 50% of the members will participate in communication/public speaking activities; know how to find information for a speech or talk; 60% can select a topic, speak loud enough to be heard and organize thoughts necessary to give a speech or talk.

2. Outcome Type : Change in Action Outcome Measure

2012:5000 2013:5000 2014:5000 2015:5000 2016:5000

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 5

1. Outcome Target

Life Skill Development; Science, Engineering and Technology:
Participants will develop technology competencies in videography, robotics and GPS; develop science processing skills; use technology applications as tools to learn science through hands-on projects, activities and events.

2. Outcome Type : Change in Action Outcome Measure

2012:100 2013:100 2014:100 2015:100 2016:100

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 6

1. Outcome Target

Military Partnerships:
Because of their involvement with 4-H, participants involved in Military 4-H clubs, activities or events will learn science, engineering and technology skills through projects, activities and events. Partnerships will be formed/enhanced with the military so youth can take part in 4-H programming

2. Outcome Type : Change in Action Outcome Measure

2012:400

2013:400

2014:400

2015:400

2016:400

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Description

Montana youth are leaving the state to find employment opportunities. Volunteer time is spread thin as parent's work requires time and energy.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Among other techniques, Montana 4-H is using the Life Skills Evaluation System to collect and compile data from participants involved in activities focused on life skill development. This is a statewide, electronic system that allows information to be gathered locally and then compiled at the state level.

In addition, 4-H members are required to keep a 4-H Record Book (journal), which describes their involvement from beginning to end. They record the things they learn from the activities in which they have participated. These records are a source of information about the knowledge youth have gained, what behaviors they have learned and what changes they have made over time.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Global Food Security, Hunger, Ag Sustainability and Profitability

2. Brief summary about Planned Program

The economic and cultural changes in the country and Montana are making it more difficult for families involved in production agriculture to keep their businesses profitable, yet agriculture remains the most significant economic basis in the state with a net farm income of over \$720 million dollars annually. Producers have become increasingly aware of the need to analyze their individual situations so they can make decisions that keep their operations viable. The fluctuation in costs to do business as well as the market place keeps farmers/ranchers in a constant state of change. Planning for the future is becoming more stressful each year. Progressive producers have learned that education is one of the most important elements they can turn to for help in making wise decisions and Extension is the best source of that information.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	5%			
205	Plant Management Systems	20%			
213	Weeds Affecting Plants	5%			
216	Integrated Pest Management Systems	10%			
301	Reproductive Performance of Animals	10%			
307	Animal Management Systems	20%			
311	Animal Diseases	5%			
601	Economics of Agricultural Production and Farm Management	5%			
602	Business Management, Finance, and Taxation	10%			
603	Market Economics	5%			
604	Marketing and Distribution Practices	5%			
	Total	100%			

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

1. Situation and priorities

Montana production agriculture is largely dependent on small grains and livestock. Small grain producers face challenges with higher input costs (fuel, fertilizer, equipment), pest control and damage and increased irrigation costs. Producers know profit margins fluctuate as they face roller coaster income and expenses over the years. Operators must gain proficiency not only at producing a commodity, but also at marketing systems, environmental regulations, market quality requirements and financial/business management.

The beef industry has become more consumer-focused and as a result, specific quality and consistency targets have been established in all segments of the industry. To meet consumer expectations for safe beef and return additional revenue to cattle producers, a systems network is necessary to ensure that a quality and consistent product is being produced. Central to this networking approach is the exchange of information from the producer to the end consumer.

Most land managers agree the spread of invasive plants is the primary environmental threat to western wildlands/ranges. Noxious weed invasion reduces the ecological integrity of land and water, alters ecosystems, impacts wildlife habitat and threatens survival of native plants. Small ruminant production can provide land managers an alternate tool to eliminate invasive plants that is more economically feasible and environmentally sensitive compared to traditional weed control methods. Currently, sheep grazing represents the only economically and environmentally sound alternative to address large infestations of invasive plants, however, availability of sheep has limited their use.

Plant management, whether for weed control in crops or range lands, or for family or commercial

gardens and yards, is important to land owners. Management plans assist owners in determining best practices to enhance production while addressing other issues specific to their property. The largest expense for ranchers in this region is the winter feeding program. Perennial forages such as alfalfa provide advantages for nutrient recycling and disrupting pest cycles in crop rotations. Growing annual crops for pasture or hay provides excellent opportunities for low-cost forage production, weed control and water conservation in dry land systems. In irrigated forage systems, there continues to be a need for efficient forage rotations that reduce fuel, fertilizer or other inputs.

Chemicals are used to control pests of all kinds but to be safe and effective, application procedures and protocols must be followed. Diagnosing the problem and making recommendations to address it are important first steps in pesticide education.

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

The spread of weeds on public land will continue without intervention efforts.

Many public agencies are underfunded in the area of noxious weed control.

As the cost of agricultural inputs increases, many may choose to ignore, rather than manage, noxious weeds.

If demonstrations can prove recommended changes are economically worthwhile, producers will adopt the suggested practices.

2. Ultimate goal(s) of this Program

The Montana Beef Network has three primary goals: 1) to provide educational programs aimed at promoting beef quality assurance standards, production and marketing goals; 2) to certify feeder calves that have met defined health management protocols in an attempt to reduce sickness; and 3) to provide information feedback from the feedlot and/or packing plant to the cow-calf producer showing if the feeder calves met industry requirements for quality grade, safety and red meat yield.

The goals of the Montana Sheep Institute are: 1) to incorporate controlled sheep grazing as a tool in integrated natural resource management, specifically in controlling established infestations of non-native/noxious weeds; 2) to create an educational environment that facilitates improved lamb and wool quality so they are products that will directly enter the marketplace; and 3) to develop selection, nutritional and marketing management strategies that maximize production efficiencies.

For the area of weeds, the goals are: 1) to evaluate new and existing technologies for weed control and crop safety; 2) to raise the capacity of producers/crop advisors to identify and control crop weeds; and 3) to prevent new invasive plants from establishing in the state and containing invasive plants that are not currently widespread across the state.

The area of crops includes goals whereby producers will: 1) develop long range plans that include a cropping system for farm profitability, pest management, soil fertility, residue and moisture management;

2) develop specific crop management plans that include major production components, e.g., performance and characteristics of small grain varieties and other rotation crops; and 3) use detailed field records to track field operations and associated inputs to make production decisions.

The goal for the Master Gardener program is to increase the knowledge of skilled and unskilled individuals in the areas of botany, soils, plant nutrition, turfgrass management and vegetable and fruit production as well as basic instruction in entomology and plant problem diagnosis.

The major goal of those programs targeted at profitability is for farm managers to use guidelines and management tools that will assist them in the evaluation of farm records, enterprise analysis, lease arrangements, machinery ownership and operating costs, as well as expansion opportunities and consequences. This includes producers keeping detailed farm/ranch records to track such items as income, expenses, assets, liabilities and inventories. These practices lead to better decision making associated with business performance, profitability of enterprises, marketing decisions and implications of expansion plans for land and/or machinery.

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
2012	8.8	0.0	0.0	0.0
2013	8.8	0.0	0.0	0.0
2014	8.8	0.0	0.0	0.0
2015	8.8	0.0	0.0	0.0
2016	10.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

The Montana Beef Network uses a variety of delivery methods to reach producers including interactive video conferencing, workshops, newsletters, seminars and interactive TV that addresses nutrition, production, marketing and other topics important to the clientele. The Montana Sheep Institute uses demonstration sites associated with grazing of noxious weeds (leafy spurge and spotted knapweed) by small ruminants, provides workshops and seminars for producers on best practices for effective/efficient production and marketing strategies and clinics for people interested in learning to shear their sheep or hire out to shear others animals. The weed issue is addressed by landowners learning to monitor their property for weed infestations and then knowing when and how to address the problems. Workshops, tours and field days are used to raise the ability of the landowners to curtail weed infestations. The crops area use workshops and seminars to help producers with keeping records, decision making aids, leasing alternatives/marketing, computer applications as well as test plots, tours and other demonstration strategies that provide information on varieties, fertilizer and soils. Master Gardener programs are delivered both live and by internet as well as printed resources to use in answering questions. Workshops on financial management, developing business plans, analyzing individual enterprise techniques are all associated with helping producers make decisions that will result in making a profit/staying in business.

