Beaverhead County MSU Extension agent Jackie Sutton has spent the last production season helping producers get back to basics to make economic decisions. In the prevailing drought conditions and dropping commodity prices, Beaverhead County producers sought information to manage available resources to optimize returns. These decisions encompassed a variety of topics including nitrate testing, annual and perennial forage production, fertilization and irrigation strategies, range condition monitoring and management, stocking rates, artificial insemination and synchronization, forage grazing vs. harvesting, stockpiling forage in windrows and bale grazing strategies. Other profitability strategies included adding value to calves, and forage that was produced to sell to other producers.

Johnny Harbor asked to nitrate test a barley and oat stand before weaning his lambs onto the forage. Concerns the forage would become unpalatable to his sheep as it matured, coupled with a need to use the crop without harvesting it mechanically were motivating factors. The forage tested high in the field, and showed a toxic nitrate level when re-tested in the office. A month of consistent testing and management discussions resulted in harvesting the barley and oats as silage, with plans for using the regrowth as graze in the fall. He stated “I could have lost my entire lamb crop in one fateful decision. The Extension agent was faithful to my situation until we found a solution I could live with.”

A ranch visit exposed an economic loss in production due to the encroachment of native grasses, loss of alfalfa plants and a large population of ground squirrels on the northwestern third of the Dragging Y Cattle Company’s “big” pivot. “We will be putting money into the farming budget for next year, we had no idea it had gotten that far behind” stated the ranch manager.

Extension agent Jackie Sutton helped farmer and cattle producer Ken Davis test soil type and moisture holding capabilities to map alfalfa loss in a second-year stand. They discovered low water holding capacity and due to pivot speed, loss of alfalfa plants in that section. Davis plans to inter-seed grass into this portion of the pivot to increase production of forage.

With irrigation shares scheduled to end in the next two days, Max Yates needed options for safely harvesting and feeding forage oats from a field that had caused late bred heifer abortions the previous season. The standing oats tested 80 percent positive for nitrates. Within conversation, it was discovered the water rights for his newly purchased ground had enough river rights to keep one of the two pivots running for the next 10 days. This provided enough moisture for the oats to mature enough to test within an acceptable range prior to harvest, and a quantitative lab test gave confirmation he could safely feed this forage to his cattle.
Supporting reclamation efforts after development strikes

Beaverhead County residents, developers, and service contractors have similar questions in mind as they work to create more livable spaces in our communities. Building houses, roads and other infrastructure takes a toll on the land. Previously sodded hay meadows and right of ways become a haven for unidentified, opportunistic plants that can be problematic for homeowners, ranchers, farmers and land managers.

♦ Ken Thompson, recent homebuyer in Beaverhead County, entered the office in late June with a fistful of plants for identification and needed advice. “My five acres is covered in these plants. “What are they? Are they good?” Thompson had collected kochia, russian thistle, flix weed, common tansy, and poverty sumpweed. A home visit facilitated identification of plant species, and a discussion of strategies to replace unwanted species with more desirable species. Combining chemical and mechanical control measures with careful replanting of desired species, Thompson reported in early November that he has reclaimed “a third of the property and is readying the next strip for planting before the ground freezes.”

♦ MSU Extension consulted with 3 Rivers Communications about the fiber optic project in southwestern Beaverhead county, making recommendations for reclamation practices and species to plant to control invasive and undesirable species of plants after pulling the fiber optic cable.

♦ MSU Extension is working with a Dillon resident that is reclaiming a tract of ground along the railroad right of way using exclusively native range grasses and shrubs to create a drought tolerant, low maintenance space.

Welcome to Beaverhead County

Beaverhead County is the largest county in Montana with an area of 5,571 square miles encompassing 3,566 million acres of land, with approximately 69% under public ownership. Beaverhead county’s economy is driven by agriculture, tourism, and recreation. The county is number one in cattle production and perennial and annual forage production. MSU Extension is funded by a three-way partnership between Beaverhead County, Montana State University, and The United States Department of Agriculture. Beaverhead County MSU Extension welcomed new agricultural, and 4-H youth development agent Jacqueline Sutton in late 2015.

ServSafe Food Safety Manager Certification

The ServSafe program provides food safety education to foodservice managers. This training is now required for managers of all retail food establishments, private caterers, mobile food operators and temporary food permit holders by the State of Montana.

The Beaverhead County MSU Extension agent is certified to teach ServSafe Manager Certification courses and test participants, and to proctor tests online. Since becoming certified, she has certified 35 food managers with an average score of 83%. Giving the food industry leaders a local option to certify has decreased the financial burden this regulation has placed on their establishments and businesses.

Reclamation Efforts, Thompson Property, in June 2016 and Nov 2016
Montana ranks in the top five states in suicide rates, with over twice the national average for the past decade. Beaverhead County, with neighboring counties Madison, Butte-Silver Bow, and Deerlodge rank in the top five counties for suicides per capita. Suicide is the number one preventable cause of death in Montana children ages 10-14, and the suicide rate in young adults ages 15-23 is twice the national average per capita. The highest rate occurs in the Native American population and adults ages 45-64. Montana recorded 518 suicides in the past two years, with 61 confirmed deaths during the first quarter of 2016. Over 90% of suicides in the state of Montana have been linked to mental illness. Major depression is at the top of the list; depression is treatable, and manifests itself in recognizable symptoms.

Mental Health First Aid’s (MHFA) training mission is to prevent suicide by getting people needed help. Jackie Sutton will be attending an instructor training course to train Extension personnel and residents in rural Montana in MHFA. Sutton is excited to also be trained in Youth Aware of Mental Health (YAM) in March 2017. YAM focuses on giving youth a hands-on approach to mental health issues, providing them with tools to prevent suicide, deal with stress, crisis situations, and depression.

MSU Extension will become active in Southwestern Montana helping equip adults and youth to recognize the signs and symptoms of mental illness, teach them to help someone utilize self-help strategies, seek out a support group among their family and friends and seek medical attention when appropriate.

### 2016 Agricultural Highlights

- **Twenty two thousand pounds** of wool was cooperatively marketed from the Beaverhead/Madison Jefferson Wool Pool, giving small wool producers increased marketing potential for their wool.
- **Four hundred and fifty acres** of forage was certified weed free adding value to forage products sold.
- **Fifty-two participants** attended the Veterinary Feed Directive short course, gaining valuable information on the upcoming implementation of the new veterinary feed directive in January 2017.
- **Forty-five nitrate tests** were done, giving 15 producers timely information their forage was safe to utilize or sell, 30 producers learned additional management was needed to safely utilize their forage.
- **Fifty-eight private pesticide applicators** earned 4 credits for license renewal. Five additional private applicator licenses were issued in 2016.
- **Forty-two samples** were submitted to Schutter Diagnostic Lab to identify insects, plants, and diseases, providing valuable economic information to county land owners and producers.
- **Twenty-eight on-site yard and garden visits** combined with 30 on-site farm and ranch visits saved county residents consulting fees and helped them utilize research-based information in their decision making process.
Master Gardener Program gets a new start in Beaverhead County

The Master Gardener program is a three level program that combines horticulture education and community service. Ten participants completed the Level 1 Master Gardener course this spring. They learned about soil types and fertility, plant growth and development, vegetables, small fruit, ornamentals, trees, shrubs, lawn and turf, composting and pest management.

One participant stated “The highlight of the class for me was learning about trees and pruning from MSU Extension Horticultural Specialist Toby Day, and ornamentals from Kellee Anderson, MSU Butte-Silver Bow horticultural agent.” Eight of this spring’s Master Gardener participants will join a Level 2 class scheduled for this winter.

Participants contributed volunteer hours working at the UM-Western community garden, donated produce to the community pantry and local pre-school, helped maintain boulevards in Dillon and volunteered at the Dillon Farmer’s Market. After a five year hiatus from the program, the Extension agent is looking forward to creating a new tradition of Master Gardeners in Beaverhead County.

Positive identification: Positive results

MSU Extension helped a homeowner identify and remove a powder post beetle infestation from a newly built home. "A big thanks to all at the County Extension Office for acting so fast, without you we may have been sitting in a pile of dust" stated new Beaverhead county homeowner Lorilee Diaz. The Diaz family moved into their freshly built home in July. In late February, a fine powder appeared under the kitchen island. When Diaz cleaned up the powder, it would rapidly reappear. Upon closer inspection, she discovered small black beetles between the counter top and the framing.

