



April 4, 2006

The 2005 Montana State University Extension Annual Report exemplifies the breadth and depth of Extension programming across the state and fulfills the Land Grant University mission of “taking the University to the people.” 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. This report highlights the results of such efforts and activities.

Congress created the Extension system nearly a century ago to address almost exclusively rural, agricultural issues. And while fewer Americans farm for a living today, MSU Extension still plays an important role in American life -- rural, urban and suburban. Individual Montanans take advantage of a wide range of opportunities to be a positive force for change in their own lives, and in their families and their communities, with support from the unbiased, research-based resources they receive from Extension faculty and staff. While certainly the delivery methods have changed over the years, the focus on people and communities has not.

As the goal statements throughout this annual report attest, the challenges and opportunities in Montana today are endless. From competing in a “global agricultural economy” to a “healthy, well-nourished population,” the needs across the state are evident by the response of Extension programming. This last year, Extension received additional funding to: add a Beef Cattle Specialist position to address the critical needs of animal identification, beef nutrition and reproduction and profitability; add a Cropping Systems Specialist to focus on traditional crop rotations, pulse crops and organic farming; and to secure a county Extension agent position for Meagher County. These positions will assist in providing additional educational programming across the state.

Finally, this report reflects countless hours of input by volunteers and advisory committees that provide direction and focus to programming efforts. A statewide network of 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 2005, it does adequately portray the dedicated and talented individuals who are the driving force of Extension. These pages represent not just a variety of program areas, but also a thoughtful response by faculty, staff, volunteers and partners to address critical issues in Montana today.

Sincerely,

A handwritten signature in black ink that reads 'Douglas L. Steele'.

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Mountains & Minds

GOAL 1: AN AGRICULTURAL SYSTEM THAT IS HIGHLY COMPETITIVE IN THE GLOBAL ECONOMY.

Overview:

The changes in Montana's profile is making it more difficult for families involved in production agriculture to keep their business profitable, yet agriculture remains the most significant economic basis in the state with a net farm income of over \$721 million dollars. Producers have become increasingly aware of the need to analyze their specific situations so they can make decisions that will keep their operations viable. They have learned that education is one of the most important elements they turn to for help and Extension is the best source of that information. Publications, workshops, on-farm consultations, field trials and many other methods are used to reach farm and ranch families with research based information that can help them with their day-to-day business decisions.

According to Annual Report data, 16,173 people have participated in one or more programs that fall under this goal and of those, 6,954 indicated they have adopted one or more of the practices they learned in these programs. Approximately 5 FTE's are devoted to the development and delivery the wide variety of programs.

Key Theme: Agriculture Profitability and Competitiveness

Brief Description:

Many programs have been developed and delivered under this one key theme. They range from the Montana Beef Network to lawn, garden and horticulture issues. In this report, programs are separated by issue:

Montana Beef Network:

The beef industry, representing a \$1.3 Billion dollar revenue stream, has become more consumer-focused and as a result, specific quality and consistency targets have been established in all segments of the industry. To meet customer and consumer expectations for safe beef and return additional revenue to cattle producers, a systems network is necessary to ensure that a quality and consistent product is being produced and ensure that quality has been enhanced. Central to this networking approach is the exchange of information from the producer to the end user (customer or consumer). This systems approach for information transfer is the foundation of the Montana Beef Network. There are three goals emphasized by the program. 1.) to provide educational programs aimed at meeting beef quality assurance standards, production and marketing goals and additional educational programs through interactive-video conferencing, 2.) certification of feeder calves that have met defined health management protocols, and 3.) information feedback from the feedlot and packing plant to the cow-calf producers showing if the feeder calves met industry requirements for quality, safety and red meat yield.

Impacts:

- Montana Beef Quality Assurance Training. The third version of the BQA Training Manual is available with updated and advanced information. Over 800 Montanan's are

now BQA certified.

- Interactive Television Short Courses. Four courses were offered in 2005. Participants learned at Animal Identification and Country of Origin Labeling, How to Get Ready for the Breeding Season, How to Compete? And weaning nutrition and prevention of morbidity in freshly weaned calves.
- Montana Livestock Forum and Nutrition Conference. Participants learned about industry market issues and how to understand the industry' to challenges.
- Web Pages: Extensive information about the beef industry and the Montana Beef Network is available to the public on the web site.
- Cattle Certification and Tracking: BQA certified producers interested in the quality data of their calves enroll in the Montana Beef Network to tag their cattle with an electronic identification tag that allows the program to track the cattle and collect feed yard and carcass data. The goal is to provide data to producers that will help them in making herd management decisions. The Montana Beef Network tagged over 54,500 calves and cows for 185 producers during the 2005-2006 production year. The network continues to use eMERGE Interactive for data collection, data management and report generation services. The service provides secure internet access by the livestock producer to the data anytime. To date, 140,000 calves have been tagged. With feedlots and packers demanding age and source verified calves, it is expected the program will continue to grow. Anecdotal data from this past year suggested that MBN garnered premiums of approximately \$25 per head, totaling approximately 3.5 million dollars in increased revenues.
- Market driven source and age verification programs have increased the demand for Montana Beef Network services. Producers attempting to qualify their cattle for international (Japan and South Korea) and domestic (McDonald's and Wal-Mart) markets have turned to the Network for tags, data management, and third party validation services. The Network responded to the need by offering tags and data management at \$3 per head for source and age verification, while the fee for animal tracking and carcass data was raised to \$5 per head.
- Eight percent (80%) of the producers who participated in the Montana Beef Network in 2004-05 received some carcass data. Fifty-seven (57%) of the calf data was received. The Network continues to be challenged by the lack of cooperation by feeders and the different technologies employed across the industry, though data collection improved once Montana Beef Network staff at MSU assumed responsibility for communicating with producers, feeders, and data collectors. The change consolidated the ranch data collection aspects of the Network with a goal of achieving better communication with producers and better rate of return for carcass data.
- On one of the reservations, Trichimonas foetus (a reproductive disease causing early term abortions and extremely high open cow rates. With the help of Chief Dull Knife College, a grant was received and 100% of the herd was tested. As a result, 1200 open cows were sold as non-producers, saving an estimated \$204,000 in wasted winter feed costs. More importantly, they were not on the reservation to harbor the disease. None of the bulls tested positive for this disease, indicating producers have adopted the recommended procedures for healthy herd management and betterment.

Source of Funds:

Federal Smith Lever, State and County, Grants from private and public sources, and user fees

Scope of Program:

Statewide

Cropping:

Producers continue to intensify their crop rotations and crop diversity. As fuel and fertilizer prices increase and commodity prices remain low, producers are searching for profitable rotations. In 2005, approximately 80% of the cropland acres were planted to small grains and rotational crops such as oilseeds and legumes. The rotational crops represent approximately 26% of the planted acreage. As producers intensify their farm operations by moving into reduced tillage programs and annual cropping, problems arise with pest management and timeliness of operations. Producers are adopting rotational crops as a means of diversification, reducing pest problems and increasing net farm income. Field days, farm tours and producer meetings focus on the challenges associated with developing cropping systems that include rotational crops including agronomic practices, economic profitability and marketing considerations.

Impacts:

- Producers have learned about the problems associated with small grain monoculture, primarily weed and disease pressure. They have gained knowledge and skills in implementing a cropping system and actual production of rotational crops. Producers are better able to utilize farm equipment and reduce workloads while increasing farm output and net farm income.
- Producers have been able to increase farm production of both small grains and rotational crops because of the information they received through Extension programs. They are using farm machinery and labor more efficiently which has allowed some of them to expand their operations and increase their net income. There has been less soil erosion and improved soil quality due to an increase in soil carbon from reduced tillage operations. Pest pressure and fertility requirements have declined with adoption of crop rotations, especially legumes.
- Producers have realized an increase in net farm income by intensifying their cropping systems. They have seen an overall reduction in pesticide and fertilizer use and there has been a reduction in soil erosion and improved soil and crop quality.

Source of Funds:

Federal Smith Lever, State and County

Scope of Program:

Statewide

Montana Sheep Institute:

The Montana Sheep Institute has three goals which are to: 1) improve the profitability and competitiveness of the Montana Sheep Industry; 2) create more opportunity for rural

Montana families; and 3) land managers can use sheep as a weed control tool.

