



March 27, 2007

Each year in the “frontier” West seems to bring about more change, new issues and greater opportunities for the region. The 2006 Montana State University Extension Annual Report exemplifies the breadth and depth of Extension programming across the state as it 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.

However, this report is more than just numbers and program outcomes; rather, it highlights how Extension’s statewide outreach education network responds quickly to new and emerging needs and strengthens existing resources through partnerships. Our roots in communities help us understand local needs and put university expertise and connections where they can make a difference---both in people’s lives and their livelihoods.

As the goal statements throughout this annual report attest, the challenges and opportunities in Montana today are endless. A recent Extension statewide survey identified the following concerns among a sample of Montana residents: nutrition/food safety, financial planning/estate planning, community/economic development, noxious weed eradication/control, agriculture marketing/management, youth/families, value added/sustainable agriculture, and natural resources/wildlife just to mention a few. This report offers a small glance into how Extension is working to address local needs with a statewide perspective.

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 2006, it does adequately portray the dedicated and talented individuals who are the driving force of Extension. I am pleased to share these accomplishments with you.

Sincerely,

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

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Mountains & Minds

TABLE OF CONTENTS

Letter from Douglas L. Steele

Table of Contents

GOAL 1: An Agricultural System that is Highly Competitive In the Global Economy	1
GOAL 2: A Safe and Secure Food and Fiber System	10
GOAL 3: A Healthy, Well Nourished Population	17
GOAL 4: An Agricultural System Which Protects Natural Resources and the Environment	21
GOAL 5: Enhanced Economic Opportunity and Quality of Life for Americans	27
Stakeholder Input Process	44
Program Review Process	45
Evaluation of the Success of Multi and Joint Activities	46
Multi State Extension Activities	47
Integrated Research and Extension Activities	48
Management Goals	48
Merit Review Letter	53

Goal 1

An Agricultural System that is Highly Competitive In the Global Economy

Overview:

Several key themes under this goal apply to the issues related to Montana agriculture. Extension programs have been developed that respond to stakeholder feedback about these concerns.

Sustainable livestock production in the northern Great Plains relies on improved forages for hay and pasture. Harvested forages (valued at \$414 million) contribute to Montana's \$1.1 billion livestock industry. The largest expense for most ranchers in this region is their winter feeding program. Aside from the roughage and conservation benefits, perennial forages such as alfalfa provide tremendous advantages in terms of nutrient recycling and disrupting pest cycles in crop rotations. Similarly, growing annual crops (winter or spring cereals, millet, sorghum, sudangrass, peas and other legumes) for pasture or hay provide excellent opportunities for low-cost forage production, weed control and water conservation in dryland systems. In irrigated forage systems, there continues to be a need for efficient forage rotations that reduce fuel, fertilizer or other inputs.

For several decades, the science and policy issues of crop production, livestock husbandry and environmental concerns have become more specialized and fragmented. For most Montana livestock producers, improved forage management and utilization practices are still needed to stabilize agricultural resources and economy. Extension must continually adapt, integrate and teach and implement sound forage agronomic practices to livestock producers.

Montana has a continuing interest in certifying Master Gardeners as a way to meet the requests for information about horticulture. The Montana Master Gardener program trains laypeople in introductory, general horticulture, so directly responds to this concern. The policy of the Master Gardener Program is set by the national organization which oversees criteria for completion of the training. To become a certified Master Gardener, students must attend at least 24 hours of classroom training, successfully complete a comprehensive written examination, and satisfy a volunteer time requirement predetermined by the instructor and the county extension agricultural agent involved in the training. Upon successful completion of all requirements a Master Gardener certificate is issued to the student.

The beef industry has become more consumer-focused and, as a result, specific quality and consistency targets have been established in all segments of the industry. To meet 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 (MBN).

The Junior Livestock Loan Program has provided an avenue for youth to obtain resources for livestock endeavors. Extension on the Fort Belknap and Blackfeet Reservations has facilitated these loan opportunities and the results are impressive.

Most land managers agree that the spread of non-native invasive plants is the primary environmental threat to western wild lands and range lands. Noxious weed invasion reduces the ecological integrity of land and waters, alters ecosystems, impacts wildlife habitat and threatens

survival of native plants. In many cases, the cost of traditional weed control methods (primarily herbicides) actually exceeds the value of the land. Past MSU research indicates that small ruminant production can yield other products in addition to food and fiber. It can provide land managers an alternate tool in their fight against invasive plants that is more economically feasible and environmentally sensitive when compared to traditional weed control methods. Currently, sheep grazing represents the only economically and environmentally sound alternative to address large infestations of invasive plants. However, availability of sheep has limited their use as a tool in weed management projects. A sustained and profitable sheep industry must exist for this tool to be available to land managers. Therefore, the animal husbandry, management and marketing issues necessary for a sustained sheep industry are important considerations for educational programs.

The health of Montana's range land depends largely on management practices that are sensitive to the environment while providing the basis for a sizable share of the states economy. The Undaunted Stewardship® Program is a comprehensive rangeland management effort that educates producers in practices that will accomplish their goals. It is a multi-faceted, public-private partnership that helps preserve Montana's rural economy, history, and natural resources. Through its Undaunted Land Steward Certification program, Undaunted Stewardship® recognizes farms and ranches that practice sustainable environmental stewardship on their private and public grazing lands. The certification program also educates landowners to help them make better resource management decisions. Fifty ranches are now certified, comprising more than one million acres of Montana's rural landscape. Undaunted Stewardship® also developed a unique, incentive-based approach that protects historical sites on private agricultural lands without transferring them into public ownership. Eleven sites are currently protected. Kiosks at each site provide historical interpretation and inform visitors that historical site preservation, agriculture, and environmental values can be compatible. This message also is delivered to landowners and the urban public via public service announcements on radio and television, seminars and workshops, newspapers and magazines, and the worldwide web.

Farms and ranches continue to increase in size at an escalating rate due to the agricultural economy and increased age of operator. A large amount of crop acreage is beginning to change hands as CRP contracts expire and older operators retire. This, coupled with normal expansion plans and few new operations starting results in the need for increased financial management skills. The farm/ranch manager must be able to manage all aspects of the agricultural business in order to ensure the success of the operation. Expansion plans, production decisions, machinery decisions, marketing and financial management must be incorporated into an overall business plan for the farm/ranch operation. Good management skills are necessary to make sound decisions regarding expansion plans, production systems and tax management strategies. According to 2006 reports, 10,745 people participated in programs under this goal with 3.07 FTE providing the leadership for program development and delivery.

Source of Funding: Federal Smith-Lever: \$ 111,447

Key Theme: Agricultural Profitability: Montana Beef Network

Brief Description:

The Montana Beef Network (MBN) is a producer-driven partnership between the Montana Stockgrowers Association (Stockgrowers) and Montana State University (MSU). The MBN uses a systems approach in helping all Montana beef producers raise and market, source and process-

verified feeder cattle of consistent quality. This is done through a network providing beef production information feedback and exchange and an organized approach dedicated to national Beef Quality Assurance guidelines and standards. The MBN uses its resources for research and educational efforts that demonstrate solutions to issues that are of concern to all Montana beef producers. The direction of the Montana beef industry centers on supply chain management driven by domestic and international forces:

1. Consumer preferences and consumer confidence.
2. Quality assurance through accountability.
3. Globalization and comparative advantages

Impacts:

Montana Beef Network: Through this program an “Animal Identification Demonstration Trailer” was developed which allows producers an opportunity to look at Animal ID technology first hand. Equipment in the trailer includes electronic ID tags, handheld tag readers, panel readers, and herd management software from various companies. Twenty-four hands-on demonstration programs utilizing the demonstration trailer were presented at auction markets and other locations across the state to present information on National Animal Identification System (NAIS), source and age verification, and the Montana Beef Network. Approximately 1000 producers attended these programs resulting in feeder calf enrollment of 52,000 head for 2006 coming from 195 ranches. The biggest driver for increased enrollment continues to be source and age verification requirements from buyers. Currently, Extension is working with the USDA approved Process Verified Program (PVP) to qualify calves for export to Japan. In 2006, certified calves from 176 ranches went to feedlots that have the capability to export to Japan. Also in 2006, carcass data generated on 10,500 of the 17,000 animals tracked in 2005, was returned to producers. A 62% rate of return was second best since the program began. Video cattle sales from Superior and Northern Video would suggest that age and source verification of calves resulted in an increase in sales value of \$20 per head.

Beef Quality Assurance: Educational programs are aimed at meeting Beef Quality Assurance (BQA) standards, production and marketing goals and providing educational programs. Certification of 57,000 feeder calves that have met defined management protocols. Information feedback from feedlots and packing plants to the cow-calf producer show whether the feeder calves met industry requirements for quality, consistency and red meat yield. This year, over 16,000 Montana calves were traced from the ranch to the packing plant. To accomplish this, electronic ear tags (EID) were utilized with the ranch information easily loaded into a main frame computer. Results were returned to the producer via e-mail and according to a survey of those producers, data suggests they were: 1. able to determine how their cattle performed in comparison with the rest of the industry, 2. able to determine the need to change the genetics of their cattle herd and 3. actually culled non-productive cows.

Tribal Livestock: On the Fort Belknap and Blackfeet Reservations, enhancing and strengthening family structure and economic well being of families is a priority of the tribe. For example, agricultural sustainability and profitability addressed beef production and marketing. On the Fort Belknap Reservation, a new livestock weighing facility and marketing coop sought ways to increase marketing avenues for local producers. More than 3000 head were weighed and shipped to Midwest feedlots, resulting in \$60,000 savings to tribal producers. Utilizing Junior Ag loans, 30 youth received loans of \$150,000 and purchased 150 head of cows, learning beef production, sound management and even financial practices. These youth will be the future producers on the reservation. On the Blackfeet Reservation, 75 youth borrowed \$505,000 and have started a

cow/calf operation of their own. Twenty-seven youth have pursued a college education and are helping pay their tuition from calf sale proceeds. 100% of these youth are involved in the family ranch business.

Success Story: Toby Werk started his ranching career when he was 9 years old. At that time he had 1 cow of his own. When he turned 12, he and his parents received finance management training through the local reservation extension office. Through this process Toby was able to complete a Junior Livestock loan application from the Montana Department of Agriculture. The loan was for \$7,000 which was approved on the local and state level. With the funds he purchased 10 head of cows. He paid this loan in full in four years. By age 18 he used the cows as security to obtain a \$25,000 Rural Assistance Loan through the Montana Department of Agriculture. With the training and assistance of the extension office these funds were used to purchase 30 more cows, haying machinery and cover some operating expenses. At the age of 24 years and two payments left totaling \$7,000, Toby applied for a Farm Service Agency loan in the amount of \$130,000 and paid off his Rural Assistance Loan. With these funds he purchased 100 head of cows, 4 bulls and 640 acres of land. He was able to buy out his parents' cattle which brought his cow numbers to 135 head. Today Toby is married with two children, has a home of his own and is working on expanding his operation and adding a ranch recreation project to his enterprise.

Source of Funds: Federal Smith Lever
State/County
Grants – Private/Public
User Fees

Scope of Impacts: Statewide
Multi State – NE, MN, CO, ND
Integrated

Key Theme: Agricultural Profitability: Farm Financial Management

Brief Description:

The efforts in Sheridan County are typical of most counties in Montana that have small grain farming operations. The goal of these Extension programs is to provide farm managers with guidelines and management tools that will assist them in evaluation of farm records, enterprise analysis, lease arrangements, machinery operating costs and purchases, as well as expansion opportunities and consequences. A basic component of this program is for producers to keep detailed farm/ranch records to track such items as income, expenses, assets, liabilities and inventories. These records can then be used to generate cost of production information, enterprise analysis and machinery cost estimates. The result is improved decision making associated with business performance, profitability of enterprises, marketing decisions and potential for expansion plans for land and machinery.

Impacts:

Participants in Extension programs have learned to use the Enterprise Budgeter program (Extension Developed) to analyze costs and returns associated with their farm enterprise. This includes items such as direct costs, machinery costs and total enterprise costs associated with farm budget and cropping plans. Based on the knowledge they have gained, producers have changed their cropping patterns and crop rotations to allow for better management costs and

returns. For example, after analyzing costs and returns, Sheridan County producers increased pulse crop and oilseed acreage 25 percent, nearly 40,000 Acres in 2006. Over a 5 year period, pulse cropping practices have been used on a total of 130,000 acres. This helped avoid nitrogen fertilizer costs of nearly \$22.00 per acre on the additional 40,000 acres, saving \$880,000. They are keeping records that allow them to determine the effects of changes in crop rotations, machinery purchases, land leasing and purchases. Extension developed software and spreadsheet analysis are used to make financial decisions. In many cases, producers are looking at the profitability of expanding their operations. By using the tools provided, they generally make the decision to lease the land, but are likely to negotiate the price per acre so their decision can be profitable. Additionally, producers have developed a crop rotation which allows them a better way to control inputs such as herbicides and fertilizer, again, keeping profitability always in mind. Similar practices are being implemented in the small grain producing counties (Sheridan, Roosevelt, Daniels, Valley, Cascade, Chouteau, Teton, Pondera, Hill, Liberty and Blaine) across the state.

Source of Funds: Federal Smith Lever
State/county

Scope of Impact: Statewide
Multi State – ND

Key Theme: Agricultural Competitiveness: Montana Sheep Institute

Brief Description:

The objective of the Montana Sheep Institute is to develop and implement nontraditional adjustment strategies that will increase the competitiveness of Montana (U.S.) lamb and wool in the world market. This will be accomplished by focusing the use of sheep grazing as a tool in natural resource management (Objective 1), reducing lamb mortality (Objective 2) and non-traditional lamb and wool marketing strategies (Objective 3).

Montana State University Extension and the National Sheep Shearing Program have offered beginning and advance shearing courses since 2003. The schools are for beginners who want to learn to shear their own flock, or experienced shearers who want to catch up with the latest techniques in the shearing business. Advanced students were expected to hone their skills and professional techniques. The schools teach techniques that maintain a quality wool clip and minimize stress to both the shearer and the sheep. The instructors teach how to operate the shearing machine and how to maintain and sharpen shearing equipment.