Powder post beetles were positively identified through the Schutter Diagnostic Lab and by the regional expert at the Oregon Department of Agriculture. Diaz’s contractor was uninterested in helping with their “bug” problem until a positive identification was made. “The offending kitchen island has been removed from our home,” stated Diaz with visible relief. Powder post beetles are second only to termites as destroyers of seasoned wood used in buildings and furniture. The adult powder post beetle exits the wood, leaving a small circular hole the size of a pencil lead. Any jarring of the wood causes a fine, flour-like powder to sift from these holes. When cut or broken, the interior of infested wood is laced with this finely-packed powder. If infestations are not treated, the structural strength of the wood becomes seriously impaired.

Diaz has become a repeat Extension customer coming in for information about sustainable landscaping with native plants, weed control and management, and tree recommendations.
Member-leader partnerships fuel successful programming

Successful programs tie interested youth in a meaningful relationship with a caring adult. The 4-H shooting sports program is successful for this very reason. We have an amazing group of caring adults that give freely of their time and energy to make sure our shooting sports members are safe and successful. The Shooting Sports committee has worked hard to give our 4-H members the best possible experience. Shooting Sports has the largest number of youth participating. There were 65 members enrolled in the archery program, 25 members participated in air rifle and air pistol, and 15 members in shotgun. The shooting sports committee received a NRA grant to fund the shotgun program and start an Olympic recurve archery program. The grant award totaled $5922 including six youth shotguns and three Olympic recurve bows. The Beaverhead County 4-H Archery camp celebrated its second year of preparing prospective national team contenders in July, where 15 members and leaders from across the state tested their skills.

The Beaverhead County Shooting Sports program is home to two national shooting sports team members, Sam Peterson competed in compound archery and Christina Mayer shot air rifle in Nebraska in late June. Peterson competed in air rifle two years previous. Dedicated leaders are the reason our members experience success at this project. They spend countless hours on the range, and more traveling and preparing, to give these kids the opportunity to shine.

Beaverhead County enjoys a rich outdoor tradition that makes this project meaningful to families across multiple generations. The program promotes responsibility, decision making, and identifying realistic personal goals. It assists young people in their personal development, helps them explore a life-long vocational activity, and establishes a framework of knowledge and skills for lifetime involvement in recreation, hobbies, and careers related to shooting sports, the environment, and wildlife.

MSU Extension partnered with the Beaverhead FFA Chapter, and Dave Madsen, DVM, to help Beaverhead County 4-H and FFA members have a better understanding on how to best raise their livestock. Participants learned health, nutrition, and management practices to ensure their animals are a safe quality product for food consumers. Youth had a hands-on opportunity to explore proper injection types and sites with Caleb Igo, Beaverhead FFA Chapter advisor. They learned the importance of proper storage and labeling of medications with 4-H volunteer Kiley Martinell and about proper feed measurement, storage and feeding with Jackie Sutton, Beaverhead County MSU Extension Agent.

Madsen hosted two swine workshops, Youth Pork Quality Assurance and market hog husbandry basics. He addressed vet-client-patient relationships, biosecurity, and the need for accurate records. Members learned the importance of high quality feed and clean, cool, readily available water is for animal health and weight gain. The Beaverhead County 4-H members enjoy the opportunity to have Dr. Madsen’s expertise at their fingertips.

Seventy 4-H members attended the three-workshop series to become livestock quality assurance certified. Partnering with the FFA program solidified relationships and unified the expectations for youth livestock produced in Beaverhead county. These workshops are part of an effort to educate 4-H youth on proper animal care to increase the value of products sold to consumers.
Junior 4-H Leaders
Making learning by doing fun

4-H Junior Leaders are serving as mentors for our younger members. Junior Leaders organized and presented fit and show clinics for the poultry, beef, swine, rabbit, and cat projects. Enthusiasm breeds enthusiasm and we have doubled the number of active junior leaders in the past year.

Junior leaders took on leadership roles in the implementation of the Beaverhead County 4-H day camp, leading four separate groups through team challenges and STEM-based workshops exploring food science, solar energy, chemical reactions, and the science of throwing over 500 water balloons in less than 10 minutes. Forty-five 4-H members and their siblings enjoyed the day in the sun at Clark Canyon Bible Camp.

Beaverhead County is excited to highlight their senior ambassador, Katey Sutton. She was elected to serve on the State 4-H Ambassador team as the Montana 4-H Leader’s Council Representative at 4-H Congress this past July. Sutton traveled the state this summer helping with livestock shows at fairs, making friends, and encouraging 4-H members to get active and make a difference. She is enthusiastic about the opportunities 4-H has given her during her 11-year 4-H career and shares her contagious smile and enthusiasm with younger members and teens. “4-H is opportunity, it has opened the whole world to me, it has taught me I can do anything I want with work and determination. I am so excited to share the opportunities 4-H has given me with other 4-H members.”

Junior leaders Deacon Stewart (left) and Jacelyn Stewart (above) lead camp activities.

Junior leaders Alison Bramlet and Bailee Doering teach swine fitting and showmanship to 4-H swine members (left). Poultry members learn safe handling practices and showmanship from Harleigh Johnson and Alison Bramlet.
Carcass quality and meat cut identification: The missing link

Beaverhead County 4-H leaders reported a disconnect in 4-H member’s knowledge linking production practices with carcass quality. L and S Meats shop owner Paul Lamey held a captive audience as he took 25 4-H members and six leaders on a facility tour, tracing the steps from a live animal to cut and wrapped frozen product. They learned how each species is broken down into wholesale and retail cuts. 4-Hers learned the difference in pricing for different types of retail cuts and the importance of proper animal husbandry to the final product. The members were able to see firsthand the effects that rough handling of an animal had on the carcass. Trimming out bruises or abscesses takes extra time and diminishes the quality of the finished product.

Caden Hansen, Stock “N” Stitch 4-H club member, stated “That was so cool, did you see that huge steak?” Hansen was in awe as Lamey placed the porterhouse on the counter alongside the equivalent pounds of hamburger and two chuck roasts for price comparison. In response to member and leader demand, more educational events on carcass measurement and quality will be scheduled in the future.

Beaverhead County Beef
Born, Raised and Fed at Home

Beaverhead County Youth Kaleb Probst, Reese Meine, and Sara Malesich rank in the top five steer carcasses statewide in 2016, proudly showing steers from their family beef operations.

Beaverhead County 4-H has 235 members involved in 11 4-H Clubs. Members explore interests, participate in educational programming and build positive relationships with interested adults. Beaverhead county 4-H has 82 volunteer adult and youth leaders. 4-H empowers youth to take on leadership roles, speak in front of a group, run a public meeting, and engage in community service and service learning.

One hundred seventy members participated in a market livestock project. These projects develop leadership, initiative, goal setting and sportsmanship while mirroring the livestock industry that drives the economy of Beaverhead county. We celebrated eight Steers of Merit, 10 Montana Certified Lambs, and 17 Symbol of Excellence swine.

Beaverhead County 4-H Foundation awarded two scholarships to local 4-H youth pursuing an agricultural career. These scholarships were awarded Cierra Lamey (Pre-Vet) and Ty McKay (Ag Tech and Diesel Mechanics).
Warming our Communities one Heart at a Time

The Beaverhead County 4-H Junior Leaders Council (JLC), wanting to make a real difference within their combined communities, decided to make homemade fleece blankets and deliver them in person to community members. The JLC applied for a People Partner Grant to help fund their service project. A goal of 50 blankets was set to provide shut-in elderly and special needs adults with warmth, comfort, and more importantly, the affirmation that someone cares about them as a person and member of our communities. In partnership with the Montana 4-H Foundation and utilizing JLC funds, the teens were able to purchase over 100 yards of fleece and build 52 blankets.

- Thirteen blankets were delivered to the Building Self Worth (BSW) community home in Dillon.
- Twenty-nine hand-made fleece blankets were delivered throughout Dillon
- Ten blankets were distributed in the Lima and Dell communities.

The members learned that many residents of the BSW do not have family to enjoy their holidays with. JLC members were able to give special attention to personal likes, favorite colors, and designs in presenting the blankets to the BSW clients. The youth leaders learned about the true circumstances some of the residents of Beaverhead county face every day. The majority of our recipients live on a fixed budget, lacking ideal circumstances. Something as simple as a blanket can make a real difference for someone. Little did the kids realize the power of a smile and a heartfelt thank you would have in their lives. "We could truly see the happiness, we really made a difference for some of our recipients. We hoped to lift their spirits and wish them to stay warm as winter approaches."

Junior leaders: Katey Sutton (top) building blankets. James Kramer (left) and Tim Martin (right) delivering a blanket to Dillon resident Millie Drivdahl (center).
Welcome to Big Horn County

Big Horn County is a land of diversity. Rural and urban, rangeland and industry, past and present, creates a rich tapestry that makes Big Horn County unique. Encompassing approximately three million acres, Big Horn County includes the city of Hardin as the county seat, Crow Agency, Lodge Grass, Pryor, Wyola, and the Crow and Northern Cheyenne Reservations. The Little Big Horn Battlefield and Big Horn Canyon National Recreation Area are two major tourism destinations. Agriculture and coal mining are the primary industries of the county, practicing sustainable production of food and fuel.