Impacts:

Marketing

- Because of their small size and distance to a suitable market, marketing options for wool growers are limited or non-existent. In 24 Northeastern and 12 Western Counties there were 200 sheep producers with 250,000 pounds of wool. Half of the producers had less than 2 bales of wool. As a result of Extension education and coordination, growers received a premium of about 25 cents per pound for their wool. The cost of the program is \$.07 per pound of wool. In 2004, the bulk of the wool marketed through this program was exported to China and Taiwan.
For example:
- Because of the education received through Extension programs, producers indicate they understand more clearly the wool quality in their flocks. Generally, producers have learned that consolidating with others improves their ability to increase net revenue over previous wool pool or independent marketing activities. This was verified by the fact that producers are willing to pay \$.07 a pound to participate in the consolidated wool pool in the future (\$.04 warehousing and \$.03 for trucking and handling).
- Buyers have indicated having wool core tested enables them to bid a higher price because they know exactly what they are getting. Also, because of Extension education, producers understand the importance of grading and core testing the wool so they are doing a better job of sorting and packaging their wool. More wool bales are delivered meeting the 350 pound minimum and in nylon bags. All of these efforts make for better marketing options.
- The consolidation of 7 wool pools in Eastern Montana has increased the ability to sort the wool into quality lines and increased the total volume of wool for sale, which attracts the interest of more buyers than a small pool could alone. The total volume of wool sold by the Montana Dakota Woolgrowers Association increased by approximately 7,000 pounds. All of these attributes have resulted in a net increase in revenue for participating producers.

Weed Control:

- Encroachment of non-native plants is the single most serious threat to natural habitats in the West. Invasive plants such as leafy spurge and spotted knapweed infest millions of acres of farm and public land. Seventeen million acres of public rangelands in the Eastern US are contaminated with noxious weeds. An additional 4,600 acres of public land becomes infested each day. The cost of chemical control can exceed the original cost of the land. Sheep are often the most economical and ecologically sound tool available to manage established leafy spurge infestations. Weed projects directly involved over 100,000 acres of weed infested Montana rangeland and about 1000 landowners. There are 31 monitoring sites using 30,000 sheep and goats from 31 producers grazing on these 100,000 acres of noxious weeds (Leafy Spurge, Spotted Knapweed, and Dalmation Toadflax). Data from 8 of the sites indicate that leafy spurge has decreased while grass increased at all but one of the locations. As a general rule, leafy spurge composition decreased about 9% while the grass component of the

landscape increased by 10%.

For example:

- The use of sheep to manage noxious weeds is proving an excellent choice for producers. One landowner in Granite County has reported excellent results with a reduction in spotted knapweed infestations while generating a cash crop of lambs through the process. This project has eliminated approximately \$11,000 in annual herbicide costs for this producer, while providing an added revenue through the sale of lambs and wool.
- Long term projects, such as the one in Powder River/Custer Counties, has been going over 5 years with 1,800 head of sheep grazing 1,275,000 acres. Fifty-five landowners, the Department of Natural Resources and the Bureau of Land Management are all involved and have adopted practices which have controlled 4,500 acres annually with sheep grazing, 3,600 acres of spurge with spray. They have also established 40 insect sites as yet another method of addressing the noxious weeds on their operations.

Source of Funds:

Federal Smith Lever, State, County and Grants (public)

Scope of Program:

Statewide, Montana and North Dakota

Weed Seed Free Hay

There are far more horses than people in the state of Montana. Many of these animals are owned by urban/sub-urban residents for recreation purposes. As a result, the horse hay market is a viable outlet for some hay producers across the state. They must supply a high quality hay suitable to the horse market which then allows them to get a premium price per ton. The Montana Noxious Weed Seed Free Forage (Hay) program certifies acres of hay as being weed seed free. Extension has helped producers achieve this status all across the state.

Impact:

Producers who certify their hay through the Noxious Weed Seed Free Forage program understand how to identify weeds in their hay pastures and how these weeds can impact their customers as well as the environment in which the hay is fed. In one county, three producers converted a total of 95 irrigated acres from round bale hay production to small square bale production which, allowed them to target the horse market. Producers selling the NWSFF hay increased their income by an average of \$55 per ton (\$65 per ton for commodity hay vs. \$120 per ton for horse hay.) There are added costs associated with producing and marketing horse hay, so the total net increase in profitability is approximately \$30 per ton. Producers who sold horse hay with the NWSFF certification increased the per ton income by an average of \$35 per ton.

Source of Funds:

Federal Smith Lever, State and County

Scope of Program:

Statewide

Cherry Production:

Out of concern that Montana cherry producers maintain access to markets necessary for the cherry industry, a Research and Marketing District Pest Management Area (PMA) to control the Eastern cherry fruit fly was established. Requirements of the California Department of Food and Agriculture dictate that cherries grown in Montana and marketed in California must be produced in a California approved mandatory PMA. To meet this requirement, the Flathead Lake Cherry Growers, MSU Extension, and the Montana Department of Agriculture established a functioning PMA. This district is recognized as a legal entity in Lake and Flathead Counties which produce 100% of the cherries marketed in California from Montana.

Impact:

Cherry producers in Montana received access to markets in California during the 2005 marketing season. By having access to California markets, brokers estimated an additional \$.50 per pound of cherries was received by Montana growers, representing gross sales of over \$4,000,000.

GOAL 2: A SAFE and SECURE FOOD and FIBER SYSTEM.**Overview:**

Montana Extension is committed to helping ensure that Montanans have an adequate food and fiber supply and a safe food supply by applying science-based detection, surveillance, prevention and education. Programs are centered on the key themes of Food Resource Management, Food Safety and Food Security. According to reports, 21,383 people have participated in Extension education on topics related to these three broad areas. Approximately 2.5 FTE have been devoted to these efforts.

Key Theme: Food Resource Management**Brief Description:**

In the Montana Expanded Food and Nutrition Education Program, Extension professionals train and supervise paraprofessional and volunteers who teach basic nutrition and food skills to limited resource families and youth. Group classes offer an in-depth series of 10-12 lessons for adults. EFNEP works to achieve lasting improvements for families while promoting immediate changes in food and physical activity habits. In the last year, Montana EFNEP operated in two counties and one reservation: Fort Belknap, Missoula and Yellowstone. According to annual reports, 1,363 people participated in the EFNEP activities during the past year.

The Montana Food Stamp Nutrition Education Program provides educational programs for food stamp households and those eligible. In counties and reservations, paraprofessional (nutrition assistants) and FSNE agents provide a series of lessons or single demonstrations with

practical information and skill-building tips for choosing better foods, food handling, food storage and food safety practices. FSNE partners with numerous community agencies and organizations to optimize effective programming and to make participants job ready and healthy. Primary program collaborators are the county Extension offices providing FSNE and the county Offices of Public Assistance (Montana Department of Health and Human Services).

Limited income households often find it challenging to stretch food resources to cover the entire month, even when they receive food stamps. Some of these households include children, senior citizens and disabled individuals. Many limited income people are also being employed, although not at a living wage. As family members are employed, less time at home demands greater efficiency with food resource management. Food resource management is a critical skill for limited resource Montanans.

According to annual reports, 16,919 people participated in FSNE programs during the past year.

Impacts:

Short Term:

- EFNEP's evaluation system (ERS) has documented the effectiveness of the program in teaching people to stretch their food dollars to feed their families in a nutritious manner. Data indicated that 92.3% of the EFNEP graduates (after 9-12 lessons) improved their diets, notably with an increase in fruits and dairy. For EFNEP youth participants, 97% now eat or intend to eat a wider variety of foods, including fruits and vegetables.
- Adults who completed the lesson series presented by the FSNE program reported they improved or intended to improve one or more food resource management practices, improved nutritional practices, and/or food safety practices. Youth who participated improved their practices in food preparation and food safety. This indicates they learned the information necessary to make wise food choices and practice safe handling of food in their homes.

Medium Term:

- According to data collected, 63% of the EFNEP participants made one or more positive changes in their food resource management practices. (i.e., plans meals, compares prices, or uses a grocery list). An estimated 30% of participants ran out of food less often before the end of the month.
- Participants of the FSNE program reported they less often ran out of food before the end of the month as a result of education they had received. Participants have also noted these types of changes have given them more confidence in managing their resources and planning and preparing nutritious low-cost meals on an on-going basis.

Long Term:

- Follow-up on graduates of the EFNEP has shown that people not only make small changes immediately because of the EFNEP lessons, but often make changes that are long term. Increased confidence in the ability to manage resources, sustain weight loss, and even related job opportunities have been recorded as impacts of the program. Of the top ten causes of death in the U.S., four (obesity, heart disease, diabetes, and several types of cancer) are associated with dietary quality. These serious issues can be addressed through proper

nutrition and physical activity – both promoted through EFNEP programming. An EFNEP cost/benefit study in six states, including Montana, found that for every dollar invested in EFNEP programming, \$8.82 in future health care savings resulted.

- Regional and national studies with Extension Nutrition Education Programs (EFNEP and FSNE) have shown that for every dollar invested in nutrition education with limited resource families at least \$8.00 in benefits from reduced health care costs are realized.