Impacts:

Weed Control: The Montana Sheep Institute has 21 active projects with 31 monitoring sites involving over 100,000 weed-infested acres. Most projects are in the second year of a five-year of grazing protocol. Preliminary data suggests that 80-90% of the original ecological value of noxious weed-infested land improved over a five year period with controlled sheep grazing. Data from these sites indicated that leafy spurge has decreased (9%) while grass increased (10%). Because of the successes shown in sheep/goat grazing on weed-infested lands, controlled weed grazing will play an important role as management strategies are developed to deal with aftermath of the 2006 Montana wild fires. The Montana Sheep Institute is developing sheep

grazing protocols and projects involving private landowners, county weed supervisors, and public agencies. An example of the success of sheep being used in weed control was given by a producer in Granite County. He reported excellent results with a reduction in spotted knapweed infestations while generating a cash crop of lambs. He estimated the grazing project eliminated \$11,000 in annual herbicide costs while providing an added revenue through the sale of lambs and wool.

Marketing: Because of their small size and distance to a suitable market, marketing options for some growers are limited or nonexistent. Participants in the Wool Pools collectively marketed 250,000 pounds of wool from 200 sheep producers in 24 northeastern and 12 western counties across Montana. Approximately half of these producers had less than 800 pounds of wool to market. As a result of Extension lead collaboration and coordination, these growers marketed their wool at a premium price, receiving about 25 cents more per pound for their wool, yielding an additional \$45,000. The cost of the program was \$.07 per pound of wool. The bulk of the wool marketed through this project being exported to China and Taiwan.

Wool Harvesting: Montana State University, through the Sheep Institute, has sponsored an annual shearing school for the past 3 years as a way to meet the need for qualified shearers. Since the school began, the following estimates can be drawn: Approximately 100 students have taken the course; of those 100, 50 students actively shear their own sheep; of those 50, approximately 25 students are shearing on a contract basis; of those 25, 10 students are shearing on a daily basis on shearing crews across Montana and other western states. According to student feedback, of the 50 who are not actively shearing say they have learned skills in proper animal handling and improved the day to day management of their own flocks. It is estimated that producers may save up to \$3.00 per head by shearing their own sheep. They may also generate an additional \$3-5,000 of added income by shearing for other people.

Source of Funds: Federal Smith Lever
State/County
Grants – Public and Private

Scope of Impacts: Statewide
Integrated - MSU Experiment Station

Key Theme: Rangeland/Pasture Management

Brief Description:

Goals for Extension Education related to this key theme include the use of annual cereal forages during persistent droughty conditions as emergency forage, which has risen to about 300,600 acres in the state. During periods of crop stress, these forages tend to accumulate toxic levels of plant nitrate. Since 2000, MSU Extension's "Nitrate Quik Test" has been used on over 4500 producer samples, reducing livestock abortions or death.

Besides their use as emergency feed, cereal forages fit very well during crop breakout of alfalfa or other perennial forages. Growing hay barley maintains good hay production for the two years

needed for sod decomposition, while providing an opportunity for control of pesky weed, disease or vertebrate pests. Recent feeding trial work with both spring and winter cereals indicate that these have abundant forage quality for backgrounding or wintering beef cattle. Additional goals are to develop streamlined forage rotations that reduce tillage and other inputs. In many areas, deep plowing of alfalfa is not desirable due to fuel prices, erosion concerns or on rocky ground. Research trials where cereals or alfalfa are relay-cropped have begun. For example, old irrigated alfalfa stands are typically terminated by fall plowing. One alternative strategy on irrigated ground is to terminate the stand with herbicides after the first harvest, and then plant winter cereals in the fall after light tillage and/or herbicide re-application. At the other end of the rotation, alfalfa is successfully re-established into stubble following cereal hay harvest, and irrigated by sprinklers.

Impacts:

Progress with winter cereal forages has generated considerable interest among livestock producers. Those that have used spring-seeded cereals, have found the advantages of a winter cereal in terms of production potential, workload distribution and water conservation to be considerable. Forage quality, nitrate analyses, and feeding trials have been completed and are ready for distribution to clientele.

Impacts with Montana forage production are related to the use of alternative annual forages. Most of Montana experienced severe droughty conditions since 1999. Research has adequate data to promote the use of cereal forages to augment low pasture and hay productivity. Since 2000, the acreage of cereal hay has increased to over 306,000 acres, for a value of about \$23 million annually. Extension coordinated the release of “Willow Creek” winter wheat and 400 acres of Foundation seed are now in production. Concurrent feeding trials are confirming that cereal forages provide a good winter roughage diet, and the other advantages are the ease, low cost and wide adaptation of cereals.

In droughty conditions, many forages and weeds tend to accumulate high levels of nitrate that are toxic to livestock. Many Extension offices have used a rapid diagnostic nitrate test since the 1960’s, but in 1999 the MAES Analytical Lab discontinued providing these kits due to safety and liability concerns. In 2000, Extension developed and coordinated the Nitrate Quik Test Program, which is an annual training and certification effort to ensure proper use and interpretation of the qualitative nitrate test. 110 people in 53 counties have been certified to use the Nitrate Quik Test, and County agents have evaluated over 1800 samples per year. With droughty conditions, 38% of all samples tested since 2000 had prohibitive levels of nitrate for feeding, (two private labs have confirmed that over one-third of their samples were considered toxic). The economic value of nitrate testing since 2000 has been estimated at between \$12 million (replacement value of high-nitrate hay) to \$39 million (potential calf losses to abortion) annually.

Source of Funding: Federal Smith Lever
Grants
State/County

Scope of Impact: Statewide
Multi State ---

Integrated - MSU Experiment Station On Campus/Off Campus
Centers

Key Theme: Rangeland/Pasture Management: Undaunted Stewardship®

Brief Description:

Through its Undaunted Land Steward Certification program, Undaunted Stewardship® publicly recognizes farms and ranches that practice sustainable environmental stewardship on their private and public grazing lands. The certification program also educates landowners to help them make better resource management decisions. Education occurs while collaborating with landowners and others to develop or refine ranch management plans, and via traditional educational outlets of workshops, seminars, newsletters, and newspaper and magazine articles. The most up-to-date, research-based technical information is presented.

Interpretive displays at historical sites, public service announcements and news features on radio and television, youth camps and workshops, newsletters, magazines, and newspapers all are utilized by Undaunted Stewardship® to inform urban audiences that environmental stewardship, historical site preservation, and Montana agriculture can be compatible and often, in fact, are mutually dependent

Undaunted Stewardship® also recognizes that the economic sustainability of farms and ranches is necessary to preserve the open space, natural environment, and historical sites found on private agricultural lands. In response, Undaunted Stewardship® provides technical assistance to farm and ranch businesses wishing to establish or expand tourist-related enterprises, such as bed and breakfasts, wagon and horseback trail rides, recreational cabins, and campgrounds. These enterprises also provide opportunities for the business owners to inform tourists directly about the compatibility of agriculture and environmental values.

Impacts:

Fifty ranches have been certified as Undaunted Land Stewards, comprising more than one million acres. Another 50 ranches are currently progressing toward certification. All 50 certified ranches implemented at least one change in their grazing management and/or resource monitoring practices as a direct result of the certification process. In addition, Undaunted Stewardship® has preserved 11 historical sites on private agricultural lands and provided historical interpretation and public access to these 11 sites. Visitor interviews at the interpretive sites indicate the exhibits effectively convey the educational message and that visitors modify their opinions about ranching and livestock grazing after viewing the exhibits. Visitor-use surveys conservatively estimate that more than 6,000 people have visited the interpretive sites thus far. Impacts from the public education campaign via mass media have not been quantified, but public service announcements have aired repeatedly on every major television and radio station in Montana, and articles have appeared in every major newspaper statewide and several popular magazines. Feature articles also have appeared in newspapers nationwide (e.g., the *Seattle Post-Intelligencer* and the *New York Times*). Finally, 14 ranch businesses have added or expanded a recreational enterprise with help from Undaunted Stewardship®.

Source of Funding: Federal Smith Lever
Grants
State/County

Scope of Impact: Statewide

Key Theme: Home Lawn and Garden**Brief Description:**

Increase knowledge base of skilled and unskilled individuals in the areas of botany, soils and plant nutrition, turfgrass management, and vegetable and fruit production. Increase knowledge of adapted woody and herbaceous plant materials. Basic instruction in entomology and plant problem diagnosis is the emphasis.

Impacts:**Short Term:**

Students learned basic plant nomenclature and physiology, soils and soil fertility, lawn care, planting and maintenance of ornamental plants, vegetable gardening and other horticulture subjects. Participants overwhelmingly rated their initial knowledge of the many aspects of horticulture as none to slight, while at the conclusion of the class rated their knowledge from moderate to great. Some stated they were born in a city and while they had never gardened much before, felt confident they had increased their gardening knowledge. Comments at the conclusion of class included the excitement for the season to start, along with increased confidence in their ability to care for their own yards and to help others, stimulated by classroom discussions. Participants requested more classes of this type, and indicated they would repeat this class as often as it is offered. Resources used, such as the book, "Best Garden Plants for Montana", MontGuides, "Annual Flowers", "Can I Grow That Here?", "Growing Minor Stone Fruits in Montana", "Planting a Successful Vegetable Garden", "Choosing Biennials and Perennials for Montana Gardens", and "Successful Lawns", and the GardenGuide website were praised by students seeking further information outside of class. Visits to local greenhouses, volunteerism sites, and demonstration gardens increased participants' knowledge of applied horticulture.

Medium/Long Term:

Over 2000 documented hours of volunteerism utilizing the gardening expertise learned in class were undertaken in 2006. Some examples: Community aesthetics have been improved by several projects, including those in Billings at ZooMontana, Moss Mansion, Courthouse Park Fountain Planter and Meadowlark House (Cancer Care). Additional beautification projects were undertaken in Froid, Medicine Lake, Poplar, Wolf Point, Belgrade and Bozeman. At the Billings MetraPark Square Foot Demonstration Gardens, the public is shown the possibilities of small space gardens, the goal of which is to increase awareness of those not familiar with this style of gardening. Many volunteer hours were spent at Senior Centers, including classes, maintenance and gardening with residents, and the planting and maintaining of a wheelchair accessible garden. A horticulture program was implemented at Bozeman's Eagle Mount, helping developmentally disabled learn gardening, landscape construction and maintenance. Economically, several Master Gardeners help with the Special K Ranch greenhouses, assisting mentally challenged individuals with the culture and care of flower and vegetable transplant care. This is the home of these individuals, set up with the sale of greenhouse grown transplants as income.

Source of Funding: Federal Smith Lever

State/County

Scope of Impact: Statewide

Goal 2 **A Safe and Secure Food and Fiber System**

Overview:

Montana Extension has continued initiatives that address issues related to an adequate and safe food and fiber supply. Major efforts are focused on methods of handling food to ensure consumers their food is safe to eat and techniques for stretching the food dollar so families can eat nutritiously. The programs offered under this goal are centered in two of the key themes, Food Resource Management and Food Safety and Security.

Montana's limited resource families struggle to purchase and prepare food for their families in a nutritious manner with the money, food stamps, or other food resources they have available. Almost 20% of all Montana children live in poverty, and food security is a problem for many of these children and their families. Working low income families often lack the time, knowledge and skill to prepare and serve family meals which are tasty, low-cost and healthful.

Both children and adults in Montana are increasingly obese and overweight, consuming significantly more calories with less physical activity than 30 years ago. The personal costs of obesity include reduced longevity due to increases in heart disease, hypertension, stroke, some types of cancer, and diabetes. The societal costs are immense when considering annual obesity-attributable medical expenditures (estimated today at \$125 billion annually in the United States). Studies show that people who run out of food or miss meals because they cannot afford them are among the most obese.

The EFNEP (Expanded Food and Nutrition Education Program) staff, consisting of Extension professionals and paraprofessional nutrition assistants, works in close partnership with many community organizations to reach and teach those families in need of food resource management skills, food safety information, practical nutrition education, and physical activity strategies.

According to reports, 1436 people completed the program. Currently, 6.968 FTE are devoted to EFNEP activities in 3 counties in the state and one reservation.

In partnership with the Montana Department of Public Health and Human Services, Montana State University Extension completed the ninth year of providing nutrition education to the food stamp audience in Montana through Food Stamp Nutrition Education (FSNE). Montana FSNE delivered programming to adult audiences in twenty counties and six reservations. The school based program taught third and fifth grade lessons in Title I schools in 12 counties and 5 reservations. (Blaine, Lincoln, Sanders, Mineral, Flathead, Ravalli, Granite, Powell, Deer Lodge, Silver Bow, Gallatin and Lewis & Clark counties. Crow, Flathead, Northern Cheyenne, Fort Belknap and Rocky Boy reservations)

The Food Stamp Nutrition Education Program has 11.84 FTE and served 6872 youth and adults in Montana counties and reservations.

In the area of food security, recent Bureau of Business and Economic Research poll found that one in every eight Montana households (12.5%) was either uncertain of having or unable to acquire adequate food over the past year. The survey reported that 4.6% of these

households experienced the more severe form of food insecurity; that is, one or more members were hungry at some time during the year because they could not afford enough food. Both hunger and obesity are serious public health problems and sometimes co-exist in the same families or individuals. With fewer resources to buy food or to obtain health care or other preventative or remedial interventions, people with limited incomes are particularly susceptible to damage from hunger/food insecurity, obesity, or both. Lack of access to adequate food can result in weight gain.

Providing basic food safety training reduces the incidence of foodborne illness, which impacts an estimated one in every 65 Montanans each year. Food safety is a growing concern for the food service industry and public and private agencies. Many of these food service groups are now requiring food safety training, such as the Montana school systems as they comply with the mandatory USDA policy to implement a School Food Safety Plan. Training in Hazard Analysis and Critical Control Points (HACCP) has helped entities do a better job with food safety issues. The financial costs of food-borne illnesses for Montanans, especially those at high risk, are tremendous as scarce public tax money covers lost wages, health care, and investigative costs. These losses have wide spread implications in Montana's health care costs, productivity, and the health and economic well-being of children, families and communities.

The Confederated Salish and Kootenai Tribal members maintain several community kitchens and facilities with cooking and food handling areas, including Kicking Horse Job Corps (KHJC), and various child care facilities, senior citizen centers, and assisted living centers. Many tribal community members have not been exposed to food safety training.

The KHJC kitchen staff and educators train incoming students in food safety during the students' kitchen time. KHJC requested help from MSU Extension with food safety training and HACCP compliance to meet safety guidelines and keep food safe during the flow of food through the kitchen.

During the 2006 program year, approximately 0.79 FTE were devoted to food safety and security through the Level 1 and 2 Food Safety programs and 1163 participated in related education.

Source of Funding: Federal Smith-Lever funds \$ 31,868

Key Theme: Food Resource Management

Brief Description:

The Expanded Food and Nutrition Education Program (EFNEP) helps limited resource audiences (youth and families with children) in acquiring the knowledge, skills, attitudes, and changed behavior necessary for nutritionally sound diets, and to contribute to their personal development and the improvement of the total family diet and nutritionally well-being.