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 ● One-on-One Intervention ● Demonstrations ● Other 1 (Field trials/tours) 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● TV Media Programs ● Web sites other than eXtension ● Other 1 (Publications)

3. Description of targeted audience

Livestock Producers, especially beef, swine and sheep
 Commodity Associations
 Land Managers/Owners (small and large)
 Weed Control Professionals
 Gardening Club members/people interested in gardening
 Small Grain Producers (Dry Land and Irrigated)

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Montana Beef Network: Number of people participating in demonstration/tour opportunities.
Number of producers attending workshops on disease mitigation and prevention.
Number of producers attending presentations on "best practices" in beef cattle production and marketing.

- Montana Sheep Institute:
Number of people attending workshops teaching innovative ways to using sheep.
Number of projects being conducted with sheep grazing invasive plants
 Number of sheep producers involved with sheep grazing projects
Number of landowners involved in sheep grazing projects
Number of acres where weeds were controlled and documentation of vegetative composition trends.
Number of wool growers involved in developing larger, more marketable clips
Number of people attending workshop related to using "best practices" in sheep production and marketing of wool
Number of people trained as shearing instructors.
Number of people shearing their own sheep or being hired to shear for others.

- Weed Control: Number of producers participating in workshops on weed control. Number of producers and landowners attending tours. Number of people attending meetings on pesticide control and applicator training. Number of people being recertified for pesticide use.

- Crops: Number of producers attending cropping systems workshops
 Number of producers adopting soil moisture conservation practices
 Number of producers adopting an annual crop rotation focused on profitability and soil health.
 Number of producers attending workshops on fertilization, reading soil test reports, pest management programs and field records.
 Number of people accessing web site for information on fertilizer and soils.
 Number of people attending field days, crop guides, research plot sites, and research center summaries.
Number of people using pulse crops in the cropping rotation.

- Master Gardener: Number of people who become certified Master Gardeners.

- Profitability:
Number of producers attending farm management workshops including financial record guidelines and computer applications.
Number of management plans developed including costs of production worksheets and summaries.

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	<p>Montana Beef Network: Number of people learning about new practices in livestock production. The percent of increase in the value of calves sold at weaning. Number of people who made changes in the way records are kept on ranches. Percent of breeding programs that are meeting the needs of the consumer in terms of quality and yield grade of calves. Add value to weaned calves</p>
2	<p>Montana Sheep Institute: Number of people who learned about using sheep to control invasive plants. Increased number of grazing management programs initiated and monitoring programs developed. Increase in the number of Wool Pools organized and wool delivery and marketing of consolidated pools implemented. Number of producers who developed plans to implement technology in their own production unit. (Ribeye program) Acres of infested landscape controlled by small ruminant grazing. Wool from smaller growers prepared and marketed on the national/international market. Producers improving production efficiency of their sheep enterprise. Number of people involved with shearing their own or others sheep.</p>
3	<p>Weed Control: Producers participating in workshops will be able to identify weeds and know how to control them. People attending meetings will understand pesticide control and appropriate applicator training. People will be recertified for pesticide use.</p>
4	<p>Master Gardener: Participants learn about plants and how to grow them successfully. Participants' volunteer hours of service to their communities in answering questions about horticultural issues.</p>
5	<p>Crops: Producers improve their understanding of nutrient cycling, weed control, variety selection and alternative crop possibilities. Producers will plant short water varieties when moisture conditions are low, plant sawfly resistant varieties to minimize losses, and forage varieties that will improve production. Pounds of fertilizer used in farming systems will be reduced. Producers will adopt weed, crop and forage management strategies that sustain agricultural crop production and lessen environmental damage. Farm operators who implement best practices will increase their profitability and enhance long-term sustainability.</p>
6	<p>Profitability: Ag producers gain knowledge associated with development of standard financial statements, and track machinery costs as well as fixed and variable costs associated with crop enterprises. Producers will adopt financial management programs that will provide financial statements for business analysis and bank lending requirements. Producers will analyze enterprise cost of production that will aid in cropping decisions, marketing, leasing, machinery and land purchases. Successful farm and ranch businesses provide stability and continuity for local communities, businesses and schools.</p>

Outcome # 1

1. Outcome Target

Montana Beef Network:

Number of people learning about new practices in livestock production.

The percent of increase in the value of calves sold at weaning.

Number of people who made changes in the way records are kept on ranches.

Percent of breeding programs that are meeting the needs of the consumer in terms of quality and yield grade of calves.

Add value to weaned calves

2. Outcome Type : Change in Condition Outcome Measure

2012:4000

2013:4000

2014:4000

2015:4000

2016:1000

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 307 - Animal Management Systems
- 311 - Animal Diseases
- 601 - Economics of Agricultural Production and Farm Management

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Montana Sheep Institute:

Number of people who learned about using sheep to control invasive plants.

Increased number of grazing management programs initiated and monitoring programs developed.

Increase in the number of Wool Pools organized and wool delivery and marketing of consolidated pools implemented.

Number of producers who developed plans to implement technology in their own production unit. (Ribeye program)

Acres of infested landscape controlled by small ruminant grazing.

Wool from smaller growers prepared and marketed on the national/international market.

Producers improving production efficiency of their sheep enterprise.

Number of people involved with shearing their own or others sheep.

2. Outcome Type : Change in Action Outcome Measure

2012:5000 2013:5000 2014:5000 2015:5000 2016:1000

3. Associated Knowledge Area(s)

- 213 - Weeds Affecting Plants
- 301 - Reproductive Performance of Animals
- 307 - Animal Management Systems
- 601 - Economics of Agricultural Production and Farm Management
- 603 - Market Economics
- 604 - Marketing and Distribution Practices

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

Weed Control:

Producers participating in workshops will be able to identify weeds and know how to control them. People attending meetings will understand pesticide control and appropriate applicator training. People will be recertified for pesticide use.

2. Outcome Type : Change in Action Outcome Measure

2012:4000 2013:4000 2014:4000 2015:4000 2016:900

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems
- 307 - Animal Management Systems

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Master Gardener:

Participants learn about plants and how to grow them successfully.
Participants' volunteer hours of service to their communities in answering questions about horticultural issues.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:200 2013:200 2014:200 2015:200 2016:2000

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 5

1. Outcome Target

Crops:

Producers improve their understanding of nutrient cycling, weed control, variety selection and alternative crop possibilities.

Producers will plant short water varieties when moisture conditions are low, plant sawfly resistant varieties to minimize losses, and forage varieties that will improve production.

Pounds of fertilizer used in farming systems will be reduced.

Producers will adopt weed, crop and forage management strategies that sustain agricultural crop production and lessen environmental damage.

Farm operators who implement best practices will increase their profitability and enhance long-term sustainability.

2. Outcome Type : Change in Action Outcome Measure

2012:2400 2013:2500 2014:2500 2015:2500 2016:2000

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 213 - Weeds Affecting Plants
- 216 - Integrated Pest Management Systems
- 602 - Business Management, Finance, and Taxation

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 6

1. Outcome Target

Profitability:

Ag producers gain knowledge associated with development of standard financial statements, and track machinery costs as well as fixed and variable costs associated with crop enterprises.

Producers will adopt financial management programs that will provide financial statements for business analysis and bank lending requirements.

Producers will analyze enterprise cost of production that will aid in cropping decisions, marketing, leasing, machinery and land purchases.

Successful farm and ranch businesses provide stability and continuity for local communities, businesses and schools.