Source of Funds:

Federal Funds

Scope of Impact:

26 Counties and 6 Reservations

Key Theme: Food Safety

Brief Description:

Even though the US has the safest food supply in the world, about 1 in 65 Montanan's will experience a food borne illness this year. With the number of meals eaten away from home continuously increasing, youth and adults need to be aware of proper food handling practices to avoid getting sick. Additionally, food service establishments have major concerns about preparing and serving safe food. Montana Extension has used the National Restaurant Association ServSafe Certification program, Food Safety Works program for job training for youth, Quality Assurance and HACCP as the main effort to address concerns of Food Safety. According to annual report data, 3086 people participated in programs related to keeping food safe.

Impacts:

Short Term:

- In surveys received following ServSafe Certification classes, participants indicated they had increased their knowledge in the area of food safety. Pre-Post tests also showed participants increased their knowledge and they intended to use the information they learned. Approximately 85% of the 595 people receiving the training, were awarded their certification. An additional 67 youth completed the Food Safety Works education.
- ServSafe and Food Safety Works program participants learned proper thawing techniques, correct cooking temperatures of various foods, safe cooling and storing techniques and safe reheating practices. They also learned the difference between cleaning and sanitizing and how to do each, as well as how to identify potentially hazardous foods and individuals who are more susceptible to food borne illness.
- Schools who attended an Extension lead HACCP program are developing a plan for their districts. Eighty schools now have training to implement HACCP as required.
- All Montana Health Service and tribal sanitarians utilized an Extension produced video, *Celebrating Safe Food at Pow Wows*, for food safety training. They indicate the video has improved the understanding of participants about food safety and their role in it.
- Because of the Extension Quality Assurance Program, 472 youth and adults in 5 counties

gained knowledge about proper handling skills such as injection sites, care of animals, nutrition and animal housing.

Medium Term:

- Seventeen establishments have food safety plans in place with certified employees handling food preparation at the national safety levels. Certified employees encourage others to become certified as well.
- The family consumer science teachers reported students completing the Food Safety Works class had improved their food safety practices. All members of the class passed their post test on food safety practices.
- School food service employees and church camp food service volunteers applied skills learned on calibrating all the thermometers used in their food service kitchens. Food producers using the Mission Mountain Market commercial kitchen passed the inspection by the County Sanitarian's Office, practicing excellent personal hygiene, following approved standards for preparation, maintaining proper temperature of foods in preparation and following sanitary practices in all operations; clean up, sanitizing and storage. School food service staff completing certification have practiced safe handling, preparation and storage of food practices. No incidents of food borne illness have been reported in the 1700 meals served daily to students at the four public school districts (Ronan, Charlo, St. Ignatius and Arlee) and the tribal middle/high school (Two Eagle River School).
- Follow up inspections of the food service establishments by sanitarians indicate those who have taken the ServSafe classes show more knowledge in the area of food safety practices. The managers of school food service programs are requesting the employee class at the beginning of each new school year to make sure the employees are current on the information.
- There was increased knowledge concerning the mandatory identification of livestock in the US. Producers were introduced to the technology and the requirements that are currently known. Five producers in one county who had never used the electronic identification tags put them in this fall and marketed their calves as source and process verified. One producer disclosed that by doing this he realized a \$4.00 per cwt premium in the price he received for his calves.

Long Term:

- The Office of Public Instruction is mandating public schools develop and adopt a HACCP plan which includes participating in a ServSafe program. Nine schools in rural Montana have complied. These schools are requiring all food service employees to become certified in ServSafe.
- Each of the six food business entrepreneurs using the Mission Mountain Market commercial kitchens in Lake County, have obtained licensing for producing a food product and successfully passed each inspection for sanitary and safe production of their foods products.
- According to a survey conducted by sanitarians in Yellowstone County, Montana's largest county, 40% of all those involved in the Food Service industry have completed the ServSafe Certification. This indicates the managers see the value in the program and are willing to put money into the necessary training to provide safe food to the public. Following is a listing of the types of establishments classified according to the risk level of the menu prepared:

Level #2 (the lowest risk of food borne illness in foods prepared) -- 31% of employees have been ServSafe certified.

Level #3 (medium level of risk) – 51% of employees have completed the ServSafe certification.

Level #4 (highest level of risk in type of foods prepared) – 59% of employees have completed the ServSafe certification.

This shows the higher the risk level of the food service business, the more likely they are to require employees to become certified.

Source of Funds:

Federal Smith-Lever, State and County

Scope of Impact:

Statewide

GOAL 3: A HEALTHY, WELL NOURISHED POPULATION

Overview:

Over the past several years, more and more attention has been given to nutrition and healthy lifestyles. Still there are many health problems that can be attributed to nutritional deficiencies because of poor food choices. This is true for both the adult and youth populations. Montana Extension programs have addressed these issues with the understanding that the problems are on-going, however there has been some measurable success to date. Because of the limited staff, efforts have been focused on the human health and human nutrition key themes. According to the Annual Reports, 7540 adults and youth have participated in Extension programs related to this goal and approximately 1.0 Extension FTE was devoted to developing and delivering the educational efforts.

Key Theme: Human Health

Programs were developed by specialists and county faculty based on stakeholder identified needs. Education on physical activity/exercise and nutritional food choices are at the heart of the efforts to improve human health conditions in the state. Both youth and adults have engaged in programs that have resulted in weight loss and better physical condition through increased exercise and smarter nutritional food selections. According to year end data, 3027 people completed programs under this key theme. Of those, 2347 people indicated they intend to adopt practices and 2261 people said they did, in fact, adopt one or more practices they learned as a result of attending Extension programs.

Impacts:

Short Term:

Over 700 individuals learned how to evaluate their current health status through interpretation of blood chemistry screening results, bone scans and fitness walking programs. As a result of bone scans, 331 people received personal advice on increasing calcium

consumption and the prevention of osteoporosis.

As a result of programs related to methamphetamine, 1 privately owned pharmacy, 2 local grocery stores, 4 convenience stores and 2 hardware stores learned what steps are necessary to reduce suspicious sales and thefts of pseudo ephedrine and other precursor products used in the illicit manufacturing of meth. This was one of the first programs implemented in the state, and because of the positive results, additional programs will be conducted over the next year and beyond.

Medium Term:

As a result of local health fairs, residents in rural counties have been more diligent about monitoring their own health. In one county for example, 672 people representing 11% of the county population participated and 85% of those participants did a number of preventative tests such as lung capacity, fitness step tests, peripheral vascular screening, and chemistry screen interpretation. The bone density test was taken by 331 people and 20% of those showed some indication of osteopenia, which means they may be at risk of developing osteoporosis and 125 people, received flu shots. In another small rural county, 610 people participated in the local health fair, which represents nearly 60% of the population. This included 377 blood profiles and 123 prostate screens. Since the medical facilities are some distances away, physicians encourage their patients to attend the Health Fair and to forward the test results to them.

Walking programs have proven to be a very popular way to increase physical activity. Youth and adults have participated in a variety of programs that target a minimum of 10,000 steps per day. In a collaborative effort between two counties, 482 people walked 134,209 miles, which serves as an indicator of increased physical activity for these people. At the end of one of the programs, an enthusiastic participant said her cholesterol had dropped from 265 to 192 and was no longer required to take medication.

Long Term:

By reducing the incidence of obesity and being overweight, associated health risks are reduced. One physician stated that because of the Extension programs, "I have seen it (programs) impact several of my patients with weight loss, better knowledge and better choices made. I would like to see this program continue for our community and plan to continue to send patients to it." Similar statements have been made by medical personnel in several counties.

County health fairs offer long term benefits to residents, in both financial and health matters, with increased quality of life and decreased medical care expenses. For example one county reports significant long term benefits. Based on normal costs for the blood chemistry screening, residents saved over \$250,000 by participating in the local health fairs. Many people indicate the cost savings is one of the primary reasons for their participation. They would not have had these tests done otherwise, because they could not afford the expense. Participants in the free bone scan realized a total cost savings of \$10,500. In reviewing the statistical summary of blood test results, the following figures indicate some trends: 22% had elevated glucose levels (potential diabetes concerns); 54% had elevated cholesterol levels; 37% had elevated triglycerides; 10% abnormal TSH (for thyroid problems --- 5 individuals were indicated as severe alerts); 5% had abnormal iron levels; and 3% abnormal Creatine levels (potential kidney disease). Physicians have indicated that the results from the

health fairs have often lead to early recognition of diseases that are very treatable with medications and lifestyle modifications. The percentage of people with high cholesterol readings has decreased slightly since the health fair two years ago.

