

2011 Montana State University Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

As Vice President for External Relations and Director of Extension, it is my pleasure to present the 2011 Montana State University Annual Report. Through its network of 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 on campus. Following are program highlights offering a snap-shot of Extension's outreach capacity.

*Childhood Obesity, Nutrition and Healthy Lifestyles program areas focus on educating families on 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.

*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 in economically challenging times.

*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 was largely focused on youth education during 2011 helping young people grasp the importance of quality product for consumers consumption.

* Sustainable Energy education helps agriculture and home owners evaluate alternative energy

opportunities that might be appropriate for their respective situations. Understanding the potential of renewable and alternative energy must be a priority in order for Extension to meet this educational need.

While this report reflects only a 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. I am pleased to share these comments with you.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	40.7	0.0	0.0	0.0
Actual	32.8	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. The committee is composed of Jim DeBree (WY Director of Extension; retired) and is the senior member of the team with 8 years, Jim Johannes (MSU Extension Area Supervisor, Director of Programming and FRTEP; retired) who has 4 years and Dr. Charles Rust (MSU Director of Extension; retired) is in his second year with the group.

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

The Global Food Security and Hunger area includes the Ag Sustainability and Profitability programs. These programs are well done and address the needs of constituents involved in related business enterprises. More impact data would clarify any important results gained through these programs.

The Climate Change area involves those programs related to the states natural resources such as forests and water quality. Again, the impact of the work is not well documented so it is difficult to understand the results of the work.

Youth Development programs showing valuable results are achieved for youth and adults involved. The increase of 4-H enrollment on the Blackfeet Reservation speaks to the quality of the program. The Jr. Ag Loan program on 2 of the reservations is excellent, but could have stronger impact data.

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 is meeting identified needs.

Childhood Obesity, Nutrition and Healthy Lifestyle programs are targeted at achieving healthy eating and exercise habits. This is an important program area since adult and especially childhood obesity has been at epidemic levels for years and is receiving publicity related to long term problems. It would be beneficial to have better impact data to document program efforts.

Community and Economic Development programs provide education to local government including elected officials and citizen boards as well as leadership and community capacity building. Adult education and disaster preparedness are important factors for communities.

Sustainable Energy is an important topic for people across the state. The programs are just beginning to address needs faced by the agriculture and other communities. There are good results in the Estate Planning and Home Energy efforts.

Food Safety programs include education on the safe handling of food at the consumer and productions levels. The BQA program focused on youth education during the past year in 2011.

The Merit Review Committee comments indicate they believe there is ample evidence 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

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 being used in some program areas.

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 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

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
2574908	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	561169	0	0	0
Actual Matching	0	0	0	0
Actual All Other	1083000	0	0	0
Total Actual Expended	1644169	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, Hunger, Ag Sustainability and Profitability
4	Family Issues, Resources and Environments
5	Community and Economic Development
6	Climate Change - Natural Resources and Environment
7	Sustainable Energy
8	Food Safety

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Childhood Obesity, Nutrition and Healthy Lifestyles

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	45%			
724	Healthy Lifestyle	45%			
802	Human Development and Family Well-Being	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	2.6	0.0	0.0	0.0
Actual Paid Professional	1.8	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
11396	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
83604	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

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

2. 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
- Parents and youth living in rural areas

3. How was eXtension used?

At this time, eXtension is used by Extension professionals and clientele as a resource for specific information and educational materials. The Extension Nutrition Specialist was involved at the beginning of eXtension so understands the potential of the system and encourages people to use it.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	7218	12701	4875	900

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

Patent Applications Submitted

Year: 2011
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	2	0	2

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
2011	10084

Output #2

Output Measure

- Steps to a New You: Two train the trainer sessions for County Extension Agents who in turn will implement county Steps to a New You program. Conduct one 7-week program in each of the counties with trained Extension Agents to deliver Steps to a New You. Not reporting on this Output for this Annual Report

Output #3

Output Measure

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

Year	Actual
2011	724

Output #4

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. To track people who follow up with a physician or professional as a result of information gained at the health fair or similar activity.

Year	Actual
2011	7000

Output #5

Output Measure

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

Year	Actual
2011	44

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, whole grains) Increasing physical activity Food Safety practices Food resource management practices Food planning and preparation Number of youth increasing knowledge regarding the importance of: Eating a variety of foods Healthy eating Increased physical activity Food safety principles (hand washing) Number of adults: Improving the family diets by choosing/preparing healthier choices (more fruits/vegetable/whole grains). Improving food safety practices (storing and thawing foods properly) Improving food resource management practices (meal planning, shopping with list) Improving nutrition practices (reading food labels) Participants will: Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes. Increase their confidence in the ability to manage food resources as well as other resources.
2	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 life styles and prevent or reduce obesity. Number of children: Eating a variety of foods Improving practices of food preparation and food safety Select low cost nutritious foods
3	HEALTHY LIFESTYLES: As a result of having medical screenings at a health fair, participants will follow up with their physician or health professional. People will make better nutrition and food choices and engage in regular physical activity.
4	STRONG WOMEN: Participants will improve physical measurements (maintaining or lowering BMI) and reducing resting heart rate. Amount of increase in weight resistance over the course of the program as measured by specific exercises (bicep curl) and amount of weight lifted 2# increasing to 5#).
5	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.

Outcome #1

1. Outcome Measures

EFNEP/FSNP: Number of adults gaining awareness and knowledge regarding the importance of: Healthy eating (more fruits and vegetables, whole grains) Increasing physical activity Food Safety practices Food resource management practices Food planning and preparation Number of youth increasing knowledge regarding the importance of: Eating a variety of foods Healthy eating Increased physical activity Food safety principles (hand washing) Number of adults: Improving the family diets by choosing/preparing healthier choices (more fruits/vegetable/whole grains). Improving food safety practices (storing and thawing foods properly) Improving food resource management practices (meal planning, shopping with list) Improving nutrition practices (reading food labels) Participants will: Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes. Increase their confidence in the ability to manage food resources as well as other resources.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	10084

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 nutritional manner with the money, food stamps, or other food resources they have available. Almost 22% of all Montana children live in poverty and food security is a problem for many 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. Both children and adults are increasingly obese and overweight; in 2009, 22% of adults were obese and 39.2% overweight.

What has been done

The Expanded Food and Nutrition Program (EFNEP) and the Supplemental Nutrition Assistance Program (SNAP-Ed) are focused on improving nutrition and eating habits for limited resource families. Information is provided to families through individual and group meetings where participants learn to prepare healthy foods (snacks and meals), extend their food dollar through good shopping practices, manage their food dollar wisely and increase their physical activity. When necessary, individual consultation is provided.

Results

Through EFNEP, evaluations show adults/youth improved the family diets by choosing/preparing more fruits, vegetables and whole grains (54%); 34% improved food safety practices (storing and thawing foods properly); 45% improved food resource management practices (meal planning, shopping with list); 92% improved their diet by eating a variety of foods; 98% improved their practices in food preparation and safety. Through the SNAP-Ed program, findings indicate adult participants improved as follows: 57% eating more fruits and vegetables daily; 5% ate more whole grains; 55% planned meals more often; 42% compared prices at the grocery store. Findings for youth participating indicate that 47% eat a variety of fruits/vegetables and 48% eat at least one whole grain serving daily. Both EFNEP and SNAP-ED have data collected over a number of years that indicate program participants have healthier eating habits.

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 life styles and prevent or reduce obesity. Number of children: Eating a variety of foods Improving practices of food preparation and food safety Select low cost nutritious foods

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

HEALTHY LIFESTYLES: As a result of having medical screenings at a health fair, participants will follow up with their physician or health professional. People will make better nutrition and food choices and engage in regular physical activity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	7000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Chronic diseases are Montanas leading cause of death, illness and disability and account for approximately 70% of health related costs. Research shows that a healthy lifestyle can prevent or delay onset of these diseases. Healthy lifestyles include making good health choices and getting physically active and are the result of understanding and incorporating all aspects of well-being to include physical, emotional, economic, environmental and other. The cost and availability of routine screening tests is a deterrent to many low income Montanans.

What has been done

Nine counties conducted training for teachers and others on healthy mealtime and snack solutions and increasing physical activity and or promoted healthy lifestyles through newspapers, newsletters, agencies including WIC, and Community Education programs. Health Fairs in numerous locations provided informational booths, hands-on activities and demonstrations and low or no cost blood screens and bone-density tests. Leadership and collaboration with a network of community partners expanded the reach of Extensions work.

Results

Children and adults report increasing physical activity, drinking less soda, reading and better understanding food labels, losing weight, lowering blood sugars, lowering blood pressure, reducing cholesterol, consuming less fast food, increasing family meals, adding more fiber, whole grains, fruit and vegetables, selecting leaner meat options, adding strength training and aerobic exercise and getting regular health screenings. Health Fairs provided low or no cost blood screens and bone-density tests leading to significant cost savings and lives saved due to early detection. Because individuals tend to focus on appropriate behavior modifications when personalized testing is available, the health fairs lead to long-term lifestyle modifications. In addition, Health Fairs become much anticipated community events and contribute to the overall physical, emotional, economic and environmental aspects of an area. Awareness of need for healthy snack solutions in an after-school program that doubled in size in Sidney, led to the community raising more than \$1600 in cash and food donations for the program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being

Outcome #4

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	724

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

Lynn Paul, Food and Nutrition Specialist, was certified as an Ambassador, one of only 14 nationally focused on training others to provide Strong Women programs in their communities. Choteau created a Change Club and was the site of a 3-day workshop including more than 100 people on location and at two TeleHealth sites in Anaconda and Billings on how to mobilize a community to address a community-based nutrition issue. A class was provided to agents who might be interested in pursuing a Change Club. Strong Women sessions were conducted statewide.