2. Outcome Type : Change in Action Outcome Measure

2012:150

2013:150

2014:150

2015:150

2016:350

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

4. Associated Institute Type(s)

- 1862 Extension

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
- Populations changes (immigration, new cultural groupings, etc.)
- Other (High cost of fuel, fertilizer)

Description

The weather will always be a factor over which producers have no control yet it effects their business greatly. In some parts of the state drought has caused ranchers to sell livestock and farmers to decide when, what and if to plant. Both are addressing weed and other pest issues brought on by stressed plants. Like other business entities, the economy has been difficult for agriculture producers to negotiate as well.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Many of the programs in this area are connected to research efforts which have specific and expected outcomes. This is especially true for the Montana Beef Network, The Sheep Institute, and cereal forage efforts.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Sustainable Energy - Family Issues, Resources and Environments

2. Brief summary about Planned Program

Regardless of the community, families are concerned about economic development, better paying jobs, business opportunities and health care. They are concerned about giving their youth the skills necessary to become competent, contributing and caring members of the community in which they live. They are concerned about being good parents/grandparents who know how to guide their youth through the challenges of being a young person today. They are concerned about the elderly and having adequate health care, housing and other infrastructure necessities to accommodate a shift in population. They are concerned about having adequate resources to maintain a desirable quality of life and they are interested in how they can pass their accumulated holdings on to future generations, which most recently has become an urgent issue for tribal members.

In short, Montana citizens are concerned about the quality of life for their families and look to Extension for education and help so they can make wise decisions and choices.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management	40%			
802	Human Development and Family Well-Being	40%			
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	20%			
	Total	100%			

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

1. Situation and priorities

The general population of Montana is aging. The fastest growing age group in the state are those individuals over 85. Along with extended life expectancy comes a variety of chronic illnesses. Most older individuals live on their own or with a spouse yet they often require either direct or managed care.

Between 1990-2000, there has been a 53% increase in the number of grandparents responsible for

caring for their grandchildren (9th nationally). The US Census (2000) reported 6,053 grandparents hold the primary responsibility for the basic needs of their grandchildren, while 11,098 grandparents live in households with one or more grandchildren under the age of 18. Grandparents are faced with this responsibility for a variety of reasons: death of the parent, parental child abuse, neglect, abandonment, teen pregnancy, issues of divorcing parents, parental issues with alcohol/drugs, financial difficulties, illness and military deployment. The two-parent nuclear family structure is no longer the majority of families. More women today are experiencing incarceration. Teen pregnancy has risen. More grandparents, aunts and uncles are being asked to care for relative children. Parents who are stressed or do not have good parenting skills are at risk of abuse and neglect of their children.

Montanans are interested in the wise use and handling of their financial resources. Statistics reveal that 70% of Montanans die without a will. The state legislature continues to change the intestate succession (dying without a will law) and contract laws that impact beneficiaries of real and personal property, eg. a new beneficiary deed law went into effect in October 2007. Montana farmers/ranchers/owners of closely held businesses continue to be interested in intergenerational transfers. Congress has made changes in the federal estate and gift tax laws that will be in effect from 2011 to 2012. Education is needed to provide families, including those living on reservations, with information about the impact of state and federal laws.

The personal savings rate for October 2005 was a negative 0.8%, the lowest rate since the depression. (Commerce Dept, Bureau of Economic Analysis) The 2005 Retirement Confidence Survey found most workers say they are behind schedule in saving for retirement. Montanans need information on why and how to save for their futures while paying for increased utility costs and other bills.

Consumers, real estate professionals, county health officers and others report alarming incidences and health effects related to home environmental issues. The state's radon level ranks 3rd highest in the US, asthma has increased due to poor home environments. Home environmental issues include asbestos in vermiculate insulation, drinking water contamination, improperly installed and maintained septic systems, carbon monoxide from faulty heating systems, mold and lead based paint.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Families have continuing concerns about having enough money for their families to live comfortably through retirement years. Estate planning is difficult for many and is likely avoided by some, yet is so important. Taking care of aging or aligning family members will likely increase over time, so finding resources is amust. The number of grandparents serving in the primary responsible role for their grandchildren is most likely going to increase or, at best, remain stable. Health issues related to home environments will continue to result from mold, radon, asbestos and a variety of other problems. Many people are unaware of the health hazards brought about by these factors.

2. Ultimate goal(s) of this Program

To assist care givers of patients with chronic illnesses in learning about the various diseases,

planning for the future as the disease progresses and learning how to care for themselves as they care for their loved one. Montana farmers/ranchers/owners will develop a transfer plan for passing their operation to the next generation. Montana families will write a will to name guardianship and conservatorship for their children. Montana families will take advantage of contract laws such as beneficiary designations, payable on death designations and transfer on death designations when appropriate. Tribal members will develop a transfer plan for passing their operation to the next generation. Individuals will develop a savings plan and save for their financial goals of higher education, retirement and long term care. To provide education, support and resources to grandparents who are raising grandchildren. To increase the number of homes tested/assessed and mitigated for household molds and excessive moisture, radon, asbestos containing materials, drinking water quality, carbon monoxide and other combustion gases related to home fossil fuel appliances, furnaces and water heaters, lead-based paint. To reduce home asthma triggers.

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
2012	2.8	0.0	0.0	0.0
2013	2.8	0.0	0.0	0.0
2014	2.8	0.0	0.0	0.0
2015	2.8	0.0	0.0	0.0
2016	2.8	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

- Conduct workshops in all areas
- Develop support groups where and when necessary
- Partner with agencies, associations, organizations, real estate personnel, county health officials, Montana Building Industry Association.
- Conduct Seminars on Estate Planning Healthy Indoor Environments
- Revise MontGuides (fact sheets) to reflect the changes in state and federal laws related to estate planning.
- Develop publications on asthma awareness, lead-based paint and other home environment issues.
- Conduct webinars when appropriate, develop/maintain current web sites, use other electronic opportunities when appropriate (Face Book, etc.)

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● One-on-One Intervention● Other 1 (MontGuides (Fact Sheets))	<ul style="list-style-type: none">● Newsletters● TV Media Programs● Web sites other than eXtension
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3. Description of targeted audience

Care givers of people with chronic illness
Home health care providers
Certified nursing assistants
Tribal members
Farmers/Ranchers
Montana Financial Educational Coalition Partners
4-H Leaders
State Agency Employees
Home Builders, housing authorities, real estate professionals
Remodeling Contractors
Weatherization Contractors
Homeowners
Senior Citizens
Parents/Grandparents
Montana Department of Family Services

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Estate Planning
An estimated 1000 people will attend an in-depth seminar on estate planning and promotion and will begin to make plans for distribution of their estates.
Distribute MontGuides on state and federal law changes to 1400 people who have purchased Estate Planning: The Basics Packet
Train/distribute the curriculum: Track'n Your Saving Goals Register and associated MontGuides
Distribute materials/fact sheets on AIPRA on reservations - estimated 100.

 - Grandparents Raising Grandchildren:
Produce and distribute a bimonthly newsletter to all Extension Offices, grandparents, and others on the mailing list; currently 150 names.
Provide support and assistance to start educational/support groups in local communities for grandparents who are parenting children. Currently, there are 15 in the state.

 - Housing and Environmental Quality
Number of publications/fact sheets distributed.
Number of participants attending home environmental workshops/programs.
Number of people testing their wells, doing radon tests.

 - Parenting Piece by Piece
Train 3 county Extension agents in a train-the-trainer model for delivering a 6 week workshop to parents.
Conduct 3 six week workshops in the state for parents who have limited parenting skills, are at risk for child abuse and neglect or are mandated by the Montana Department of Family Services.

 - Powerful Tools for Care Givers:
An estimated 100 people responsible for giving care to someone with chronic illness will learn steps in planning to provide adequate support and care.
Caregivers will have tools to assist them in self-care as they provide or manage care for a friend or loved one.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	<p>Powerful Tools for Care Givers: An estimated 100 people responsible for giving care to someone with chronic illness will learn steps in planning to provide adequate support and care. Caregivers will have tools to assist them in self-care as they provide or manage care for a friend or loved one.</p>
2	<p>Grandparents Raising Grandchildren: Grandparents will become aware of services available to support them as they raise their grandchildren. Grandparents will use current parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren. Grandparents and their families will experience reduced stress and grandchildren will have a safe and nurturing environment to which to grow.</p>
3	<p>Housing and Environmental Quality: Participants will learn about an environmental health concerns common to new and existing homes e.g., molds, water quality, lead-based paint, radon, etc. Homes will routinely be tested/assessed and mitigated for environmental health issues such as molds, radon, asbestos, drinking water, carbon monoxide</p>
4	<p>Parenting Piece by Piece: Parents, especially those who have limited parenting skills, are at risk for child abuse and neglect or are mandated by the Montana Department of Family Services, will show evidence of improved parenting practices.</p>
5	<p>Estate Planning: An estimated 1000 people will make plans for the distribution of their property through estate planning.</p>

Outcome # 1

1. Outcome Target

Powerful Tools for Care Givers:

An estimated 100 people responsible for giving care to someone with chronic illness will learn steps in planning to provide adequate support and care.

