

**MONTANA STATE UNIVERSITY
EXTENSION SERVICE**

2004 ANNUAL REPORT



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It is my pleasure to provide to you a copy of the 2004 Montana State University Extension Service Annual Federal Report. MSU Extension works in a cycle, using input from the public to drive the creation and delivery of education resources for the public--- but we are not going around in circles! The Extension cycle of program planning, development and evaluation continually spirals into the future to meet the changing needs of the citizens of Montana.

With each revolution of progress, change brings about new partnerships and collaborations, new methods of performing old tasks, and new responsibilities to meet emerging needs differently. Individual Montanans are taking advantage of opportunities to be a positive force for change in their own lives, and in their families and their communities, with support from the unbiased, research-based resources they receive from MSU Extension.

This report not only describes the key themes of Extension programming for 2004, but also captures the short- and long-term impacts to clientele. MSU Extension has taken on the challenge to be relevant to the ever-changing needs of today, to be timely in how educational programming is designed and implemented, and to be excellent in how we perform our duties. The pages of this report will show the difference Extension is making in Montana.

To the clientele, volunteers, stakeholders and advocates of Extension, I say "thank you." Your support and interest in our mission make our continued success possible. Extension is a crucial component of the Montana State University land-grant system, recognized by citizens and university administrators alike for its ability to serve the practical needs of Montanans. This report provides an overview and description of our service to the state in 2004.

A handwritten signature in cursive script that reads "Douglas L. Steele".

Vice Provost and Director of Extension

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GOAL 1:

AN AGRICULTURAL SYSTEM THAT IS HIGHLY COMPETITIVE IN THE GLOBAL ECONOMY

Overview Statement:

It is increasingly difficult for families involved in production agriculture to keep their business viable and profit generating. Extension programs continue to assist producers in analyzing their situations and provide education that can help them make sound decisions. Publications, workshops, on-farm consultations, and many other methods are used to reach farm and ranch families with information that can help them with their day- to-day business decisions. These programs can be categorized under a select number of Key Themes and are summarized below.

Extension faculty have devoted approximately 2300 man-days and nearly 9 FTE to provide education to Montanans on subjects related to this goal. Data also indicates that 19,552 people have participated in educational programs conducted by Extension. Of these, 13,884 indicated they have adopted practices presented in the program.

Funding Source: Smith Lever, State, County, Grant funds from private and public Sources.

KEY THEME: IMPROVING PRODUCTION PRACTICES/EFFICIENCIES

Brief Description: Montana Beef Network

The Montana Beef Network has three primary objectives, 1) educational programs aimed at meeting beef quality assurance standards, production and marketing goals and providing additional educational programs through interactive-video conferencing, 2) certification of feeder calves that have met defined management protocols, and 3) information feedback from the feedlot and packing plant to the cow-calf producer showing if the feeder calves met industry requirements for quality, consistency, safety and red meat yield.

Training manuals were developed and Beef Quality Assurance (BQA) educational programs were presented in Montana so producers could certify that calves were vaccinated using a standard health management protocol. County agents were trained to provide this educational program to producers at the local level. The training has been presented to over 2000 producers in the state and more than 1100 (55%) are certified through the Montana Beef Quality Assurance program.

Additional examples of projects that supported the objectives include:

- Initiation of a statewide audit of ranchers to determine value-added practices related to breeding, health management, nutrition and marketing
- One or two day short courses were held, in which issues pertinent to the beef industry were presented. This program is called Montana Beef University.

- A breeding project for determining if red meat yield, quality grade or carcass weight had the greatest influence on profitability has recently been completed and data are being summarized.
- Interactive television short courses aimed at carcass evaluation, genetic management, opportunities for back-grounding calves and marketing options have been presented over the course of the project.
- Two statewide television programs were presented and emphasized beef safety and drought management.
- One statewide television program was aimed at national animal identification.
- Four feedlot projects are underway to determine methods of reducing shedding of E. coli O157:H7 in an effort to improved pre-harvest food safety. This is a cooperative project with Colorado State University and the University of Nebraska.
- A statewide survey was conducted to determine producer attitudes toward food safety, production practices, marketing, and health management.
- A ten-ranch field study was conducted to determine if a weaning system could reduce morbidity and mortality.

Impact:

The cattle certification and tracking component of the project (objectives 2 and 3) has used grant funds to subsidize electronic identification (EID) tags for the enrolling producers and to secure the feedlot and carcass data on the calves certified in the program. Approximately 18,900 calves were certified during the first year, 17,200 the second year, 8,300 the third year, 7,900 the fourth year, 15,300 the fifth year and 23,800 the sixth year. The difficulty convincing all the various segments of the beef industry to cooperate has resulted in a less than desirable rate of return of carcass data. This difficulty has caused some producers to drop out of the program until data recovery is improved. Changes were made to the program in 2002 to improve rate of data return through the hiring of an individual to work closely with the feedlots to assure carcass data is collected. Rates of return on carcass data collected in 2004 were much higher than previous years with 88% of producers receiving some data and data collected on 72% of the calves enrolled in the Network. The data captured throughout the process is synthesized, presented, and explained to the producer to provide information on how they might modify their breeding and/or management practices to improve the quality of their product. A number of producers are making herd management decisions and changes as a result of this data collection and evaluation. As the industry moves toward a national animal identification system, producer's already employing BQA practices and utilizing EID technology are realizing benefits through increased marketing opportunities and higher calf prices.

Scope of Program: Statewide, multi-state (CO & NE)

Brief Program Description:

Educational information was provided to producers using seminars, workshops, tours, one-on-one visits and distribution of educational material through printed and electronic media on the following topics:

Managing Machinery Costs	International trade issues in the beef industry, Canadian Border issues and BSE	Forage nitrate testing and feeding high nitrate feeds.
Farm Leases	Country of Origin Labeling	Multi species range and pasture grazing.
Hay and Forage Management	Animal ID systems for beef producers	Managing range and pasture under drought conditions
Noxious Weed Control and Prevention with chemical and biological means	Wolf Recovery Impacts on Agricultural Operations	Sawfly resistant wheat varieties.
Feeding High Nitrate Forages	FSA drought and disaster programs	Intensive Grazing Systems
GPS Training	Economics of haying or grazing CRP	Soybean Production
Economics of No-Till Farming	Tax Implications of herd dispersal programs due to drought.	Value added crop and livestock products, potential and pitfalls
GIS and Computer Mapping	Land Resource Monitoring for range, forest and crops	
Livestock Handling	Sprayer calibration	
Crop Rotations and Tillage Systems	Pesticide Applicator Training	

Impact:

Short Term Impacts:

- Participants attending these workshops gained knowledge and skills about production management for all of their resource base, cropland, rangeland, livestock, etc. This information and skills were applied to individual problems like sawfly infestations and particular noxious weed infestations. Participants gained knowledge about the overall health of their resource base due to changes in fertilizer and chemical application practices. Producers learned how to apply relatively new technologies such as GIS and GPS. While difficult to estimate the potential impact of such a diverse set of topics, one example is the potential to increase profit on wheat farms by adopting sawfly resistant varieties. It is estimated that a 200-acre farm could increase profit from \$5,000 to \$10,000 with just this one practice.
- **Medium Impacts:**
Producers have reported that improved knowledge and techniques have led to increased production and efficiency in all areas of agricultural production and marketing. More efficient production has helped improve net income by decreasing per unit costs, increasing production and better marketing according to follow-up phone calls and on farm visits. Adoption of new technologies, such as GPS and GIS are contributing to

better economically and ecologically sustainable management decisions and the health of the resource base.

Long Term Impact Statements Include:

- Participants receiving information from the variety of educational activities are interested in both ecologic and economic health of their land through sustained management of their operations. They understand that the health of the resource base will help keep them in business for years to come. The programs have made a difference for participants as indicated by the following statement they have provided:
- “I am saving money because I use proper calibration and maintenance of spray equipment”
- “I am doing better planning for crop rotation needs as it relates to management decisions like chemical application and marketing decisions.”
- “I need to look carefully at the economics of my production decisions.”
- “Using up-to-date technology like GPS will enable me to be a more effective manager”
- “I anticipate that range resources will show a positive trend in plant succession through proactive management decisions based on information from monitoring transects”.
- “ I anticipate increase in ranch productivity and long-term viability.”
- I am concerned about environmental effects of pesticide use declines as applications become more efficient.
- “I anticipate healthier rangeland due to adoption of integrated approaches to weed control, including biological, grazing management and the judicious use of herbicides.”

Greater awareness of noxious weed ecology results in a concerted effort on the part of the community to control weeds.

Scope of the program:

Statewide

Brief Description: Montana Sheep Institute

The major objective of the Sheep Institute project is to develop, test and facilitate the implementation of grazing strategies that allows natural resource managers to use sheep as a tool to manage large infestations of invasive plants while maintaining a production system which is profitable to the sheep owner. By capitalizing on the sheep’s ability to favorably manipulate natural resources, sheep producers can lower production costs and develop a more economically sustainable enterprise. In addition, land managers have an additional tool for managing the encroachment of noxious weeds that in many cases, may be more economically feasible and ecologically sound.

The Sheep Institute has assisted land managers in developing grazing plans throughout Montana and then monitored both animal and plant performance on these areas. Twenty-two projects with 41 monitoring sites involving over 100,000 acres of weed infested Montana rangeland and about 1000 landowners were included in the project this year.

Impact:

- The average infestation level of leafy spurge on project areas prior to sheep grazing in 2003 was 35%, which results in an 80% reduction in cattle/elk carrying capacity from pre- or non-infestation levels. Strategic grazing with sheep reduced the percent of leafy spurge present by an average of 70%. Based on this data, controlled grazing with sheep resulted in an immediate increase in the forage available to other livestock species – more cattle grass was available after sheep grazing of leafy spurge infested pastures than would have been without sheep grazing.

Scope of Program:

Statewide

Brief Description: Swine production management/carcass quality/SOE

The swine Symbol of Excellence (SOE) program is an over-arching program that strives to improve carcass quality of hogs through improved selection, nutrition and production management. It is a collaborative program that centers around youth 4-H or FFA market swine projects in which industry (Montana Pork Producers Council) serves in an advisory and support role. Local livestock advisory councils and Fair Boards may be involved when the SOE program is incorporated as part of the official county or fair livestock program. Components include printed materials, educational production and live animal and carcass evaluation workshops, and data collection activities via ultrasound evaluation or carcass measurements. The program was initiated in 1984 and has evolved such that in 2004, twenty local workshops or presentations involving 725 individuals were conducted. Data was collected on 1495 hogs representing 1361 youth, 176 breeders, 38 fairs and 45 counties. In addition to summaries of individual fair (county) data, annual and multi year reports for the state and individual breeders were also prepared. The multi year reports allow individual counties and breeders to track changes in the carcass quality of animals produced. Exhibitors and producers associated with hogs that are producing carcasses that meet certification standards receive a certificate of recognition and top statewide individuals and breeders are recognized at the MPPC annual meeting.

Impact:

- The summaries of annual results for the 21 years of the program show a marked improvement in carcass quality, particularly during the last ten years. Since 1994, live and carcass weights have increased 7%, back fat thickness has decreased 31%; loin muscle area has increased 28% and percent lean muscle has increased 13%. The majority of hogs in the US and in MT are sold on the basis of carcass quality. These improvements would increase value by an estimated \$8-\$12/head, depending upon the pricing “grid” utilized, representing \$2.6 to \$3.8 million annually to the MT swine industry.
- The improvements obtained suggest that producers and youth have adopted information and technologies in the areas of genetics, selection, nutrition, feeding and management. Although all of this is not directly related to the SOE program, the program does increase

awareness and demonstrates the results of technology adoption. In a 2002 program survey, responding breeders rated the educational value/usefulness of the breeder reports as 4.3 (5 = highly useful), 61% used the information as an aid in determining genetic improvement needs and only 39% were receiving carcass evaluation reports from commercial packing plants.

Scope of Program:

Statewide

Brief Description: Nutrient Management Practices

The Nutrient Management Modules, numbering 15, provide the reader with the major considerations necessary to optimize nutrient management practices. The modules received an Excellence Award from the American Society of Agronomy in November, have been introduced in 8 state newspapers, and are currently having an article written about them in the Western Cowman. The final 3 modules were printed in July 2004 and were mailed to all extension agents and certified crop advisers in the state. Quizzes at the end of each module can be taken by CCAs to provide up to 25 Continuing Education Units (CEUs). The online versions receive approximately 6,000 visits per year. In addition to the modules, the Fertilizer Facts information sheets summarize applied research on fertilizer conducted in Montana. These materials are mailed to all agents, CCAs, and Montana Agri-Business Association members (>500).

Impact:

- Participants learned the background science and management strategies for applying manure and preventing offsite movement of nutrients in manure and uses of advanced technologies to improve nutrient application, yield, and quality.

Scope of the program:

Statewide and WY

KEY THEME: IMPROVING ECONOMIC AND FINANCIAL MANAGEMENT PRACTICES

Brief Description:

Financial decisions are involved in the everyday operation of the farm and ranch. Just how many bad financial decisions can be made before producers must evaluate their financial and economic business performance? A program titled *Risk Management for Ag Families* was developed and presented throughout Eastern Montana. This program include several modules: 1) How Can I Survive In Agriculture, 2) RightRisk, a risk management educational game 3) Family Financial Planning and, 4) Human Risks and Interactions. This program was designed to help producers evaluate the business, the family and the interaction and impact of the family on the business resources.

Literally hundreds of other programs and individual meetings or consultations were conducted that had some emphasis on the financial health of agricultural operations. Teaching activities included: 1) how to generate enterprise and whole farm budgets for main stream commodities

like wheat, barley, hay, cow-calf, and sheep enterprises as well as specialty crops such as sweet cherries 2) evaluating enterprise mixes, 3) estate planning, 4) retirement planning, 5) economics of incorporating alternative crops, 5) implications of agricultural policy changes, 6) managing labor in agricultural operations, 7) Trade Adjustment Assistance Act education, 8) commodity price protection using futures and options, 9) record keeping for tax and management purposes, 10) equitable leases for agricultural operations, 11) evaluating machinery ownership and operating costs, just to name a few.