Results

Women participating in the Strong Women sessions reported increased strength and flexibility, better nutrition and in some cases the ability to get off medications for high cholesterol or high blood pressure. Healthcare Professionals refer women to the program. Women indicated they had increased knowledge, confidence and attitude and were more active overall, more willing to try new things and more socially active thanks to the camaraderie with other participants. Twenty two agents were trained to offer Strong Women programs and Lynn Paul began promoting Strong Women Healthy Hearts Statewide to improve the health of rural Montana women

4. Associated Knowledge Areas

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

Outcome #5

1. Outcome Measures

4-HEALTH: Rural parents of 4-H 8-12 year olds will gain knowledge about healthy diets, physical activity and improved body image while enhancing their understanding, skills and potential roles as positive change agents for their pre-teen children. Rural 4-H families will have greater levels of knowledge related to nutrition, body image and physical activity. Parents will assist their pre-teens in making healthier choices and practicing healthier behaviors after participating in 4-Health programs. Rural families will have decreased rates of childhood obesity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	44

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 environment for their children.

What has been done

A pilot study was conducted, concluding in May of 2011. Six counties participated with 3 receiving intervention in 10 face-to-face interviews over the course of 8 months and 3 receiving Healthy Living information via mail only.

Results

Parents in the experimental groups had lower BMI, significantly improved their nutrition choices, rated their diet quality higher and reported improved confidence in making healthy eating and activity choices than those in the control groups. Overall the pilot study indicated that 4-Health is effective in helping parents adopt healthier choices in the areas of physical activity, food and nutrition, body image, and active parenting.

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

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

For each program, an evaluation (generally a pre-post survey) is designed during the planning stages. It is part of the training given agents who plan to deliver the programs at the county level. The evaluations focus is on decision making related to food selection, choice and consumption as well as weight control and physical activity to maintain good health.

Key Items of Evaluation

Childhood obesity was lifted up to be a more visible portion of this program in order to address the NIFA priority. Obesity, both adult and childhood, have been part of the efforts delivered through these programs for years. Key items for evaluation purposes include childhood obesity, healthy nutrition practices (selection and consumption), and decision making for good health.

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	10%			
801	Individual and Family Resource Management	5%			
802	Human Development and Family Well-Being	15%			
806	Youth Development	70%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	12.0	0.0	0.0	0.0
Actual Paid Professional	12.6	0.0	0.0	0.0
Actual Volunteer	19.2	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
325917	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
214882	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.

3. How was eXtension used?

Extension professionals and program participants (youth and adults) are encouraged to use the eXtension system as a resource for specific information related to their work and interests.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	13666	150	11530	12919

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

Patent Applications Submitted

Year: 2011
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	2	0	2

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.

Year	Actual
2011	23435

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 a majority of the counties will follow and adhere to established financial and audit guidelines. Teenage youth will exhibit leadership and communications skills within the 4-H program and at other times outside 4-H program.

Year	Actual
2011	1116

Output #3

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
2011	15

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 thought 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 initiative Youth involved in 4-H will make contributions to their communities, be less likely to ve 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. In agreement with results of the Tufts Study of Positive Youth Development, Montana 4-H youth will be more likely than other youth to show the highest positive youth development, more than twice as likely to contribute to their communities, show the lowest levels of depression, be 41% less likely to exhibit/problem behavior and have better grades and be more engaged in school and more likely to see themselves going to college.</p>
2	<p>LEADERSHIP/VOLUNTEER DEVELOPMENT Eighty percent (80%) of Extension agents attending professional development opportunities will increase knowledge in volunteer management. Sixty percent (60%) of the 4-H volunteers participating in trainings will learn the duties of an organizational leaders, project leader and other leadership positions within the program so 4-H clubs and activities will use positive youth development practices. Sixty percent (60%) of the county 4-H Councils will learn and use the established financial management and review guidelines for handling public money. Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills. Fifty percent (50%) of Extension professionals will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation. Fifty percent (50%) of volunteers attending trainings will adopt practices that support the 8 critical elements on 4-H education programs. Fifty percent (50%) of 4-H councils in Montana will adopt the financial management and review guidelines. Fifty percent (50%) of participating youth will apply developed practices of leadership. Agents and volunteers participating in professional development opportunities will provide a safe, positive environment for youth to gain life skills and meet developmental needs through participation in 4-H programs. Montana's will have a more accurate and positive impression of the 4-H Youth Development Program.</p>
3	<p>JUNIOR AGRICULTURE LOAN PROGRAM Youth will complete the finance and beef management trainings needed to complete the application. Youth making application to borrow money will use it for the purchase of livestock so they can start or expand their herd.</p>

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 thought 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 initiative Youth involved in 4-H will make contributions to their communities, be less likely to ve 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. In agreement with results of the Tufts Study of Positive Youth Development, Montana 4-H youth will be more likely than other youth to show the highest positive youth development, more than twice as likely to contribute to their communities, show the lowest levels of depression, be 41% less likely to exhibit/problem behavior and have better grades and be more engaged in school and more likely to see themselves going to college.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	23435

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

As Montana, the United States and the world face increasingly broad issues in an ever-changing and global world, youth must be better prepared to lead us into the future. Youth need strength in hard skills related to expanding career fields including agriculture, science, engineering and technology. In addition, they need soft skills in areas like communication, finances, public speaking, leadership and civics. Caring adults can be trained and matched with youth to create partnerships that increase the competence, connection, compassion and character necessary for all to become more successful.

What has been done

Montana 4-H uses the resources of Montana State University and the U.S. Department of Agriculture to create environments for positive youth development through experiential education,

learning-by-doing projects, club meetings, community service projects, afterschool programs, school enrichment, camps, conferences and other events and activities. 4-H directly contributes to the development of youth through programs in communication and public speaking, goal setting, leadership and decision-making. Popular 4-H projects include photography, swine/sheep/beef, shooting sports, food and nutrition, technology and engineering. MSU Extension actively recruits and trains caring adults to mentor youth.

Results

Youth in 25 counties demonstrated their public speaking and communications skills in a public setting with more than 80% expressing increased confidence and ability. Seventy-five percent of Montana 4-H youth reached the specific, measurable goals they set for themselves at the beginning of the year. The Montana 4-H Western Heritage curriculum book for leaders was completed in 2011, and the program spread to Missouri and Kansas. The Montana 4-H Shooting Sports Advisory Committee held 10 statewide training sessions that resulted in 183 new or recertified leaders. Five Texas 4-H Shooting Sports Program volunteers attended training through the Montana team and teams waiting to be trained include: Nebraska, Oklahoma, Louisiana, Alabama, Virginia, Vermont, Washington and Oregon. Blackfeet youth enrollment in 4-H expanded from 40 to 95 with over 30% over age 13. The youth, volunteers and staff planned, fundraised for and built improvements at their fairgrounds including a kitchen, shower area and additional stalls.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
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 (60%) of the 4-H volunteers participating in trainings will learn the duties of an organizational leaders, project leader and other leadership positions within the program so 4-H clubs and activities will use positive youth development practices. Sixty percent (60%) of the county 4-H Councils will learn and use the established financial management and review guidelines for handling public money. Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills. Fifty percent (50%) of Extension professionals will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation. Fifty percent (50%) of volunteers attending trainings will adopt practices that support the 8 critical elements on 4-H education programs. Fifty percent (50%) of 4-H councils in Montana will adopt the financial management and review guidelines. Fifty percent (50%) of participating youth will apply developed practices of leadership. Agents and volunteers participating in professional development opportunities will provide a safe, positive environment for youth to gain life skills and meet developmental needs through participation in 4-H programs. Montana'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 Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1116

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

One on one discussion and group training of extension agents and volunteers took place at New Agent Orientation, Montana 4-H Agent Update, Extension Annual Conference, Ambassador Fall Training, District 4-H meetings and the Montana 4-H Leadership Forum connecting with 3800 total volunteers, including 438 youth. The FUNdamentals of Positive Youth Development-Leaders College, Montanas premier 4-H volunteer development training program was strongly utilized; focusing volunteers on improving youth development programs including program approaches, experiential learning model, critical elements of 4-H programs, and ages and stages of youth development. The 4-H Leadership project and the 4-H Ambassador program focused on leadership skills for youth.

Results

Seventy-six agents (79%) received training in Volunteer and Leadership Development and 3935 Leadership and Personal development projects were completed by youth. Adults completing the FUNdamentals Leaders College reported they would listen more to youth and delegate more responsibility. As a result of leader training and youth preparedness, youth leaders in one county were authorized to move Clover Bud Club from a weekday to Saturday morning and increased participation over 20%. Youth camp leaders planned and implemented activities including flag ceremonies, games and workshops. These activities were rated very high by campers who noted the high quality events and their increased knowledge and confidence as a result of attending camp. Fifty-four host families and 386 youth participated in 4-H exchange programs by traveling abroad or hosting a student. They reported increased ability to communicate effectively, learn to accept differences, make decisions and think critically. The Montana 4-H State Livestock Committee consisting of volunteers was created and guided development of a new Animal Quality Assurance curriculum now being used by 70% of Montana Counties.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
806	Youth Development

Outcome #3

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	15

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 viable business.