Caregivers will have tools to assist them in self-care as they provide or manage care for a friend or loved one.

2. Outcome Type : Change in Action Outcome Measure

2012:125 2013:125 2014:125 2015:100 2016:100

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Grandparents Raising Grandchildren:

Grandparents will become aware of services available to support them as they raise their grandchildren.

Grandparents will use current parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren.

Grandparents and their families will experience reduced stress and grandchildren will have a safe and nurturing environment to which to grow.

2. Outcome Type : Change in Action Outcome Measure

2012:250 2013:275 2014:275 2015:250 2016:250

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

Housing and Environmental Quality:

Participants will learn about an environmental health concerns common to new and existing homes e.g., molds, water quality, lead-based paint, radon, etc. Homes will routinely be tested/assessed and mitigated for environmental health issues such as molds, radon, asbestos, drinking water, carbon monoxide

2. Outcome Type : Change in Action Outcome Measure

2012:1000 2013:1000 2014:1000 2015:1000 2016:3000

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Parenting Piece by Piece: Parents, especially those who have limited parenting skills, are at risk for child abuse and neglect or are mandated by the Montana Department of Family Services, will show evidence of improved parenting practices.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:125 2013:125 2014:150 2015:150 2016:150

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 5

1. Outcome Target

Estate Planning:

An estimated 1000 people will make plans for the distribution of their property through estate planning.

2. Outcome Type : Change in Action Outcome Measure

2012:0	2013:0	2014:0	2015:0	2016:1000
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3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management
- 802 - Human Development and Family Well-Being

4. Associated Institute Type(s)

- 1862 Extension

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

Description

{NO DATA ENTERED}

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Each program has designed evaluation tools to gather data indicating outcome/impacts. Many have 3-6 year follow-up strategies to track the actions of participants.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Sustainable Energy - Community and Economic Development

2. Brief summary about Planned Program

Montana people have indicated they want to improve conditions for their families and communities, but this is not easy in a state that is so large and diverse. The major initiatives for this planned program are business retention/expansion, tourism, adult education, leadership development, community planning, effective service on boards, councils and committees. Agent and specialist developed programs provide both technical support and leadership in helping communities identify, set and achieve their goals. Extension is viewed as a resource by decision makers and community leaders for unbiased education on issues impacting their communities and the people who live there.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	35%			
723	Hazards to Human Health and Safety	10%			
801	Individual and Family Resource Management	10%			
802	Human Development and Family Well-Being	5%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	20%			
805	Community Institutions, Health, and Social Services	20%			
	Total	100%			

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

1. Situation and priorities

Depending on the area of the state, issues facing families and communities differ. The eastern part of Montana must address problems related to declining populations and shrinking communities. On the other hand, people who live in the western section of the state are working hard to plan for fast growth and

an increasing and changing population. Extension programs are helping families and communities address needs brought on by these changes.

Business acquisition, retention and/or expansion are all important to community well being. A viable business community provides work for families and keeps a community sustained.

Adult education activities, such as leadership development, in rural communities provide an opportunity for people to learn new skills or just gain new information. Extension provides a link to the University which can assist in acquiring classes and instructors.

Serving on public boards, whether at the county or municipal level, is a critical component of good governance. Training for the people who serve on boards is critical to the success of any board. Elected officials, employees or appointed board members hold positions of high responsibility and public accountability. The people elected to these positions have accepted a position of public trust and enjoy the confidence of the community. Many local governments believe that the acceptance of a public trust entails an obligation to achieve the competence necessary to discharge the duties of the office. The establishment of Ethics Training represents a commitment to citizens to serve them competently, honestly and faithfully.

Citizens need to be aware of local/community emergency plans and services available if a disaster should occur. How to access those services and become part of the solution is key for individuals and communities to survive a disaster.

Alternative energy opportunities are becoming more available to landowners. These people need current information in order to make informed decisions about becoming involved.

2. Scope of the Program

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

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

1. Assumptions made for the Program

There is evidence that communities can develop leadership and take control of their future by setting goals and developing strategic plans to accomplish a vision. Adults are interested in continuing education. Adult Education activities have been well attended in many communities across the state. Training for people serving on boards, councils and committees can lead to better local governance.

2. Ultimate goal(s) of this Program

- To maximize community and economic development efforts, matching local needs, attributes, goals with business needs, resulting in effective development strategies including success with targeted industry efforts.
- To engage entities within a community in identifying community values and assets and to create a long range community vision which will become a guiding document for addressing issues facing the community.
- To provide a way for adults in rural settings to continue to expand their knowledge and skills without leaving their jobs, homes and families. Adult education opportunities can offer a variety of classes from the most technical to recreational.
- To reduce accidents and loss of property and human life due to disasters.

- To improve leadership systems and reduce poverty in small rural communities of less than 5,000 population.
- To train people serving on local boards, committees and councils as well as elected officials so they can be effective in executing the responsibilities of their positions.
- To develop information about alternative energy opportunities so landowners/citizens can make informed decisions about becoming involved.

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
2012	5.2	0.0	0.0	0.0
2013	5.2	0.0	0.0	0.0
2014	5.2	0.0	0.0	0.0
2015	5.2	0.0	0.0	0.0
2016	5.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Community meetings will be held to determine community values, attitudes and vision on which to develop strategies and action plans.

Partner with local economic development entities, agencies, businesses/industry and organizations to implement goals and plans of action.

Partner with local adult education entities to identify class offerings.

Work to plan for potential disasters that may occur in a community, e.g., EDEN.

Training opportunities will be available for people serving on boards, councils and committees in both the public and private sectors.

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 • Other 1 (MontGuides (Fact Sheets)) 	<ul style="list-style-type: none"> • Public Service Announcement • Newsletters • Web sites other than eXtension • Other 1 (Publications)

3. Description of targeted audience

Adults interested in education
Business and Community Leaders
Local Development Entities
Local Economic Development Entities
Chamber of Commerce Members
Tourism Leadership - local/state
County and City Government
Individuals interested in start-up and expansion or business
County DES, Law Enforcement Emergency Response Coordinators
Current community leadership/potential community leaders
Landowners
Adults/Youth serving on Boards
Elected officials
Tribal members