Impacts:

Short Term:

- Producers gained knowledge and skills in evaluating their business financial position and performance by participating in the *Risk Management for Ag Families* program. Participants learned key decision criteria that indicates financial business performance and the impacts a family structure has on long term survivability. Participants in many other educational meetings increased knowledge, awareness and skills in negotiating crop leases, machinery cost analysis for custom rate determination and risk management, evaluating individual crop and livestock enterprises to help maximize profitability with a selected enterprise mix. This knowledge will help assure the businesses are profitable and have a sustainable operation in the future.

Medium Term:

- Several years ago, participants started to use computers to manage production and financial records with emphasis on making more informed decisions in the future. Knowledge gained through these analysis and the workshops helped participants make fundamental changes in approaching management decisions. This change involved day-to-day record keeping like using QuickBooks for better financial data as well as using decision aids (Excel spreadsheets) to make timely decisions about machinery purchases.
- Cherry producers employing the Fruit Fly Trap system realized a more efficient use of crop protection products. This technology has allowed for reliable information about the cherry fruit fly that growers didn't have in the past. Savings on the average are \$150.00 per acre of orchard strategically sprayed. That savings is over shadowed by the continued ability to provide pest free fruit to the market place. Without pest free fruit, the market wouldn't exist. Cherry quality has improved because of producers applied education. Average price for cherries were .83/lb Montana producers averaged .93/lb. Approximately 3,251,600 million pounds were shipped this year as compared to 2.4 million in 2003.

Long Term:

- Participants gained a basic understanding of financial statements and understand why it is critical to see long-term survival of their operation. They recognized the impacts a "family structure" has on the farm or ranch. Follow through by participants in these areas, will help keep another generation on the farm or ranch.

Scope of Program:

Statewide

Brief Program Description: Drought Prevention and Mitigation

One of the programs producers could participate in for drought assistance in Montana was the dry milk program. Producers were eligible for dry milk allotments due to county drought status. Allotments were based on numbers of cows and bulls in their foundation herd. Producers elected to receive vouchers from MDA to barter with feed companies for feed or mineral purchase.

Impacts:**Short Term:**

- Producers were able to barter their Dry Milk allotment for appropriate feedstuffs in their particular area. A minimum of 2.6 million pounds of Dry Milk vouchers were converted to feed for a total savings of \$88,500. These funds were used for producers to mitigate the impact of continuing drought in 16 Montana counties.

Medium Term:

- Producers were able to remove cattle from drought stricken range grass earlier than planned. This allowed grasses to recover from the lack of moisture and made the grasses better able to compete against noxious weed invasion. Savings in feed costs resulted in added profitability for and increased the chances of long-term survivability.

Long Term:

- With this type of assistance, producers increase their chance of remaining profitable in the long run and have less chance of being forced to carry over debt that must be serviced in future years. In addition, producers are more aware of the importance of livestock management, the importance of preparing in advance for drought and that USDA is willing to help producers in Montana. Producers had a positive experience with a government drought program, fostering trust and educating them to the benefits of USDA, MDA and Extension programs in agriculture.

Scope of the program:

Statewide

Brief Program Description: Field Diagnosis of High-Nitrate Forages – Nitrate QuikTest Program

Annual cereal forages are widely planted in Montana. During drought periods, cereals and other crops or weeds tend to accumulate levels of nitrate that are toxic to livestock. The Nitrate QuikTest Program was developed to provide producers with a rapid field detection of high nitrate levels. Since 2000, 110 county faculty, crop advisors or producers have been trained to use the kits.

Impacts:

- The primary risk to livestock producers feeding hay with high nitrate levels are deaths and abortions, so there has been keen interest in this program. During the drought years

of 2001 and 2002, about one-third of the samples tested were considered too “hot” to safely feed. During this period, it was estimated that the impact of the Nitrate QuikTest Program was likely between \$12 million (replacement of high-nitrate hay) and \$35 million (potential calf abortions). Due to the awareness and potential value of the program, a number of new research initiatives have begun to develop better the basic knowledge about nitrate accumulation. One major consequence of the program has been that many producers now routinely invest \$50 to \$100 per year for forage nitrate tests. This is a statewide program that costs about \$500 per year to administer, plus county faculty time and travel (the test is provided free to producers).

Scope of Program:

Statewide

KEY THEME: LAWN, GARDENING, HORTICULTURAL, EDUCATIONAL AND SERVICE ACTIVITIES

Brief Program Description: Gardening/Horticulture:

The horticulture program has many components that have touched a high percentage of Montanans regardless of their roots. People who live in urban settings have numerous questions and concerns about which they need to be educated. The same is true for those who reside in the more rural areas of the state. Whether they are planting a vegetable garden, an ornamental flower bed or pruning a shelterbelt, Montana people often turn to Extension for answers.

Examples of programs that respond to these needs are listed below:

- The Master Gardener program provided 26 hours of education for 227 participants. Attendees gained a thorough knowledge of the fundamentals of plant growth and development, fertilizers and culture of landscape and garden plants, including turf grass. Correct gardening skills, including grafting, fertilizing, cultivating and pest management, were taught.
- The Tree Physiology program provided education to the Association of Montana Turf and Ornamental Professionals. (AMTOP).
- Participants gained a sound knowledge of basic plant physiology to help them make sound business decisions in fertilizing, pruning, and cultivating landscape plants, including turf. With these sound decisions malpractice will be reduced, saving businesses and clients thousands of dollars in unnecessary repeat services. Overall, Montana landscapes should be better maintained with increased cost savings of clients.
- The Home Landscaping program provided a telecast to six counties in south central Montana. Participants gained a sound knowledge of the causes of plant problems in the state and how to remediate those problems. With this they should be better able to preserve and protect their existing landscapes.
- The Small Fruit Culture and Pruning program provided 50 participants with information they could use on raising fruit trees. This was a special Master Gardener class. Participants learned what small fruit species have adapted to Montana and the care of those species, including pruning and fertilizing. This knowledge may lead to far more

fruit plantings in the state, which may offset the expense of homeowners having to purchase their fruit.

- The Shelterbelt program helped 60 participants get combined theory and hands-on experiences related to gardening issues. The attendees learned the correct way to fertilize, prune and otherwise care for their shelterbelts, how to lay out a shelterbelt, and which species are appropriate for that use. This knowledge alone will save them many thousands of dollars in replacement costs for plants lost to improper care or poor species selection. Long-term benefits include substantial reduction in potentially millions of dollars in heating and feed costs through maintenance of a healthy shelterbelt.
- Radio Programming is a 260 show broadcast over 15 stations, making the potential audience around 50,000. All of these shows deal with solving Montana, Wyoming, and South Dakota's horticultural problems. Improved landscapes, shelterbelt maintenance, and gardens are the result, saving perhaps millions of dollars to home and ranch owners. Programs were broadcast without charge.
- Television Programming was done through 10 Montana Ag Live shows having a potential audience of 300,000. This is a live call-in show allowing people to get their questions answered in "real time". In addition, the NBC Affiliates in Missoula, Kalispell, and Bozeman aired 26 shows, 2 times per week, each to a potential audience 15,000. These programs were part of the evening news broadcast.

Impacts:

- Participants in the horticulture programs have gained information and understanding about the selection and application of fertilizers and pesticides/herbicides and proper techniques in cultivating and soil preparation. They learned skills in pruning trees as well as planting and caring for shelterbelts. While data has not been collected on the long-term effects of these programs, there certainly are economic and environmental consequences that can be predicted.

Scope of Program:

Statewide

GOAL 2:

A SAFE AND SECURE FOOD AND FIBER SYSTEM

Overview

The Montana State University Extension's approved Plan of Work has Performance Goals which ensure Montanans have an adequate food and fiber supply and food safety through improved science-based detection, surveillance, prevention and education.

Concern about food safety throughout the food system has reached an all-time high. A "food system" approach considers the processes and relationships involved with providing food. This "system" is composed of eight general sectors: production, processing, packaging, distribution, marketing, purchasing, consumption and disposal. By adopting an integrated and collaborative

approach, professionals in all sectors can gain an understanding of how interconnected they are and most importantly, link strategic actions to address problems and issues. Approximately 5.5 FTE are focused on this portion.

Limited resource Montanans, most likely to be food insecure, have developed new skills and learned behaviors leading to improved nutritional well-being and economic independence.

- In the Key Theme of Food Resource Management, two programming efforts are highlighted. Montana's EFNEP (3d funds) in four counties and encompassing parts of three reservations, has taught a series of lessons to over 380 adult family members and 849 youth. With the focus of modifying food intake behavior for improved health, more than 88% of the adult EFNEP graduates improved their diets, notably with an increase in intake of both fruits and vegetables. EFNEP federal funds paid salaries, benefits and operations for 1.6 FTE Professionals, and 5.0 FTE Paraprofessionals.
- Montana's FSNE, funded by Food Stamp Program nutrition education funds (\$567,037) and matched by Montana State University and community organization in-kind (\$567,376), provides educational programs for food stamp households and those eligible in 30 counties of the state. Over 17,980 Montanans (adults, seniors, and youth) were directly contacted with lessons on improving food skills and modifying food choices. The Food Stamp Program funds salaries and benefits for paraprofessionals (10.075), professionals (2.5), and classified staff (1.0).

The purpose of the Beef Quality Assurance program is to educate producers about providing a safe and quality product to the public. These programs make it possible for producers to certify that calves were vaccinated using a standard health management protocol. Since the program began in 2002, 2000 producers in the state have received the training and more than 1100 are certified through the Montana Beef Quality Assurance program. Other livestock species have offered similar programs to ensure a quality product is available for consumers.

Source of Funds:

Smith Lever, 3d funds, State, matching county and local funds and grant funds from public and private sources. #FSIS-C-39-2003 Outreach to Small & Disadvantaged Retail Establishments.

Key Theme: Food Resource Management

Expanded Food and Nutrition Education Program (EFNEP)

Brief Description:

In Montana EFNEP, Extension professionals train and supervise paraprofessionals and volunteers, who teach basic nutrition and food skills to limited resource families and youth. Group classes offer an in-depth series of 10-12 lessons for adults. EFNEP works to achieve lasting improvements for families while promoting immediate changes in food and physical activity habits. In the last year, Montana EFNEP operated in four counties encompassing parts of three reservations.

Collaborative:

The collaborative effort with the four Family and Consumer Sciences agents in the counties where EFNEP is implemented is an important part of the program. The agents serve as supervisors for the EFNEP paraprofessionals (nutrition assistants). Additionally, the Fort

Belknap Reservation agent serves as an on-site supervisor. Funds from the Fort Belknap Tribes partially fund that site. Collaboration in the community is extensive, as EFNEP staff recruits participants with the help of WIC (Women, Infant and Children Program), Offices of Public Assistance, food banks, and other important community agencies.

Underserved Efforts:

Montana EFNEP serves limited resource families and children in Montana. 55% of EFNEP participants have a household income of 50% or less of the Federal Poverty Level. All participants of EFNEP are at 185% of poverty or less. The percentage of minority participants in the adult and the youth program exceeds the percentage of those in Montana as a state.

People Completing Program: 1229

Impacts:

Short Term:

- EFNEP continues to help families stretch their food dollars to feed their families in a nutritious manner. EFNEP's evaluation system (ERS) has documented the effectiveness of the program in the following ways: 88% of the EFNEP graduates (after 10-12 lessons) improved their diets, notably with an increase in fruits and vegetables. For EFNEP youth participants, 98% now eat or intend to eat a wider variety of foods, including fruits and vegetables.

Medium Term:

- Sixty-five percent of EFNEP participants made one or more positive changes in their food resource management practices. (i.e., plans meals, compares prices, or uses a grocery list). An estimated 26% of participants ran out of food less often before the end of the month.

Long Term:

- Follow-up on graduates of the EFNEP has shown that people not only make small changes immediately because of the EFNEP lessons, but often make changes that are long term. Increased confidence in the ability to manage resources, sustained weight loss, and even related job opportunities are impacts of the program.
- Of the top ten causes of death in the U.S., four (obesity, heart disease, diabetes, and several types of cancer) are associated with dietary quality. These serious issues can be addressed through proper nutrition and physical activity – both promoted through EFNEP programming. An EFNEP cost/benefit study in six states, including Montana, found that for every dollar invested in EFNEP programming, \$8.82 in future health care savings resulted.

Scope of Impact:

4 counties and 3 Indian reservations

Food Stamp Nutrition Education (FSNE)

Brief Description:

The Montana Food Stamp Nutrition Education Program provides educational programs for food stamp households and applicants. In 30 counties, paraprofessionals (nutrition assistants) provide a series of lessons or single demonstrations with practical information and skill-building tips for choosing better foods, food handling, food storage and food safety practices. FSNE partners

with numerous community agencies and organizations to optimize effective programming and to make participants job ready and healthy. Primary program collaborators are the county Extension offices providing FSNE and the county Offices of Public Assistance (Montana Department of Health and Human Services). Limited income households often find it challenging to stretch food resources to cover the entire month, even when they receive food stamps. Some of these households include children, senior citizens and disabled individuals. Many limited income individuals are also being employed, although not at a living wage. As family members are employed, less time at home demands greater efficiency with food resource management.

Underserved Efforts:

Montana FSNE serves limited resource families and children in Montana. At least 50% of the target population must have gross incomes at or below 185% of poverty. County program staff recruits participants who would not otherwise have access to food resource management information from other venues. The percentage of minority participants exceeds the percentage of those in Montana as a state. FSNE also serves elderly and developmentally disabled on food stamps.

People Completing Program: 17,980

Impacts:

Short Term:

- Over 17,980 Montanans (adults, senior citizens, and youth) were directly contacted by FSNE in FY04. Some participants completed a series of lessons, while some participated in one or more lessons or demonstrations focused on improving food skills. An additional 50,182 indirect contacts were made by the program offering Montanans information through newsletters and displays. Adults who completed the lesson series reported that they improved or intended to improve one or more food resource management practices, improved nutrition practices, and/or food safety practices. Ninety-four percent of youth who participated improved their practices in food preparation and food safety.

Medium Term:

- Twenty-three percent of participants in FSNE less frequently ran out of food before the end of the month. FSNE continues to help families stretch their food dollars and feed their families in a nutritious manner. While the short term impacts show immediate behavior change, participants have noted that these small changes have given them more confidence in managing their resources and planning and preparing nutritious low-cost meals on an ongoing basis.

