

# 2007 Montana State University Extension Annual Report

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## I. Report Overview

### 1. Executive Summary

It is my pleasure to present the 2007 Montana State University Extension Annual Report, which exemplifies the breadth and depth of Extension programming and education efforts across the state as we fulfill the Land-Grant University mission of "taking the University to the people." This report is more than just numbers and program outcomes; rather, it highlights how Extension's statewide outreach education network responds quickly to new and emerging needs and strengthens existing resources through partnerships. This report offers a small glance into how Extension is working to address local needs with a statewide perspective.

Regardless of the program, Extension expertise meets public needs at the local level through the involvement of volunteers, stakeholders and advisory committees. Our roots in communities help us understand local needs and put university expertise and connections where they can make a difference--both in people's lives and in their livelihoods. As the goal statements throughout this annual report attest, the challenges and opportunities in Montana today are endless. Increasingly, Extension serves a growing, increasingly diverse constituency with fewer and fewer resources, utilizing methods that are timely, relevant and cost-effective.

As we look toward tomorrow, Montana State University Extension is collaborating on a new initiative called eXtension. One of the goals of eXtension is to develop a coordinated, Internet-based information system where customers will have round-the-clock access to trustworthy, balanced views of specialized information and education on a wide range of topics. For customers, the value will be personalized, validated information addressing their specific questions, issues, and life events in an aggregated, non-duplicative approach.

The true meaning of Extension is to reach out and extend resources, solving public needs with university research and knowledge through non-formal, non-credit education. A statewide network of county and reservation Extension offices, supported by campus-based faculty and staff, remains committed to serving citizens and organizations throughout the state. While the program overviews and highlights in this annual report reflect just a portion of the many accomplishments during 2007, it does adequately portray the dedicated and talented individuals who are the driving force of Extension. I am pleased to share these accomplishments with you.

#### Total Actual Amount of professional FTEs/SYs for this State

Year:2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	37.0	0.0	0.0	0.0
<b>Actual</b>	0.0	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

Programs delivered by MSU Extension are reviewed by the merit review committee according to the process outlined in the Plan of Work. The committee, composed of Dr. LeRoy Luft, Jim DeBree, Dr. Nate St.Pierre, and Beverly Wallace, provided written and oral feedback following their review of the Annual Report/Plan of Work. The feedback was compiled into one letter and sent back to the review committee for revision, edit and acceptance.

The comments made by the Merit Review Committee were used in planning and conducting programs for the next year(s). For Example:

- Multi-county programming could be strengthened along with cross state programming at the county level. The Regional Department Heads, who have been in their positions for 2-3 years, are stimulating cross county and multi-county programming. These efforts also involve state specialists when appropriate. The cross state programming efforts at the county level are still limited, but are slowly being developed. In Montana, most of the cross state program efforts are lead by the MSU Extension specialist faculty and involve county level people in the delivery of programs.
- In the Natural Resources and Environmental programs, the committee suggested enhancing programming or program evidence in addressing issues related to rangelands. There are significant efforts being made through the Undaunted Stewardship program and other rangeland/pasture management programs to address this concern. Because of this suggestion, work was done over the past year to gather better impact data related to these rangeland issues. Personal changes, however, may influence the success of these endeavors.

As in the past, the Merit Review process has provided valuable information and suggestions that make Extension's program better. While the process will remain the same for this years review, one person on the review committee has been changed. Dr. Nate St. Pierre will be replaced by Don Addy, Extension Agent on the Ft. Belknap Indian Reservation for 34 years. Don recently retired and is serving on a post-retirement contract to train his successor.

### **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. Those 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 what issues are important to them and 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 some fairs, agricultural trade shows, home and garden shows. Literature is distributed, however discussions and questions with potential Extension users make up the biggest share of conversations. If common issues surface, 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, a 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, Area 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.

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.

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

**3. A statement of how the input was 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 he/her office. At other times and when issues are determined to be statewide, specialists will become more involved with program development and direction than if they are responding to a single request for information. Work to address the methamphetamine problem is an example of a program that has been started because of this type of input.

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

From the meetings with the Montana Association of Counties, Extension has learned over the past year that the desire for Extension to take a leadership role in agri-security and emergency disaster planning; the need for unbiased, research based information in renewable energies and a renewed commitment to rural community development – both economic and leadership development. For example, resulting from this input, a regional specialist was hired to work in the area of renewable energy and another specialist has targeted his work toward that effort. These two people, along with county agents and researchers, serve on a program team to explore needs and develop programs to address the issue.

**Brief Explanation of what you learned from your Stakeholders**

In general, the stakeholder input for CSREES from Montana has to do with resources. They are concerned that Extension is able to respond to unplanned and unexpected events or issues that come up during the year. In this state, the drought and fires have been a challenge that programming needed to address. This response is not limited to emergency strategies only but also other problems that come up such as infestations of insects or weeds and wind energy opportunities that are being offered to communities.

Tools for making decisions about utilizing alternative energy is becoming an issue for the state. People say they aren't necessarily concerned about more research on alternative energy sources, but rather on knowing what is suitable for their particular situation. They need assistance in making practical applications. This applies to wind, solar, bio-diesel as well as other options.

For Montana, the 3 way funding stream is important to keep Extension viable – federal, state and county funding sources are very important.

**IV. Expenditure Summary**

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2395885	0	0	0

<b>2. Totaled Actual dollars from Planned Programs Inputs</b>				
	<b>Extension</b>		<b>Research</b>	
	<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
<b>Actual Formula</b>	1012200	0	0	0
<b>Actual Matching</b>	0	0	0	0
<b>Actual All Other</b>	427762	0	0	0
<b>Total Actual Expended</b>	1439962	0	0	0

<b>3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous years</b>				
<b>Carryover</b>	0	0	0	0

**V. Planned Program Table of Content**

<b>S. NO.</b>	<b>PROGRAM NAME</b>
1	Nutrition, Food Safety and Healthy Lifestyles
2	Youth Development
3	Ag Sustainability and Profitability
4	Family Issues, Resources and Environments
5	Community and Economic Development
6	Natural Resources and Environment

**Program #1**

**V(A). Planned Program (Summary)**

**1. Name of the Planned Program**

Nutrition, Food Safety 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
703	Nutrition Education and Behavior	55%			
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	35%			
724	Healthy Lifestyle	10%			
<b>Total</b>		<b>100%</b>			

**V(C). Planned Program (Inputs)**

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	3.0	0.0	0.0	0.0
<b>Actual</b>	4.6	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
17511	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
198156	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

Because of the wide range of topics under this planned program, different approaches are needed to reach the intended audiences. Health Fairs for example, have been successful in attracting people who live in rural areas and have limited access to medical facilities or limited funds to pay for services. A train the trainer approach has been effective in working with weight control, nutrition and physical activity. These activities require a high degree of motivation that can be achieved from the synergy of groups. Meetings, similar to support groups, also help keep people remain motivated to achieve set goals. In all cases, programs are more effective if collaborations can be formed to address issues. This has been particularly important when considering health care issues and reaching limited income audiences. Cooperating with schools is extremely valuable when needs of youth are of concern.

**2. Brief description of the target audience**

All of the programs delivered under this planned program make specific efforts to reach limited income families and families having special needs including those on Foods Stamps and public assistance. People living on reservations tend to have more issues with nutrition, obesity and health, so every effort is made to conduct workshops in those areas and establish support groups or some type of long term contact. Generally, rural communities have a large number of seniors living within the community. Driving any distance or at all is often a problem and living on fixed incomes presents its own set of challenges. While not confined to the rural areas of the state, the food service industry is in need of constant training and updating for employees and managers alike. New research, along with changes in policy, make education in this area critical and continual.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	12300	15000	2500	1500
2007	10968	3852	3185	150

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	8000	6564

**Output #2****Output Measure**

- Steps to a New You
  - Provide 3 train the trainer sessions for 15 County Extension Agents who in turn, can implement county Steps to a New You program.
  - Provide 350 sets of training materials to County Extension Agents who will be presenting programs.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3500	191

**Output #3****Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	800	1329

**Output #4****Output Measure**

- HEALTHY LIFE STYLES To reach adult and youth populations in rural communities, 5 health fairs and school based programs will be provided. Medical screenings will be offered as well as classes on stress management, nutrition, obesity, fitness, osteoporosis, cardiovascular disease, diabetes, prostate cancer to mention a few.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	{No Data Entered}	2846

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	<p>Short Term EFNEP/FSNP Number of adults gaining awareness and knowledge regarding the importance of: Healthy eating (more fruits and vegetables, more whole grains Increasing physical activity Food Safety practices Food resource management practices Food planning and preparation Number of youth increasing knowledge regarding the importance of: Eating a variety of foods Healthy eating Increasing physical activity Food safety principles (hand washing) STEPS TO A NEW YOU Participants will learn about facts, attitudes, behavior change techniques and specific behaviors related to physical activity, nutrition, body image that will allow them to live healthier lifestyles and prevent or reduce obesity. FOOD SAFETY The participants will learn about safe food handling, specifically facts and skills related to the basics of safe food handling: Controlling time and temperature when handling food Ensuring proper personal hygiene Preventing cross-contamination Proper cleaning and sanitizing Medium Term EFNEP/FSNP Number of adults: Improving the family diets by choosing/preparing healthier choices(more fruits and vegetables, hole grains) Improving food safety practices storing and thawing foods properly) Improving food resource management practices (meal planning shopping with list) Improving nutrition practices (reading food labels) Healthy eating (more fruits and vegetables, more whole grains Increasing physical activity Food Safety practices Food resource management practices Food planning and preparation Number of youth increasing knowledge regarding the importance of: Eating a variety of foods Healthy eating Increasing physical activity Food safety principles (hand washing) STEPS TO A NEW YOU Number of children: Eating a variety of foods Improving practices in food preparation and food safety Select low cost nutritious foods FOOD SAFETY The participants will improve safe food handling, specifically the behaviors supporting the basics of safe food handling: Controlling time and temperature when handling food Ensuring proper personal hygiene Preventing cross-contamination Proper cleaning and sanitizing. Long Term EFNEP/FSNP Participants will: Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes. Decrease the risk for illness and death associated with foodborne illness. Increase their confidence in the ability to manage food resources, as well as other resources. FOOD SAFETY Participants will adopt healthy attitudes related to a healthy lifestyle approach to prevention or reduction of obesity. Participants will improve their eating behaviors related to a healthy lifestyle approach to obesity. Participants will increase their level of physical activity related to a healthy lifestyle approach to preventing or reducing obesity. There will be a decline in the economic and health consequences of foodborne illnesses.</p> <p>2 HEALTHY LIFESTYLES: As a result of attending a local health fair, youth and adults will make follow up appointments with their physician to discuss test results as needed.</p> <p>3 FOOD SAFETY: Participants will improve all safe food handling practices, but specifically the basic techniques of safe food handling: Controlling time and temperature when handling food, ensuring proper personal hygiene, preventing cross-contamination, proper cleaning and sanitizing. Ultimately, there will be a decline in economic and health consequences of food borne illnesses.</p> <p>4 EFNEP/FSNE: Participants will learn how to stretch their food dollars and how to prepare nutritious, healthful meals for their families.</p> <p>5 STEPS TO A NEW YOU: Participants will be able to use healthy weight control practices to reduce or prevent obesity.</p>

**Outcome #1**

**1. Outcome Measures**

Short Term EFNEP/FSNP Number of adults gaining awareness and knowledge regarding the importance of: Healthy eating (more fruits and vegetables, more whole grains Increasing physical activity Food Safety practices Food resource management practices Food planning and preparation Number of youth increasing knowledge regarding the importance of: Eating a variety of foods Healthy eating Increasing physical activity Food safety principles (hand washing) STEPS TO A NEW YOU Participants will learn about facts, attitudes, behavior change techniques and specific behaviors related to physical activity, nutrition, body image that will allow them to live healthier lifestyles and prevent or reduce obesity. FOOD SAFETY The participants will learn about safe food handling, specifically facts and skills related to the basics of safe food handling: Controlling time and temperature when handling food Ensuring proper personal hygiene Preventing cross-contamination Proper cleaning and sanitizing Medium Term EFNEP/FSNP Number of adults: Improving the family diets by choosing/preparing healthier choices(more fruits and vegetables, hole grains) Improving food safety practices storing and thawing foods properly) Improving food resource management practices (meal planning shopping with list) Improving nutrition practices (reading food labels) Healthy eating (more fruits and vegetables, more whole grains Increasing physical activity Food Safety practices Food resource management practices Food planning and preparation Number of youth increasing knowledge regarding the importance of: Eating a variety of foods Healthy eating Increasing physical activity Food safety principles (hand washing) STEPS TO A NEW YOU Number of children: Eating a variety of foods Improving practices in food preparation and food safety Select low cost nutritious foods FOOD SAFETY The participants will improve safe food handling, specifically the behaviors supporting the basics of safe food handling: Controlling time and temperature when handling food Ensuring proper personal hygiene Preventing cross-contamination Proper cleaning and sanitizing. Long Term EFNEP/FSNP Participants will: Decrease their risk of developing diet-related chronic disease, obesity, osteoporosis, cardiovascular disease and diabetes. Decrease the risk for illness and death associated with foodborne illness. Increase their confidence in the ability to manage food resources, as well as other resources. FOOD SAFETY Participants will adopt healthy attitudes related to a healthy lifestyle approach to prevention or reduction of obesity. Participants will improve their eating behaviors related to a healthy lifestyle approach to obesity. Participants will increase their level of physical activity related to a healthy lifestyle approach to preventing or reducing obesity. There will be a decline in the economic and health consequences of foodborne illnesses.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	800	0

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

**Outcome #2**

**1. Outcome Measures**

HEALTHY LIFESTYLES: As a result of attending a local health fair, youth and adults will make follow up appointments with their physician to discuss test results as needed.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	2846

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

People living in rural areas find access to medical screening, testing or regular Doctor visits challenging. Few resources are available to assist them though technology makes access to specialized medicine more available for catastrophic illnesses. County health entities, physicians, clinic/hospitals, schools and Extension recognize the need for a well planned, locally based prevention and early detection approach to health care giving people the tools to be responsible for their own well being

**What has been done**

Extension and other collaborators, conducted 9 health fairs in local communities and offered opportunities for prostate screening, blood work-ups, blood pressure and bone density tests, classes on nutrition/fitness, etc. Many people who attended the health fairs were not able to travel the distance to a clinic and many were not financially able to pay for such tests in a clinic. Health fairs held in the schools targeted youth and focused on obesity, nutrition, exercise, and healthy food choices.