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- **Community Resource Development:**
Number of Extension lead activities such as facilitation services, assistance in feasibility studies, strategic planning processes, development of business retention and expansion plans/programs.
Number of partnerships and existing relationships utilized to strengthen sustainability of county and private efforts in community and economic development.
- **Adult and Community Education**
Number of collaborations with community organizations to identify and establish classes to be offered in adult educational settings.
Number of adult education classes offered during the year.
- **EDEN (Extension Disaster Emergency Network):**
Number of workshops/presentations/activities focused on disaster mitigation.
Number of responses from PSA's, web site, etc. for emergency service entities.
- **Horizons Program:**
Number of Study Circle and Leadership Plenty meetings conducted.
Number of people who have not been involved in community problem solving activities in the past.
Number of community members trained and serving as facilitators for programs.
Number of community members involved in Study circles and Leadership Plenty process.
- **CITIZEN LEADERSHIP AND GOOD GOVERNANCE:** Number of people attending workshops/presentations focused on board responsibilities and authorities. Number of elected officials attending workshops on ethics.
- **Community Development with Tribal Populations:** Number of tribal members involved with community development issues related to the reservation(s).
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	<p>EDEN: The public will understand how they access local emergency services and take steps to prepare for a disaster. Reduction of accidents, loss of property and human life due to disasters.</p>
2	<p>COMMUNITY RESOURCE DEVELOPMENT: Community leaders, agency personnel, organization members and other citizens that will gain an understanding of the value of creating a community development/economic development plan. Community leaders, agency personnel, organization membership that will collaborate on economic development strategies. Communities will utilize an inclusive process to establish goals and action plans. Counties will establish and maintain a sustainable population with a viable and diversified economy. Communities will be prepared and able to deal with and direct change so it will reflect its goals, values and vision.</p>
3	<p>ADULT/COMMUNITY EDUCATION Participants will gain new knowledge leading them to try a new activity or making an informed decision as result of attending an adult education class. Participants will use a new skill, practice or technique as a result of attending a class.</p>
4	<p>HORIZONS: Communities demonstrate awareness and interest in poverty reduction. Community members become aware of opportunities, tools and techniques available to engage in poverty reduction. Communities begin to recognize and own poverty as a community issue about which they can take action. Communities begin to recognize and own leadership as a community issue about which they can take action. Communities demonstrate an interest in poverty reduction and begin the process of learning to recruit and mobilize others. Communities are mobilized to create and adopt a shared vision for poverty reduction. Communities will directly engage people living in poverty in leadership training and action planning. Communities will define leadership for poverty reduction as collective, rather than individual actions. Communities will implement inclusive processes and decision-making methods. Leadership base of communities will mirror the demographics of their community. Communities have a commitment to poverty reduction. Communities will implement and sustain changes that contribute to poverty reduction in the community. Communities will be able to demonstrate progress toward reducing poverty. Communities will conduct Study Circles and Leadership Plenty activities and involve people new to the community problem solving. People trained as facilitators for the Study Circle and Leadership Plenty process are able to assist community groups. People who have developed or enhanced their leadership skills are able to apply those newly acquired skills and techniques.</p>
5	<p>CITIZEN LEADERSHIP AND GOOD GOVERNANCE: Number of people serving on boards, councils and/or committees who are prepared for the responsibilities/authorities of the entity. Number of boards, councils or committees that are successful in conducting the responsibilities/authorities of the group.</p>
6	<p>COMMUNITY DEVELOPMENT WITH TRIBAL POPULATIONS: Culturally sensitive programs focused on community needs will be developed through partnerships with tribal populations.</p>

Outcome # 1

1. Outcome Target

EDEN:

The public will understand how they access local emergency services and take steps to prepare for a disaster.

Reduction of accidents, loss of property and human life due to disasters.

2. Outcome Type : Change in Action Outcome Measure

2012:3000 2013:3500 2014:4000 2015:4000 2016:1000

3. Associated Knowledge Area(s)

- 723 - Hazards to Human Health and Safety

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

COMMUNITY RESOURCE DEVELOPMENT:

Community leaders, agency personnel, organization members and other citizens that will gain an understanding of the value of creating a community development/economic development plan.

Community leaders, agency personnel, organization membership that will collaborate on economic development strategies.

Communities will utilize an inclusive process to establish goals and action plans.

Counties will establish and maintain a sustainable population with a viable and diversified economy.

Communities will be prepared and able to deal with and direct change so it will reflect its goals, values and vision.

2. Outcome Type : Change in Condition Outcome Measure

2012:7150 2013:7200 2014:7250 2015:7250 2016:7000

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

ADULT/COMMUNITY EDUCATION

Participants will gain new knowledge leading them to try a new activity or making an informed decision as result of attending an adult education class.

Participants will use a new skill, practice or technique as a result of attending a class.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:2000	2013:2100	2014:2100	2015:2100	2016:2000
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3. Associated Knowledge Area(s)

- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

HORIZONS:

Communities demonstrate awareness and interest in poverty reduction. Community members become aware of opportunities, tools and techniques available to engage in poverty reduction.

Communities begin to recognize and own poverty as a community issue about which they can take action.

Communities begin to recognize and own leadership as a community issue about which they can take action.

Communities demonstrate an interest in poverty reduction and begin the process of learning to recruit and mobilize others.

Communities are mobilized to create and adopt a shared vision for poverty reduction.

Communities will directly engage people living in poverty in leadership training and action planning.

Communities will define leadership for poverty reduction as collective, rather than individual actions.

Communities will implement inclusive processes and decision-making methods.

Leadership base of communities will mirror the demographics of their community.

Communities have a commitment to poverty reduction.

Communities will implement and sustain changes that contribute to poverty reduction in the community.

Communities will be able to demonstrate progress toward reducing poverty.

Communities will conduct Study Circles and Leadership Plenty activities and involve people new to the community problem solving.

People trained as facilitators for the Study Circle and Leadership Plenty process are able to assist community groups.

People who have developed or enhanced their leadership skills are able to apply those newly acquired skills and techniques.

2. Outcome Type : Change in Action Outcome Measure

2012:1100 2013:1200 2014:1250 2015:1250 2016:1500

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 5

1. Outcome Target

CITIZEN LEADERSHIP AND GOOD GOVERNANCE:

Number of people serving on boards, councils and/or committees who are prepared for the responsibilities/authorities of the entity.

Number of boards, councils or committees that are successful in conducting the responsibilities/authorities of the group.

2. Outcome Type : Change in Action Outcome Measure

2012:1000 2013:1000 2014:1000 2015:1000 2016:2000

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 6

1. Outcome Target

COMMUNITY DEVELOPMENT WITH TRIBAL POPULATIONS: Culturally sensitive programs focused on community needs will be developed through partnerships with tribal populations.

2. Outcome Type : Change in Action Outcome Measure

2012:300

2013:300

2014:400

2015:400

2016:500

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 802 - Human Development and Family Well-Being
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Description

There will be a continual decline in populations in Eastern Montana resulting in a more depressed atmosphere for families and communities. Growth in Western Montana will continue with absentee land owners being the largest increase in population. Leadership systems in small rural communities need to be revitalized. People who live in rural Montana will continue to seek opportunities to enhance and develop skills and knowledge in many areas.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Several of the programs in this area are in the process of designing appropriate tools to gather impact data.

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Climate Change - Natural Resources and Environment

2. Brief summary about Planned Program

For decades, Montana landowners have made use of abundant natural resources in order to make a living and survive on the land. Today, society desires to preserve and protect these same resources that have made Montana a unique and thriving state. However, the majority of the state's citizens lack knowledge of how agriculture works to ensure the sustainability of natural resources even though their livelihood depends on it. For example, many livestock operations and other industries have chosen locations to build based on the proximity to nearby water sources which was the most economical and efficient. However there have been examples where the locations of these facilities have been devastating to the environmental quality. As a result, management techniques have been devised to make these industries compatible with their locations.

Forests and rangelands are also an important natural resource in Montana because they contribute to the economic base of the state. Both require continual management and stewardship to maximize their potential outputs. Additionally, wildlife habitat and its interface with agriculture and non-agricultural entities are critical components to the state's natural resource and environmental issues. Water quality cuts across all entities and is an extremely important resource requiring intentional management.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%			
121	Management of Range Resources	20%			
123	Management and Sustainability of Forest Resources	20%			
135	Aquatic and Terrestrial Wildlife	10%			
136	Conservation of Biological Diversity	15%			
216	Integrated Pest Management Systems	5%			
605	Natural Resource and Environmental Economics	20%			
	Total	100%			

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

1. Situation and priorities

All of the natural resources in the Montana are being impacted by the changing climate. Good management will be required to keep pace with the challenges brought on by different climate conditions.

Forests are an important resource in the state because they provide clean water, timber products, recreation and wildlife habitat. To be able to reach the highest potential of this resource however, appropriate management systems need to be in place. Private forest landowners need to understand the intricacies of timber sales so they can capitalize on this resource.

Publicity has raised the awareness of and concerns about water quality. Specifically, arsenic and nitrates have been noted as being at potentially dangerous levels in some wells. People need to feel comfortable that their drinking water is safe for their families and regularly test their wells to obtain this assurance. There are several aspects of water quality that require attention and understanding and some of them are controversial in nature.

Small acreages are being purchased by people who are unfamiliar with appropriate stewardship practices for the land. These people need to gain an understanding of weed and pest controls as well as establishing a plan for appropriate and effective use of their property. Similarly, agricultural enterprises also need to develop environmentally friendly practices while making their business sustainable and profitable.

Rangeland covers the majority of the landscape in Montana. The prevention of the spread of noxious weeds and/or the control of noxious weeds continues to be the greatest concern for landowners and managers on both private and public lands. Use of controlled grazing strategies and integrated weed control techniques will help producers most efficiently use their range resources.