What has been done

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 seven reservations in the state currently have active Junior Ag Loan Programs. In Fort

Belknap, five applications were approved. On the Blackfeet reservation 10 loans are active bringing in \$628,283 for the purchase of 520 head of pregnant cows. Youth who graduate from the Junior program are finding great success in graduating to programs for mature producers

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)

Evaluation Results

On a statewide basis, the 4-H program has a 5 year evaluation plan focused on life skills. Each year a specific life skill is targeted for study using the life skills survey instrument. In 2011, communications was evaluated. This evaluation effort was started this year, so the data is not as complete as hoped for, but there was strong evidence that 4-H youth participating in communication activities felt more confidence in their ability to communicate.

The Leaders College evaluation noted that participants are more confident in their roles of working with youth. They feel more prepared and confident to teach because they understand the ages and stages of youth development more clearly.

Key Items of Evaluation

The focus for the 2011 life skills evaluation was communications. The focus for the 2012 life skills evaluation will be on goal setting.

The Leaders College will continue to measure understanding and use of the experiential learning model, critical elements of positive youth development programs, ages and stages of youth development.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Global Food Security, 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	10%			
216	Integrated Pest Management Systems	15%			
301	Reproductive Performance of Animals	10%			
307	Animal Management Systems	15%			
311	Animal Diseases	5%			
601	Economics of Agricultural Production and Farm Management	5%			
602	Business Management, Finance, and Taxation	5%			
603	Market Economics	5%			
604	Marketing and Distribution Practices	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	8.8	0.0	0.0	0.0
Actual Paid Professional	7.0	0.0	0.0	0.0
Actual Volunteer	6.1	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
101798	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
287436	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

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

2. 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)

3. How was eXtension used?

Extension professionals and clientele are encouraged to use the eXtension system as a resource for locating information and educational materials related to specific questions and interests.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2739	600	200	0

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

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	3	0	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2011	2404

Output #2

Output Measure

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

Year	Actual
------	--------

2011 2957

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
2011	2005

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. Number of producers attending workshops on fertilization, reading soil test reports, pest management programs and field records. Number of people accessing web site for information on fertilizer and soils. Number of people attending field days, crop guides, research plot sites, and research center summaries. Number of people using pulse crops in the cropping rotation.

Year	Actual
2011	2247

Output #5

Output Measure

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

Year	Actual
2011	843

Output #6

Output Measure

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

Year	Actual
2011	1712

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Montana Beef Network: Number of people learning about new practices in livestock production. The percent of increase in the value of calves sold at weaning. Number of people who made changes in the way records are kept on ranches. Percent of breeding programs that are meeting the needs of the consumer in terms of quality and yield grade of calves. Add value to weaned calves
2	Montana Sheep Institute: Number of people who learned about using sheep to control invasive plants. Increased number of grazing management programs initiated and monitoring programs developed. Increase in the number of Wool Pools organized and wool delivery and marketing of consolidated pools implemented. Number of producers who developed plans to implement technology in their own production unit. (Ribeye program) Acres of infested landscape controlled by small ruminant grazing. Wool from smaller growers prepared and marketed on the national/international market. Producers improving production efficiency of their sheep enterprise. Number of people involved with shearing their own or others sheep.
3	Weed Control: Producers participating in workshops will be able to identify weeds and know how to control them. People attending meetings will understand pesticide control and appropriate applicator training. People will be recertified for pesticide use.
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 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.
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.

Outcome #1

1. Outcome Measures

Montana Beef Network: Number of people learning about new practices in livestock production. The percent of increase in the value of calves sold at weaning. Number of people who made changes in the way records are kept on ranches. Percent of breeding programs that are meeting the needs of the consumer in terms of quality and yield grade of calves. Add value to weaned calves

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2404

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Extension beef program on a statewide basis is being redefined as program leadership changes. The Montana Beef Network which has been the umbrella for beef programming in the state has been moved to a private entity leaving the well established program direction in a state of flux. The statewide emphasis and impacts were not as evident during 2011 as this shift takes place, but the needs of ranchers/producers were addressed locally. These needs remain somewhat constant in the areas of management, marketing, nutrition, animal health, grazing and range management to state a few.

What has been done

Issues facing beef producers were addressed in Herdsmanship Schools, Regional Beef seminars, and County specific clinics and workshops. These types of delivery methods focused on a variety of topics including future trends in the industry, feeding and nutrition, storage of hay and its food value, management decisions, marketing decisions, grazing management and estate planning to mention a few. Written materials were available both in hard copy and electronically, web delivered newsletters are available and eXtension offers another source of information that is used by producers. Ranchers were encouraged to use whatever resources they need to stay current and up-to-date.

Results

This year, the impacts of Extension beef programs can be best described by individual benefits. In the area of marketing, 5 ranchers applied tools provided by Extension to gather information to help decide when and how to sell their calves. (Such as: Satellite auction, auction yard, pre-conditioned or sold and shipped off the cow) They used the anticipated market forces described in the classes along with the computer tools to secure a good price for their calves. They

indicated they are comfortable with their decisions because they fit the goals of their operations and received good prices for their stock. These same types of comments are heard across the state from producers who have attended these workshops or used Extension resources.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
307	Animal Management Systems
311	Animal Diseases
601	Economics of Agricultural Production and Farm Management
603	Market Economics

Outcome #2

1. Outcome Measures

Montana Sheep Institute: Number of people who learned about using sheep to control invasive plants. Increased number of grazing management programs initiated and monitoring programs developed. Increase in the number of Wool Pools organized and wool delivery and marketing of consolidated pools implemented. Number of producers who developed plans to implement technology in their own production unit. (Ribeye program) Acres of infested landscape controlled by small ruminant grazing. Wool from smaller growers prepared and marketed on the national/international market. Producers improving production efficiency of their sheep enterprise. Number of people involved with shearing their own or others sheep.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2957

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 and wool production, marketing and harvesting. One of the limiting factors is the shortage of shearers with just 38 individuals listed on the Montana Sheep Institute web page and 210,000 head of sheep reported in the state (by PBS documentary). 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

Montana Wool Harvesting School helped address the shortage of sheep shearers in the state by training individuals for wool harvesting and providing an opportunity for harvesting instructors to receive advanced training from a well recognized New Zealand program. In 2011, Montana worked with Wyoming Extension to offer additional shearing training to 31 folks in Greybull. The Sheep Institute held educational programs including Ram Marketing , Ultrasound School, Wool Marketing, Noxious Weed Grazing and many more.

Results

Twenty-two participants in Sheep Production Class reported utilizing information from the class to make fundamental changes to operation including changing culling strategies, improving health programs through rotating wormers and other animal health products, and utilizing market information to make decisions related to marketing decisions. One producer reported that he typically sold fat lambs but he decided to sell feeder lambs after receiving a market update at the sheep seminar, resulting in an increase in profits.

4. Associated Knowledge Areas

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

Outcome #3

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
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2011

2005

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, 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

Research needs and objectives have been developed by interaction with county agents, agency personnel and producers. Research is conducted and results are shared with clientele through a variety of workshops, presentations, press releases, publications, etc. Classes training and motivating invasive plant managers and volunteers to recognize and report invasive species have been effective for EDRR in Montana. The INVADERS database system allows users to create an online profile to submit weed-find records and receive next day alerts for invading species.

Results

Efforts to control leafy spurge in an area where Wibaux, Fallon and Prairie counties meet has resulted in a barrier zone consisting of 86,400 acres surrounding the weed management area being established to prevent spread of leafy spurge control beyond the main 2500 acre infestation. All 60 participants in the Marias Pass Spray Day reported that they could properly calibrate their weed spraying equipment to insure correct application. One producer announced that where they had sprayed weeds this year all the desirable vegetation survived, as opposed to prior years when equipment was not properly calibrated. One producer in Judith Basin was able to certify 500 acres Noxious Weed Seed Free Forage resulting in premium sale price to outfitters working in Yellowstone Park, an increase in profit of over \$6,000. Two hundred 3rd graders in Fergus County who attended Ag days were able to identify at least 3 new weeds. Ninety percent of Toole County Private Pesticide Applicator license holders renewed their licenses in 2011.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
307	Animal 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	Actual
2011	843

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montanans are avid gardeners and landscape enthusiasts who actively seek information to make their labors successful. Increasingly, people are seeking to be self-sufficient and able to grow their own products. Primary needs include yard and garden problem diagnosis followed by recommendation for pest control, diseases, climate considerations, pruning techniques, drip irrigation and soil health. Many people look to the Extension Service for unbiased, research based information regarding best practices because they can trust what they learn. More than 50% of calls to local Extension Offices during the growing season are related to consumer horticulture.