**Results**

Health care providers say health fairs are beneficial and encourage patients to participate annually. By early detection/recognition of diseases that are treatable with medications and lifestyle modifications, patients have avoided medical costs and enjoy a healthier life. At one county health fair, a summary was done on blood test results: 22% had elevated glucose (diabetes concerns); 54% had elevated cholesterol; 38% had elevated triglycerides; and 7% had abnormal iron levels. Over 725 participated in the health fair; over 600 had a blood chemistry screen and 187 had the osteoporoses bone density scan. An estimated 93% visited their physician about the test results; 36% began or continued an exercise program; 19% are changing eating patterns; 26% are lowering cholesterol and 12% are increasing their calcium consumption. Similar results can be found in health fairs across the state. Youth are more active; walking, lifting weights and making healthier food choices at meals and snacks.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #3****1. Outcome Measures**

FOOD SAFETY: Participants will improve all safe food handling practices, but specifically the basic techniques of safe food handling: Controlling time and temperature when handling food, ensuring proper personal hygiene, preventing cross-contamination, proper cleaning and sanitizing. Ultimately, there will be a decline in 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	Quantitative Target	Actual
2007	{No Data Entered}	1329

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

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

**What has been done**

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

**Results**

Foods Safety training in counties/reservations caused food establishments and potential employees to recognize the importance of handling food safely. After holding the basic food safety trainings, 5 counties were asked to repeat the course so additional businesses and employees could attend. At least 10 counties reported that there was a new commitment from the County Sanitarian to continually work on food safety. At least 40 businesses, agencies and schools have incorporated food safety training for employees at regular intervals and at least 10 participants who were hired in the industry received a higher wage or were promoted because they had participated in the basic food safety training. Additionally, of the 28 participants in the ServSafe Food Protection Manager Certification program, 25 passed the test and were certified. Counties who have actively participated in Extension Food Safety programs report fewer complaints related to food safety issues and food borne illnesses.

**4. Associated Knowledge Areas**

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

**Outcome #4****1. Outcome Measures**

EFNEP/FSNE: Participants will learn how to stretch their food dollars and how to prepare nutritious, healthful meals for their families.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	6564

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Limited resource families struggle to purchase/prepare nutritious meals with the money, foods stamps or other resources they have available. Almost 20% of all children live in poverty and food security is a problem. A recent poll found 1 in 8 households was uncertain of having or unable to acquire adequate food over the past year. This survey reported 4.6% of these households said one or more family members were hungry some time during the year because they could not afford enough food

**What has been done**

EFNEP is conducted in 2 counties and focuses on teaching how to stretch food dollars to feed their families nutritious meals. EFNEP reaches low income youth (5-17) in Title I schools and out-of-school programs with lessons on healthier, low cost food choices and obesity. FSNE operates in 20 counties and 5 reservations and provides nutrition education to recipients of foods stamps. FSNE has served youth in Title I schools, adults in rural-urban settings, senior and disabled populations.

**Results**

EFNEP: Of 338 adult graduates, nearly 90% learned the importance of safe and healthy eating. Specifically, 66% improved food resource management, 80% improved nutrition, 50% improved food safety, 100% made positive changes in eating more fruits, vegetables, grains, milk, fiber. The dollar amount spent on food/person/month also decreased. Of 1109 youth, 97% increased understanding of nutrition, the importance of eating a variety of foods and food safety principles. FSNEP: Exit surveys from individuals enrolled in at least 6 nutrition lessons showed 60% improvement from entry surveys in selecting healthier foods and reading labels; 59% planned meals in advance, 50% compared prices, and 48% used a grocery list; a 59% increase of 3 servings and a 52% increase of 2 servings of fruits and vegetables/day. On average, 3rd-5th graders report they almost always eat different kinds of fruits/vegetables (45%); 3 servings of low fat dairy products (58%); and are physically active daily (79%).

**4. Associated Knowledge Areas**

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

**Outcome #5****1. Outcome Measures**

STEPS TO A NEW YOU: Participants will be able to use healthy weight control practices to reduce or prevent obesity.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	191

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Since obesity is a widespread health concern, the goal of this project is to reverse the rising obesity rates and increase fitness levels through changes in health related attitudes and behaviors. Employing a health-centered rather than a weight-centered approach to well-being, the project supports the idea that people can improve their health by developing positive lifestyle habits rather than by trying to achieve a specific body size, shape or weight

**What has been done**

Steps to a New You is a 9 week healthy lifestyles program related to food, physical activity and body image. Classes were conducted in schools, worksites and through community wellness programs. Special effort was given to delivering the program in rural areas generally underserved by health agencies and to Native American who have a high rate of obesity.

**Results**

Of the 191 participants in the Steps to a New You program, 172 participated in an evaluation. These respondents revealed that because of the program, they learned facts, attitudes and behavior changing techniques to aid in achieving a healthy lifestyle. They indicated they have implemented the tools to reduce or prevent obesity and achieve a positive body image. For example, a health care professional reported finding lower blood pressure in 4 individuals and 80% of the class lost weight. Another class of 44 members had similar results showing 2 people quit smoking, 4 experienced a drastic drop in blood pressure, and 38 noted continued weight loss. Because of the success of the 9-week program, many of the participants have requested continued contact to stay motivated. Some groups have formed to keep walking and exercising, some are doing Yoga, and some are lifting weights. Where available, participants have also joined health clubs to keep themselves active and committed.

**4. Associated Knowledge Areas**

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

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

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

**Brief Explanation**

In 2007, the extreme heat during the summer months, along with the drought, impacted many in the state. Especially for seniors, high temperatures were difficult to cope with on a day after day basis. Additionally, regional fires caused much smoke in the air which again provided respiratory challenges for many people, regardless of age. Another issue that faced Montana families was the rise in natural gas prices which was reflected in heating/cooling expenses. Some people were forced into making difficult decisions about paying their heating bills or buying needed medications. This strain on family financial resources pushes the ability to purchase nutritious food even further down the priority list. While state government has offered some relief for heating costs, it remains a concern moving into 2008

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- Before-After (before and after program)
- During (during program)
- Other (focus groups)

## Evaluation Results

### Key Items of Evaluation



**Program #2**

**V(A). Planned Program (Summary)**

**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
806	Youth Development	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	14.0	0.0	0.0	0.0
<b>Actual</b>	12.0	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 447122	1890 Extension	Hatch	Evans-Allen
	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
0	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

As described in the plan of work, the youth development program conducted workshops for adult volunteers on such topics as positive youth development, 4-H organizational information, teaching techniques and best practices in subject matter/project areas. In turn, youth had opportunities to attend clinics/workshops on a variety of topics including leadership, citizenship and other life skills that expand their ability to be competent and contributing members of their families and communities. The 4-H Club setting provides youth a laboratory in which to learn parliamentary procedure and consensus building techniques, conflict resolution strategies, setting group goals and methods to accomplish them. During 2007, special attention was given to the camping program. Training was conducted on recommended industry practices that provided comprehensive leader training and used life skill focused curriculum. Resources were used in implementing "best" practices, facilitating leaders training and designing life skill focused curriculum to be offered at camp settings. Outside the 4-H club, 4-H participants and professionals formed partnerships and alliances to extend education to other groups and agencies at local and state levels. Education materials and training were provided for people concerned about meth. Efforts included: educating retailers, store managers, homeowners, agriculture producers, teachers and local agencies.

**2. Brief description of the target audience**

The target audience for the Extension youth development program is youth ages 7-19. According to statistics, the place of residence for Montana 4-H participants is: 5410 farm, 10951 towns under 10,000 & rural, 3053 Town & cities – 10000 to 50000, 377 suburbs of cities over 50000, 3541 Central cities over 50000. Of the 23332 youth enrolled in the various delivery methods conducted by Extension, 12873 are in traditional 4-H clubs. The other 10459 youth are engaged in special interest short term projects, camping (overnight and day), study/mentoring programs and school enrichment activities. During 2007, 4655 volunteers directed the learning activities for youth involved in Extension sponsored programs. Most of the adults are parents of participating youth although some volunteers like to share their special talents with the young people. These 4655 volunteers provide an estimated 800,000 service hours annually which translates into 419 Full-Time Year-round Job Equivalents. Their service is equal to an economic impact of over \$15 million to the state. (Independent Sector Reports and the Canadian Centre for Philanthropy).

## V(E). Planned Program (Outputs)

### 1. Standard output measures

#### Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	2000	3500	10000	10000
2007	2100	2155	17152	6180

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

#### Patent Applications Submitted

Year    Target

Plan:    0

2007 :    0

#### Patents listed

### 3. Publications (Standard General Output Measure)

#### Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

## V(F). State Defined Outputs

### Output Target

**Output #1****Output Measure**

- Life Skill Development
  - Statewide, 9,000 youth will be involved in 300 experiential learning activities including workshops, clinics, seminars and club meetings.
  - On a statewide basis, 300 youth will attend 15 camps to develop enhance life skill development.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	9000	12873

**Output #2****Output Measure**

- Leadership/Volunteer Development
  - An estimated 250 youth and 450 adults will be able to apply leadership skills and positive youth development practices in their roles of organizational, project or other leadership positions.
  - Professional and volunteer staff in at least 1/3 of the counties will follow and adhere to established financial and audit guidelines.
  - Teenage youth will exhibit leadership and communications skills both within the 4-H program and at other times outside 4-H program.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2000	4655

**Output #3****Output Measure**

- Methamphetamines Develop a presentation that will teach basic information about meth. Develop a presentation that addresses meth and weight control - one the the reasons youth begin to use meth.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3000	2423

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O No.	OUTCOME NAME
1	<p>Short Term: Life Skill Development</p> <ul style="list-style-type: none"> <li>• Seventy five percent (75%) of the youth camping program participants will show an increase in life skills practiced at summer camp.</li> <li>• Sixty percent (60%) of the youth camping program participants will evaluate the camp context as contributing to positive youth development.</li> <li>• Eighty five percent (85%) of the youth involved in the experiential learning activities through 4-H will gain knowledge about the topic they have selected. (Example: plants, animals/quality assurance, aerospace, vet science, foods, public speaking, leadership etc.) Leadership/Volunteer Development Eighty percent (80%) of Extension agents attending professional development opportunities will increase knowledge in volunteer management. Sixty percent of the 4-H volunteers participating in trainings will learn the duties of an organizational leader, project leader and other leadership positions within the program so 4-H Clubs and activities will use positive youth development practices. Fifty percent of the county 4-H Councils will learn the established financial and audit procedures for handling public money. Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills. Methamphetamine Percent of students who can identify the ingredients used to manufacture meth Percent of students who can identify the effects of taking meth Medium Term Life Skill Development Fifty percent (50%) of the counties offering summer camping programs will adopt "best" practices and strengthen camp curriculum through a focus on life skill enhancement. Eighty percent (80%) of the youth involved in the experiential learning activities through the 4-H program will show improvement in life skills. Leadership/Volunteer Development Because of the training, Extension professionals will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation. Fifty percent (50%) of volunteers attending trainings will adopt practices that support the 8 critical elements on 4-H educational programs. Over the next year, at least one-third of 4-H Councils in Montana will adopt the established financial and audit guidelines. Fifty percent (50%) of participating youth will apply developed practices of leadership. Methamphetamine Participants will become involved in community meth awareness and prevention outreach activities. Long Term Life Skill Development Montana 4-H will be recognized as a leader in youth camping because of the application of positive youth development principles. Youth involved in 4-H will make contributions to their communities, be less likely to be involved in illegal activity and be more likely to perform better in school. Youth involved in 4-H will exhibit having more confidence, feeling more competent and self-assured, and feeling more connected to their families and communities. Leadership/Volunteer Development Agents and volunteers participating in professional development opportunities will provide a safe, positive environment for youth to gain life skills and meet developmental needs through participation in 4-H programs in Montana. Montanan's will have a more accurate and positive impression of the 4-H Youth Development Program.</li> </ul> <p>2 LIFE SKILL DEVELOPMENT: Seventy-five percent(75%) of the youth camping participants will show an increase in life skills practiced at summer camp; 60% will evaluate the camp context as contributing to positive youth development; 85% of the youth involved in experiential learning activities will gain knowledge about their project topic. Fifty percent (50%) of counties offering summer camps will adopt 'best practices' and strengthen camp curriculum through focus on life skill enhancement. Youth involved in 4-H will make contributions to their communities, be less likely to be involved in illegal activity and be more likely to perform better in school.</p> <p>3 LEADERSHIP/VOLUNTEER DEVELOPMENT: Eighty percent (80%) of Extension agents will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation; 50% of volunteers will adopt practices that support the eight crucial elements of positive youth development; 50% of participating youth will apply developed practices of leadership.</p> <p>4 METHAMPHETAMINES: The use of meth will decrease according to law enforcement reports and school input.</p>

**Outcome #1****1. Outcome Measures**

Short Term: Life Skill Development

- Seventy five percent (75%) of the youth camping program participants will show an increase in life skills practiced at summer camp.
- Sixty percent (60%) of the youth camping program participants will evaluate the camp context as contributing to positive youth development.
- Eighty five percent (85%) of the youth involved in the experiential learning activities through 4-H will gain knowledge about the topic they have selected. (Example: plants, animals/quality assurance, aerospace, vet science, foods, public speaking, leadership etc.) Leadership/Volunteer Development Eighty percent (80%) of Extension agents attending professional development opportunities will increase knowledge in volunteer management. Sixty percent of the 4-H volunteers participating in trainings will learn the duties of an organizational leader, project leader and other leadership positions within the program so 4-H Clubs and activities will use positive youth development practices. Fifty percent of the county 4-H Councils will learn the established financial and audit procedures for handling public money. Eighty percent (80%) of participating youth will increase their self-perception of leadership development skills. Methamphetamine Percent of students who can identify the ingredients used to manufacture meth Percent of students who can identify the effects of taking meth Medium Term Life Skill Development Fifty percent (50%) of the counties offering summer camping programs will adopt "best" practices and strengthen camp curriculum through a focus on life skill enhancement. Eighty percent (80%) of the youth involved in the experiential learning activities through the 4-H program will show improvement in life skills. Leadership/Volunteer Development Because of the training, Extension professionals will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation. Fifty percent (50%) of volunteers attending trainings will adopt practices that support the 8 critical elements on 4-H educational programs. Over the next year, at least one-third of 4-H Councils in Montana will adopt the established financial and audit guidelines. Fifty percent (50%) of participating youth will apply developed practices of leadership. Methamphetamine Participants will become involved in community meth awareness and prevention outreach activities. Long Term Life Skill Development Montana 4-H will be recognized as a leader in youth camping because of the application of positive youth development principles. Youth involved in 4-H will make contributions to their communities, be less likely to be involved in illegal activity and be more likely to perform better in school. Youth involved in 4-H will exhibit having more confidence, feeling more competent and self-assured, and feeling more connected to their families and communities. Leadership/Volunteer Development Agents and volunteers participating in professional development opportunities will provide a safe, positive environment for youth to gain life skills and meet developmental needs through participation in 4-H programs in Montana. Montanan's will have a more accurate and positive impression of the 4-H Youth Development Program.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	18000	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2**

