

2010 Montana State University Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

As Vice Provost and Director of Extension, it is my pleasure to present the 2010 Montana State University Annual Report. Our mission of extending the presence of the land-grant university to citizens across the state is realized through a network of 60 county and tribal offices, campus based specialists and collaborative funding partnerships at the county, state and federal levels. Extension serves as the link between the people of Montana and the research, knowledge, expertise and information available through Montana State University.

The 2010 Annual Report reflects the applied research, educational programming and outreach efforts of Extension faculty and staff dedicated to the individuals, families, communities and businesses that rely on an unbiased source for critical decision-making information. The following are program highlights offering a snap-shot of Extension's outreach capacity and impacts:

- Childhood Obesity, Nutrition and Healthy Lifestyles program areas focus on educating families by selecting nutritious foods and promoting exercise for achieving healthy weight and body tone; on how to spend their food dollars wisely by pre-planning; and to take advantage of medical screening opportunities. These are difficult program areas in which to achieve success since they require change in behaviors that are ingrained in the personal, social and psychological makeup of each person.
- Youth Development centers on positive youth development and uses hands-on methods for engaging young people in activities and experiences that will achieve those goals. The 4-H program teaches youth to be competent, caring and confident. Studies indicate that youth involved in 4-H are better equipped to make good decisions and to be contributing members of their communities.
- Global Food Security and Hunger, Ag Sustainability and Profitability represents issues that are extremely important to the state since agriculture is the number one industry. Small grains and livestock represent the bulk of the industry and require staying up-to-date on basic and applied research as well as consumer and industry needs. Agriculture is "risky business" that involves understanding and applying many disciplines to be successful. Marketing, pest control, crop variety selection-rotations, genetics, fertilizer applications, management systems and environmental factors are all important to producing a healthy, safe food supply.
- Sustainable Energy - Family Issues, Resources and Environments address areas of great need for Montana families including Estate Planning, living with Alzheimers or other chronic diseases, especially as a caregiver, adjusting to unexpected demands such as grandparents raising their grandchildren and making decisions about housing and housing costs in economically challenging times.
- Sustainable Energy - Community and Economic Development programs assist communities in addressing issues of safety, population growth and decline, poverty and leadership development. Competence of local government officials is a priority since so many citizens are asked or elected to fill positions that require them to make decisions for which they are not fully prepared. This is especially true in the rural sections of the state.
- Climate Change, Natural Resources and Environment programs are particularly sensitive to environmental conditions. Forests and rangelands as well as water quality and quantity are natural resources that agricultural enterprises and small acreage landowners depend on. Changes in these and

other natural resources are felt in businesses and living conditions for communities and families across the state.

- Food Safety education trains perspective or current food service workers safe food handling practices through the multi-level ServSafe program. Additionally, food preservation is on the rise, so "best practices" for canning/freezing foods safely is in high demand. The Beef Quality Assurance program focuses on "gate to plate" issues for producers helping them raise the best quality and safest product possible for consumers.

While this report represents only a small portion of the many accomplishments over the past year, it does adequately portray the dedicated and talented individuals who are the driving force of Extension. M.L. Wilson, one of Montana's first county agricultural agents was quoted as saying "We must do all we can to make sure we are facing the future and not the past." This annual report reflects an Extension system in Montana that is meeting the needs of today while preparing for the uncertainties of tomorrow.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	37.0	0.0	0.0	0.0
Actual	35.4	0.0	0.0	0.0

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- External University Panel
- Expert Peer Review

2. Brief Explanation

The Annual Report was reviewed by the Merit Review Committee according to the process outlined in the Plan of Work. The committee is composed of Jim DeBree (WY Director of Extension - retired) and is the senior member of the team with 7 years, Jim Johannes (MSU Extension Area Supervisor, Director of Programming and FRTEP - retired) who has reviewed for 3 years and Dr. Charles Rust (MSU Director of Extension - retired) is joining the committee this year.

The comments made by the committee were used by administration, specialists and county agents in planning and conducting programs. Cross/multi-county programming involving state specialists when appropriate are encouraged.

The Merit Review process provided valuable information and suggestions to improve Extension's programs. Their comments include observations for the program areas as follows:

The Global Food Security and Hunger area includes the Ag Sustainability and Profitability programs in Montana. These programs are well done and address the needs of constituents involved in related business enterprises.

The Climate Change area involves those programs related to the state's natural resources such as forestry and water quality. While efforts in this area are commendable, the impact of the work is not well documented in each of the identified programs. In general however, the programs appear to be providing landowners with tools to make sound management decisions.

Youth Development programs show valuable results are achieved for youth and adults involved. The Jr. Ag Loan program on two of the reservations warrants special note.

The Family Issues, Resources and Environments programs are focused on issues important to Montana families; Estate Planning, Housing and Tools for Caregivers. There is evidence that through these programs, Extension education is meeting identified needs.

Childhood Obesity, Nutrition and Healthy Lifestyle programs are targeted at achieving healthy eating and exercise habits.

Community and Economic Development programs provide education to local governments including elected officials and citizen boards as well as leadership and community capacity building.

Food Safety programs include education on the safe handling of food at the consumer and production levels.

The Merit Review comments indicate they believe there is ample evidence that Extension education is addressing emerging needs with relevant and timely programs that are making a difference. The report contains good information on the quality of reservation extension programs and the outcomes they are achieving.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged 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 of selected individuals from the general public

Brief explanation.

Personal contact has been the most successful way for Extension to gain stakeholder participation. The clientele who use Extension regularly are willing to provide input when asked. People who attend programs or are referrals from other agencies are asked to indicate which issues are important to them, their families and communities.

While less effective, radio, newsletters, newspapers and electronic distribution lists are used to inform clientele about the opportunity to make requests for Extension assistance. Informational booths are set up at agricultural trade shows, home and garden shows and health fairs allowing for discussions with people who often are not regular clientele of Extension. These conversations reveal concerns/issues that might not be heard in the usual process. When common issues surface through these methods and the advisory process, they are considered in the program planning process.

2(A). A brief statement of the process that was 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.

Membership on county advisory groups is generally achieved by sending an invitation to traditional stakeholder groups requesting the name of an individual who can represent their views and provide input for Extension programming. A similar invitation is sent to non-traditional groups however, in these cases, personal contact is made to explain the role of the representative. During programs targeted at certain audiences, (eg. EFNEP, Horizons, Small Acreage Owners), attendees are asked directly for input or may be asked to serve on a specific advisory committee for the program area.

Membership on the MEAC (Montana Extension Advisory Council) is based on geographic representation, areas of interest and some previous relationship with Extension. Recruitment from specific sectors such as health care, government agencies and community development are also targeted. County Extension Agents and state Specialists, Extension Program Leaders and Regional Department Heads are asked to make recommendations for membership to MEAC. Those who are selected serve a 3 year term.

2(B). A brief statement of the process that was 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
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Survey of the general public
- Survey specifically with non-traditional groups
- Survey of selected individuals from the general public

Brief explanation.

The most common method of gathering stakeholder input is from the regular clientele of MSU Extension. While they are contacted on a less formal basis, they are systematically asked for input into program priorities. Often this occurs in intentional program planning sessions to which these people are invited, requested to attend or are required to be present by their role or position. Examples of groups that fall into this category are County/Reservation 4-H Councils, Livestock Associations, Weed Boards, Human Resource Coalitions, Local and State Agricultural Organizations, Ag Research Center Advisory committees and special interests groups. Some of these groups have offices or directing boards that are asked for specific input.

County and state Advisory committees are also used to gather input. Advisory groups are generally comprised of a cross section of the leadership and citizens in the county. Efforts are made to involve the under served and under represented clientele by contacting agencies and organizations that work with this audience regularly. They are asked for input and/or for names of people who could provide input directly. Local Extension agents follow up with personal conversations to explain the goals and process.

At the state level, one of the most valuable sources of input is from MACo. (Montana Association of Counties). Extension makes presentations during MACo's Annual Meeting followed by an open session for mutual dialog. These types of discussions also happen during the newly elected county commissioner's orientation and have proven very beneficial. Extension administration, through the Regional Department Heads (RDH's), also gathers stakeholder input from county Commissioners during the regular and systematic visits at the county level between the RDH's and County Commissioners.

Surveys are used to gather information at either the local or state level. They may be hard copy although the electronic formats are becoming more popular. As faculty become more familiar with the electronic capabilities, it is expected that more survey work will be done using technology.

3. A statement of how the input will be considered

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

Brief explanation.

Information gathered through the stakeholder input process is used to determine program needs and direction. In some cases, cross-county educational teams made up of county extension agents, specialists, clientele and researchers are formed to develop and implement programs. At times, county agents are able and equipped to address the issue with resources from his/her office. At other times and when issues are determined to be statewide, specialists will become more involved with program development and direction than if they are responding to a single request for information.

The statewide advisory committee (Montana Extension Advisory Council) meets twice a year, once on campus and once out in the state. The campus meeting is focused on campus based activities and the educational outreach of specialists. The off-campus meeting focuses on programming at the county level. The Director of Extension also provides a system wide update and discusses program priorities and funding

Brief Explanation of what you learned from your Stakeholders

Stakeholders are concerned about similar issues receiving attention across the nation. Many worry about job security while others are concerned about accessing health care in their rural community. Agriculture producers are concerned about holding a positive profit margin. Rural families living in the eastern part of the state are wondering if local schools will remain open while those on the western side are concerned about the schools being over crowded. In those areas where education can help address the issue, Montanans look to Extension as a resource so they can make choices and decisions that are best for their families, businesses and communities.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2593425	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	772567	0	0	0
Actual Matching	0	0	0	0
Actual All Other	922929	0	0	0
Total Actual Expended	1695496	0	0	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover	0	0	0	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Childhood Obesity, Nutrition and Healthy Lifestyles
2	Youth Development
3	Global Food Security and 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	Food Safety

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Childhood Obesity, Nutrition and Healthy Lifestyles

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	5%			
703	Nutrition Education and Behavior	60%			
724	Healthy Lifestyle	30%			
802	Human Development and Family Well-Being	5%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	0.0	0.0
Actual	2.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
22394	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
83357	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct train the trainer workshops
- Conduct workshops
- Facilitate meetings
- Develop local and state partnerships
- Provide training

2. Brief description of the target 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

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	9772	2463	2702	1253

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

Patent Applications Submitted

Year: 2010
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	1	0	1

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- EFNEP/FSNP: The NEP curriculum will be used to teach three 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.

Year	Actual
2010	5490

Output #2

Output Measure

- Steps to a New You: Provide 2 train the trainer sessions for 10 County Extension Agents who in turn, can implement county Steps to a New You program. Provide 20 sets of training materials to County Extension Agents who will be presenting programs.
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- Food Safety: Provide 3 train the trainer sessions for County Extension Agents so they can conduct 25 food safety education for audiences such as county sanitarians, school food service personnel, volunteers, food banks and so forth. Provide training and updates to County Extension Agents so they can implement County based programs. Provide training for home food preservers.
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- Strong Women: To certify 10 county agents so they are qualified to conduct strength training classes. These 10 agents will provide 1-14 week strength training sessions in their local county.

Year	Actual
2010	350

Output #5

Output Measure

- 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 on stress management, nutrition, obesity, fitness, osteoporosis, cardiovascular disease, diabetes, prostate cancer, etc. Number of people having medical screenings at health fair type activities and attending related classes as a result. Number of people following up with a physician or professional as a result of the tests conducted at the health fair activity.

Year	Actual
2010	4050

Output #6

Output Measure

- 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.