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

There are currently over 156 certified level 1 Master Gardeners (646 took class) who have completed the Extension program. These people serve as resources to others interested in basic gardening. There are 65 certified Level 2 Master Gardeners (158 took class) which allows them to answer questions and assist gardeners with more advanced issues. There are 10 certified Level 3 Master Gardeners (39 took class) who provide high level service in their communities. The Master Gardeners work at local farmer markets, community gardens, Extension Offices, local

food banks and more answering questions and helping people make successful gardening decisions. It is estimated that Master Gardeners in the state volunteered a minimum of 12,596 hours valued at over \$245,999. A local tribal member and gardening class participant (3 years ago) learned about composting and now composts 20 tons of fish per year, reducing fish waste, leaf waste, old straw, wood chips and lawn clippings in the local landfill.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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 Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2247

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, 5th in sugar beets and canola, 2nd in flax seed and safflower, 4th in alfalfa hay and 12th in potatoes. 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

Agents conduct workshops, one-on-one trainings, hands-on demonstrations and field tours and use Ag newsletters, MontGuides and traditional media to bring the latest technology and data to producers statewide. Direct mailings, phone, calls, advertisements, word-of-mouth, trade organizations and direct marketing efforts are used to inform as many producers as possible. Cooperative efforts with North Dakota and other state and federal agencies on comprehensive research and data collection expand the reach of MSU Extension.

Results

In Wibaux County, based on research trials, a majority of farmers are now raising some type of alternative crops such as field peas and lentils, and using the newer, higher yielding varieties of spring wheat and durum. In Dawson County, agents are researching use of high tunnel production systems and three producers have adopted the systems. In Glacier County, ten percent more producers are evaluating pulse crops and producers already using pulse crops are expanding acreage. 15% changed the timing of fertilizer application to minimize nutrient losses. Research and education in Liberty County led to a 60% increase in acreage devoted to pulse crops in 2011 compared to 2010. Several agents spent extensive time and energy combating epidemic strip rust infections. Research and education by Extension led to a net increase in income to wheat farmers of \$90 million. Sugarbeet growers are saving \$2.42 million each year by incorporating research-based IPM programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management
603	Market Economics

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 Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1712

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, the practice of not growing a crop but controlling weeds with either tillage or herbicide application on crop ground. This practice 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 of 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

As a result of Precision Ag workshops in Prairie County, 3 producers received direct assistance on interpreting their soil analysis helping to optimize fertilizer use and improve yields and two producers learned they did not need to purchase protein for their winter feed rotation. A producer in Teton County who took a grain marketing class received \$12,500 more for his grain than if he had not taken the class. In Stillwater County a producer who learned of alternative forage strategies through Extension increased his forage production average of less than ¼ of a ton per acre to over 1 ton/acre using barley hay. As a result of the Extension Winter Series, producers have a better understanding of the importance of grading and core testing wool. Of the 22,833 pounds of wool sold by the Montana Dakota Woolgrowers Association through the Eastern Montana Consolidated Wool Pool in 2011, 81% of the wool graded fine or choice (68% fine) leading to the producers receiving a record setting bid for the pool.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

603	Market Economics
604	Marketing and Distribution Practices

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.)
- Other (High cost of fuel, fertilizer)

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The beef program is undergoing significant change as there is a shift in leadership. The Montana Beef Network - the title under which most of the beef education was conducted and evaluated is being transitioned to a private entity. In 2011, there has been not evaluation done as this program makes the necessary changes.

The sheep program has been focusing effort in weed control, marketing, and production.

The weed program has focused on prevention and controlling noxious weeds. This includes calibrating weed spraying equipment correctly along with identification and locating weeds.

Decision making in crops and profitability go hand in hand. The impact and outcomes of the programs have been largely focused on crop rotation to maximize production, cost analysis related to fertilizer, machinery and other expenses, and weed control.

Key Items of Evaluation

Education delivered in this program area is focused on decisions related to production and profit.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

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 FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	2.8	0.0	0.0	0.0
Actual Paid Professional	2.0	0.0	0.0	0.0
Actual Volunteer	0.1	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
5618	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
129524	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.
 Conduct Seminars on Estate Planning Healthy Indoor Environments
 Revise MontGuides (fact sheets) to reflect the changes in state and federal laws related to estate planning.
 Develop publications on asthma awareness, lead-based paint and other home environment issues.

2. Brief description of the target audience

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

3. How was eXtension used?

Extension professionals and clientele are encouraged to use the eXtension system as a resource for information and educational materials.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	6946	24000	0	0

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

Patent Applications Submitted

Year: 2011
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	2	0	2

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2011	1344

Output #2

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
2011	417

Output #3

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
2011	1475

Output #4

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
2011	3601

Output #5

Output Measure

- Powerful Care Givers People who are giving care to a victim of chronic illness attend a six week Powerful Tools for Caregivers workshop. Ten new class leaders will be trained to be able to conduct the Powerful Tools for Caregivers workshops. Two county agents will reach Master Trainers in Powerful Tools for Caregivers programs.

Year	Actual
2011	61

Output #6

Output Measure

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

Year	Actual
2011	48

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Powerful Tools for Care Givers: An estimated 100 people responsible for giving care to someone with chronic illness will learn steps in planning to provide adequate support and care. Caregivers will have tools to assist them in self-care as they provide or manage care for a friend or loved one.
2	Grandparents Raising Grandchildren: Grandparents will become aware of services available to support them as they raise their grandchildren. Grandparents will use current parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren. Grandparents and their families will experience reduced stress and grandchildren will have a safe and nurturing environment to which to grow.
3	Home Energy Costs: Participants will apply common methods to save home energy to new or existing homes. Participants will use high performance, resource efficient building materials and construction techniques in remodeling and new construction. Participants will increase their purchase of Energy Star products and appliances resulting in an energy saving of at least 30% annually per appliance. Participants will experience an energy savings due to weatherizing and remodeling existing homes (13-65% energy savings per household).
4	Housing and Environmental Quality: Participants will learn about an environmental health concerns common to new and existing homes e.g., molds, water quality, lead-based paint, radon, etc. Homes will routinely be tested/assessed and mitigated for environmental health issues such as molds, radon, asbestos, drinking water, carbon monoxide
5	Parenting Piece by Piece: An estimated 100 participants will apply current parenting strategies. An estimated 100 participants will be able to prepare nutritious meals, plan for financial security and access services that can assist them be successful in parenting their children.
6	Estate Planning: An estimated 1000 people will make plans for the distribution of their property through estate planning.

Outcome #1

1. Outcome Measures

Powerful Tools for Care Givers: An estimated 100 people responsible for giving care to someone with chronic illness will learn steps in planning to provide adequate support and care. Caregivers will have tools to assist them in self-care as they provide or manage care for a friend or loved one.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	61

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The population of the state is aging with the fastest growing age group being those individuals over 85. Along with extended life expectancy comes a variety of chronic illnesses. One of these is Alzheimers with over 16,800 individuals diagnosed with the disease to date. Most older Montanans live on their own or with a spouse, yet they often require a certain level of care-giving. The people in the care giving roles can benefit from learning strategies that will make their efforts efficient and effective while maintaining their own health and well-being.

What has been done

This year, 61 individuals participated in 12 classes. They received 9.5 hours of information from the Powerful Tools curriculum including how to do self care so they can provide care either direct or managed to a loved one.

Results

Results obtained from the pretest-posttest administered to participants indicates several changes: Caregivers -- *feel confident in asking for help with the task they need for care-giving such as shopping, cooking, cleaning, and transportation; * understand that their emotions are a normal response to care-giving; *find ways to take care of their own health; *assert themselves with others to get their needs met; *take time for themselves without feeling guilty; *have confidence in their ability as a caregiver; *have an identity outside of being a caregiver; *do something to make themselves feel better when they feel discouraged; *find positive ways to cope with the stress of care-giving; *are more positive about their role as a caregiver; *can find care-giving resources; *make decisions related to care-giving.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #2

1. Outcome Measures

Grandparents Raising Grandchildren: Grandparents will become aware of services available to support them as they raise their grandchildren. Grandparents will use current parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren. Grandparents and their families will experience reduced stress and grandchildren will have a safe and nurturing environment to which to grow.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	417

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montana ranks ninth in the nation for Grandparents Raising Grandchildren. Grandparents are faced with this responsibility for reasons such as the death of a parent, involvement of social services due to child abuse or neglect, abandonment, teen pregnancy, issues rising from divorce, parental issues with alcohol/drugs, financial difficulties, illness, and military deployment. The common factor is that grandparents are called upon to parent their grandchildren due to a crisis or failure in the nuclear family. The emotional toll on grandparents is extensive in part due to today's child rearing philosophies which differ from their own experiences.

What has been done

More than 417 contacts were made with grandparents raising grandchildren with 170 of them participating in support groups. There is about a 50/50 split of white versus Native American grandparent caregivers who enrolled in the program. Over 100 grandparents and social service staff who work with grandparent caregivers attended two enhancement workshops. Three new grandparent support groups were formed. Nine communities received mini-grants to offer the parenting curriculum-Parenting the Second Time Around. Three additional grants were received to expand the program.