Long Term:

- Of the top ten causes of death in the U.S., four (obesity, heart disease, diabetes, and several types of cancer) are associated with dietary quality. These serious issues can be addressed through proper nutrition and physical activity – both promoted through FSNE programming. Regional and national studies with Extension Nutrition Education Programs (EFNEP and FSNE) have shown that for every dollar invested in nutrition education with limited resource families, at least \$8.00 in benefits from reduced health care costs is realized.

Scope of Program:

30 Counties within the state.

Key Theme: Food Safety

Food Safety Works and ServSafe 4-hour Employee Guide Training

Brief Description:

Food Safety Works and the ServSafe 4-hour Employee Guide Training programs are basic food safety classes provided to non-managerial food service workers. Non-managerial food service workers include volunteer and paid workers for service and non-profits agencies, students, food production workers, and those involved with workforce preparation. This program has been very successful because of the cooperation among high school students, teachers, 4-H, non-profits, community kitchens, county sanitarians, MSU Extension faculty, and the food industry. Examples of topics covered in these basic trainings include personal hygiene, food handling, and safe temperatures. Participants who complete these programs receive a certification of participation. Food Safety Works and the ServSafe 4-hour Employee Guide Training are different types of training than the ServSafe Food Protection Manager National Certification Training discussed in the next section.

Impacts:

Short Term:

- Over 1700 Montanans gained an understanding of the principles in safely handling food through the Food Safety Works or the ServSafe 4-hour Employee Guide training.
- Data collected indicates that 1445 Montanans (85% of 1700) intend to adopt one or more safe food handling practices as a result of attending one of the trainings.
- Because of the trainings Extension held on Food Safety, 1207 Montanans (71% of 1700) indicated they adopted at least one safe food handling practice.
- In Fergus County, 96% of 210 participants (202) showed they gained knowledge based on pre/post tests scores. Content areas showing highest level of knowledge gain included hand washing, cross-contamination, and temperature danger zone.

Medium Term:

- Several counties reported improved food safety practices by those receiving basic food safety training: Examples include:
 - 1) Park County Sanitarians have noted an improvement in food safety practices at food service establishments and credit Extension programs for this change.
 - 2) Family and Consumer Sciences teachers in Custer, Fergus, Missoula, and Yellowstone counties reported improved food safety practices in school food labs and school concession stands. They noted this change after Extension trainings.
- Several Counties reported evidence of job preparation skills by those receiving basic food safety training. Examples include:
 - 1) In Fergus county, 22 students placed their certificates into their job portfolios as a way to be more competitive in the workplace. There is evidence that these certificates actually influenced employers in their hiring decisions.
 - 2) Rosebud-Treasure County reported that 65% of participants increased their self-confidence in performing their job requirements and in meeting the employers' standards at the food service establishment where they work.
- Because of the Food Safety Works trainings, sanitarians have noted changes.

- 1) Richland County reported fair concessionaires have increased the level of hand washing, sanitary food preparation, and the storing of foods at correct temperatures for the 2005 fair. In addition, 5 fair concessionaires developed written plans for improved food safety for the 2005 fair.
- 2) Missoula County reported that the McDonalds franchise donated food safety textbooks to local high schools.

Long Term:

- There is evidence that the Food Safety Works program is influencing the practices of food entities in the state. They are recognizing the need for employee training on Food Safety and are adopting it as a general way of doing business. For example:
 - 1) Sanders County reported restaurants, schools, agencies and other businesses are continually asking for more food safety classes and training requests for food booths at fairs.
 - 2) Custer County reported employers at food establishments request training for their workers on a continuing basis.
 - 3) Richland County reported the Food Safety Works program was requested by fair board manager. This request has been repeated annually.
 - 4) Fergus County reported Family and Consumer Sciences teachers are developing plans to incorporate the Food Safety Works program into their standardized curriculum.
 - 5) Missoula County reported the directors of the Poverello Center and Food Bank requested food safety training for their employees and volunteers.
 - 6) Big Horn County reported they have had an increase in requests for Food Safety Works training from restaurants, schools, and other food booth operators.
- There is some evidence that Food Safety Works program participants receive increased salaries, promotions, and employment opportunities as a result of the basic food safety training. For example:
 - 1) Missoula County students reported increased salaries and promotions.
 - 2) Yellowstone County students received a raise on completion of the program. It was also reported that 4 students gained employment, therefore no longer needed public assistance.
 - 3) Sanders County reported high school students are given preference over other applications if they present their Food Safety Works certification of participation.
 - 4) Carbon County teachers reported students' used their certificate to gain summer or part-time employment.
- An increased number of schools reported they are incorporating the Food Safety Works program into their curriculum. For example:
 - 1) Missoula, Richland and Yellowstone Counties now have the Food Safety Works as part of the standardized Family and Consumer Sciences curriculum.
 - 2) Richland County also reported Family Consumer Science teachers in schools not currently offering the program are requesting resources to begin teaching it.
- Wibaux, Custer and Rosebud-Treasure Counties reported economic benefits of basic food safety training through practices such as improved customer service and reduced food costs. There is evidence that customers feel more confident eating in establishments that have qualified, trained workers who use safe practices and serve safe, quality food.

- Custer, Rosebud-Treasure, Yellowstone, Richland and Park Counties report a reduction in incidence of foodborne illness as a result of safer food handling practices. Some Counties value the basic food handling training enough to make it mandatory in some of their food establishments. Examples include:
 - 1) Training is required for all concessionaires at the Metra in Billings.
 - 2) Plans for required food safety training and establishing standardized policies were discussed in Richland County among the Fair Board, county sanitarian, and Extension agent.

Scope of Program: Statewide

ServSafe Food Protection Manager National Certification Training

Brief Program Description:

ServSafe Food Protection Manager Certification Course from the National Restaurant Association Educational Foundation is a food safety educational training program for food service managers offered in the community, through food service businesses and schools. This training has been accredited by the Conference for Food Protection. Upon receiving a passing score on the examination, participants will receive a nationally recognized certification. This certification makes employment across the country more viable for people who must relocate.

Impacts:

Short Term:

- Data indicates that 490 Montanans gained knowledge of safe food handling practices by attending the ServSafe Food Protection Manager Certification Course.
- Of the 490 Montanans, 85% indicated they intent to adopt one or more safe food handling practices.
- Of the 490 Montanans taking the course, 71% or 441 participants adopted one or more safe food handling practices.
- In selected evaluation samples of the trainings, two had 100% of participants pass the certification test, one 99% and one 81% pass rate.

Medium Term:

- Deer Lodge County reported 8 food service establishments developed food safety plans as a result of attending training.
- There has been an increase in the number of reports from communities indicating that food safety practices have improved by those who received the ServSafe Food Protection Manager Certification Course. For example:
 - 1) One food service manager reported to the county sanitarian that he has observed an increase in the use of food thermometers and an awareness of keeping food at the correct temperatures.
 - 2) Sanitarians in several counties have reported they have had fewer write-ups in food establishments that have workers who attended the certification program.
 - 3) Sanitarians also noted an increased use of gloves and hand washing in those food service establishments where there are certified employees.

Long Term:

- Because of the training, Deer Lodge County has reported economic benefits to food service establishments. Owners/managers say that, among other things, improved customer service and reduced food costs have contributed to increased a better profit margin.
- As a result of safer food handling practices, Yellowstone and Deer Lodge Counties have reported a reduction in the incidence of foodborne illness.
- Yellowstone County has reported that participants are seeking recertification which documents the value of updated training to individuals and to food service employers.

Scope of Program:

Statewide

Food Safety for Consumers**Brief Description:**

Food safety for consumers is taught for a variety of groups such as seniors, county employees, and general community audiences. Key safe food handling points covered in classes include: clean by washing hands and surfaces often, separate food to prevent cross-contamination of bacteria from one food to another, cook to proper temperatures, and chill by refrigerating promptly.

Impacts:**Short Term:**

- Because of Extension programs, 277 Montanans have gained knowledge about consumer food safety.
- Information gathered during programs indicates that 216 Montanans (78% of 277) intend to adopt one or more safe food handling practices.
- Data indicates that 199 Montanans (72% of 277) have adopted one or more safe food handling practices.
- In a selected evaluation sample, 20 K-3 grade students attended a hand washing class. After the class, 100% of the students demonstrated the correct and safe hand washing procedures. Several parents reported their children talked to them about germs and the importance of hand washing.

Scope of Program:

Statewide

Program: Quality Assurance Programs for Beef and Swine**Brief Description:**

Montana is a high beef producing state so it is important for producers to exercise accepted practices and protocols as they work with their animals. The Beef Quality Assurance program helps ranchers meet these requirements and by doing so, receive a premium price for the product. County agents across the state have delivered the program at the local level and have certified over 1100 producers.

Impacts:**Short Term:**

- By attending one of the Beef Quality Assurance programs conducted by Extension, producers gain an understanding of the importance of providing a quality product to consumers. They also learn what practices need to be followed so that quality products can be achieved.

Medium Term:

- According to recent data, over 2000 producers have participated in one or more of the trainings and of that number, over 1100 (55%) are certified through the Montana Beef Quality Assurance program. This means they are following the practices and protocols outlined.

Long Term:

- Consumers can feel confident that they are purchasing a quality product.

Scope of Program: Statewide**Starting a Specialty Food Business Video and Resource Guide****Brief Description:**

Starting a Specialty Food Business: Knowing What Questions to Ask and Where to Find the Answers is a video and resource guide that provides consumers and industry with basic information about starting a food business. The topics covered in the video and resource guide include: getting started in the specialty food business; determining the feasibility of a food business; developing a business and marketing strategy; understanding labeling requirements; packing and co-packing; becoming informed on regulations; and networking. This project has been a collaborative effort among MSU Extension, food businesses, state, tribal, and local health departments, MSU College of Agriculture, Montana Department of Livestock, Montana Department of Agriculture, and Mission Mountain Market and other food processors, and Intertribal Agriculture Cooperative.

Impacts:**Short Term**

- As a result of this Extension program, 1294 Montanans gained information on starting a specialty food business.
- During the training, 63 Montanans (5% of 1294) indicated they intend to adopt at least one practice related to starting a specialty food business.
- Follow up data indicates that 54 Montanans (4% of 1294) adopted a practice related to starting a specialty food business as a result of the training.

Scope of Program: Statewide**KEY THEME: Native American Food Safety Training: HACCP and ServSafe Food Manager National Certification Training****Brief Description:**

Montana State University Extension Service has received food safety partnership money through USDA to conduct food safety training for Native Americans. The goal of this project is to improve the ability of food service workers to make informed, responsible decisions related to controlling food safety hazards, especially those hazards associated with meat and/or poultry. This project is a partnership between Montana State University- Bozeman Extension and Montana's 1994 Land-Grant Colleges on seven reservations, tribal communities and other local/state agencies including Tribal/IHS sanitarians and the Montana Department of Livestock. This project provides culturally sensitive food safety training and enhances community competence in addressing food safety hazards. These strategies include creating on-going educational partnerships for providing food safety training, policy development, and building community capacity. Nationally recognized programs with options for certification such as ServSafe are taught using culturally relevant learning techniques. Tribal colleges and communities have expressed interest in a holistic food safety approach which includes value-added agriculture and food production; workforce preparation; community, youth and economic development; safe food operations for tourism and trade; and establishment of credentialed educational classes offered by each Tribal College.

Evaluation data will be reported for two projects:

1) Hazard Analysis and Critical Control Points (HACCP) and Basic Meat Microbiology with Focus on Native American Food Products

This 3-day seminar designed for small meat processors and/or food safety regulators and educators features lectures, practical hands-on sessions and audience participation. HACCP training for meat processors and other food establishments has been a collaborative effort among MSU Extension; Montana Department of Livestock; state, tribal, and local health departments, and the food industry. Montana's HACCP training includes on-site visits to food processor establishments and provides information and resources for participants to write a HACCP plan for their own business. Seminar highlights included product sampling, pathogenic microorganisms, sanitation, and intrinsic factors in food that prevent microbial growth. Participants were provided hands-on experiences with environmental and product testing, and strategies for using scientific data for HACCP plans. The HACCP training course will meet USDA Final Rule mandatory requirements. The audience included technical, production and HACCP personnel responsible for the maintenance of SSOP and HACCP plans, meat inspectors, sanitarians, regulators and food safety educators.

2) ServSafe Food Manager National Certification Training

Based on the results of the training conducted on the Northern Cheyenne reservation, modifications were made for the ServSafe Food Manager Certification training on the Crow Reservation. All facility and meal planning was coordinated by the Little Big Horn College Extension Service personnel. The team of instructors included state and county Extension educators and Debbie Haines, Indian Health Service Sanitarian. Fifteen people attended the training. Fourteen (93%) of the participants passed the course and are ServSafe Certified. The average passing score was 86.8%. Four participants (29%) passed with a 90% or greater score and are now eligible to apply for ServSafe Instructor status. The Northern Cheyenne community now has the capacity to teach ServSafe training without depending on outside resources. The course was modified to best meet the predominant learning styles of Native Americans by using

interactive learning strategies and emphasized test taking throughout the two-day course. This allowed for participants to practice translating information for answering test questions. The strategy resulted in participants having a higher comfort level when taking the actual test.

Impacts:

Short Term:

- Because of Extension efforts, 78 Montanans have learned the importance of food safety through the HACCP Training or ServSafe Food Protection Manager Certification Course.
- Data indicates that 66 Montanans (85% of 78) intend to adopt one or more safe food handling practices.
- Follow up to the trainings indicate that 55 Montanans (71% of 78) adopted one or more safe food handling practices.

Medium Term:

- Data indicates there is an increase in numbers of meat businesses that are effectively complying with federal policies to develop and implement HACCP plans.

Scope of Program

Multi-Institutional

Montana State University Extension Service and each of Montana's seven Tribal Colleges: 1) Blackfeet Community College, 2) Dull Knife Memorial College, 3) Fort Belknap Community College, 4) Fort Peck Community College, 5) Little Big Horn Community College, 6) Salish Kootenai College, and 7) Stone Child Community College.