The city of Hardin is the headquarters of Montana State University Extension in Big Horn County. The two resident Extension agents cover the county providing research-based, unbiased information to the residents of Big Horn County. With the collaboration of the Agriculture Extension Agent, Family and Consumer Science Extension Agent, SNAP educator, and support staff, we offer over 50 years experience in food production, sustainable agriculture, horticulture, nutrition, food preparation and preservation, and home skills.

HARDIN GARDEN

The first year of growing was a great success for the Hardin Garden! With Big Horn County MSU Extension playing a lead role, it wouldn’t have been made possible without the Hardin Garden Board, local support, and contributions totaling over $5600 dollars and six grants, including Montana SARE Professional Development Program, Town Pump Foundation, Montana Partnership to End Childhood Hunger, First Interstate Bank Foundation, Red Ants Pants Foundation, and Human Resources Development Council, totaling $8500.

After many hours planning and building, 16 raised garden beds served over 38 people, including 18 low-income families, in growing produce for themselves and family. Two separate families mentioned they wanted to be involved so their kids would learn how to grow produce off the land to be able to provide for themselves when they get older.

Big Horn County MSU Extension used one of the garden plots for educational purposes, including how to plant seeds, weed identification, pest management, and when to harvest the produce. The vegetables produced in Extension’s plot were used for SNAP-Ed Education adult classes.

Moving into 2017, the Hardin Garden Board is looking into potential expansion due to the demand of returning gardeners from 2016 and interest from others in the community. The Board is also looking into adding fruit trees in the back for plot renters to harvest from and using it for more educational classes.

Pictures of the Hardin Garden progress throughout its first year. Thanks to all who donated their time and support for the project to make it a success!
Earth Day in the Schools

To help celebrate Earth Day, the National Park Service, Americorps, Department of Natural Resource Conservation, Cloud Peak Energy, Little Big Horn College, and the Bureau of Indian Affairs Fire Management of the Crow Tribe, and MSU Extension were able to visit schools throughout Big Horn County, reaching over 400 students. Each entity taught about various aspects of the environment and how students can help keep the environment healthy. MSU Extension taught the youth what plants need to grow and photosynthesize. Each student then planted a marigold seed of their own to take home.

Grasshopper Suppression

Fall 2015 adult grasshopper counts from the Animal and Plant Health Inspection Service (APHIS) gave Big Horn County MSU Extension a heads up that 2016 may be a great year for grasshoppers’ destruction to range land. Over a period of 30 days, each grasshopper can create about 14 pounds of lost grass per acre. Multiple this by 20 grasshoppers per square yard, that is a loss of 276 pounds of forage for each acre over 30 days. For a period of 60 days, it equates to 552 pounds of lost forage.

Early planning for suppression activities was key for program success. With cooperation between Big Horn County MSU Extension and APHIS, over 290,000 acres were treated for grasshoppers. This equates to over 80 million pounds of forage saved from grasshopper deprivation which can greatly impact a ranches operation from having to buy replacement forage for the fall and winter and/or culling excess cattle to make up for the lost forage.

Initial Pesticide Training

An Initial Pesticide Training was held in Hardin by Big Horn County MSU Extension. Topics covered included private applicator license information, pesticide safety, reading the pesticide label, sprayer calibration, pesticides in the environment, integrated pesticide management, and pesticide laws. Covering all of this information made for a full day of learning about safe pesticide use. A total of 17 new licenses were acquired, and 28 more people filled their recertification credit requirement for keeping their private pesticide applicator license.

Forage Nitrate Testing

Over 20 forage samples were brought to Big Horn County MSU Extension in 2016 to test for nitrates. Out of the these samples, two recommended to only feed non-pregnant livestock or no more than half the ration to pregnant animals, five of the results said to not feed any pregnant animal and limit the forage to half the ration for non-pregnant animals and two forage results had such high nitrated it was recommended to not be fed at all to livestock.

These tests saved producers from killing livestock from nitrate poisoning and potential aborting of calves in pregnant animals.

SNAP-Ed

The Big Horn County Supplemental Nutrition Assistance Program (SNAP-Ed) reached over 630 youth in the schools and 29 adults. In the six week youth classes, SNAP-Ed educator Shirley Redding teaches the kids about food groups, food safety, and healthy eating. During her adult classes, Redding teaches the participants about healthy eating and the food groups, how to plan out meals on a budget, and food safety. When adults complete the eight week program, they are eligible for an additional food box from Helping Hands Food Bank in Hardin.

Pictured is a quantitative nitrate test sample MSU Extension is trying. For now, we are comparing to lab results to be sure it is accurate. If that’s the case, producers can obtain nitrate results much quicker.
Thirty-Seven Years of Service

Well, it seems like all good things must come to an end. After over 36 years spent working for Montana State University Extension Service, I can honestly say that Extension has been my second family. When I came to Montana 44 years ago, I never envisioned a career that would last this long, nor one that would be so fulfilling. I have come to the end of the line and will be jumping off the MSU Extension train at the end of December 2016.

I am proud of my accomplishments over the years. In 4-H, I have seen hundreds of 4-H members and leaders pass through our program. My pay back has been to see former 4-H members come back to the program as leaders and 4-H parents… makes me a little teary eyed. Community Development was a part of my early and mid-career, and being involved in securing the Railroad Depot as our local Chamber of Commerce was an important event. Another important accomplishment was working with Jean Kukes and Don Gilbertson to create the local Helping Hands in Hardin Food Bank. It has come a long way since its beginning operating out of the basement of the County Health Department and the American Lutheran Church.

Over the years I have traveled throughout the county to provide programming on many topics including family financial information, food safety, food preservation, sewing, upholstery, nutrition, diabetes, cardiac fitness, balancing work and family, grandparenting, parenting, after school programming, in-school programming for teachers, enrichment classes in schools about water quality, financial management, food safety, hand washing, simple science experiments to encourage an interest in science, first time home buyers, healthy homes, various programming including fraud protection, exercise, and health related topics for senior citizens.

In addition to teaching and facilitating classes, I have answered thousands of questions. One of the latest calls involved “How long do I have to cook a 42 pound turkey, and can I cook it partially at home and then drive for three hours and finish cooking it at our destination?”

DEEP (Diabetes Empowerment Education Program) is a “new kid” on the block for MSU Extension. Big Horn County was an early adopter for the program and as a result has paved the way for many other counties to become trained in the program and delivery thanks to Lisa Terry, Stillwater County MSU Extension Agent.

Food Safety and food preservation are my passions! In my final year, I have presented nine basic employee ServSafe classes to 154 students. Many of the participants use the certificate to gain employment, continue employment or to run food stands at various events in the county.

It has been my pleasure to teach people to preserve food. Over the years I have taught many classes and answered thousands of questions, including questions from other Extension Agents. It has been my favorite topic for many years.

Supervising Shirley Redding, our SNAP Nutrition Assistant, has been a rewarding experience. She has served in a number of programs through the years, including IRNE (Indian Reservation Nutrition Education), EFNEP (Expanded Food Nutrition Education Program), FSNEP (Food Stamp Nutrition Education Program) and now SNAP-Ed (Supplemental Nutrition Assistance Program). SNAP-Ed continues to evolve and finding ways to incorporate the information for schools, and adult learners is a challenge that Redding meets daily.

I am proud of being a small part of the MSU Extension Team that hosted more than 700 participants at the National Association of Family and Consumer Science Agents at Big Sky in September 2016. It was a big accomplishment for a small Montana branch.

And finally, I am extremely proud, honored, flattered and excited to receive in 2016 the highest award that MSU Extension gives, The Silver Buffalo Award from the Joint Council of Extension Professionals. What a way to go out! None of the work I have done over the years would have been possible without the support of the Big Horn County Commissioners, the people of Big Horn County and Montana State University Extension. So, THANK YOU to all who have supported me and my endeavors!
4-H Program Updates

Big Horn County Youth and Open Fair
The Big Horn County 4-H program had a great year once again! MSU Extension appreciates all of the hard working volunteers and leaders who make this program a success. We had a total of 115 youth members and 46 adult leaders enrolled in 4-H this last year. For fair, there were over 700 project entries, including cooking, leathercraft, scrapbooking, welding, and livestock projects. A total of $174,068, a 12% increase from last year, was generated at the market animal sale. Youth learn very valuable life lessons through their projects, and many use the money raised from the sale for their college funds.