Results

Twenty-three grandparents completed writing their wills which protects their grandchildren's welfare. One support group has become active soliciting funding for the group to help cover activities and needs for the families. They have raised \$5,000 in donations and meals have been donated for the group meetings. One grandmother was successful in adopting her granddaughter. At least one group has become active in the state legislative process.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #3

1. Outcome Measures

Home Energy Costs: Participants will apply common methods to save home energy to new or existing homes. Participants will use high performance, resource efficient building materials and construction techniques in remodeling and new construction. Participants will increase their purchase of Energy Star products and appliances resulting in an energy saving of at least 30% annually per appliance. Participants will experience an energy savings due to weatherizing and remodeling existing homes (13-65% energy savings per household).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3601

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 as the cost of energy has increased by as much as 65%. With higher utility bills, consumers are requesting assistance for energy conservation and weatherization, seeking information on energy efficient construction, remodeling and purchasing EnergyStar appliances. By applying basic energy conserving principles, consumers can reduce their home utility cost by an average of 21%, about \$156.00 per year. Weatherization applied to older homes can save as much as 65%, about \$780 per year. In both cases the savings pay-back is typically 1-4 years; truly a good investment.

What has been done

Over the past year, 31 training programs were provided directly to 326 energy related contractors. These trainings included 3 educational efforts: Home Energy Conservation and Weatherization Methods and materials; EnergyStar Product Selection; and Energy Efficient Remodeling and New Construction. In addition to the trainings, many energy-related educational resources were available through publications and other media. The Montana Seniors Energy Project was a targeted delivery venue.

Results

As a result of these education efforts, weatherization of 2400 homes throughout Montana was documented, reducing home energy consumption by an average of 33% or an estimated \$345 per year per household. Indirectly, an approximate 24,000 Montana households received energy education using Extension publications and consumer education materials.

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 #4

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1475

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Consumers, real estate professionals, county health offices etc. report health effects related to home environmental issues. Radon levels in MT rank 3rd in the nation, asthma has increased, molds have forced homeowners out of their homes or homes to be destroyed. Asbestos in vermiculate insulation, drinking water contamination, improperly installed/maintained septic systems, carbon monoxide from faulty heating systems, and lead-based paint are also prevalent

in Montana homes. Reservation homes are 3 times the U.S. average for child related asthma, occupancy density rates lead to high moisture and mold problems, over use of wastewater is documented, risks of drinking water contamination and risks due to indoor smoking are noted.

What has been done

Topic folders containing instructional materials are available to the public including: Home Environmental Risk Calculator, Help Yourself to a Healthy Home, Well Maintenance, Septic System Maintenance, Indoor Air Quality Record Keeping, Asthma Awareness Brochure, Lead-based paint campaign publications, Kids Care about Clean Indoor Air for Teachers. Continuing education/certification training for realtors, home builders, housing authorities, home inspectors and county health departments using the list of publications as resources are conducted. The Home Environmental Risk Calculator is placed at public libraries, county fairs, home shows and other public events.

Results

As a result of this program, 453 Native American Homes were assessed for environmental risk; 293 contractors were certified to detect and work safe with lead-based paint in pre-1978 homes; 183 tested for radon; responses were given to 434 calls, emails and other inquiries related to floods, excessive moisture and molds; 32 professionals were provided a 16 hour training dealing with flood clean-up and molds; 26 contractors were certified to test and work safe with asbestos in homes; responses were made to 130 drinking water quality questions related to flooding; 46 contractors received training to detect and control carbon monoxide and other combustion gases related to home fossil-fuel appliances, furnaces and water heaters; 35 contractors received OSHA required respirator fit-testing.

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

Parenting Piece by Piece: An estimated 100 participants will apply current parenting strategies. An estimated 100 participants will be able to prepare nutritious meals, plan for financial security and access services that can assist them be successful in parenting their children.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The two-parent nuclear family structure is no longer the majority of families. More women today are experiencing incarceration. Teen Pregnancy has risen. More grandparents, aunts and uncles are being asked to care for relative children. Parents who are stressed or do not have good parenting skills are at risk of abuse and neglect of their children. Education on how to be a better parent can help those who have minimal parenting skills learn techniques to become more effective parents.

What has been done

Training of County Extension Agents, Head Start Staff and other interested professionals on using the curriculum has been conducted during the past year. The curriculum is designed for use with parents who are at risk of abuse or neglect or who have been mandated to take a parenting class. Twenty-five people have been trained to deliver the curriculum and classes are just beginning to be offered.

Results

Since classes are just getting started, impact data is limited. What little is available does show promise indicated by the following statements: One person utilized the curriculum with a high risk population in her parenting classes and was pleased with the initial outcomes. Additionally, one organization taught the class for 20 parents. One family started having sit-down meals as a family and there was evidence that dad was becoming more patient with the children. Another participant stated she realized the parents need to change their own behaviors before they can help the children manage their behaviors.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being

Outcome #6

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1344

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montanans are interested in the wise use and handling of their financial resources, especially as it relates to passing property of all types from one generation to another. Being informed on estate planning is the only way individuals/families can be sure their final wishes are realized. Statistics reveal that 70% of Montanans die without a will. The state legislature continues to change the intestate succession (dying without a will law) and contract laws that impact beneficiaries of real and personal property. Farmers/ranchers/owners of closely held businesses continue to be interested in inter-generational transfers.

What has been done

Workshops have been presented in 34 communities across the state reaching over 915 people. Over 1600 Montanans have purchased Estate Planning: the Basics packets that contain a variety of estate planning MontGuides. The estate planning Web site had over 2244 hits. Webinars on a variety of estate planning topics have been available on the Web. The interactive website and CD that illustrates how property passes under Montana law when a person dies without a written will had over 1710 hits. Over 300 CDs were mailed out bringing the total requests fulfilled to 1344.

Results

Data from participants responses immediately following the workshops reveal: only 10% had taken advantage of PODs and TODs before the session. 90% indicated they planned to establish PODs and TODs after the session; 75% learned Montana no longer had inheritance tax; 4% of participants could correctly identify how solely owned property would be distributed if the deceased had a surviving spouse and parents; 5% could correctly identify the amount grandchildren would receive if the grandparents passed away with one living child. Evaluations for the WEB and CD opportunities reveal that after learning about Montana laws; 38% discussed estate planning with their family; 37% drafted a will for the first time; 22% revised their current will. When asked who users intended to share information with: 58% said spouse/partner; 49% reported their children; 27% indicated other family members; 29% reported friends.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
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
- Public Policy changes
- Government Regulations

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The impacts and outcomes in this program area focus on how well families are coping with issues in their lives and their environments. The program targets education in estate planning, family relationships and living conditions. Pretest-posttest surveys are used to check progress as a result of education such as:

- being more prepared as a caregiver
- being more prepared to raise your grandchildren if you are a grandparent
- being more prepared to be a parent
- making decisions about energy costs
- taking steps toward planning for the distribution of their accumulated estates.

Key Items of Evaluation

Education delivered in this program is focused on three specific areas: estate planning, home environments, and family life.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

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	60%			
723	Hazards to Human Health and Safety	10%			
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 FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	5.2	0.0	0.0	0.0
Actual Paid Professional	4.4	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
48114	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
164902	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 entities, agencies, businesses/industry and organizations to implement goals and plans of action.

Partner with local adult education entities to identify class offerings.

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

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

2. Brief description of the target audience

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

3. How was eXtension used?

Extension professionals and clientele are encouraged to access eXtension system for answers to specific questions or concerns. At this point, the system is not widely used in this program area.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	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: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	2	0	2

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
2011	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.

Year	Actual
2011	896

Output #3

Output Measure

- EDEN (Extension Disaster Emergency Network): Number of workshops/presentations/activities focused on disaster mitigation. Number of responses from PSA's, web site, etc. for emergency service entities.

Year	Actual
2011	150

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
2011	922

Output #5

Output Measure

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

Year	Actual
2011	800

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	EDEN: The public will understand how they access local emergency services and take steps to prepare for a disaster. Reduction of accidents, loss of property and human life due to disasters.
2	COMMUNITY RESOURCE DEVELOPMENT: Community leaders, agency personnel, organization members and other citizens that will gain an understanding of the value of creating a community development/economic development plan. Community leaders, agency personnel, organization membership that will collaborate on economic development strategies. Communities 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 Participants will gain new knowledge leading them to try a new activity or making an informed decision as result of attending an adult education class. Participants will use a new skill, practice or technique as a result of attending a class.
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 recognize and own poverty as a community issue about which they can take action. Communities begin to recognize and own leadership as a community issue about which they can take action. Communities demonstrate an interest in poverty reduction and begin the process of learning to recruit and mobilize others. Communities are mobilized to create and adopt a shared vision for poverty reduction. Communities will directly engage people living in poverty in leadership training and action planning. Communities will define leadership for poverty reduction as collective, rather than individual actions. Communities will implement inclusive processes and decision-making methods. Leadership base of communities will mirror the demographics of their community. Communities have a commitment to poverty reduction. Communities will implement and sustain changes that contribute to poverty reduction in the community. Communities will be able to demonstrate progress toward reducing poverty. Communities will conduct Study Circles and Leadership Plenty activities and involve people new to the community problem solving. People trained as facilitators for the Study Circle and Leadership Plenty process are able to assist community groups. People who have developed or enhanced their leadership skills are able to apply those newly acquired skills and techniques.
5	CITIZEN LEADERSHIP AND GOOD GOVERNANCE: Number of people serving on boards, councils and/or committees who are prepared for the responsibilities/authorities of the entity. Number of boards, councils or committees that are successful in conducting the responsibilities/authorities of the group.