**1. Outcome Measures**

LIFE SKILL DEVELOPMENT: Seventy-five percent(75%) of the youth camping participants will show an increase in life skills practiced at summer camp; 60% will evaluate the camp context as contributing to positive youth development; 85% of the youth involved in experiential learning activities will gain knowledge about their project topic. Fifty percent (50%) of counties offering summer camps will adopt 'best practices' and strengthen camp curriculum through focus on life skill enhancement. Youth involved in 4-H will make contributions to their communities, be less likely to be involved in illegal activity and be more likely to perform better in school.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	12873

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Nearly 1000 youth participate in summer camping programs which can be the most rewarding and challenging experiences for participants. Camps may pose significant risk, but by following industry practices, providing comprehensive leader training, and using life skill focused curriculum, risks can be lessened and optimal youth development promoted. Youth respond to hands on methods of learning inherent in all 4-H project curriculum which needs continual updating to maintain interest

**What has been done**

Camp counselor training was conducted and camp program development, risk assessment and evaluation resources were offered to overnight and day camping planners. The 4-H newsletter included a monthly column on quality camping program components. The 4-H project curriculum was updated and offered new areas of study including TerraPod and Ballooning projects. Methamphetamine kits were mailed out with the Tools for Schools kits and PPT's were developed and targeted Native American Students

**Results**

As a result of the camp training, 100% of the participants, in post-program sharing, identified a concept they learned that would help them in their leadership and program planning role in the camping program. Through post camp interviews, 100% of the camp programs (16 counties and 6 different locations) participating in in-depth leader training reported an improvement in camp counselor attitudes and age appropriateness of activities planned. All of the counties reported improvement in practices related to risk management. Thirty five youth piloted the new TerraPod project after which 100 students became involved with developing a 5 minute film on biodiversity, the project assignment. Participants reported that as a result of the project, they understand what biodiversity is and learned about making films; shooting footage, controlling the camera, editing, and adding music and special effects

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #3**

**1. Outcome Measures**

LEADERSHIP/VOLUNTEER DEVELOPMENT: Eighty percent (80%) of Extension agents will adopt best management practices in the areas of volunteer identification, selection, orientation, training, utilization, recognition and evaluation; 50% of volunteers will adopt practices that support the eight crucial elements of positive youth development; 50% of participating youth will apply developed practices of leadership.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	4655

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Volunteers are asked to serve as mentors/instructors for youth who are involved in Extension youth development programs - especially those who are enrolled in the 4-H club program. Many are not informed of educational techniques, in positive youth development theory/strategies, or in the philosophy of 4-H. Continual training in a variety of ways will provide the necessary skills for volunteers (youth/adult) to be successful in working with youth education.

**What has been done**

Professionals (56) and volunteers (1015) received training in volunteer management/development including recruitment and retention, evaluation and volunteer motivation; 945 volunteers were trained in positive youth development strategies and the 4-H philosophies through the 4-H Leaders College. Youth (1186) enrolled in leadership and personal development projects. The Ambassador program gave older youth an enhanced opportunity for personal, leadership and citizenship development.

**Results**

While an evaluation has not yet been conducted, County agents report that volunteers who participated in the trainings interact in a more positive way with youth in their clubs or activities they conducted and are more likely to work cooperatively toward the goals of the 4-H program. For example, 495 out of the 1000 leaders responsible for a 4-H club/unit have obtained the EIN numbers for their clubs and have adopted established financial guidelines. A pre-post test was conducted with 24 senior Ambassadors to assess leadership skills/abilities. A repeated measures t-test revealed a statistically significant difference between the retrospective pretest and posttest. The participants of this study believed the Ambassador program was a positive influence on their self-perceived leadership abilities.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #4**

**1. Outcome Measures**

METHAMPHETAMINES: The use of meth will decrease according to law enforcement reports and school input.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	2423

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Concern about drug use, especially meth, is a priority among parents and schools. Most recently, awareness of the problems related to the use of meth has been heightened because of the information aired on television. Families, schools, agencies and other youth serving organizations look for information and help in prevention, intervention and treatment for young people especially. Understanding the problem and effects of meth are important first steps.

**What has been done**

Educational materials and training were provided for people concerned about meth and included: educating retailers, store managers, homeowners, agriculture producers, teachers and local agencies; distributing 600 Tribal community toolkits nationally, distributing 675 non-tribal community toolkits in state; collaborating with 4-H and Montana Office of public instruction, the Tools for Schools Meth Prevention education component reached all Montana middle/high schools training 700 teachers.

**Results**

According to the findings of the Methamphetamine in Montana - Trends and Impacts, report by Mike McGrath, Montana Attorney General, educational programs have influenced the meth problem: \*Attitudes are changing. Public awareness of meth is high; \*Supply may be decreasing. The number of incidents in which meth was suspected or seized by law enforcement was the lowest since 2002; \*Meth use appears to be declining. Workplace drug testing statistics indicate a 73% decrease in the number of people testing positive for amphetamine/meth. \*Meth-related crime is decreasing. Drug tests on people charged with 'possession,' showed a drop in those testing positive for meth,- down 56%. Meth related crime dropped by 53%; \*Meth's social and economic impact remains high. Approximately 50% of adult inmates are incarcerated due to meth-related crimes. More than half of the parents whose children are placed in foster care use meth; Teen Meth use has declined 45% and adult meth use has declined 70%.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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**

The 4-H program is dependent on volunteer staff to provide educational experiences for youth. The Extension professional staff has the responsibility for developing appropriate materials and then training volunteers to use them effectively with young people. When the economy changes or appropriations change, these activities are affected. Montana has been able to fill Extension positions that were lost many years ago. As a result, many youth are now able to have better access to quality programs offered through 4-H. The economy however, specifically the price of fuel, has provided some access challenges. Many families need to be more selective about which workshops/clinics their youth attend because of travel costs. In most counties and at the state level, partnerships have been formed among schools and other youth serving organizations which limits the competition between programs. By working together, youth all across the state benefit greatly.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Comparisons between program participants (individuals,group,organizations) and non-participants

**Evaluation Results**

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}

**Program #3**

**V(A). Planned Program (Summary)**

**1. Name of the Planned Program**

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	20%			
205	Plant Management Systems	20%			
213	Weeds Affecting Plants	20%			
216	Integrated Pest Management Systems	20%			
301	Reproductive Performance of Animals	20%			
<b>Total</b>		100%			

**V(C). Planned Program (Inputs)**

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	9.0	0.0	0.0	0.0
<b>Actual</b>	8.3	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
279489	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
30338	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

The issues under this program area are related to agricultural production, rangeland management, farm/ranch management, small acreages and horticulture. All of these areas are subject to such concerns as drought, fuel prices, disease, noxious weeds and marketing. Ultimately, those engaged in agriculture as a main source of income are most worried about profitability and making appropriate decisions for their respective enterprises. Over the past several years, land owners, in some parts of the state, have dealt with the impact of natural disasters, specifically wildfire.

**2. Brief description of the target audience**

The audiences that are targeted by programs under this planned program area are largely agricultural producers, small land owners and people interested in raising produce. This includes ranchers who make their living from beef cattle and sheep production and farmers who rely on small grains and other crops for their income. All of these people are concerned about profitability from their operations as well as weed and pest control. Small land owners are engaged in raising animals or crops, but generally have another source of income. Montana has a large number of people living on small acreages who have animals they use for recreational purposes and do not realize any income from them. Those who raise gardens may be selling produce or raising it for their own consumption while others interested in horticultural issues may be mostly concerned about their ornamental gardens and trees.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	12120	43240	930	2100
2007	9347	32000	810	1700

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007 :	0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1****Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3500	2838

**Output #2****Output Measure**

- Montana Sheep Institute
  - Number of people attending workshops teaching innovative ways of using sheep.
  - Number of projects being conducted with sheep grazing invasive plants.
  - Number of sheep producers involved with sheep grazing projects
  - Number of landowners involved in sheep grazing projects
  - Number of acres where weeds were controlled and documentation of vegetative composition trends.
  - Number of wool growers involved in developing larger, more marketable clips.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	6000	1140

**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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1535	0

**Output #4****Output Measure**

- Crops
  - Number of producers attending cropping systems workshops.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2050	2435

**Output #5****Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	100	216

**Output #6****Output Measure**

- Profitability
  - Number of producers attending farm management workshops.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	155	132

**Output #7**

**Output Measure**

- PASTURE/FORAGE PRODUCTION: Number of producers attending workshops related to alternative crops/forage.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	{No Data Entered}	1648

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O No.	OUTCOME NAME
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- 1 SHORT TERM Montana Beef Network
- Number of people using and understanding Beef Quality Assurance protocols for raising beef.
  - Number of people learning about new practices in livestock production. Montana Sheep Institute
  - Number of people who learned about using sheep to control invasive plants
  - Increase in the number of Wool Pool consolidation. Weeds
  - People learn about noxious weed identification and weed management.
  - People learn how to map their property with a GIS device.
  - Landowners will be able to recognize weed problems, determine control techniques, and improve their weed control skills. Master Gardener:
    - Participants learn about plants and how to grow them successfully. Crops:
    - Producers will improve their understanding of nutrient cycling, weed control, variety selection and alternative crop possibilities. Profitability:
      - Ag producers will gain knowledge associated with development of standard financial statements, and track machinery costs as well as fixed and variable costs associated with crop enterprises. MEDUIM TERM Montana Beef Network
      - 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. Montana Sheep Institute
      - 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) Weeds
        - An increase in the number of acres mapped for purposed of weed identification and location.
        - An increase in the number of weed infested acres being controlled by accepted practices.
        - Producers will implement weed management plans/areas on their land.
        - Integrated Pest management techniques will be put into practice. Master Gardener:
          - Participants' volunteer hours of service to their communities in answering questions about horticultural issues. Crops:
            - Producers will plant short water varieties when moisture conditions are low, plant sawfly resistant varieties to minimize losses, and forage varieties that will improve production.
            - Pounds of fertilizer used in faming systems will be reduced.
            - Producers will adopt weed, crop and forage management strategies that sustain agricultural crop production and lessen environmental damage. Profitability:
              - 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. LONG TERM Montana Beef Network
              - Add value to weaned calves. Montana Sheep Institute
              - Acres of infested landscape controlled by small ruminant grazing.
              - Wool from smaller growers prepared and marketed on the international market.
              - Producers improving production efficiency of their sheep enterprise. Weeds
              - Agricultural and public lands will be conserved for future production and use.
              - The spread of noxious weeds will be reduced Crops:
                - Farm operators who implement best practices will increase their profitability and enhance long-term sustainability. Profitability
                  - Successful farm and ranch businesses provide stability and continuity for local communities, businesses and schools.

|   |   |
|---|---|
| 2 | MONTANA BEEF NETWORK: Number of people using and understanding Beef Quality Assurance protocols for raising beef; number of people learning about new practices in livestock production; percent of increase in value of calves sold at weaning; number of people making changes in records keeping; percent of breeding programs meeting the needs of the consumer in terms of quality and yield grade of calves; added value to weaned calves.  |
| 3 | MONTANA SHEEP INSTITUTE: Number of people who learned about using sheep to control invasive plants; increase in the number of wool pool consolidations; increased number of grazing management programs initiated and monitoring programs developed; increase in the number of wool pools organized and wool delivery/marketing of consolidated pools implemented; number of producers who develop plans to implement technology in their production units; acres of weed infested land controlled by small ruminant grazing; wool from smaller growers prepared and marketed on the international market; producers improving production efficiency of their sheep enterprise. |
| 4 | WEED CONTROL: Number of people who can identify noxious weeds; number of people who can map their property with a GIS device; number of landowners who can recognize weed problems, determine control techniques and improved their weed control skills; number of acres mapped for weed identification and location; increase in the number of acres being controlled by accepted practices; producers implementing weed management plans/areas on their land; number of integrated pest management techniques put into practice; spread of noxious weeds will be reduced.   |
| 5 | CROPS: Producers will understand 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.  |
| 6 | MASTER GARDENER: Participants learned about plants and how to grow them successfully; number of volunteer hours of service to their communities in answering questions about horticultural issues.  |
| 7 | PROFITABILITY: Producers will learn about standard financial statements and be able to track machinery costs and fixed/variable costs; number of producers who adopt financial management programs that will provide financial statements for business analysis and bank lending requirements; number of producers who analyze enterprise cost of production to aid in cropping decisions, marketing, leasing, machinery and land purchases.  |
| 8 | PASTURE/FORAGE PRODUCTION: Number of producers planting cereal forages as a source for winter feed; number of people certified to use the Nitrate Quik Test Program; number of samples tested and estimated economic impact for producers.  |



**Outcome #1**

**1. Outcome Measures**

## SHORT TERM Montana Beef Network

- Number of people using and understanding Beef Quality Assurance protocols for raising beef.
  - Number of people learning about new practices in livestock production.
- Montana Sheep Institute
- Number of people who learned about using sheep to control invasive plants
  - Increase in the number of Wool Pool consolidation. Weeds
  - People learn about noxious weed identification and weed management.
  - People learn how to map their property with a GIS device.
  - Landowners will be able to recognize weed problems, determine control techniques, and improve their weed control skills. Master Gardener:
  - Participants learn about plants and how to grow them successfully. Crops:
  - Producers will improve their understanding of nutrient cycling, weed control, variety selection and alternative crop possibilities. Profitability:
  - Ag producers will gain knowledge associated with development of standard financial statements, and track machinery costs as well as fixed and variable costs associated with crop enterprises. MEDUIM TERM Montana Beef Network
  - 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. Montana Sheep Institute
  - 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) Weeds
  - An increase in the number of acres mapped for purposed of weed identification and location.
  - An increase in the number of weed infested acres being controlled by accepted practices.
  - Producers will implement weed management plans/areas on their land.
  - Integrated Pest management techniques will be put into practice. Master Gardener:
  - Participants' volunteer hours of service to their communities in answering questions about horticultural issues. Crops:
  - Producers will plant short water varieties when moisture conditions are low, plant sawfly resistant varieties to minimize losses, and forage varieties that will improve production.
  - Pounds of fertilizer used in faming systems will be reduced.
  - Producers will adopt weed, crop and forage management strategies that sustain agricultural crop production and lessen environmental damage. Profitability:
  - 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. LONG TERM Montana Beef Network

- Add value to weaned calves. Montana Sheep Institute
- Acres of infested landscape controlled by small ruminant grazing.
- Wool from smaller growers prepared and marketed on the international market.
- Producers improving production efficiency of their sheep enterprise. Weeds
- Agricultural and public lands will be conserved for future production and use.
- The spread of noxious weeds will be reduced Crops:
- Farm operators who implement best practices will increase their profitability and enhance long-term sustainability. Profitability
- 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 Condition Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | 45000               | 0      |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                      |
|---------|-------------------------------------|
| 216     | Integrated Pest Management Systems  |
| 112     | Watershed Protection and Management |
| 205     | Plant Management Systems            |
| 213     | Weeds Affecting Plants              |
| 301     | Reproductive Performance of Animals |

**Outcome #2**

**1. Outcome Measures**

MONTANA BEEF NETWORK: Number of people using and understanding Beef Quality Assurance protocols for raising beef; number of people learning about new practices in livestock production; percent of increase in value of calves sold at weaning; number of people making changes in records keeping; percent of breeding programs meeting the needs of the consumer in terms of quality and yield grade of calves; added value to weaned calves.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 2838   |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

To meet customer and consumer expectations for safe beef and return additional revenue to cattle producers, a systems network approach is necessary to ensure a quality and consistent product is being produced and to ensure quality has been enhanced. Central to this network approach is the exchange of information from the producer to the end user (customer or consumer). Both producers and consumers are keenly aware of the beef related issues and both expect and want a safe and quality product.