In FY06, Montana EFNEP in three counties and one reservation (Missoula, Yellowstone, Silver Bow and Fort Belknap Reservation in Blaine) taught a series of lessons to adult family members to help them stretch their food dollars to feed their families in a nutritious manner. EFNEP agents and paraprofessionals contacted low income youth in Title I schools and out-of-school programs between the ages of 5 and 17 with lessons about healthier, low cost food choices, addressing child obesity in an effective, collaborative way.

Impacts:

Short Term:

- As indicated in a pre/post test, a total of 335 adult participants learned the importance of healthy eating, importance of increasing physical activity, principles of food safety, strategies for food resource management, and useful tips for food planning and food preparation.
- According to a pre/post test, 95% of the 1026 children taught in Title I schools and in after school programs increased their knowledge in the basics of healthy eating and the importance of daily physical activity.

Medium Term:

- Both the adult participants of EFNEP (410 people) and the youth participants (1026 children) showed consistent positive behavior changes in choosing more nutritionally sound diets and managing food budgets.
- More than 88% of the EFNEP adult graduates improved their diets, notably with an increase in fruit and dairy consumption.
- More than 44% of EFNEP participants showed improvement in one or more of the food safety practices taught.
- Participants made strides in food resource management with 63% making positive changes in family food management (i.e., plan meals, compare prices, use a grocery list).
- 97% of the 1026 children taught by EFNEP now eat or intend to eat a wider variety of foods. 95% of children improved their food safety behaviors by learning how to correctly wash their hands, as an example.
- 21% of the adult participants reported that they now feed their children breakfast more often.

Long Term:

- An EFNEP cost/benefit study in 6 states, including Montana, found that for every dollar invested in EFNEP programming, \$8.82 in future health care savings resulted. These savings are a huge positive impact for Montana.
- Follow-up with EFNEP graduates reveals that long term impacts also are a result of the program, such as increased confidence in the ability to manage resources, sustained weight loss, and even increased job opportunities.

Source of Funding:

Federal Funds

Scope of Impact:

3 Counties and one Reservation in the state

Multi-state Activity: States that have EFNEP Programs

Key Theme: Family Resource Management --- FSNEP**Brief Descriptions:**

The FSNE Program helps adult participants:

- adopt healthy eating and active lifestyles that are consistent with the current Dietary Guidelines for Americans and USDA Food Guidance System;
- enhance practices related to thrifty food shopping and preparation of nutrition objectives;
- have enough to eat without resorting to emergency food assistance and if not already participating in the FSNE program, be aware of its benefits and how to apply for them; and
- safely handle, prepare and store food.

Youth in Title I schools received help to adopt healthy eating and active lifestyles that consistent with the current Dietary Guidelines for Americans and USDA Food Guidance System.

Impacts:

Participants reported a 33% improvement in breakfast consumption for their children. Adult participants reported the following behavior changes as a result of participating in the Extension delivered programs:

- 61% reported an increase in vegetable and/or fruit consumption.
- 50% reported eating more servings of low fat dairy servings.
- 84% of participants reported being more physically active; 91% said they intended to be physically active 5 times a week.
- 61% reported using a grocery list more often
- 72% plan meals more often
- 70% compared prices at the grocery store; 39% prepared supper at home at least three times or more a week. 91% reported that they intend to prepare meals at home more often.
- 33.7% reported washing their hands more often; 94% intend to wash their hands more often in the future.
- 42.7% thaw foods at room temperature less often
- 40% of participants prepare raw meat separately more often.
- 35% of adult participants reported positive changes in their food security.

Source of Funds: Federal Grant

Scope of Impact: 20 Counties & 6 Reservations – Adult Audiences
 12 Counties & 5 Reservations – Youth Audiences
 Multi State --- States that offer the FSNE program

Key Theme: Food Safety

Brief Description: Level 1

The goal of Level 1 Basic Food Safety Training for Food Service Employees is to prevent foodborne illness by teaching safe food handling information and skills. This training is focused on four key principles - controlling time and temperature when handling food, ensuring proper personal hygiene, preventing cross-contamination, and proper cleaning and sanitizing.

The goal for the Level 2 ServSafe Food Protection Manager Certification Course is to provide food service managers and professional food safety educators with the knowledge and skills to maintain an establishment that practices safe food handling and to provide an opportunity to receive a national certification "ServSafe Food Protection Manager Certification." The ServSafe Food Protection Manager Certification Course is a comprehensive, nationally recognized food safety course for food service managers designed to provide food-safe knowledge and skills to maintain a safe establishment. This is an activity-based approach to food safety, which covers material in the ServSafe® Essentials text in three content areas: 1) the impact of safety on your operation; 2) the flow of food through your operation; and, 3) managing a food-safe operation or Industry.

Finally, the goal for the Salish/Kootenai program is to educate students and community members in keeping food safe through the flow of food in the kitchen, including receiving preparing, cooling, storing, and reheating. With this basic food safety training, foodborne illnesses and contamination in the flow of food can be prevented.

Impacts: Level 1.

According to a pre-post survey of the 917 participants, the following data was collected:

Short Term:

Participants who responded, reported increased knowledge about:

- 99% controlling time & temperature when handling food
- 99% ensuring proper personal hygiene
- 99% preventing cross-contamination
- 99% using proper cleaning and sanitizing
- 91% ensuring proper personal hygiene
- 79% controlling time and temperature when handling food
- 75% preventing cross-contamination
- 89% proper cleaning and sanitizing

Medium Term:

Participants who responded, reported improved behavior regarding:

- 90% controlling time and temperature when handling food
- 90% ensuring proper personal hygiene
- 89% preventing cross-contamination
- 89% using proper cleaning and sanitizing
- 89% ensure proper personal hygiene
- 83% control time and temperature when handling food
- 81% prevent cross-contamination
- 90% use proper cleaning and sanitizing

Long Term:

Overall, the result of this program is the prevention of foodborne illnesses, but the consequences are much broader.

Businesses have indicated they will provide the training on a regular basis for employees, including additional sessions so new employees can receive the training. For example, one

participant said: “We use the ServSafe practices already and we send all employees through your course so they know why we are so rigid on the ServSafe practices.”

The food handlers with the Head Start program, after completing the 4-hr class for the 2nd time, have decided to take the 8-hr certification class. Two individuals completed that certification this fall.

The Laurel School Food Service Manager continues to request the 4-hr class each fall for all her employees as a refresher in Food Safety before the school year starts. The manager previously completed the Certification class and sees the importance of continuing education for her employees.

The Metra Food Service in Billings continues to require all individuals involved in the preparation and sale of food on the premises, participate in a 1 ½ hr course on food safety and pass a test on their knowledge of food safety.

The County Superintendent of Schools referred 36 people for training on safe food handling practices. The 4-H food booth manager and day care certification program were also required to attend. The School Food Service director in one county told the sanitarian that the workshop has benefited his employees.

Over 225 youth also participated in food safety classes. In surveys completed, many said they participated because they either currently work in food service or expect to be working there within the next 2 years. Students reported they received an increased wage and promotions due to the training. Additionally, the health inspector in one county reported fewer infractions during the summer fair season. Several counties trained youth and adults who work in the 4-H food booth and other food stands at the county fairs. One county reported the 4-H food booth purchased food thermometers, installed a separate hand washing sink, initiated sanitizing with spray bottles and developed a procedure for storage of hamburger patties. As a result of training provided to grades 7-12 and staff, one school installed a “handless” paper towel dispenser in all restrooms.

In a Behavior Change Follow-Up Survey (3-6 months post):

- 51% reported more skills in preparing and serving food safely to prevent illness.
- 41% have more knowledge to help pass our food safety inspection
- 41% are more confident that food safety will increase profits
- 59% will better train others about the importance and methods of serving food safely
- 49% consider food safety training realistic and relevant for my food service establishment
- 71% monitored the temperature of hot and cold foods served more often
- 72% washed hands using the methods learned in the training more often
- 64% minimized cross contamination by separating uncooked from ready-to-eat food more often

Brief Description: Level Two

Impacts:

Short Term Outcomes

- 100% increased knowledge about controlling time & temperature when handling food
- 100% increased knowledge about ensuring proper personal hygiene
- 100% increased knowledge about preventing cross-contamination
- 100% increased knowledge about proper cleaning and sanitizing

Participants have reported they have learned practical techniques to help with food safety.

Examples of their statements are:

“This class has been particularly helpful in making me more aware of the importance of good personal hygiene.” (75% of participants)

“I intend to be more responsible about taking temperatures.” (67% of participants)

“I intend to be more careful about the cleaning and sanitizing in my establishment.” (50% of participants)

“I intend to implement HACCP in my business.” (25% of participants)

“I learned a lot about bacteria and food borne illness.”

“I learned a lot about not to thaw food at room temperature, to cool hot food properly, and how not to cross contamination on cutting boards.”

Medium Term Outcomes

- 73% improved behavior in controlling time and temperature when handling food
- 84% improved behavior about ensuring proper personal hygiene
- 80% improved behavior about preventing cross-contamination
- 72% improved behavior about proper cleaning and sanitizing

Participants report they have taken action as a result of Extension training. Some of their statements are:

“I am cooling foods as fast as possible and check the temperatures of hot and cold food constantly. “

“Shared with co-workers and friends not to store baked potatoes in the foil wrapper.” “I always use bleach water for the towels and always take the temperature of the reheated meats or food.”

“I wash hands continually and use different cutting boards for foods.”

Long Term Outcomes

Overall, the consequence of this program is the prevention of foodborne illnesses, but the consequences are much broader and can impact:

Supporting Economic, Workforce, and Health-Related Business Practices

- Of 191 participants, 93% of participants passed the test and received the national ServSafe Food Protection Manager Certification.
- Twenty school food service workers completed the ServSafe certification and then went on to complete the HACCP for school food service workers.
- The teacher for the ProStart (food service manager training) class in Billings completed the ServSafe Certification and is now teaching the 4-hr class to all the students in the ProStart classes.
- 49% reported more skills in preparing and serving food safely to prevent illness.

- 49% reported more knowledge to help pass our food safety inspection.
- 89% reported more confident that food safety will increase profits
- 93% will better train others about the importance and methods of serving food safely.
- 93% received training that was realistic and relevant for my food service establishment.
- 94% now monitor the temperature of hot and cold foods served.
- 92% wash hands using the methods learned in the training.
- 94% minimize cross contamination by separating uncooked from ready-to-eat food much more often

Source of Funds: Federal Smith Lever
Federal Grants
State/County

Scope of Impacts: Statewide

Goal 3

A Healthy, Well Nourished Population

Overview:

Nutrition plays a critical role in successful aging, a key component of quality of life. However, there is a high rate of malnutrition among older adults because they experience a large number of nutrition-related individual and environmental risk factors. Seventy-three percent of older adults report eating fewer than the recommended 5 or more servings of fruits and vegetables. Sixteen percent report having been told by a doctor that they had diabetes, more than doubling 1998 findings. According to the 2000 Census, Montana has a total population of 902,195 persons of whom 13.4 % (120,949 individuals) are age 65 years and older, representing an increase of almost 14% from the 1990 census.

In addition, obesity is the most widespread, serious, and complex nutrition-related health problem facing Americans, including people residing in sparsely populated states such as Montana. Educational efforts to slow and eventually reverse the rising obesity rates and increase the fitness levels through changes in health-related attitudes and behaviors are targeted at both adults and youth. Research tells us that to achieve changes related to food, physical activity, and body-image attitudes and behaviors is a long term and often difficult journey. Employing a health-centered (rather than a weight-centered) approach to well-being, Extension education is based on the idea that people can best improve their health by developing positive lifestyle habits rather than by trying to achieve a specific body size, shape, or weight. “Steps to a New You” combines a series of food/physical, activity/body image classes with a physical activity program. Educational settings include adult educational classes, worksite programs, and church groups. “Steps to a New You” has already been identified as a program appropriate for schools implementing the mandatory School Wellness policy. This program is also being used as professional development for teachers and other professionals helping them learn the information and behaviors associated with the current researched-based approach to obesity prevention. Parents are another important audience as they deal with their own health, weight,

and fitness issues while also helping to support development of healthy attitudes and behaviors for their children.

Several counties have found that the “health fair” concept is a way to provide easy and inexpensive health checks for people who don’t regularly see a Doctor or have medical check ups. Emphasis is often placed on nutrition and diet, cardiovascular disease, fitness and weight control, stress management, accident prevention and self-responsibility for health maintenance.

The area of nutrition and health has been an important component of Extension education in the state. According to 2006 reports, 1,736 people attended workshops or received information related to health and nutrition. Approximately 1.10 FTE are devoted to providing the educational opportunities.

Source of Funding: Federal Smith-Lever funds \$ 34,199

Key Theme: Human Health --- Steps to a New You

Brief Description:

The goal of the “Steps to a New You” curriculum is to improve people’s attitudes and behaviors related to food, physical activity, and body image to prevent or reduce obesity.

Objectives:

- 1) To change people’s attitudes related to food, physical activity, and body image.
- 2) To change people’s eating behaviors.
- 3) To change people’s physical activity.
- 4) To assess physical changes in resting heart rate, height, and weight.

The Health Fairs are focused on prevention and early detection of potential health issues. They also provide a venue for participants to gather valuable information and materials about factors that contribute to a healthy life style.

Impacts:

Short Term:

A total of 232 people participated in the Steps to a New You program. Of those, 191 people responded to the evaluation administered and provided the following data:

- 98% said they gained general knowledge about food and nutrition and physical activity while 91% reported they learned about body image and media literacy.
- The participants also provided a number of testimonials that indicate their intentions related to what they learned:
 - o “I learned to feel good about myself as I am. (Being) fat does not always mean unhealthy.”
 - o “Dieting does not work in the long run, exercise, exercise, exercise!!”
 - o “It really helped me break the diet habit. I feel much healthier.”
 - o “This class made me realize that food is only as important as you let it be.”
 - o “It changed my attitude about food. Live every day to the fullest, not waiting until you are thin.”
 - o “Be happy with who you are.”

- o (from agent) “People still share their changes and successes with me almost 1 year after the program.”
- o “I’m really enjoying the class.”
- o “You cleared up a lot of confusion I had about nutrition.”
- o “What I have learned from this class has changed my life.”
- o “I start dreaming of fun things to do now, not when I am thin and beautiful.”
- o “Not focusing on size and shape of my body and others.”