Outcome #1

1. Outcome Measures

EDEN: The public will understand how they access local emergency services and take steps to prepare for a disaster. Reduction of accidents, loss of property and human life due to disasters.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	150

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

All 50 states and three territories are represented on the Extension Disaster Education Network (EDEN). Extension staff is increasingly called upon to provide assistance to local residents who have been affected during an emergency. By working with other agencies and disciplines and across state lines; the Extension staff is better prepared to serve in time of need. Media training for public information officers was provided to help officials communicate effectively to the public during an emergency.

Results

In Choteau County local 4H youth assisted in an exercise in which 14 dogs and 22 cats were evacuated from the animal shelter to the fairgrounds. The exercise showed that adequate plans were in place should there be a real emergency. Twenty participants completed the Intermediate Incident Command System for Expanding Incidents Class helping the county to be eligible for federal grants. Because of extensive work with the Disaster and Emergency Service, Choteau County received \$27,000 in Homeland Security grant funding. Also in Choteau County the Public Alert Notification System (PANS) is routinely tested and protocols for 911 dispatchers are routinely refined. 4H clubs in the county have installed address markers for rural residents as both a community service project (emergency personnel can locate homes) and as a fundraiser.

4. Associated Knowledge Areas

KA Code	Knowledge Area
723	Hazards to Human Health and Safety

Outcome #2

1. Outcome Measures

COMMUNITY RESOURCE DEVELOPMENT: Community leaders, agency personnel, organization members and other citizens that will gain an understanding of the value of creating a community development/economic development plan. Community leaders, agency personnel, organization membership that will collaborate on economic development strategies. Communities 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	Actual
2011	5124

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Rural Montana communities are declining in population. Eastern Montana residents traditionally get less than 10% of their diet from regionally produced foods leaving residents in an unsustainable situation. Communities that are or have lost mining industry jobs must diversify and replace jobs. Communities with growing needs due to current mining activities need additional resources. Community and Economic development statewide are key needs to move Montana proactively into the future and Extension is well prepared to be a catalyst.

What has been done

Extensive efforts to develop local food systems throughout the Eastern Region are underway. Projects include a producer-owned agricultural marketing cooperative, a shared-use commercial kitchen, a farm-to-table restaurant and a culinary arts program for vocational training. Work is being done to help communities diversify their economies. The Community Business Matching model has been at work in Deer Lodge County since 2008.

Results

More than 13,600 residents gained knowledge of local foods and the MSU Extension program

through Voices of Montana radio program and the Thats Montana television program, while over 700 participants at various conventions and meetings learned about the programs through presentations. In Dawson County more than 1100 local residents participated in the local farmers markets and 35 residents were able to access foods necessary for their dietary needs that previously were not available. Seventeen entrepreneurs contacted the Farm-to-Table program about starting their own food-based businesses. Wibaux County special events including Appreciation Day, Ski Festival and County Fair brought thousands of people and tourism dollars to town. The new Fair Exhibit Building/Community Center is fully utilized and that is making Wibaux a more attractive place for visitors. Strong partnerships in Madison-Jefferson Counties are leading to expanded commercial space development and businesses participating in the Small Business Development efforts report increased use of social media and more concise, focused business/marketing plans to expand profitability.

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	896

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 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 people keep stimulated by learning new skills and information they can put to use in their home or business environments.

What has been done

Extension agents are heavily involved in adult education. Data from related programs is found under the Master Gardener Program, Food Safety and Food Preservation Programs, Weed Control, Crops, etc. Extensive adult education classes are conducted daily and statewide. In some communities specific needs including computer skills and budgeting are met via local extension offices.

Results

In Cascade County 40% of participants in the Job Service budgeting classes reported they had a better understanding of how to adjust their monthly budgets to address spending for non-monthly expenses. Eighty percent gained new skills in economizing and reducing their spending. FFA members learned key elements of weed control and were able to identify, control and/or eradicate weeds on their property. In Toole County residents learned Microsoft Excel in order to improve farm recordkeeping or make themselves better at their jobs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

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. Communities will conduct Study Circles and Leadership Plenty activities and involve people new to the community problem solving. People trained as facilitators for the Study Circle and Leadership Plenty process are able to assist community groups. People who have developed or enhanced their leadership skills are able to apply those newly acquired skills and techniques.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	922

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

Programs and outreach opportunities were offered to all 35 Horizons communities. MSU Extension increased its impact by hiring extension agents who understand community development and by providing continuing professional development for our agents working in rural communities. Six financial literacy classes were offered (67 participants), 3 webinars were recorded to provide information on women-owned businesses, evaluating business ideas and managing cash flow (523 individuals), sixteen workshops were offered to engage local policy makers on the future of their communities (332 individuals), and many more programs were completed.

Results

Several communities have completed their action plans and have re-grouped to plan for future steps. Each community is aligned with the North West Area Foundation pillars. Dr. Paul Lachapelle, Community Development Specialist, created a webinar series addressing specific community development needs as assessed through the program. The Local Government Center has honed resources based on the Horizon experience. The Community Resources Program of MSU Extension is prepared to continue working with established Local Community Foundations and to pursue additional community development grants. At least one grant has already been received and 85 individuals who received grant writing training are prepared to be successful in more grants. While the Horizons grant has officially ended, all these steps and more are in place to support the Horizons communities and others like them well into the future. Individual participants report that exposure to a wide array of resources, programs and people was effective in building capacity for the future.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

Outcome #5

1. Outcome Measures

CITIZEN LEADERSHIP AND GOOD GOVERNANCE: Number of people serving on boards, councils and/or committees who are prepared for the responsibilities/authorities of the entity. Number of boards, councils or committees that are successful in conducting the responsibilities/authorities of the group.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	800

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 other 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

Surveys indicate change is taking place as a result of these Extension programs. For example one county required ethics training and worked with Montana State University Extension to create a handbook for employees. The city's ethics policy is stronger than the states and is a priority. Participants noted 95% confidence level based on the training, knowledge and overall effectiveness of the class whether taken online or in person. The program can be transferred to

other communities.

4. Associated Knowledge Areas

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

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)

Evaluation Results

The Horizons program ended during 2011. It has an extensive evaluation that was designed as a part of program and was collected nationally. The surveys used showed if there was impact as a result of the education provided and in most cases, it was very positive.

The Citizen Leadership and Good Governance program has used survey instruments which have indicated the education is assisting policy makers and public officials in fulfilling their roles adequately.

The EDEN program is limited in size, but the impact of the program is evident by the changes in protocols and systems at the county level.

Community Resource Development is an on going process with incremental impacts to use as milestones.

The Adult Education programs are largely based on individual needs, so evaluations are focused on meeting those needs satisfactorily.

Key Items of Evaluation

The items in this program area are focused on community and individual needs that education can impact. The individual needs may differ from year to year, but the community resource development and leadership and governance concerns remain somewhat constant.

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	25%			
123	Management and Sustainability of Forest Resources	20%			
135	Aquatic and Terrestrial Wildlife	10%			
136	Conservation of Biological Diversity	10%			
605	Natural Resource and Environmental Economics	25%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	3.4	0.0	0.0	0.0
Actual Paid Professional	2.8	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
49829	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
79255	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.

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

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

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

Conduct workshops on water quality and quantity.

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

2. Brief description of the target audience

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

3. How was eXtension used?

One of MSU Extension specialists is a national coordinator of the rangeland community of practice (CoP) in eXtension. This brings first hand knowledge of the resource eXtension can and is to extension professionals and clientele. It is used by these people to obtain resource materials and information on specific issues or concerns they may have. eXtension is used in all natural resource areas in this way.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	7320	300	2444	150

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

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	7	0	7

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2011	2383

Output #2

Output Measure

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

Year	Actual
2011	552

Output #3

Output Measure

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

Year	Actual
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2011 175

Output #4

Output Measure

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

Year	Actual
2011	950

Output #5

Output Measure

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

Year	Actual
2011	3360

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

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

Outcome #1

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2383

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montana has nearly 80,000 family forest owners with 4.2 million acres of forested lands divided into more than 110,000 parcels. Native American Tribes own 800,000 acres, the state owns 800,000 acres and private industry owns 0.8 million acres which account for 85% of wood harvested even though they only represent 1/3 of the forested land base. Wood products industries have earned 1 billion dollars per year for the state over the past two decades and is an economic provider for jobs and local infrastructure. Additionally, housing development pressures on forested lands have increased as have challenges from a changing climate that enhances wildlife occurrence, forest pests and pathogens.

What has been done

Thirty-five programs were provided for private landowners, 7 conducted for natural resource professional service providers or policy/legislative bodies, and 6 programs for youth. These programs were designed to train landowners and professional service providers on how to implement natural resources practices for conservation and management of their resources, and to provide experiential learning opportunities for both youth and adults. Programs for natural resource service providers are designed to highlight any recent advances in policy, science and practical tools.

Results

Because of this program, 514 landowners gained proficiency in forest inventory, management plan development, and implementation of desired forest practices. Surveys show participant skills in advising and implementing best practices were up 44%; 128 youth learned skills related to forestry, wildlife, noxious weed management; 100 teachers learned how to use Project Learning

Tree curriculum in their classroom. Overall, these programs impacted some level of forest management on 142,366 acres which is significant since the bark beetle outbreak impacted more than 3,500,000 acres of public/private lands. Surveys indicated over half of workshop participants implemented new management actions on their properties with reasonable success; private forests are well inventoried, have certifiable forest management plans and have implemented practices for reduced wildfire hazard, noxious/exotic weed invasion, enhanced wildlife habitat and are working to create forested stands that are resistant to bark beetle attacks.