**What has been done**

The beef industry suffers enormous loss due to bovine viral diarrhea (BVD) which is spread from persistently infected (PI) cattle. In 2006-07, a BVD-PI Herd Screening process was developed and implemented to isolate the PI cattle so Montana's PI prevalence rate is below regional and national averages. Beef Quality Assurance Education/Certification and Feeder Calf Certification programs continue. Newsletters, TV, Web Sites keep current about animal ID, traceability and age and source verification.

**Results**

In 2007, 69670 cattle enrolled in the BVD-PI Herd Screening project on 238 ranches; 11176 head were actually screened from 76 ranches; 14 PI animals were found on 9 ranches resulting in the isolation of animals that can spread BVD. Over 1300 producers have become BQA Certified since 1999 and over 300,000 calves have been certified that they were raised under BQA guidelines and were age/source verified for the export markets. Certification includes education that meets BQA standards and management protocols. Certification of feeder calves that have met defined management protocols; BQA, BVD, age and source verification has resulted in a \$9.48 per head premium at market time. Feedback from feedlots and packing plants to the cow-calf producers reflects industry standards for quality, consistency and red meat yield. Data show 17% of Montana cattle are too fat or do not have enough muscling.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                      |
|---------|-------------------------------------|
| 301     | Reproductive Performance of Animals |

**Outcome #3**

**1. Outcome Measures**

MONTANA SHEEP INSTITUTE: Number of people who learned about using sheep to control invasive plants; increase in the number of wool pool consolidations; increased number of grazing management programs initiated and monitoring programs developed; increase in the number of wool pools organized and wool delivery/marketing of consolidated pools implemented; number of producers who develop plans to implement technology in their production units; acres of weed infested land controlled by small ruminant grazing; wool from smaller growers prepared and marketed on the international market; producers improving production efficiency of their sheep enterprise.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 1171   |

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The sheep/wool industries have untapped potential when it comes to agriculture production. Sheep are often the most economical and ecologically sound tool available to manage established invasive plants infestations. Sheep/wool producers are generally small and face challenges in marketing their products. When these producers are presented with positive economic alternatives, they are willing to make the effort to prepare smaller volumes of wool for market and generally receive good prices.

**What has been done**

Weed projects involved over 100,000 acres of weed infested range and about 1000 landowners. Twenty-two projects with 35 monitoring sites utilizing 30,000 sheep and goats from 31 sheep producers were conducted. Most of the projects are in the 3rd year of a 5 year grazing protocol. The Eastern Montana Consolidated Wool Pool was formed to provide a way for growers over a large geographical area to combine and package their smaller clips of wool to gain a marketing advantage.

**Results**

Leafy spurge grazing prescriptions are in the final stages of validation. On the monitoring sites, relative utilization of leafy spurge by the sheep/goats was higher than that of the grasses. Studies show the change in composition of forage plots (grass, spurge, forbs) is significant; leafy spurge composition decreased by 7% per year of grazing while the grass component increased by 5%. Initial research indicates that infestations of spotted knapweed and Dalmatian toadflax will have similar results. The Eastern Montana Consolidated Wool Pool project has 7 local pools and coordinates the delivery and marketing of 150,000 pounds of wool from 140 producers which represents 6-7% of the annual wool marketed in Montana. Premiums obtained range from .10 to .50 per pound depending on the quality and can be attributed to both improvements in marketing efficiency and improved quality of wool. In 2007, the best quality line of wool was marketed and shipped directly to China.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area         |
|---------|------------------------|
| 213     | Weeds Affecting Plants |

**Outcome #4****1. Outcome Measures**

WEED CONTROL: Number of people who can identify noxious weeds; number of people who can map their property with a GIS device; number of landowners who can recognize weed problems, determine control techniques and improved their weed control skills; number of acres mapped for weed identification and location; increase in the number of acres being controlled by accepted practices; producers implementing weed management plans/areas on their land; number of integrated pest management techniques put into practice; spread of noxious weeds will be reduced.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 915    |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Noxious weeds are an issue for crop and rangelands alike. Controlling certain weeds presents particularly difficult challenges; Spotted Knapweed, Russian Knapweed, Dalmatian Toadflax and Leafy Spurge to mention some of the worst. Producers are interested in utilizing methods that are efficient yet cost effective. Invasive weeds infect over 8 million acres and continue to spread into healthy range lands of 10-14% per year. Economics demonstrates that it costs more to control weeds after they are established than it does to prevent their invasion

**What has been done**

Sheep/goat grazing, insects, chemical and management efforts are being used to address the noxious weed issue. On the Northern Cheyenne Reservation, a prescribed rehabilitation strategy utilizing improved pasture species and mixes to establish highly competitive and productive grasslands was implemented. Recertification of pesticide users included education on worker protection safety, integrated methods of weed control and weed identification so appropriate chemicals can be administered.

**Results**

Over the past 5 years, seeding projects were implemented on 500 acres of Tribal and allotted lands that were dominated by Russian Knapweed; 120 acres were new projects in 2007. The knapweed was reduced by 95% while production increased. In 2007, 380 acres of fully established improved grasslands were utilized as grass hay. These formerly abandoned fields produced 975,000 pounds of hay or about \$29,000 (\$118 per acre). The restored pastures require 1/3 less herbicide to maintain. The fields now provide substantial production of hay and/or pasture. The fields are now producing lease and/or production income to the owners and lessees. Approximately 6951 private applicators are currently certified, with 111 pesticide education programs held for 2,400 private applicators. A total of 337 recertification credits were given for those programs and 10 pesticide education programs for initial certification were approved

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area           |
|---------|--------------------------|
| 213     | Weeds Affecting Plants   |
| 205     | Plant Management Systems |

**Outcome #5**

**1. Outcome Measures**

CROPS: Producers will understand 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.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 2435   |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The dryland small grain and irrigated farming industry is facing challenges even though there is an up-turn in the price of wheat. Higher fuel, fertilizer, machine inputs as well as sawfly damage and increased irrigation costs require significant management skills. There are many factors not manageable by the producer that have great impact on their production; acres in crop, farm ownership and size, soil moisture and weather conditions to mention a few.

**What has been done**

In conjunction with research, demonstration plots addressing the sawfly problem were established in high grain producing areas and sawfly predators were released and monitored. Traps were set to learn if the Orange Wheat Blossom midge had migrated into high grain production areas. Crop variety trials/plots were established to find varieties best suited for climate, pest resistance and soil nutrients. Producers saw the results of test plots through tours, programs, publications and newsletters.

**Results**

As a general rule, producers are planting a semi solid or solid stemmed variety of wheat (spring and winter) that is resistant to the sawfly. Simply planting a solid stemmed variety can raise the yield by 20 to 50 % in an infested field. Some producers are addressing the sawfly problem by planting other crops (like barley) into highly infested areas. The sawfly is an on-going problem and requires producers to plant higher yielding hollow stemmed varieties. Producers have also learned that planting haybet barley during times of low crop moisture is a profitable decision. As a result of setting traps for the orange Wheat Blossom midge, it was learned that it had not yet infested the high wheat producing areas of the state and remains isolated in the NW corner. Continual monitoring, however, is needed to establish its migration pattern.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                     |
|---------|------------------------------------|
| 205     | Plant Management Systems           |
| 216     | Integrated Pest Management Systems |

**Outcome #6**

**1. Outcome Measures**

MASTER GARDENER: Participants learned about plants and how to grow them successfully; number of volunteer hours of service to their communities in answering questions about horticultural issues.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 216    |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Hundreds of people garden in the spring, summer and fall. They have vegetable and ornamental gardens, trees and shrubs around their homes. These people have questions about their gardens and want reliable information to use when addressing a specific problem or situation. The Master Gardener program trains lay-people in introductory, general horticulture so they can be a resource to people in their communities

**What has been done**

To become a certified Master Gardener, students must attend at least 24 hours of classroom training, successfully complete a comprehensive written examination, and satisfy a volunteer time requirement. With the use of the internet and Adobe Connect, Master Gardener classes were conducted in 13 counties and reservations resulting in 216 people becoming certified.

**Results**

In a survey taken at the end of the classes, 100% of the respondents stated they gained useable knowledge in the area of horticulture that will be useful in their home yard and gardens, 94% plan to use the material they learned in their communities and 95% are likely to volunteer in their communities. A pre-post test was given and compared which indicated that of the number of people tracked, 74 of 76 responding students improved their scores on the post test. In 2007, over 2000 hours of volunteer time was recorded by Master Gardener participants. Examples include: Walk-in plant diagnostic clinics were held in several counties; informational booths were manned by Master Gardeners at local Farmers Markets to answer questions; flower beds and demonstration gardens were designed and planted at public facilities/community garden areas.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area           |
|---------|--------------------------|
| 205     | Plant Management Systems |

**Outcome #7**

**1. Outcome Measures**

PROFITABILITY: Producers will learn about standard financial statements and be able to track machinery costs and fixed/variable costs; number of producers who adopt financial management programs that will provide financial statements for business analysis and bank lending requirements; number of producers who analyze enterprise cost of production to aid in cropping decisions, marketing, leasing, machinery and land purchases.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 132    |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The managers of small grain farms want their operations to be productive and look for tools to evaluate management decisions. Successful producers keep detailed farm/ranch records to track income, expenses, assets, liabilities and inventories which then can be used to generate cost of production information, enterprise analysis, machinery ownership and operating costs. The result is better decision making on business performance, enterprise profitability, marketing and business expansion plans.

**What has been done**

Programs were conducted on basic farm management record keeping so data could be used with the Enterprise Budgeter program (Extension developed software) to analyze costs and returns associated with farm enterprises. Included in the program are direct costs, machinery costs and total enterprise costs associated with farm budget and cropping decisions. Producers have also changed their cropping practices and crop rotations to allow for better management of costs/returns.



**Results**

After analyzing costs/returns, producers have increased no-till or direct seeded acres reducing fuel usage, moisture loss and soil erosion. Fallow acreage was reduced from 40% to 20% of the total cropland acreage. Pulse crop (peas/lentil) acreage has increased as fuel/fertilizer inputs have increased and rotation benefits are realized. Legume crops require no additional nitrogen so a savings on fertilizer costs of \$25 per acre is achieved. Producers are keeping records to determine the effects of changes in crop rotations, machinery purchases, land leasing and land purchases. Producers are considering the profitability of expanding their operations. Using tools provided, they usually make the decision to lease the land, but are likely to negotiate the price per acre so it is profitable. Producers have developed a crop rotation so they can control inputs like herbicides/ fertilizer when profitable.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area           |
|---------|--------------------------|
| 205     | Plant Management Systems |

**Outcome #8**

**1. Outcome Measures**

PASTURE/FORAGE PRODUCTION: Number of producers planting cereal forages as a source for winter feed; number of people certified to use the Nitrate Quik Test Program; number of samples tested and estimated economic impact for producers.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 1648   |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Harvested hay is produced on 2.6 million acres in Montana, with a value of \$378 million annually. Hay and seeded improved pastures are critical components of Montana's \$1.3 billion livestock industry. Winter feed is a major ranch expense, so producers have requested assistance with efficient production of home-grown, high-quality roughages and feeds. Also, in droughty conditions, many forages and weeds tend to accumulate high levels of nitrate that are toxic to livestock.

**What has been done**

In cooperation with the research centers, tests have provided adequate data to promote the use of cereal forages to augment low pasture and hay productivity. Over 56 meetings, tours, trainings and workshops have been held across the state to bring producers information on cereal forage establishment and management, forage seed production, forages in crop rotations, weed control and pasture renovation and re-seeding.

**Results**

Since 2000, the acreage of cereal hay has increased to over 306,000 acres, for a value of about \$23 M annually. A forage wheat variety called 'Willow Creek' was released and seeded on 12,000 acres. Recent feeding trials confirm cereal forages provide a good winter roughage diet along with other advantages of ease, low cost and wide adaptation of cereals. The Nitrate Quik Test Program is an annual training and certification effort to ensure proper use and interpretation of the qualitative nitrate test. Over 110 people in 53 counties have been certified to use the Nitrate Quik Test and county agents have evaluated over 1800 samples. With droughty conditions, 38% of all samples tested had prohibitive levels of nitrate for feeding and over 1/3 of the samples were at toxic levels. According to data that has been collected since 2000, the economic value of nitrate testing is estimated at \$12M (replacement value of high-nitrate hay) to \$39M (potential calf losses to abortion) annually.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area |
|---------|----------------|
|---------|----------------|

**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 etc)

**Brief Explanation**

Since 1998, one of the largest concerns for agricultural producers has been the drought. Many problems seem to magnify under these conditions; pests seem to thrive, weeds seem to grow better, grasses are stressed, crops yields are down.