Reach for the Stars
The 2016 Montana 4-H Rec Lab was hosted by District 8 counties, which includes Big Horn, Carbon, Musselshell-Golden Valley, Stillwater, and Yellowstone. With a lot of planning by county agents and district 4-H ambassadors, District 8 held a very successful Rec Lab in Joliet, Montana. Over 160 youth and 30 adults attended the event learning many leadership skills, recreational activities, and networking with one another. Participants take what they have learned from the event back to their home counties to share and hopefully aid their program in “Making the Best, Better.”

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Agriculture and Natural Resources

Blaine County is one of the leaders in producing ag commodities in the state of Montana. Its reported yields in grain and hay all typically rank in the top ten in the state along with high quality commercial and pure bred cattle herds. Blaine County MSU Extension is multi-faceted in its efforts to meet the needs of these producers.

Livestock and forage producers in Blaine County consult with Blaine County MSU Extension throughout the haying season and during fall and winter to evaluate forages. Many of these clients utilize the Nitrate Quick Test service to get a qualitative test of nitrates in forages. Over 40 producers visited MSU Extension in 2016 requesting a qualitative or quantitative test of the amount of nitrates in their forage or wanting additional analysis for nutritional value. These one on one consultations often lead to discussions about safely feeding hay and other forages that contain nitrates, livestock nutrition, forage quality analysis, and how to balance diets using the quantitative report from a lab. This information can potentially save livestock producers thousands of dollars by reducing the risk of losing cattle from nitrate poisoning, or saving them from buying expensive supplements or excess forage. Blaine County MSU Extension was also able to reach producers by hosting seminars and in-field demonstrations that covered topics such as forage sampling methods and feed report analysis, livestock supplementation, forage species selection and establishment, and grazing management.

Cash crop growers faced multiple challenges during the 2016 crop year. Along with traditional challenges such as weed control, growers saw increased disease in crops this year. This was attributed to an abnormal abundance in rainfall in the spring, and winter wheat infection of wheat streak mosaic virus in the fall of 2015. Blaine County MSU Extension worked with producers to diagnose wheat diseases and provide management options to the grower. Many of these farmers benefited from individual farm visits or by bringing samples to the office for evaluation.

The annual Cederberg Crop Tour was held in July for area farmers to talk with and learn from researchers from the MSU Northern Ag Research Center and other parts of Montana. Currently the focus of the field trials is to evaluate the performance of various small grain varieties as they are affected by infestation of the insect pest Wheat Stem Sawfly and to determine the overall suitability of spring wheat, winter wheat, and durum varieties for this particular area of Montana. Producers have indicated that this information is important so they can make profitable cropping decisions with the best variety selection to maximize their profits. The plot typically attracts an average of 30 producers representing over 35,000 acres of Blaine County farmland each year.

Welcome to Blaine County

Blaine County is located in beautiful North Central Montana between the Missouri River and the Canadian border. The population in Blaine County stands at just over 6,600 people, with approximately half of these individuals residing on the Fort Belknap Indian Reservation. Agriculture is the major industry in the county, with the major enterprises of cattle and wheat production. Over 8.3 million bushels of wheat are produced each year from Blaine County’s 235,500 acres of farmland. There are over 60,000 mother cows in the county supported by an irrigated hay base located along the Milk River, enhanced by irrigation supplied by the Corps of Engineers St. Mary’s diversion project.

Blaine County MSU Extension has a strong partnership between Blaine County and Montana State University. This unique partnership provides research-based information and educational programs in the areas of Agriculture, Family & Consumer Sciences, and 4-H Youth Development. Blaine County MSU Extension is dedicated to improving the quality of people’s lives by providing unbiased research-based education and information. Call or stop in and find out what Blaine County MSU Extension can do for you.
Blaine County residents consult with our Family and Consumer Sciences Agent throughout the year to answer questions ranging from food preservation and safety to financial planning. During canning season, clients utilize the Pressure Canner Gauge Test service to assure their pressure canner is working properly, while others take advantage of the research-based information and one-on-one consultations to help them safely can at home. Such information and training helps to reduce the chance of under processing or unsafely canning foods, thus reducing the risk of foodborne illness.

Food Safety education is an important step to prevent the spread of foodborne illnesses. It is important that everyone who works in the food service industry, from concession workers to kitchen managers, to obtain food safety education and training. Blaine County MSU Extension has provided over 55 hours of training through 13 different ServSafe® classes. In the past year, 185 people were provided ServSafe® Food Safety education. 122 of those received the Basic Food Safety Course designed for concession workers, and 13 received the ServSafe® Food Handler Course. Blaine and Hill County MSU Extension teamed up to provide ServSafe® education to 50 residents along the Hi-Line who were in need of the ServSafe® Food Protection Manager Certification.

Extension is one of the main educators who are offering Food Safety training. We try to offer all of our classes at as low of a cost as we can. We don’t want the cost to deter people from receiving important education. Those requiring the ServSafe® certification benefit from having local trainings available, making it convenient and economical.

In an effort to increase participation in the Annual Sugarbeet Festival Dutch Oven Cooking Contest, Blaine County MSU Extension put on a Dutch Oven Cooking class. There were 16 participants who joined in the hands-on cooking class, preparing and sampling 11 dishes. At this year’s event, there were four two-person teams, compared to one team last year.

Health and Wellness is a strong focus in Blaine County’s FCS programming. Several classes are offered for a variety of topics and audience members. During this year’s Summer Reading Program in Harlem, Blaine County MSU Extension was invited to teach nutrition for children, “Fuel Your Engine,” to nine children ages 4 to 10. During this class, participants learned about MY Plate and the various food groups and sorted foods into ‘Slow, Go, Whoa’ categories.

As with many communities across the state, Blaine County has a large number of people who have chronic diseases, such as depression, Diabetes, Parkinson’s, and Multiple Sclerosis. Blaine County MSU Extension and the Blaine County Health Department team up to offer the Living Life Well—Chronic Disease and Self-Management program to help those living with a chronic disease, along with those who live with or take care of someone with a chronic dis-ase.

Blaine County MSU Extension participated in a Healthy Hearts for Rural Women, (Strong Hearts) research project with Cornell University. Eleven women from Blaine County completed the program. Cornell University is currently compiling the data.
Blaine County 4-H Youth Development

The Blaine County 4-H Youth Development program served 117 youth ages 5 to 19 during the 2015-2016 4-H year. There were 45 adult volunteers who were enrolled as certified leaders.

Our 4-H members enrolled in a wide-range of projects. We had 147 4-H projects related to Animal Science, 56 in Family and Consumer Sciences, 24 in Communications and Expressive Arts, 16 in leadership and personal development, 14 in Engineering and Technology, 7 in Shooting Sports, and 26 in Cloverbuds.

7 counties along the Hi-Line come together to offer 4-H camp for youth ages 9 to 13. Of the 82 youth who attended camp this year, 18 were from Blaine County. 4 of our Teen Leaders were consolers; planning camp, putting on workshops, and being positive role models for the younger 4-H members. 4-H camp gives youth an opportunity to learn in a safe, different environment and participate in hands-on activities that may not normally be available to them such as canoeing, archery, and other projects that utilize STEM curriculum.

We offer a variety of workshops and learning opportunities through our 4-H programming: horse, dog, cat, poultry, and livestock clinics, along with Shooting Sports workshops. These opportunities give youth a hands-on experience to learn by doing.

Over 97 youth and adults participated in ServSafe® training for concession workers. This was the first year we’ve started to implement this training for all of our 4-H Chucwagon workers who help serve food during the fair. With a rising concern for food safety, and our desire to set a trend for other fair concession food booths, our 4-H program decided to be proactive and require food safety training for all of our 4-H youth and adults.

The Blaine County MSU Extension Office handles the entry and implementation of the 4-H Division and the Youth Livestock Division of the Blaine County Fair in Chinook. Forty-three youth participated in Livestock Quality Assurance trainings. The workshop taught participants how to evaluate an animal's carcass after slaughter. Youth learned what factors can affect the quality of an animal's carcass. The workshop also included a hands-on exercise, to give 4-H youth training and experience evaluating different cuts of meat. Participants learned how to identify the quality of meat, and what impact feeding, environment, and other animal husbandry practices have on carcass quality. After this course, 4-H youth were better prepared to deliver high quality animals to slaughter. Blaine County 4-H youth who participated in market shows at the county fair were able to see the results of their hard work during the county wide carcass contest. Youth members achieved statewide honors in all three species of market animals that are shown at the Blaine County Fair. Most of the animals shown at the county fair are purchased and raised locally including 4-Hers raising market animals from their own stock. Both steers that received Steer of Merit recognition were raised from the 4-Hers own breeding stock.

Two Blaine County 4-H youth participating in 4-H camp activities.