Year	Actual
2010	88

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	EFNEP/FSNP: Number of adults gaining awareness and knowledge regarding the importance of: Healthy eating (more fruits and vegetables, more 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 Increasing physical activity Food safety principles (hand washing) Number of adults: Improving the family diets by choosing/preparing healthier choices(more fruits and vegetables, hole 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) Healthy eating (more fruits and vegetables, more 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 Increasing physical activity Food safety principles (hand washing) Participants will: Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes. Decrease the risk for illness and death associated with foodborne illness. Increase their confidence in the ability to manage food resources, as well as other resources.
2	STEPS TO A NEW YOU: Participants will learn about facts, attitudes, behavior change techniques and specific behaviors related to physical activity, nutrition, body image that will allow them to live healthier lifestyles and prevent or reduce obesity. Number of children: Eating a variety of foods Improving practices in food preparation and food safety Select low cost nutritious foods
3	FOOD SAFETY: The participants will learn about safe food handling, specifically facts and skills related to the basics of safe food handling: Controlling time and temperature when handling food Ensuring proper personal hygiene Preventing cross-contamination Proper cleaning and sanitizing The participants will improve safe food handling, specifically the behaviors supporting the basics of safe food handling: Controlling time and temperature when handling food Ensuring proper personal hygiene Preventing cross-contamination Proper cleaning and sanitizing. Participants will adopt healthy attitudes related to a healthy lifestyle approach to prevention or reduction of obesity. Participants will improve their eating behaviors related to a healthy lifestyle approach to obesity. Participants will increase their level of physical activity related to a healthy lifestyle approach to preventing or reducing obesity. There will be a decline in the economic and health consequences of foodborne illnesses.
4	HEALTHY LIFESTYLES: Number of people having medical screenings at health fair type activities. Number of people following up with physician or health professional. Number of people making better nutrition and food choices and engaging in regular physical activity.
5	STRONG WOMEN: Number of people improving 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#).
6	4-HEALTH provides parents with relevant information, effective parenting skills and strategies, and a strong social network that encourages and helps them to solve everyday problems relating to the health and well-being of their pre-teen children.

Outcome #1

1. Outcome Measures

EFNEP/FSNP: Number of adults gaining awareness and knowledge regarding the importance of: Healthy eating (more fruits and vegetables, more 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 Increasing physical activity Food safety principles (hand washing) Number of adults: Improving the family diets by choosing/preparing healthier choices(more fruits and vegetables, hole 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) Healthy eating (more fruits and vegetables, more 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 Increasing physical activity Food safety principles (hand washing) Participants will: Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes. Decrease the risk for illness and death associated with foodborne illness. Increase their confidence in the ability to manage food resources, as well as other resources.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	6000	5490

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Limited resource families in Montana struggle to purchase and prepare food for their families in a nutritious manner with the money, food stamps or other resources they have available. Almost 20% of all Montana children live in poverty and food security is a problem for many children and their families. Working low income families often lack the time, knowledge and skill to prepare and serve family meals which are tasty, low-cost and healthful. Research on diet quality and cost indicates as incomes drop and food budget shrink, the trend is to shift away from selecting healthier, nutrient-dense foods and instead opt for energy-dense, refined grains, added sugars and fats.

What has been done

Through EFNEP, 2 counties received lessons on helping adult family members stretch food dollars to feed their families nutritious meals. Programs reach low income youth in Title 1 Schools and out-of-school programs for ages of 5-17 with lessons on healthier, low cost food choices and

child obesity. SNAP-Ed is delivered in 22 counties and 7 reservations. Identification of people in need of nutrition education has improved due to cooperation with MT DPHHS entities like Temporary Assistance to Needy Families and Work Readiness Component programs. Local Offices of Public Assistance, commodity programs, public housing units and Food Banks are also contacted regularly.

Results

Of the 634 families participating in EFNEP, 48.5% stated they increased their consumption of milk; new enrolled families (537) said they decreased the amount of money spent on junk food like chips, soda pop, fried frozen items; and participants said they decreased their saturated fat intake by 30%. In the SNAP-Ed programs 56% of adult participants surveyed at the end of the series of lessons showed improvement in healthy food choices, food resource management and food safety as compared to initial surveys; 71% of youth were selecting and adopting healthy food and lifestyle choices. Post surveys from 3rd graders who completed the series of lessons indicate 49% eat different kinds of fruits and vegetables daily, 49% eat at least one whole grain serving daily, 76% are physically active daily, and 82% eat breakfast daily.

4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #2

1. Outcome Measures

STEPS TO A NEW YOU: Participants will learn about facts, attitudes, behavior change techniques and specific behaviors related to physical activity, nutrition, body image that will allow them to live healthier lifestyles and prevent or reduce obesity. Number of children: Eating a variety of foods Improving practices in food preparation and food safety Select low cost nutritious foods

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

FOOD SAFETY: The participants will learn about safe food handling, specifically facts and skills related to the basics of safe food handling: Controlling time and temperature when handling food Ensuring proper personal hygiene Preventing cross-contamination Proper cleaning and sanitizing The participants will improve safe food handling, specifically the behaviors supporting the basics of safe food handling: Controlling time and temperature when handling food Ensuring proper personal hygiene Preventing cross-contamination Proper cleaning and sanitizing. Participants will adopt healthy attitudes related to a healthy lifestyle approach to prevention or reduction of obesity. Participants will improve their eating behaviors related to a healthy lifestyle approach to obesity. Participants will increase their level of physical activity related to a healthy lifestyle approach to preventing or reducing obesity. There will be a decline in the economic and health consequences of foodborne illnesses.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

HEALTHY LIFESTYLES: Number of people having medical screenings at health fair type activities. Number of people following up with physician or health professional. Number of people making better nutrition and food choices and engaging in regular physical activity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	2600	4050

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Chronic diseases are Montanas leading cause of death, illness and disability and 70% of health related costs. Heart disease tops the list with diabetes, stroke, osteoporosis, and hypertension significantly impacting the population. Research documents that healthy food choices and physical activity can prevent or delay the onset of many of these diseases. Educational strategies that work at the individual, community and policy levels can contribute to prevention as well. Programming in this area includes access to health services, chronic diseases, disability/secondary conditions, injury/violence prevention, nutrition/weight status, quality of life and well-being, physical activity/fitness.

What has been done

In 9 counties and 1 reservation, teaching strategies for achieving and maintaining healthy lifestyles to Montana residents is important programming. A variety of opportunities for people to learn about nutrition, physical activity, medical issues, chronic disease and other issues related to healthy lifestyles included nutrition education classes for teachers, community health fairs, cooking classes, menu planning with schools and restaurants, physical activity classes, newsletters and newspaper articles, brown-bag lunch classes on nutrition/exercise, modifying recipes for health and wellness (diabetes, heart, gluten intolerance, etc.)

Results

Restaurants involved with the Tasty Fork program have moved from offering the heart healthy menu one month per year to year round. Because of the health fairs, early detection of heart disease, diabetes, high blood pressure, cancer etc for some participants has lead to medical treatment. A variety of health screenings were offered at minimal costs which made them

affordable for participants. These screenings include such tests as blood profiles, blood pressure checks, glucose checks, a mobile mammography unit, bone density scans, flu shots, PSA screen. Because of Extension classes, physical activity and weight lifting has increased for both youth and adults, especially for seniors. The schools in two counties are offering healthy food/snack choices in their concessions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #5

1. Outcome Measures

STRONG WOMEN: Number of people improving 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. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	75	150

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Women start to show decline in muscle mass beginning at age 30. Current recommendations for adults to maintain a healthy level of muscle mass is to strength train at least two times per week, but only 17.5% of women meet this goal. The Strong Women™ program was developed by Tufts University as a strength training program to be conducted through County Extension Offices. In Montana, the program is especially targeted at women who live in rural communities.

What has been done

There were 12 strength training exercise programs conducted in 8 Montana counties. Ages of the participants ranged from 36 to 77 years. Nutritional information, along with individual consultation, opportunities were made available to participants. In some programs, CDs containing instructions were provided for people to continue the work at home.

Results

Through the evaluation process which included 13 focus areas, class participants reported they know how to properly use weights, feel physically stronger, have better balance, feel happy about their bodies, can lift most anything, feel free from joint pain, have enough energy to do what they want to do, have a healthy level of physical activity, enjoy good health, are in a good mood, feel confident in what they do, are willing to try new things, and walk up and down stairs without pulling on the handrail. In one county, a physician assistant is referring patients to the program and in this rural county, it is the only program of its kind. On a scale of 1-10, all the programs were rated between 9 and 10.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle

Outcome #6

1. Outcome Measures

4-HEALTH provides parents with relevant information, effective parenting skills and strategies, and a strong social network that encourages and helps them to solve everyday problems relating to the health and well-being of their pre-teen children.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	88

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The increasing prevalence of childhood overweight and obesity is cause for alarm across the globe. Because they have poorer nutrition, more sedentary lifestyles and poorer body image, children today are worse off both physically and emotionally than children were just 25 years ago. The main goal of this program is to deliver an obesity prevention curriculum that will change the behaviors of parents and children thereby significantly reducing the likelihood of children becoming overweight. Throughout the course, parents will improve their abilities to encourage nutritious eating and physical activity and provide healthier home environments for their children.

What has been done

The program is conducted over an 8 month period with 1 additional month devoted to gathering evaluation data. This is the pilot year (2010) with 6 counties involved; 3 offering classes taught by the county agents and 3 with educational information being delivered by mailed packets. Information in the classes covers body image, parenting activity and food and nutrition. In May, data will be gathered from the 6 counties providing feedback on effectiveness of class content as well as delivery method.

Results

Evaluations indicate that parents in all experimental counties are reporting increased rates of confidence in their ability to make changes to family habits in order to increase health and well-being; increased agreement that by using new knowledge obtained in the session, they could make positive changes to their families eating habits; increased confidence in their ability to set and support family goals related to physical activity; that they could better identify the best way to communicate with their preteen and family regarding health related topics; increased rates of confidence in their ability to proactively address media messages with their preteens; that they are more comfortable applying their knowledge of body image issues to enhance the health of their preteen and family.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{No Data Entered}

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

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Youth Development

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 (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	14.0	0.0	0.0	0.0
Actual	11.4	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
315848	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
180958	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct Workshops, 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. Brief description of the target 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
 Individuals who have access to property where meth can be made
 Youth who live on reservations and are between the ages of 9-21.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4254	1234	16625	10646

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	3	0	3

V(F). State Defined Outputs

Output Target

Output #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. On a statewide basis, 300 youth will attend 15 camps to develop enhance life skill development.

Year	Actual
2010	23332

Output #2

Output Measure

- 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 at least 1/3 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.

Year	Actual
2010	4556

Output #3

Output Measure

- Methamphetamines: Provide materials and training on meth to retailers, store managers, homeowners, agricultural producers. Distribute 100 Tools for Schools Meth Prevention materials to school administrators/teachers. Distribute 500 Toolkits on Meth to tribal communities and non-tribal communities.
Not reporting on this Output for this Annual Report

Output #4

Output Measure

- 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.

Year	Actual
2010	20

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	<p>LIFE SKILL DEVELOPMENT 100% of 4-H members will show an increase in knowledge and skills 100% of 4-H members will report improved practices learned 50% of 4-H members will re-enroll 85% of the youth involved in the experiential learning activities through 4-H will gain knowledge and skills about the topic they have selected. (Example: plants, animals/quality assurance, aerospace, vet science, foods, public speaking, leadership, etc.) 200 youth select new project literature or participate in new educational programs 80% of the youth involved in the experiential learning activities through the 4-H program will show improvement in life skills. 75% of youth selecting new project literature or participating in new programs successfully complete project records or program requirements. 50% of agents and leaders will promote and market new curriculum and program initiatives Youth involved in 4-H will make contributions to their communities, be less likely to be involved in illegal activity and be more likely to perform better in school. Youth involved in 4-H will exhibit having more confidence, feeling more competent and self-assured, and feeling more connected to their families and communities. As a result of participating in 4-H programs for at least 2 years, members are less likely than other kids: To shoplift or steal (3 times less likely) To use illegal drugs of any kind to get high (2 times less likely) To ride in a car with someone else who has been drinking To smoke cigarettes To damage property for the fun of it (2 times less likely) To skip school or cut classes without permission 4-H members are more likely than non-members To succeed in school, getting more A's than other kids To be involved as leaders in their school and the community To be looked up to as role models by other kids To help others in the community</p>
2	<p>LEADERSHIP/VOLUNTEER DEVELOPMENT Eighty percent (80%) of Extension agents attending professional development opportunities will increase knowledge in volunteer management. Sixty percent of the 4-H volunteers participating in trainings will learn the duties of an organizational leader, project leader and other leadership positions within the program so 4-H Clubs and activities will use positive youth development practices. Fifty percent of the county 4-H Councils will learn the established financial and audit procedures for handling public money. Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills. 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 on 4-H educational programs. Over the next year, at least one-third of 4-H Councils in Montana will adopt the established financial and audit 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 in Montana. Montanan's will have a more accurate and positive impression of the 4-H Youth Development Program.</p>
3	<p>METHAMPHETAMINES Percent of students who can identify the ingredients used to manufacture meth Percent of students who can identify the effects of taking meth Participants will become involved in community meth awareness and prevention outreach activities.</p>
4	<p>JUNIOR AGRICULTURE LOAN PROGRAM Youth will complete the finance and beef management trainings needed to complete the livestock loan application. Youth will make application to borrow money for the purchase of livestock so they can start or expand their herd.</p>