Agricultural producers, to some extent, are at the mercy of the weather – a factor over which they have no control. In stress times, farm/ranch families rely more heavily on government subsidies than when prices are good. This makes the "new" farm bill of great importance. While prices seem to be good now, farmers/ranchers know that will not be the case long term. The fluctuation in markets, like the weather, are facts of life for people who make their living from the land.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

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

**Evaluation Results****Key Items of Evaluation**

**Program #4**

**V(A). Planned Program (Summary)**

**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%             |                 |                |                |
| <b>Total</b> |  | 100%            |                 |                |                |

**V(C). Planned Program (Inputs)**

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

| Year: 2007    | Extension |      | Research |      |
|---------------|-----------|------|----------|------|
|               | 1862      | 1890 | 1862     | 1890 |
| <b>Plan</b>   | 2.0       | 0.0  | 0.0      | 0.0  |
| <b>Actual</b> | 1.0       | 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    |
| 35827               | 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 |
| 2284                | 0              | 0              | 0              |

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

Many of the issues addressed under this planned program are very personal and sometimes difficult situations. Over the years of seeking stakeholder input and planning effective programs, sequential and long term courses have been most successful. The Alzheimer Mini Series engages families over a 6 week period, the Grandparents Raising Grandchildren support groups meet regularly and are on-going, and Estate Planning has several methods for individual/family study and decision making that leads them to writing a will, establishing a trust or some other document, but these methods generally are planned to take several weeks – even a year to complete. Newsletters, Mont Guides (handouts on a specific item), workshops, conferences, video and web based instruction are all used for delivering subject matter.

**2. Brief description of the target audience**

Most of the programs delivered under this area also target a certain audience; grandparents who are raising grandchildren, families or individuals who have a family member suffering from Alzheimer's or are caring for a family member for some other reason, people who don't already have their estates planned or reservation landowners. Each of these situations is emotionally charged, stressful and difficult to think about – let alone address. Programs must provide a safe environment for people to feel comfortable enough to learn, talk and share.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

|             | <b>Direct Contacts<br/>Adults</b> | <b>Indirect Contacts<br/>Adults</b> | <b>Direct Contacts<br/>Youth</b> | <b>Indirect Contacts<br/>Youth</b> |
|-------------|-----------------------------------|-------------------------------------|----------------------------------|------------------------------------|
| <b>Year</b> | <b>Target</b>                     | <b>Target</b>                       | <b>Target</b>                    | <b>Target</b>                      |
| <b>Plan</b> | 7200                              | 18465                               | 30                               | 250                                |
| 2007        | 3880                              | 3356                                | 35                               | 0                                  |

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

**Patent Applications Submitted**

| <b>Year</b>  | <b>Target</b> |
|--------------|---------------|
| <b>Plan:</b> | 0             |
| 2007 :       | 0             |

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

|             | <b>Extension</b> | <b>Research</b> | <b>Total</b> |
|-------------|------------------|-----------------|--------------|
| <b>Plan</b> |                  |                 |              |
| 2007        | 0                | 0               | 0            |

**V(F). State Defined Outputs**

**Output Target**

**Output #1****Output Measure**

- Alzheimer's Mini Series Conduct one mini series, which is made up of several sessions in the western part of Montana. Based on past experience, 60 people could participate in the sessions.

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 60            | 56            |

**Output #2****Output Measure**

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

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 1700          | 800           |

**Output #3****Output Measure**

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

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 250           | 460           |

**Output #4****Output Measure**

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

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 1000          | 2050          |

**Output #5****Output Measure**

- HOUSING AND HOME ENVIRONMENT: Number of publications/fact sheets distributed. Number of participants attending home environmental workshops/programs. Number of people testing their wells, doing radon tests.

| <b>Year</b> | <b>Target</b>     | <b>Actual</b> |
|-------------|-------------------|---------------|
| 2007        | {No Data Entered} | 2050          |

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

| O No. | OUTCOME NAME  |
|-------|---|
| 1     | <p>SHORT TERM Alzheimer's Mini Series Sixty participants in the Alzheimer's Mini Series will learn about financial planning issues, nutrition, home modifications, and family interactions related to caring for an Alzheimer's patient. Estate Planning, Passing of Tribal Lands, Savings The percent of people who reviewed their property titles and made changes in them, who had an attorney write a will, who reviewed their will and had an attorney update it, who began a gifting program, who made a list of tangible personal property, who reviewed beneficiaries on their life insurance policies, who discussed estate planning with family members, who learned that Montana law would not distribute their property as they desire, who learned that their estate is not large enough that federal estate taxes would apply. Number of participants who attended the educational sessions to learn about AIPRA. Number of feature articles on AIPRA printed in the local newspapers, newsletters and aired over the radio and requests for additional information as a result. Number of tribal members who shared the fact sheets with relatives and talked about estate planning with friends and relatives. Number of parents who open a savings account for their children, discuss saving with family members, and complete a savings goal worksheet. Grandparents Raising Grandchildren Number of grandparents who gain information to assist them in their parenting role, become aware of services available to support them, and learn about methamphetamine and how it affects the user. Home Energy Costs Number of participants who learn common methods to save home energy by applying measures to new or existing homes. Meth Number of participants who learn about the impact meth has on personal health and on a community. Number of participants who are be able to identify signs of meth use and production. Housing and Home Environment Number of participants who learn about environmental health concerns common to new and existing homes – molds, water quality, lead-based paint, radon, etc. Number of people requesting information related to home/environmental concerns. MEDUIM TERM Alzheimer's Mini Series Seventy percent (70%) of the participants will cope with caring for an Alzheimer's patient more effectively. Estate Planning, Passing of Tribal Lands, Savings The percent of people who actually did the list of items under short term (the things they learned about). The percent of people who used POD and TOD designations. Number of people who request a copy of an Informational Title Report from the Bureau of Indian Affairs. The number of people who drew a family generational tree to determine to whom their property will pass upon their death; who wrote a will in their own handwriting, retitled property into joint tenancy with right of survivorship, who decided to establish a life estate, who wrote a will, who talked with an attorney about writing a will, who shared the fact sheets with an immediate family member. The number of people who start saving with a financial institution, open an IRA, 401 k or 403 b plan, and whose children are beginning to save. Grandparents Raising Grandchildren Number of grandparents who begin to use current parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren. Home Energy Costs Number of participants who are using high performance, resource efficient building materials and construction techniques in remodeling and new construction. 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Grandparents Raising Grandchildren Number of grandparents and their families will experience reduced stress and grandchildren will have a safe and nurturing environment in which to grow. Home Energy Costs Number of participants who experience an energy savings due to weatherizing and remodeling of existing homes resulting in an annual 13-65% energy savings per household. Number of participants who increase utilization of the Montana Energy Tax Credit program. Meth The use of meth in Montana will be reduced or eliminated Housing and Home Environment Homes in Montana will routinely be tested/assessed and mitigated for environmental health issues. (molds, radon, asbestos, drinking water, carbon monoxide.)</p> <p>2 ALZHEIMER'S: Number of people enrolled in the Alzheimer's Mini Series to learn about financial planning issues, nutrition, home modifications and family interactions related to caring for an Alzheimer's patient; percent of people that will cope with caring for an Alzheimer's patient more effectively; number of people who feel more comfortable in their care-giving role and have a greater understanding of how they can assist a loved one afflicted with Alzheimer's.</p> |

|          |   |
|----------|---|
| <p>3</p> | <p>GRANDPARENTS RAISING GRANDCHILDREN: Number of grandparents gaining information to assist them in their parenting role and will become aware of services available to support them; number of grandparents who begin to use parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren; number of grandparents and their families experiencing reduced stress and grandchildren have a safe and nurturing environment in which to grow.</p>   |
| <p>4</p> | <p>ESTATE PLANNING, PASSING OF RESERVATION LANDS: The percent of people who reviewed their property titles and made changes in them; who had an attorney write a will; who reviewed their will and hand an attorney update it; who began a gifting program; who made a list of tangible personal property; who reviewed beneficiaries on their life insurance policies; who discussed estate planning with family members; who learned that Montana law would not distribute their property as they desire; who learned that their estate is not large enough that federal estate taxes would apply; number of people who attended sessions on AIPRA; number of feature articles on AIPRA printed in local newspapers, newsletters and aired over the radio and requests for information as a result; number of tribal members who shared the fact sheets with relatives and talked about estate planning with friends and relatives; number of parents who open a savings account for their children, discuss saving with family members and complete a savings foal worksheet; number of people who used POD and TOD designations; number of people who request a copy of an Informational Title Report from the Bureau of Indian Affairs; number of people who drew a family generational tree to determine to whom their property will pass upon their death; who wrote a will in their own handwriting, retitled property into joint tenancy with right of survivorship, who decided to establish a life estate, who wrote a will, who talked with an attorney about writing a will who shared the fact sheets with an immediate family member; number of people who start saving with a financial institution, open an IRA, 401K or 403 b plan and whose children are beginning to save. Farms and ranches are transferred intact without being sold to provide equally to all heirs or to pay death costs. More families will be financially secure at retirement age.</p> |
| <p>5</p> | <p>HOUSING AND ENVIRONMENTAL QUALITY: Number of people who learn about environmental health concerns common to new and existing homes - molds, water quality lead-based paint, radon, etc. Number of people requesting information related to home/environmental concerns; number of people using high performance, resource efficient building materials and construction techniques in remodeling and new construction; number of people who increase their purchase of EnergyStar products and appliances resulting in an energy saving of at least 30% annually per appliance; number of people who test and control home environmental health issues (water, mold, lead-based paint, radon, etc.); number of people who experience an energy savings due to weatherizing and remodeling of existing homes resulting in an annual 13-65% energy savings per household; number of people who increase utilization of the Montana Energy Tax Credit program.</p>  |

**Outcome #1**

**1. Outcome Measures**



SHORT TERM Alzheimer's Mini Series Sixty participants in the Alzheimer's Mini Series will learn about financial planning issues, nutrition, home modifications, and family interactions related to caring for an Alzheimer's patient. Estate Planning, Passing of Tribal Lands, Savings The percent of people who reviewed their property titles and made changes in them, who had an attorney write a will, who reviewed their will and had an attorney update it, who began a gifting program, who made a list of tangible personal property, who reviewed beneficiaries on their life insurance policies, who discussed estate planning with family members, who learned that Montana law would not distribute their property as they desire, who learned that their estate is not large enough that federal estate taxes would apply. Number of participants who attended the educational sessions to learn about AIPRA. Number of feature articles on AIPRA printed in the local newspapers, newsletters and aired over the radio and requests for additional information as a result. Number of tribal members who shared the fact sheets with relatives and talked about estate planning with friends and relatives. Number of parents who open a savings account for their children, discuss saving with family members, and complete a savings goal worksheet. Grandparents Raising Grandchildren Number of grandparents who gain information to assist them in their parenting role, become aware of services available to support them, and learn about methamphetamine and how it affects the user. Home Energy Costs Number of participants who learn common methods to save home energy by applying measures to new or existing homes. Meth Number of participants who learn about the impact meth has on personal health and on a community. Number of participants who are be able to identify signs of meth use and production. Housing and Home Environment Number of participants who learn about environmental health concerns common to new and existing homes – molds, water quality, lead-based paint, radon, etc. Number of people requesting information related to home/environmental concerns. MEDUIM TERM Alzheimer's Mini Series Seventy percent (70%) of the participants will cope with caring for an Alzheimer's patient more effectively. Estate Planning, Passing of Tribal Lands, Savings The percent of people who actually did the list of items under short term (the things they learned about). The percent of people who used POD and TOD designations. Number of people who request a copy of an Informational Title Report from the Bureau of Indian Affairs. The number of people who drew a family generational tree to determine to whom their property will pass upon their death; who wrote a will in their own handwriting, retitled property into joint tenancy with right of survivorship, who decided to establish a life estate, who wrote a will, who talked with an attorney about writing a will, who shared the fact sheets with an immediate family member. The number of people who start saving with a financial institution, open an IRA, 401 k or 403 b plan, and whose children are beginning to save. Grandparents Raising Grandchildren Number of grandparents who begin to use current parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren. Home Energy Costs Number of participants who are using high performance, resource efficient building materials and construction techniques in remodeling and new construction. Number of participants who increase their purchase of EnergyStar products and appliances resulting in an energy saving of at least 30% annually per appliance. Meth Number of participants who become involved in community meth awareness and prevention outreach activities. Housing and Home Environment Number of participants who test and control home environmental health issues (water, mold, lead-based paint, radon, etc.) LONG TERM Alzheimer's Mini Series Participants will feel more comfortable in their care-giving role and will have a greater understanding of how they can assist a loved one afflicted with Alzheimer's. Estate Planning, Passing of Tribal Lands, Savings Farms and ranches will be able to be transferred intact without being sold to provide equally to all heirs of to pay death costs. More Montana families will be financially secure at retirement. Grandparents

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**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | 7200                | 0      |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area   |
|---------|--|
| 802     | Human Development and Family Well-Being  |
| 801     | Individual and Family Resource Management  |
| 804     | Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures |

**Outcome #2**

**1. Outcome Measures**

ALZHEIMER'S: Number of people enrolled in the Alzheimer's Mini Series to learn about financial planning issues, nutrition, home modifications and family interactions related to caring for an Alzheimer's patient; percent of people that will cope with caring for an Alzheimer's patient more effectively; number of people who feel more comfortable in their care-giving role and have a greater understanding of how they can assist a loved one afflicted with Alzheimer's.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 56     |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Currently, over 16,843 people in Montana are diagnosed with Alzheimer's disease. Residents in the 50 Frontier designated counties experience obstacles in accessing care for families coping with Alzheimer's-obstacles include: distance, terrain, climate, lack of provider and fewer available specialty services according to the MT Chapter of the Alzheimer's Association. The fastest growing population is among those over 85, some of whom are not able to live alone and require family assistance.

**What has been done**

Each year, a section of the state is targeted to receive the Alzheimer's Series. Over the past 3 years, 236 people have benefited from the series, 56 southeast Montanans during 2007. A manuscript on the evaluation of the series was accepted for publication in the Journal of Extension. The Powerful Tools for Caregivers course is designed to help the caregiver learn self care so they can provide care - either direct or managed to a loved one.

**Results**

Evaluation information indicates that participants in the series learned financial planning techniques, nutrition, home modifications and family interventions related to caring for an Alzheimer's patient. Reports also show that participants of the mini-series feel more comfortable in their care giving role and have a greater understanding of how they can assist a loved one who is afflicted with Alzheimer's. Because of their experiences with this mini series, 107 participants enrolled in the Powerful Tools for Caregivers course and 16 new class leaders were trained. Participants indicated the following: use action plans learned (78%), used relaxation tools taught (70%), positive self-talk (70%), used I messages (85%), are confident in helping with daily tasks (48%), can cope with the stress (63%), can do something to feel better when feeling discouraged (56%), are confident they can discuss needs and concerns related to care-giving with family members.