Key Theme: Human Nutrition

Brief Description: Areas of emphasis under this key theme include food choices to achieve a nutritionally healthy diet, factors influencing obesity, utilization of the food pyramid and establishment of community empowerment efforts. Data indicates that 4513 people participated in nutrition related programs with 4311 individuals saying they plan to adopt practices they learned. The data also shows that 4162 people have already adopted practices that have impacted decisions they make about eating a healthy diet.

Impacts:

Short Term:

Because of Extension education, 60 people indicated in a consumer survey that they had learned the fat content of favorite foods they order when eating out influencing their menu selections.

Because of a community youth issues coalition brought together by Extension, nutritional needs were identified by teenagers. As a result, the Junior High and High School installed a milk vending machine to provide healthy snacks and dairy products for teens. Youth learned about healthy snack choices.

A survey conducted at the end of an Extension initiated nutrition campaign revealed that the 125 food service personnel employed by 20 assisted living and retirement centers and 6 senior citizen centers, understood the critical need for older persons to double their daily intake of fruits and vegetables and how to easily and quickly incorporate them in their menu planning.

Medium Term:

Of 490 people completing Extension programs on nutritious food choices, 46% chose low-fat menu items to help with medical conditions and 64% generally chose a restaurant based on healthy options when eating out.

Twelve restaurants and 2 senior centers offered low-fat dietitian approved entrees which they had not done prior to the Extension initiated community coalition. Of those, 6 have adjusted their menu selections to offer these choices on a daily basis.

Because of an Extension initiated coalition, over 100 nutritious and dairy and calcium rich products were sold each week day through the milk vending machine. This option has not been available for youth in this school previously.

Follow up contact with participants of an Extension led nutrition campaign indicated that the 20 assisted living and retirement centers had cooperatively planted 7 community gardens to supplement their supply of fresh fruits and vegetables. Six senior centers contracted with 5 Farmers Market sellers to purchase fresh vegetables and fruits. Two assisted living center corporations contacted their administrators and requested food service changes and polices be made nationally. In addition, they also received permission to secure a local dietician's assistance in planning meals to meet the dietary needs of older persons.

Long Term:

Teens, especially girls, whose diets don't provide sufficient calcium are at risk of developing osteoporosis in later years.

The American Academy of Pediatrics Committee on School Health considers school the second most important environment for child development. Therefore, the availability of milk and healthy snacks at school has a great impact on child health. For example, children who choose soft drinks in place of milk take in less protein, calcium, zinc, vitamins A & C. For each soft drink consumed daily, a child's risk of obesity increases by 60%.

The 31 member community planning group responsible for a nutrition campaign (Extension initiated) identified that over 85% of people impacted by the program were at or below the poverty line. It was decided to activate the County Poverty Reduction Association to identify resources to address nutritional needs of this population – a group called Opportunity Links will provide leadership for this coalition.

Source of Funds:

Federal Smith-Lever, State and County

Scope Impact:

Statewide

GOAL 4: AN AGRICULTURAL SYSTEM WHICH PROTECTS NATURAL RESOURCES AND THE ENVIRONMENT.**Overview:**

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

Extension programs have assisted livestock producers in making decisions about their operations and the impact on the environment. Programs have helped producers understand regulations and use good environmental stewardship practices.

Year end reports indicate that 10,825 people have participated in programs under this goal. Approximately 4.1 FTE are dedicated to developing and delivering these programs.

Key Theme: Agricultural Waste Management

Brief Description:

Montana is largely a rural state with a land area of 93 million acres and a population of 909,000. There are 11,400 farms and ranches in Montana that consist of beef cattle enterprise ranging in size from a few to 10,000 head. Approximately 55 of these operations are licensed concentrated animal feeding operations (CAFO), which leaves the remaining 11,345 as cow/calf rangeland operations or small to mid-size back-grounding lots, which may or may not need a discharge permit. It is estimated that another 40-50 may need permits.

Impacts:**Short Term:**

Over 4000 “AFO/CAFO: Is Your Livestock Operation Regulated by New Water Quality Laws?” brochures were distributed to Extension Offices, NRCS Offices and all agricultural organizations that deal with livestock who in turn gave them to producers. The brochure provided information for livestock operators to learn to assess the potential environmental risks their operations were exposed to. Producers became aware of the rules and regulations governing the operation of Animal Feeding Operations and learned how to assess their own specific situation.

Medium Term:

Extension personnel conducted more than 150 on-site assessments that resulted in operations designing and implementing management practices that will protect the surface and ground water resources of Montana. The assessments reveal that many producers lack plans for emergencies or bio-security issues. Going through the assessment process gave the producers valuable external perspectives on their environmental performance. Assumptions at the beginning about their priority environmental issues were corrected with the recognition of unexpected issues.

As a result of the AFO/CAFO Extension educational programs and site assessments, more than 10 Nutrient Management Plans were written and implemented that ensure that manure is applied at agronomic rates, which prevents excess nutrients from polluting state water.

As a result of Extension programs, 7 producers in one county completed an Operational Assessment of their feeding facility and waste management practices. Each producer was able to identify areas where management practices could be altered to reduce the impact of their feeding operation. All seven producers began taking yearly water samples to monitor well water quality. Two producers altered their runoff containments system in order to capture and spread potential water runoff. One producer planted a shelterbelt to obscure the feedlot from a public road.

Long Term:

As a result of Extension educational programs and on site assessments, one livestock organization initiated a program “Corralling Change, Changing Corrals” which selected two operations and installed new management techniques to ensure the operation is in compliance with the Clean Water Act as well as enhancing the environment. These operations will be used as demonstration sites for other producers to view what can be done to enhance their environmentally friendly stewardship.

Four producers in one county completed and initiated CNMPs for their operation which included annual monitoring of ground water, annual manure analysis, and calculation of

agronomic manure application rates based on annual soil tests. By calculating agronomic manure application rates, these producers not only prevent the accumulation of excessive soil nutrient levels but also save money on additional fertilizer. Three of these producers also completed the process of obtaining a NPDA permit from the Montana Department of Environmental Quality.

Source of Funds:

Federal Smith Lever, State and County

Scope of Program:

Statewide

Key Theme: Forest Resource Management

Brief Description:

Montana has approximately 24 million acres of forested land. Of that, roughly 17 million is under federal jurisdiction, 3.5 million in non-industrial private ownership, 1.5 million in private industrial forest ownership, 1 million under state ownership and 1 million under tribal ownership. These forests support several endangered wildlife species, are the primary watersheds for streams, are highly valued for their scenic and recreation opportunities, and support a forest products industry that produces over 1 billion dollars in gross revenue annually. Balancing all of these values is extremely difficult, and on federal land has resulted in judicial gridlock and a steady and significant decline in wood raw materials. This has resulted in the non-industrial private lands playing an increasingly important role for the wood products industry with these lands supplying an average of 30% of the wood harvested in Montana during the past decade. In addition, private lands are becoming increasingly valuable as home-sites, resulting in fragmentation and loss of productive forest. Finally, prolonged drought and unstable weather patterns have resulted in serious drought related insect and disease issues as well as unprecedented wildfires. The U. S. Forest Service reported that in 2005 there are 1.2 million acres of public and private lands infested with insects and disease representing a loss of valuable saw timber. The insect damage represents an epidemic.

Impacts:

Short Term:

In the Forest Stewardship program, the primary stewardship workshop is a 3-4 day program for landowners that taught them to survey their forest and develop a forest management plan for their specific property objectives. By the end of 2005, after 16 years of program delivery, over 2550 landowners had participated with a combined ownership of 943,597 acres, which represents 28% of the non-industrial private forest ownership in Montana. In 2005, 53 forest ownerships (85 participants) learned how to survey their forest land and development a forest management plan. This represented 14,344 acres of forested lands.

A Community Wildfire Protection Plan and pre-disaster all-hazard mitigation planning efforts have been done in 3 counties. As a result of the meetings to develop the plans, 30 individuals have gained an understanding of the need for fuel reduction and all hazard

mitigation. Fire prevention literature has been distributed to all of the river outfitters as an example of increasing peoples knowledge about the risks of fire.

After attending a Forestry Mini-College, participants (190) indicated they learned information they plan to implement on their lands(30,000 acres). Evaluations also showed participants learned how to manage their forest lands more effectively and that active management that produces wood products while protecting water and wildlife resources would play an important role in maintaining their forested lands. A comprehensive survey of past forest stewardship graduates showed that the majority indicated wildlife, water and healthy forests were their primary land use objectives.

Youth education to help prepare future landowners and professionals for issues regarding natural resources management, the Montana Natural Resources Camp is conducted. The camp is limited to 45 high school students who learn about wildlife, soils, water, geology, range and forestry. It also provides an environment for youth to learn about integrated land-use.