A 4-Her practices measuring and evaluating a beef ribeye for quality.
The Supplemental Nutrition Assistance Program (SNAP) offers a free educational program to all SNAP, WIC, or Head-Start eligible adults, along with nutrition and physical education to youth in qualifying schools. The SNAP-Education program provides hands-on nutrition education with a research-based curriculum through a series of lessons. Joann Beard, Blaine County’s SNAP-Ed Nutrition Educator, has been providing this important program in Blaine County for the past fifteen years.

In the schools, Joann teaches a series of six action-packed lessons, from the “Youth Understanding MyPlate” (YUM) curriculum to first, third, and fifth grade students in qualifying schools. During these lessons, youth learn about the importance of food safety, MyPlate, Grains, Fruits and Vegetables, Dairy, Protein, and physical activity. There are six schools who qualify for SNAP-Education in Blaine County. Over the past year, 172 youth received the Extension nutrition and physical activity curriculum here in Blaine County. The series of lessons in the adult curriculum presents individuals with information and practical tips for choosing healthier foods, preparing meals, learning appropriate food safety practices, modeling good food choices for family members, and incorporating ways to be more physically active. Along with learning healthy nutritional information, the participants also learn financial tips to help them stretch their food dollars so they can afford to buy, eat, and live better.

Participants stated that they were willing to try new fruits and vegetables as a result of the program. They also noted that they are making better food choices and making fruits and vegetables more available within their homes. Youth participants have shown an increase of snacking on fruits and vegetables as a direct result of trying them within the program. SNAP-Ed is an important program for many individuals and is an important factor in creating a healthy community.

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Welcome to Broadwater County
MSU Extension in Broadwater County is a three-way partnership between Broadwater County, Montana State University and the United States Department of Agriculture. This partnership provides educational programs in the areas of Agriculture/Natural Resources, 4-H Youth Development, Community Development and Family Consumer Sciences.

Broadwater County remains a fast growing county and currently has a population of about 5,689 (2015 estimate). There is a diverse mix of agricultural land, small acreage subdivisions, rural communities and range or forested land. The county Extension office provides a unique set of services and educational resources to meet the diverse and changing needs of local clientele.

Office Welcomes New Administrative Assistant
In December of 2015, Tammy Rauser joined the office as the new Administrative Assistant. Tammy worked in the accounting department for the county for seven years prior to joining the office, so she was already familiar with the inner workings of the county. She is a former 4-H member and brings lots of experience working with the public. During her spare time, she enjoys spending time with her husband, two sons and two grandchildren. As a Broadwater County native, she says the favorite part of the job is “working with and seeing the people she grew up with.” Welcome Tammy!

Agriculture Programs Provide Decision Making Tools to Growers

Orange Wheat Blossom Midge Confirmed in Broadwater and Gallatin Counties
Throughout the summer, the Extension Agent conducted a monitoring program for the Orange Wheat Blossom Midge. In July, the midge was found in one local trap. Traps in Gallatin and Broadwater County confirm that the midge is on the move. Fortunately, counts from the summer were found late in the growing season, were well under the economic threshold and are currently not causing any major damage. However, it does tell us that monitoring next year will be critical to see if populations grow or move throughout the county. Previously, the midge has been found in northwest Montana and across the Hi-line. It has caused over $1.5 million dollars in damage in Flathead County alone. Early identification is key to determine if action needs to be taken to control the pest. The monitoring program will continue in order to be able to provide producers with information to make informed decisions. Plans are underway to provide programs and information so that farmers can be aware of the pest and best management techniques.

No-Till Drill Improves Soil Health
The no-till drill went to work for it’s first major year in the county and planted nearly 500 acres. Funds were donated by a local producer in 2015 to purchase the drill. It has been used to enable growers to try the technology before they make the capital investment and to provide a tool for small acreage landowners. By avoiding or minimizing tillage, producers can conserve moisture, increase microbial activity, decrease soil erosion and increase organize matter. In addition to improving soil health, decreased tillage can maximize profits for farmers by requiring less labor and equipment, decrease fertilizer costs and possibly improve yields. Leasees used the drill to plant cover crops, renovate pastures or grass lands and improve small acreages. It is expected the drill will be used more next year as people become aware of it.
4-H Volunteers Make a BIG Difference

During the past year, 106 youth were enrolled in Broadwater County 4-H Clubs. It is possible to reach this many youth due to the contributions of 4-H volunteers in cooperation with the Extension office. Effort was made this year to recruit new volunteers and formalize volunteer roles. As result, 31 certified adult volunteers assisted with the program. This was a 48% increase in individual volunteer support compared to last year. Volunteers with Broadwater County 4-H contributed over 1,000 hours of time throughout the year. The value of their time given back to the community and the youth is estimated at over $20,000.

4-H volunteers work in a variety of roles including club organizational leader, project leader, Council or committee member or assisting with activities. A 4-H Indoor Committee was formalized to enhance educational opportunities for 4-H project areas other than livestock. The committee recruited new volunteers, organized workshops and added more options for the Fair including an indoor project silent auction.

Broadwater County 4-H members were recently asked how 4-H made a difference in their lives:

- “It helped me talk in front of my friends and adults.” - Mikayla Lear, 8 years old
- “It has taught me to be a better leader and how to be a better person.” - Taylor Noyes, 14 years old
- “4-H has taught me responsibility and how to follow through with an idea.” - Trenton Braaten, 14 years old
- “Has made me confident to be able to talk in front of people and given me countless opportunities to learn about agriculture.” - Abby Leachman, 16 years old

4-H Archery Program Receives Grant

A grant received this year has made it possible to expand the county 4-H archery program, provide opportunities to youth who may not be able to afford their own equipment and increase safety awareness. In the county, archery is currently the most popular shooting discipline and reaches over 20 youth. The program often relies on members to provide their own equipment and donations. The purpose of the 4-H shooting sports program is to help youth learn life skills, the safe and responsible use of firearms and archery equipment and develop a lifelong appreciation for outdoor recreational activities. The Extension Agent and 4-H Archery Instructor Jason Noyes applied for and received a grant from the NRA Foundation to improve the archery program. The program was given an equipment grant valued at over $3,500 which provided targets, bows, arrows and safety gear.

Engaging Youth in Science and Engineering Through Drones

4-H Volunteer Donna Richards discusses equine skeletal structure during a 4-H horse project workshop. Photo credit: Jan Finn

National 4-H Youth Science Day (NYSD) is held each year during National 4-H Week. This year’s challenge, Drone Discovery, allowed youth to explore the engineering design and flight principles of drones. The Extension Agent partnered with Townsend high school agriculture education teacher Jemma Morrow to engage students on the topic. Morrow’s eleventh grade agriculture class learned about drones and taught the NYSD experiment to over 50 students in the fifth grade. Students participated in a hands-on experience in science, technology, engineering and math. NYSD culminated with a school assembly for grades 5-12. Big Sky UAV of Helena discussed the history of drones, their usage and gave a demonstration. Students in Morrow’s class were given the opportunity to fly drones and discuss agriculture applications in more detail.
Master Gardeners Make a Community Difference

The Master Gardener program is a three-level course that provides horticulture information to improve gardening skills paired with community involvement. During the fall of 2015, two local gardeners, Kelly Morick and Dawn Reynolds, became the first in the county to attend the Level 3 course in Bozeman. When they returned, they each completed over 40 hours of community service by assisting at the community garden, teaching classes and writing newspaper articles.

In the spring of 2016, Level 1 of the Master Gardener program was offered by Extension in Broadwater County. Five individuals successfully completed the course. Four of these individuals became certified Master Gardeners through participating in volunteer hours by assisting at the school garden, working with the Townsend Tree Board, pruning trees for the Heritage Orchard Program and improving the community garden. Together, they provided nearly 120 hours of community service.

On the final evaluation for the Level 1 course, participants indicated learning the following new skills or increased areas of knowledge: pruning, germination, fruit trees, companion planting, plant rotation, pest control, irrigation techniques, soil health and tree care. All participants indicated they increased their knowledge of general gardening, yard and tree care. All participants felt more confident in finding unbiased, research-based answers to gardening questions.

Rancher Roundtable Programs Connect Local Ranchers

Throughout the winter, Extension in Broadwater County offered Rancher Roundtable programs to provide producers with information on emerging issues, help them be better prepared to make decisions for their business and to share best practices. Each program featured a meal, guest speaker and an opportunity for networking and interaction. There were consistently 20-25 ranchers at each program. Topics included cattle fetal programming, sainfoin, smartphone applications, cheatgrass management and the veterinary feed directive. Program participants indicated value in networking with others and learning from guest speakers.