GOAL 3:

A HEALTHY, WELL NOURISHED POPULATION

Overview Statement:

In Montana, many health problems are directly and indirectly related to unhealthy nutrition and food choices. It is the goal of Montana State University Extension Food & Nutrition to provide information, programs and leadership to identify primary health issues related to food and nutrition. In addition, Montana is experiencing problems related to methamphetamines. While programming in this area is a new effort for Extension, several accomplishments have been noted. Currently in Montana, the following food and nutrition programs are being conducted to address those issues:

Chronic Disease: The prevention of chronic disease occurs by the adoption of health-promoting lifestyles. In Montana, chronic diseases that significantly impact the health of residents include heart attacks, cancer, strokes, high blood pressure, diabetes, osteoporosis and obesity. The leading cause of death in the state is heart disease. Chronic diseases also account for approximately 70% of health care costs.

General Nutrition: The Food Guide Pyramid and the Dietary Guidelines serve as practical recommendations for healthy food choices. By following these recommendations and learning how to use nutrition labels on foods, Montanans can improve their health. Nutrition

misinformation costs Montanans each year in dollars and potential health risk. The nutrition quackery business is increasingly promoting their products at great monetary expense, and at times, creating problems and potential health risks for consumers.

Healthy Lifestyles: Healthier lifestyles will result by increasing health-related behaviors such as healthy food choices, regular physical activity, and positively handling stress. Montanans will improve their quality of life and decrease health care expenses if they follow some basic guidelines like eating properly and incorporating physical activity into their daily routine.

Nutrition Education for Children/Teens/Educators: Extension educators have delivered programs on nutrition for students in and out of school as well as for their teachers, reaching 1565 people. The results of this education is significant when 100% of teachers improved their ability to integrate nutrition topics into the school curriculum and 80% of children reported making healthier food choices. Throughout Montana, teachers (preschool, elementary and secondary) and other educators (after school programs, child care, school enrichment) are interested in incorporating nutrition education into the current curriculum. They understand that poor nutrition can have a lasting impact on children because it influences the way they learn, can be linked to chronic disease and ultimately effects the quality of life. Currently, one of the biggest concerns is about the eating patterns of children, which leads to the rise of childhood obesity. Teachers, parents, and other school personnel see nutrition education as valuable for their children.

Optimal Nutrition for Older Adults: Nutrition is a key component of quality of life for older adults. Unfortunately however, there is a high rate of malnutrition among senior citizens due to a large number of nutrition-related individual and environmental risk factors. Seventy-three percent of older adults report eating fewer than the recommended servings of fruits and vegetables. Sixteen percent report having been told by a doctor that they have 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. This represents an increase of almost 14% from the 1990 census.

Pathways to Health: Nutrition programs are needed to promote health and fitness for people of all shapes and sizes and prevent disordered eating and eating disorders. Programs must inform participants about safe approaches to fitness and weight control and often include topics such as portion sizes, media literacy, and strategies of successful, sustainable behavior changes.

Source of Funding: Smith Lever, State, County, and Local; Grants from private and public sources, Grant (WIN the Rockies)

Key Theme: HUMAN NUTRITION

Program: Chronic Disease

Brief Description:

The prevention of chronic disease occurs by adopting health-promoting lifestyles. Educational programs help people learn the nutrition-related knowledge and skills needed to reduce their risk of chronic diseases. Commonly taught classes on how to prevent chronic diseases through healthy food choices include: 1) *Make Heart Healthy Eating a Family Affair*, which provides basic food and nutrition information for people with cardiovascular disease and their families

and 2) *Defeating Diabetes in Indian County*, 3) *Calcium Counts*, which provides information and skills to prevent osteoporosis through increased calcium choices and other lifestyle practices, 4) *Women to Women*, which is a telecommunications support and information project for rural, chronically ill women, 5) *Tasty Fork*, a campaign developed by Richland County Nutrition Coalition to increase healthy options while dining out for those with chronic diseases.

Impacts:

Short Term:

- Extension programs show that 625 Montanans gained an understanding about chronic disease prevention through healthy food choices.
- Data gathered at programs indicate that 588 Montanans (94% of 625) intend to adopt one or more practices that will prevent chronic disease through healthy food choices.
- Follow up to programs reveal that 312 Montanans (52% of 625) adopted one of more practices that will prevent chronic diseased through healthy food choices.
- In a selected evaluation sample for the Calcium Counts workshop, 92% of participants were able to identify their calcium needs, how to read a food label for calcium content, and identify healthy calcium choices.

Medium Term:

- One individual who participated in an Extension-sponsored walking program, logged 228 miles, increasing her bone health through physical activity.
- In several counties, community agencies have increased their commitment to offer bone health education.

Long Term:

- Several counties indicate they have formed collaborations among community agencies in offering bone health education, thereby raising the awareness of the importance of bone health among residents. Health professionals and community agencies proactively provide reliable, consistent information on bone health to the public, making it convenient for residents to obtain bone tests and monitor their own conditions.

Scope of Impact: Statewide

General Nutrition

Brief Description:

Topics covering the area of general nutrition include promoting awareness and utilization of Food Guide Pyramid, Nutrition Label, Dietary Guidelines, and the *5 A Day* fruit and vegetable campaign. The recent consumer trend in low carbohydrate diets provided opportunities to educate in the areas of healthy weight and fitness strategies, as well as the potential problems associated with low carbohydrate diets. Also included in this area are programs addressing knowledge and skills for safely utilizing dietary supplements, such as the program *Safe Use of Dietary Supplements*.

Impacts:

Short Term:

- Because of Extension program efforts, 800 Montanans gained an understanding of the importance of making healthy food and nutrition choices.
- During programs, 720 Montanans (90% of 800) indicated they intend to adopt one or more practices to help them make healthy food and nutrition choices.
- Data gathered indicates that 608 Montanans (76% of 800) have adopted one or more practices that help them make healthy food and nutrition choices.

Medium Term:

- Participants of *Safe Use of Dietary Supplements* indicated they have reviewed what food supplements they are currently taking. Several have indicated they have also reviewed their list of supplements with their doctors to determine safety and potential contraindications in use.

Scope of Impact: Statewide

Healthy Lifestyles

Brief Description:

Two of the most successful Extension activities that have promoted healthy lifestyles are the pedometer programs and community health fairs. Several counties have found that by using a pedometer, they can motivate people to measure and even increase their physical activity. The mission of one county's health fair is to help increase positive behavior change for reaching healthier lifestyles, improving quality of life, and decreasing health care expenses. Health fairs offer information and screenings for many health issues, such as osteoporosis and high blood pressure.

Short Term:

- Extension programs have involved an estimated 7,000 Montanans in learning strategies for achieving a healthy lifestyle.
- Data indicates that 6,720 Montanans (96% of 7,000) intend to adopt one or more practices they learned about achieving a healthy lifestyle.
- Follow up efforts show that 5,390 Montanans (77% of 7000) have adopted one of more practices they learned about achieving a healthy lifestyle.

Medium Term:

- Several counties have conducted programs on increasing physical activity and have used the pedometer to help motivate participants. In a selected evaluation sample, Chouteau County implemented a pedometer activity program with participants purchasing 165 pedometers. Participants walked a total of 66,140 miles. Survey results of program indicated: 86% use their pedometer every day; 46% enjoyed more time outdoors; 57% noticed an increase in energy and fitness; and, 43% noticed an improved mood.

Long Term:

- In a follow up evaluation, 25% of those who participated in the Chouteau County Health Fair believe their health has improved as a result of this effort. Health improvements included lowered blood pressure, lowered cholesterol, improved strength and endurance. Also, physicians indicate they have noticed an increase in office visits for follow-up information and care on blood tests and health screening results offered at the health fair.

Scope of Impact: Statewide

Nutrition Education for Children/Teens/Educators

Brief Description:

Extension personnel have provided elementary and high school classroom nutrition education, as well as out of school programming. Topics include choosing healthy beverages to provide nutrients, label reading, choosing foods based on the Food Guide Pyramid, healthy snack choices, portion sizes, and fruit and vegetable consumption. County agents give teachers and other educators practical, effective strategies to incorporate nutrition education into the classroom in a way that motivates children to make healthy food and lifestyle choices. Collaborative efforts with teachers, principals, community colleges, WIC, Montana Team Nutrition (USDA) staff, and coalitions of community agencies are key to success for these programs. One county agent received mini-grant funding from *Eat Right Montana* coalition to supplement program funding. One nutrition education for teachers class was a collaboration of MSU Extension and the MSU-Billings campus. Classroom presentations are done at the request of the teachers in the local school districts, often rural schools. Special invitations are extended to those schools which do not have nutrition education in the present curriculum.

Impacts:

- Students have learned the components of a healthy diet, and are making positive changes in their daily food choices and physical activity. Because of the Extension programs, 79.7% of the children who participated reported that they changed to healthier behaviors.
- The teachers have successfully incorporated nutrition education into the classroom, which in turn helps children make positive behavior changes. After these programs, 100% of teachers reported that they incorporated nutrition education into their classroom curricula.

Scope of Impact: Statewide

Optimal Nutrition for Older Adults

Brief Description:

A variety of successful programs to increase optimal nutrition and fitness for seniors included topics such as healthy nutrition for older adults and were conducted in a variety of venues, such as community health fairs.

Impacts:

Short Term:

- Because of Extension programming, 6,500 Montana older adults have gained an understanding of how to improve their nutritional status.
- Data shows that 5,200 (80% of 6500) Montana older adults indicated they intend to adopt one or more practices they learned about how to improve their nutritional status.

Medium Term

- As a result of the Cascade County Community Health Fair for Seniors, 12 new health providers were added to the Senior Citizens Health Resource Directory.

Long Term

- Cascade County Community Health Fair for Seniors has been identified as a major community function within a 6 county area.
- Follow up information indicates that 3,250 (50% of 6500) Montana older adults have adopted one or more practices they learned about how to improve their nutritional status.

Scope of Impact: Statewide

Pathways to Health

Brief Description:

The goals for Montana State University Pathways to Health Campaign: Promoting Health, Fitness and Self-Esteem for People of all Shapes and Sizes and Preventing Eating Disorders include *primary* prevention (create awareness and prevent occurrence), *secondary* prevention (early identification and correction), *tertiary* prevention (assist in treatment and recovery). The campaign audiences include individuals and families, schools, health agencies/ professionals, media, communities, and researchers. In 2004, *Wellness in the Rockies* (WIN) and *Girl Power* resources were utilized.

Impacts:

Short Term:

- As a result of Extension efforts, 500 Montanans gained an understanding of the importance of promoting health and fitness to people of all shapes and sizes and to prevent eating disorders.
- As a result of Extension programs, 470 Montanans (94% of 500) indicate they intend to adopt one or more practices learned on how to promote health and fitness for people of all shapes and sizes and prevent eating disorders.
- Data indicates that 380 Montanans (76% of 500) have adopted one or more practices they learned on promoting health and fitness for people of all shapes and sizes and prevent eating disorders.

Medium Term

- Participants in *A New You Program* reduced portion sizes of food, developed individualized plan for physical activity, and gained a better sense of self through adopting healthier lifestyles. Middle school *Girl Power* participants learned to identify harmful advertising and vocabulary that was demeaning. They learned ways to counteract messages bombarding them by society through healthy self-talk and by supporting each other.

Scope of Impact: Statewide

Human Health

Program: Methamphetamines in Montana Homes

Brief Description:

Methamphetamines (meth) are a clandestine-manufactured drug with immense addictive qualities. According to the Montana Department of Justice, meth is among the State's leading drug problems. Although about 80% of the drug is brought into Montana from Canada and Mexico, the drug is easy and inexpensive to manufacture using common, off the shelf retail products. Meth may also be made using a process that requires the agriculture product, anhydrous ammonia. Meth is sold and used for many reasons - weight loss, a stimulant for staying awake and a recreational drug. Whatever the reason for use, meth is addictive and deadly. In an effort to provide statewide awareness of meth, the MSU Extension Service is partnering with the Montana Department of Justice to develop educational materials and provide outreach programs to consumers, youth, retailers, housing authorities, and Realtors. Reports show that 617 people participated in programs Extension conducted on methamphetamines.

Impacts:

Short Term:

- Teachers and people involved with out of school education have learned about methamphetamines through an MSU Extension developed "Meth Community Educator and Teacher Tool Kit".
- People who attended the Governor's Meth Summit gained information about methamphetamines because of Extension programs.
- Because of Extension education, property owners, people involved with real estate, retailers and Indian/public housing authorities gained an understanding about methamphetamines and problems associated with it.

Medium Term:

- Participants of workshops indicated they would use and apply the materials of the tool kit in their business and with their clientele.

Scope of Impact: Statewide

GOAL 4:

AN AGRICULTURAL SYSTEM WHICH PROTECTS NATURAL RESOURCES AND THE ENVIRONMENT

Overview Statement:

Landowners in Montana have made use of the abundant natural resources in order to make a living and survive on the land from the time Montana was settled. Today, society desires to preserve and protect these very resources that have made Montana a unique and thriving state. The majority of society lacks knowledge of how livestock agriculture works to ensure the sustainability of natural resources as their livelihood depends on it. Throughout history, many livestock operations and other industries have chosen locations to build based on the proximity to nearby water sources. At the time, it was the most economical and efficient means to survive. Today however, there have been examples where the location of these facilities has been

devastating to the environmental quality, but as a result, management techniques have been devised to make these industries compatible with their location.

Montana Livestock producers have been presented information on the requirements for discharge permits, nutrient management plan content, and other livestock waste management topics. For example, two major presentations were conducted for swine producers. Approximately 198 participants representing approximately 20 swine operations producing a significant proportion of the hogs raised in MT received the latest regulatory requirements, forms necessary to apply for CAFO permits, information on the necessary components of waste management plans, information on the engineering design and management of livestock waste handling and storage facilities, and information on electronic resources available to assist with nutrient management plan preparation. All AFO's must practice waste management procedures to avoid environmental degradation. Many CAFO's are required to have discharge permits and meet EPA and DEQ waste management regulations. These presentations provided information that enabled producers to understand regulations and practice good environmental stewardship practices.

In addition, the cattle industry is working to do a better job in water quality issues. To assist operators in understanding and evaluating their facilities, a brochure entitled, "AFO/CAFO: Is your livestock operation regulated by new water quality laws?" was developed. This brochure was distributed to all Extension offices, NRCS offices and all agricultural organizations that deal with livestock, plus made available at more than 50 educational programs. The brochure provides information that helps livestock operators assess the potential environmental risks their operations are exposed to.

Natural resources are also impacted by many other factors including pest management, drought, and forest management. Extension has developed programs that have proven beneficial to agriculture and other industries in the state. Examples of these educational efforts are summarized below.