Outcome #1

1. Outcome Measures

LIFE SKILL DEVELOPMENT 100% of 4-H members will show an increase in knowledge and skills 100% of 4-H members will report improved practices learned 50% of 4-H members will re-enroll 85% of the youth involved in the experiential learning activities through 4-H will gain knowledge and skills about the topic they have selected. (Example: plants, animals/quality assurance, aerospace, vet science, foods, public speaking, leadership, etc.) 200 youth select new project literature or participate in new educational programs 80% of the youth involved in the experiential learning activities through the 4-H program will show improvement in life skills. 75% of youth selecting new project literature or participating in new programs successfully complete project records or program requirements. 50% of agents and leaders will promote and market new curriculum and program initiatives Youth involved in 4-H will make contributions to their communities, be less likely to be involved in illegal activity and be more likely to perform better in school. Youth involved in 4-H will exhibit having more confidence, feeling more competent and self-assured, and feeling more connected to their families and communities. As a result of participating in 4-H programs for at least 2 years, members are less likely than other kids: To shoplift or steal (3 times less likely) To use illegal drugs of any kind to get high (2 times less likely) To ride in a car with someone else who has been drinking To smoke cigarettes To damage property for the fun of it (2 times less likely) To skip school or cut classes without permission 4-H members are more likely than non-members To succeed in school, getting more A's than other kids To be involved as leaders in their school and the community To be looked up to as role models by other kids To help others in the community

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	21000	23332

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montana youth need opportunities to develop life skills that supplement what they learn at home and at school. This is particularly true for people living in rural communities and those living in military settings. The 4-H program fills this need by engaging youth in projects while learning life skills like communication, decision making, critical thinking, leadership, responsibility, and workforce preparation. Currently, there is a big demand for skills in science, engineering and technology as the needs of our society and its workforce change. These areas have been identified as insufficient in the general US population.

What has been done

From over 300 projects, youth involved in 4-H can choose areas of interest and then become engaged in the hands-on learning process. In addition to the regular project offerings, youth who go to school at Pretty Eagle Catholic School on the Crow Indian Reservation, Little Big Horn College and 9 other counties participate in robotics projects, film-making opportunities, and GPS activities as a way to enhance their science, engineering and technology skills. Three counties participated in the first Lego League bringing teams to compete. During the past year, 1003 military families located at Malmstrom Air Force Base and 5 locations of the National Guard were involved in 4-H clubs.

Results

During the past year, 111 community members/educators of the military attended trainings on starting 4-H clubs, 390 HERO Packs were distributed to youth whose parents were deployed, 10 mobile technology labs were held, 21 youth attended Speak Out for Military Kids and 63 4-H clubs have youth enrolled with parents in the military. Evaluations indicate youth involved in film-making and robotic science curriculum have gained critical thinking and technology skills as well as fine motor, engineering, math and programming skills but little or no difference is evident in science/problem solving skills or community engagement. Because of their 4-H project experiences, 83% of 4-H teens surveyed feel it is important to complete a task to which they have committed themselves. Through camping experiences, 89% of youth campers accomplished something they couldn't do the first day, 69% learned about careers, 82% indicated campers taught each other, 91% improved skills in some activities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

LEADERSHIP/VOLUNTEER DEVELOPMENT Eighty percent (80%) of Extension agents attending professional development opportunities will increase knowledge in volunteer management. Sixty percent of the 4-H volunteers participating in trainings will learn the duties of an organizational leader, project leader and other leadership positions within the program so 4-H Clubs and activities will use positive youth development practices. Fifty percent of the county 4-H Councils will learn the established financial and audit procedures for handling public money. Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills. 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 on 4-H educational programs. Over the next year, at least one-third of 4-H Councils in Montana will adopt the established financial and audit 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 in Montana. Montanan's will have a more accurate and positive impression of the 4-H Youth Development Program.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	3000	4656

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Volunteers are essential to the sustainability and growth of the 4-H program. To involve volunteers successfully, volunteer managers should be concerned with the identification, selection, orientation, training, utilization, recognition and evaluation of those volunteers. Additionally, youth and adult leadership development programs provide needed education for providing leadership to the program and ultimately, extend into the community, county and state.

What has been done

FUNdamentals of Positive Youth Development-Leaders College is the premier 4-H volunteer development training. It is focused on improving youth development programs including program approaches, experiential learning model, critical elements of 4-H programs, and ages and stages of youth development. Essential Elements of Positive Youth Development was an additional training program introduced in 2010. The 4-H leadership project and the 4-H Ambassador program are focused on leadership skills for youth.

Results

Leaders College participants evaluated program content and utility showing: 70% strongly agreed, 30% agreed that the information will be helpful in my role as a 4-H leader, 65% strongly agreed, 35% agreed that they feel like they will be a better 4-H leader as a result of the program; 68% strongly agreed, 30% agreed with the statement they intend to utilize this information in their role as a 4-H leader; and 72% strongly agreed, 28% agreed that this program was of educational value. An evaluation completed by 4-H Ambassadors indicates participants perceive their leadership skills have improved in communication, decision making, positional leadership, working with others and understanding self. Twenty eight teens/adults completed 3 trainings in the Essential Elements of Youth Development with results of: 64% who knew the key points in a caring relationship between a youth/adult compared to 16% at the beginning; 81% who could list practices/behaviors leading to an inclusive environment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

Outcome #3

1. Outcome Measures

METHAMPHETAMINES Percent of students who can identify the ingredients used to manufacture meth
Percent of students who can identify the effects of taking meth
Participants will become involved in community meth awareness and prevention outreach activities.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

JUNIOR AGRICULTURE LOAN PROGRAM Youth will complete the finance and beef management trainings needed to complete the livestock loan application. Youth will make application to borrow money for the purchase of livestock so they can start or expand their herd.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	8	20

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

It is difficult for Native American youth to get started in the agricultural business. Families are unable to provide resources for the younger generation to purchase land or livestock to begin their own businesses. The Jr. Agriculture Loan Program provides limited resources to youth to purchase livestock through an application process. For many, this gives them a start in establishing a viable business.

What has been done

Loans were provided to 20 new youth. Youth receiving loans attend workshops focused on animal body condition scoring, animal production, and financial record keeping and statements. All participants are required to fill out and submit applications to the Montana Department of Agriculture Junior Agriculture Loan Program for their loans. They have individual consultations to establish a business plan, set goals, complete financial statements, establish recordkeeping systems and develop business agreements between parties when appropriate.

Results

Two of the 7 reservations in the state have active Jr. Ag Loan Programs. On the Blackfeet, there are currently 15 youth involved and 5 on the Ft. Belknap. Each has borrowed the maximum amount of \$8500 amounting to \$170,000. Over the past 18 yrs, 86 youth living on the Blackfeet reservation have borrowed \$570,000 to purchase 716 bred cattle. Over 70% of these youth used proceeds for college expenses and/or remain involved in agriculture. In 2010, one participant said that this program helped him to learn and understand the responsibilities that go along with the cattle business. As a graduate of MSU in Range Management and Ecology, this program helped him to set goals and achieve them. Going into college knowing that with education and experience in the cattle business, there would be a career that would enable him to help other cattle producers become more successful operators.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
801	Individual and Family Resource Management
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{No Data Entered}

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

Evaluation Results

There is a communication evaluation tool on the 4-H web site that lists life skills associated with 4-H projects and programs. Counties are asked to fill out the evaluation which in turn generates statewide impact data.

During 2010, a replicated ex post facto study was conducted to analyze the effects of participation in the Montana 4-H Ambassador Program on 4-H Ambassadors' self-perceived leadership skills as measured by the Leadership Skills Inventory (LS) (Townsend & Carter, 1983). Ambassadors completed the retrospective pretest-post test format instrument which assessed their leadership skills as they perceived them prior to and after participation in the program. A repeated measure t-test revealed a statistically significant difference between the pretest and post test LSI scores for all participants.

The Leaders College was evaluated by using a 5 point Likert-type scale (strongly agree, agree, neutral, disagree, strongly disagree). In evaluations of knowledge levels reported by participants, repeated measures t-test demonstrate statistically significant

differences in the before and after training knowledge levels of all participants in the areas of positive youth development, program approaches, experiential learning model, critical elements of the 4-H program and ages and stages of youth development.

A pre-post test in the robotics and filmmaking projects measured problem solving, community engagement, science skills, and technology skills. This test showed there was significant difference in critical thinking skills and technology skills. It also showed little or no significant difference in science/problem solving skills or community engagement.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Global Food Security and Hunger - Ag Sustainability and Profitability

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 (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	9.0	0.0	0.0	0.0
Actual	10.2	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
247830	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
249049	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Interactive video conferencing from campus on beef related issues.

Workshops aimed at meeting beef quality assurance standards, production and marketing goals.

Montana Beef University provides producers with information on a variety of topics via newsletters, seminars, workshops, and interactive TV.

Develop, test and implement management strategies that reduce production costs by capitalizing on the sheep's ability to favorably manipulate natural resources.

To develop, implement and evaluate controlled sheep grazing strategies for managing large infestations of leafy spurge and knapweed.

Develop and facilitate the implementation of selection, nutritional and marketing management strategies for sheep.

MSU Master Gardener program will be delivered live and by internet. Attendees will receive in depth resources to assist with questions.

Increase knowledge of adapted woody and herbaceous plant materials; basic instruction in entomology and plant problem diagnosis.

Conduct workshops on records, decision making aids, leasing alternatives/marketing, lease agreements for land, machinery and livestock, farm financial record guidelines and computer applications, machinery cost summaries, and cost of production worksheets and summaries.

2. Brief description of the target 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(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	8848	10000	500	900

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	8	0	8

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Montana Beef Network: Number of people attending beef quality assurance, production and marketing programs. Number of classes provided. Number of people participating in the interactive-video conference programs. Number of producers becoming BQA certified. Participation in interactive television short courses (4). Number of hits on the web site. Number of people participating in demonstration/tour opportunities.

Year	Actual
2010	610

Output #2

Output Measure

- Montana Sheep Institute: Number of people attending workshops teaching innovative ways of 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 workshops related to using 'best practices' in sheep production and marketing of wool.

Year	Actual
2010	1078

Output #3

Output Measure

- 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.

Year	Actual
2010	2000

Output #4

Output Measure

- 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.

Year	Actual
2010	2250

Output #5

Output Measure

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

Year	Actual
2010	2002

Output #6

Output Measure

- Profitability: Number of producers attending farm management workshops. Number of producers using pulse crops in the cropping rotation.

Year	Actual
2010	900

Output #7

Output Measure

- Range Management - Undaunted Stewardship Number of ranches certified as Undaunted Land Stewards
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Montana Beef Network: Number of people using and understanding Beef Quality Assurance protocols for raising beef. 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	Montana Sheep Institute: Number of people who learned about using sheep to control invasive plants Increase in the number of Wool Pool consolidation. 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 international market. Producers improving production efficiency of their sheep enterprise.
3	Weed Control: People learn about noxious weed identification and weed management. People learn how to map their property with a GIS device. Landowners will be able to recognize weed problems, determine control techniques, and improve their weed control skills. An increase in the number of acres mapped for purposed of weed identification and location. An increase in the number of weed infested acres being controlled by accepted practices. Producers will implement weed management plans/areas on their land. Integrated Pest management techniques will be put into practice. Agricultural and public lands will be conserved for future production and use. The spread of noxious weeds will be reduced.
4	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.
5	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 faming 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.
6	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.
7	Range Management - Undaunted Stewardship * Producers learn about best practices in management; specifically for grazing lands. * Tourists learn that environmental stewardship, historical site preservation and Montana agriculture can be compatible and are often mutually dependent. * Producers become Undaunted Land Steward Certified which recognizes farms and ranches that practice sustainable environmental stewardship on their private and public lands. * Landowners, policymakers, urban citizens and others engage in cooperative conservation strategies that are used to sustain and enhance the environment, historical and

economic values of agricultural landscapes. * Private/public landowners and others understand that agriculture and environmental values can be compatible.