As a result of the winter programs, a committee formed to provide direction for future rancher programs. The committee met and helped organize two summer tours. In June, a tour on managed intensive grazing was held with about 25 people who toured two local ranches to learn about diversity in grazing systems. In September, a talk and tour on cover crops was held for about 30 people. The program involved a presentation from NRCS on soil health and cover crop selection, a roundtable discussion on drill calibration for cocktail mixes and a tour of three local ranches using cover crops as part of their forage production plan.

Learning Safe Practices in Food Preservation

Freezing and drying is an easy, low cost way to preserve fresh produce. By learning the proper techniques, participants can provide quality produce to their families throughout the year. Through a partnership with Old Baldy Adult Education, a food preservation class was held in September on freezing and drying techniques. The class was taught by Kim Lloyd, Lewis & Clark County Extension Agent. She reviewed safe practices in freezing and drying, provided samples and the group made freezer jam. Attendees gained skills and knowledge in safe and easy food preservation.

John Ingalls with Round Grove Ranch discusses his intensive grazing system using cover crops. He shares his experience with fencing materials and water development.

Class participants prepare fruit for freezer jam.
Growing Skills Through 4-H

For many 4-H members, their project work is the highlight of their 4-H year and they put a lot of focus in this area. For Kenzie Howey, a 13-year-old member of the Crow Creek Clovers 4-H Club, the 4-H gardening project is one of her favorites. She has turned her garden into a successful service learning experience.

Howey currently has a 30’x 40’ vegetable garden. Almost all of the vegetables she produces are donated to food banks in Three Forks and Townsend. This year, she was awarded a grant through the Montana 4-H Foundation which supports youth who are involved in the greens industry. With this grant, she purchased supplies to build raised beds, irrigation equipment and composting materials. The use of raised beds was a skill she learned through participating in the Katie’s Krops Foundation, which sponsors youth across the country to grow gardens to fight against hunger.

“I enjoy growing my garden and helping others in need. Gardening is a fun activity that my whole family can do together,” Howey said, “I’m not 100% sure what I want to be when I grow up, but eating healthy vegetables will always be a main part of my life. Educating others and helping others learn the benefits of healthy eating brings me happiness, so I think it will always be a part of who I am.” Through her project, she is learning lifelong skills including concern for others, healthy lifestyle choices, disease prevention, decision making, problem solving and organization.

Preparing for Farm Emergencies

Farm work is a dangerous job and in a rural county being prepared for such an emergency is essential. As a result of a local training, emergency responders are now better prepared for farm, machinery and vehicle emergencies. Response and action time can be decreased through practice and training, which can save lives. It also creates a safer environment for volunteer emergency workers who risk their lives to help others.

A local emergency planning committee meeting identified a need for a Farm Extrication Training. As a result, a training was held in November for nearly 50 local fire and Emergency Medical Services (EMS) personnel. It had been nearly 20 years since the last training and almost all of the current emergency responders had never attended.

MSU Extension in Broadwater County partnered with the MSU Fire Services Training School, MSU Extension Ag Emergency Program, local Disaster Emergency Services, Fire, EMS and local businesses to provide an all day hands-on training for all five county fire departments and EMTs. The training was taught by the Fire Services Training School, administered by MSU Extension. Participants walked through several farm scenarios including baler entrapment, hand in an auger and swather run-over. Additionally, participants were able to practice vehicle extrication.

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Welcome to Carbon County Extension

This past year in Carbon County Extension Agent Nikki Bailey has hosted, facilitated, and taught many educational classes in the areas of agriculture and natural resources, 4-H and youth development, gardening, and much more. In addition to these programs, MSU Extension in Carbon County also provided research-based resources and individual instruction to constituents in many areas. The most prevalent topics answered through one-on-one instruction were questions related to nitrates in forages, cover crops, land and pasture leases, and identification with control recommendations for plant diseases and insects.

4-H in Carbon County continues to grow in both membership and activities. Working with adult and teen leaders, the MSU Extension in Carbon County has been able to offer new and exciting programs and educational opportunities for 4-H members. This report highlights several exciting 4-H and agriculture programs facilitated in the last year by MSU Extension in Carbon County.

“Reach for the Stars” 2016 4-H Rec Lab

4-H Rec Lab is a statewide event that travels around Montana and is hosted by a different region each year. This past year Rec Lab took place in Joliet. This event focuses on building leadership and project skills in teens. Rec Lab kicked off with 200 teens and numerous adults from across Montana exploring their artistic side while building leadership skills with Karen Grosz from Canvas Creek Team Building. 4-H’ers spent the next day in interactive workshops with topics ranging from outdoor cooking to drones. Everyone had a chance to learning something new, including many innovative crafts and exciting games. Each workshop focused on skills that the teens could take back and share with their club and community. The banquet keynote speaker, Adam Lee Brooks, shared a message of self-acceptance, leadership, and the importance of speaking up. Both teens and adults walked away feeling inspired to be an agent of change in their lives and the lives of others.

Rec Lab provided an opportunity for Carbon County 4-H Ambassadors and other teen leaders to gain leadership and teamwork skills. Each Ambassador worked with the Extension Office, 4-H leaders, and 4-H members from other counties in the district to organize Rec Lab. This provided an opportunity for the teens to truly make the event their own. One 4-H teen was quoted saying, “I really enjoyed being a part of the planning and set-up of Rec Lab; I learned a lot and made some really good friends.” Through participation in Rec Lab, Carbon County teens gained hands-on experience leading a group of peers and had the opportunity to gain skills to take back to their clubs and communities.

The 2016 4-H Rec Lab was a huge success, leadership skills were developed, talents were shared, and fun was had by all. It was a pleasure to host this event in Carbon County and everyone involved walked away with new life skills, proving that 4-H is the place that gives everyone the chance to “Reach for the Stars.”
Completion of the 4-H Exchange Cycle

Last year, MSU Extension revived the Carbon County 4-H Exchange program after 20 years of no activity. In June, the 4-H Exchange group completed their exchange traveling to Dauphin County, Pennsylvania.

As a part of this exchange, teens gained valuable leadership and citizenship skills. The group traveled across the eastern part of the country and got to experience Niagara Falls, Pennsylvania agriculture, the beach, Hershey Park, the Appalachian Trail, Gettysburg, and much more. Travelling to and living in others’ homes and communities was an eye-opening experience for the teens. Montana teens learned that although there are cultural differences between east coast people and ourselves, there are also a lot of commonalities and lifelong friendships were created. Due to this exchange, a Pennsylvania teen is now looking to attend Montana State University in the fall. Carbon County 4-H’ers gained a better understanding of accepting cultural differences, traveling wisely, budgeting, leadership, and teamwork.

4-H Camp 2016

4-H Camp 2016 featured new and exciting training for the camp counselors and an increased enrollment of both counselors and campers from Carbon County. An effort was made by the MSU Extension staff in Carbon, Yellowstone, and Stillwater counties to refocus camp counselor meetings back on camp counselor training and teen development. Throughout the numerous meetings teens learned more about how to manage young 4-H members, the eight essential elements of 4-H, and how to be a better leader at camp. The outcomes of these trainings were amazing. The teens became more connected as a group and the planning process became more focused and impactful. Teens created new activities to replace bygone and stagnant traditions. They designed activities that focused more on cabin bonding including a camp-wide mystery, cabin skits, games, and competitions. The result was a fun and successful 4-H Camp with a new style. Due to these new changes, over 90% of campers felt they found a place they belonged with their cabin, a group of 4-H’ers that they did not know before camp. Over 85% of campers indicated they learned life skills they can use in other areas of their life. These skills included how to make new friends, tolerance, and responsibility. All teen counselors agreed that they were able to practice leadership skills at 4-H camp and they all made new friends. The 2016 4-H Camp was a camp of positive change and more purposeful programing, which as the evaluation results show, was a valuable project for all involved.

4-H Project Day & Teen Leadership

MSU Extension and the Carbon County 4-H Ambassador team have had a productive year. Along with planning Rec Lab, recruiting new ambassadors, and teaching a Cloverbud Camp, the group also met the need of more project education in the county by hosting a 4-H Project Day. The 2016 Carbon County 4-H Project Day featured expert teen leaders and adults who discussed showmanship tips, nutrition advice, and demonstrated show fitting on all show animals from beef to poultry. To meet the needs of all 4-H members, the day also included indoor project rotations including robotics, cake decorating, photography, and art. The teen ambassadors gained leadership and teaching experience through peer teaching. 4-H members learned basic project skills and connected with other 4-H’ers from across the county. One mother reported, “That project day was a great idea. My son learned a lot at the event and more importantly afterwards he wasn’t afraid to ask for help from the older members at the fair.” It was a great day where connections were made and project knowledge was shared and learned.
Producer Education Series
During the spring of 2016, MSU Extension in Carbon County hosted an educational series for farmers and ranchers. Topics focused on forage varieties, cover crops, land leasing, and farm transition planning. Over 60 agriculture producers were reached through these workshops. Producers explored the viability of cover crops in their operations and learned about alfalfa variety selection and stand establishment with Dr. Emily Glunk. Agricultural producers and small acreage landowners studied the ins and outs of land leasing with Kate Fuller, MSU Extension Farm Management Specialist. Producers learned what to have in a grazing leases and tools that could be used to determine reasonable rates.