4. Associated Knowledge Areas

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	552

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There are a growing number of families living on small acreages ranging from 5 to 30 acres. The income for most of these families is not dependent on the acreage, but they enjoy having horses, chickens, maybe a sheep or beef animal. In general, their knowledge about land stewardship is limited, so information about weed control, pasture management, water quality and quantity, forest management among other issues are needed. Extension Education has been helpful for this population in making decisions about living on their acreage.

What has been done

Extension has learned that the population living on small acreages tends to receive information via publication or web site. There are still workshops and individual consultations but on a limited basis. One of the most successful efforts for MSU Extension has been the publication of the Big Sky Small Acres magazine. During the past year, articles included weed control of Eurasian Watermilfoil, reseeding pastures, grasses of the northern plains, poisonous plants effecting horses, successful tree planting, growing native plants, being a good neighbor, livestock brands and travel permits, erosion, groundwater quality from private wells, livestock fence laws, and stream permitting.

Results

Feedback from small acreage owners indicates they are using the information gained from Extension educational efforts, including the magazine. In general, they are willing to take steps to manage their property in a positive manner. Substantial impact information is limited at this time, but observations by Extension faculty have revealed many of the small acreage landowners are making appropriate decisions about their property.

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 for animal feeding operations and how to evaluate their own operation. This also applies to forestry plans, grazing land plans and any other plans appropriate to the individual operation. Landowners will implement best practices in adopting weed, crop, pest and forage management strategies. Landowners will be more profitable while protecting the environment. All operations that develop and implement a Comprehensive Nutrient Management Plan (CNMP) to protect ground and surface water, apply manure at agronomic rates and utilize technologies that allow them to better operate and/or monitor their operation. All operations will remain economically viable and environmentally friendly.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	175

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Agricultural producers may be regulated by many state and federal agencies under a variety of authorities such as the Clean Water or Clean Air Acts. In many cases, government agencies have poor outreach abilities and producers do not even know when a new regulation applies to them. It is incredibly difficult for a single producer to evaluate all of the potential environmental, safety, transportation or labor rules that may apply.

What has been done

The agriculture community became aware that two rules administered by the US Environmental Protection Agency could impact producers: 1. The Spill Prevention Control and Countermeasure (SPCC) rule was determined to apply to farms and ranches with qualifying amounts of stored fuel and petroleum products; 2. Changes to the Confined Animal Feeding Operation (CAFO) rule for permitted animal feeders were released for public comment. The Livestock Environment and Water Quality Programs studied the issues, collected resources and distributed (electronically and in workshop formats) information to agents and stakeholders in every county/reservation in the state.

Results

The ability for Extension to stay abreast of regulatory issues is valuable to individual producers. They are often regulated like large corporations, yet they are sole or family proprietorships without full-time legal representation. By working with the county Extension delivery system, as well as farm and ranch groups/associations, Extension delivered confidential education and interpretation on these regulatory matters, thereby reducing legal liability of hundreds of producers due to non-compliance. Non-compliance with regulations can result in forced interruption of production and agribusiness activities or in monetary fines.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity
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, and will follow recommendations resulting from tests. Forage producers/participants will learn proper timing and implementation of control techniques and methods appropriate to their operations. Participants will understand the importance of water and related issues as a result of information from water projects such as Water Monitoring Activities, Well and Septic Programs and video, film and website materials.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	950

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Water quality is of growing concern for private well and septic owners across the state. Families and businesses need assurance that the water they are using is safe for human consumption. The transition of traditionally agricultural land into small acreage residential land use and the associated installation of well and septic systems is increasing pressure on groundwater resource. Well heads that are not appropriately protected can lead to unsafe household drinking water supplies and can provide a direct conduit for groundwater contamination. Similarly, improperly functioning septic systems can pose public health risks when incompletely treated effluent reaches surface or groundwater.

What has been done

During 2011, the network of participating counties in the Well Educated project has expanded from 17 to 30; a You Tube channel was deployed to stream well and septic education videos; over 950 households participated in the program; a statewide press release was issued during Groundwater Awareness Week resulting in a number of newspapers, radio stations and television stations running pieces of private well; more than 10 well and septic workshops and public presentations were held; data sharing logistics were sorted out and 317 data points were shared in EQUIS.

Results

As a result of the program, well and septic owners are testing their water quality, addressing issues with their well heads and maintaining their septic systems. Outreach activities and data associated with the project have led to focused groundwater studies in both the Gallatin and Judith watersheds and data has been used in presentations to the public and students to inform Montanans about water quality concerns and how we can work together to protect groundwater resources. The final program evaluation for the Well Educated project was conducted which determined that 96% of participants would participate again and most participants would pay between \$5 and \$7.50 for participation in the program. This is important to note as outside funding diminishes and steps must be taken to resource the project for the future.

4. Associated Knowledge Areas

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

Outcome #5

1. Outcome Measures

Range: As a result of participating in Range Monitoring programs, ranch managers/producers will learn to identify plants, determine phenologic stage of plant growth, determine monitoring site location and determine appropriate time for monitoring activities which leads to improvement in resource management strategies. As a result of attending the Extension Range Management Institute, participants will be able to apply basic principles of range management and related topics determined at the planning stage. People will request information on identifying new weeds found, GPS assistance and use of sprayers for small weed infestation control. Producers will work through the Livestock Environmental Management Systems self assessment to understand how their operation affects the environment and to prioritize and develop action plans for addressing any environmental risks.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3360

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Rangeland makes up a substantial portion of the states land area and much of it is managed by people involved in agriculture. To maintain healthy and productive range is a priority for these landowners. They need assistance in such things as monitoring their rangelands to determine needs, identifying plants, addressing noxious weed control as well as livestock management systems. The use of GPS and other electronic systems are important tools for producers to target specific issues related to their rangelands. It is important for landowners to stay current on information and technology that can help them successfully manage their properties.

What has been done

There have been 3360 adults involved with Extension education on range issues. Workshop topics have included maximizing livestock profits from range resources, biological weed control, livestock/predator relationships, livestock grazing management, grazing management to prevent weeds, photo monitoring, rangeland inventory/monitoring, livestock/wildlife relationships, rangeland health assessment, Montana poisonous plants, rangeland plant anatomy among others. Youth workshops have included Montana Ag in the Classroom-Home on the Range and Montana Range Days-Rangeland Health Assessment as well as enrichment programs on reservations.

Results

Workshop participants have reported putting the information gained to work in their respective situations. As a result of gaining the skills, one rancher reported studying the maps of his property to divide one of his summer pastures finding a way to turn one big pasture into two with less than a half mile of fence, making better use of the rangeland. Several producers reported implementing better practices learned from Extension programs without investing large sums of money. The most commonly mentioned was simplifying rotations of pastures making the process planned accommodate to climate changes per year (dry or wet).

4. Associated Knowledge Areas

KA Code	Knowledge Area
121	Management of Range Resources
135	Aquatic and Terrestrial Wildlife
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)

Evaluation Results

Because the programs in this area are all concerned with the natural resources, climate change was added as a priority to meet the requests of NIFA. Forestry management and marketing, water quality, range management and systems, environmentally sensitive management systems and small acreage management and decision making are all impacted by what is happening with the climate.

Key Items of Evaluation

The programs will continue to focus on management and environmentally conscious decision making. As climate changes, practices need to be altered to meet the challenges.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Sustainable Energy

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

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

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	2.3	0.0	0.0	0.0
Actual Paid Professional	1.3	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1188	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
76121	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

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

2. Brief description of the target audience

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

3. How was eXtension used?

Extension professionals and clientele are encouraged to use the system as a resource for information and educational materials related to their specific questions and concerns. The Ask an Expert function has been valuable to provide information that is not available in our state.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	3363	24000	0	0

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

Year: 2011
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	2	0	2

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Sustainable Energy: Number of people attending workshop/presentations and/or accessing the web site for information about wind energy. Number of people attending workshops/presentations on the pros and cons of various types of bio-fuels or alternative energy sources. Development of educational guides/publications on current energy issues. Workshops/seminars on quantifying the impact of energy generation or savings as it relates to the bottom line of their primary business function. Number of people gathering information from the Extension Energy web site.
 Not reporting on this Output for this Annual Report

Output #2

Output Measure

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

Year	Actual
2011	412

Output #3

Output Measure

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

Year	Actual
2011	225

Output #4

Output Measure

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

Year	Actual
2011	2726

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Energy and Agriculture (reservation and non-reservation) Participants will understand energy alternatives and how to use a framework to evaluate energy opportunities Participants will be able to make a sound decision on becoming involved with energy generation. (wind, solar, bio-diesel, bio-mass, oilseed production/processing, ethanol etc.) Participants will use energy saving tillage system practices.
2	Energy and Community (reservation and non-reservation) Participants will understand the public policy issues related to wind and other alternative energy generation and transmission. Participants will understand land leasing issues related to wind and other alternative energy generation and transmission.
3	Residential Energy: Homeowners will apply home energy savings/conservation practices. Home builders, contractors and crews will use weatherization techniques in constructing homes. Participants will become aware of the Camelina Composite Pellet Fuels for home stoves.