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

Based on the demographics of Montana, no one argues the background and values of citizens are changing. Development of rural areas poses growth challenges. Increasing influence of environmental groups are changing policy and land use philosophies and perspectives. Environmental restrictions related to water, air and pesticides are increasing. There is evidence that the climate is changing making the use and management of natural resources challenging. Natural Resources and Environmental issues will continue to be a strong influence on the economic development, and social and political decisions in the state. Most Montanans are strongly opinioned about environmental issues. Extension Natural Resource and Environmental programs must continue to use scientific information to help the general public and decision makers understand the complex interrelationships and consequences of natural resource and environmental management. As Extension audiences continue to expand beyond traditional clientele, we will be challenged to be an unbiased source of information for all citizens while continuing to address the needs of traditional clientele.

2. Ultimate goal(s) of this Program

To educate non-industrial private forest landowners in how they can implement the stewardship plans for their forested property.

To provide private forest landowners with the necessary knowledge to conduct a successful timber sale, which in turn supports the sustainability of managed forests.

To provide managers with the necessary tools and knowledge to effectively manage resources for economic and ecologic benefit.

To educate rural Montanan's about testing their well water and increase the number of well tests done along with the interpretations and recommendations.

To decrease the number of acres infested with noxious weeds or other pests and improve range land conditions.

To enhance effective resource stewardship of private landowners who own small acreages or who are new-to-the-land.

To increase awareness of management techniques that can be used by small acreage landowners to maintain or improve their crops, lawns and animals, while protecting their natural resources such as water, soil and plants.

To educate new landowners to natural resources and threats to them from plant, animal and insect pests.

To increase implementation of water quality best management practices related to livestock production and animal agriculture across the state.

To increase the level of non-point source pollution awareness and knowledge for livestock orientated small acreage land owners.

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
2012	3.4	0.0	0.0	0.0
2013	3.4	0.0	0.0	0.0
2014	3.4	0.0	0.0	0.0
2015	3.4	0.0	0.0	0.0
2016	3.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Conduct workshops that will address specific topics such as forest stewardship and controlling pests for Extension Professionals and clientele.

Conduct workshop/clinics on calibrating spray equipment and making plans for weed/pest control.

Partner with local and state associations and organizations that are concerned about natural resource issues.

Prepare MontGuides (fact sheets) and information for web sites on natural resource topics (water, range, forest, etc.)

Conduct workshops on water quality and quantity.

Develop Range Monitoring systems, conduct the Rangeland Institute and design range management seminars.

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 ● One-on-One Intervention ● Demonstrations ● Other 1 (Field Days) 	<ul style="list-style-type: none"> ● Newsletters ● Web sites other than eXtension ● Other 1 (Newspaper articles, MontGuides) ● Other 2 (Websites)

3. Description of targeted audience

- Private Forest Land Owners
- Graduates of the Forest Stewardship Program
- County Weed Boards
- Farmers/Ranchers/Ag Producers
- Private Land Owners
- Small Acreage Land Owners
- Producers who operate Animal Feeding Operations
- Professional loggers/foresters
- Tribal Members and Tribal Colleges

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Forestry:
 - Number of private forest owners who attend one/two workshops to understand the timber sale process allowing them to complete a successful timber sale.
 - Number of people attending the forestry mini-college, a one-day educational program that includes 10 forestry related courses that provide knowledge or sources of assistance necessary to implement their forest stewardship plans.
 - Number of people completing a forest stewardship plan.
 - Number of people attending Forest Stewardship programs.

- Small Acreage Lands:
 - Number of people attending workshops or participating in private consultations about pest control, weed management and other related/management topics.
 - Number of people who participate in field days and demonstration opportunities for land owners to observe techniques and best practices for land stewardship.
 - Number of subscribers to Big Sky Small Acres publication.

- Environmentally Sensitive Management Systems:
 - Number of people attending workshops or requesting private consultation for developing a management plan. (forestry, animal feeding operations, small acreages, etc)
 - Number of demonstrations of sprayer calibrations, GPS usage and other technical practices that provide environmental protection.
 - To provide up-to-date guidance for operators through an AFO/CAFO website and electronic library, MontGuide fact sheets and field days.

- WATER QUALITY:
 - Number of people attending Well Educated programs, starting a file to track water quality, regularly testing their wells and receiving materials for interpreting results and gaining insight on ways to help protect ground water resources.
 - Number of people attending water quality workshops that specifically address issues related to reservations.
 - Number of people viewing the documentary "Tribal Waters: The Clean Water Act in Indian Country".
 - Number of people viewing the video series for well and septic owners - 8 part educational video.
 - Number of people attending the watershed - citizen water quality monitoring workshops.

- Range:
 - Number of people participating in Range Monitoring programs.
 - Number of people attending the Range Management Institute.
 - Number of requests to identify new weeds found, GPS assistance, use of sprayers for small weed infestation control.
 - Number of producers working through the Livestock Environmental Management Systems self assessment for their operation.

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	<p>Forestry: Participants will be able to sell their timber because of information learned in Extension workshops. Landowners will develop plans and implement activities that will enhance the sustainability of their forest lands and meet their individual forest stewardship objectives. Private forest landowners will manage their forests lands so they will continue to provide environmental, economic and social benefits to Montana citizens.</p>
2	<p>Small Acreages: Producers and small acreage landowners will be aware of insect, weed and disease infestations as they are developing so they can make management decisions in a timely manner. Applicators will learn the risks associated with applying pesticides and safety precautions recommended to mitigate those risks, while at the same time, learn techniques in applying chemicals appropriately. Small landowners will develop a plan and take action steps to manage their property to meet their individual stewardship objectives.</p>
3	<p>Environmentally Sensitive Management Systems: Producers will understand the current rules and regulations for animal feeding operations and how to evaluate their own operation. This also applies to forestry plans, grazing land plans and any other plans appropriate to the individual operation. Landowners will implement best practices in adopting weed, crop, pest and forage management strategies. Landowners will be more profitable while protecting the environment. All operations that develop and implement a Comprehensive Nutrient Management Plan (CNMP) to protect ground and surface water, apply manure at agronomic rates and utilize technologies that allow them to better operate and/or monitor their operation. All operations will remain economically viable and environmentally friendly.</p>
4	<p>Water Quality: Participants will learn the importance of and steps to do well testing, and will follow recommendations resulting from tests. Forage producers/participants will learn proper timing and implementation of control techniques and methods appropriate to their operations. Participants will understand the importance of water and related issues as a result of information from water projects such as Water Monitoring Activities, Well and Septic Programs and video, film and website materials.</p>
5	<p>Range: As a result of participating in Range Monitoring programs, ranch managers/producers will learn to identify plants, determine phenologic stage of plant growth, determine monitoring site location and determine appropriate time for monitoring activities which leads to improvement in resource management strategies. As a result of attending the Extension Range Management Institute, participants will be able to apply basic principles of range management and related topics determined at the planning stage. People will request information on identifying new weeds found, GPS assistance and use of sprayers for small weed infestation control. Producers will work through the Livestock Environmental Management Systems self assessment to understand how their operation affects the environment and to prioritize and develop action plans for addressing any environmental risks.</p>

Outcome # 1

1. Outcome Target

Forestry:

Participants will be able to sell their timber because of information learned in Extension workshops. Landowners will develop plans and implement activities that will enhance the sustainability of their forest lands and meet their individual forest stewardship objectives. Private forest landowners will manage their forests lands so they will continue to provide environmental, economic and social benefits to Montana citizens.

2. Outcome Type : Change in Condition Outcome Measure

2012:350 2013:350 2014:350 2015:350 2016:300

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Small Acreages:

Producers and small acreage landowners will be aware of insect, weed and disease infestations as they are developing so they can make management decisions in a timely manner. Applicators will learn the risks associated with applying pesticides and safety precautions recommended to mitigate those risks, while at the same time, learn techniques in applying chemicals appropriately. Small landowners will develop a plan and take action steps to manage their property to meet their individual stewardship objectives.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:500 2013:500 2014:500 2015:500 2016:500

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 136 - Conservation of Biological Diversity
- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

Environmentally Sensitive Management Systems:

Producers will understand the current rules and regulations for animal feeding operations and how to evaluate their own operation. This also applies to forestry plans, grazing land plans and any other plans appropriate to the individual operation.