Outcome #1

1. Outcome Measures

Montana Beef Network: Number of people using and understanding Beef Quality Assurance protocols for raising beef. 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. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	3000	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montana ranks 7th in the nation in beef cattle production, making it an entity important on the economic stage. Over the past 10 years, producers have seen a change their operations; biosecurity and source verification requirements, tighter bottom lines triggering better business decisions regarding production and marketing practices, shifts in customer product selection and heightened foods safety requirements. Extension programs have provided leadership to help them address the issues and changing climate that faces them on a daily basis. By its very nature, agriculture is risky business, so producers must make careful and informed decisions in order to remain viable.

What has been done

The Montana Beef Network assists Montana livestock producers in receiving added value for their cattle by identifying cattle that meet specific beef quality and consistency targets. The foundation of the network is data collection and information exchange. Through collaboration between MSU and the MT Stockgrowers Association, the MBN has three main goals: Beef Quality Assurance Certification (BQA), Feeder Calf Certification and Return of feedlot and carcass data to producers. Demonstrations of best practices through hands-on workshops, web-based self-study courses, producer self audits, CD videos and industry seminars prepares Montana Beef Producers to add value to their product, thereby significantly increase their net margins.

Results

While there are many impacts to discuss from the MBN, the Trichomonas Fetus Project on the Northern Cheyenne Reservation will be highlighted for 2010. The project began in 2003 when tribal producers were faced with the potential of reduced pregnancy rates as much as 40% in their herds. Since then, a total of 29,964 cows were tested resulting in 3,956 being open, then sold for a total savings of \$672,520 in feed costs. The project raised the female pregnancy rate by 2.7% for 6 years equating to 809 additional females retained in the herd. If their net replacement cost is \$450 each, the savings is \$364,062. Combined savings in feed and females is \$1,036,582 over the 6 years. The highest pregnancy rate of the 6-year effort was 2009 with an average of 88.9%. In 2009-2010, 20% of the reservation producers were voluntarily monitoring for the disease; 78% of them are permanently pregnancy testing cows. This project has created trust on which to build future ranching projects in areas associated with BVD, age and source verification.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
307	Animal Management Systems
311	Animal Diseases

Outcome #2

1. Outcome Measures

Montana Sheep Institute: Number of people who learned about using sheep to control invasive plants Increase in the number of Wool Pool consolidation. 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 international market. Producers improving production efficiency of their sheep enterprise.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	1200	1078

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Sheep producers are looking for ways to stay in business and stay profitable. This includes sheep production and wool production/marketing and harvesting. One of the limiting factors is the shortage of shearers with just 17 individuals listed on the Montana Woolgrowers Association shearer page and 270,000 head of sheep to be sheared. Research has shown producers with weed issues have successfully used sheep to address infestations of unwanted plants. As this becomes a more generally adopted method of controlling weeds, producers may be more inclined to invest in sheep as a weed controlling entity as well as increasing profit margins for their operations.

What has been done

A research project is being conducted to examine traits of sheep (growth, reproduction and wool) and the relationships between them and how it influences profitability. Sorting lines of wool with the OFDA2000 allows producers to target markets and market options for specific fiber diameter requirements. Currently there are 22 grazing projects involving 35 monitoring sites, 31 producers and 30,000 sheep, 1000 Montana landowners and 100,000 of weed infested acres. The Montana Wool Harvesting School cooperates with a program in New Zealand to train shearers so they can work in the industry in Montana, the US and/or internationally.

Results

The OFDA2000 is used to sort fleeces at shearing into specific fiber diameter lines of wool. Producers have teamed up with a wool merchandizing company in ME and are using this technology to sort wool at the ranch so they can provide a specialized product for this company thereby receiving top dollar for their product. Grazing projects using sheep to address weed infestations are targeting sensitive waterways and post fire projects. As a general rule, the leafy spurge composition on these landscapes decreased by 9% per year of grazing while the grass component increased by 10%. Forty seven students completed the Wool Harvesting School basic program with the majority indicating they are able to shear their own sheep, saving the expense of hiring someone, if available, to shear. Three students have achieved the instructor level and are involved in teaching the basic sheep shearing classes and assist with the beginner level of the shearing school.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
307	Animal Management Systems
311	Animal Diseases
604	Marketing and Distribution Practices

Outcome #3

1. Outcome Measures

Weed Control: People learn about noxious weed identification and weed management. People learn how to map their property with a GIS device. Landowners will be able to recognize weed problems, determine control techniques, and improve their weed control skills. An increase in the number of acres mapped for purposed of weed identification and location. An increase in the number of weed infested acres being controlled by accepted practices. Producers will implement weed management plans/areas on their land. Integrated Pest management techniques will be put into practice. Agricultural and public lands will be conserved for future production and use. The

spread of noxious weeds will be reduced.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	2000	126

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The majority of weed management programs in MT focus on land that is already infested/impacted by noxious weeds. An equal, if not greater than, effort should be made to prevent their spread into lands that are currently non-infested. Early detection and rapid response (EDRR) to invading or still spreading species is critical to protecting non-infested lands and is the most cost effective. The need for a coordinated, statewide early detection and rapid response program is substantial and unmet at this time. The INVADERS database system is available for use and contains records of occurrences of invasive plants across the state. This is an important step in addressing weed problems.

What has been done

Six hands-on training sessions were conducted to train weed watchers (126) and give them the tools to report and receive information on new noxious weeds records. Use of the INVADER database system allows trainees to create an online profile to submit weed-find records and receive next-day email weed alerts for invading species.

Results

As a result of this extension program, 30 new weed reports have been submitted, including several that triggered email alerts. Trained weed watchers are using the INVADER database system for plant/weed identification. There have been 177 new users establishing e-mail alert accounts and 150 new users establishing data entry accounts since the initiation of an EDRR network. As the program continues, more impact data will be available.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #4

1. Outcome Measures

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. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	200	2002

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montanans are avid gardeners and landscape enthusiasts who look for information that can make their labors successful. Primary needs include yard and garden problem diagnosis followed by recommendations for pest control, diseases, climate considerations, pruning techniques, drip irrigation and soil health. While information is being streamed over the web, people still want unbiased, research based information so they can be sure they are using best practices. Many people look to the Extension Service for that information and for assistance because they can trust what they learn.

What has been done

The Master Gardener Program is a comprehensive approach to gardening with 3 levels; a beginner to intermediate series of classes for level 1, intermediate to advanced classes for level 2 and a 3 day advanced/intensive training for level 3. Levels 1 and 2 are 8 week classes that require 16 hours of class time and 20-30 hours respectively of volunteer commitment to be certified as a Master Gardener. Participants learn proper yard/garden installation techniques, integrated pest management, variety selection, abiotic issues, proper soil fertility/management, cost savings, pruning techniques and where to find pertinent/timely yard/garden information to answer questions in their communities.

Results

Through the Master Gardener program, over 1000 people participated in the classes for Level 1 and 2. There are over 285 students certified as level 1 Master Gardeners during 2010. These people can serve as resources to others interested in gardening, but at the basic stages. Twenty-nine people achieved Level 2 certification which allows them to answer questions and assist gardeners with more advanced issues. The Master Gardeners work at local farmer markets, community gardens, Extension Offices and volunteer at local food banks answering questions and helping people make decisions about their gardens so they are a resource to their

communities. It is estimated that Master Gardeners in the state volunteered a minimum of 8,611 hours which is valued at over \$170,000.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #5

1. Outcome Measures

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. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	2250	2717

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Cash receipts from all crops produced in Montana contribute over one billion dollars each year to the state economy. In national rankings, the state is 3rd in wheat and barley production, sugar beets 5th, flax seed and safflower 2nd, canola 5th, alfalfa hay 4th and potatoes 12th. There is a continuing need for producers to receive research-based technology and information related to varieties, flexible cropping strategies, alternative crops, oilseed crops and marketing. Producers look to Extension to provide that information so they can make informed decisions related to their operations.

What has been done

Workshops, demonstration plots, crop tours, webinars presented by Extension personnel have provided information for producers to use in making decisions about their operations. Individual consultations are available when requested. Crop disease, insect issues and related herbicide/pesticide practices were also presented to producers. Pesticide Applicator trainings along with regular newsletters (electronic/paper) and media productions keep producers informed of new or continuing problems they will face during the up-coming growing season.

Results

As a result of Extension programming, many producers are raising some type of alternative crops such as peas/lentils and changing to newer, higher yielding varieties of wheat and hay. Producers are increasing the acreages that are planted to leguminous crops for better soil fertility and reducing disease impacts. They are applying best practices to address pests and disease in their crops such as sawfly, cut worms, Russian wheat aphid, head blight (scab) and the Richardson ground squirrel. For example, after inspecting fields, it was determined that the Russian Wheat aphid problem was not severe enough to warrant chemical control saving the producer \$12,000. Additionally, as a result of Extension programs, producers (110) reported saving money from calibrating their bait applications properly and timing the application better to control the Richardson ground squirrel.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
602	Business Management, Finance, and Taxation

Outcome #6

1. Outcome Measures

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. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	900	350

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wise management practices are more important now than ever before. Profit-loss margins are tight, so producers must be aware of opportunities to cut costs and increase profits. For example, grain producers have been working toward reducing the cost of summer fallow management, that practice of not growing a crop but controlling weeds with either tillage or herbicide application on crop ground. This allows the soil to act like a sponge, absorbing the water without any loss from foliage growth. While this practice stores much needed moisture for the next years crop, it does cost about \$40 per acre to summer fallow without any return on the investment during that year.

What has been done

Extension workshops/classes/demonstrations have provided information for producers to make decisions on management practices. As a result, producers have been growing green and yellow peas and lentils as cash crops on the summer fallow as a way to reduce costs. These crops use less water than traditional wheat and barley crops and can return some nitrogen back to the soil. Also, growing peas or lentils allows producers to rotate crops and focus on different weed control efforts.

Results

Producers recognize the largest benefit to this practice is harvesting a crop instead of just having the cost of summer fallow. There are additional costs to growing peas/lentils but producers have been able to break even rather than having just the expense. As fuel prices have tripled in the past 5 years and nitrogen costs have increased 33% in the same amount of time (\$150 to \$450 per ton), profit margins are small, so informed management decisions like growing peas/lentils is imperative. Fallow acres have fallen to 20%-30% of available cropland acreage and rotational crop acreage has increased substantially. Based on crop acreage reports, lentil acreage increased from 155 acres in 2009 to 2,392 in 2010 and pea acres increased from 3,747 acres in 2009 to 4,803 acres in 2010. Producers are using financial management tools to make changes in their farm/ranch operations so their operations can remain profitable.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
602	Business Management, Finance, and Taxation

Outcome #7

1. Outcome Measures

Range Management - Undaunted Stewardship * Producers learn about best practices in management; specifically for grazing lands. * Tourists learn that environmental stewardship, historical site preservation and Montana agriculture can be compatible and are often mutually dependent. * Producers become Undaunted Land Steward Certified which recognizes farms and ranches that practice sustainable environmental stewardship on their private and public lands. * Landowners, policymakers, urban citizens and others engage in cooperative conservation strategies that are used to sustain and enhance the environment, historical and economic values of agricultural landscapes. * Private/public landowners and others understand that agriculture and environmental values can be compatible.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	50	613

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Cheatgrass and Japanese brome are invasive annual grasses that are impacting crop and rangeland production across the state, yet very little information is available for restoring annual brome-infested land to more productive plant communities that meet management objectives. Rangeland and CRP lands are particularly impacted with cheatgrass/brome problems. Producers need information on the biology, ecology and integrated management practices for cheatgrass on rangelands, pastures and crop lands.

What has been done

Workshops have reached 613 people in 17 locations across the state with information on addressing the cheatgrass and brome problems. A field tour was held in which 47 participants observed in-the-field research. The Undaunted Stewardship program has been discontinued.