Funding Sources include: Smith Lever, State, County, Public and Private Grants, Program Fees

Brief Description: Water Quality Issues in Livestock Operations:

Montana is largely a rural state with a land area of 93 million acres and a population of 909,000. There are 11,400 farms and ranches in Montana that consist of beef cattle enterprises ranging in size from a few to 10,000 head. Only 55 of these operations are licensed concentrated animal feeding operations (CAFO), which leaves the remaining 11,345 as cow/calf rangeland operations or small to mid-size back-grounding lots or operations that need a discharge permit, but have not applied for the permit. Montana's beef cattle industry is in a position to improve the public's perception of agriculture by demonstrating ways to maintain working livestock agriculture and at the same time enhance production and improve the environmental quality of the landscape.

Impacts:

- Because of Extension programs, more than 120 on-site assessments were conducted that resulted in operators designing and implementing management practices that will protect the surface and ground water resources of Montana. The assessments reveal that many producers

lack plans for emergencies or biosecurity issues. Going through an assessment process gives producers a valuable external perspective on their environmental performance. When beginning, assumptions about the priority of environmental issues are often corrected with recognition of unexpected issues.

- As a result of Extension programs and site assessments, 15 Nutrient Management Plans have been written and implemented. This ensures that manure is applied at agronomic rates, which in turn, prevents excess nutrients from polluting state waters.
- As a result of the Environmental Assessment of AFO/CAFO facilities and the development of a plan of operation, two producers have been able to opt out of the state Pollution Elimination Discharge Permit saving them each \$1,500 annually in permit fees. More importantly, they are keeping records that demonstrate their pro-active stewardship. By implementing improved management practices, agricultural operations are protecting Montana surface and ground water. As a result of these programs, agricultural operations will be viewed by the general public as being pro-active environmental stewards of natural resources.

Scope of Program:

Statewide

KEY THEME: FOREST RESOURCE MANAGEMENT

Brief Description: Forest Roads Maintenance Workshop

Several Extension efforts have helped people involved with forest enterprises become more effective. Landowners, loggers and road contractors have been completely immersed into forest road technology, engineering and inventory techniques. Outputs and impacts for this line item include:

- The Montana Forest Roads Maintenance Workshop is a 2-day workshop that provides landowners, loggers and road contractors with learning experiences. Twenty Five participants learned to approach roads and road maintenance ideas differently than they had in the past. It is no longer about the shortest point between “A” and “B” , but rather they look at how road layout and management affects the environment around it.

Impacts:

Short Term Impacts:

- Participants gained knowledge and understanding of the fundamentals of forest roads maintenance. Landowners, loggers and road contractors learned how to interpret forest roads and how to make informed decisions on future management.

Long Term Impact:

- While data is limited yet, it appears that landowners, loggers and road contractors are experiencing economical gain because they are applying techniques they learned on long-term road management through Extension programs.

Scope of Program:

Statewide

Brief Description: Forest Stewardship Logger Education Workshop

The Montana Forest Stewardship Logger Workshop is a 4-day program that serves as the core requirement of the Montana Accredited Logging Professional (ALP). Logging professionals receive a complete immersion in natural resource science, inventory, and planning. This provides them with enough knowledge to understand what the fundamentals of stewardship entail. Typically, loggers acquire a clearer understanding of how the natural resources on forest land function and interact with each other, and how human influence has changed some of the natural dynamics and processes. Data indicates that approximately 25 people became accredited.

Impacts:**Short Term Impacts:**

- During these Extension programs, loggers have learned how to read and interpret forest land and how to make informed decisions on future management.

Long Term Impact:

- After the loggers become ALP certified, there is evidence that they approach their work and their clients differently than before. The classes open a new way of thinking about the “Big Picture.” No longer is it simply about cutting logs and getting them out of the woods, rather it overlaps and impacts a broad variety of other natural resource components and the people who own and manage them. Economically, loggers gain a better appreciation for these components and how they may impact the survival of their businesses. It impacts business decisions, both current and future.

Scope of Program:

Statewide

Brief Description: Forest Stewardship Landowner Planning Workshops

The Montana Forest Stewardship Planning Workshops are multi-day, combination of classroom and field programs aimed at the 80,000 non-industrial private forest landowners, Montana’s “Family Forests.” The intent of the workshops is to coach landowners through the development of a Forest Stewardship Management Plan for their properties. It includes natural resource inventories that landowners themselves complete. In 2004, five separate workshops were held in Cascade, Lincoln, Missoula, Lake and Deer Lodge Counties. These five workshops involved 111 participants and 53,557 acres of land. Landowners received a complete immersion in natural resource science, inventory, and planning.

Impacts:**Short Term Impacts:**

- Because of Extension education, participants now have enough knowledge to make informed decisions about their forest land. Typically, landowners acquired a clearer understanding of how the natural resources on their forest land function and interact with each other, and how human influence has changed some of the natural dynamics and processes. Landowners learned how to read and interpret their forest and how to make informed decisions on future management.

Medium Term Impact:

- Landowners have begun implementing their plans and are starting to see “first-hand” how land management decisions impact their land. It also allowed them to make necessary changes to continue achieving their plan objectives.

Long Term Impact:

- Generally speaking, most landowners begin to see their forest land differently than before they attended the class. This usually plays over into landowner positions on neighboring properties as well as forest land management on government lands. Economically, landowners have begun to develop a framework for utilizing product from their land and using it to fund other infrastructure and management activities. This plugs directly into local economies, whether it be in supplying mills with logs or providing jobs for businesses who provide the necessary land management service.

Scope of Program:

Statewide

Brief Description: Riparian/Wetland Forest Stewardship Workshop

The Riparian/Wetland Forest Stewardship Workshop is a 3-day program that provides landowners with a learning experience in forested riparian/wetland management and inventory techniques. They receive a complete immersion in the ecology of forested riparian and wetland areas including stewardship inventory techniques. Approximately 25 participants have attended this workshop.

Impacts:

Short Term Impacts:

- Extension education has provided participants with the knowledge to understand how their riparian areas function, how to classify them, and ultimately how to inventory them. Therefore, landowners learn how to interpret their inventory data and make informed decisions on future management.

Long Term Impact:

- While evidence is limited yet, some data indicates that landowners are approaching their riparian forests areas differently than before the class. They have a fuller understanding of the role their riparian areas play in the larger ecosystem, they set objectives, and finally come up with strategies to achieve them.

Scope of Program:

Statewide

Key Theme: Integrated Pest Management (IPM)

Brief Program Description: IPM

The Insect, Weed and Plant Disease Diagnostic Labs are partially supported by IPM funds and regular formula Extension funds. The MSU-ES-IPM Diagnostic Labs are in contact with other similar labs through the Great Plains Diagnostic Network (GPDN) centered at Kansas State University. The GPDN provides funds for first detector training, important for Montana because of its international border. First detector training provides key County Extension faculty with in-

depth training allowing them greater ability to detect new and potentially harmful pest species.

A Regional Cutworm monitoring program has been conducted annually since 1992 but recently, through grant funds obtained from WRIPM Grants Program, an environmental component has been added to the pheromone trap prediction model for army and pale western cutworms. This environmental component allows for improved ability to predict cutworm activity, time monitoring and improve decision-making. Since 1992, nine states and one Canadian province (Alberta) participate in the monitoring program and contribute to a web database which generates maps, indicating problem sites in which monitoring should be emphasized.

Impact:

- The diagnostic lab processes about 500 insect samples and 1000 plant samples each year. The identifications done by the labs are crucial to agriculture, home and garden enthusiasts, and others who may have invasive species.
- The cutworm monitoring program has allowed producers to focus their monitoring efforts in years and areas they are most at risk from damaging populations of the two cutworm species and to reduced unwarranted pesticide application. Pesticide application varies from year to year but on average ranges from 50,000 to 300,000 acres. Currently, the web page receives 45 hits per day. In addition, there are 37 average page views each day which indicates people are checking data so they can keep up with any changing events.

Scope of Program:

Statewide

Key Theme: Pest Management Program

Brief Program Description:

The Pest Management Training (PMT) program was developed to combine Integrated Pest Management (IPM) training with Pesticide Applicator Training (PAT). This provides a more integrated and high quality program for Montana producers and agricultural professionals. PMT is scheduled each fall and rotated among the five pesticide re-certification districts (I – V). In the fall of the re-certification year, the PMT program is scheduled with the extension agents in that district. This timing provides the Extension agents a final opportunity for county clientele to obtain the necessary six credits of pesticide re-certification training.

The PMT program is a self-supporting program that allows a collaboration of MSU campus-based research, teaching and research center faculty in PMT programs to be successful by providing funds that cover costs for travel and lodging (if needed). The goal of PMT is to deliver a high quality program, tailored to local needs, that offers six pesticide re-certification credits to attendees. Total attendance for the program over the past 3 years has increased by 53%; from 2002 with 210; 2003 with 291; to 2004 with 322.

Impact:

- People have learned how to monitor their fields, determine economic thresholds for treatment and apply appropriate control measures. While data is not available yet, there is

reason to believe there are significant economic and environmental consequences for producers.

Brief Description:

Sugarbeet pest management programs have been a collaborative effort with entomology, weed science, agronomists and agricultural engineers from North Dakota State University and Montana State University. A total of 212 producers, spouses, farm workers and associated industry personnel attend programsthat have information relevant to each group. targeted at including producers,.

Impact:

- Evidence indicates losses due to pests and improper planter use were reduced. Growers planted more acres of disease resistant varieties and disease losses were reduced. Attendees learned to diagnose new diseases.

Scope of Program:

Statewide

Key Theme: Wildlife Management:

Brief Description:

Impacts of wildlife on agriculture in Montana are very significant. In a recent survey, alfalfa producers reported losses exceeding \$5 million to ground squirrels in alfalfa production alone. Pocket gophers are responsible for even greater losses to alfalfa. Other hayland, cropland and rangeland forage losses to rodents have not been documented but would greatly exceed losses reported in alfalfa. Forage consumption by deer and elk cost landowners in southwest Montana over \$5,000 annually. Stakeholders have identified a need for assistance in identifying best practices to control big game and rodent populations. Demonstration sites, trials and workshops have been implemented to assist producers in coping with wildlife problems.

Wolves continue to be a challenge for livestock producers. In addition to depredation, wolves cause behavioral changes in livestock that lead to inefficient use of pastures, reduction in feeding periods and reduced weight gain and calving success.

Impacts:

Short Term:

- In the past, producers have conducted ground squirrel control programs when workload priorities made it convenient. Initial control trials and dissemination of results about the importance of early spring treatment have resulted in 100% improved control by producers implementing recommended procedures. Current trials promise equally dramatic results in other haylands and on rangelands.
- Development of economical and effective fencing designs has provided ranchers and farmers with a tool to eliminate deer and elk damage in enclosed fields and pastures. One

producer reported after installing a fence design by MSU Extension at a cost of for \$2300, he reduced the \$5-7000 annual damage to \$0! He reported his conservative figure is “he will save at least \$12,000 over the 3 years...”

- Prior to enclosing a pasture used for spring grazing with the fence MSU Extension designed, over 200 elk grazing there in early spring made the pasture unsuitable for cattle foraging. The resulting \$6000 in hay cost was eliminated the first year after the rancher installed the fence. The fence paid for itself the first year and thereafter the rancher netted a \$6000 gain annually.
- 350 producers have received training at programs in 12 counties and 300 have adopted practices they learned.
- Two rodent control publications have been prepared and 7 workshops have been held to teach producers the most effective rodent control techniques. Over 400 producers have attended and 200 of them have developed the skills to better control rodents.
- A system has been implemented to alert producers about potential wolf conflicts with livestock.
- A brochure has been developed to guide ranchers in their actions should they suspect wolf depredation. A project has been initiated to quantify the non-predatory losses incurred by producers who have wolves in proximity to cattle. Predator losses are being verified and publicized to ensure officials and the public understand the impact of wolves on livestock producers.

Medium Term:

- The public and state wildlife managers have begun to realize the negative effects wildlife can have on agriculture. Policies are being implemented to address these effects and producers are adopting practices to better manage the impacts of wildlife.
- Many ranchers and farmers in Montana would like sportsmen to hunt their land to help control the population of female deer, antelope and elk. Similarly, many hunters are looking for places to hunt does or cow elk for meat for their freezer. A web site was developed, <http://www.doecowhunt.montana.edu/> to help these folks connect with each other. Over 20,000 visitors entered the site and over 400 registered so they could be contacted by other site users. A survey instrument is currently being developed to assess the harvest resulting from the site and to ascertain site user satisfaction. Other states have requested information on developing a site for their state. This is the first time this strategy has been used, so interest and benefits of the work are anticipated to be very significant. Preliminary findings are very positive.

Long Term:

- As behaviors change and producers implement practices to reduce the negative impacts of wildlife, millions of dollars will be saved. For example, if half of the alfalfa producers in Montana implement the recommended rodent control practices, a savings will accrue equal to over \$1500 per alfalfa producer or over \$3.5 million across the state. The ability to have the negative effects of wolves reduced for livestock producers will allow ranches to survive where their sustainability is presently threatened due to wolf impacts.

Scope of Program:

Statewide

GOAL 5:

ENHANCED ECONOMIC OPPORTUNITY AND QUALITY OF LIFE FOR AMERICANS

Overview Statement:

The Plan of Work reflects the concerns Montanans hold for their families and communities. The stakeholder input process identified priority issues around which Extension programs were developed. The education provided through these programs has truly made a significant difference for many families and the communities in which they live.

Issues facing families and communities differ depending on the area of the state. The eastern part of Montana must address problems related to a declining population and shrinking communities. On the other hand, people who live on the west side of Montana are working hard to plan for fast growth and a changing population. Extension can provide tools for families and community leaders so they can make sound decisions to address the needs brought on by these changes.

Regardless of the community however, families are worried about economic development, better paying jobs, business retention, and health care. They are concerned about providing their youth the skills necessary to be competent, contributing and caring members of their communities. They are concerned about being good parents who know how to help youth grow up in today's society. They are concerned about the elderly and having adequate health care, housing and other infrastructure necessities to accommodate this increasing population. In short, they are concerned about the quality of life and look to Extension for education and help.