Medium Term:

Forest landowners have developed plans on how to meet their basic land objectives and to address specific forest issues such as wildfire hazard reduction, stream protection, road maintenance, noxious weeds, insects and diseases, and wildlife habit.

Source of Funds:

Federal Smith Lever, State and County

Scope of Program:

Statewide

Key Theme: Integrated Pest Management

Brief Description:

The integrated approach to pest management has proven to be successful for Montana agricultural producers and those who are more interested in their lawns and gardens. It provides a comprehensive way of addressing insect, weed, plant disease and other pest invaders to plants growth and production. Extension faculty developed programs and publications to increase the publics' knowledge in addressing problems. According to annual report data, 2168 people participated in these programs during the year.

Impacts:

Short Term:

To address the spotted knapweed problem in Lincoln County, students, landowners and other stakeholders learned about the types and efficiency of biological control. Following Extension presented information, people contacted the Extension Office for more information with regard to biological control of all noxious weeds. A survey and teacher observations indicated that students learned the proper identification of noxious weeds and the biological agents that are currently used to control those weeds.

In another county, 19 landowners learned the proper use of applying chemicals by passing the certification test and receiving Private Applicator Licenses. This example is

duplicated all across the state.

Medium Term:

The Montana Department of Transportation, Lincoln County Board, and landowners bordering major highways agreed to use biological control agents and proper re-vegetation instead of relying solely on herbicide applications for weed control. One landowner, who had refused to control leafy spurge, agreed to use insects, mowing and grazing as alternatives to herbicide use.

In another county, 22 landowners produced 1220 tons of certified forage, adding an estimated \$30,500 to the value of the hay. One producer changed weed management strategies after 60% of a 100 acre field failed certification in 2004 due to Canada thistle. The entire field passed certification in 2005.

The MSU diagnostic lab processes about 500 insect samples and 1000 plant samples each year. The identifications done by the labs are crucial to agriculture, home and garden enthusiasts, and others who may have invasive species. It is also critical in identifying the appropriate steps to addressing the problems. People have applied the recommendations given by the lab.

Source of Funds:

Federal Smith Lever, State and County

Scope of Program:

Statewide

Key Theme: Pesticide Application

Brief Description:

The Pesticide Applicator program is designed not only as a certification/recertification opportunity, but also as a way for agricultural producers to learn more about pest problems and their management. Training opportunities are planned as stand-alone events and are also offered in conjunction with other educational programs. Each year there are pest management methods and pesticide products that are available for producers to consider using in their pest management program. The Extension service helps producers determine the proper use of these products in accordance with labeled standards. Data indicates that 1486 people participated in the pesticide application process this past year.

Impacts:

Short Term:

The pesticide training program is designed to assist producers in meeting requirements to purchase and apply restricted use products. It also applies to any pesticide that is used in an agricultural environment. Applicators learn about the safe handling and application of all pesticide products. They also gain knowledge about new products and how they might fit into their pest management programs. New applicators are able to meet training requirements.

Medium Term:

Producers are able to maintain their private applicator license by attending training programs that meet training requirements. They are also able to keep current on safe handling and application of pesticide products. The pesticide training program keeps producers up-to-date on new pesticide products, safe use, and proper handling and applications procedures. As a result of this program, producers have changed their application procedures to adhere to the requirements.

Long Term:

Producers who are trained in handling pesticides practice IPM principles and are able to evaluate whether or not a pesticide needs to be applied. This has a long term effect on the health of the environment.

Source of Funds:

Federal Smith Lever, State and County

Scope of Program:

Statewide

Key Theme: Wildlife Management**Brief Description:**

Impacts of wildlife on agriculture in Montana are significant. In a recent survey, producers reported losses exceeding \$5 million to ground squirrels in alfalfa production alone. In addition, landowners provide over \$32 million in forage to big game in the state each year. Techniques developed through Extension programs provide producers and other landowners with the skills and knowledge to address wildlife damage control problems.

Impacts:**Short Term:**

Over 500 landowners have gained knowledge on how to address wildlife damage problems. This allows some issues to be prevented and it gives landowners the tools to address problems after they occur.

Landowners learned about the habits of prairie dogs, control methods and laws regarding the controls.

Medium Term:

Because landowners have implemented damage control practices learned in Extension programs, they have seen at least a \$2 million reduction in losses each year.

Because of Extension education, landowners were able to make the decision to get a pesticide license and perform the controls themselves or hire a commercial applicator. They understood the costs, both financially and in time, with regard to control of ground squirrels on their land.

Long Term:

With landowners providing over \$32 million in forage to Montana big game each year, some of

this forage is critical to livestock at certain times and in certain places. It is estimated that implementation of suggested practices will make over \$10 million in forage available to Montana livestock each year.

Source of Funds:

Federal Smith-Lever, State and County

Scope of Program:

Statewide

Key Theme: Natural Resources Management

Brief Description:

Noxious weeds dominate the educational efforts under this key theme. Spotted knapweed, tall larkspur, leafy spurge and other invasive plants provide opportunities for producers to apply new research techniques for control. Extension faculty have developed programs to help producers successfully address these problems recognizing they are on going and require constant monitoring. Over 2000 acres of the Cheyenne Reservation have been infested with Russian knapweed and within 2 years of implementing a plan which broke up the area into smaller plots, wheatgrass now is 85% of the plots. According to annual report data, 3344 people participated in programs falling under this key theme.

Impacts:

Short Term:

Producers gained knowledge on tall larkspur and how it affects beef cattle; about grazing management as a way to restrict livestock poisoning from tall larkspur; and about herbicides and their effect on controlling tall larkspur.

Through efforts of the Granite County Natural Resources Land Use Planning Council of which Extension is a key player, 21 producers demonstrated skill acquisition in successful interactions with the US Forest Service and the Bureau of Land Management.

Twenty-five individuals participated in the rangeland resource monitoring program and acquired skills in plant identification, phenologic stage determination, and methodology of monitoring site installation. This resulted in an excess of 40 monitoring sites providing critical management information for producers. Ranchers learned to design grazing systems to assist in goal realization and learned to identify specific resource goals for each enterprise.

Medium Term:

Producers have controlled 7,319 acres of noxious weeds, while protecting 183,000 acres of land from noxious weed infestations. The cost of this noxious weed control was \$253,114. These producers are committed to long-term weed control by applying techniques learned from research and Extension. The project has expanded from 80,000 acres to 368,640 acres under noxious weed management.

The Natural Resource Land Use Council is considered to be an integral part of resource management planning on federally administered lands in Granite County. They are often

contacted by federal resource management for input into planning efforts without solicitation. Rangeland Resource Monitoring now is being used by 14 ranches in a three county area to aid in management decisions. Not only do they utilize sites that were established with assistance from Granite County Extension, but 4 ranchers have gone on to create their own sites independently. In addition, the Montana Department of Agriculture, Noxious Weed Division now utilizes the monitoring system developed by Granite County Extension to evaluate their grant funded weed management programs.

Long Term:

The long term goal of the natural resource program is to affect a positive influence on natural resource management in Granite County. This is visible on 8 ranches in the county and on three Forest Service Grazing Allotments, and two Bureau of Land Management Grazing Allotments. These individuals have experienced improvement in resource management strategies. Specific improvements have been identified as improved effectiveness of weed management, achieving desired plant communities through grazing system adjustments, and documentation of ranches as responsible resource stewards.

Source of Funds:

Federal Smith Lever, State and County

Scope of Program:

Statewide

GOAL 5: ENHANCED ECONOMIC OPPORTUNITY AND QUALITY OF LIFE FOR AMERICANS.

Overview Statement:

Extension is fully aware of the desire Montanan's have to improve conditions for their families and communities. This understanding is the force driving program development and delivery in several identified areas although the challenges are significant. For example, issues facing families and communities differ depending on the area of the state. The eastern part of Montana must address problems related to declining population and shrinking communities. On the other hand, people who live in the western section of the state are working hard to plan for fast growth and a growing and changing population. Extension programs are helping families and communities address needs brought on by these changes.

Regardless of the community however, families are concerned about economic development, better paying jobs, business opportunities, and health care. They are concerned about giving their youth the skills necessary to become competent, contributing and caring members of the community in which they live. They are concerned about being good parents/grandparents who know how to guide their youth through the challenges of being a young person today. They are concerned about the elderly and having adequate health care, housing and other infrastructure necessities to accommodate this increasing population. In short, Montana citizens are concerned about the quality of life and look to Extension for education and help so they can make wise decisions and choices.