**4. Associated Knowledge Areas**

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

**Outcome #3**

**1. Outcome Measures**

GRANDPARENTS RAISING GRANDCHILDREN: Number of grandparents gaining information to assist them in their parenting role and will become aware of services available to support them; number of grandparents who begin to use parenting strategies, prepare nutritious meals for themselves and their grandchildren, seek information to assist with their financial and legal issues related to parenting their grandchildren; number of grandparents and their families experiencing reduced stress and grandchildren have a safe and nurturing environment in which to grow.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 460    |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

According to the Montana Chapter of the Alzheimer's Montana residents have greater obstacles than other areas. Obstacles include: distance, terrain, climate, lack of providers, fewer available specialty services. From 1990-2000, Montana has experienced a 53% increase in the number of grandparents who are responsible for caring for their grandchildren. That means 6,053 grandparents hold primary responsibility for meeting the basic needs of their grandchildren, while 11,098 grandparents live in households with one or more grandchild who is under the age of 18.

**What has been done**

Extension efforts reached 120 people through support group (13) activities and 275 receive a bi-monthly newsletter. Topics found in the newsletters or discussed in support groups include parenting strategies, preparing nutritious meals/snacks, and finding information to assist with financial/legal strains put on by raising a grandchild. An additional 65 grandparents attended a kinship caregiver conference where classes focused on bullying, attachment in children, parenting and services available

**Results**

A retrospective pre-post test was conducted with grandparents who have been attending support groups. Results indicate statistically significant increases in grandparent's: confidence in calling on others when stressed about their family situation, confidence in finding resources in the community to help meet their needs as a grandparent raising a grandchild, better understanding of parenting today, realization that they cannot control the choices of their adult children, and their ability to advocate for their grandchildren at school and with social services

**4. Associated Knowledge Areas**

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

**Outcome #4****1. Outcome Measures**

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

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 1000   |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Few tribal members realize the lack of estate planning can result in further fractionation of their ancestral lands. This means that tribal members may inherit and share undivided interests with hundreds of others. Sometimes, family members with interests cannot be found or agreement for land use cannot be reached. Specifically, agricultural producers are at risk of losing control over use of their land. Some reservation parcel's ownership interests are less than 0.000002% of the total allotment.

**What has been done**

Information explaining tribal land fractionation raises awareness of potential problems. A series of 14 fact sheets highlighting AIPRA(American Indian Probate Act of 2004) were distributed to over 800 people. A series of 13 newspaper articles was printed in 4 reservation newspapers and informational packets were sent on request. Partnerships were formed with ID Reservation - Ft. Hall, MT Reservations - Blackfeet, Fort Peck, Fort Belknap, MSU & U of I departments, and the State Bar of MT.

**Results**

As a result of the efforts targeted at providing information on tribal land fractionation, the Institute for Indian Estate Planning and Probate and the Indian Land Working Group became 'unofficial partners' to reservation/university collaborations. Also, resulting from contacts with the Executive Director of the Montana Wyoming Tribal Leaders Council, 20 copies of the information packet were requested to share with tribes and key staff. The Institute for Indian Estate Planning and Probate and the Wyoming Bar Association has posted the fact sheets on their respective Web sites. Because the program is in the beginning stages, strategies for raising awareness and providing knowledge so people can understand the issue is step one. Estate planning in general continues to be a concern for people in the state. During 2007, 609 estate planning packets were distributed so Montanans could be updated on new state and federal laws.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                            |
|---------|---|
| 801     | Individual and Family Resource Management |

**Outcome #5**

**1. Outcome Measures**

HOUSING AND ENVIRONMENTAL QUALITY: Number of people who learn about environmental health concerns common to new and existing homes - molds, water quality lead-based paint, radon, etc. Number of people requesting information related to home/environmental concerns; number of people using high performance, resource efficient building materials and construction techniques in remodeling and new construction; number of people who increase their purchase of EnergyStar products and appliances resulting in an energy saving of at least 30% annually per appliance; number of people who test and control home environmental health issues (water, mold, lead-based paint, radon, etc.); number of people who experience an energy savings due to weatherizing and remodeling of existing homes resulting in an annual 13-65% energy savings per household; number of people who increase utilization of the Montana Energy Tax Credit program.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 1312   |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Consumers, real estate professionals, county health offices and others report health effects related to home environmental issues. For example, the radon levels rank 3rd highest in the US, asthma has increased, molds have forced homeowners out of their homes and other homes to be destroyed. Other issues include asbestos in vermiculate insulation, drinking water contamination, improperly installed and maintained septic systems, carbon monoxide from faulty heating systems, and lead-based paint

#### What has been done

Low-income weatherization program

1800 home heating systems evaluated for carbon monoxide and other combustion problems. 1600 homes weatherized using Lead-Safe Weatherization work practices

450 homes tested for asbestos in vermiculite prior to assessment for weatherization

Recommendations provided:

Meth clean-up hazards-12

Septic system maintenance/pumping schedules-220

Well maintenance/testing-130

Household hazardous material disposal (batteries, medications, used paint and motor oil, etc)-550

#### Results

Using MSU Extension guidelines, 467 Montana households cleaned their homes for molds and eliminated the source(s) of moisture.

Through MSU and testing partners, 345 Montana households tested their homes for radon with 47 percent of the homes being over the EPA limit. MSU Extension provided mitigation information to these households.

Recommendations resulted in homeowners disposing of hazardous materials using acceptable methods and maintaining their septic systems appropriately.

#### 4. Associated Knowledge Areas

| KA Code | Knowledge Area   |
|---------|--|
| 804     | Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures |

#### V(H). Planned Program (External Factors)

##### External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations

##### Brief Explanation

The onset of diseases such as Alzheimer's is a prime example of a factor over which families/individuals have little or no control, yet must find ways to cope with the inevitable. This is also true for families who find themselves caring for an aging family member who no longer can live alone or for grandchildren who are still dependents. Financial stress is paramount and the slightest change in the economy can be disastrous or beneficial, depending. For some, an unpredictable situation can even bring on housing concerns for which they had not planned. People in these circumstances can find themselves more dependent on government programs and subject to government policies than they ever thought possible

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

##### 1. Evaluation Studies Planned

- After Only (post program)
- Before-After (before and after program)
- During (during program)

##### Evaluation Results

##### Key Items of Evaluation

**Program #5**

**V(A). Planned Program (Summary)**

**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   | 65%             |                 |                |                |
| 723     | Hazards to Human Health and Safety  | 10%             |                 |                |                |
| 803     | Sociological and Technological Change Affecting Individuals, Families and Communities | 5%              |                 |                |                |
| 805     | Community Institutions, Health, and Social Services                                   | 20%             |                 |                |                |
|         | <b>Total</b>  | 100%            |                 |                |                |

**V(C). Planned Program (Inputs)**

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

| Year: 2007    | Extension |      | Research |      |
|---------------|-----------|------|----------|------|
|               | 1862      | 1890 | 1862     | 1890 |
| <b>Plan</b>   | 4.0       | 0.0  | 0.0      | 0.0  |
| <b>Actual</b> | 6.9       | 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    |
| 109012              | 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 |
| 194423              | 0              | 0              | 0              |

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

During 2007, Extension faculty used a variety of methods to engage local citizens in programs that benefit individuals and communities. Meetings to determine what people hold as the vision of their community, whether it be growing or declining in population, were common across the state. Follow up strategies to the visioning exercises include committees of interested and committed local citizens charged with the task to plan "next steps" to move forward. County Economics Development groups (corporations or association), business owners/operators and agencies whose missions include similar goals were key in the development of the committee structures and brought resources to the table. Local citizens are passionate about their communities and bring the enthusiasm necessary to "get the job done". Extension has conducted surveys to determine class offerings for adult education programs. Especially in rural counties, these classes are the best way for residents to equip themselves to do better in their business and personal lives. In some communities, it is the only way people have to keep their skills current without traveling significant distances. This past year, classes were offered in accounting, human resources, marketing, business planning, and computer usage as well as exercise, weight control/diet, and yoga to mention a few. Of these, developing needed computer skills to do a task is by far the most popular.

Informing and educating the public of potential disasters is an on going goal of the EDEN project. Proactive education via mass media, web sites or face to face classes has helped communities become prepared for potential disasters. In 2007, the largest disasters impacting the state were drought and wildfire. Horizons is a community leadership program aimed at helping rural communities of fewer than 5,000 build a comprehensive leadership base that will help communities address poverty. Montana Extension is one of the 8 partner organizations to deliver the Horizons program. Horizons communities, in general, have limited outside resources, and have experienced significant declines in population and income. Twenty-three Montana communities are part of the Horizons program and are found in every part of the state.

**2. Brief description of the target audience**

In 2007, efforts under this program area involved adults motivated to learn new skills, business owners/operators who need to explore technology as a way for expanding/marketing their business or becoming aware of new personal laws, and community leaders who need to become aware of how to address a myriad of issues such as changing population. Collaborations with local economic development councils, chamber of commerce groups, county and state government entities helped further the reach of education.

The Horizons Program specifically, brought existing and new community leaders to the table. Some of these leaders are people who had never been involved in community issues before. The Horizons program targets people who are living below the poverty line as well as the systems and structures that are designed to address issues related to poverty.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

|             | <b>Direct Contacts<br/>Adults</b> | <b>Indirect Contacts<br/>Adults</b> | <b>Direct Contacts<br/>Youth</b> | <b>Indirect Contacts<br/>Youth</b> |
|-------------|-----------------------------------|-------------------------------------|----------------------------------|------------------------------------|
| <b>Year</b> | <b>Target</b>                     | <b>Target</b>                       | <b>Target</b>                    | <b>Target</b>                      |
| <b>Plan</b> | 4933                              | 162200                              | 450                              | 1344                               |
| 2007        | 14357                             | 141711                              | 130                              | 1200                               |

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

**Patent Applications Submitted**

|              |               |
|--------------|---------------|
| <b>Year</b>  | <b>Target</b> |
| <b>Plan:</b> | 0             |
| 2007 :       | 0             |

**Patents listed**



**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

|             | <b>Extension</b> | <b>Research</b> | <b>Total</b> |
|-------------|------------------|-----------------|--------------|
| <b>Plan</b> |                  |                 |              |
| 2007        | 0                | 0               | 0            |

**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.

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 7000          | 9346          |

**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.

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 200           | 875           |

**Output #3**

**Output Measure**

- EDEN:
  - Number of hits on the EDEN WEB Site
  - Number of responses from PSA's to emergency service entities.

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 155000        | 141770        |

**Output #4**

**Output Measure**

- HORIZONS: Number of Study Circle and Leadership Plenty meetings conducted and include people who have not been involved in community problem solving activities in the past

| <b>Year</b> | <b>Target</b>     | <b>Actual</b> |
|-------------|-------------------|---------------|
| 2007        | {No Data Entered} | 1563          |

## V(G). State Defined Outcomes

## V. State Defined Outcomes Table of Content

| O No. | OUTCOME NAME   |
|-------|--|
| 1     | EDEN Short Term: <ul style="list-style-type: none"> <li>• Number of PSA's produced to increase public awareness and knowledge of disasters and increase consumer awareness of local emergency services</li> </ul> Medium Term: <ul style="list-style-type: none"> <li>• The public will understand how they access local emergency services and take steps to prepare for a disaster (number of disaster survival kits made)</li> </ul> Long Term: <ul style="list-style-type: none"> <li>• Reduction of accidents, loss of property and human life due to disasters</li> </ul>  |
| 2     | COMMUNITY RESOURCE DEVELOPMENT Short Term Number of community leaders, agency personnel, organization members and other citizens that will gain an understanding of the value of creating a community development/economic development plan. Medium Term: Number of community leaders, agency personnel, organization membership that will collaborate on economic development strategies. Numbers of communities that will utilize an inclusive process to establish goals and action plans. Long Term 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 Short Term Number of people who gained knowledge through adult education classes Number of participants who tried a new activity as a result of attending a class. Medium Term Number of participants who used a new skill, practice or technique as a result of attending a class.  |
| 4     | HORIZONS: Number of facilitators trained and who have been involved in sessions; number of people involved who have never participated in community planning previously.   |

**Outcome #1**

**1. Outcome Measures**

EDEN Short Term:

- Number of PSA's produced to increase public awareness and knowledge of disasters and increase consumer awareness of local emergency services

Medium Term:

- The public will understand how they access local emergency services and take steps to prepare for a disaster (number of disaster survival kits made)

Long Term:

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

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | 155000              | 141771 |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Recent catastrophic disasters have put emphasis on disaster mitigation, planning and preparedness. Studies show communities benefit with lives saved, decreased levels of damage and smoother recovery when residents know how to respond before, during and after a disaster. With inter/intra state collaborations and interdisciplinary cooperation, Extension people will be prepared to serve people in time of need.

**What has been done**

Emergency personnel participated in 2 week-long disaster exercises, examined preparedness plans for alternative care facilities and practiced helping public agencies with resource allocation. 60 people from 9 counties took the Public Information Officer (PIO) course. They represented agencies, emergency management, public health, law enforcement, hospitals, ambulances, schools, county commissioners, Red Cross. The EDEN web site is a resource for anyone needing information on disaster preparedness

**Results**

All participants in the week-long disaster exercises demonstrated techniques for working with special needs populations, performing patient assessments and evacuation techniques. Skills demonstrated were: unitization of protocols, decision making, agency coordination, resource allocation, utilization of Incident Command System and activation of alternative care sites. Participants enrolled in the PIO course demonstrated the utilization of incident media fact sheets and practiced TV interviews with a newscaster in front of a camera. Based on course evaluations, 90% of the participants plan to use the class information personally as their agency PIO; update their local PIO plan and protocols, and/or train additional people for the PIO role. Other results from Extension efforts include school preparedness and response planning, courthouse emergency protocols and in one county, transitioning to Phase II wireless enhanced 911 phone system which now reaches all county residents

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area  |
|---------|---|
| 608     | Community Resource Planning and Development   |
| 805     | Community Institutions, Health, and Social Services                                   |
| 803     | Sociological and Technological Change Affecting Individuals, Families and Communities |

**Outcome #2**

**1. Outcome Measures**

COMMUNITY RESOURCE DEVELOPMENT Short Term Number of community leaders, agency personnel, organization members and other citizens that will gain an understanding of the value of creating a community development/economic development plan. Medium Term: Number of community leaders, agency personnel, organization membership that will collaborate on economic development strategies. Numbers of communities that will utilize an inclusive process to establish goals and action plans. Long Term Counties will establish and maintain a sustainable population with a viable and diversified economy. Communities will be prepared and able to deal with and direct change so it will reflect its goals, values and vision.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | 7000                | 9346   |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Montana people say they want to improve conditions for their families and communities which is not easy in a large and diverse state. The major initiatives that have been identified through the stakeholder input process include business retention and expansion, tourism and leadership development as well as practicing good governance and community strategic planning to address concerns related to competence of new government employees and volunteers serving on boards, councils and committees.