Goal 5 encompasses a wide variety of programs that provide education essential to the improved economic opportunity and quality of life for Montana residents. Because of its scope, most Extension personnel devote at least a portion of their time to delivering programs that fall under this goal. Calculations indicate that the time devoted to these programs is approximately 16.5 FTE.

Source of Funds: Smith Lever, USDA, State, County, and a variety of Grant funds received from public and private sources.

KEY THEME: **Home Safety**

Program: **Montana Extension Disaster Education Network – EDEN**

Brief Description:

The Montana Extension Disaster Education Network (EDEN) is a collaborative, one-stop public website for information on all potential disasters. The website links to updated news of incidents as they happen; to resources for educators; and to information for the public on how to prepare

for disasters. Additional features of the site include a volunteer registry for the Montana Citizen Corp as well as host for the State of Montana all-hazard training calendar. The site includes contact and website information for Montana's county Extension Offices, DES coordinators and health office.

Impacts:

Short Term:

As a result of Extension efforts in disaster education, the following results have been reported:

- 173 people have been trained to deal with hazardous materials
- 50 people have been trained to deal with wildfire fuel reduction
- 327 people have volunteered with natural disasters through Citizen's Corp. They feel more confident in handling the disaster because of training.
- 380 people/businesses/agencies have prepared disaster mitigation/preparedness plans
- 8 campuses with 57,000 students and employees developed emergency management plans

Scope of the Program

Statewide

KEY THEME: Housing

Program: Weatherization/Coping with High Home Energy Costs

Brief Description:

During 2003 and 2004, Montana homeowners experienced the highest energy cost increase in decades. Rising energy costs can consume more than half the disposal income for elderly and fixed-income households. With Montana having the highest percent of low income families (14.6%)* in the region, the MSU Extension Service has developed a comprehensive public education program to reach adult and youth consumers. It is working with state agencies to conduct builder workshops on constructing energy-efficient homes and has teamed up with the Montana Department of Health and Human Services to provided training to low-income families and certification to Montana's 13 weatherization programs.

* 2000 census compared to Colorado - 9.3%, Utah - 9.4%, Wyoming - 11.4%, North Dakota - 11.9% and South Dakota - 13.2%

Impacts:

Short Term:

- Low-income clientele are gaining information about energy conservation through publications and programs developed by Extension. Thirteen Montana Human Development Councils are delivering much of the information to those who need it.
- Nearly 210 contractors are better informed about energy conservation because they have attended Extension programs.

Medium Term:

- From all across the state, 2183 households have reported they are applying energy conservation measures.

Long Term:

- In Montana, 1828 homes have been weatherized, resulting in 19% energy savings.

Scope of the Program

Statewide

Program: Native AIR (Asthma Intervention and Reduction)

Brief Description:

Research conducted by Fort Peck Indian Health clinic revealed that Native American children have asthma rates 2 to 5 times higher than that of the general population. With increased asthma incidence, Native children miss more school and spend more time (and money) in hospitals and emergency rooms. While there are many triggers for asthma, the predominant factors deal with household influences - second-hand smoking, dust mites, molds and excessive moisture, and pets kept indoors. To address the issue of asthma among Native American children, MSU Extension has developed a culturally specific program, Native AIR (Asthma Intervention and Reduction) for implementation with Montana's seven reservations.

Impacts:

Short Term Impacts

- Native American children have gained knowledge and understanding about asthma through the Native AIR program. Eight hundred ninety (890) Native American children received Native AIR materials to share with their parents and apply corrective action to their homes.

Medium Term Impacts

- MSU Extension organized Native American reservation Asthma Education leadership teams to implement the Native AIR program on all seven Montana reservations.

Scope of the Program

Statewide to all seven Montana Indian Reservations

Program: Healthy Homes

Brief Description:

Many factors characterize the environmental health of a home and affect the health and safety of the occupants. These factors include contaminated private drinking water supplies; molds and excessive moisture; carbon monoxide; volatile organic compounds including formaldehyde from household products and furnishings; asbestos; lead-based paint; radon; and, safety risks from home hazards. The impact of these and other environmental health factors to human health can vary from short-term irritation to permanent nerve and organ damage to death. Extension issued informative publications and workshop formats for agents to implement locally.

Impacts:

Short Term Impacts

- Indian housing authorities, real estate agents, homebuilders, sanitarians, consumer groups and the general public have gained knowledge about maintaining a healthy home.

Medium Term:

- Thirteen hundred ninety-six (1396) individuals participated in Extension workshops and outreach events; 590 indicated adoption of home risk practices; 180 purchased radon, lead-based paint and carbon monoxide test monitors.

Scope of the Program

Statewide

KEY THEME: Parenting

Program: RETHINK Anger Management Program

Brief Description:

Parenting is a challenging job and many people do not have preparation for the transition into the parenting role. The stress and responsibilities associated with parenting puts adults at risk of mistreating their children. There are several factors accounting for high rates of violent family interactions: a) the large amount of time spent interacting with one another; b) the wide range of activities in which families engage; and c) the high intensity of involvement with one another. In 1998 there were 10,885 reported cases of child abuse in the state of Montana. To address this situation, the RETHINK Parenting and Anger Management Program is being offered in Montana through Extension and 1,006 people have participated to date.

Impacts:

Short Term Impacts

- Participants gained information on anger management when working with children.

Medium Term Impacts

- Participants indicate they have adopted one or more of the strategies presented in the curriculum.

Long Term Impacts-Outcomes

- Participants have demonstrated positive parenting skills when working with young children.

Scope of Program:

Statewide

Program: Grandparents Raising Grandchildren (GRG)

Brief Description:

The 2000 Census found that 11,098 Montana grandparents are living with their grandchildren and of that population, over 6,000 or nearly 55% of these grandparents have the primary responsibility for raising their grandchildren. Demographic trends indicate a growing increase in grandparent-headed families in every socioeconomic and ethnic group across the United States with a 30% increase since 1990. The federal government now urges the placement of foster children into the homes of children’s grandparents or other relatives. Grandparents begin parenting their grandchildren for a variety of reasons, but one factor remains constant; almost all circumstances result from family hardship. Poverty is a major issue for grandparents who are raising their grandchildren with 27% of them living below the poverty line. MSU Extension is partnering with other groups including Montana AARP, Montana Child Care Resource and

Referral Agencies, Montana Head Start Collaboration, Office on Aging, and Tribal partners to address the needs of grandparents raising grandchildren.

This project was developed as a result of stakeholder input across Montana. The support groups are community based and may vary based on the needs of group members. Groups generally meet from one to four times a month. Training for support group facilitators has been held in three communities across the state, training 66 facilitators. Topics in these trainings include: running a support group, resources, legal issues, medical insurance, financial assistance, child development, conflict management, parenting, and working with Native American populations. The Cornell University curriculum Parenting the Second Time Around is used as a basis for the training.

Impacts:

Short Term:

- Grandparents raising grandchildren know where they can access information and assistance with their parenting concerns.
- Eleven support groups have been started across the state.
- Partnerships have been developed at the county level.
- Information has been disseminated to grandparents raising grandchildren in Montana that will assist them with the challenges of raising today's youth.
- During 2004, 149 individuals were made aware of the GRG project through seminars and conference presentations.
- More than 220 individuals gained information through the GRG bi-monthly newsletter.
- More than 1,457 people viewed the GRG Montguide on-line as of 12/22/04.
- Grandparents gained knowledge of child development and the unique needs of children who they are raising.
- Grandparents gained knowledge of services available to their families and feel confident to seek assistance.

Long Term Impacts

- Grandparents and their grandchildren are experiencing more healthy family relationships.
- The State of Montana could potentially be saving an estimated \$116,251/day in foster care payments through grandparents raising grandchildren who receive needed support through other venues. This is based on 65% of grandparents who are raising grandchildren in Montana (approx. 6,000 grandparents) who do not receive foster care payments times 1.8 children per family and using the mean payment per child per day of \$16.56 (\$15.03 for children through age 12 and \$18.09 per day for children 13-18 years of age.)

Scope of Program:

Statewide

Program: Parenting Through Divorce

Brief Description:

The Parenting Through Divorce course is designed to assist parents in their parenting role as the couple goes through divorce. Divorcing parents learn how to mediate, establish and implement a

plan to share the parenting of their children. Data shows that 538 people have participated in this program.

Short Term:

- Parents related that their co-parenting styles emerged through the trial and error process and recommitted themselves to the reality and importance of strengthening families.

Medium Term:

- 95% of the parents made changes in parenting behavior and their emotional and verbal responsibilities.

Scope of Program:

Statewide

KEY THEME: CHILD/DEPENDENT CARE

Program: The Forgetting: A Portrait of Alzheimer's

Brief Description:

Currently, it is estimated that 16,843 people in Montana 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.)

The Forgetting: A Portrait of Alzheimer's is an hour-long public broadcast program highlighting the plight of families with a loved one that has Alzheimer's. Chris Seifert, Director for Outreach at Montana PBS, received a grant to implement the program in Montana in conjunction with MSU Extension, Montana Chapter of the Alzheimer's Association, and Montana AARP. The program aired in January 2004 and was hosted by 14 MSU Extension County Agents. All interested County Agents were given a copy of the taped program, including a Montana-specific segment. An estimated 1,000 people viewed the program either at home or at program sites. The program continues to be used by County Agents in local programming.

Impacts:

Short Term Impacts

- Nine sites completed evaluations. This summary is of those participants who completed evaluation forms. More people may have participated at the site. (N=121)
- 98% of the respondents reported learning a great deal about Alzheimer's disease by viewing the program.
- 83% reported that the information was relevant to them.
- 87% believed the material will be valuable in their ability to assume a care giving role with a family or friend.
- 89% believe the program has motivated them to learn more about Alzheimer's.

Medium Term Impacts

- 85% believe the information has enhanced their ability to communicate effectively with someone with Alzheimer's disease.

- 90% believe the information will enhance their ability to form more effective relationships with friends/family members with Alzheimer's disease.
- At least one county newsletter now includes Alzheimer's related articles.
- Some communities are discussing the possibility of setting up support groups.
- Montana PBS, the End of Life Institute, and MSU Extension submitted a proposal to bring more resources to the state for Alzheimer's families.

Long Term:

- 66% believe the information has reduced some of their anxiety associated with Alzheimer's disease.
- 53% believe the examples presented in the program made them feel less alone as a caregiver for a friend/family member with Alzheimer's disease.

Scope of Program:

Statewide

KEY THEME: CONFLICT

Brief Description: **Diversity**

The face of America is changing and the change is not limited to our coastal states and large cities. Nurses are being recruited from the Philippines to fill nursing shortages in rural eastern Montana communities. The Hispanic population is the fastest growing minority in the U.S. and is growing in Montana. The Native American population is the largest minority group in Montana. Helping people to understand the histories of various ethnic, racial, and religious groups so that they can better see why tensions exist and how to work toward a harmonious and inclusive society is important. Additionally, it is important that we teach our children to respect everyone regardless of their national origin, ethnicity, race, religious beliefs, or sexual orientation. To meet this need, several programs on diversity have been presented to Extension Faculty and Staff, Child Care Professionals, and Teachers. These include:

- “A Place at the Table”, developed by the Southern Poverty Law Center.
- “The Challenges and Strengths of Montana Families”, developed by Sandy Bailey.
- “Purple Cows, Green Horses: Looking at Life Through Different Lenses”, based on the book *The Ten Lenses*.

Reports indicate that 162 people have attended one or more of these programs.

Impacts:

Short Term:

- Participants have engaged in discussions about diversity.
- Participants gained awareness of the origins of discrimination against certain groups.
- Extension Agents were trained in how to use the curriculum "A Place at the Table" so they can conduct the program locally.
- Participants learned about the strengths of various ethnic, religious, and racial groups.

Long Term:

- Some participants have indicated they feel they are more accepting of all people regardless of their national origin, ethnicity, race, religious beliefs, or sexual orientation.

Scope of Program:

Statewide

KEY THEME: CHILDREN YOUTH & FAMILIES AT RISK

Program: **Building Community Strengths in Montana**

Brief Description:

Building Community Strengths in Montana is designed to provide limited resource youth and adults with technology skills to bridge the digital divide and life skills needed to be workforce ready, enrich family life, and become contributing community members. This project is funded through the USDA Children, Youth, and Families, At-Risk Program. It involves 132 youth from the Miles City/Terry area, 415 youth from the Rocky Boy Indian Reservation and 290 parents from the Rocky Boy Reservation.

Impacts:**Short Term:**

- Youth indicate they have learned new life skills as well as skills in technology.
- Adults report they have learned new parenting skills.

Medium Term:

- Youth indicate they are beginning to use the newly learned life skills and technology skills in their everyday lives.
- Parents indicate they are beginning to implement new parenting skills.

Long Term Impacts:

- Youth will become competent, contributing, and caring members of their communities.
- The Miles City/Terry after school programs cost approximately \$5.00 per day per child and these children display more positive pro-social styles of interaction with both their peers and adults. Youth are more assertive, task oriented, and tolerant in frustrating situations. Youth in the program exhibit fewer behavior problems. Youth are reported by parents to be more confident and outgoing, have more diverse friendships, communicate better and are more respectful. Youth have better study skills and complete their homework in a timely manner. Compare this to the cost of one day of care for a male juvenile at Pine Hills Youth Correctional Facility at \$155.65/day. For girls the daily cost of care is \$227.38.

Scope of Program:

Statewide

KEY THEME: FINANCIAL SECURITY IN LATER LIFE**Brief Description:**

Although the passage of the Economic Growth and Tax Relief Reconciliation Act of 2001 increased the dollar amount of assets that can be passed to heirs without a federal estate tax being due, the change has not eliminated the need for Montana families to plan their estates. Research has indicated that seven out of ten Montanans die without writing a will. With the financial assistance from the Business, Estate, Trusts, Tax and Real Property Section, and the State Bar of Montana, a World Wide Web site is updated monthly. The site contains all 29 estate planning fact sheets: <http://www.montana.edu/www.pb/pubs/estate.html>.

Impacts

Short Term:

- Approximately 2,553 Montanans learned the importance of estate planning by attending Extension led seminars in 20 counties.
- Approximately 250 Montana citizens learned ways to distribute personal property that is not titled by attending an Extension led program called “Who Get’s Grandma’s Yellow Pie Plate”.