According to Annual Report data, approximately 10.6 Extension FTE have been devoted to programs that fall under the heading of this key theme. Excluding the 4-H enrollment, 21,886 Montana youth and adults participated in these programs. The youth enrolled in the 4-H programs raise these numbers significantly reaching a total of 46,849 youth and adults. In the 4-H program, a total of 24,963 youth receive education in a variety of venues. Of that, 12,318 young people participate in the 4-H Community Club Program.

Key Theme: Aging

Brief Description:

In Montana, over 16,843 individuals have been diagnosed with Alzheimer's disease and there is no estimate of future numbers who may be affected. Montana has 50 counties that are designated as frontier counties. According to the Montana Chapter of the Alzheimer's Association, this means that residents in these locations have greater obstacles in accessing care for families affected by Alzheimer's. The obstacles included: distance, terrain, climate, lack of providers, and fewer available specialty services.

The recognized need for educational programming for family and friend caregivers of Alzheimer's patients and requests from counties has resulted in the development of a five-week series. The program is a collaborative effort among the Family Consumer Science specialists and provides education on Alzheimer's care-giving topics such as family interactions and caregiver stress, nutrition, family financial planning and housing.

According to Annual Report data, 5448 people completed programs under this key theme. The Alzheimer's program was limited to 2 pilot counties, but significant data has developed interest for additional participation next year.

Impacts:

Short Term:

Results from an evaluation of the Alzheimer program indicate that people learned what steps could be taken that would benefit the patient and the family. They include:

- 61% of the participants who are care giving at home planned to use the checklist for home modifications.
- 48% of the participants either planned to or had already started exploring alternatives for handling the financial affairs of the Alzheimer patient.
- 44% of participants either planned to or had already started exploring legal guardianship or conservatorship for the Alzheimer patient.
- 82% of participants planned to try at least one of the stress reduction techniques learned.
- 60% of the participants strongly agreed with the statement: "Based on the workshop, I better understand the food/nutritional need of people with Alzheimers."

Medium Term:

- A random sample of participants were selected for telephone interviews six weeks after the Alzheimer program was completed.
- 90% of the participants interviewed had already used some of the information learned

- in the program.
- 85% of the participants interviewed had shared information they learned in the program with others.
 - 95% of the participants have used the information with friends, family members, or co-workers.

Source of Funds:

Federal Smith Lever, State and County

Scope of the Program:

Two-county pilot – Statewide in the future

Key Theme: Family Resource Management

Brief Description:

Programs addressing family resource management have been successfully educating Montanans about techniques in the wise use and handling of their financial resources. For example, Montana farm and ranch families have become more informed about effectively transferring their farms and ranches to future generations through Extension developed programs. While there are many other locally developed programs that fit under this key theme, the Estate Planning for Everyone Montanan program still is having impact for the people of the state.

People have learned how to “Get Smart About Credit”. This program was designed to create an awareness of the “real” cost of purchases when credit card holders make only the monthly minimum payments. It has been reported that the average credit card debt of senior citizens who use credit cards is \$4,041 and that 83% of undergraduate students have at least one credit card with an average balance of \$2,237. By the time they graduate, college students had an average of \$20,402 in credit card and education loan balances. It has also been found that 60% of credit card holders hardly ever pay their credit card bills in full.

Annual Report information indicates that over 3230 people have participated in programs under this key theme and that 978 have stated that they have adopted practices they learned in these sessions.

Impact:

Short/Medium/Long Term:

- Participants of the Estate Planning programs were provided 28 questions designed to identify actions taken. The results provide confirmation that as a result of the program, Montanans are taking action to develop, review and complete their estate plans.
 - 48% reviewed their property titles and 19% made changes
 - 16 % had an attorney write a will
 - 21 % reviewed their will and had an attorney update it
 - 17% started a gifting program
 - 26% reviewed their need for life insurance

- 81% discussed estate planning with family members
- 61% learned that Montana law would not distribute their property as they desire
- 39% learned that their estate is not large enough that federal estate taxes would apply.
- Participants who had been a part of previous programs on Estate Planning were given a list of additional publications they could request. Nearly half (40%) of those who received the list requested additional information.
- Participants in the Get Smart about Credit program were given an evaluation that revealed they were inspired to take actions to improved their debt situation:
 - 40% decided to cut up one or more of their credit cards
 - 47% decided to boost their monthly minimum payments to 3%
 - 43% decided to double the amount of their monthly minimum payment
 - 57% decided to not charge any more on their credit cards until at least one is paid off.
 - 14% contacted their local bank for further information
 - 11% contacted their local credit union for further information
 - 14% contacted their County Extension Office for further information
- Participants indicated they shared the packet with others. About one-third shared with their spouse/partner (36%). Approximately another 1/3 shared with friends (34%) and another 1/3 indicated they shared with other family members (33%). The packets were also shared with colleagues at work (12%) and neighbors (5%). One respondent wrote “I will send this packet to a family member who has credit card debt”. Another said, “I shared this information with my grandchildren”.

Source of Funds:

Federal Smith Lever, State and County

Scope of Program:

Statewide

Key Theme: Community Development & Economic Development

Brief Description:

The major initiatives of the Community/Economic Development Extension program are business retention and expansion, jobs and employment, and tourism. Agent and specialist developed programs provide both technical support and leadership in helping communities set and achieve their goals. For example, business education programs strengthen local economies by providing community business operators and potential business operators with the knowledge and skills they need to decide whether or not to start or expand a business, manage their own business efficiently and market their goods and serviced effectively. Additionally, tourism is Montana’s second largest source of external or “export” income. Extension programs for residents help them decide if a tourism business could work for them given their current situation. Similarly, programs for communities help them objectively consider and develop

tourism attractions, facilities and events that fit with local values.

According to Annual Report data, just over 9700 people participated in some way in programs under this key theme.

Impacts:

Short/Medium Term:

- Several Counties have developed strategic plans to provide direction and focus to local efforts resulting in such things as the building of a new Food Bank and improvements to local community buildings.
- In response to a Montana Woolgrowers identified lack of sheep shearers, Extension began a Sheep Shearer school for new professional shearers. Eighteen beginners and 12 advanced students enrolled in this first ever school.

Extension provided consultation to several areas such as small and individual business start up, business retention and expansion, business plan development and marketing research and feasibility of starting or expanding a Nature-based tourism business.

To date, the community tourism assessment program has resulted in over \$1 million of community attractions and facilities investment.

Source of Funding:

Federal Smith Lever, Grants, State and County

Scope of Program:

Statewide

Key Theme: Methamphetamine

Brief Description:

The increasing availability of Meth is considered the most significant drug problem to law enforcement. Statistics show that 9% of high school youth indicate they have used meth, 50% of child abuse and neglect investigations conducted in the past year involve meth-impacted families, 50-70% of children placed in foster care are because of parental use of meth, and about 85% of inmates in the Montana women's prison are there, in part, because of meth.

Impacts:

Short Term:

Retailers, home owners, agriculture producers, local agencies, individuals, and school personnel learned about meth production and use because of the Extension produced Meth Watch program and Toolkits. This is the beginning of a major initiative to address this growing and invasive problem. Over 1200 people have participated in these initial meetings.

Source of Funds:

Federal Smith Lever, State and County, State Grant funds

Scope of Program:

Statewide

Key Theme: Youth Development**Brief Description:**

Youth Development occurs from an intentional process that promotes positive outcomes for young people by providing support, relationships and opportunities. Youth development takes place in many venues, but 4-H is one of the primary areas that studies have shown positive youth development does occur. The 4-H program provides an avenue for youth to meet the challenges of growing up through a series of experiential, research based educational experiences that help them become socially, morally, emotionally, physically and intellectually competent.

Montana 4-H experienced another increase in club enrollment reaching 12,318 youth involved. This is up over 2,000 youth during the past year. These youth participate in a host of activities that give them the opportunity to develop life skills: national and international exchanges, subject matter projects, camps, community clubs, after school programs, and project clinics, just to mention a few.

Impacts:

- According to a study on the impact of 4-H which was replicated in 5 other states with the same outcomes, youth who are involved with the program are:
 - More likely to succeed in school, getting more A's than other youth
 - Are involved as leaders in their school and the community
 - Less likely to shoplift or steal
 - Less likely to use illegal drugs of any kind to get high
 - Less likely to ride in a car with someone who has been drinking
 - Smoke

The same study indicated youth in Montana 4-H have a positive self-identity which gives them confidence to succeed in life. They report feeling that they have more control over things that will happen in their lives, They are more likely to feel good about who they are, to feel that they "have much to be proud of" and to feel that their lives have a purpose and meaning. 4-H members are more likely than non-members to be able to "make their own decisions", do things on their own, set goals, try new things, and take responsibility for their actions.