Medium Term

Of the 232 people who attended the Steps to a New You program, 191 responded to the evaluation provided. They indicated they took some action as a result of the information they gained about changing their behaviors related to achieving a healthy life style, reducing or preventing obesity.

Eighty-two percent said they made some changes in their habits related to food and nutrition, while 81% increased their physical activity, and 76% achieved a more realistic view of their body image and media literacy.

Many of the participants shared what they have been doing as a result of the class:

- “It would be a great benefit for everyone to take this class. It will be a life changing event!”
- “I have increased my physical activity. I find I can walk more without feeling worn out so I enjoy it more. I am more conscious of fitting walking or exercise into my day.”
- “I’m kinder to myself, less critical. I’ve discovered areas that need improvement such as more veggies and less TV.”
- “It is important to have balance in our individual lives – from eating to physical activity.”
- “It’s nice knowing that I’m not alone in my struggles.”
- “Food is part of being healthy, not our enemy.”
- “One of the most important things I remember from the program is – To accept myself as well as others as we are – not picture perfect.”
- [from agent] One person lost 22 pounds and gave Steps the credit for helping her.”
- A group of 4 women walk 4-5 times a week together as a result of the class.
- Participants in one office changed walking schedules so they could walk together at lunch.
- One inactive participant joined her boys for a 5 mile walk at the end of class
- Collectively 14 participants logged 6,100 miles in 23 weeks
- Three participants said they are going to look nice now and not wait until they became “thin” to dress well
- “From someone who was diagnosed with breast cancer during the workshop – “The exercise and the healthier eating style rally helped in making me feel better.”
- As a direct result of this class, 4 participants became involved in a regularly held community yoga class—that was introduced to them during the program.

Long Term:

Participants reported the following continued changes 3-6 months after completing program:

- 48% added physical activity to my usual daily routines.
- 92% received greater enjoyment being physically active.
- 72% chose smaller portion sizes.

- 84% ate more fruits and vegetables.
- 84% usually ate when experiencing sensations of hunger
- 68% usually quit eating when starting to feel full.
- 44% do not eat while doing another activity (watch TV, reading, driving)
- 36% received greater enjoyment when eating.
- 52% usually eat without feelings of guilt.
- 92% agree that abilities are more important than body size and shape.
- 55% experienced improved self-esteem.
- 84% experienced more self-confidence in improving health and fitness.

Individual testimonials also provide information on the impact of this program:

- One participant lost 20 pounds and said the intuitive eating information changed her eating behaviors for life
- “I have lost weight and brought my cholesterol down – what a great thing to have happen.”
- “I slowed down my eating and took time to enjoy it; the result was a loss of 7 pounds.”
- Three individuals experienced a significant weight loss as a direct result of participating in this class (loss ranged between 30-50 lbs).
- 3 participants reported lower blood pressure.
- As a direct result of this class, a daily activity program (yoga, exercise videos, etc.) was started at the local Senior Center. There are approximately 10 participants, some of whom were former program participants.
- Working with the nutrition coalition, 10 new restaurant entrees were analyzed and identified as low-fat and available to customers.
- Through this program, it became apparent there was a need for a community diabetes program. The Agent is collaborating with the public health nurses to develop a program.
- Participants asked that I offer the program again for their friends and family.
- Two more class will be offered for youth on media literacy.
- An Elementary teacher that was participating in the class, used the videos and materials to work with her 4th graders on self esteem issues and healthy life styles.
- 2 physicians recommended this program to their patients.
- 1 class member reported being referred by her physician.
- Was invited to advertise STEP program jointly with the hospital wellness program and the diabetes Thin to Win program
- The diabetes educational meetings were changed to “Wellness for Life” in which STEPS information was utilized
- Teton Medical Center started a personal trainer program through their physical therapy department.
- Two participants in the class worked with the Deaconess Diabetes Center and were themselves diabetic. They shared the materials with individuals in the Diabetic Support Group and with other members of the office staff.
- Fergus Electric worksite has requested a condensed program in January for their Wellness Program.
- Asked to present food and mood program to wellness groups
- 35 requests for more programs.

Human Health: Health Fairs

Impacts:

Health Fairs are held in approximately 30% of the counties in the state with similar results to Wibaux County. In Wibaux County with a population of 951, the Health Fair reaches 558 local residents and an additional 62 people who live within a 60 mile radius. A total of 620 individuals received medical attention and health information at the County Health Fair. A high percentage of the participants are elderly or low income folks who may not be able to visit a doctor regularly. Doctors often refer patients to the Health Fair indicating that it is less expensive to have their blood work or PSA test done there, knowing this is an important consideration. Medical services that were offered at the Health Fair include blood typing, blood pressure, blood sugar, hearing, bone density, blood profiles and PSA tests. Many who attended the Health Fair in 2006 indicated they waited all year to have their blood work completed; 406 blood profiles and 132 PSA screens were done in addition to other services. The Health Fair has made it possible for residents of this small rural county to have up to date health and nutrition information available which has increased their awareness of personal health accountability.

Source of Funds: Federal Smith Lever
State/county

Scope of Impact: Statewide
Multi State --- Steps to a New You --- ID, WY
Integrated --- Steps to a New You

Goal 4

An Agricultural System Which Protects Natural Resources and the Environment

Overview:

Montana is a state that relies heavily on the natural resources for its economic base. For the most part, however, landowners understand the importance of protecting and preserving these natural resources even though doing so can challenge earnings. Generally speaking, agricultural producers work hard at being good stewards of the natural resources, for to do differently, destroys their ability to make a living and survive on the land. It is true however, that many of the state's citizens lack knowledge of how livestock agriculture, forestry, or grain production works to ensure the sustainability of natural resources. It is also true, there have been examples where the locations of these enterprises have been devastating to the quality of the environmental, but management techniques have been devised to make these industries compatible with their locations.

Extension programs have assisted agricultural 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 16,620 people have participated in programs under this goal. Approximately 1.7 FTE are dedicated to developing and delivering these programs.

Source of Funding: Federal Smith-Lever funds \$ 56,102

Key Theme: Noxious Weeds

Brief Description:

Invasive weeds infect over 8 million acres in Montana and continue to spread into healthy range lands at a rate of 10-14 percent per year. Additionally, weeds reduce yield, quality and value of crops. They increase production and harvesting costs, adversely affect use, economic value and aesthetic aspect of the land they infest. Economics clearly demonstrate that it costs more to control weeds after they are established than it does to prevent them.

Impact:

- Through Extension education, 311 private landowners have become aware of the noxious weed issue, management options and resources available to them to address the problems.
- For local government, State, Tribal and Federal land managers, field visits and educational efforts sponsored by Extension have increased awareness and attention to the problems caused by noxious weeds. They, in turn, are developing more comprehensive plans for management which assists them with funding issues to meet their management goals.
- The past efforts of the Tri-County (Wibaux, Fallon, Prairie) Leafy Spurge Control Project have made it possible to reduce the size of the Weed Management Area (WMA) from 178,570 acres to 30,080 acres of rangeland containing the main 2,500 acre leafy spurge infestation and other large infestations. A barrier zone consisting of 86,400 acres surrounding the WMA, has been established to intensify leafy spurge control around the main infestation to reduce weed spread into non-infested areas. A 452,560 acre Weed Prevention Area (WPA) surrounds the barrier zone and WMA to protect against the leafy spurge seed source. The tiered management strategy has helped redefine and prioritize landowner efforts and shared responsibility to maximize resources and management effectiveness.
- Northern Cheyenne Reservation implemented a noxious weed management program on 330 acres of infested ground. With a combination of mowing, tilling, fallowing and seeding, 85% of the idle land was established. The yield was in excess of 2.5 tons per acre, an equivalent of \$9000. These fields now have tremendous perennial cover and competition to hold off the Russian knapweed. It will require 80% less herbicide, saving producers about \$8 per acre and the land will generate income for many years into the future.
- A range rider was hired to scout for noxious weeds on nine ranches, comprising 26,560 acres of private land in Blaine County. Within this WPA is a wilderness study area which is of particular concern because of limited access, rough terrain, and little survey work makes the noxious weed threat to their ranches unknown. A total of 77,834 acres of public land lies within the ranch boundaries of the nine WPA landowners. The range rider was able to survey approximately 60% of the WPA for noxious weeds, which is more than 60,000 acres. The only noxious weed found present was leafy spurge. The range rider found approximately 180 scattered, eradicable patches of leafy spurge, each less than one-fifth of an acre in size. Extension provided the technical expertise for the

range rider and eradication of the leafy spurge areas. Concurrent WPA activities are occurring in Liberty, Phillips, Garfield, Prairie, Custer and Fallon counties.

- As a result of Extension education, producers learned to identify the life stages and the damage caused by the Hessian fly on their small grain crops.
- Small grain producers, because of Extension efforts, learned about wheat strip rust. Several thousand acres of winter wheat were treated with fungicide before weather conditions improved enough to stop the spread of the fungus. Mass media were heavily utilized in keeping producers aware of conditions so they could in turn, respond to the problem.

Source of Funds: Federal Smith Lever
State/County

Scope of Impact: Statewide

Key Theme: Integrated Pest Management

Brief Description:

Extension conducts several activities that provide landowners and agricultural producers with information and techniques for dealing with pests. Participants in the Crop Pest Management School learned to recognize the damage caused by pests and acquire skill in integrating alternative management methods, economic thresholds and environmental issues in decision making. The Insect Diagnostic Lab aids growers in identifying insect/plant problems and their solutions, recommends management techniques for control and prevention, and predicts and monitors outbreaks based on samples from different areas in the state so alerts can be sent out. This year, Extension was approached by museum professionals who indicated they need accurate and current information about monitoring and managing pests that can cause damage to irreplaceable artifacts. The Museum IPM program offers aids on the selection and integration of pest control strategies based on results of timely monitoring and considers other factors, important in pest management decision-making including environmental, ecological, and sociological consequences. The four basic steps of an IPM program are "Identification, Monitoring, Control and Evaluation".

For several years, Montanan's have been concerned about West Nile Virus. Particularly, the West Nile Virus has many horse owners and individuals worried about the dangers associated with becoming infected with the virus. Extension programs have worked to provide information for early warnings. In short, Montanans need and require accurate pest identification and access to researched based management options that are available to them.

Impacts:

- Through pesticide recertification training workshops and tours sponsored by Extension, participants increased their knowledge of worker protection safety, integrated methods of weed control, and their ability to accurately identify Montana noxious weeds. Extension sponsored pesticide recertification training workshops in which 311 Private Pesticide Applicators have renewed their licenses. On the Blackfeet Reservation, 25 participants

obtained an initial license or received continuing credits. All 25 of those participants are utilizing the certification by purchasing and spraying chemicals for weed control.

- Approximately 625 samples were processed in the Insect Diagnostic Lab. Approximately 75% of the samples involved home horticulture and 25% commercial agricultural problem identification. Clientele report they learned to recognize the insect and in some cases, built a collection of common pests for their own reference. These people also report they are more effective at using appropriate control practices that protect the environment while eradicating the pest problem.
- Over the last five years many small grain producers have faced the challenges of sawfly damage to spring grain crops and short moisture growing conditions. The losses due to sawfly have ranged from 20 to 80 percent of the annual small grain harvest. Through newsletters, crop plot tours, and research demonstrations, many producers have changed their variety selection and planting habits to minimize sawfly damage. This has resulted in a shift away from hollow stemmed small grain varieties to semi or solid varieties for crop protections. Simply planting a solid stem variety within a sawfly infested field can increase yields by 20 – 50 percent. Also, producers have gained knowledge about the biology of the sawfly allowing them to reduce damage by planting other crops (like barley) into highly infested areas. With an increase in late season moisture, some producers have increased annual planting of winter wheat, where winter kill is not as significant. While taking advantage of this valuable moisture, it has also lessened the work load on the spring planting process. Many producers have planted additional acres of haybet barley during times of low crop moisture. A rise in small grain prices along with better management of the sawfly has allowed producers to harvest more of their crop leading to an improved annual income during this high input cost era of drought.
- A post session survey indicates that attendees of the Crop Pest Management Schools are using the information they learned. Specifically, they indicated:
 - o 53% of the attendees felt more knowledgeable about cooperatives and the market than they did prior to attending the school.
 - o 86% felt more knowledgeable about crop options and alternative cropping systems.
 - o 80% of the attendees said they are more aware of various aspects of cereal diseases.
 - o 80% said they are more familiar with control concepts of Hessian fly, Alfalfa weevil, and other insect pests.
 - o 95% percent said they would be able to access the National Plant Diagnostic Network and understand its value with regard to Plant Pathology/Insect detection and monitoring.
 - o 90% of the attendees said they felt more confident about making important decisions regarding nitrogen management.
 - o 90% feel more confident about initiating more practical noxious weed management.
 - o 95% feel they are more knowledgeable about weed models and weed identification.
- In a survey that was sent to the 75 museum professionals who had used the Extension materials on identifying and controlling insects and pests, 22 participants indicated they are applying the techniques outlined in the information. For example:

- o Over 54% indicated they had a clearer understanding of the problems caused by insects in Museums and that it is important to monitor them on a continuous basis.
 - o Over 85% indicated they learned techniques for monitoring for insects and how to send insect specimens for identification if needed. 55% said they would start an insect monitoring program.
 - o Over 95% said they learned practical techniques for reducing insect infestations and feel better prepared to preserve valuable exhibits.
- West Nile Virus Surveillance in Montana is a statewide program which is in place. Thirty-three counties and 10 state parks and wildlife management areas took part in the surveillance program. WNV infected mosquitoes were detected in eight counties representing the first report of positive mosquitoes collected in both eastern and western Montana. Because of this program, it has been possible to detect WNV two weeks before human and horse transmission has occurred. This has provided ample time to inform residents, tourists, mosquito control districts of the occurrence of virus activity in certain areas of the state via radio, TV PSA's and feature news articles. The primary vector of WNV is Cx.tarsalis and it is closely associated with irrigated agriculture along major river drainages in the state. Analyses of blood fed mosquitoes suggest they may be picking up WNV infections from mourning doves, information which is vital in establishing the epidemiology cycle of WNV in Montana.

Source of Funding: Federal Smith Lever
State/County

Scope of Impact: Statewide
Multi State – WY (Museum)
Multi State – ND, SD, WY, NE, Co, KA, OK, TX (Great Plains
Diagnostic Network)
Integrated ---Sawfly - MSU Research Station - Havre
Integrated --- WNV --- MSU Experiment Station - Bozeman

Key Theme: Water Quality

Brief Description:

Publicity has raised the awareness of and concerns about the safety of the water people are drinking. Specifically, arsenic and nitrates have been noted as being in potentially dangerous levels. In response to inquiries on “how safe is my well water?”, Extension established a well water testing program that goes beyond the usual by offering interpretation of the test results and fact sheets that explain components of the test. This educational component makes this testing program a one of a kind. In 2005, approximately 400 people took advantage of the Well Educated program. Based on input from those participants, some changes were made to the program. In 2006, those identified changes were tested involving nearly 275 individuals.