Medium Term:

- Past evaluations have revealed that as a result of participating in workshops: 8% had written a will and 29% intended to do so; 28% reviewed the titles of their real and personal property with 13% finding changes were necessary in the way their property was titled; and 39% reviewed their insurance situation and 8% found changes were necessary.

Scope of Impact:

The MSU Extension estate planning web site has been added as a link in the national Financial Security in Later Life web site. Michigan Extension Service has provided links to MSU publications that do not contain state specific legal information. South Dakota is in the process of revising the estate planning Mont Guides to make them applicable to that state.

KEY THEME: FINANCIAL LITERACY FOR YOUTH

Brief Description (high school program):

The Montana State University Extension Service, in partnership with the National Endowment for Financial Education and Credit Union National Association, continues to provide the High School Financial Planning Program (HSFPP).

Impacts:

- 1,560 students in 26 schools participated in the program.
- 86% of the high school students demonstrated an increase in financial knowledge or behavior when dealing with money.
- 58% of the students said they had improved their spending habits and 56% indicated their savings habits had also improved.
- 84% indicated they felt more confident.

Brief Description (preschool, elementary, and middle school programs):

Saving\$ Starter Kits for parents were utilized by MSU Extension Agents during April - June 2004. The kits were funded through an Extension mini-grant and contributions from the Montana Credit Unions for Community Development and First Interstate Bank System. The kit was designed to provide learning activities for parents to use with their children ages four through ten for teaching the value of saving. In addition, some counties provided the Money on a Bookshelf program at the library and schools; financial calculator programs; financial champion 4-H project training, and other workshops as a part of Teach Children to Save month. Twelve Montana Counties conducted these programs.

Impact:

Results of evaluations revealed the following:

- 58% encouraged their children to use the Super Saver Funbook to record their savings.
- 63% opened a savings account for their children.
- 64% shared information about saving methods they used as children.
- 87% discussed the concept of donating to a charity with their children.
- 93% discussed a spending wish list with their children.
- 50% completed the Family Savings Goal worksheet.
- 80% talked about a spending wish list with their children.
- 52% indicated they helped their children make a piggy bank.
- 56% bought a piggy bank for their children.
- 36% reported they visited the websites provided.
- 11% ordered parent guides for the Money on a Bookshelf program.
- 24% printed out one or more the parent guides from the Nevada Extension website.
- 70% encouraged their children to read and color pages in the coloring books provided.
- 47% started using the Track'n Your Savings register.
- 22% requested additional copies of the savings register.
- 52% recommended the Track'n Your Savings register to friends, relatives, and teachers.

Scope of Impact: Statewide - Montana is one of 50 states that are offering HSFP. The Teach Children to Save Web Site was utilized by other states such as Missouri.

KEY THEME: PROMOTING BUSINESS, JOBS AND EMPLOYMENT

Brief Description:

Economic development continues to be the number one concern in Montana. Montana consistently ranks among the lowest of states' average wages. Montana ranks number one in the number of residents working two jobs to make ends meet. The new Governor has stated economic development is his top priority. The Montana Extension Service develops, tests, and delivers economic development programs to help local businesses and communities capture retail sales, attract new businesses, retain and expand existing businesses, increase tourism (see Goal 5 Key Theme: Tourism) and to help small businesses start-up and operate effectively. During 2004 Montana Extension continued work with the Nevada and Hawaii Extension Services on an innovative western regional project developing a computer program to help communities identify and attract compatible businesses. Additional efforts in 2004 included a second Marketing for Artists workshop for 123 Livingston area artists, an economic impact assessment of the Grizzly Marathon, and completion of a trade area study for Judith Basin County. Agents in Cascade, Custer, Deer Lodge, Mineral, Judith Basin, Jefferson, McCone, Hill, Sanders, Broadwater and Dawson Counties conducted economic development programs.

Impacts:

- In Deer Lodge County, 23 merchants participated in monthly management trainings, learning to develop niche markets, increase walk-in traffic, compete with major discounters, and create effective displays. Merchants applying the marketing and display training noted an increase in customer sales. Another project attracted a department store to the downtown, and developed a construction network.

- Twelve jobs were retained and 5 new positions created through efforts of the Mineral County Agent-coordinated Revolving Loan Fund. Eight enterprises received funding.
- Twenty-two Judith Basin merchants helped design a county trade area analysis that provided data on shopping preferences and habits allowing them to better capture area retail spending.
- The Jefferson County Agent's 9- component Small Business Assistance Program reached 3520 residents. Seventy-five adopted practices, including failing businesses that managed to turn their businesses around. Twenty new jobs have resulted over the past two years.
- In McCone County, eight residents learned to market over the Internet.
- The Hill County Agent provided customer service training for 60 business owners and employees, including 35 Native Americans, plus workforce skills training for another 126.
- The Dawson County Agent worked with state and local educators to obtain \$108,497 CSREES grant to cross-train farm workers in welding and Ag mechanics, enhancing their lengths of employment and incomes. He also served as a technical assistance provider for the Montana Cooperative Development Center.
- Extension conducted an economic impact assessment on the Teton County Agents' Grizzly Marathon, estimating the local economic impact of the run was \$71,426.

Scope of Program:

Statewide

KEY THEME: Tourism

Brief Description:

Tourism remains Montana's second largest and one of our only export base industry, just behind Agriculture, attracting some 900,000 tourists and close to \$2 billion annually. Tourism educational programs have steadily grown within Extension as well. For over a decade, Extension has joined with Montana Travel and the University of Montana's Institute for Travel and Tourism to guide 3 communities each year through a comprehensive 9-month Community Tourism Assessment and Development process. Thirty-three communities have completed the process, investing over \$1million in tourism projects. The 3 communities completing the process this year were the Crow Indian Reservation, Wibaux and Great Falls. The 3 communities starting the process during 2004 were the Rocky Boy Indian Reservation, Helena, and Harlowton. Other tourism educational efforts included 3 Farm and Ranch Recreation Business sessions, a state birding trail presentation, chairing the Western Regional Nature-based Tourism Project, accepting the chair for the Montana Birding Trail, conducting a nature-based tourism workshop in Broadwater County, development of an 11-county "Hands of Harvest" artists' trail and guide book, planning for two birding festivals in Broadwater and Valley counties, completion of the Minnesota Extension Service's Festival and Events Management training by the Lincoln County Extension Agent.

Impacts:

- Community Tourism Assessment Projects were completed in Cascade and Wibaux Counties plus the Crow Reservation. Their project plans include a cultural interpretation center, a community folk art sculpture trail, restoration of an historic stone church, and improved signage and scenic access. Over 300 people completed training programs and

244 adopted practices discussed in the sessions. Progress is being made on accomplishing the goals outlined.

Scope of Impact:

Multi-state and state specific

KEY THEME: Community Development

Brief Description:

During 2004, Montana Extension's Community Development programs included faculty professional development, community visioning, community study, community education, community and organization strategic plans and project implementation.

Community Visioning projects progressed in Deer Lodge, Teton, Broadwater and Fergus Counties. The state CD Leader facilitated the Fort Belknap Reservation Strategic Plan. Agents in Deer Lodge, Lincoln, Madison, Sanders, Broadwater, Yellowstone, Jefferson, and Prairie Counties facilitated extensive local strategic plans. A Valley County agent conducted a community asset-mapping project. Large community educational events were arranged and taught by agents in Blaine, Cascade, Teton, Granite, and Yellowstone Counties. The Chouteau agent continued her county emergency planning project.

Impacts:

- Nine strategic plans and a community asset mapping projects were completed.
- Four community visioning efforts progressed from previous plans. Agents reported 10,450 people completed the programs and 8,519 actually adopted practices learned from training sessions.

Scope of Program:

Multi-state and state specific.

KEY THEME: Leadership Development

Brief description:

Montana Extension leadership development efforts in 2004 included both faculty development and citizen training. County agents from Teton, Hill, Powder River, and Cascade counties participated in the second Western Extension Leadership Development program. Montana Extension obtained a \$352,000 Horizon Leadership Plenty Program grant from the Northwest Area Foundation to help small, rural communities confronting economic decline by developing and supporting leaders who will work with local citizens to create a more promising future. Two Extension staff were trained, became certified and will start delivering the training next year. The CD Program Leader conducted the kick-off training session for Leadership Sydney. The Broadwater County Agent collaborated with the MSU Local Government Center to encourage

local citizens to run for public office. The Teton County Agent conducted Team Building training for Montana and Wyoming municipal clerks and treasurers.

Impacts:

Because of Extension led programs, 1228 people completed training programs and 957 adopted practices they learned about leadership. Of this group, several people are holding leadership positions important to their communities.

Scope of Program:

Statewide

KEY THEME: Youth Development/4-H

Brief Description

Positive youth development occurs from an intentional process that promotes positive outcomes for young people by providing support, relationships and opportunities. Youth development takes place in multiple contexts, but 4-H is one of the primary areas where positive youth development can occur. 4-H youth development helps youth acquire the life skills necessary to meet the challenges of growing up through a series of experiential, research-based educational experiences that help them become socially, morally, emotionally, physically and intellectually competent.

Through a myriad of programs—such as camps, community clubs, project clinics, after-school programs, national and international exchanges, leader training, and others—4-H offers young people opportunities to develop skills and avoid risks. Montana 4-H experienced a 3% increase in community club membership this year, reporting 10,054 members in nearly 600 clubs statewide.

Impacts:

Short-Term Impacts

Using the Montana 4-H Life Skills Evaluation System that measures program impacts on life skills development, youth in Montana have enhanced their life skills through a variety of programs.

- Through after-school and mentoring programs, youth have improved reading skills, improved self-concept and communications skills, enhanced decision-making skills and gained greater responsibility through youth/adult partnerships.
- In Yellowstone County, nearly 97% of youth who participated in the 4-H Reality Check money management program reported significant gains in specific life skills such as decision-making, wise use of resources, communications skills, accepting differences, marketable skills, and self-responsibility. Participants also indicated that they learned how to budget their money, distinguish between wants and needs, increased knowledge of money and job opportunities, developed a better understanding of what an employer wants, and are more apt to hold themselves responsible for expenses and goals.

- In Teton County, where 80 4-H members participated in foods and nutrition programs, 95% of youth reported trying at least five new fruits and vegetables as a result of the lessons taught. In addition, participants were able to—
 - Draw an advertisement they had seen of one of the “wholesome” food choices and one of the “junk” food choices.
 - Design two snacks using choices from the “wholesome” food groups.
 - Include the quantity of each food they would eat.
 - List calories and total calories for each set of snacks.
 - Compare and design two “grab and go” snack bags for a bus trip.
 - List advantages and disadvantages of these choices.
 - Analyze the cost of food choices.
 - Compare the nutrient content of those foods.
- In Roosevelt County, where another nutritional program was conducted for 4-H youth, skills and knowledge increased markedly among participants. For example—
 - 59 percent said they were very likely to use the information presented in the program.
 - 45 percent learned new ideas to use in the next month.
 - 31 percent learned how to make a pizza.
 - 22 percent learned how to properly wash their hands when preparing food.
 - 13 percent learned that proper hand washing is important for cleanliness and food preparation.
- Nearly 180 4-H members participated in the annual 4-H Recreation Leadership Lab in March 2004, and 83.5 percent of participants surveyed reported increased life skill development as a result of the educational program. Participants were surveyed in the areas of (1) wise use of resources; (2) communications skills; (3) listening skills; (4) accepting differences; (5) leadership skills; (6) organizational skills; (7) marketable skills; and (8) healthy lifestyle choices. Participants reported gains in all eight areas, but the largest increases were in leadership skills. Participants reported improvements in their ability to assist a group in meeting goals by showing or directing along the way, using personal influence to guide a group, organizing a group to reach a goal, using different leadership styles, and helping others share in the leadership experience.

Medium Term Impacts

- Youth who are involved in 4-H report that they are less likely than other youth to engage in risky behaviors such as shoplifting, stealing, using illegal drugs to get high, ride in a car with someone else who has been drinking, smoke cigarettes, damage property for the fun of it, or skip school or cut classes without their parents’ permission.
- As a result of their association with 4-H and participation in the program for more than 12 months, youth have better relationships with adults than those who have not been in 4-H for as long or who were never in 4-H. 4-H participants report that they are more likely to go to an adult for help about important questions. 4-H youth said they were more likely to talk to an adult about drugs, alcohol sex or other serious issues than those who were never in 4-H.
- Youth who have proper nutritional eating patterns perform better academically. Ninety-five percent of youth participating in nutrition-education programs improved intake of food group servings.

- Ninety-one percent of the participants in the Rec Lab program said that as a result of their participation in the program that they would now select a way of living that is in accord with sound condition of the body and mind for the prevention of disease and injury.

Long-Term Impacts-Outcomes

- 4-H alumni report more satisfaction with their 4-H experiences than alumni of other youth programs. Moreover, 4-H alumni attribute their experiences in 4-H with helping them to achieve their status in adult life. 4-H alumni are also more likely to be serving in community leadership roles than alumni of other youth programs—as officers in civic clubs, members of chambers of commerce and other community organizations.
- For example, during the 10th bi-annual legislative breakfast held at the state capital, newly elected Governor Brian Schweitzer spoke quite poignantly about the impact of his 4-H experiences growing up in Geyser, Montana. “I would not be standing before you today as your Governor if it had not been for 4-H.” In addition, Gov. Schweitzer said: “In Geyser, we didn’t have FFA, we didn’t have Boy Scouts. If you wanted something outside of school, it was either sports or 4-H. You had no other choices.” Schweitzer concluded his remarks by saying: “Now, I can assure you today that I would not be before you, publicly speaking—this kid from a hardscrabble ranch in the Judith Basin--if it had not been for 4-H (because of) the lessons I learned, the confidence that I got in 4-H. Because remember—no FFA, no Boy Scouts. 4-H was our outlet. 4-H was our opportunity to meet the world.” In closing, Governor Schweitzer said: “So today, in front of you, you have a 4-H’er, who is a 4-H’er, who will always be a 4-H’er--as your Governor.”
- Recent studies published in September 2003 by the US Department of Health and Human Services show a return on investment averaging \$3.14 per every dollar spent in prevention education.
- Recent reports from the U.S. Department of Justice indicate that every youth who is kept out of the juvenile justice system through effective after-school and prevention education programs saves approximately \$80,000 per year in costs of incarceration.