Landowners will implement best practices in adopting weed, crop, pest and forage management strategies.

Landowners will be more profitable while protecting the environment.

All operations that develop and implement a Comprehensive Nutrient Management Plan (CNMP) to protect ground and surface water, apply manure at agronomic rates and utilize technologies that allow them to better operate and/or monitor their operation. All operations will remain economically viable and environmentally friendly.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:100

2013:100

2014:100

2015:100

2016:100

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 136 - Conservation of Biological Diversity
- 216 - Integrated Pest Management Systems
- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Water Quality:

Participants will learn the importance of and steps to do well testing, and will follow recommendations resulting from tests.

Forage producers/participants will learn proper timing and implementation of control techniques and methods appropriate to their operations.

Participants will understand the importance of water and related issues as a result of information from water projects such as Water Monitoring Activities, Well and Septic Programs and video, film and website materials.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:500 2013:550 2014:550 2015:600 2016:500

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 136 - Conservation of Biological Diversity

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 5

1. Outcome Target

Range:

As a result of participating in Range Monitoring programs, ranch managers/producers will learn to identify plants, determine phenologic stage of plant growth, determine monitoring site location and determine appropriate time for monitoring activities which leads to improvement in resource management strategies.

As a result of attending the Extension Range Management Institute, participants will be able to apply basic principles of range management and related topics determined at the planning stage.

People will request information on identifying new weeds found, GPS assistance and use of sprayers for small weed infestation control.

Producers will work through the Livestock Environmental Management Systems self assessment to understand how their operation affects the environment and to prioritize and develop action plans for addressing any environmental risks.

2. Outcome Type : Change in Condition Outcome Measure

2012:1300 2013:1350 2014:1400 2015:1500 2016:600

3. Associated Knowledge Area(s)

- 121 - Management of Range Resources
- 135 - Aquatic and Terrestrial Wildlife
- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Description

Probably the greatest of all the factors over which landowners have no control is the change in climate patterns. Some of them might reach the disaster level, but many are gradual. The natural resources are greatly impacted by the things over which we have little or no control leaving those who depend on the resources challenged to develop flexible management plans that ensure viability and profitability.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Some programs in this area are connected to research projects that have specific targets established and strategies outlined for collecting data. Water quality and environmentally sensitive management reflect this approach.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Sustainable Energy

2. Brief summary about Planned Program

For several years, Extension has been providing education in the area of energy conservation. It has however, begun to work in renewable and sustainable energy projects during the past 3-5 years. According to the Montana Department of Commerce, Montana has more potential for energy development from existing and untapped diversified sources than any state in the nation. For example, it is #1 in US coal deposits, #1 in wind potential class 3 and above and has seen a 40% increase in oil production during the last decade. There are over 50 wind farms in various levels of production and more than 15 locations for potential geothermal energy. Biomass/biofuels have also seen an increase in interest and production. Education is needed for good decision making as it relates to energy and Extension is in a position to assist with that need. The cost of energy has increased as much as 65% over the past year. With higher utility bills, consumers are requesting assistance for energy conservation and weatherization, seeking information on energy-efficient construction and remodeling and purchasing EnergyStar appliances.

3. Program existence : Intermediate (One to 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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
111	Conservation and Efficient Use of Water	10%			
131	Alternative Uses of Land	10%			
402	Engineering Systems and Equipment	10%			
605	Natural Resource and Environmental Economics	20%			
608	Community Resource Planning and Development	20%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	15%			
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	15%			
	Total	100%			

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

1. Situation and priorities

Energy is a significant expense for nearly all Montanans and a sizeable input cost for agricultural producers. Energy prices have been volatile in recent years. Environmental concerns are growing due in part to concern about greenhouse gas levels. Both of these factors have encouraged Montanans to utilize energy more effectively. Unfortunately, many Montanans do not have quality information about benefits and costs associated with alternative energy. Resources developed in other parts of the country may not be accurate for the state.

Additionally, the increasing energy costs and a national economic slow down are negatively impacting Montana businesses' ability to finance projects. Montana's small businesses can no longer pass on to consumers higher costs driven by escalating energy costs. A recent study by the Small Business Administration found that small businesses pay 30% more for electricity than large businesses. In order for Montana businesses to compete in the national market, flexible and innovative tools to reduce energy costs are necessary.

2. Scope of the Program

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

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

1. Assumptions made for the Program

It can be assumed that there will be continued interest in sustainable energy among Montanans and the rest of the nation; that it will be possible to find and use new forms of energy in homes and businesses that are economical, clean and renewable; that people will use alternative energy and would be willing to pay a little more to do so; that some funding will be available to pursue alternative and sustainable energy. Families want to engage in energy saving practices related to their home energy costs.

2. Ultimate goal(s) of this Program

- To provide Montanans with an economic framework to evaluate alternative energy opportunities.
- To provide quality and relevant resources on wind, solar and other renewable energy industries at local and regional levels.
- To provide reliable information that can be used for decision making by agriculture and business entities.
- To assist Montanans in reducing their home energy bills.

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
2012	2.3	0.0	0.0	0.0

Year	Extension		Research	
	1862	1890	1862	1890
2013	2.3	0.0	0.0	0.0
2014	2.3	0.0	0.0	0.0
2015	2.3	0.0	0.0	0.0
2016	2.3	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

- Produce guides on current energy topics.
- Conduct community meetings on energy topics
- Conduct meetings for agriculture and other landowners on alternative energy topics.
- Partner with agencies, local and tribal government, organizations and industry.
- Conduct meetings and seminars on methods for evaluating alternative energy opportunities.

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"> ● Newsletters ● Web sites other than eXtension ● Other 1 (Publications)

3. Description of targeted audience

- Farmers and Ranchers
- Non-farm or ranch energy users
- Landowners
- Local Government
- Current Community Leadership
- Local Development Entities
- Local Economic Development Entities
- Chamber of Commerce Members
- People interested in becoming involved with creating alternative energy opportunities
- Small businesses by SBA definition

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Sustainable Energy:
 - Number of people attending workshop/presentations and/or accessing the web site for information about wind energy.
 - Number of people attending workshops/presentations on the pros and cons of various types of bio-fuels or alternative energy sources.
 - Development of educational guides/publications on current energy issues.
 - Workshops/seminars on quantifying the impact of energy generation or savings as it relates to the bottom line of their primary business function.
 - Number of people gathering information from the Extension Energy web site.

- Energy and Agriculture:
 - Number of people attending workshops/presentations or using the website for information about energy alternatives and what criteria to use for decision making on becoming involved with energy generation. (wind, solar, bio-diesel, bio-mass, oilseed production/processing, ethanol etc.)
 - Number of producers attending seminars/demonstrations on using energy saving tillage system practices.

- Energy and Community:
 - Number of people attending workshops/presentations or using the web site on public policy issues related to energy generation and transmission.
 - Number of people participating in workshops/presentations on land leasing issues related to energy generation.

- Residential Energy:
 - Number of homeowners and builders who attend workshops/seminars or accessing the web site on home energy saving/conservation practices.
 - Number of home builders, contractors and crews attending workshops on weatherization techniques in construction of homes.
 - Number of people who gain information about the Camelina Composite Pellet Fuels for home stoves.

- Home Energy Costs:
 - Number of people learning methods to save home energy, including purchasing Energy Star products.
 - Number of people using energy saving practices in new and remodel construction. Number of people practicing weatherization techniques.

- Renewable/Alternative Energy:
 - Number of people making decisions about alternative energy opportunities based on Extension information.