**What has been done**

An estimated 30 workshops/trainings on practicing good governance have been conducted. Community strategic planning and community visioning programs have also been provided to towns and cities across the state that are working to address population and economic changes. Helping residents develop a common view of the future for their communities is vital to their very existence. While there are several communities engaged in the visioning process, 6 have had on-going efforts and positive results

**Results**

On going visioning programs have powerful results: one community reports wages are increasing as new manufacturing businesses locate to the area and others expand, current unemployment rate of 3.6% is the lowest since the closure of the smelter in 1980, grants have been secured to develop a new industrial and commercial park, parks have been built, trees planted and streets repaired. Leadership/governance education has resulted in new leaders, who are well prepared for their positions, to step forward to serve on county boards and committees. All are working to achieve a desired and agreed upon vision. One town realizes tourism helps to sustain existing businesses and encourage business expansion. As a result of wind energy education, one county erected a 100-ft wind-monitoring tower. The data received caused a wind energy company to do further testing resulting in the development of a wind generation farm with 13 towers generating approximately 20 mw

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                                      |
|---------|---|
| 723     | Hazards to Human Health and Safety                  |
| 608     | Community Resource Planning and Development         |
| 805     | Community Institutions, Health, and Social Services |

**Outcome #3**

**1. Outcome Measures**

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

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | 200                 | 1154   |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Many Montana citizens recognize the value of the internet and other technology in their businesses and personal lives. They note that businesses have been started using the internet for marketing, networking and distribution. E-commerce has opened new opportunities for working from home or a small, isolated community. Especially for people who live in rural Montana, accessing resources to improve skills in areas like technology are often a challenge. They look to MSU Extension for help.

**What has been done**

Classes held in the computer technology area include: menu systems, personal electronic bookkeeping, e-commerce skills, new software options, digital camera usage, computer/net etiquette, phone skills and the use of the world wide web as a way to attract business and market products. Other classes that were most popular were in the area of health, nutrition and fitness.

**Results**

Of the participants enrolled in adult education classes, 278 said they have used the practices they learned in the computer classes. Over 875 participants said they learned new information, especially about computers, tried some of the techniques, but have not put them into everyday practice. Survey data and testimonials indicate that Extension's involvement in Adult Education programs pay off. One person said: 'By using your tip, I probably cut my time in half and I was also more successful than I usually am. I had no clue that there were such simple things I could do to improve my search engine success.' In another county, the world wide web information provided the basis for a new business to start that adds value to forest products. It has 3 employees and plans to double that number within one year. Yet another report indicates that after taking a computer class, several participants enrolled in a computer course at a near by University.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                                      |
|---------|---|
| 805     | Community Institutions, Health, and Social Services |
| 608     | Community Resource Planning and Development         |

**Outcome #4**

**1. Outcome Measures**

HORIZONS: Number of facilitators trained and who have been involved in sessions; number of people involved who have never participated in community planning previously.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 1563   |

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In small, rural areas it is difficult to locate qualified people who are skilled in providing leadership to their communities. Additionally, these types of communities often have limited resources and have been experiencing considerable decline in population and income. Volunteer leadership and people who are not generally engaged or represented in community decision making are significant.

**What has been done**

Through Horizons, 23 communities prepared for and conducted Study Circle events while 18 engaged in the Leadership Plenty process. Study Circles help people talk about the kind of community they want to live in, look at poverty in their community, discuss what it looks like and why it exists and work together to make that vision a reality. Leadership Plenty helps diverse groups in communities work together to solve problems in areas such as leadership.

**Results**

The Study Circle process trained 100 (est) as facilitators and involved more than 1500 people in 5 discussion segments. Communities have been successful in motivating new leaders and addressing poverty issues-42% said they had never attended a leadership program before. The process offered hope of structural and systemic solutions for working together to move from poverty to prosperity. People appreciated being asked to solve their own problems. One person said, 'I learned more in the six weeks of Study Circles than I had learned in 5 years about the community and how things work.' Of the 473 participants in Leadership Plenty activities, 273 completed a post survey which revealed 75% increased their leadership skills, 36% would be active in bringing attention to poverty issues, 37% would actively work on poverty reduction, 57% would become involved in community decision making, 58% would recruit others for leadership roles, and 29% would expand local leadership training.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                              |
|---------|---|
| 608     | Community Resource Planning and Development |

**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**

In 2007, Montana once again faced drought and wildfires in large sections of the state. The dry conditions caused forest lands and range lands alike to be ripe for burning, so agriculture producers to tourism to main streets businesses felt the impact. Additionally, the price of fuel is an important consideration in a rural state like Montana. Everyone must drive some place for goods and services. Farmers/ranchers are especially impacted as they try to control costs of production. Similarly, low income or fixed income people feel the rise in transportation and heating costs as they strive to meet monthly expenses. Shifts in population are causing communities to lose valuable resources or struggle to keep up with infrastructure and housing needs. The eastern part of the state is experiencing significant loss in population while parts of the western section are growing very fast. Public policies like those dealing with land use, water quantity and quality or open space are in constant need of review and revision. Priorities change as the population changes.

**V(l). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Before-After (before and after program)
- During (during program)

**Evaluation Results**

**Key Items of Evaluation**

**Program #6**

**V(A). Planned Program (Summary)**

**1. Name of the Planned Program**

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        | 20%             |                 |                |                |
| 123          | Management and Sustainability of Forest Resources | 20%             |                 |                |                |
| 135          | Aquatic and Terrestrial Wildlife                  | 20%             |                 |                |                |
| 136          | Conservation of Biological Diversity              | 20%             |                 |                |                |
| 605          | Natural Resource and Environmental Economics      | 20%             |                 |                |                |
| <b>Total</b> |   | 100%            |                 |                |                |

**V(C). Planned Program (Inputs)**

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

| Year: 2007    | Extension |      | Research |      |
|---------------|-----------|------|----------|------|
|               | 1862      | 1890 | 1862     | 1890 |
| <b>Plan</b>   | 5.0       | 0.0  | 0.0      | 0.0  |
| <b>Actual</b> | 3.4       | 0.0  | 0.0      | 0.0  |

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

| Extension           |                | Research       |                |
|---------------------|----------------|----------------|----------------|
| Smith-Lever 3b & 3c | 1890 Extension | Hatch          | Evans-Allen    |
| 123239              | 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 |
| 2561                | 0              | 0              | 0              |

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

To address the issues under this planned program area, a number of publications were authored that provided not only information, but also specific instruction for taking action. Videos were also produced as away for people to better understand the issues related to a certain topic. The mass media was also an important method of getting information to the public when considering issues such as the West Nile Virus. Still other issues such as animal feeding operations are very specific to a single operator, so one on one consultation is most appropriate. Collaborations with research, various agencies, commodity organizations and various associations have proven beneficial in program determination and development. For example, cooperators for the West Nile virus surveillance activities included MSU county Extension agents, environmental health specialists, reservation collage instructors, private citizens, mosquito district personnel, county maintenance personnel and commercial pesticide applicators.



**2. Brief description of the target audience**

The audience interested in topics under this program area are not generally those who are "regular" clientele of Extension. Small land owners, for example, could benefit greatly from Extension information but often don't know about this resource. The general public is interested in knowing where West Nile is likely to be a problem. Those with wells are interested in knowing if they are producing water that is safe to drink. At the same time, livestock producers and forest landowners are generally familiar with Extension and are interested in programs like Undaunted Stewardship and Forest Stewardship programs which give them the tools to have a profitable operation while being sensitive to the environment. In some cases, the issues covered are controversial and are emotionally charged.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

|             | <b>Direct Contacts<br/>Adults</b> | <b>Indirect Contacts<br/>Adults</b> | <b>Direct Contacts<br/>Youth</b> | <b>Indirect Contacts<br/>Youth</b> |
|-------------|-----------------------------------|-------------------------------------|----------------------------------|------------------------------------|
| <b>Year</b> | <b>Target</b>                     | <b>Target</b>                       | <b>Target</b>                    | <b>Target</b>                      |
| <b>Plan</b> | 3500                              | 45230                               | 400                              | 400                                |
| 2007        | 7409                              | 10934                               | 200                              | 150                                |

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

**Patent Applications Submitted**

| <b>Year</b>  | <b>Target</b> |
|--------------|---------------|
| <b>Plan:</b> | 0             |
| 2007 :       | 0             |

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

|             | <b>Extension</b> | <b>Research</b> | <b>Total</b> |
|-------------|------------------|-----------------|--------------|
| <b>Plan</b> |                  |                 |              |
| 2007        | 0                | 0               | 0            |

**V(F). State Defined Outputs**

**Output Target**

**Output #1****Output Measure**

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

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 500           | 375           |

**Output #2****Output Measure**

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

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 500           | 0             |

**Output #3****Output Measure**

- III. Environmentally Sensitive Management Systems.
  - Provide one-on-one assistance for developing management plans. (Forestry, Animal Feeding Operations, etc.) Number of consultations. Number of demonstrations of sprayer calibrations, GPS usage, and other technical practices that provide environmental protection.

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 500           | 0             |

**Output #4****Output Measure**

- IV. Wildlife Interface - Ground Squirrel Control
  - Numbers of people who attend workshops, meetings, agent training, tours and demonstrations
  - Numbers of people who request information as a result of reading a newspaper article.
  - Numbers of people who request a MontGuide (fact sheet) or other publications on ground squirrels.

| <b>Year</b> | <b>Target</b> | <b>Actual</b> |
|-------------|---------------|---------------|
| 2007        | 2000          | 0             |

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

| O No. | OUTCOME NAME   |
|-------|--|
| 1     | <p>SHORT TERM Forestry</p> <ul style="list-style-type: none"> <li>• Participants will learn the necessary steps for selling timber and what resources are available to them for assistance.</li> <li>• Attendees will receive information they can use to meet their individual forest stewardship objectives. Small Acreages</li> <li>• Producers and small acreage landowners will become aware of insect, weed and disease infestations as they are developing so they can make management decisions in a timely manner.</li> <li>• Applicators will learn the risks associated with applying pesticides and safety precautions recommended to mitigate those risks, while at the same time, learn techniques in applying chemical appropriately.</li> <li>• Producers will learn to use the GPS in locating weed or other problem areas. Environmentally Sensitive Management Systems</li> <li>• Producers will understand the current rules and regulations relative to animal feeding operations and how to evaluate their own operation. This also applies to forestry plans, grazing land plans and any other plans appropriate to the individual operation.</li> <li>• Producers will learn to identify and manage their particular IPM issue or natural resource concern. Wildlife Interface - Ground Squirrel Control</li> <li>• Number of forage producers and landowners who learn how to determine the economic impact of ground squirrels.</li> <li>• Percent of forage producers participants who learn proper timing and implementation of control techniques and methods appropriate to their operations. MEDUIM TERM</li> <li>• Landowners will develop a plan and implement activities that will enhance the sustainability of their forests.</li> <li>• Landowners will implement activities their individual stewardship objectives. Forestry</li> <li>• Landowners will develop a plan and implement activities that will enhance the sustainability of their forests.</li> <li>• Landowners will implement activities their individual stewardship objectives. Small Acreages</li> <li>• Landowners will implement best management practices in addressing weed issues.</li> <li>• Number of producers/small landowners who have adopted weed, crop, pest and forage management strategies. Environmentally Sensitive Management Systems</li> <li>• Producers/Landowners will adopt practices outlined in their CNMP plans. (applies to other planning efforts)</li> <li>• Producers/landowners will adopt practices that will address their specific IPM problem. Wildlife Interface - Ground Squirrel Control</li> <li>• Number of forage producers who implement practices which effectively reduce or eliminate ground squirrel damage to their forage crops. Long Term:</li> <li>• The number of dollars saved from damage by ground squirrels to forage crops.</li> <li>• Rangeland forage will improve, soils will be protected, run-off will be reduced, and potential hazards from ground squirrel holes will be reduced. LONG TERM Forestry</li> <li>• Montana's private landowners will be managing their forests to meet their individual stewardship objectives and so the forests lands continue to provide environmental, economic and social benefits to Montana citizens. Small Acreages</li> <li>• Local landowners will become more profitable while protecting the environment. Environmentally Sensitive Management Systems</li> <li>• All operations that develop and implement a CNMP protect ground and surface water, apply manure at agronomic rates, and utilize technologies that allow them to better operate and/or monitor their operation. All operations will remain economically viable and environmentally friendly.</li> </ul> |

|   |  |
|---|--|
| 2 | <p>FORESTRY: Participants will learn steps for selling timber and what resources are available to them for assistance; receive information they can use to meet their individual forest stewardship objectives; develop a plan and implement activities that will enhance the sustainability of their forests; will manage their forests to meet their objectives and so the forests lands continue to provide environmental, economic and social benefits to all.</p> |
| 3 | <p>SMALL ACREAGE LAND OWNERS: Small acreage owners will become aware of insect, weed and disease infestations as they are developing so they can make management decisions in a timely manner; implement 'best' management practices in addressing weed issues; adopt weed, crop, pest and forage management strategies appropriate to their property; small acreages will become more profitable while protecting the environment.</p>                                |
| 4 | <p>RANGELAND/PASTURE MANAGEMENT: Number of ranches certified as Undaunted Land Stewardship; number of acres involved in land stewardship program; number of changes in grazing management and resources monitoring practices; visitor feedback.</p>  |
| 5 | <p>WATER QUALITY: Number of people who have tested their wells and received the interpretation for the test; number of people who have made changes resulting from the test; number of people who have a better understanding of the Coal Bed Methane issue and feel better about making informed decisions or forming opinions.</p>   |
| 6 | <p>PEST MANAGEMENT: Applicators will learn the erisks associated with applying pesticides and safety precautions recommended to mitigate those risks; learn rechniques in applying chemical appropriately, use GPS in locating weed or other problem areas; learn to identify and manage their particular IPM issue or natural resource concern; will adopt practices that will address specific IPM problem.</p>  |
| 7 | <p>ENVIRONMENTALLY SENSITIVE MANGEMENT SYSTEMS:</p>  |

**Outcome #1**

**1. Outcome Measures**

## SHORT TERM Forestry

- Participants will learn the necessary steps for selling timber and what resources are available to them for assistance.
- Attendees will receive information they can use to meet their individual forest stewardship objectives. Small Acreages
- Producers and small acreage landowners will become aware of insect, weed and disease infestations as they are developing so they can make management decisions in a timely manner.
- Applicators will learn the risks associated with applying pesticides and safety precautions recommended to mitigate those risks, while at the same time, learn techniques in applying chemical appropriately.
- Producers will learn to use the GPS in locating weed or other problem areas. Environmentally Sensitive Management Systems
- Producers will understand the current rules and regulations relative to animal feeding operations and how to evaluate their own operation. This also applies to forestry plans, grazing land plans and any other plans appropriate to the individual operation.
- Producers will learn to identify and manage their particular IPM issue or natural resource concern. Wildlife Interface - Ground Squirrel Control
- Number of forage producers and landowners who learn how to determine the economic impact of ground squirrels.
- Percent of forage producers participants who learn proper timing and implementation of control techniques and methods appropriate to their operations. MEDUIM TERM
- Landowners will develop a plan and implement activities that will enhance the sustainability of their forests.
- Landowners will implement activities their individual stewardship objectives.