Impacts:

According to regular survey work, 60% of the 275 participants started a file to initiate tracking of water quality through time and of the 14% of participants with a positive bacteria result, 28% disinfected, and 14% tried to source contamination. Ninety-seven percent indicated a better ability to monitor their drinking water quality due to the Extension program and 92% indicated improved confidence in sharing what they learned with neighbors. Ninety-eight percent of participants indicated a better understanding of the importance of regular well testing due to the program and 97% stated they would participate again. Participants have indicated they have found the interpretation of the results very helpful and have used the fact sheets in decision making.

Source of Funding: Federal Smith Lever
State/County

Scope of Impacts: Statewide
Integrated – MSU Experiment Station - Campus

Key Theme: Forest Resource Management

Brief Description:

Forest Stewardship Education: The Forest Stewardship program teaches landowners to survey their forest and develop a forest management plan for their specific property objectives. The program has been in place for 16 years and by the end of 2006, over 2652 landowners had participated with a combined ownership of 955,385 acres, which represents 28% of the non-industrial private forest ownership in Montana. In 2006, 66 forest ownerships (102 participants) attended the Stewardship workshop representing 11,788 acres, including one landowner with 1,700 acres who had taken the course before but wanted to take it again to make sure she had opportunity to absorb all of the information. In addition, 13 professional loggers attended the training, as well as a representative for the Montana State Prison who used the course to start developing a forest management plan for 4000 acres of state lands.

Forest Mini-College: This endeavor is also targeted at private landowners, professional loggers and professional foresters. A total of 124 people participated in classes on estate financial management, forest insect and disease identification, log grade optimization, and noxious weed biocontrols.

Impacts:

On site evaluations indicate that participants learned about techniques and principles to use in managing their forests. Most indicated their expectations changed, increasing their understanding that active management that produces wood products while protecting water and wildlife resources plays 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 and that harvesting trees could be important. Less than 10% indicated they would consider developing a portion of their forest towards another use.

Source of Funds: Federal Smith Lever

Federal Grants
County/State

Scope of Impacts: Statewide
Integrated --- University of Montana, College of Forestry and
Conservation Research

Goal 5

Enhanced Economic Opportunity and Quality of Life for Americans

Overview:

Extension, through the stakeholder input process, recognizes the interest Montanan's have in improving the conditions for families and the communities in which they live. This understanding is the force driving program development and delivery in several identified areas although the challenges are significant. 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, shrinking communities and slow economic conditions. On the other hand, people who live in the western section of the state are working hard to plan for fast growth, a viable economy and a changing population. Extension programs are helping families and communities address needs brought on by these changes.

Regardless of the community there are some common concerns. Families are worried 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. Extension programs have met these needs with a variety of educational opportunities.

According to reports, data indicates 63,260 people participated in programs areas that fall under this goal, not including 4-H. The 4-H program reached 25,335 youth and 4,68 adults with learning opportunities. Approximately 9.11 FTE are focused on planning and delivering these programs.

Source of Funding: Federal Smith-Lever funds \$ 327,960

Key Theme: Aging

Brief Description:

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

Since 2002 the MSU Extension Service has been providing assistance to the Alzheimer's Association Montana Chapter to increase the awareness and support for caregivers of Alzheimer's patients. Fourteen County Extension Offices (primarily in the eastern part of the state) participated in the PBS broadcast and discussion of *The Forgetting: A Portrait of Alzheimer's*. From the interest generated through this broadcast Extension became aware of the need for more education in the state on Alzheimer's.

While the majority of programs were delivered in the Eastern part of the state a year ago, over the past year, 110 people in 3 communities in Western Montana have completed the series of classes. The program is now accessible and is being delivered to people across the entire state.

Powerful Tools for Caregivers: The baby boom generation is aging and our population is aging. The fastest growing age group is those individuals over 85. Along with extended life expectancy comes a variety of chronic illnesses. Most older individuals live on their own or with a spouse yet they often require a certain level of caregiving. The Powerful Tools for Caregivers course is designed to help the caregiver learn self care so that they can provide care --- either direct care or managed care to a loved one.

During the 2006 program year, 40 class leaders were trained and approximately 140 individuals completed the six-week program in 7 communities, and one reservation, in the state.

Impacts:

Short Term:

- Evaluation results indicate that participants have gained knowledge about financial planning issues, nutrition, home modifications and family interactions related to caring for an Alzheimer's patient. (The evaluation consisted of paper/pencil feedback from each class, followed by 4 and 6 month telephone surveys with a random sample of participants.)
- By completing the Powerful Tools for Caregivers, 140 individuals reported through pre/post tests that they have increased their knowledge about how to provide appropriate care for the elderly.

Medium Term:

- Participants from the series have anecdotally indicated a need for more information on the topic of Alzheimer's. Requests have been received for additional classes targeted at answering participant questions about the disease that were not covered in the planned series.
- Anecdotal information shared by Powerful Tools for Caregivers class leaders indicate that caregivers attending the program recognize the need for self care and are practicing techniques they learned in the course.

Long Term:

- At this time it is difficult to assess the long-term impacts although there have been people anecdotally indicate that they feel more competent in their caregiving of Alzheimer's victims.

Source of Funding: Federal Smith-Lever Funds

Scope of Impact: Statewide
Multi-State – WI (Powerful Caregivers)

Key Theme: Children, Youth and Families at Risk

Brief Description:

Building Community Strengths: The Rocky Boy Indian Reservation project purpose is designed to provide education, fun, and exciting opportunities for youth and adult in technology skills to bridge the digital divide and build upon life skills needed to be workforce ready, enrich family life. Children, Youth and Families at Risk (CYFAR) enhances the Rocky Boy Indian Reservation 4-H program by organizing and funding non-traditional projects that have incorporated the Chippewa Cree cultural, tradition, and language relevant components. It also has introduced the Grandparents Raising Grandchildren Support Group concept to people living in on the reservations.

Impacts:

- Rocky Boy High School Seniors, in collaboration with the Parents Involvement Committee (PIC), utilized life skills in time management, organization, teamwork, planning, decision-making, meetings and social skills to conduct a Rocky Boy schools Appreciation Day for staff and faculty. PIC, parents and students volunteered their time to prepare appreciation packets and serve banana splits to all Rocky Boy School employees.
- Five young men, grades 10-12, from the Rocky Boy and Box Elder Schools 4-H Native American Cultural Crafts group organized and created their own drum and singing group, KREE BOYZ. They performed in the Rocky Boy High School graduation celebration, Grandparents Raising Grandchildren Conference, various community, ceremonial and traditional gatherings. As young boys beginning in 4-H, they have gained respect, reliability, new friendships, maturity, and have become role models to their peers. Speaking with their teachers over the years, some made comments such as “the young men have become so mature, respectable and their positive attitudes towards school and socializing are nice to see.” Youths learned the importance of quality family time together, public speaking skills, and how to the value of teamwork along with many other life skills.
- Box Elder and Rocky Boy Schools Native American Cultural Crafts under the 4-H Mi-wah-si-n Club had 33 youths, nineteen K-6 graders and fourteen 7-12 graders, with 6 adult volunteers. These projects were taught as an intergenerational hands-on and story telling by Chippewa Cree elders to continue culture, language, tradition and believes. At Box Elder Schools there were 16 youths, eight K-6 and eight 7-12 graders, with 3 volunteer parents. Cultural crafts included hand-drum and drum stick making, loom-work, tipi lamps, ornamental teepees, beaded necklaces, medallions, hair barrettes, earrings, pouches, key-rings, key-chains and bracelets. Some of the Box Elder School youths and their project leaders organized a display case to show their finished products. Interest in purchasing the beadwork on display from the staff, faculty and outside visitors gained the youths’ attention. The youths with the

guidance of the project leaders, utilized their life skills, entrepreneurial and decision-making skills to plan and organize the sales of their beadwork. One youth used her profits as financial aid in funding her to go to a summer medical internship in South Dakota. Other youths used their profits for clothing and summer fun.

- Approximately 250 pre-K, children, youth, parents, grandparents, and families learned about the health problems associated with drinking by participating in the Rocky Boy Sobriety Walk. Participants could walk, run or ride their bikes in the event.
- As a result of the efforts of Rocky Boy Tribal Extension, Box Elder and Rocky Boy Schools, and CYFAR an election for the newly formed Tribal Youth Council officers was successfully held. Four youth and 4 parents volunteered to work voting poles at both Rocky Boy and Box Elder Schools.

Source of Funds: Federal Funds (Grants)

Scope of Impact: Rocky Boy Reservation

Key Theme: Family Resource Management

Brief Description:

Saving and Investing: Our Future Depends On It: The personal savings rate that the Commerce Department’s Bureau of Economic Analysis rate for October 2005 was a negative 0.8%, the lowest rate since the depression. The 2005 Retirement Confidence Survey (RCS) found that most workers, buffeted by daily living expenses, say they are behind schedule in saving for retirement. The RCS numbers below reflect the total savings and investments) not including the value of the primary residence) of today’s workers, broken down by age groups:

Retirement Savings	All	25-34	35-44	45-55	55+
Less than \$25,000	52%	70%	50%	41%	39%
\$25,000-\$49,999	13%	12%	15%	14%	12%
\$50,000-\$99,999	11%	9%	14%	13%	7%
\$100,000-\$249,999	12%	5%	10%	17%	23%
\$250,000 or more	11%	4%	10%	16%	19%

Montanans need information on not only the need to save for retirement but ideas on how they can save.

Over the past year, 2560 people have completed the Get Smart About Credit Program which addresses the retirement issue along with other financial management practices. Twenty-two of the 56 counties in the state conducted programs that helped people manage their resources more effectively.

Estate Planning: Statistics reveal that 7 out of 10 Montanans die without writing a will. The Montana legislature continues to make changes in the intestate succession (dying without a will law) and contract laws that impact beneficiaries of real and personal property. Past program evaluations have revealed that "learning about Montana law" was of the most value.

Montana farmer/ranchers and owners of other closely held businesses have traditionally had an interest in inter-generational transfers. In addition, Congress has made changes in the federal

estate and gift tax laws that are being phased in through 2010.

Education is needed to provide Montana families with information about the impact of state and federal laws on their situations.

The goal of the program is for:

- Montana farmers/ranchers to develop a transfer plan for passing their operation to the next generation.
- Montana families to write a will to name guardianship and conservatorship for their children.
- Montana families to take advantage of contract laws such as beneficiary designations, payable on death designations, and transfer on death designations when appropriate.

Few Montana tribal members realize that their lack of estate planning can result in further fractionation of their ancestral lands. Fractionation means that tribal members on reservations may inherit undivided interests in tracts of land--interests that are shared with perhaps hundreds of other Native Americans who may not be living on that reservation. When undivided interests in a piece of land are owned by such a large number of people, management and use of the property becomes burdensome. Trying to achieve consensus from hundreds of family members about the best use of the land and to come to an agreement on leases is almost impossible. In some cases family members with undivided interests cannot be found. Indian agricultural producers, in particular, are at risk of losing control over use of their land because of involvement of hundreds of co-owners who may be dispersed throughout the United States. There are now parcels on Montana reservations with ownership interests that are less than 0.000002% of the total allotment.

The American Indian Probate Act of 2004 (AIPRA) has created a uniform probate code for all reservations across the United States. Provisions of this Act will apply to all tribal trust lands unless a tribe has a Department of Interior approved probate code. As of June 20, 2006, state laws no longer determined how trust lands pass from one generation to the next. Tribal members who want to control where their property passes must write a will. Otherwise, the federal law will prevail.

The goal of the program is for:

- Tribal members to write a will to transfer trust lands to reduce fractionation of trust lands within their families.
- Tribal member farmers/ranchers to develop a transfer plan for passing their operation to the next generation.
- Tribal members to take advantage of contract laws for non trust property such as beneficiary designations, payable on death designations, and transfer on death designations when appropriate.

Impacts:

Savings and Investing: The evaluations revealed that participants were inspired to take actions to improve their debt situation:

- 40% decided to cut up one or more of their credit cards.
- 47% decided to boost their monthly minimum payments to three percent.
- 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.
- 9% decided to get another job so they could pay off their credit cards sooner.
- 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

Estate Planning: About 3,400 Montanans have learned about effective methods for transferring their assets to future generations during two statewide video conferences and 117 public meetings. All this was made possible through two Extension Risk Management Education grants from the Western Center for Risk Management Education.

Results of the program:

- 48% reviewed their property titles and 19% made changes
- 16% had an attorney write a will
- 21% reviewed their will and had an attorney update it
- 19% made a list of tangible personal property
- 81% discussed estate planning with family members
- 61% learned that state law would not distribute their property as they desire
- 49% sought legal assistance from an attorney
- 43% contacted an accountant.

One participant's comment emphasized the need plan now rather than later: "My husband and I both attended and planned to conduct some estate planning but he passed away suddenly before we got started." The seminar provided "...a non-threatening way to initiate dialogue with my husband's parents," wrote another seminar participant.

Tribal Lands: As a result of Extension Education, Tribal leaders from 20 reservations have requested copies of the materials and fact sheets related to estate planning. In addition to the educational sessions, draft copies of the fact sheets were distributed to 200 residents on the Fort Belknap Reservation. This is a new program with significant growing interest and long reaching potentials. At this time, 148 people have participated in the workshops with approximately 237 fact sheets distributed.

Fort Belknap Reservation Residents: More than 40 landowners became more aware of and gained knowledge of the problems and how to solve undivided fractionated land interests owned by them or their families. Eighteen of these landowners either consolidated or began the consolidation process of their undivided interests. Six of these landowners made wills that would allow them to pass their land by partitioning parcels and passing them on to their heirs.

Source of Funding: Federal Smith Lever
Grants

Scope of Impact: Statewide

Multi State with ID
Reservations (3 in MT)

Key Theme: Leadership Training and Development
Brief Description:

Horizons Project: Many Montana communities are struggling with a high percentage of people living below the poverty line. These areas generally have an economy that is slow and offers little in the way of work opportunities. Additionally, these small rural communities are experiencing a shift in their populations. It is hard to tell which came first, the decline of a healthy economy due to people leaving or if people began leaving because of the lack of opportunity. In any case, many Montana communities are struggling with what the future may hold.