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	<p>Energy and Agriculture (reservation and non-reservation) Participants will understand energy alternatives and how to use a framework to evaluate energy opportunities. Participants will be able to make a sound decision on becoming involved with energy generation. (wind, solar, bio-diesel, bio-mass, oilseed production/processing, ethanol etc.). Participants will use energy saving tillage system practices.</p>
2	<p>Energy and Community (reservation and non-reservation) Participants will understand the public policy issues related to wind and other alternative energy generation and transmission. Participants will understand land leasing issues related to wind and other alternative energy generation and transmission.</p>
3	<p>Residential Energy: Homeowners will apply home energy savings/conservation practices. Home builders, contractors and crews will use weatherization techniques in constructing homes. Participants will become aware of the Camelina Composite Pellet Fuels for home stoves.</p>
4	<p>Home Energy Costs: Participants will apply common methods to save home energy to new or existing homes. Participants will use high performance, resource efficient building materials and construction techniques in remodeling and new construction. Participants will increase their purchase of Energy Star products and appliances resulting in an energy saving of at least 30% annually per appliance. Participants will experience an energy savings due to weatherizing and remodeling existing homes (13-65% energy savings per household).</p>
5	<p>Renewable/Alternative Energy: Landowners/citizens will have tools to make decisions about becoming involved with renewable/alternative energy opportunities.</p>

Outcome # 1

1. Outcome Target

Energy and Agriculture (reservation and non-reservation)

Participants will understand energy alternatives and how to use a framework to evaluate energy opportunities.

Participants will be able to make a sound decision on becoming involved with energy generation. (wind, solar, bio-diesel, bio-mass, oilseed production/processing, ethanol etc.).

Participants will use energy saving tillage system practices.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:275

2013:275

2014:275

2015:275

2016:275

3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 131 - Alternative Uses of Land
- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Energy and Community (reservation and non-reservation)

Participants will understand the public policy issues related to wind and other alternative energy generation and transmission.

Participants will understand land leasing issues related to wind and other alternative energy generation and transmission.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:150

2013:150

2014:150

2015:150

2016:150

3. Associated Knowledge Area(s)

- 402 - Engineering Systems and Equipment
- 605 - Natural Resource and Environmental Economics
- 608 - Community Resource Planning and Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

Residential Energy:

Homeowners will apply home energy savings/conservation practices.

Home builders, contractors and crews will use weatherization techniques in constructing homes.

Participants will become aware of the Camelina Composite Pellet Fuels for home stoves.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:400

2013:400

2014:400

2015:400

2016:400

3. Associated Knowledge Area(s)

- 402 - Engineering Systems and Equipment
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Home Energy Costs:

Participants will apply common methods to save home energy to new or existing homes. Participants will use high performance, resource efficient building materials and construction techniques in remodeling and new construction.

Participants will increase their purchase of Energy Star products and appliances resulting in an energy saving of at least 30% annually per appliance.

Participants will experience an energy savings due to weatherizing and remodeling existing homes (13-65% energy savings per household).

2. Outcome Type : Change in Knowledge Outcome Measure

2012:1000 2013:1000 2014:1000 2015:1000 2016:2000

3. Associated Knowledge Area(s)

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 5

1. Outcome Target

Renewable/Alternative Energy:
Landowners/citizens will have tools to make decisions about becoming involved with renewable/alternative energy opportunities.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:500 2013:500 2014:600 2015:600 2016:700

3. Associated Knowledge Area(s)

- 605 - Natural Resource and Environmental Economics
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

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

Description

The need to determine alternative energy sources will continue to be a priority for the national government on through to local entities. Costs of energy will continue to fluctuate making it difficult for planning. There are renewable energy sources that are dependant on weather conditions.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Some of these programs are in the beginning stages and are in the process of designing appropriate tools to gather impact data.

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Food Safety

2. Brief summary about Planned Program

Programs delivered under this planned program category focus on safe food; from gate to plate. It involves food handling practices and protocols by food service managers/employees, food preservation techniques generally used at home and on farms, and animal practices that lead products into the food chain. Extension has long been recognized as one of the best sources of reliable information related to food safety, so it is appropriate to maintain a strong presence in this educational effort.

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 : No

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	50%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	50%			
	Total	100%			

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

1. Situation and priorities

One out of 65 Montanans experience an illness related to unsafe food handling practices. To address this concern, there are three major efforts underway: Basic Food safety training for food service employees, ServSafe Food Protection Manager Certification Courses and Hazard Analysis and Critical Control (HACCP) training for the Food Industry. Food safety is a growing concern for the food service industry, public and private agencies. Many food service groups require food safety training including the Montana school systems that must comply with the mandatory USDA policy to implement a School Food Safety Plan.

Montana has an abundance of nutritious seasonal, wild and homegrown foods appropriate for home preservation. It is critical that those who practice preserving and processing foods at home have access to the most reliable information available concerning food safety and food quality. A study done by CSREES-USDA in 2000, revealed a high percentage of home food processors are using practices that put them at risk for food borne illness and economic losses due to food spoilage. As a result of this study and more

recent updates to the study, there is a renewed need to provide programming for home food preservers. The sustainable food trends and current economic downfall have also contributed to a renewed interest in home food preservation.

Producing safe and high quality beef that is desirable for the consumer is important to Montana ranchers and consumers alike. The "produce then sell" mentality of ranchers is being replaced by the strategy of asking consumers what they want in their beef products, then creating it. Consumers are looking for attributes such as tenderness, flavor and portion size while producers are interested in performance, health and predictability throughout the system. Age and source verification, animal health and bio-security are also part of that comprehensive system. Consumers want to know they are buying safe and high quality products when they go to the market. Beef Quality Assurance and Biosecurity Education ensure the domestic and international beef consumers enjoy ready access to a safe and wholesome beef supply.

2. Scope of the Program

- In-State Extension
- 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

Food borne illnesses are a substantial health burden in the US and will remain so into the near future.

Food preservation will continue to be of interest as long as the economy is slow.

Consumers/ranchers/producers are concerned about the safety of their food supply and are motivated to address related issues. The motivations may be different, but none-the-less are present.

2. Ultimate goal(s) of this Program

To reduce the incidence of food borne illness through education within the foods service operations. (targeted audience includes: Food service employees, managers and professionals.)

To provide information, training and support to home food preservers so they will practice safe food preservation practices.

To ensure consumers have ready access to a safe and wholesome beef supply.

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
2012	3.6	0.0	0.0	0.0
2013	3.6	0.0	0.0	0.0
2014	3.6	0.0	0.0	0.0

Year	Extension		Research	
	1862	1890	1862	1890
2015	3.6	0.0	0.0	0.0
2016	3.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Conduct train the trainer workshops, clientele workshops/clinics aimed at food safety, food preservation 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. 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 ● One-on-One Intervention ● Demonstrations ● Other 1 (Interactive Video) 	<ul style="list-style-type: none"> ● Newsletters ● Web sites other than eXtension ● Other 1 (MontGuides (Fact sheets))

3. Description of targeted 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

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Food Safety:
Provide 3 train the trainer sessions for County Extension Agents so they can conduct 25 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.)
- 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)
- Montana Beef Network - 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.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	<p>Food Safety</p> <p>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.</p> <p>There will be a decline in the economic and health consequences of food borne illnesses</p>
2	<p>Food Preservation:</p> <p>Home food preservers will use accepted preservation practices in their home processes.</p> <p>There will be a decline in the economic and health consequences of food borne illnesses and spoilage.</p>
3	<p>Montana Beef Network-Beef Quality Assurance (BQA)</p> <p>Ranchers/producers will adhere to BQA protocols for raising beef.</p> <p>Ranchers/producers will become BQA certified.</p> <p>Consumers are assured of a readily available and wholesome supply of beef.</p>

Outcome # 1

1. Outcome Target

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. Outcome Type : Change in Action Outcome Measure

2012:1400 2013:1400 2014:1500 2015:1500 2016:800

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

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

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.

2. Outcome Type : Change in Action Outcome Measure

2012:1350 2013:1400 2014:1450 2015:1450 2016:500

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

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

Montana Beef Network-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.

2. Outcome Type : Change in Condition Outcome Measure

2012:1350 2013:1400 2014:1450 2015:1450 2016:1400

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

4. Associated Institute Type(s)

- 1862 Extension

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 Programmatic Challenges

Description

The safe and secure food supply will continue to be of concern for consumers. Recent illnesses from food have heightened the interest of safe food for producers, food handlers/processors, markets and others involved with the food chain.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

The Montana Beef Network has an on-going evaluation focused on benefits of being involved with BQA. Additionally, the food safety programs have follow up activities indicating their impact.