- Youth who participate in 4-H are more likely to develop useful and practical skills that will help them grow into capable, competent and contributing adults. (good record keeping skills, ability to speak in front of others, organize their work, make good decisions, plan ahead and manage money wisely)
- 4-H members are more likely to have a positive view of their role in the community and the future than youth who have not been involved in the program. Members reported that adults are more likely to look at them as assets to the community. Members credit the program with making a significant difference in their own lives, in the quality of their family life, and in the quality of their community.

- The study also reveals that 4-H members have better relationships with adults than those who have not been in 4-H. They are more likely to go to another adult (besides their parent or guardian) for help about important questions in their lives. They are more likely to say that if they had “an important concern” about drugs, alcohol, sex and any other serious issue, they would talk to their parents or guardians about it.
- 4-H members report they are more likely to have been involved in a project to make life better for other people, given money or time to a charity or other organization that helps people, and to have spent time helping people who are poor, hungry, sick or unable to care for themselves.

Source of Funds:

Federal Smith Lever, State, County, Grant (private and public)

Scope of Program:

Statewide

Key Theme: Grandparent Raising Grandchildren

Brief Description:

Montana ranks ninth in the nation for the increase in Grandparents Raising Grandchildren between the years of 1990-2000 (AARP). In Montana alone during that decade, there has been a 53% increase in the number of grandparents who are responsible for caring for their grandchildren. The US Census (2000) reported 6,053 grandparents in Montana hold the primary responsibility for meeting the basic needs of their grandchildren, while 11,098 live with their grandchildren. Extension programs have been developed to provide support and assistance to grandparents who find themselves in this situation.

Impacts:

As a result of Extension programs, grandparents report that they and their grandchildren are experiencing more healthy family relationships. They attribute this to the support groups in which they participate as well as the information they obtain regularly that provides them tips on handling the challenges of raising today’s youth.

Source of Funding:

Federal Smith Lever, State and County

Scope of Program:

Statewide

Stakeholder Input Process

In late 2003, an extensive stakeholder input process was conducted to gather information about local needs and concerns. This process involved every county in the state. The information was shared with the Montana Extension Advisory Council, who assisted in fleshing out the issues and placing them in priority order. Extension specialists and agents then incorporated the citizen

input into the program development process.

Because of the comprehensive work done in 2003 and administrative restructuring, the decision was made to conduct limited stakeholder input for 2004 and 2005. In 2004, a survey was sent to a small sample of Montana residents to determine if there had been significant change in needs. While there has been some shift in the rank order, the same issues were identified as being critical for Montanans. Issues listed from stakeholders include: Youth, Health, Family/Parenting/Aging, Nutrition/Food Safety/Physical Activity, Financial Planning/Budgeting/Estate Planning, Community and Economic Development, Noxious Weeds, Water Quality and Quantity, Preserving Farmland/Keeping Farms in Families, Marketing/Finances related to Agriculture, Natural Resources/Wildlife, Value Added and Ag Sustainability, and Education. In some cases, Extension is not equipped to address the concerns identified. In those instances, the information was given to another entity whose mission more closely aligns with the problem.

In 2005, a new administrative structure was established for Montana. The state was divided into three regions, each with a Regional Department Head. One of the purposes of this restructuring was to locate upper administrative personnel in the field. This has enabled an expanded level of contact with local clientele and county leadership. No adjustments were made in the issues viewed as critical for the State.

Stakeholders are defined as people having an interest in Extension work, either directly or indirectly. Thus, participants in Extension programs, beneficiaries of Extension programs and contributors to Extension programs are considered stakeholders. Stakeholders are comprised of producers, merchants, educators, consumers. Some are the local “voices” while others are silent unless asked. Extension makes sure there is a balance between the two by seeking out the “non-vocal” folks and asking their opinions. They are also found through random sampling surveys.

In September, a conference was funded by MSU Extension for all reservation agents, tribal college agents and Extension agents in reservation counties. Presentations included Family/Human Development, Food/ Nutrition, 4/H, Natural Resources, Water Quality and Indian health issues. Four Tribal Council members spoke on Extension-led issues and programs important to the tribe; thus giving input from a local leadership perspective. As a result of this conference, tribal partners, agents and specialists were able to initiate collaborative efforts for enhanced programming.

Program Merit Review Process

There have been no changes in the Program Merit Review process since the last 5 year Plan of Work. Following last year’s process, the chairman of the original merit review committee agreed to review the information for this year and provide input. His letter is attached for reference.

The previous year’s merit review provided several suggestions which were considered in programming and reporting for 2005. It was suggested that a marketing plan be developed to

disseminate documented impacts. Another suggestion was for Extension to become more involved in the public issues arena. Both of these suggestions have been addressed. During 2005, a Marketing and Communications Coordinator was hired by Extension. Her assignment is to develop a marketing plan and communication strategies for Extension. Additionally, an agreement has been established with the Local Government Center on campus to house the soon-to-be hired Community/Economic Development Specialist. This will enhance opportunities for relationship building and collaboration with faculty in the area of public issues.

Almost all program areas are relying heavily on input from groups for planning and delivering education. Steps are being taken to forge relationships with graduate programs on campus in conducting surveys for Extension effectiveness. A graduate class conducted a survey in late 2004 to assess the level of customer satisfaction throughout the State. The results have been used for marketing and programming development in 2005.

Many Extension programs are making efforts to gather impact data; however, there is still room for improvement. Survey work is being done along with follow-up telephone calls, observations, and on site evaluations to gather impact data. A computerized system is being used by the 4-H and FCS programs to target indicators of change. FCS is the umbrella organization for the Food Stamp Nutrition Education (FSNE). Every program FSNE conducts is evaluated by its participants. Since there are many duplications of programming there, an overall evaluation, with outcomes and impacts, is available. A new online system was developed by the MSU IT Department for agents to submit Plans of Work which will be expanded to submit outcomes and impacts at the end of the year.

Evaluation of the Success of Multi and Joint Activities

The multi and joint activities conducted by Montana Extension successfully met the requirements outlined in the 5 year Plan of Work.

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

A strategic plan was conducted prior to the last 5 year Plan of Work which outlined areas of concern for Extension to address. Through the Montana Extension Advisory Council, stakeholder input was checked and rechecked so programs would stay relevant.

Extension has met the challenge of staying current with issues facing the state. The Beef ID efforts being conducted by the Montana Beef Network program and the development of two programs addressing the meth problem in the state are examples of relevant educational initiatives.

2. Did the planned programs address the needs of under-served and under-represented populations of the state?

Progress is being made in reaching the under-served and under-represented populations of the state, although there is still work to be done. Collaborations with the tribal college faculty, the EIRP Agents, and the EFNEP and FSNEP programs are in the forefront of Extension efforts. In addition, the youth development and family/parenting programs are

working on a model for rural youth to become involved in after school programs. The Rocky Boy Reservation has been key in learning what works best for this audience. Housing, nutrition-health (particularly with diabetes) and economic development programs continue to work with the under-served and under-represented audiences.

3. Did the planned programs describe the expected outcomes and impacts?
For the most part, the planned programs described a set of expected outcomes and impacts. It seems the programs that are multi-disciplinary, multi-institutional and multi-state are often the most effective in outlining outcomes and impacts. They are generally forced to be more specific and intentional about their work since people from different backgrounds are involved in the planning and delivery of the education.
4. Did the planned programs result in improved program effectiveness and/or efficiency?
The programs that are multi-state, multi-disciplinary and multi-institutional are generally more effective because more resources in the form of personnel and funding are available. In states like Montana with limited faculty and funding, the multi approach to program development is very beneficial and brings more capacity to any project.

Multi-State Extension Activities

Several programs involved states from the region or from the entire nation in their program planning and delivery. The definition used in Montana for a multi-state activity is that the program must have a collaborative planning component as well as delivery. Examples of programs under this multi-state definition are listed below. They represent many other programs that are similar and have been successful, largely because of the multi-state involvement.

- The Youth Development program involved inter-state exchanges with New York, Ohio, North Carolina, Wisconsin, Minnesota, Pennsylvania and Tennessee. Faculty have served on multi-state planning committees for 4-H Camps, Teen Leadership Education, and Recreation. States generally involved, outside the exchanges, are North Dakota, South Dakota, Wyoming, Utah and Idaho.
- High school students received food safety training, which follows the ServSafe guidelines of the National Restaurant Association Education Foundation, through a workforce training effort in the schools administered by Family and Consumer Science teachers. The program was planned in cooperation with Colorado, Wyoming and Montana.
- The Oxeye Daisy, a Montana declared noxious weed, has invaded the Cooke City area and Yellowstone National Park. In cooperation with the Shoshone National Forest Service and National Park Employees in Wyoming, a program was planned and developed to eradicate the weed from the area. A weed control army arrived in Cooke City armed with backpacks, gloves, educational brochures and a mission to remove all traces of the plant from the small community and the surrounding area. The army was composed of employees from the Gallatin National Forest, Shoshone National Forest, Park County, and the National Park Service. (MT and WY)
- The EFNEP state coordinator meets regularly with other regional and national EFNEP

coordinators. Curriculum resources, evaluation measures, marketing pieces, and program strategies are shared among the states. The cost/benefit analysis was conducted with Montana EFNEP collaborating with 5 other rural states, replicating research done in a national study. (NE, KS, ND, SD, WY)

- The FSNE Principal Investigator and the State Coordinator regularly meet with the other regional and national coordinators. They share curriculum resources, evaluation measures, marketing plans, and program strategies.