Twenty-three Montana communities have considered the Horizons Program and determined it will assist with the revitalization for their area. Horizons is a community leadership program aimed at reducing poverty in small rural and reservation communities with populations of less than 5000 and a poverty rate of 10% or greater. These communities are faced with economic decline and demographic change. This is a familiar scenario to many Montana communities that are looking for a way to envision a future that will restore it to a healthy and vibrant area.

The ultimate goals of the Horizons Program are to improve leadership systems and reduce poverty in small rural communities of less than 5000 population. While the program has just begun in Montana, 23 communities are involved with over 120 participating in the initial efforts.

Impacts:

Short Term:

The entry level of the Horizons Program is called Spotlight Horizons. In 23 communities across Montana, 123 people participated. In a written survey, the following information was recorded:

- 115 of the 123 participants indicated they are more aware of tools/techniques to use to build community leadership to help reduce poverty.
- 103 of the 123 participants indicated they are more aware of tool/techniques to use to help reduce poverty in their community.
- 108 of the 123 participants said they are more aware of other communities in the area with similar situations as their own.

Medium Term:

Following the Spotlight activities, all 23 communities decided to submit an application to do the Horizons Program. Recruitment for larger group membership for the Horizons program is in process.

Source of Funds: Federal Smith Lever
State Funds
Northwest Area Foundation

Scope of Impact: 23 counties in the State

Key Theme: Farm/Home Safety

Brief Description:

Disasters and emergencies are unfortunate realities-drought, wildfires, and earthquakes are natural disasters of Montana. Terrorism, while seemingly remote to Montana, is a possibility. While it is difficult to predict and prevent these incidences, consumers can prepare for emergencies and appropriately respond. The Extension Disaster and Emergency Network (EDEN) is an all-hazard and disaster information program and website that provides up-to-date, Montana specific emergency preparedness and response information to citizens.

There are three major goals for this long-term project:

- To help county residents become better prepared for all hazards and more knowledgeable about steps that they can take for prevention, mitigation, and safety during an emergency.
- To continue to update the county Emergency Operations Plan and protocols for emergency responders and public safety agencies to use as a guideline for a more effective and safe response during a disaster event.
- To review the capabilities and operations of the enhanced 9-1-1 center. Monitor the implementation of wireless enhanced 9-1-1 and coordinate the purchase of updated 9-1-1 and mapping software.

While there are only a few counties heavily involved in disaster and emergency response work, Chouteau County, has realized outstanding results from focusing on response efforts. Statewide, some efforts have resulted in systems that can assist citizens in dealing with disaster. Over 7000 people have participated in programs that will help them be able to cope with disasters should they occur.

Impacts:

Short Term:

The major risks and vulnerabilities within Chouteau County were identified and rated by individuals from the following county entities: planning board, fire council, EMS council, Local Emergency Planning Committee, commissioners and conservation district, the Forest Service, Bureau of Land Management and State Department of Natural Resources & Conservation were involved. The following public programs created awareness of emergencies and information on appropriate preparedness and response techniques including First Aid & CPR classes; preparedness exercises on pandemic flu; EMT refresher course; and an informational column in the local newspapers. Approximately 50% of the entire county population has received first aid & CPR training and have shown that they can effectively demonstrate those skills. The county hazard mitigation plan is in the draft stage and is being reviewed by all county agencies, emergency responders and the public.

Medium Term:

The Chouteau County Emergency Operations Plan has been updated and new infectious disease control protocols have been written. Emergency responders have been trained in those guidelines.

As a result of initial meetings with the faith based groups and schools, facility profiles have been

completed. These will be essential in the event of an emergency or disaster. All of this background information is extremely valuable for updating the database of county resources.

As a result of the training on utilization of GPS units by emergency responders, all of the wildland fires that occurred this summer were mapped using GPS and were incorporated in the county mitigation planning documents.

A special exercise was conducted in the school to create more awareness by teachers of the proper response to an emergency in the school. The exercise simulated a “shooting incident” and the law enforcement conducted a demonstration of lock-down procedures and their tactical response techniques. As a result of this exercise, the school has initiated written protocols, has changed their system of locks in the classrooms and will be updating some of their phone systems.

Due to Federal grant programs and public concern, there have been increasing demands for planning and preparedness programs. As a result, the county commissioners allowed the hiring of a part-time individual. This will greatly expand the ability to meet emergency preparedness goals.

Long Term:

A technical consultant has been hired to work with landowners in the county to develop wildland fire mitigation and fuels reduction plans. He has met with individuals in the areas of the county identified as highest risk and has written contracts and plans for three landowners at this time. The BLM grant money will help to reimburse those landowners for projects as they are completed. Fuel reduction is the primary means to help prevent and lessen the impact of wildfires.

Wireless enhanced 9-1-1 was completed this year for the county. The advantage to the public is that all 9-1-1 calls - both landline and cell phones - will now have the capability to identify the caller’s location and phone number. With the widespread use of cell phones it was essential to achieve this Phase II compliance. This caller location feature has been proven to save lives.

All of the county road atlases were updated this year to include property ownership. The atlases, along with continual updating of county road signs, enable both the public and emergency responders to easily find correct locations. These county atlases and the database are being utilized also to compile GPS locations of all emergency structures and utilities in the county. This information will be compiled in the county mitigation plan and is being used by the county planning board to reference when considering growth and new development in the county.

Scope of Impact: Statewide

Source of Funds: Federal Smith Lever
 State/County
 Grant funds

Key Theme: Family Resource Management

Brief Description:

Montana consumers have noticed a major difference in their utility bill during the past year - the cost of energy has increased by as much as 65%. With higher utility bills consumers (affluent and low-income) are requesting assistance for energy conservation and weatherization, seeking information on energy-efficient construction and remodeling and purchasing EnergyStar appliances. By applying basic energy conserving principles (at current energy costs), consumers can reduce their home utility cost by an average of 21% - about \$156.00 per year. Weatherization applied to older homes can save by as much as 65% - about \$780.00. In both cases the savings pay-back is typically 1-4 years - truly a good investment

Impacts:**Short Term:**

During this reporting period:

- As a result of training from MSU Extension for the Montana Low-Income Weatherization Program, 1800 Montana households received education.
- MSU Extension provided training and certification to 238 contractors (of the Montana Low Income Weatherization Program) and volunteers (of the Governor's Warm Heart - Warm Homes Initiative).
- Over 250 housing-related professionals were trained to identify and correct energy-related environmental health issues, such as molds, excessive moisture, carbon monoxide, asbestos, and lead-based paint.
- Over 22,000 PowerBill information fact sheets were requested by Montana consumers

Medium Term:

During this reporting period, 1800 Montana homes were weatherized, reducing home energy costs on an average of 21% per household.

Source of Funding: Federal Smith Lever Grants

Scope of Impact: Statewide

Key Theme: Home Safety**Brief Description:**

Throughout Montana, consumers, real estate professionals, county health offices and others are reporting alarming incidences and health effects related to home environmental issues. Extension outreach programs confirm the reality of these issues, radon level in MT ranks 3rd highest in the U.S., asthma has increased due to poor home environment, molds have forced homeowners out of their homes and other homes to be destroyed. Other home environmental issues common to Montana include asbestos in vermiculate insulation, drinking water contamination, improperly installed and maintained septic systems, carbon monoxide from faulty heating systems, and lead-based paint. As a result of Extension education, 7862 people have participated in programs related to home safety this year.

The goal for this program is for homes to be tested/assessed and mitigated for:

- Household molds and excessive moisture
- Radon
- Asbestos containing materials
- Drinking water quality
- Carbon monoxide and other combustion gases related to home fossil-fuel appliances, furnaces and water heaters
- Lead-based paint
- Reduce home asthma triggers

Impacts:

Short Term:

As a result of Extension workshops, consumers have increased awareness and knowledge of environmental health concerns common to new and existing homes in Montana - molds, water quality, lead-based paint, radon, etc. Workshop participants include weatherization contractors, home builders, home inspectors, real estate agents, public and Indian Housing Authorities, etc. Participants have reported the following areas of increased awareness:

- 1654 individuals - molds and excessive moisture
- 380 individuals - water quality
- 865 individuals - lead-based paint
- 310 individuals - radon gas
- 1235 individuals - septic systems
- 128 individuals - carbon monoxide and other combustion gases
- 3250 Native American children - asthma triggers in the home
- 85 asbestos containing materials such as vermiculate insulation

Medium Term:

As a result of educational services and inquiries provided by agents and specialists of the MSU Extension Service, Montanans took action to test, improve and correct the following home-related environmental health issues:

- 1150 individuals tested their home/related property for molds and excessive moisture
- 876 individuals had their homes corrected for molds and excessive moisture
- 180 individuals tested their individual drinking water well
- 35 corrected their wells from contamination or condition problem
- 140 individuals tested their home for lead-based paint and other sources of lead
- 10 abated their homes for lead-based paint
- 185 individuals tested their home for radon gas
- 55 had their homes mitigated for radon
- 1235 individuals inquired about septic systems for corrective action
- 128 individuals tested their home for sources and problems dealing with carbon monoxide and other combustion gases
- 3250 individuals conducted an assessment of their home for triggers related to asthma
- 85 had their homes tested for asbestos containing materials such as vermiculate insulation
- 3500 collected and recycled non-chargeable household batteries

- 127 mercury thermostats collected and recycled
- 6701 searches for wanted and available materials conducted using the Montana Extension Materials Exchange on-line system.

Source of Funds: Federal Smith Lever
Grants

Scope of Impact: Statewide

Key Theme: Children, Youth and Families

Brief Description:

In Montana, meth has become a significant problem among adults and youth. For a variety of reasons, meth has become the target of prevention and treatment efforts. It is highly addictive and the addiction is difficult to treat, relatively easy to make and may be found in cities and in rural areas. The clandestine labs in which it is cooked are so small they can be assembled in apartments, hotel rooms, cars, camper trailers, abandoned buildings and campgrounds, creating significant amounts of toxic waste. Meth is often accompanied by crime, violence, and child abuse. It can be marketed to a wide range of Montanans. Dealers may portray it as a diet aid for adolescent girls, an energy supplement for overworked moms or an escape from everyday reality for bored young adults. The physiological effects can be devastating, ranging from missing teeth and skin lesions to permanent brain damage.

The goal of this program is to reduce meth use and manufacture in Montana.

Further objectives include:

- To create greater community methamphetamine awareness of the drug's health, economic, and disposal impacts.
- To encourage citizens to respond appropriately and timely to law enforcement the discovery of meth wastes, meth use and suspicious neighborhood activity.
- To encourage agricultural producers, landlords, rental property managers, highway workers, hotel and motel owners and operators, storage unit owners and operators, and other people who have access to property to regularly examine their properties with an eye toward the discovery of materials and signs of methamphetamine production.
- To involve parents of youth and teens in the understanding of meth and it's appeal to children, the reality that their child or friend(s) could be a meth user and to pursue safe alternative activities with their children.
- To encourage and train retail store managers and employees to participant in the Montana MethWatch Initiative

Impacts:

As a result of meth prevention, train-the-trainer educational programs and distribution of Community Toolkits and Tools for Schools, it is estimated that 269,000 Montanans received meth awareness and prevention education.

As a result of the Meth in Montana Tools for Schools initiative these impacts were measured:

- 80% of students could correctly identify at least 2 toxic ingredients used to make meth

- 80% of students could identify and name 3 negative effects of taking meth
- 100% of students responded that there is never a good reason to take meth
- 92% of students could name at least 1 positive alternative to lose weight
- 96% of students could correctly identify signs of meth abuse.

As a contribution to the comprehensive and statewide outreach efforts put forth by the state of Montana, the MSU Extension Service contributed to the substantial reduction of meth labs in Montana during 2006.

Source of Funds: Federal Smith Lever
State/County
Grants

Scope of Impact: Statewide

Key Theme: Youth Development

Brief Description:

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

4-H youth development helps youth acquire the life skills necessary to meet the challenges of adolescence and adulthood through self-chosen participation in planned experiential, research-based education. These experiences immediately yield new knowledge, which leads to changed behavior, and through prolonged participation, gradually promotes attitudes, characterizations and outcomes of:

- Competence - advanced skills in some important subjects of interest
- Character - clear consistent moral precepts that effectively guide behavior
- Caring - willingness to respond to the needs and concerns of others
- Confidence - willingness to take on new challenges, and expect success
- Connections - establishing and maintaining relationships at many levels
- Contributions - making a difference in the lives of others through service

These factors can all be combined into one construct known as "positive youth development," according to a Tufts University study of the impact of 4-H.

For the 2006 program year, Montana had 25,335 kids participating in 4-H. Of those, 11,919 were in the club program which includes community, in-school, after-school and military clubs. There were 4068 volunteers assisting youth with educational opportunities.

Camping: During the 2006 program year, particular attention was given to educational

opportunities through camps. Each year, nearly 1,000 Montana youth participate in summer camping programs. These summer camping programs can be the most rewarding and challenging programs offered to youth. But camps also pose significant risks. By following recommended industry practices, providing comprehensive leader training, and using life skill focused curriculum, camps can lessen risks and promote optimal youth development. Resources were provided to use in implementing "best" practices, facilitate leader training, and design life skill focused curriculum. Evaluations focused on the camp context as a setting for positive youth development and whether the opportunity to enhance life skill development is practiced by youth participating in camping programs.

In short, the goal for the Montana 4-H camping program was to lessen risk and liability through the implementation of camping policies and procedures that are in accordance with industry standards, provide comprehensive training to adult and teen leaders and offer life-skill based curriculum. As a result of these efforts, it will be recognized as a leader in camping and serve as a model for other youth serving agencies desiring to offer camping programs for their youth

Impacts:

Short Term:

4-H Positive Youth Development: Based on the first 3 years of data from the national longitudinal study conducted by Tufts University, females were more likely to be found in the highest trajectory groups; race was not significant in terms of upward or downward trajectory, but aspirations about going to college were key predictors for life success for adolescents. 4-H youth were equally as likely to be in the high trajectory group--70% overall.

In addition, the Tufts study found that 4-H youth are more likely than youth in other after-school programs to be in the high contribution group. While 4-H youth do not have higher "positive youth development" scores than youth in other structured after-school activities (SASAs), they have higher contribution scores.

More significantly, there are differences between boys and girls in 4-H. Overall, 4-H youth would out-pace youth in other structured after-school programs, but the boys bring down the overall scores. For example,

Positive Youth Development Score

Overall 68%

Girls 78%

Boys 49%

4-H and Contribution Scores

Overall 4-H Score 21%

Girls 25%

Boys 14%

The same was true when looking at low depression.