Outcome #1

1. Outcome Measures

Energy and Agriculture (reservation and non-reservation) Participants will understand energy alternatives and how to use a framework to evaluate energy opportunities Participants will be able to make a sound decision on becoming involved with energy generation. (wind, solar, bio-diesel, bio-mass, oilseed production/processing, ethanol etc.) Participants will use energy saving tillage system practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	412

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Evidence of renewable energy as a relevant societal issue was presented in the 2011 State of the Union Address, the US Farm Bill and the Western Extension Directors Association reports from 2006 to present. Of the five NIFA national priorities, sustainable energy is number three. The Association of Public and Land-Grant Universities (APLU) provides additional evidence of the recognized need for Extension involvement in renewable energy education. Energy is one of the APLUs ten major initiatives (APLU, 2011).

What has been done

The E3A (Exploring Energy Efficiency and Alternatives) curriculum will meet the demand for comprehensive energy education, specific to Montana as related to agriculture, community, and more. The E3A toolkit curriculum has been developed. It is a self-guided, self-contained teaching resource that was developed in collaboration with the University of Wyoming. Content was also provided by Colorado State University and North Dakota State University. A multi-state 12 member issue team of MT and WY agents was formed to develop and review all content.

Results

Work by the E3A team resulted in over 80 fact sheets of energy content and supporting PowerPoint content. The E3A fact sheets were developed through integration of research and Extension and reviewed by Extension, MSU Wind Application Center, Wyoming School of Energy Resources, NREL, CSU Engineering, economists in MT, WY, and CO and are comprehensive, relevant, and carefully evaluated. The toolkit was launched on November 28, 2011 so impacts of teaching efforts are just beginning. Initial feedback on the training materials has been very positive.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
605	Natural Resource and Environmental Economics

Outcome #2

1. Outcome Measures

Energy and Community (reservation and non-reservation) Participants will understand the public policy issues related to wind and other alternative energy generation and transmission. Participants will understand land leasing issues related to wind and other alternative energy generation and transmission.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	225

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Energy is a sizeable 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 Montana.

What has been done

Targeted audiences of farmers and ranchers, as well as non-farm or ranch energy users were assembled in classes both in person and online and delivered proper energy management tools.

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
605	Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

Residential Energy: Homeowners will apply home energy savings/conservation practices. Home builders, contractors and crews will use weatherization techniques in constructing homes. Participants will become aware of the Camelina Composite Pellet Fuels for home stoves.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2726

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; the cost of energy has increased by as much as 65%. With higher 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 Energy star 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/year. Weatherization applied to older homes can save as much as 65% about \$780. In both cases, the savings payback is typically 1-4 years; truly a good investment.

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

Thirty one training programs were provided directly to 326 energy related contractors. The training resulted in the weatherization of 2400 homes throughout Montana, reducing home energy consumption by an average of 33% or an estimated \$345.00/year/household, a savings of \$828,000. Indirectly, approximately 24,000 Montana households received energy education using Extension publications and consumer education materials.

4. Associated Knowledge Areas

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

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The impacts in this area are focused in three areas: Energy and Agriculture, Energy and Community, and Residential Energy. Outcomes have focused on results of decision making related to energy efficiency and energy alternatives.

Key Items of Evaluation

The program area will continue to focus on Energy Efficiency and Alternatives.

V(A). Planned Program (Summary)

Program # 8

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	55%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	35%			
806	Youth Development	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	3.6	0.0	0.0	0.0
Actual Paid Professional	1.0	0.0	0.0	0.0
Actual Volunteer	0.1	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
17309	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
47276	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

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

2. Brief description of the target audience

K-12 school employees, daycare owners/employees, Restaurant and other Food Service Managers/Employees; volunteers at food serve operations.
 Home food preservers and people involved with food preparation
 Livestock producers
 Commodity Associations

3. How was eXtension used?

The eXtension system is not widely used in this program area. It is used as a resource on a limited basis.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1505	1800	2477	3431

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

Patent Applications Submitted

Year: 2011
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	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 Extension Agents so they can conduct 25 food safety education classes for audiences such as county sanitarians, school food service personnel, volunteers, food banks etc. (Number of people attending) Make resources available for individual study - web, publications etc.. (Number distributed.)

Year	Actual
2011	1456

Output #2

Output Measure

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

Year	Actual
2011	764

Output #3

Output Measure

- Montana Beef Network - Beef Quality Assurance (BQA) Number of people attending beef quality assurance, production and marketing programs. Number of classes, demonstrations and tours provided related to BQA. Number of people participating on interactive video programs, hits on the web site, publications distributed etc.

Year	Actual
2011	2739

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

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

Outcome #1

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	5018

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Foodborne illnesses impact approximately 1 in 65 Montanans annually with widespread implications in health care costs, productivity and the health and economic well-being of children, families and communities. The financial costs of foodborne illnesses are significant including lost wages, health care and investigation. The USDA requires schools to implement a School Food Safety Plan and many public and private agencies mandate training to reduce these rates.

What has been done

Food safety training classes were provided to confer 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 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 8 counties and on 2 reservations. Level 1 class participants reported increased knowledge regarding separating cooked and ready-to-eat foods, better personal hygiene habits, safely cooling foods, effectively cleaning and sanitizing work areas and preventing cross contamination. A Fergus County assessment showed a 20% increase in knowledge from pre-test to post-test. Overall, this increased knowledge translated to Clover Buds automatically washing their hands for 20 seconds before snack time, no reports of foodborne illnesses during county fairs in participating counties and other anecdotal culture change among participants. Level 2 participants had a certification pass rate of over 91% in Deer Lodge and Yellowstone Counties and share their knowledge in their restaurants and at school

concession stands further spreading food safety awareness with adults and children.

4. Associated Knowledge Areas

KA Code	Knowledge Area
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2

1. Outcome Measures

Food Preservation: Home food preservers will use accepted preservation practices in their home processes. There will be a decline in the economic and health consequences of food borne illnesses and spoilage.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	741

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Montana has an abundance of nutritious seasonal, wild and homegrown foods. Sustainable food trends and the current economic downfall have kept home food preservation an important and popular cultural activity. Recent national surveys reveal a high percentage of home food processors are using practices that put them at high risk for food-borne illness and economic losses due to food spoilage. As a result, a renewed effort to provide enhanced programming for home food preservers is necessary to insure they have access to the most reliable information available concerning food safety and food quality.

What has been done

Special marketing regarding food preservation to target an audience of low income individuals was conducted via newspaper and radio. Direct e-mails were sent to agencies that provide services to low income clientele and posters were displayed in various retail stores. In-depth workshops on canning, lectures, demonstrations and hands-on training were provided and MSU Food Preservation MontGuides were widely distributed.

Results

Class participants gained skills necessary to safely and confidently can local fruits and garden goods, providing economic benefits including lower food bills, as well as social/cultural benefits. More than 1800 MSU Food Preservation MontGuides were widely distributed. Phone, email and Facebook were used to answer hundreds of questions from preservers regarding specific recommendations on canning issues. Pressure canner gauges were checked for accuracy with some being replaced and others being adjusted. FCS agents provided training to other agents on properly using the pressure gauge testing unit to effectively offer year-round checks in local offices. Home preservers reported gaining confidence to can safely, a network of organizations was engaged to recruit new home preservers and re-engage others and competency was increased improving overall quality and quantity of food preserved.

4. Associated Knowledge Areas

KA Code	Knowledge Area
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #3

1. Outcome Measures

Montana Beef Network-Beef Quality Assurance (BQA) Ranchers/producers will adhere to BQA protocols for raising beef. Ranchers/producers will become BQA certified. Consumers are assured of a readily available and wholesome supply of beef.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2739

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The report for BQA this year is focused on youth education. During 2010, Extension turned the adult BQA program over to the livestock associations in the state, so data related to Extension involvement is limited. Past education however, has indicated that producers were following appropriate protocols to become BQA certified and understood the importance of that designation. This recognition has been passed to youth of producers who are learning the

protocols through the 4-H program.

What has been done

All 56 counties and some reservations in the state have implemented a BQA program for 4-H members in the market livestock projects. These programs consist of written materials along with workshops that include practice session on giving shots and other factors related to handling livestock.

Results

The Quality Assurance programs improve the awareness of youth who are enrolled in the livestock projects so they understand they are raising a product that will enter the food chain. There is evidence that youth understand the terms associated with quality assurance when questioned by judges at local fairs or other livestock shows, contests or clinics. They also recognize the importance of sending quality products into the food chain for consumers to purchase as evidenced when youth are questioned by judges or other professionals.

4. Associated Knowledge Areas

KA Code	Knowledge Area
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Impact data for this area is done with pre-posttest surveys along with later follow ups. The Montana Beef Network - Beef Quality Assurance program has produced significant impact data in past years, but because of program leadership changes, a new program of work will be completed for future years.

Key Items of Evaluation

The food safety program is focused on training people best practices to handle food - hand washing, keeping food hot or cold, food storage, cross contamination, proper cleaning and sanitizing.

The food preservation area is targeted at sanitization, temperature control and processing (freezing or boiling).