Scope of Program:

Statewide

KEY THEME: Leadership Training and Development

Brief Description:

The 4-H program provides a “laboratory” for youth and adults to learn the tools for effective leadership as well as the importance of volunteerism. The 4-H Leaders College has been implemented in many counties across the state to teach more effective leadership skills to adult who work with youth. In addition, the 4-H Ambassador program contributes to the skill development and confidence of youth so they can serve at the leadership level in their school and community. These programs help youth and adults learn about teamwork, cooperation, leadership and a host of other very important skills.

Impacts:

Short-Term Impacts:

- Participants in the Leader’s College can now take it for graduate college credit from trained Extension agents. Over 60 individuals have completed Level 1 of Leader’s College, with another 28 who have completed Level 2. Participants routinely report that they learn a lot of valuable information—the 8 critical elements of positive youth development, how to work effectively with youth as partners, risk/resiliency concepts and ages and stages of youth development. A common remark following the training is: “it is always good to remember why we are involved with 4-H and that it is about helping kids learn and grow.”
- The 4-H Ambassador program is available in all but 8 counties and these youth consistently distinguish themselves for leadership and poise. Seventeen ambassadors recently attended the 10th bi-annual 4-H Legislative Breakfast and served as first contacts with legislators who attended. Eric Berg, state ambassador president, gave one of the speeches at the breakfast and highlighted the role that technology is playing in all kinds of projects in 4-H including even Cowboy Poetry.
- Based on results from the Life Skills Evaluation System, 92 percent of youth who participated in camp counselor training reported gains in life skills development. In addition, camp counselors reported learning skills and acquiring practical knowledge that would help them in their leadership roles at camp.
- Participants in a three-county collaborative Lewis & Clark training workshop reported that they saved nearly \$7,000 by taking part in this local, community-based training rather than taking a class in Billings. Moreover, teachers reported that they learned valuable skills in the workshop that they could use in their classrooms.

Medium Term Impacts

- Youth camp counselors were observed interacting appropriately with younger 4-H members at camp.
- Youth are playing a stronger leadership role in local communities by being involved in the planning, design, implementation and evaluation of programs.

Long-Term Impacts

- 4-H alumni are also more likely to be serving in community leadership roles than alumni of other youth programs—as officers in civic clubs, members of chambers of commerce and other community organizations.

Scope of Program:

Statewide

STAKEHOLDER INPUT PROCESS

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

Because of the comprehensive work done in 2003, the decision was made to conduct limited stakeholder input for 2004. A survey was sent to a small sample of Montana residents to

determine if there had been significant change in needs. While there has been some shift in the rank order, most of the same issues were identified as being critical for Montanans. Therefore, no change was warranted in the program planning and development process.

Issues listed from stakeholders include: Youth, Health, Family/Parenting/Aging, Nutrition/Food Safety/Physical Activity, Financial Planning/ Budgeting/Estate Planning, Community and Economic Development, Noxious Weeds, Water Quality and Quantity, Preserving Farmland/Keeping Farms in Families, Marketing/Finances related to Agriculture, Natural Resources/Wildlife, Value Added and Ag Sustainability, and Education. In some cases, Extension is not equipped to address the concerns identified. In those instances, the information was given to another entity whose mission more closely aligns with the problem.

In October, a conference was funded by MSU Extension for all reservation agents, tribal college agents and Extension agents in reservation counties on the MSU campus. Presenters included Family/Human Development specialist, FSNE coordinator, Food/ Nutrition specialist, insect diagnostician, 4/H, Natural Resource and Water Quality specialists. As a result of this conference, tribal partners, agents and specialists were able to initiate collaborative efforts for enhanced programming. Funding issues were settled and three new nutrition programs were established on reservations. No impact has been reported yet on these very new programs. Several new 4-H clubs have been started on two of the reservations, with an expected impact on youth involved in after school and equine activities.

PROGRAM MERIT REVIEW PROCESS

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

The previous year's merit review provided several suggestions which were considered in programming and reporting for 2004. It was suggested that longitudinal studies and a better record of inputs would strengthen Extension's position. While little progress has been achieved to date, steps are being taken to forge relationships with graduate programs on campus with the hope that graduate students might conduct studies on the impact of Extension programs. This past year, one class assisted in conducting a survey for Extension.

Many Extension programs are making efforts to gather impact data; however, there is still room for improvement. Survey work is being done along with follow-up telephone calls, observations, and on site evaluations to gather impact data. A computerized system is being used by the 4-H and FCS programs to target indicators of change.

Listing the program priorities from the stakeholder input was also suggested in the last merit review. A listing can be found in the discussion on stakeholder input in this year's report.

Collaborations and partnerships are very apparent in current Extension programs. Almost all program areas are relying heavily on input from groups for planning and delivering education.

EVALUATION OF THE SUCCESS OF MULTI AND JOINT ACTIVITIES

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

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

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

Extension has met the challenge of staying current with issues facing the state. The Montana Sheep Institute is an example of a program that addresses the noxious weed issue while at the same time, strengthens one of the livestock businesses in the state. These were both issues identified by stakeholders.

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

Progress is being made in reaching the under-served and under-represented populations of the state, although there is still work to be done. Collaborations with the tribal college faculty, the EIRP Agents, and the EFNEP and FSNEP programs are in the forefront of Extension efforts. In addition, the youth development and family/parenting programs are working on a model for rural youth to become involved in after school programs. The Rocky Boy Reservation has been key in learning what works best for this audience. Housing, nutrition-health (particularly with diabetes) and economic development programs continue to work with the under-served and under-represented audiences.

3. Did the planned programs describe the expected outcomes and impacts?

For the most part, the planned programs described a set of expected outcomes and impacts. It seems the programs that are multi-disciplinary, multi-institutional and multi-state are often the most effective in outlining outcomes and impacts. They are generally forced to be more specific and intentional about their work since people from different backgrounds are involved in the planning and delivery of the education.

4. Did the planned programs result in improved program effectiveness and/or efficiency?

The programs that are multi-state, multi-disciplinary and multi-institutional are generally more effective because more resources in the form of personnel and funding are available. In states like Montana with limited faculty and funding, the multi approach to program development is very beneficial and brings more capacity to any project.

MULTI-STATE EXTENSION ACTIVITIES

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

- The Youth Development program involved inter-state exchanges with New York, Ohio, North Carolina, Wisconsin, Minnesota, Pennsylvania and Tennessee. Faculty have served on multi-state planning committees for 4-H Camps, Teen Leadership Education, and Recreation. States generally involved, outside the exchanges, are North Dakota, South Dakota, Wyoming, Utah and Idaho.
- A Risk Management for Ag Families program was focused on an integrated approach to risk management, business and personal finance and human relations. The target audience was Extension Agents and producer families who would attend a series of educational programs specific to their needs. The program was planned and presented by the 4 State Ruminant Consortium involving North Dakota, South Dakota, Wyoming and Montana.
- High school students received food safety training, which follows the ServSafe guidelines of the National Restaurant Association Education Foundation, through a workforce training effort in the schools administered by Family and Consumer Science teachers. The program was planned in cooperation with Colorado, Wyoming and Montana.
- The Oxeye Daisy, a Montana declared noxious weed, has invaded the Cooke City area and Yellowstone National Park. In cooperation with the Shoshone National Forest Service and National Park Employees in Wyoming, a program was planned and developed to eradicate the weed from the area. A weed control army arrived in Cooke City armed with backpacks, gloves, educational brochures and a mission to remove all traces of the plant from the small community and the surrounding area. The army was composed of employees from the Gallatin National Forest, Shoshone National Forest, Park County, and the National Park Service. (MT and WY)
- In preparations for the Lewis and Clark Bicentennial, several counties in Montana are involved in planning activities to commemorate this milestone. One County in the state will be holding one of the signature events. Plans are underway with North Dakota to ensure the infrastructure and educational programs are among the best possible for the estimated 50,000 visitors.
- The EFNEP state coordinator meets regularly with other regional and national EFNEP coordinators. Curriculum resources, evaluation measures, marketing pieces, and program strategies are shared among the states. The cost/benefit analysis was conducted with Montana EFNEP collaborating with 5 other rural states, replicating research done in a national study. (NE, KS, ND, SD, WY)
- The FSNE Principal Investigator and the State Coordinator regularly meet with the other regional and national coordinators. They share curriculum resources, evaluation measures, marketing plans, and program strategies.

These programs and others like them were supported by Smith Lever 3b&c funds in the amount of \$121, 400 and a total of 2.98 FTE.

INTEGRATED RESEARCH AND EXTENSION ACTIVITIES

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

These programs are supported by Smith Lever 3b&c funds in the amount of \$52,249 and a total of 1.47 FTE.

MANAGEMENT GOALS:

Agriculture Communications: As was true of the previous year, there are continuing personnel changes within the Agriculture Communications unit. Progress has been made with the unit becoming more closely aligned with the University communications group, but there is still work to be done in hiring personnel to accomplish the tasks necessary for Extension to meet it's goals in reaching the public. An Extension Annual Report was produced this past year in preparation for the legislative session. It has met with very high approval by those who have received a copy.

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

Information Technologies: With the assistance of the Extension IT group, Extension workers are using technology more and more to support their programs. Technology is also being used more and more to gather information required by the organization for accountability purposes. For example:

The Reporting Impact and Outcomes (RIO) system is being revised so it can better gather the data needed to communicate the difference Extension programs are making in the state. This effort is in addition to the annual update done to the system when the key themes are reviewed and revised.

Extension is using the WEB extensively to support program efforts. Almost all of the registration activities for Extension programs are being done “on-line” and several programs have provided WEB sites for clientele to get up-to-date information. Several specialists are conducting education via the WEB by setting up classes in which people can enroll.

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

Extension personnel rely almost exclusively on technology for communicating among themselves. Programs have been enhanced because more people can be informed of work being done in different areas of the state. There is regular communication from the Director’s office, which helps the organization stay connected and informed. Ultimately, communication can be conducted with regular and quick response expected.

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

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

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

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

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

- The EFNEP and FSNEP programs both are targeted at under-served and under-represented audiences.

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

The goals for improving the multicultural and diversity concerns in the state are outlined in the 2001 Civil Rights Review. The administration and staff are committed to continued progress in addressing these areas.

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

April 21, 2005

TO: Elizabeth McCoy
Director of Planning and Reporting

FR: Jim DeBree
Retired

Re: Extension Annual Report

I have reviewed the Annual Report and find it to be an excellent document. There is ample evidence of behavioral changes as the result of Extension’s educational efforts. I am indeed impressed with the width and depth of the educational programs offered to the people of Montana. You are to be complimented in addressing the needs of diverse audiences across the spectrum including minorities, low income, elderly, youth, special interests, professionals, small businesses, and the general public.

The report reflects dramatic changes that will indeed improve the social and economic conditions of those participants impacted by Extension education. You have done an excellent job in documenting the changes and practices initiated by the participants. I still rely on the tried

and true Extension acronym, (KASA) and I find ample evidence of increased **knowledge**, changed **attitudes**, improved **skills**, and developing **aspirations**.

I also like the economic worth illustrated as the result of educational endeavors. (EFNEP shows \$1.00 investment returns \$8.00) (The cost of incarcerating juveniles at Pine Hills Youth Correctional facility) It is also evident that outside agencies and organizations have conducted independent studies to show the return on investment as mentioned by the US Department of Health and Human Services.

There are excellent examples of using a multitude of educational methods including one-on-one, informal classes, video, private and public television, modules, follow up materials, and workbooks. The programs conducted by Extension also show that they are environmentally friendly by reducing chemicals, utilizing biological controls, and using livestock to reduce severe infestations of noxious weeds. This speaks very well to the Forest Stewardship Logger Education workshop.

The report points out that many of the educational efforts resulted in over 70% of the recipients adopting a practice (s). Here again is ample proof of the worth of education. I also appreciated the testimonials provided by constituents of Extension programming. These statements provide positive feedback to the relevance of the programs and effectiveness of the Extension Educator.

I believe that pointing out the significance of Agriculture in Montana could strengthen the report. Obviously Agriculture is the most important economic sector in the state and ranks in the top ten nationwide in several categories. According to the Ag statistics, Montana has well over 2 million head of cattle producing 155 million pounds of red meat, 165,000 head of hogs and over 300,000 sheep. Extension programs relating to the agriculture sector are extremely relevant, timely and produce tremendous results.

A very good example of relevancy and timeliness is the net profit Cherry growers realized with educational programs on the Cherry fruit fly. Growers realized an average of ten cents per pound increase providing a very positive impact on a 4 million dollar industry. Similar examples can be found in a goodly number of Extension programs.

I was extremely pleased to see Extension tackle some of the most severe problems facing our state. One in particular is the rapid growth of methamphetamines. This insidious drug is taking Montana like a storm and leaving such death and destruction in its wake that it really deserves attention. Extension is to be commended on their dedication and work in this arena.

I noticed a lot of partnerships in many of the programs, which strengthens the delivery, and impact of educational efforts. I do believe there could be more collaboration in some of the Agriculture programs involving financial institutions, commodity groups, and other USDA agencies. I must hasten to add that there are good examples of partnering with a host of agencies and organizations in the Program through Partners and other social and economic programs.

Many of the programs are not only in response to the concerns of individuals, which is one of the real strengths of Extension; they are also very proactive and help to prevent major problems from creeping in down the road.

Perhaps one of the most impressive elements of the report is the way you report the results by identifying short, medium and long-term impacts. You know that I have been critical of Extension for not taking the time to review longitudinal impacts to identify and document permanent changes that have occurred in people and communities as a result of Extension education. I think you have taken a gigantic step in helping to justify Extension programming for the greatest number and greatest good over time. I believe a companion program would be to integrate the documented impacts with an effective marketing plan similar to the legislative breakfasts Extension conducts.

Even though Extension is tackling some of the most severe and controversial issues, I would like to see more involvement in the Public Issues arena. Extension has a golden opportunity to not only facilitate public debate, they have the ability to bring to the table objective and empirical data that is so important to making “informed decisions”. There are plenty of issues to address, including reintroduction of the wolf, energy policies, open space, rural and urban blight, public lands management, sales tax, public school funding, drug use, and a host of others.

In summary, I want to Compliment you on an excellent report. Montanans can be very proud of their Extension Service for recipients are being favorably impacted by a host of educational programs contributing to the social and economic betterment of individuals and communities.

Sincerely,

Jim DeBree

Jim DeBree

Retired

cc: Barbara Williams