Overall 4-H Score 73%

Girls 67%

Boys 83%

Similar results were reported for low risk behavior involvement.

Overall 4-H score 52

Girls 60

Boys 42

Overall, these preliminary results from the Tufts Study indicate that:

- 4-H practitioners can be proud that the implementation of their programs is related to youth contributions across the early adolescent years. However, there are gender differences which raise questions about program impact and contributions
- Boys are more likely to be depressed and engage in risky behaviors than girls.
- Participation in 4-H is linked to several positive outcomes for youth in the early portions of adolescence. However, participation seems to be more beneficial for the girls.
- 4-H appears to be launching young people on a life path marked particularly by community contributions.

Camping: In Teton County, the camp counselor training was evaluated as an example. 75% reported significant improvements in leadership skills. 100% reported gains in:

- how to plan and present a class
- how to treat adult leaders respectfully
- how to work with younger children
- how to schedule time to complete a task

50% reported gains in:

- creating a safe environment for younger 4-H members
- understanding the importance of following through on commitments
- accepting responsibility for doing a job

According to youth participants themselves, the most important gains from being a 4-H camp counselor were:

- patience and ability to work with a schedule
- leadership, responsibility and independence--"I've loosened up a bit and am not so shy to go in front of a larger group."
- "A good trait I got from being a counselor was how to handle a larger group. (4-H member)

Additional camp training examples are:

- 6 summer camp leadership trainings were conducted for 132 teen counselors, agents and leaders. Instructor evaluations from these trainings show that 67% of the respondents rated the trainings as "Excellent" with minimal responses in the lower end of the scale. In statements related directly to the camp training "excellent" responses were given to the following statements, 72% helped them be more effective as a leader, 70% provided insight into camper behavior and needs, and 77% made you think about your role as a camp leader.
- Results of life skill surveys in Gallatin County show that campers strongly agreed or agreed with 100% of the items used to measure their life skill enhancement in the camp

setting. Context surveys from Fergus County show that 97% of the youth strongly agree or agree with items measuring the camp context as conducive.

Medium Term:

4-H Positive Youth Development: As a result of participating in 4-H programs for at least 2 years, members are less likely than other kids:

- to shoplift or steal (3 times less likely)
- to use illegal drugs of any kind to get high (2 times less likely)
- to ride in a car with someone else who has been drinking
- to smoke cigarettes
- to damage property for the fun of it (2 times less likely)
- to skip school or cut classes without permission

4-H members are more likely than non-members

- to succeed in school, getting more A's than other kids
- to be involved as leaders in their school and the community
- to be looked up to as role models by other kids
- to help others in the community

Medium Term Impacts

Recommended Best Practices, and the Summer Camp Survival Guide, were developed in DRAFT form and distributed to 14 agents who report that they have positively influenced how they conduct leader training and run their summer camping programs.

Source of Funding: Federal Smith Lever
State/county
Grants

Scope of Impact: Statewide
Media Smart Curriculum – WA, OR, ID
Western 4-H Institute – Western Region – 13 States
WA, ID, MT, WY, CO, NV, AK, CA, AZ, NM, HI, UT, and
National Advisor to Youth Science Engineering Technology & Literacy
for E Extension
National Camping Consortium

Key Theme: Promoting Business Programs

Brief Description:

Due to various business closures, counties in the state have engaged in a variety of efforts to stimulate new business and keep current businesses viable. Extension has spearheaded efforts in counties that are congruent with the area, so different plans are designed for each county. For example, one community (Dawson County) is in the process of developing a producer-owned, agricultural marketing cooperative that would operate a shared-use, commercial kitchen; a farm-to-table restaurant; and a regional cooking school for vocational training. All the food consumed, other than a small portion produced in home gardens, is shipped into this region. As transportation and production costs cause food prices to increase, more and more of the local food dollar leaves the area. This loss of economic return has helped exacerbate the population

decline and subsequent loss of tax base that has resulted in reduced social and public services.

The Mineral County Extension Office is the county's Economic Development hub which includes entrepreneurship training, small and home based business consulting, business plan training, revolving loan fund management, loan packaging, infrastructure and business park development, and point of contact for business establishment. Through their involvement with area/regional economic development organizations, the county is able to access an abundant variety of technical expertise and services, funding options for various public and private endeavors, and networking.

Deer Lodge County has struggled since the 1980 closure of the Smelter in Anaconda, the designation as a Superfund site and loss of over 1,500 jobs and 65% of their tax base. Over the past 25 years, scarce resources were spent on trying to target industries to locate in Anaconda but with little success. The Community Business Matching model (CBM) is a state-of-the-art approach to maximizing the effectiveness of economic development efforts. The focus is on matching business needs with community attributes and goals. The objective is to ensure that scarce economic development resources are not allocated to projects with marginal long term benefits. The county needs a process that will help to match their assets and goals with potential businesses, while improving the business conditions for existing businesses throughout the county.

Impacts:

In Dawson County, the newspapers have cooperated with Extension by providing residents with knowledge about local foods, agricultural marketing, vocational training opportunities, value-added agriculture, and small business enterprise opportunities.

A new value-added agricultural enterprise (Western Trail Foods) was started in Glendive to package and market locally grown small grains and dry beans. Four local producers are selling their locally grown products through this new value-added agricultural enterprise. To help, a recent survey of local consumers resulted in the Farmer's Market moving from Friday morning to Saturday morning, allowing producers to have access to this outlet and for consumers to be able to attend.

In Mineral County, 501c3 status has been obtained by the newly established Mineral County Economic Development Corporation. Through Extension, trainings on non-profit boards, revolving loan fund management for business and the changes in the state demographics provided a nine person board with information they need to guide the corporation. A grant has been obtained and completed for building local capacity in the corporation. Five businesses have been assisted with three becoming established and functioning.

Business park acreage has been identified and infrastructure deficiencies have been identified (lack of 3-phase power, water and sewer on site) and the funding and technical expertise is being researched.

Deer Lodge County has applied the CBM principles in development of Business Attraction Plans. Attraction packages have been developed for three matched businesses for possible

expansion or relocation to Deer Lodge County. These development plans include needed improvements in infrastructure, workforce education and training, community environment, public services, etc. On going Superfund issues were considered as the plans were developed.

Source of Funding: Federal Smith Lever
State/County

Scope of Impact: Statewide
CBM Program --- MT, NV, HI, NM

STAKEHOLDER INPUT PROCESS

MSU Extension faculty place a great deal of value on using input from citizens to determine program priorities. Special efforts are taken to ensure that local people have the opportunity to provide input and feel comfortable in doing so. These actions include:

- Invitations to traditional stakeholder groups and individuals to provide input through either a meeting or survey format. On-line survey capability is an attractive option to both faculty and clientele.
- Invitations to non-traditional stakeholder groups and individuals are generally issued for people to serve on the Extension Advisory Committee. Generally, these groups meet face to face for discussion about program priorities.
- On a limited basis, other actions are incorporated into the stakeholder input process.

A variety of methods are used to gain stakeholder input into Extension program determination and development. Topping the list are County and State Advisory Committees as well as groups and individuals with whom the County/State faculty work. The advisory committees are comprised of a cross section of the leadership and citizens in the county. Efforts are made to involve the under served and under represented clientele to serve on these boards. Special invitations are issued to those who are asked to serve on the County/State Advisory Committee. Training modules for County Advisory Committees have been developed in an effort to maximize the advisory process.

While people who are among the regular clientele of MSU Extension are contacted on a less formal basis, they are systematically asked for input into program priorities. This often occurs in intentional program planning sessions to which these people are invited, requested to attend or are required to be present by their role or position. Examples of groups that fall into this category are County/Reservation 4-H Council, Livestock Associations, Weed Boards, Human Resource Coalitions, Local and State Agricultural Organizations and special interest groups. Some of these groups have officers or directing boards that are asked for specific input.

Information gathered through the stakeholder input process is used to form cross-county educational programs. These teams generally involve the local county agents, but in some cases, clientele, external resources and internal specialists are consulted. Additionally, on other needs that are determined to be statewide, specialists provide leadership for planning and

implementation teams to train and deliver education. In either case, the information gained from stakeholders provided the framework for program development.

PROGRAM REVIEW PROCESS

The Merit Review process has been rewritten as a part of the 2007-2011 Plan of Work. An External University Panel who also can serve as an Expert Peer Review Team has been asked to provide feedback. The four people who have been named bring knowledge about Extension, Montana and how Extension can serve the needs of the state's citizens.

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

Last year, comments from the review process were considered in program development and planning. The letter included suggestions that stimulated:

- Discussions about the expansion of multi-state programs to include issues which are common in the region. A new Economic/Community Development Specialist began work in the late fall. He will be able to explore possibilities and provide leadership for economic development and public policy issues both in state and across state lines.
- Coordination of multi-county programming which has been facilitated by the Regional Department Head positions. Additionally, this notion was supported by the program planning process which allowed a collaboration of agent groups and/or agent-specialist teams to write one plan of work and submit one report for all involved. Descriptions of single county efforts can also be written if more detail is required to explain local activity.
- Collaboration between Extension and the Local Government Center to house the newly hired Economic/Community Development Specialist. The person who was hired as the Economic/Community Development Specialist was working at the University of Montana and, although he did not work directly with the Bureau of Business and Economic Research, he is familiar with the work done at the bureau.
- Marketing to raise public awareness of MSU Extension educational opportunities. Additionally, a system wide training on program evaluation was conducted during the Annual Conference.
- Consideration for the Horticulture-Master Gardner program and the educational efforts in swine production. In both cases, the specialist leadership for the program development and delivery was on hold. Both specialists had assumed temporary positions in administration leaving the programs with maintenance level activity.

Comments from the Merit Review Team will be shared with Extension personnel and used in the program planning process for the up-coming 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.

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

The process for gathering stakeholder input was revised as a part of developing the new 5 year plan of work. Each county is to design an advisory process that will reach a broad spectrum of clientele who live in their areas. Many counties have completed the process and are successfully involving stakeholders in identifying needs and setting program priorities. Other counties are still working with their Regional Department Heads to determine the best way to accomplish this goal. In the meantime, they are working with traditional audiences on program needs. The Estate Planning on fractionalized lands, the sheep shearing school and the Alzheimer's Mini Series are examples of relevant educational initiatives.
- 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 Federally Recognized Tribes Extension Program agents (FRTEP), EFNEP and FSNE personnel are in the forefront of Extension efforts. In addition, the 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. Family resource management, youth development and housing programs continue to target the under-served and under-represented audiences.
- Did the planned programs describe the expected outcomes and impacts?

Most of the planned programs have a described set of expected outcomes and impacts. Statewide training and assistance at the regional level is proving to help faculty achieve this task. As in previous years, it seems the programs that are multi-disciplinary, multi-institutional and multi-state are often the more 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.
- Did the planned programs result in improved program effectiveness and/or efficiency?

Generally speaking, the multi-state and integrated programs are 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. Technology makes working across state lines or disciplines fairly easy to accomplish and fairly cost effective.

MULTI-STATE EXTENSION ACTIVITIES:

Montana is active in planning and delivering programs with states from the Western Region and nationally. The definition used in Montana for a multi-state activity is that the program must have a collaborative planning and delivery components with at least one other state. Since many issues identified by stakeholders do not start and stop at a state line, programs that have a multi-state partnership are more successful at addressing the needs identified by stakeholders. Additionally, small states like Montana, have found that by networking with other states, greater resources are available to address common issues and generally results in more significant outcomes and impacts. Examples of programs under this multi-state definition are listed below. They represent many programs that are similar in nature and have been successful, largely because of the multi-state involvement.

- The Montana Beef Network cooperates with NE, MN, CO and ND in directing a system to help producers be successful in meeting customer demands. Information such as source and age verification and Beef Quality Assurance are at the heart of the program.
- Extension Agents in Eastern Montana Extension and western North Dakota have joined together to plan and deliver education aimed at improving small grain producer's decision making associated with business performance, profitability of enterprises, marketing decisions and potential for expansion plans for land and machinery.
- The EFNEP state coordinator meets regularly with other regional and national EFNEP coordinators to evaluate curriculum resources, discuss evaluation measures, consider marketing strategies and share program plans. The cost/benefit analysis was conducted with NE, KS, ND, SD, WY, and MT replicating research done in a national study.
- The FSNE Principal Investigator and the State Coordinator regularly meet with other regional and national coordinators. They share curriculum resources, evaluation measures, marketing plans, and program strategies.
- Nutrition and health issues in ID, WY and ND are being addresses by Extension programs that help people develop skills to be proactive with their own health care.
- The Great Plains Diagnostic Network provides identification and protocols for addressing pest related agricultural issues. States involved are ND, SD, WY, NE, CO, KS, OK, TX. Work with WY on developing an IPM Museum is proving to be a productive partnership.
- The Horizons Project is giving Montana Communities a way to improve leadership systems and reduce poverty in their communities. This effort is planned through a consortium of states including MN, SD, ND, MT, IA, ID, WA.
- The Youth Development program conducted inter-state exchanges with states as far away as Florida; eleven exchanges were held in 2006. Faculty have served on multi-state planning

committees for the Western 4-H Institute, the Youth Science Engineering Technology and Literacy for E Extension and the National Camping Consortium.

These programs and others like them were supported by Smith Lever 3b&c funds in the amount of \$210,009 and a total of 5.38 FTE.

INTEGRATED RESEARCH AND EXTENSION ACTIVITIES:

The definition used in Montana for the integrated programs are that the program must include Experiment Station Research. In Montana Extension, 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 through research, making it usable to clientele. They may also become involved with securing locations in the state appropriate for experimental work. The programs include, but are not limited to beef quality assurance, nitrate testing, West Nile Virus, new and alternative crop varieties, field trials, integrated pest management, water quality, crop pest management, and forest management. Although on a limited basis, there is some research being conducted outside the Experiment Station and the College of Agriculture which is related to family and youth issues.

These programs are supported by Smith Lever 3b&c funds in the amount of \$194,215 and a total of 5.59 FTE.

MANAGEMENT GOALS

Agriculture Communications:

As a result of the Extension administrative restructuring, the decision to add a full-time marketing/communication specialist has been a valuable step in sharing the work that Extension is doing with and for Montanans. Several efforts have been realized because someone is focused on this important work.

To identify Extension as integral to Montana State University; to promote MSU Extension to the public as Montana's state-wide source of unbiased, research-based information and educational resources; and to educate key audiences about Extension's role in improving the social, economic and environmental well-being of Montanans were established as objectives by the Marketing Specialist. Progress has been made in meeting these targets. For example:

- New outdoor signs were provided for 21 offices – some office codes would not allow outdoor signage.
- Indoor and temporary signage was provided for all field offices including portable metal sign holders, framed office poster series, an outdoor banner, outdoor portable field location/event signs, clear office window statics and vehicle window statics.