Results

Surveys given participants at the end of the series of workshops indicates 60% of the participants have changed how they are managing cheatgrass based on what they learned during the presentation. Economic impacts will be available in the future.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
307	Animal Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Populations changes (immigration, new cultural groupings, etc.)
- null

Brief Explanation

{No Data Entered}

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

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Sustainable Energy - Family Issues, Resources and Environments

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	45%			
802	Human Development and Family Well-Being	45%			
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	10%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	0.0	0.0
Actual	2.5	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
19272	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
140781	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- 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
- Develop Fact Sheets on AIPRA for Tribal members
- Develop curriculum on AIPRA for tribal members, estate planning in general; indoor air quality and record keeping systems; well maintenance folders
- Conduct seminars on estate planning and 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 and lead based paint

2. Brief description of the target audience

- Caregivers of Alzheimer patients
- Home health Care providers
- Certified Nursing Assistants
- Tribal members who own undivided interests in trust lands on a reservation
- 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

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	9154	1922	46	78

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

Patent Applications Submitted

Year: 2010
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	3	0	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Alzheimer's Mini Series: Conduct two mini series in the state. Based on past experience, 60 people could participate in each of the sessions. Conduct one Tools for Caregivers class reaching 30 people.

Year	Actual
2010	99

Output #2

Output Measure

- Estate Planning, Passing of Reservation Lands: An estimated 1000 people will attend an in-depth seminar on estate planning and promotion and will begin to make plans. Distribute the revised MontGuide on state and federal law changes to 1400 participants who have purchased Estate Planning: The Basics packet. Reprint the curriculum "Track'n Your Saving Goals Register" MontGuide and develop materials with ideas on how to save. Prepare materials for presentation and seminars on AIPRA on reservations that request it; an estimated 200. Prepare a series of fact sheets that explain AIPRA and distribute them to tribal members; approximately 300.

Year	Actual
2010	3000

Output #3

Output Measure

- 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.

Year	Actual
2010	250

Output #4

Output Measure

- 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.

Year	Actual
2010	3450

Output #5

Output Measure

- 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.

Year	Actual
2010	2355

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Alzheimer's Mini Series: Seventy-five participants in the Alzheimer's Mini Series will learn about financial planning issues, nutrition, home modifications, and family interactions related to caring for an Alzheimer's patient. Seventy percent (70%) of the participants will cope with caring for an Alzheimer's patient more effectively. Participants will feel more comfortable in their care-giving role and will have a greater understanding of how they can assist a loved one afflicted with Alzheimer's.
2	Estate Planning, Passing of Tribal Lands, Savings: The percent of people who reviewed their property titles and made changes in them, who had an attorney write a will, who reviewed their will and had an attorney update it, who began a gifting program, who made a list of tangible personal property, who reviewed beneficiaries on their life insurance policies, who discussed estate planning with family members, who learned that Montana law would not distribute their property as they desire, who learned that their estate is not large enough that federal estate taxes would apply. Number of participants who attended the educational sessions to learn about AIPRA. Number of feature articles on AIPRA printed in the local newspapers, newsletters and aired over the radio and requests for additional information as a result. Number of tribal members who shared the fact sheets with relatives and talked about estate planning with friends and relatives. Number of parents who open a savings account for their children, discuss saving with family members, and complete a savings goal worksheet. The percent of people who actually did the list of items under short term (the things they learned about). The percent of people who used POD and TOD designations. Number of people who request a copy of an Informational Title Report from the Bureau of Indian Affairs. The number of people who drew a family generational tree to determine to whom their property will pass upon their death; who wrote a will in their own handwriting, retitled property into joint tenancy with right of survivorship, who decided to establish a life estate, who wrote a will, who talked with an attorney about writing a will, who shared the fact sheets with an immediate family member. The number of people who start saving with a financial institution, open an IRA, 401 k or 403 b plan, and whose children are beginning to save. Farms and ranches will be able to be transferred intact without being sold to provide equally to all heirs of to pay death costs. More Montana families will be financially secure at retirement
3	Grandparents Raising Grandchildren: Number of grandparents who gain information to assist them in their parenting role, become aware of services available to support them, and learn about methamphetamine and how it affects the user. Number of grandparents who begin to 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. Number of grandparents and their families will experience reduced stress and grandchildren will have a safe and nurturing environment in which to grow.
4	Home Energy Costs: Number of participants who learn common methods to save home energy by applying measures to new or existing homes. Number of participants who are using high performance, resource efficient building materials and construction techniques in remodeling and new construction. Number of participants who increase their purchase of EnergyStar products and appliances resulting in an energy saving of at least 30% annually per appliance. Number of participants who experience an energy savings due to weatherizing and remodeling of existing homes resulting in an annual 13-65% energy savings per household.

5	Housing and Environmental Quality: Number of participants who learn about environmental health concerns common to new and existing homes - molds, water quality, lead-based paint, radon, etc. Number of people requesting information related to home/environmental concerns. Homes in Montana will routinely be tested/assessed and mitigated for environmental health issues (molds, radon, asbestos, drinking water, carbon monoxide)
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Outcome #1

1. Outcome Measures

Alzheimer's Mini Series: Seventy-five participants in the Alzheimer's Mini Series will learn about financial planning issues, nutrition, home modifications, and family interactions related to caring for an Alzheimer's patient. Seventy percent (70%) of the participants will cope with caring for an Alzheimer's patient more effectively. Participants will feel more comfortable in their care-giving role and will have a greater understanding of how they can assist a loved one afflicted with Alzheimer's.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	100	99

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

As the baby boom generation ages, so does the general population. The fastest growing age group is 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 a certain level of care which may fall to a family member who has few skills to serve in a care-giving role.

What has been done

The Powerful Tools for Caregivers program has been made available to Montanans through the Extension Service. Currently, Extension is delivering the program in 12 counties and on 3 reservations, plus there are 66 other entities who partner with Extension to offer classes.

Results

The program evaluation shows: between 84-100% of the participants report they use the tool of Action Plans to help reduce stress in their lives; between 86-100% report they use the tool of Positive Self Talk to help reduce stress. When asked what was helpful about the program, comments include: not feeling guilty, realizing I am not alone and counting my blessings, not feeling overwhelmed & hopeless-having tools to fix specific problems letting go of what cannot be fixed. One caregiver said: I am so glad this class was available for me. It came at a time in my

life when I was extremely discouraged and now have hope and tools that work; thank you.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #2

1. Outcome Measures

Estate Planning, Passing of Tribal Lands, Savings: The percent of people who reviewed their property titles and made changes in them, who had an attorney write a will, who reviewed their will and had an attorney update it, who began a gifting program, who made a list of tangible personal property, who reviewed beneficiaries on their life insurance policies, who discussed estate planning with family members, who learned that Montana law would not distribute their property as they desire, who learned that their estate is not large enough that federal estate taxes would apply. Number of participants who attended the educational sessions to learn about AIPRA. Number of feature articles on AIPRA printed in the local newspapers, newsletters and aired over the radio and requests for additional information as a result. Number of tribal members who shared the fact sheets with relatives and talked about estate planning with friends and relatives. Number of parents who open a savings account for their children, discuss saving with family members, and complete a savings goal worksheet. The percent of people who actually did the list of items under short term (the things they learned about). The percent of people who used POD and TOD designations. Number of people who request a copy of an Informational Title Report from the Bureau of Indian Affairs. The number of people who drew a family generational tree to determine to whom their property will pass upon their death; who wrote a will in their own handwriting, retitled property into joint tenancy with right of survivorship, who decided to establish a life estate, who wrote a will, who talked with an attorney about writing a will, who shared the fact sheets with an immediate family member. The number of people who start saving with a financial institution, open an IRA, 401 k or 403 b plan, and whose children are beginning to save. Farms and ranches will be able to be transferred intact without being sold to provide equally to all heirs of to pay death costs. More Montana families will be financially secure at retirement

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	900	3000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montanans are interested in planning for the distribution of their wealth following their death. Statistics reveal that 70% 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. Farmer/rancher/owners of closely held businesses are interested in inter-generational transfers. This is especially true on Indian Reservations where landowners need to plan for passing their agricultural land to avoid further fractionation under the American Indian Probate Reform Act.

What has been done

Workshops were presented in over 100 towns in Montana reaching over 3000 residents. As a result of the programs, over 1600 participants purchased "Estate Planning: The Basics" packets that contain a variety of Estate Planning MontGuides and will be sent updates when there are changes in state or federal laws. Webinars on a variety of topics related to estate planning are also available on the Web.

Results

Surveys reveal that of participants: 48% reviewed their property titles and 19% made changes; 16% had an attorney write a will; 21% reviewed their will and had an attorney update it; 19% made a list of tangible personal property; 81% discussed estate planning with family members; 61% learned that state law would not distribute their property as they desire; 43% contacted an accountant. One participant emphasized the need to plan now rather than later saying that she and her husband both attended and planned to conduct some estate planning but he passed away suddenly before getting started. Another commented that the seminar provided a non-threatening way to initiate dialogue with her in-laws.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #3

1. Outcome Measures

Grandparents Raising Grandchildren: Number of grandparents who gain information to assist them in their parenting role, become aware of services available to support them, and learn about methamphetamine and how it affects the user. Number of grandparents who begin to 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. Number of grandparents and their families will experience reduced stress and grandchildren will have a safe and nurturing environment in which to grow.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	250	250

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montana ranked 9th in the nation for the increase in Grandparents Raising Grandchildren between the years of 1990-2000. During that decade there was a 53% increase in the number of grandparents who were responsible for caring for their grandchildren. This means 6.053% of grandparents hold the primary responsibility for meeting the basic needs of their grandchildren, while 11,098 grandparents live in households with one or more grandchildren who is under the age of 18. The common factor in most all these situations is grandparents are called upon to parent their grandchildren due to a crisis or failure in the nuclear family.

What has been done

MSU Extension has taken the lead in forming partnerships of agencies and individuals who are interested in providing services and support to grandparents raising grandchildren. Current cooperators include: AARP of MT, MT Child Care Resource & Referral Network, MT Office on Aging, MT Public Broadcasting Outreach Director, OPI, DPHHS, Tribal members, and Head Start Collaboration. Establishment of support groups has been primary to caregivers and allows an avenue for educational opportunities to directly touch those in need. An estimated 40% of participants in this program are Native American. There are 18 support groups in 11 counties and/or reservations.

Results

Evaluation of grandparents raising grandchildren who have participated in the support/education groups found significant improvement in that the grandparents were confident in calling on others when stressed about a situation; could find resources in the community to help meet their needs; better understood parenting today; realized they could not control the choices their adult children make; and could advocate for their grandchildren at school and in other settings. When asked what they learned in the program, participants stated they became able to ask for support and information and getting help finding hints and facts, the importance of balance, self-care and supporting one another as grandparents, a place to vent themselves, realize they are not alone in this situation. A grandmother on the Ft Belknap reservation used information she had gained to work with school officials regarding her 14 year old grandson who did not want to go to school.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #4

1. Outcome Measures

Home Energy Costs: Number of participants who learn common methods to save home energy by applying measures to new or existing homes. Number of participants who are using high performance, resource efficient building materials and construction techniques in remodeling and new construction. Number of participants who increase their purchase of EnergyStar products and appliances resulting in an energy saving of at least 30% annually per appliance. Number of participants who experience an energy savings due to weatherizing and remodeling of existing homes resulting in an annual 13-65% energy savings per household.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	1000	3450

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montana consumers have noticed a major difference in their utility bill during the past year where the cost of energy has increased by as much as 65%. With high utility bills consumers (affluent and low-income) are requesting assistance for energy conservation and weatherization, seeking information on energy-efficient construction and remodeling and purchasing EnergyStar appliances. By applying basic energy conserving principles (at current energy costs), consumers can reduce their home utility cost by an average of 21% - about \$156 per year. Weatherization applied to older homes can save as much as 65% - about \$780. In both cases, the savings pay-back is typically 1-4 years.

What has been done

Classes/workshops were conducted for contractors, home owners, housing authorities, tribal members, real estate agents, home inspectors, waste water treatment operators, health departments and Extension agents.

Results

As a result of this Extension program, 1256 contractors attended and passed the training and certification classes/workshops in weatherization. Because of this training, 2025 Montana homes were weatherized. According to the Montana Weatherization Assistance Program, Montana families saved a minimum of 30% on their energy bills as a result of weatherizing their homes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #5

1. Outcome Measures

Housing and Environmental Quality: Number of participants who learn about environmental health concerns common to new and existing homes - molds, water quality, lead-based paint, radon, etc. Number of people requesting information related to home/environmental concerns. Homes in Montana will routinely be tested/assessed and mitigated for environmental health issues (molds, radon, asbestos, drinking water, carbon monoxide)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	1000	2355

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Throughout Montana, consumers, real estate professionals, county health offices and others are reporting alarming incidences and health effects related to home environmental issues. Extension programs confirm the reality of these issues; radon level in Montana ranks 3rd highest in the nation, asthma has increased due to poor home environment, molds have forced homeowners out of their homes and other homes had to be destroyed. Other home environmental issues common to Montana include asbestos in vermiculate insulation, drinking water contamination, improperly installed and maintained septic systems, carbon monoxide from faulty heating systems, and lead-based paint.