These programs and others like them were supported by Smith Lever 3b&c funds in the amount of \$91,939 and a total of 2.12 FTE.

Integrated Research and Extension Activities

In the Montana Extension Service, the integrated research and extension programs are found in Goals 1, 4 and 5. They are generally connected to projects being conducted by researchers at the Experiment Station Research Centers and with Extension Specialists who have split appointments between Extension and research. County Extension Agents are often involved in planning and delivering the information generated, making it usable to clientele. The programs include, but are not limited to, beef quality assurance, new and alternative crop varieties and production, field trials, integrated pest management, nitrate testing, West Nile Virus and marketing. Although limited, there is some research being conducted outside Experiment Station and College of Agriculture and is related to family and youth issues.

These programs are supported by Smith Lever 3b&c funds in the amount of \$78,739 and a total of 2.18 FTE.

Management Goals:

Agriculture Communications: In the administrative restructuring of Extension, a marketing/communication (1.0 FTE) person was added to the staff. Her responsibilities are centered on “telling the Extension Story” to Montanan’s - whether they are decision makers, downtown business people, agriculture producers or fellow University faculty. She also serves as the link between the University and Ag Communications units.

Enhancing Customer Service/Satisfaction: A pilot survey was sent to a limited number of people asking questions about what they know about Extension and if they would turn to Extension as a source of information. This survey is the beginning of a more in-depth marketing plan Extension will be under taking over the next year. Questions on meeting customer service and satisfaction are at the heart of any new marketing efforts. Progress is slow, but continues.

Information Technologies: With the assistance of MSU Extension’s Office of Information Technology, Extension workers are using technology more and more to support their programs. Montana has upgraded its infrastructure to allow nearly all of our county offices to be connected to high speed internet, which is helping MSU Extension to use technology even more.

The Planning and Reporting database has been redesigned to streamline the reporting process. This continues to be an online reporting system with the ability to attach the report component directly to the plan. It also allows for collaborative groups to report as a group using one plan and report, thus eliminating duplicate reporting, and extra effort for our agents.

MSU Extension is using the internet extensively to support program efforts. Almost all of the registration activities for Extension programs are being done on-line and several programs have provided web sites for clientele to get up-to-date information. Several specialists are conducting education via the web by setting up classes in which people can enroll. This past year MSU Extension redesigned all websites, making them more visually appealing and user friendly. Extension is continuing to add information regularly, including a database driven online directory, and the "Extension Today" marketing tool, which features highlights of outstanding work being done by Extension personnel.

GIS/GPS programs are becoming very popular throughout the state, particularly among 4-H and Agriculture program areas. Through a strategic planning process, the youth development program has identified technology as one of 8 priorities. Program development continues to meet the goals identified by the group.

MSU Extension personnel rely almost exclusively on technology for communicating among themselves. Programs have been enhanced because more people can be informed of work being done in different areas of the state. There is regular communication from the Director's office, which helps the organization stay connected and informed. Each week the Director sends out the Monday E-memo, which is a weekly update sent to all Extension faculty and staff. Several Extension e-mail lists are maintained, and other technologies are being explored including web conferencing, online forums and chat rooms. This will help to better connect our staff, and conserve travel resources. MSU Extension's intranet is an internal, secure section of our internet site that allows our faculty and staff immediate access to travel and accounting forms, online leave entry, as well as access to information regarding our annual conference and other training opportunities.

Because of the technological capabilities, communication at many levels (organizational to personal) can be conducted with regularity with quick responses expected.

Institutional Engagement: The Vice Provost and Director of Extension has as one of his major goals provide an avenue for greater integration to occur between Extension and on campus programs. He meets regularly with the Dean's Council and the Provost, which is a building block to greater cooperation and understanding across campus. These relationships are important if institutional engagement is to be achieved.

The 4-H program has been given Center status on campus. It is now referred to as the 4-H Center for Youth Development. Several faculty members from a variety of departments on campus have indicated an interest in becoming associated with "the Center". The title of "Center" seems to be better understood by the academic community and is paying dividends for establishing working relationships. A survey has been sent to all people working with in the

state inquiring about their training needs. MSU, through the 4-H Center, will be seen as a resource for helping these professionals remain current.

Multicultural and Diversity Issues: Many of the programs and efforts outlined in last year's report are still current and applicable. Work is continuing to comply with the recommendations of the 2001 Civil Rights Review that pointed out several areas for improvement. Examples of activities focused on multi cultural and diversity issues include the following:

- All Extension Agent position announcements include civil rights related responsibilities and qualifications.
- Through the Extension intranet, census information is readily available for county and state faculty to use in determining target audiences at the planning stages.
- More collaborations are being formed between reservation and county Extension personnel. This will better serve all clientele.
- EIRP and Tribal College Extension Agents serve on the Montana Extension Advisory Council.

Samples of programs that have made intentional efforts to be inclusive in their program offerings are:

- The EFNEP and FSNE programs both are targeted at under-served and under-represented audiences.
- The housing and community/economic development programs have worked with reservation audiences for many years. These efforts are helping Native Americans improve the quality of their lives and their communities to become more viable and inviting places to live.
- A program titled "A Place at the Table" is focused on diversity and is being used at the local level.
- The 4-H CYFAR grant is focused on after school programs for the under-served and under-represented youth in rural communities.
- The 4-H Leaders College, a leader-training program, has a section focused on making its clubs inclusive.

The goals for improving the multicultural and diversity concerns in the state are outlined in the 2001 Civil Rights Review. The administration and staff are committed to continued progress in addressing these areas. Fourteen civil rights reviews were conducted in Montana counties and on one reservation in 2005.

Focus Areas in FY 2001 CSREES Budget

The items listed in this category are addressed in the narratives of the National Goals 1 through 5. Programming has been done in several of the focus areas identified in the FY 2001 CSREES Budget.

Program Merit Review Letter

March 29, 2006

TO: Barbara Williams
Administrative Associate
PO Box 172230
Bozeman, MT 59717-2230

FR: Jim DeBree *Jim DeBree*
Retired

RE: Extension Report

I have completed the review of the Extension report and want to compliment you on an excellent job. There is ample evidence of educational programs making a significant difference in the lives of participants. As former MSU President Leon Johnson said at a commencement, (I am not going to tell you when) “the role of the Land Grant University is to favorably impact people”. I believe Cooperative Extension epitomizes this basic function of the University. Now I will offer a critique on the report. (Not necessarily in any order of priority)

- I am assuming the final report will include page numbers
- There is plenty of evidence to reflect Extension’s mission in satisfying the KASA change. (Knowledge, Aspiration, Skill, and Attitude)
- The multi-state programs are relevant and make good use of regional resources. I do believe programs could be expanded to include other regional issues in the area of economic development and public policy. (endangered species, and environmental concerns)
- Could educational efforts be enhanced with coordinated multi-county programming? Planning circuits for specialists and resource personnel in a multi-county area. Now that you have regional directors, you have an automatic facilitator.
- I especially liked the decision to give special attention to marketing and getting involved in the public issues arena. I believe it is a good move to house the state CD with the Local Government Center and hope this individual will be available to assist County personnel. I would also like this person to become familiar with the University of Montana’s Bureau of Business and Economic Research. Perhaps the new Marketing and Communications Coordinator could provide training to county based personnel on marketing and program evaluation.
- The programs reflected in the report address critical needs that are well defined and I was really impressed to read Extension’s involvement in implementing programs relating to Methamphetamine. So much more needs to be done.
- I didn’t see anything on Horticulture and the work of Master Gardeners. Historically this topic required considerable time and effort. Nor did I see anything on Swine production.

Summary

I could go on and on but do believe I have covered the most salient points. I did take the liberty

of making suggested changes in the document that you will find attached, and even though some are just nit-picking, it helps to justify my time and effort. I did in fact enjoy reading the document and give you an A+. When I downloaded it originally, I had to convert it to word and one time I got 28 pages and the next time 33. Thanks for faxing and now I know I had the entire document.

Keep up the good work and if you have any specific questions, don't hesitate to give me a jingle.