- Branded display materials carrying the new MSU logo are available for check out and include indoor floor displays, table-top panels illustrating Extension programs, banners, and an outdoor shade canopy with MSU Extension branding printed on it. Improved quality and consistent identity in publication branding was also an important effort.
- Stationary, name tags, clothing with the Extension logo, business cards, and all other such items were changed to be in keeping with the MSU brand.
- The WEB page was redesigned to reflect a close identity with MSU. Training was held for county staff so they could update their local WEB pages to have a close identity with the MSU campus.
- Marketing MSU Extension efforts with the media included distribution of “referring to Extension” and “Extension Messages”, and released over 100 news releases. Training was provided to Extension Agents on news writing, digital photography and newsletter design.
- Attended several events to market Extension including the Women Stepping Forward in Agriculture Conference reaching 70 people, MSU Catapalooza for students reaching 2,000, and Expanding Your Horizons reaching 170 middle school girls visiting campus to learn about careers in math and science.

Enhancing Customer Service/Satisfaction:

Assessing customer service and satisfaction are on-going activities for Extension. In addition to the usual inquiries that are made by clientele on a regular basis, several strategies were developed and implemented over the past year. Related to the marketing efforts, they are:

- Improved usability of the WEB page resulted in a free PSA site for newspapers and a one-stop public survey opportunity for the general public.
- A plan was created for converting the Extension publications online catalog to a web-based shopping cart sales system making resources more readily available to the public.
- Extension publications are available for order in several ways so the customer can select the method best suited to him/her. Orders can be placed on the phone, through walk-in, by e-mail and voice mail, and visiting the Extension WEB site with a target delivery within 48 hours. Work has begun to develop a print on demand option for some publications. The Publications Unit is working hard to renew the personal and hands-on approach to customer service which can be lost to technology.

During the 2006 Annual Conference for Extension faculty, a session was devoted to program evaluation. Agents and specialists learned techniques on developing a customer satisfaction survey to use with programs. Additionally, the Advisory process in each county provides a mechanism to assess how customers are using Extension information and programs and if they are worthwhile to them.

Information Technologies:

MSU Extension’s use of Information Technology has taken a huge jump in the last few years, and 2006 was no exception. We are continuing to see a trend in society to rely more and more on technology, and our customers are expecting our programs to be at that same level. Our IT staff consists of 2 FTE, and one student employee. We have focused on increasing our web presence, and building the infrastructure to position ourselves for more interactive online learning, and the increasing need for our services.

We are preparing for the implementation of an online bookstore, creating a knowledgebase of searchable information, an increasing the use of web conferencing technology. In 2006 MSU Extension IT had several accomplishments in the areas of training and support, advancing the technology infrastructure, online web presence, web conferencing and planning, reporting and evaluation as outlined below.

Training & Support

2006 was an exciting year for increased IT training programs for MSU Extension faculty and staff. We hosted our very first technology conference, “Tech Tacklebox”, which was a four day technology training where faculty and staff at all levels throughout the state participated in hands on workshops. The goal of this program was to not only to increase knowledge in specific computer applications but also provide some basic training for those who find information technology challenging. All of the participants indicated that after the conference they felt more confident with information technology, and would recommend this conference to their co-workers. We are in the process of planning our next conference in another region of the state.

We have added a student employee to be available at our Extension IT Helpdesk to answer desktop user’s questions, and troubleshoot problems. This has not only provided more desktop support, but also freed up the time of other IT staff to work on other projects.

In addition, we have added an IT support section to our intranet, where faculty and staff can find their own answers to their problems, and find information on software and hardware pricing, watch online training videos, and read about the latest trends in technology. This site allows our customers more self service options, again freeing up staff time for other projects.

Technology Infrastructure

In anticipation of our future projects, we have invested in our technology infrastructure this past year, upgrading our server systems, and ensuring that we have the proper hardware to meet our future system requirements. We have put into production a new web server, FTP Server, SQL server, Adobe Connect Server, and system monitoring server/system and a backup server/system. We have implemented an Extension-wide backup system, and have also increased the server security level and server back up system to ensure all our systems are safe, and up and running at all times.

MSU Extension Website

The MSU Extension website has continued to undergo major changes this past year. We have implemented the new MSU Extension branding, and changed the look and feel of the entire website. We have added news feeds on each subject matter page, as well as an “Extension Today” feature that highlights one of Extension’s programs of interest. This is all database driven, and requires little IT management after implementation. We have also updated our online directory to be database driven, and more user friendly, and include a subject matter area listing as well. We have also added a communications section for access to graphic templates, and common identity materials to encourage the use of MSU branded materials for PowerPoint’s, brochures etc.

Web Conferencing

We have recently implemented a new web conferencing system, Adobe Connect. This system, formerly called Macromedia Breeze, allows meetings and trainings to be conducted via the intranet. This has significantly cut down on travel costs, allowing participants to attend meetings and trainings at their own desktop, rather than leaving their offices. We have implemented this system on a pilot basis for the Master Gardener Classes and IT training with great success. Plans are being made to use the system more this coming year.

Online Planning and Reporting

We have streamlined our online planning and reporting process, and have tailored the system to better meet the needs of agents, specialists and Extension administration. The new systems allow for reporting directly against the plans of work and allow specialists to create collaborative groups for agents to join, thus cutting down on duplicate reporting.

Evaluation Tools

We have continued to expand the life skills evaluation system as a tool for our family and consumer science and youth programs. This past year, the system was updated and more programs were added. We are also continuing to add more evaluation resources on our website.

We have implemented a classroom response system, where workshop participants can provide evaluation data with a remote control device in response to questions the instructor projects on the screen. The software then reports the data for immediate onscreen viewing and for use at a later time. This has provided instant feedback for our instructors, and encouraged more interaction by participants.

The IT unit has had a very busy and successful year. Extension will be delivering more programs and make information available using technology in the future so people have more choices to educate themselves.

Institutional Engagement

The title, Vice Provost and Director of Extension implies a responsibility to integrate Extension and other campus programs. The Vice Provost and Director meets monthly with the Provost and the Dean's Council which provides a venue to discuss Extension work and explore areas for collaboration with campus faculty. In the colleges and departments that house Extension faculty, relationships are easier to establish. Extra effort is needed for those with less obvious ties to the mission and goals of Extension, but there are still opportunities available to cooperate on program development.

Multicultural and Diversity Issues

Many of the programs and efforts outlined over the past year 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.
- FRTEP (Federally Recognized Tribes Extension Program, formerly EIRP) and Tribal College Extension Agents are invited to serve on the Montana Extension Advisory Council.
- Civil Rights reviews are conducted with County Extension staff on a fixed schedule that rotates through all County Offices.
- Diversity is a common discussion topic with County Extension Agents during their performance appraisal sessions and other supervisory visits during the course of the year.

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

- The Horizons Program focused on leadership development and poverty reduction.
- The EFNEP and FSNE programs both are targeted at under-served and under-represented audiences.
- The Housing and Environmental Health program has offered the Native American Technical Assistance Institute focused on making homes safe and secure.
- The EDEN (Extension Disaster Education Network) program has provided assistance for reservations to plan for effective emergency response.
- Extension is providing education on methamphetamine on reservations targeted at youth, adults, businesses, law-enforcement, etc. Planning is in progress with the National Congress of American Indians to create a Meth on Tribal Lands Tool Kit – a prevention education and outreach program.
- The community/economic development program has 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.
- The 4-H CYFAR grant is focused on after school programs for the under-served and under-represented youth in rural communities including the smallest, least populated county in the state and the reservations.
- The 4-H Agent Update included a session titled “The Blind Man and The Elephant: A Parable about Diversity” that was focused on what diversity is, why it is important to understand and how to develop cultural awareness.
- At 4-H Congress, a workshop on diversity awareness was given and included activities that youth could take home to do in their local clubs.
- “A Recipe for Global Citizenship” was a workshop given at the 4-H Leadership Forum and focused on what global citizenship is and what it means to be a “global citizen”.

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.

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.

MERIT REVIEW LETTER

TO: Elizabeth M. McCoy
Program Planning/Reporting
MSU Extension

FR: Merit Review Team
Jim DeBree, Extension Director – Wyoming (Retired)
Dr. LeRoy Luft, Extension Director --- Idaho (Retired)
Beverly Wallace, Extension Agent --- Montana (Retired)
Dr. Nate St. Pierre, Tribal Economic Development Planner – Chippewa Cree
Community Development Corporation

RE: MSU Extension Merit Review

The Montana Extension Service Annual Report for FY 2006 is very well written and easily understood. The report contains a great amount of survey information as well as anecdotal testimonies which makes it evident that Montana Extension is truly meeting the needs of the people of Montana. There is also ample evidence that KASA (Knowledge, Aspiration, Skill and Attitude) changes have taken place. The situational statements are excellent, giving the reader an accurate and concise picture of program efforts.

Short, medium and long term impacts are well documented, although economic impact could be stronger, difficult as it is to measure. Overall, the results are impressive given the limited number of FTE's in many of the subject matter areas and in the counties. Related to each goal, we make the following observations:

Goal 1 --- Agricultural System

- Goals are relevant and well written. They do indeed address critical needs facing Montana Agriculture.
- We don't know the exact number of displaced agriculturists getting out of the agriculture industry, but perhaps there would be opportunities for Extension to provide programs to help those selling out to get into another career or occupation.
- We applaud the Bio-weed control work, especially on the Indian Reservations. It may strengthen programs to develop collaborative partnerships with others on the reservations including the tribal college, BIA, and tribal councils.
- The Montana Sheep Institute is doing great work, especially with small growers.
- Extension programs relating to drought clearly demonstrate the flexibility that is critical to providing timely and relevant programs.

- We were pleased to see the section on Home Lawn and Garden for it is extremely popular and serves a vital need in the urban community.

Goal 2 --- Safe and Secure Food and Fiber Systems.

- Extension is clearly addressing one of the most critical needs in Montana. It may very well be one of the most difficult audiences to work with, yet MSU Extension has excellent documentation by measuring the results of educational programming through pre and post testing. Additional strengths include “training the Trainers” and collaborative partnerships with Native American organizations and public state agencies.
- The section on Food Safety is well documented and again, by training the trainers, the pay off for educational efforts is extended many times over.

Goal 3 --- A Healthy, Well Nourished Population

- “Steps to a New You” is a great program serving a need that is growing in severity. It has measurable goals that are achievable and measured through pre and post tests. MSU Extension is able to increase efforts through health fairs and health-concerned organizations. It is recommended that future efforts expand partnerships with hospitals, senior citizen centers, county fairs, (Wibaux) and health professionals.

Goal 4 --- Natural Resources and the Environment

- The prevention of noxious weed invasion cannot be over emphasized. We applaud the efforts in both prevention and early detection of noxious weeds and appreciates Extension’s efforts with landowners, units of local, state, tribal governments and federal land managers.
- The range rider is an innovative and relevant activity and certainly seems to be paying dividends as reflected in the results of the report.
- The IPM program has always been a banner program and a model for others to follow in reducing chemical usage. As IPM continues to expand in scope, we would like to see more evidence of integrating Biological controls in addition to select use of herbicides.
- Forest Stewardship is another banner program and exhibits great success, especially in Western Montana. We would like to see effort devoted wild fire mitigation.
- We failed to find any component addressing the proper management of rangelands.
- We believe an appropriate role for MSU Extension would be to foster a public policy program dealing with natural resources. There are numerous controversial topics that could be defused with good public information. Wolf management, dead and dying timber, livestock grazing, timber harvest, wild land fires, water quality, mining and recreational use just to name a few.

Goal 5 --- Enhanced Economic Opportunity and Quality of Life

- The Montana Extension Service may be one of the best resources in those frontier counties mentioned in the report. It is only fitting to team up with the Montana

Chapter of the Alzheimer's Association. We believe efforts could be expanded by collaborating with rural hospitals, senior citizen centers and county health officials.

- The programs on the Rocky Boy's Indian Reservation are outstanding. It truly shows Extension's commitment to Native Americans and challenges facing the Indian youth.
- Estate planning continues to provide valuable assistance, especially with an aging population as mentioned in the report. The population base will continue to grow and create challenges for many years to come.
- The American Indian Probate Act of 2004 is perhaps one of the most important laws ever enacted affecting land ownership. Whatever steps can be taken to reduce fractionalized land ownership will pay huge dividends in freeing up resources to improve the management of tribal lands. Extension's efforts can be greatly enhanced by forming collaborative partnerships.
- Extension's involvement with the Methamphetamine program is to be applauded. This insidious killer seems to be slowing down some, but is still extremely critical to our country's youth.
- As always, the 4-H program is one of the fundamental building blocks for a productive society and Montana's youth involved in the program exemplify the epitome of productive programs. Keep up the good work!!
- The Community Business Matching model (CBM) is a great program and hopefully it can be expanded to all interested counties.

It appears that cross or multi-county programming could be strengthened and likely can be expected to with Extension's reorganization to include Regional Department Heads. Also, there is little mention of cross state programming at the county level with neighboring states. Joint programming with cross state neighboring counties should be strengthened.

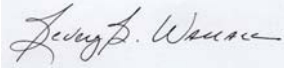
Many of the highlighted programs are right on target in dealing with crucial issues in Montana, reflecting on the good job of program determination with the use of advisory groups and other methods of program suggestions. This includes program areas of combating Methamphetamine use, issues surrounding Alzheimer's, financial management, noxious weed control and proper nutrition for health and well being.

Reporting of non-programmatic activities that will, in the future, aid in more effective programming adds greatly to the report. This includes the stepped up effort in marketing and communications, the constant upgrading and improving of IT capabilities and the program evaluation training at Annual Conference. These efforts will strengthen future programming and enhance outreach capabilities.

Programs and their impacts for Native Americans are included throughout the report with a good summary in the diversity section at the end of the report. Reporting, however, is a bit inadequate in the agricultural programs on and for reservations. The Rocky Boy success comments assist greatly in providing information in this area.

The Montana Extension Service should be proud of its achievements as it addresses difficult and complex problems among the citizens of the state. Extension has, once again, clearly demonstrated the worth of its educational endeavors. After completing our respective reviews, we extend our sincere compliments for a job well done.

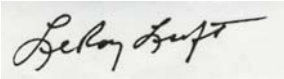
Beverly B. Wallace



Jim DeBree



Leroy Luft



Nate St. Pierre