What has been done

Workshops/classes have been conducted for home owners, contractors, real estate professionals, county health officials, home inspectors and others on finding and mitigating radon in homes, locating and addressing mold issues as well as other potential problems in homes.

Results

As a result of this Extension program, 1300 contractors have been certified to apply lead-safe

work practices in homes; 225 homes were provided with comprehensive health home walk-through assessments; 250 contractors were certified to assess and implement healthy home practices and in conjunction with those certified in previous years, 1775 contractors are applying healthy home assessment techniques to their business, 248 homes were tested for radon and mitigation steps taken in those requiring action, 85 homes were tested and abated for asbestos containing materials in homes, 425 homeowners cleaned up or fixed up their home from molds and excessive moisture, 235 homes were tested for carbon monoxide and other combustion gases related to home fossil-fuel appliances, furnaces and water heaters and problems corrected, 825 homes were tested for lead-based paint and steps taken to contain/clean lead during construction, 104 consumers and youth took action to reduce asthma triggers in their homes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations

Brief Explanation

{No Data Entered}

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

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Sustainable Energy - Community and Economic Development

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	45%			
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	10%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual	4.2	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
48535	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
153166	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

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 entitles, agencies, businesses/industry and organizations to implement goals and plans of action

Partner with local Adult Education entitles to identify class offerings

Television PSAs announcing EDEN (Extension Disaster Emergency Network)

Television PSAs discussing drought/wildfire or other disasters that may occur.

Community meetings will be held to discuss renewable/alternative energy possibilities in both public and private sectors

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

2. Brief description of the target audience

- Adults interested in education
- Business and Community Leaders
- Local Development Entities
- Local Economic Development Entitles
- Chamber of Commerce members
- Tourism Leadership - local/state
- County government
- Individuals interested in start-up and expansion of business
- County DES, Law enforcement, Emergency Response coordinators
- Current community Leadership/potential community leaders
- Landowners
- City Government
- Adults/Youth serving on boards

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	13274	38396	76	46

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

Year: 2010
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	1	0	1

V(F). State Defined Outputs

Output Target

Output #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.

Year	Actual
2010	63

Output #2

Output Measure

- 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. Number of people attending classes.

Year	Actual
2010	2013

Output #3

Output Measure

- EDEN (Extension Disaster Emergency Network): Number of hits on the EDEN WEB Site. Number of workshops/presentations/activities focused on disaster mitigation. Number of responses from PSA's to emergency service entities.

Year	Actual
2010	600

Output #4

Output Measure

- 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.

Year	Actual
2010	7240

Output #5

Output Measure

- Renewable/Alternative Energy: Number of people attending workshops/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.

Year	Actual
2010	708

Output #6

Output Measure

- CITIZEN LEADERSHIP AND GOOD GOVERNANCE: Number of people attending workshops/presentations focused on board responsibilities and authorities.

Year	Actual
2010	2200

Output #7

Output Measure

- COMMUNITY DEVELOPMENT WITH TRIBAL POPULATIONS: Number of tribal members involved in community activities, including health issues.

Year	Actual
2010	450

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	EDEN: Number of PSA's produced to increase public awareness and knowledge of disasters and increase consumer awareness of local emergency services. The public will understand how they access local emergency services and take steps to prepare for a disaster (number of disaster survival kits made) Reduction of accidents, loss of property and human life due to disasters
2	COMMUNITY RESOURCE DEVELOPMENT: Number of 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. Number of community leaders, agency personnel, organization membership that will collaborate on economic development strategies. Number of communities that 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.
3	ADULT/COMMUNITY EDUCATION Number of people who gained knowledge through adult education classes. Number of participants who tried a new activity as a result of attending a class. Number of participants who used a new skill, practice or technique as a result of attending a class.
4	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 recognized 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. Number of communities conducting Study Circles and Leadership Plenty activities and involve people new to the community problem solving. Number of people trained as facilitators for the Study Circle and Leadership Plenty process and are able to assist community groups. Number of people who develop or enhance their leadership skills and are able to apply those newly acquired skills and techniques
5	RENEWABLE/ALTERNATIVE ENERGY: Number of communities/cities making decisions about revenue generation with wind based on MSU Extension model. Number of people making decisions about the use of bio-fuels and other alternative energy opportunities.
6	CITIZEN LEADERSHIP AND GOOD GOVERNANCE: Number of boards, councils and committees being successful with assigned responsibilities/authorities.
7	COMMUNITY DEVELOPMENT WITH TRIBAL POPULATIONS: Number of tribal members involved in community activities, including health issues.

Outcome #1

1. Outcome Measures

EDEN: Number of PSA's produced to increase public awareness and knowledge of disasters and increase consumer awareness of local emergency services. The public will understand how they access local emergency services and take steps to prepare for a disaster (number of disaster survival kits made) Reduction of accidents, loss of property and human life due to disasters

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	12000	600

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Hazard mitigation is an integral part of emergency preparedness. Hazard mitigation is the process of figuring out how to reduce or eliminate the loss of life and property damage resulting from hazards such as floods, earthquakes, fires, etc. With the recent catastrophic disasters that have occurred around the world, there is increased emphasis on disaster mitigation, planning and preparedness. Research has demonstrated the benefits to communities with lives saved, decreased levels of damage and smoother recovery when residents know how to respond before, during and after a disaster.

What has been done

As a result of participating in emergency preparedness exercises, 48 people became aware of the ramifications to business and government in the event of a long-term power outage. The participants represented elected officials, businesses, Bureau of Land Management, utilities, public health, hospital, emergency management and the faith-based volunteer network. Twenty-five fuel mitigation projects have been conducted representing 107 acres of fuel reduction treatments which will protect 39 homes and 75 other structures from wildland fires.

Results

As a result of the power outage exercise, the courthouse and businesses in one county are updating their Continuity of Operations plan or are developing a plan. The recently implemented Public Alert Notification System (PANS) was tested and protocols developed for the 911 dispatchers to use. During the past year, the system was used to notify residents about 3 different emergencies; 2 dealing with flooding and with a city water main breakage. Youth were

involved in installing 45 markers to assist the public and emergency responders to quickly locate houses that may not be visible from the county road. Thirty nine homes and other structures are more protected against wildfire due to mitigation procedures.

4. Associated Knowledge Areas

KA Code	Knowledge Area
723	Hazards to Human Health and Safety
805	Community Institutions, Health, and Social Services

Outcome #2

1. Outcome Measures

COMMUNITY RESOURCE DEVELOPMENT: Number of 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. Number of community leaders, agency personnel, organization membership that will collaborate on economic development strategies. Number of communities that 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. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	7500	63

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The SW region has not experienced the growth and positive economic development like other parts of western Montana. Manufacturing in the region has decreased over the last decade despite requests for start-up information from residents and indications from research of the potential growth. Import substitutions for materials needed by companies already in the region should be a focus as well as export enhancement to expand the current base of production/services within the region. The region needs to address the economic issues together, as a partnership, to obtain the best results.

What has been done

Partnerships across the region have enhanced the offerings of regional workshops for start-ups in

the tourism and arts sector. The cross-county planning teams have been expanded to address regional strategies in targeting innovative sectors that can be drivers for future economic development. Using models such as the Community Business Matching program, Harris InfoSource 2004, Implan, and an analysis of the likelihood of firms locating in the region, has enabled the working groups to develop compatible plans for successful development. Through the CBM program, work in 2010 focused on identifying positive economic gaps for development.

Results

All 6 counties in the region have surveyed citizens and have a four year comparison of top goals for their economic development plans. All have identified their assets, business costs and infrastructure needs for business sectors they wish to develop. Two counties have attracted new businesses; FED Ex Center in Silver Bow and Northwestern Energy plant in Deer Lodge. A third continues to develop small businesses around their agricultural sector, but has not been successful in reaching the goal of establishing a meat processing plant. Two counties have expanded their tax bases, increased job growth via full-time jobs with full benefits to increase the quality of life for their citizens. Both have added more than 80 new jobs to their economic mix during 2010.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #3

1. Outcome Measures

ADULT/COMMUNITY EDUCATION Number of people who gained knowledge through adult education classes. Number of participants who tried a new activity as a result of attending a class. Number of participants who used a new skill, practice or technique as a result of attending a class.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	300	2013

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There is a need for continuing education to enhance the lives of Montana citizens. The economic down turn has increased the desire in many folks to learn new skills /things they need to retool. They feel an urgency to be as prepared as possible for the uncertain job market. Additionally, many of the adult education classes help keep people stimulated by learning new skills and information they can put to use in their home or business environments.

What has been done

Adult Education classes have been offered in 9 communities across the state. Topics include computer classes (Excel, Quicken, PowerPoint, etc), leadership training, Master Gardener, How To Sell At a Farmers Market, Handheld GPS use, critical thinking, conflict resolution, cooking/canning and gardening in a raised bed to mention a few. Some of the classes are conducted over several months, while others are one time only offerings.

Results

Of the 10 people who took the How To Sell At A Farmers Market class, 3 actually sold goods at the market. One community formed a community foundation to provide a source of funds for community projects like developing a map for tourists of hiking trails in the near by badlands which was done in 2010. Six out of 17 students built a raised garden bed to grow their own produce. Six Master Gardener students assisted in building a new greenhouse for the Shelby elementary School, promoting the local Farmers Market and assisting at the Shelby community garden. Participants in two Excel classes learned to create and manipulate spreadsheets and graphs; 85% of participants were sponsored by their employer or were small business owners. Because of Extension programs on Mountain Pine Beetle, 40 people chose not to apply protective measures on trees that were not hosts to the beetle thus saving \$1200.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

Outcome #4

1. Outcome Measures

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. Number of communities conducting Study Circles and Leadership Plenty activities and involve people new to the community problem solving. Number of people trained as facilitators for the Study Circle and

Leadership Plenty process and are able to assist community groups. Number of people who develop or enhance their leadership skills and are able to apply those newly acquired skills and techniques

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	850	7240

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Many Montana communities have a high percentage of people living below the poverty line. These areas have a slow economy offering few work opportunities. Additionally, these small rural communities are experiencing a shift in their populations. It is hard to tell which came first, the decline of a healthy economy due to people leaving or if people began leaving because of a lack of opportunity. Twenty-three communities have determined the Horizons Program will assist with the revitalization of their area. It is a program aimed at reducing poverty in small rural and reservation communities with populations of less than 5000 and a poverty rate of 10% or greater.

What has been done

More than 7240 people participated in sessions at schools assemblies, special meetings and visioning rallies. Over 1600 people participated in community conversations to discuss poverty, with several hundred community members receiving training to be facilitators. Action forums committed to specific projects drew more than 2250 local residents who took specific steps to reduce poverty in their towns. Leadership trainings attracted 961 residents.

Results

Of the people participating in community conversations about poverty, 87.3% report they increased their knowledge of poverty in their community and those who attended the action forums took specific steps to reduce poverty in their towns. Those who attended the leadership training opportunities report the training enhanced their effectiveness in the community, 74% said they now have a greater awareness of their strengths within the community, and 94.1% report the training increased their leadership skills. Communities have leveraged \$2.3 million in additional grants, donations and in-kind contributions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and

805 Communities
Community Institutions, Health, and Social Services

Outcome #5

1. Outcome Measures

RENEWABLE/ALTERNATIVE ENERGY: Number of communities/cities making decisions about revenue generation with wind based on MSU Extension model. Number of people making decisions about the use of bio-fuels and other alternative energy opportunities.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	350	708

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Essential to the sustainability of agricultural operations and the energy economy is agricultural producer knowledge of energy issues. Energy issues are relevant to sustainability of agricultural lands in three significant ways: energy efficiency directly impacts profitability, producers have capacity to generate energy through biofuels, biomass, or small on-farm generation such as wind, solar, geothermal, microhydroelectric and methane digestion, and producers are being asked to lease their land or provide easements for large scale energy development/storage projects such as wind, transmission, storage for geological sequestration of carbon.