## Forestry

- Landowners will develop a plan and implement activities that will enhance the sustainability of their forests.
- Landowners will implement activities their individual stewardship objectives.

## Small Acreages

- Landowners will implement best management practices in addressing weed issues.
- Number of producers/small landowners who have adopted weed, crop, pest and forage management strategies. Environmentally Sensitive Management Systems
- Producers/Landowners will adopt practices outlined in their CNMP plans. (applies to other planning efforts)
- Producers/landowners will adopt practices that will address their specific IPM problem. Wildlife Interface - Ground Squirrel Control
- Number of forage producers who implement practices which effectively reduce or eliminate ground squirrel damage to their forage crops. Long Term:
- The number of dollars saved from damage by ground squirrels to forage crops.
- Rangeland forage will improve, soils will be protected, run-off will be reduced, and potential hazards from ground squirrel holes will be reduced.

## LONG TERM Forestry

- Montana's private landowners will be managing their forests to meet their individual stewardship objectives and so the forests lands continue to provide environmental, economic and social benefits to Montana citizens. Small Acreages

- Local landowners will become more profitable while protecting the environment. Environmentally Sensitive Management Systems
- All operations that develop and implement a CNMP protect ground and surface water, apply manure at agronomic rates, and utilize technologies that allow them to better operate and/or monitor their operation. All operations will remain economically viable and environmentally friendly.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | 4000                | 0      |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                                    |
|---------|---|
| 136     | Conservation of Biological Diversity              |
| 135     | Aquatic and Terrestrial Wildlife                  |
| 102     | Soil, Plant, Water, Nutrient Relationships        |
| 605     | Natural Resource and Environmental Economics      |
| 123     | Management and Sustainability of Forest Resources |

**Outcome #2**

**1. Outcome Measures**

FORESTRY: Participants will learn steps for selling timber and what resources are available to them for assistance; receive information they can use to meet their individual forest stewardship objectives; develop a plan and implement activities that will enhance the sustainability of their forests; will manage their forests to meet their objectives and so the forests lands continue to provide environmental, economic and social benefits to all.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 375    |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Forests are an important resource because they provide things like clean water, timber products/sales, recreation, and wildlife habitat. In many cases however, forests need management in order to provide these benefits. A written forest management plan will provide the blueprint for landowners to manage their property appropriately and obtain the goals they have established

**What has been done**

Three programs offer forest owners opportunities to learn or update information they need to manage their properties. The Montana Forest Stewardship program helps non-industrial private forest landowners develop a forest management plan. The Master Forest Stewardship program offers in-depth information on specific topics related to forest management. The Forestry Mini-College provides a mechanism for landowners to stay updated on current issues and trends related to the forest industry

**Results**

In 2007, 12 plans were reverified for 3,000 acres. Over 135 people attended the Forestry Mini-College to stay current on forestry issues such as conservation easements, noxious weed control in forests, laws & rules related to forestry, obtaining healthy grasses in forested areas, computer applications in forest stewardship, forest health - insects/disease, and logging systems. In order to become certified as a Master Forest Steward, participants must complete 7 core and 3 elective in-depth courses. Forty people took courses to become certified. Core courses are Forest Stewardship Planning Workshop, Wildfire Hazard Reduction, Insect/Disease ID and Management, Understory Plant/Range ID and Management, Noxious Weed Management, Harvesting practices/sales, Estate Planning, Wildlife Habitat ID and Management. Elective Courses are Riparian Area Assessment, Road Assessment/Design, GPS Applications, Soil Evaluation/Protection, logging equipment, Wildfire Restoration and Business Management

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                                    |
|---------|---|
| 605     | Natural Resource and Environmental Economics      |
| 123     | Management and Sustainability of Forest Resources |

**Outcome #3**

**1. Outcome Measures**

SMALL ACREAGE LAND OWNERS: Small acreage owners will become aware of insect, weed and disease infestations as they are developing so they can make management decisions in a timely manner; implement 'best' management practices in addressing weed issues; adopt weed, crop, pest and forage management strategies appropriate to their property; small acreages will become more profitable while protecting the environment.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 300    |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Thousands of acres of former ranch, farm or wilderness are being subdivided into small acreage parcels. As this occurs, the number of landowners grows with people who often lack knowledge and skills to manage land while preserving the natural resources. Soil erosion, overgrazing, water contamination/waste, decreased/fragmented wildlife habitat, noxious weed infestations, poor domesticated animal health, air quality issues, pesticide overuse, riparian area issues are problems that can result.



**What has been done**

Workshops and educational programs targeted at the small land owner audience are a continual effort. However, the first edition of Big Sky Small Acres was published in December 2007 and subscriptions quickly reached 30 in less than a month.

**Results**

From both the workshops and educational programs, small land owners have learned what steps to take to manage their land so it is a healthy environment for their animals while still being environmentally sensitive. The subscribers to the Big Sky Small Acres magazine learned how to winterize irrigation systems (lawn or larger), identify and control noxious weeds, manage livestock on small acreages, and the importance of water and how to protect it

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                               |
|---------|--|
| 102     | Soil, Plant, Water, Nutrient Relationships   |
| 605     | Natural Resource and Environmental Economics |

**Outcome #4****1. Outcome Measures**

RANGELAND/PASTURE MANAGEMENT: Number of ranches certified as Undaunted Land Stewardship; number of acres involved in land stewardship program; number of changes in grazing management and resources monitoring practices; visitor feedback.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 0      |

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The economic sustainability of farms/ranches is necessary to preserve the open space, natural environment and historical sites found on private agricultural lands. Technical assistance to farm/ranch operations wishing to establish or expand tourist related enterprises has been requested by producers as a value added option. Urban audiences need to be informed that environmental stewardship and Montana agriculture can be compatible.

**What has been done**

The Undaunted Land Steward Certification program educates landowners to make better resource management decisions as they develop or refine ranch management plans. Interpretive displays at historical sites, PSAs and news features on radio/television, camps, workshops, magazines and newspapers are methods used to inform city dwellers about the compatibility of agriculture and the environment. Producers could do business plans for developing or expanding a tourist based component to their ranch.

**Results**

Fifty-three ranches have been certified as Undaunted Land Stewards, comprising more than 1.25 M acres. Another 39 ranches are progressing toward certification. All 53 certified ranches implemented at least one change in their grazing management and/or resource monitoring practices as a result of the certification process. Eleven historical sites on private agricultural lands have been preserved and historical interpretation and public access to these 11 sites has been provided. Visitor interviews at the interpretive sites indicate they modify their opinions about ranching and livestock grazing after viewing the exhibits. Visitor-use surveys estimate more than 6,000 people have visited the interpretive sites. The public education campaign via mass media has involved every major television and radio station and articles have appeared in every major newspaper and several popular magazines. Fourteen ranch businesses have added or expanded a recreational enterprise.

**4. Associated Knowledge Areas**

| <b>KA Code</b> | <b>Knowledge Area</b>                        |
|----------------|--|
| 605            | Natural Resource and Environmental Economics |

**Outcome #5****1. Outcome Measures**

WATER QUALITY: Number of people who have tested their wells and received the interpretation for the test; number of people who have made changes resulting from the test; number of people who have a better understanding of the Coal Bed Methane issue and feel better about making informed decisions or forming opinions.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

| <b>Year</b> | <b>Quantitative Target</b> | <b>Actual</b> |
|-------------|----------------------------|---------------|
| 2007        | {No Data Entered}          | 275           |

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Publicity has raised the awareness of and concerns about the safety of the water people are drinking. Specifically, arsenic and nitrates have been noted as being in potentially dangerous levels. There have been many inquiries on 'how safe is my well water?' Additionally, landowners are concerned about the impact of Coal Bed Methane developments on their property and that of their neighbors. Knowing 'what to believe' from all the information available is a big issue

**What has been done**

The Well Educated program analyzes well water and interprets the resulting report. Tests include physical properties, inorganic, metals, and microbiological areas. A manual called Land and Water Inventory Guide for Landowners in Areas of Coal Bed Methane Development gives instruction for gathering baseline data and developing a monitoring system for CBM areas. A documentary was produced describing issues related to CBM development; Prairies & Pipelines: Issues in Coal Bed Methane Development

**Results**

Survey data indicate 98% of the 275 participants in the Well Educated program better understand the importance of regular testing. Participants indicate the interpretations of the test results are helpful and have made decisions based on the data. Survey results from 27 landowners who used the inventory guide on CBM show 64% collected baseline soil, water or vegetation data; 58% implemented a monitoring program on their property, 25% began photo-monitoring; 73% felt better prepared for negotiating agreements with development companies; 100% recommended the manual to others. Impacts of the documentary on viewers were assessed by distributing the video and a mail survey to 360 individuals living in CBM areas. Data indicated prior to viewing the video, 83% were 'familiar' with CBM development; after viewing the video, 87% indicated their knowledge of social issues associated with CBM development had 'changed' and 86 % indicated their knowledge of soil and water issues had 'changed'.

**4. Associated Knowledge Areas**

| <b>KA Code</b> | <b>Knowledge Area</b>                        |
|----------------|--|
| 605            | Natural Resource and Environmental Economics |
| 102            | Soil, Plant, Water, Nutrient Relationships   |

**Outcome #6****1. Outcome Measures**

PEST MANAGEMENT: Applicators will learn the risks associated with applying pesticides and safety precautions recommended to mitigate those risks; learn techniques in applying chemical appropriately, use GPS in locating weed or other problem areas; learn to identify and manage their particular IPM issue or natural resource concern; will adopt practices that will address specific IPM problem.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 5409   |

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Each year presents pest and disease challenges for producers and homeowners as they work toward growing profitable crops or healthy lawns/gardens. Problems must be identified and followed by recommendations for treatment before they can be addressed. Another concern for the public is the West Nile virus. People wonder if it will be prevalent in their area and if so, what can they do to guard against becoming infected

**What has been done**

The diagnostic lab processed 749 plant submissions from noncommercial entities and 478 samples for insect diagnosis with 472 client responses. The clinic processed 1436 samples for the MT State Department of Agriculture. Recommendations were made to address the identified/isolated problems. There were 43 trap sites for West Nile virus surveillance set to capture mosquitoes. By learning the infection rates in mosquitoes, areas of the state likely to have high WNV involvement were identified

**Results**

Producers of sugarbeets, potatoes and small grains were able to address diseases in their crops and in most cases, early enough to prevent significant yield losses. For example, Sugarbeet Cercospora leaf spot affected approximately 60,000 acres of production. Use of a weather monitoring program and disease prediction software by sugarbeet companies resulted in a reduction of 60,000 acres of fungicide application. Selection of fungicide requires annual testing to be effective. An alarming number of vector mosquitoes with a high infection rate were captured in several of the surveillance sites. (13 per 1000 mosquitoes->4 are considered a potential public health threat) The surveillance data provided time to inform residents, tourists and mosquito control districts of the occurrence of the virus activity in certain areas of the state via radio and TV PSAs, feature news articles. Although communication efforts extended statewide, 201 humans were diagnosed with WNV with 4 deaths.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                               |
|---------|--|
| 605     | Natural Resource and Environmental Economics |

**Outcome #7**

**1. Outcome Measures**

ENVIRONMENTALLY SENSITIVE MANGEMENT SYSTEMS:

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

| Year | Quantitative Target | Actual |
|------|---------------------|--------|
| 2007 | {No Data Entered}   | 300    |

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Compliance to federal regulations is important to operators of AFO/CAFOs. Tools and resource information are needed in order to complete permit applications, develop/implement management plans and maintain appropriate records. For non-permitted operations and small acreage animal owners, information defined in the Nonpoint Source Plan needs to be understood. Technical assistance requests indicate needs in manure application recommendations, assistance in permitting and nutrient management plans

**What has been done**

Three publications were written on handling of manure in specific situations and one on nutrient management planning. A web site was developed on agro-security/agro-emergency. A video was produced on AFO/CAFO for MSU Water Center and for other training efforts. Presentations, workshops and trainings have been conducted for commodity groups and operators and for small land owners on stocking rates of horses, sheep and exotics as well as manure management and small pasture management.

**Results**

Information has helped producers keep required records to meet DEQ regulations for manure exports from AFOs and to reduce their liability should pollution result from the improper use of the manure. Information on obtaining a manure analysis was provided to operators along with recommendations for acceptable application practices. While only 1 site visit has been conducted, it is representative of future assistance for producers as the program is developed by a new specialist. A producer developed a 1000 head back-grounding lot and was given assistance in the permitting process which included obtaining engineer assistance for a run-off structure and writing the land/nutrient management plan. Studies indicate this assistance has saved the producer nearly \$7000. While data is not yet available, this operation is expected to be able to offset the purchase of more than 30,000# of commercial nitrogen fertilizer. At 150# nitrogen per acre, this could fertilize over 150 acres of hay land.

**4. Associated Knowledge Areas**

| KA Code | Knowledge Area                               |
|---------|--|
| 605     | Natural Resource and Environmental Economics |

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

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

**Brief Explanation**

In 2007, the weather had a significant role in program determination and development for natural resources and the environment. Hot, dry conditions in a large part of the state put stresses on crops and pastures in small or large acreages and wildfires were prevalent in forest and grass lands. Weeds and pests were able to expand under these stressful conditions. Public policy, public priorities and economic gains have impacted the Coal Bed Methane issue. It is a controversial problem that is emotionally charged yet most people want information they can trust and believe as they form opinions and/or make decisions. The forestry industry is also challenged by governmental and public policy regulation

## **V(l). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study

### **Evaluation Results**

### **Key Items of Evaluation**