Horticulture Workshops & Field Visits
Small acreage needs over the past year focused on gardening and horticulture topics, weed identification, and disease diagnosis. Carbon County MSU Extension has been meeting these needs through numerous field visits and group presentations. One such presentation was at the Beartooth Billings Clinic during a lunch and learn event. MSU Extension presented a program on gardening in small spaces, including container gardening, creative back porch options, and strawbale gardening. This program empowered homeowners to plant small gardens and try new gardening techniques that were both effective and affordable.

Throughout the year, numerous house visits identified a multitude of disease problems and abiotic disorders in trees, garden vegetables, and field crops. These house visits saved small acreage landowners and homeowners money and time through the specific identification of their horticulture issues. Horticulture diseases identified in the area this year included Stigmina needle blight, powdery mildew, and multiple abiotic disorders. During home and field visits, many weeds were identified and recommendations were given for control of weeds and best practices in topics of water management, grazing, and garden nutrient management on small acreage properties.

Estate Planning Workshops
As the farming and ranching population of Carbon County ages, the need for estate planning has become evident in the local communities. To meet this need, Carbon County Extension brought Marsha Goetting, MSU Extension Family Economics Specialist to both Joliet and Red Lodge communities over the past year.

Participants ranged from longtime farmers and ranchers to small acreage owners and town residents. Topics focused on property transfer and the best estate planning options for each family. These workshops were very well received and each person walked away with at least one tool to use in their estate planning. Participants then sought additional individual instruction and resources from Carbon County, MSU Extension.
Reflection of 2016 Awards & Looking into 2017 with Carbon County Extension

The 2016 year has brought many successes to the Carbon County, MSU Extension Office, both Extension office staff and 4-H members have received awards and honors. Extension Agent, Nikki Bailey along with a team of agents from Stillwater and Gallatin counties and the faculty of MSU’s Agricultural Education Department, received the National 4-H Agents Association award for Excellence in Teamwork. This award recognized the collaborative effort between MSU Extension and MSU AGED on the planning and implementation of a Natural Resource Science Discovery 4-H Day Camp.

Carbon County 4-H excelled at a national level for both parliamentary procedure and shooting sports. A team of four Carbon County teens coached by Extension staff and local volunteers earned fourth place in the Parliamentary Procedure competition at the Western Region Roundup in Denver. The Carbon County 4-H Shooting Sports Team placed first at the Montana State 4-H BB Gun Shoot and qualified to attended the Daisy National BB Gun Shoot in Arkansas. At nationals, the team finished 9th in an event with 58 teams. The 4-H members on this shooting sports team also placed well individually at both the state and national shoot.

Looking into 2017, Carbon County, MSU Extension is planning more educational opportunities based on identified needs and input from stakeholders. Look for programs related to farm business planning, Private Applicator Licenses, expanded opportunities for 4-H project related activities, 4-H leader trainings, and 4-H leadership opportunities. Several specific programs to be offered include Planning for On Farm Success, Montana Master Gardener, and a Carbon County 4-H Communication Day. Planning for On Farm Success focuses on providing the business and risk management skills needed for new and beginning farmers and ranchers to be successful. The Carbon County 4-H Communication Day will provide training and the opportunity for excellence in areas of speech and communications at a county level. In 2017, Carbon County Extension will continue to strive to meet the needs of Carbon County through educational opportunities for both youth and adults.

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
2016 Program Highlights

Montana State 4-H Horse Show Held in Great Falls

The Cascade County 4-H Horse Leaders along with Rose Malisani, Cascade County MSU Extension Agent, planned and organized the Montana State 4-H Horse Show in September 2016 at the Montana ExpoPark in Great Falls. The Horse Leaders logged over 1,500 hours of planning, organizing, and hosting the show.

“Hosting the Montana State Horse Shows pulled together a team of talented Cascade County 4-H Horse Leaders and volunteers,” said Brook Gerard, Cascade County 4-H Horse Leader President. “Our hard work paid off and it was really fun to see the end results. The State 4-H Horse Show showcased Montana's amazing 4-H parents and kids. I encourage other regions or counties to take this on and have as much fun as we did.”

One hundred and twenty two 4-H members and 142 horses competed at the State Horse Show. The 4-H members traveled from across the state to test their skills in an educational and enjoyable contest. Classes offered included nearly every aspect of the 4-H horse project as well as nearly every skill level of rider.

Youth, ages 9-19, entered and competed based on the qualifying guidelines of their county.

The Cascade County 4-H Horse Leaders secured $9,260 in sponsorships to offset the costs of the State Horse Show.

Fifty-four volunteers assisted with the three day show.

Abigail Lichliter, SNAP-Ed Program Manager, Receives Healthy Hero Award

The Eat Right Montana and Action for Healthy Kids’ Healthy Hero Award recognizes leaders who go over and beyond in their communities to promote healthy nutrition and physical activity.

Lichliter’s nominators stated: “Heroes are people we look up to and are generally mentors who are in the later years of their professional career. Abigail Lichliter is the exception.

She is the MSU Extension Cascade County SNAP-Ed Program Manager and just beginning her career. However, her contagious smile, endless energy, approachable personality and risk-taking nature can light up a room.”

As Cascade County’s SNAP-Ed Program Manager, Abigail teaches the Eating Smart and Being Active curriculum to low income families and children. She also assists community organizations in providing technical assistance for policy, system and environmental changes to make healthy choices easy choices in the Great Falls area.

Throughout her three and a half years in Great Falls, Abigail received her Bachelor’s in Nursing from MSU Great Falls College of Nursing, helped four Great Falls Public schools switch to Breakfast in the Classroom, worked on getting the Great Falls Public Schools Summer Feeding Trailer, established the Kids FRESH Food Forum, kicked off the Building Active Communities Davidson Plaza Event and much more.

Abigail’s nominator summarized by stating, “She is extraordinary.” We couldn’t agree more.
Cascade County Master Gardeners Answer the Call

2016 proved to be a busy year for the Cascade County Master Gardeners with community gardens, farmer’s market, teaching, youth education, construction, diagnosing diseases, identifying insects, and answering horticulture questions.

The Master Gardener program is a three level course that covers soils, fruit, vegetables, trees, shrubs, irrigation, composting, lawns, pests, nutrient cycle, insect identification, diseases, plant growth, fruit trees, nomenclature, and other subjects.

Levels 1 and 2 are taught by Rose Malisani, MSU Cascade County Agriculture Extension Agent, and Level 3 Master Gardeners. Level 3 classes are taught on the campus of Montana State University by Toby Day, MSU Horticulture Specialist. The three-day training includes a horticulture tour with emphasis on horticulture and agriculture. Cascade County sent 12 Level 2 students to Bozeman for Level 3 training. Each level is completed with students volunteering in their communities.

Cascade county logged 13,579 volunteer hours in 2016.

The Cascade County Master Gardeners hosted the biannual Montana Master Gardener Celebration in September. Gardeners gathered from across the state to learn about local horticulture. Participants traveled to the Lewis and Clark Interpretive Center, Groundworks Farm, and Branch Brady’s garden. The first day featured a keynote talk from renowned horticulturist, Whitney Cranshaw. The second day of workshops included topics of herbs, hobby greenhouses, trees, tool keeping, water features, and the Western Ag Research Center.

Level 1 and 2 Master Gardener classes are offered annually at Cascade County MSU Extension. Level 2 classes will begin in February 2017 and Level 1 classes will begin in October 2017.

JDC Wellness Program

The Cascade County MSU Extension nutrition education program works with Cascade County Juvenile Detention Center to deliver nutrition lessons once a month to the youth at the Center. Youth who are incarcerated come from a variety of backgrounds. One of the challenges youth face is coming from food insecure homes. One survey completed at the Center indicated that 85% of the youth did not have food at the end of the month.

During the nutrition classes, youth learn about nutrition, developing skills that promote self-sufficiency, stretching the money that they have for food, safely handling and preserving foods for later use, and different food preparation methods they can use to fix food for themselves and family members. The classes also include an exercise program geared toward exercises that assist youth in coping with incarceration. Exercises include dealing with sleeping on a hard surface and how to use their time in a productive and healthy manner.

The goal of this program is to help youth stay fit and learn how to provide a healthy lifestyle for themselves and their families when they return to society.