What has been done

This year has been focused on planning and material development. Funding was not secured for this work in earnest until October 2010. Evaluations of participants using pre-post survey models indicated knowledge gain following trainings on renewable energy technologies. Training opportunities were provided in counties across the state with 708 producers/county commissioners and others attending. In addition, new web-based materials were produced and four new MontGuides were developed to increase access to information.

Results

After attending Extension programs, some producers decided not to invest in renewable energy at this time after learning more about methods for evaluating economic return. Landowners in central MT indicated the training influenced their negotiations with commercial wind energy developers; some said they opted not to sign a lease while others decided to wait and negotiate additional details that would protect their land prior to signing. Leadership MT participants and community leaders from the lending industry indicated they would push for public policies to

better protect landowners in the process of overhead powerline and commercial wind development. Several pieces of legislation have been drafted for the 2011 legislative session.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
801	Individual and Family Resource Management
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #6

1. Outcome Measures

CITIZEN LEADERSHIP AND GOOD GOVERNANCE: Number of boards, councils and committees being successful with assigned responsibilities/authorities.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	400	2200

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Serving on public boards, county or municipal, is a critical component of good governance. Yet, many board members are ill-informed and unprepared for the challenges and responsibilities of board membership. Boards and the governing authorities that supervise them are vulnerable to bad press, poor public image and even litigation if statutory requirements or social norms are not met. There are hundreds of boards, both advisory and administrative, involving thousands of people who participate on or interact with the boards. The need for coordinated training of board members/ interested citizens is critical to their success and to the perception of good governance. There is no entity in the state that coordinates board trainings at this time.

What has been done

Workshops/Webinars for public officials were conducted for those serving on county and municipal boards but especially targeting County Commissioners and County Clerks, Treasurers and Finance Officers. The trainings reached board members all 56 Montana counties. The objectives of these trainings were to describe and clarify the complex issues confronting boards and board membership. Topics include: Understanding Montana Statutes, Effective Meeting Techniques, Conflict management, and Leadership using the SOAR (Strengths, Opportunities,

Aspirations, Results) technique.

Results

An on-line survey was conducted several months after participant completion of the program with these results: (Likert Scale Scores with 5=Strongly Agree, 1=Strongly Disagree with (%) Mean Standard Deviation). I have a better understanding of: Open Meetings Law =94.43.40.61, Code of Ethics= 88.64.30.68, liability issues for board members=85.74.20.63, what constitutes nepotism=80.04.20.72, how to use motions in a meeting=62-83-80-72. Our board is implementing or following adopted polices and rules of procedure such as bylaws: 55.93.60.74; We are now using parliamentary procedure such as Roberts Rules of Order: 45.73.60.66; I think about how to address conflict at a board meeting more constructively: 74.34.00.76; Out board minutes are taken more effectively: 51.43.60.78; Our board meetings are more efficient:48.63.60.70.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #7

1. Outcome Measures

COMMUNITY DEVELOPMENT WITH TRIBAL POPULATIONS: Number of tribal members involved in community activities, including health issues.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	450

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Tribal populations exceed state averages in numerous social indicators including mortality, drug use, unemployment and literacy. Conducting programs with tribal populations is a critical aspect of CD programs but previous efforts have had mixed success for several reasons such as a lack of time or long-term commitment, poor understanding of cultural implications or decreasing interest from partnerships with tribal community members. Cultivating partnerships with tribal

populations requires commitment and understanding of the factors that influence the process and outcome of any CD program, but if given adequate planning, much success can follow.

What has been done

Starting with issues related to health, a survey was conducted on the Crow reservation. Sixty four men participated in the survey. The results of this survey will help direct programming for the reservation.

Results

Results from the survey include: Number of general healthy exams I have received in the last 5 years: 0=32.4%, 1=25.2%, 2=14.4%, 3=10.8%, 4=10.8%, 5=36%; I am nervous about getting health screenings: No=53.1%, Do not know=4.2%, Yes=42.7%; I have had at least 1 screening for prostate cancer in the last 5 years: No=46.9%, Do not know=6.1%, Yes=47%; My risk for being diagnosed with prostate cancer in my lifetime is very low: No=10.2%, Do not know=65.3%, Yes=24.5%; My risk of prostate cancer increases if an immediate family member has been diagnosed: No=28.6%, Do not know=21.4%, Yes=50%; Information about prostate cancer is easy to obtain in my community: No=31.6%, do not know=43.8%, Yes=24.6%; I would learn more about prostate cancer if the information was readily available: No=8.3%, do not know=4.2%, Yes=87.5%.

4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

V(H). Planned Program (External Factors)

External factors which affected 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.)

Brief Explanation

{No Data Entered}

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

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Climate Change - Natural Resources and Environment

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	10%			
136	Conservation of Biological Diversity	10%			
213	Weeds Affecting Plants	20%			
216	Integrated Pest Management Systems	10%			
605	Natural Resource and Environmental Economics	20%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	0.0	0.0
Actual	3.3	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
78740	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
50953	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct workshops that will address specific topics such as forest stewardship and controlling pests for Extension professionals and clientele
- Provide training so people will be able to calibrate spray equipment and making management plans
- Work with the media to educate the public on natural resource topics
- Partner with local associations, agencies and organizations with common interests and goals
- Prepare MontGuides (fact sheets) on related topics
- Conduct tours and demonstrations when that is an appropriate method for teaching the topic
- Conduct workshops on water quality and safety

2. Brief description of the target audience

- Private Forest Land Owners
- Graduates of the Forest Stewardship Program
- County Weed Boards
- Farmers, ranchers and ag producers
- Private Land Owners
- Producers who operate Animal Feed Operations
- Professional loggers and foresters

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	5694	7000	170	120

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	4	0	4

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Forestry: Number of private forest owners who attend one/two workshops so they will 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 attendees with knowledge or sources of assistance necessary to implement their forest stewardship plans.

Year	Actual
2010	221

Output #2

Output Measure

- Small Acreage Lands: Number of one-on-one consultation and group workshops for small acreage land owners on pest control, weed management and other topics. Number of people who participate in Field Days and demonstration opportunities for land owners to observe techniques and best practices. Number of subscribers to Big Sky Small Acres Publication.

Year	Actual
2010	473

Output #3

Output Measure

- Environmentally Sensitive Management Systems: Provide one-on-one assistance for developing management plans. (Forestry, Animal Feeding Operations, etc.) Number of consultations. 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, MontGuides publications, and field days.

Year	Actual
2010	4500

Output #4

Output Measure

- WATER QUALITY: Number of people starting a file to track water quality Number of people attending Well Educated program To guide private well owners through the process of testing their water quality complete with materials to help interpret results and insight on ways to help protect ground water resources. To educate land owners and the public about the effects and impacts of Coal Bed Methane Development using resources such as the documentary Prairies & Pipelines: Issues in Coal Bed Methane Development, MontGuides, news articles and educational forums

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Year	Actual
2010	500

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Forestry: Participants will learn the necessary steps for selling timber and what resources are available to them for assistance. Attendees will receive information they can use to meet their individual forest stewardship objectives. Landowners will develop a plan and implement activities that will enhance the sustainability of their forests. Landowners will implement activities for their individual stewardship objectives Montana's private landowners will be managing their forests to meet their individual stewardship objectives and so the forests lands continue to provide environmental, economic and social benefits to Montana citizens.
2	Small Acreages: Producers and small acreage landowners will become 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 chemical appropriately. Producers will learn to use the GPS in locating weed or other problem areas.
3	Environmentally Sensitive Management Systems: Producers will understand the current rules and regulations relative to 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. Producers will learn to identify and manage their particular IPM issue or natural resource concern. Landowners will implement best management practices in addressing weed issues. Number of producers/small landowners who have adopted weed, crop, pest and forage management strategies. Local landowners will become more profitable while protecting the environment Producers/Landowners will adopt practices outlined in their CNMP plans. (applies to other planning efforts) Producers/landowners will adopt practices that will address their specific IPM problem. All operations that develop and implement a CNMP 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.
4	Water Quality: Participants will learn the importance of and steps to do well testing. Percent of forage producers/participants who learn proper timing and implementation of control techniques and methods appropriate to their operations. Number of wells tested and recommendations followed as a result. Distribution of information from water projects, such as Water Monitoring Activities, Well and Septic DVD and Prairie and Pipelines: Issues in Coal Bed Methane Development as well as information retrieved from the accompanying mail in survey.
5	RENEWABLE ENERGY: Number of people attending educational opportunities on alternative/renewable energy sources.

Outcome #1

1. Outcome Measures

Forestry: Participants will learn the necessary steps for selling timber and what resources are available to them for assistance. Attendees will receive information they can use to meet their individual forest stewardship objectives. Landowners will develop a plan and implement activities that will enhance the sustainability of their forests. Landowners will implement activities for their individual stewardship objectives Montana's private landowners will be managing their forests to meet their individual stewardship objectives and so the forests lands continue to provide environmental, economic and social benefits to Montana citizens.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	350	221

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

National statistics show that all family forested lands are under tremendous influences that would change the role they play with respect to providing wildlife habitat, wood fiber, clean water, recreational opportunities and aesthetic landscape appeal. A summary of the factors that are contributing to these changes are: urban areas are expanding into outlying forests, a large percentage of forest landowners are aging, sustainable forest management certification is becoming a required process in order for forest landowners to sell wood, climate changes and the associated insect, disease and wildfire perturbations.

What has been done

Montana Forest Stewardship program helps non-industrial private forest landowners develop forest management plans. Landowners are taught basic concepts of forest ecology, inventory, silviculture and management followed by landowners themselves developing management plans for their properties with the guidance of a professional forestry/natural resources teaching team. Approximately 28% of Montana family owned forestland has been impacted by this program. Additionally, professional loggers have graduated from the adapted Forest Stewardship Class for Loggers.

Results

A survey completed by landowners following the Forest Stewardship classes indicates 80% of participants have more confidence in making management decisions such as when/if to sell their timber, whether or not to graze their forest lands, whether or not to apply for cost share funds.

Eleven Forest Stewardship Graduates (1992-2004) were visited in 2010 to determine the effectiveness of the program. All still had their original plans and most had completed or are continuing management to achieve their goals. Half have modified their plans as their management has progressed or the situation of their forest has changed. Management completed included a total of 1,487 acres of timber harvest and salvage treatments, 779 acres of pre commercial thinning, 50 acres of tree planting, 1,204 acres of weed control, 250 of wildlife habitat improvement, 200 acres of fire hazard reduction and defensible space, several miles of road maintenance, and 1,250 acres of grazing.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
123	Management and Sustainability of Forest Resources
605	Natural Resource and Environmental Economics

Outcome #2

1. Outcome Measures

Small Acreages: Producers and small acreage landowners will become 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 chemical appropriately. Producers will learn to use the GPS in locating weed or other problem areas.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	400	473

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The 2007 Census of Agriculture determined that small farms account for 91% of all US farms. A small farm has less than \$250,000 in agricultural sales annually, but operators of small farms with sales of less than \$10,000 annually, typically work off the farm for their main income. Many of the people involved with small farming/acreages lack knowledge and skills to manage land while preserving the natural resources. Soil erosion, overgrazing, water contamination/waste, decreased/fragmented wildlife habitat, noxious weed infestations, poor domesticated animal health, air quality issues, pesticide overuse, riparian area issues are some of the problems that

can result.

What has been done

Workshops/classes/individual consultations are conducted for people who are involved with small acreages. Topics of discussion range from range management and weed control to animal health and air quality. The people involved with small acreage farming appreciate the opportunity to obtain materials (electronic or printed) to help them address issues they face. The Extension Service collaborates with other agencies and organizations to publish the Rural Living in Montana: Big Sky Small Acres magazine which has a distribution of over 200 readers. Flyer/pamphlets/circulars (MontGuides) address single topic issues and are a good resource to those who live on small acreages.

Results

Several counties in Montana have small acreage resource assistance programs that help small acreage landowners with issues related to their properties. For example, in one county a resource technician was hired to provide small acreage education, conduct site visits and provide management recommendations. The technician made 80 site visits during the summer months and prepared a summary report for the landowner following each visit. To date, more than 80 site visits with over 90 different landowners have been done, 5 subdivision Homeowner Associations had consultations which reached over 200 landowners, recommendations were made for management of 1400+ acres, and phone and in-office consultations provided information for an additional 85 landowners. For those who live in forested areas, hazardous fuels reduction information was discussed.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
136	Conservation of Biological Diversity
605	Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

Environmentally Sensitive Management Systems: Producers will understand the current rules and regulations relative to 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. Producers will learn to identify and manage their particular IPM issue or natural resource concern. Landowners will implement best management practices in addressing weed issues. Number of producers/small landowners who have adopted weed, crop, pest and forage management strategies. Local landowners will become more profitable while protecting the environment Producers/Landowners will adopt practices outlined in their CNMP plans. (applies to other planning efforts) Producers/landowners will adopt practices that will address their specific IPM problem. All operations that develop and implement a CNMP 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. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	500	4500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

During 2010, pesticide safety education programs will be highlighted in this program area. These programs focus on regulations for pesticide use for private applicators including insecticide, fungicide, rodenticide, and herbicide. Without proper handling of these chemicals, human and environment issues can surface to be sizeable in scope. Private applicator certification is necessary for individuals to be able to apply these chemicals.

What has been done

A minimum requirement for certification, a private applicator must show he possesses the practical knowledge of the pest problems and pest control practices associated with his operation; proper storage, use, handling and disposal of the pesticides and containers; and his related legal responsibility. The pesticide safety program ensures that all local pesticide applicator training coordinators have the tools necessary to train applicators to meet these requirements. Extension personnel update manuals, send out critical updates, write pesticide news bulletins for applicators, and stay current on the latest mandated laws and training materials which in turn are provided to private applicators.

Results

The pesticide education program conducted pesticide safety presentations which targeted tribal applicators. Four pesticide education programs were conducted for over 150 tribal members of the Flathead Reservation, 3 pesticide program target 50 tribal members of the Fr. Peck Indian Reservation. One hundred eighty programs were conducted during 2010 targeting over 4500 applicators with topics including pesticide safety, environmental concerns, IPM, calibration, private applicator license, pesticide laws, and reading the pesticide product label. Surveys indicate over 80% of the applicators learned new perspectives which will assist them in protecting themselves, their families, or the environment from pesticide misuse. Fifty-five of the participants confirmed they would change their behavior patterns as a direct result of pesticide safety/environmental concern presentations.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
216	Integrated Pest Management Systems
605	Natural Resource and Environmental Economics

Outcome #4

1. Outcome Measures

Water Quality: Participants will learn the importance of and steps to do well testing. Percent of forage producers/participants who learn proper timing and implementation of control techniques and methods appropriate to their operations. Number of wells tested and recommendations followed as a result. Distribution of information from water projects, such as Water Monitoring Activities, Well and Septic DVD and Prairie and Pipelines: Issues in Coal Bed Methane Development as well as information retrieved from the accompanying mail in survey.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	350	500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In Montana, there is currently no effort to coordinate ground water protection and stewardship. Private wells are a large part of the concerns related to the lack of protection and monitoring. There is a high percentage of the population living in rural areas making well and septic issues a priority across the state. Additionally, water quality and quantity have been identified as priorities through a needs assessment done by Tribal Colleges. Specifically, water science education capacity building is listed at the top of the needs assessment list however, the ability of the faculty to teach the courses is lacking.

What has been done

The Well Educated program is being delivered in 32 counties across the state and has reached over 500 households. The program empowers private well owners to monitor, assess, protect and treat the quality of their drinking water. It provided kits that include sample bottles, a parameter cost sheet, and sampling instructions for conducting sampling. Analysis is conducted by Energy Lab with results being mailed to well owners that include interpretation materials, parameter fact sheets and an educational DVD. A teaching package of 25 lessons with instructor notes, assignments, supplemental reading resource guides, tests and videos was developed for use by the tribal colleges.

Results

As a result of the Well Educated Program, people are starting well and septic files, testing water quality, identifying issues with their water systems and addressing problems. Mail evaluations revealed approximately 22% of the participants identified a potential problem with their well or

septic system and 78% said they increased their knowledge about well and septic systems as a result of the program. The Tribal College teaching package was introduced to 20 educators from tribal institutions from 9 states. 94% of the participants said the teaching package increased their capacity to teach water quality and 82% said they used the package to teach water quality at their institutions; 88% of tribal college faculty said that before watching the film on The Clean Water Act In Indian Country (one of the lessons in the package), they did not have a good understanding of how the Clean Water Act is administered in Indian Country; 100% said the video helps prepare students to explore water quality monitoring and management on their reservations.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
136	Conservation of Biological Diversity

Outcome #5

1. Outcome Measures

RENEWABLE ENERGY: Number of people attending educational opportunities on alternative/renewable energy sources.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	248

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Energy is a sizable input cost for agricultural producers and a significant expense for nearly all Montanans. 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 in the state. Resources developed in other parts of the country may not be accurate for Montana. To meet this need educational materials related to biofuels have been developed and presentations have been provided across the state.

What has been done

Extension personnel have prepared materials (electronic/printed) specific to Montana that discuss alternative energy opportunities. These include biofuels, wind, solar and so forth. Work has been

done with the Fort Peck Community College on the Ft. Peck Indian Reservation, to address energy and economic issues. Workshops and classes have been conducted across the state to provide information to landowners and others about alternative energy sources as a way to help them make energy related decisions.

Results

Based on a participant polling done during the workshops, 66% of the participants indicated their interest in biodiesel declined when they learned that it has historically been priced higher than petroleum diesel. Based on conversations with biodiesel workshop participants (immediately following the workshop), most decided that biodiesel would not benefit their operation. The number of participants who did not change their fuel buying habits was increased due to the biodiesel workshops. One audience member reported that for the first time they were able to understand and evaluate the economics and policy implications of various biodiesel proposals and opportunities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

V(H). Planned Program (External Factors)

External factors which affected 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.)

Brief Explanation

{No Data Entered}

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

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Food Safety

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	25%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	75%			
	Total	100%			

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Actual	1.8	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
39948	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
64665	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct train the trainer workshops
 Conduct workshops
 Facilitate meetings
 Develop local and state partnerships with agencies and businesses
 Workshops aimed at meeting beef quality assurance standards, production and marketing goals

2. Brief description of the target audience

Restaurant and other food service managers/employees
 Volunteers at food service operations
 Adults engaging in home food preservation
 Producers of animals for human consumption

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2570	8000	2578	4589

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

Year: 2010
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	3	0	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- **FOOD SAFETY:** Provide 3 train the trainer sessions for County Agents so they can conduct 25 food safety education for audiences such as county sanitarians, school food service personnel, volunteers, food banks and so forth. Provide training and updates to county extension agents so they can implement County based programs.

Year	Actual
2010	670

Output #2

Output Measure

- FOOD PRESERVATION -- Provide training for County agents so they can conduct workshops for people wanting to preserve their own foods safely. Produce/distribute written materials describing equipment, skills and safe techniques for home canning. Test pressure cooker gauges so home canners can be assured they are canning foods safely.

Year	Actual
2010	500

Output #3

Output Measure

- BEEF QUALITY ASSURANCE: Number of people attending beef quality assurance, production and marketing programs. Number of classes, demonstrations and tours provided. Number of people becoming BQA certified. Number of people participating on interactive video program and hits on the web site.

Year	Actual
2010	1400

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	FOOD SAFETY: The participants will learn about or improve safe food handling, specifically facts and skills related to the basics of safe food handling: controlling time and temperature when handling food, ensuring proper personal hygiene, preventing cross-contamination, proper cleaning and sanitizing.
2	FOOD PRESERVATION: Number of people practicing safe food preservation techniques and using appropriate and tested equipment.
3	MONTANA BEEF QUALITY ASSURANCE AND BIOSECURITY EDUCATION

Outcome #1

1. Outcome Measures

FOOD SAFETY: The participants will learn about or improve safe food handling, specifically facts and skills related to the basics of safe food handling: controlling time and temperature when handling food, ensuring proper personal hygiene, preventing cross-contamination, proper cleaning and sanitizing.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	670

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Food borne illnesses impact 1 in 65 Montanans so food safety is of growing concern for the food service industry, public and private agencies. Food safety training ranges from basic safe food handling practices to understanding HACCP. The financial costs of food-borne illnesses are significant covering lost wages, health care and investigation. These losses have widespread implications in health care costs, productivity, and health and economic well-being of children, families and communities.

What has been done

Food safety training for food service employees covered the basics of safe food handling focusing on controlling time and temperature, ensuring personal hygiene, preventing cross-contamination, proper cleaning and sanitizing. Additional training included HACCP and the Serve Safe Food Protection Manager Certification Course designed to provide food-safe knowledge and skills to maintain a food-safe establishment, the impact of safety on the operation and the flow of food through the operation.

Results

Food safety courses (level 1 and 2) were given in 4 counties and 1 reservation. ServSafe classes were presented to 13 women at the Passages program connected with the correctional system; 95% of the participants (13) passed the certification test; 1 of the women has been released and is employed in the food service industry. FCS teachers taking the classes report they have incorporated the information in their curriculums and 3 of the teachers have started the Pro-Start class in their schools to train students in the Food Service Industry. Home Care participants reported they are better able to identify food safety concerns in client?s homes and provide accurate information for addressing issues. The Council on Aging reported significant positive

benefits when employees apply a set of consistent standards to address foods safety issues. (controlling time and temperature, ensuring person hygiene, preventing cross-contamination, proper cleaning and sanitizing, etc.)

4. Associated Knowledge Areas

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

Outcome #2

1. Outcome Measures

FOOD PRESERVATION: Number of people practicing safe food preservation techniques and using appropriate and tested equipment.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

A national survey conducted by the National Center for Home Food Processing and Preservation with funding from CSREES-USDA in 2000 revealed a high percentage of home food processors are using practices that put them at risk for foodborne illness and economic losses due to food spoilage. As a result of this initial study and recent updates to it, the need to provide programming for home food preservers is recognized. Additionally, difficult economic times have peaked interest in home food preservation. Montana has an abundance of nutritious seasonal, wild and homegrown foods that can be preserved for use during the up-coming year.

What has been done

Eleven counties and 2 reservations conducted workshops on food preservation. Three counties cooperated with their local libraries, hardware/grocery stores that sell canning supplies, Community Garden and Master Gardener programs to offer food preservation workshops and/or materials. Twenty eight pressure canner gauges were tested for accuracy. Written materials were made available on request.

Results

In county/reservation workshops, participants were asked to rate the programs, the average rating being 9 out of 10. Participants reported that after the workshops, they felt secure in canning foods at home safely. Of the 28 pressure canner gauges that were tested, 2 registered inaccurate and were replaced. The new gauges were tested before they were used for canning.

4. Associated Knowledge Areas

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

Outcome #3

1. Outcome Measures

MONTANA BEEF QUALITY ASSURANCE AND BIOSECURITY EDUCATION

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	1400

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Food Safety is a recognized part of beef cattle production and is addressed through the Beef Quality Assurance Program. Producers are looking for every opportunity to receive premium returns for their products and realize it is necessary to apply best practices to their operations. Producers on and off the reservations have worked to become BQA Certified as a valued added effort.

What has been done

Anyone working regularly with cattle (on ranch or feedlot) is encouraged to become BQA certified through hands-on, classroom-style and online training. Training at ranches using Twilight Training Seminars has been well received. The sessions emphasize hands-on demonstrations involving: proper handling/ application of pharmaceutical products, judicious treatment/handling of livestock and animal identification of recordkeeping. Group discussions that highlight individual treatment practices/regimes are compared and analyzed. Participants take the BQA exam as a group or individually. These sessions also reflect new information, new technologies and new regulations.

Results

Significant differences were found between BQA certified producers and non-BQA certified producers regarding ranch management. Results of two statewide surveys have shown that: more producers (86.1%) kept track of animal numbers and descriptions, 73.6% kept more cowherd records, 84% maintained more vaccination records, 84% kept records for more than two years, and 91.8% used plastic ear tags for animal identification. It appears BQA certification designation added \$1.56/cwt to steer calf prices and \$1.09/cwt to heifer calf prices. Producers are not only participating for their more profitable operations but for the certified trust it develops with consumers, stated one recent BQA program participant. BQA certification ensures, at least to some degree, that the consumer is receiving quality food products.

4. Associated Knowledge Areas

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

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

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

Evaluation Results

Key Items of Evaluation