Cascade County 4-H Members Bring Warmth to Their Community

Service learning and community engagement are longstanding traditions in 4-H. Service learning is an opportunity for youth to learn about their community needs and work together to meet those needs through participation in structured opportunities for service and reflection.

For the fourteenth year, Cascade County 4-H Members sewed baby blankets over the course of two days to donate to the Women, Infants, and Children (WIC) program in Cascade County. The blankets are distributed to local mothers the City-County Health Department. As the 4-Hers learn to sew the blankets and lovingly embroider the message “Sewn with love by Cascade County 4-H” on each one, they learn about the WIC program and the mothers and infants that are impacted by their contribution. In 2016, over 180 blankets were constructed and donated, with over 4,500 blankets donated since 2002. Cascade County 4-H’ers continue to learn and grow through service.

Cascade County 4-H’ers Conquer the Great Outdoors

Each year, an average of 80 4-H youth, ranging in ages 9-18, attend Cascade County 4-H Camp. For three days, youth participate in workshops, games, and traditional youth camp activities. This year, workshops included self-defense, arts and crafts, outdoor survival, jitterbug dance, teambuilding, and outdoor orienteering. Cascade County 4-H teens plan and facilitate the entire camp with the guidance of adult chaperones. Camp is the highlight for many Cascade County 4-H youth.
Grandparents Raising Grandchildren

Cascade County MSU Extension facilitates the largest and most active Grandparents Raising Grandchildren Support and Education groups in Montana. Recognized as the community resource for assistance to grandparents raising grandchildren, Cascade County MSU Extension offers resources to one in every four grandparents in Cascade County.

The monthly educational meeting offers grandparents a safe place to talk about challenges they face. Education this year focused on self-care. Grandparents learned that taking care of their own health is a necessity and not a luxury. Classes included discussion and acknowledgement of feelings both good and bad, and understanding and navigating emotions. Grandparents deal with stress and worry, anger, resentment, guilt, and grief.

One of the program goals is to offer support in many ways. Being an active member of the monthly group gives grandparents a chance to work through feelings and to accept their personal situations. Forging friendships with grandparents with similar aged children, the educational group offers camaraderie and helps navigate the issues facing children today.

Hobbies and relaxation are necessary to avoid burnout and depression. Cascade County MSU Extension, with the assistance of a Better Ways grant, facilitated two Make and Take programs for Christmas and Easter Holidays. The program allowed the grandparents to enjoy friendships and to realize that relaxation is beneficial when all senses are involved while creating gifts and food for the holidays. The workshop activities can be reproduced with the grandchildren at home.

Nitrate Quick Tests Serve Montana Ranchers

Cascade County MSU Extension conducted over 50 nitrate quick tests in 2016. Due to a mild fall, nitrate tests were conducted into November 2016 with regrowth of feed barley, oats, and other grains. Nitrates are tested in cereal grains that are intended to feed livestock because it can cause abortions or even death in livestock. Elevated nitrate levels are caused by drought, hail and other stressful factors. However, nitrates are important, as they are converted to plant protein, which is then utilized by livestock.

USDA’s National Agricultural Statistics Service reports that Cascade County is home to 59,000 head of cattle in 2015. Nitrate tests are a cheap and effective test to prevent animal loss and increase ranch profit.

SNAP-Ed Begins Teaching Youth Understanding MyPlate (YUM)

Abigail Lichliter, the SNAP-Ed Program Manager for Cascade County MSU Extension, received the YUM Curriculum training in June 2016 and began implementing the curriculum at the Boys and Girls Club of Cascade County and Sunnyside Elementary.

Youth Understanding MyPlate or YUM, promotes healthy lifestyles for youth and their families. Each of the six lessons reinforce MyPlate messages, including eating whole grains, choosing low-fat dairy, making half of your plate fruits and vegetables, food safety, and other practices that encourage healthy eating habits. The six part lesson series is grade-specific for first, third and fifth grade students and incorporates “hands-on” learning activities as well as physical activity within each of the 45-60 minutes lessons.

The Boys and Girls Club Members had the extra benefit of visiting the Westside Orchard Garden where they learned how to grow their own gardens and reinforce healthy eating concepts learned during YUM.

County Wellness Program

The Cascade County Employee Wellness program completed its fourth year. Escalating health care costs continue to remain an issue of great concern for Cascade County. Employees with more risk factors, including being overweight, smoking and having diabetes not only cost more to insure, they also pay more for health care than individuals with less risk factors. To help make a positive impact, Cascade County Safety Department and Cascade County MSU Extension offer a workplace wellness program to offset the rising costs of health care.

Wellness classes deal with topics that go beyond diet and exercise, include dealing with stress, caring for aging parents, and winter safety at work and at home. After a suicide in one of the departments, a class on suicide was reported as one of the most impactful. Thirty-four percent of the people attending the class either had considered suicide or had a family member who had committed suicide.

Wellness class impacts include creation of a list of counselors and suicide prevention trainers employed in Cascade County that was delivered to each department, improved the health of already at-risk employees, raised awareness so employees with fewer risk factors can receive a reduction in their health insurance rates, and maintained and improved employee relations and morale.

Employees report that receiving a check for completing the Wellness program is an incentive to attend the classes. Bottom line, a healthy, motivated workforce is vitally important to Cascade County.
Cascade County MSU Extension 2016

Cascade County Shelterbelts Growing to New Heights

Establishing shelterbelts has been a longtime program for MSU Extension. Farmers and ranchers began planning shelterbelts when they homesteaded to decrease wind erosion. Shelterbelts also decrease home heating and cooling costs, improve homestead quality of life, defer snow from piling along structures, and create ecosystems for both birds and wildlife.

Shelterbelt education in Cascade County is year-round. Rose Malisani, Cascade County MSU Extension Agriculture Agent, made over 40 house calls to help residents establish new shelterbelts and prune existing, neglected shelterbelts. Along with home visits, Peter Kolb, MSU Extension Forestry Specialist, presented a free seminar on Arbor Day to 60 Cascade County residents on how to properly select trees, plant, maintain, and prune trees.

Thirty-eight Cascade County residents ordered trees and shrubs through the Montana Department of Natural Resources and Conservation’s (DNRC) tree nursery in 2015-2016 with Cascade County residents planting 11,547 shrubs and trees. Tree orders are choreographed through Cascade County MSU Extension and Montana DNRC for an April delivery date. Due to the success of the shelterbelt program in Cascade County, the Cascade Conservation District requested to combine their program with Cascade County MSU Extension. Since 2014, tree orders have been a combined effort between the two entities.

Cascade County 4-H’ers On Interstate Exchange Adventures

The 4-H Interstate Exchange program gives youth an opportunity to travel, learn firsthand about distant 4-H programs, meet other 4-H youth in different parts of the country, gain skills and confidence in traveling, and experience things beyond the borders of their own State. This summer concluded the two-year Interstate Exchange for a group of Cascade County 4-H’ers. Beginning in the 2014-2015 4-H year, this group began fundraising and partnered with a group of 4-H’ers from Sullivan County, New Hampshire.

In Summer 2015, youth from New Hampshire traveled to Cascade County to learn more about Montana culture, geography, and agricultural industry. The same group of Cascade County 4-H’ers that hosted the New Hampshire youth traveled in 2016 to New York and then to New Hampshire and Massachusetts.

Their adventures in New England included sightseeing in New York City, attending a Broadway play, exploring the Flume State Park, building team work and confidence at the Sunapee Adventure Park, visiting Saint Guaden National Park, touring Newport, building a parade float and participating in the parade, visiting the Seacoast Science Center and much more.

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Sustainable Agriculture
Helping Agriculture Survive in Tough Economic Times

MSU Extension in Chouteau County provides research-based agricultural education and outreach to farmers and ranchers. Agricultural education and outreach for farmers was achieved through a wheat streak mosaic virus (WSMV) field day, Golden Triangle cropping seminar and MSU Agricultural Research Center / MSU Extension in Chouteau County field days. The wheat streak mosaic virus field day educated 33 producers about wheat streak mosaic virus management. In addition, 57 producers delivered plants to the Chouteau County Extension office. The plants tested positive for WSMV. Educating producers about the ramifications of tearing out winter wheat and seeding a spring cereal grain helped save producers 40 bushel per acre in winter wheat yield. If producers would have destroyed their winter wheat and seeded spring cereals, their yields would have been zero. Economic impacts to producers, who did not reseed their winter wheat crop to a spring cereal grain prevented $256,000 in yield losses.

The Golden Triangle Cropping Seminar educated 60 producers about crop residue management, soil fertility, stored grain insects, low pH soils management and fertility/water interactions in the soil. Producers who attended the seminar reported significant economic impacts. One producer will try to build more organic matter. One producer will utilize suggestions on low pH management. One producer will rotate crops more often. One producer will practice better stored grain management. A 10,000 bushel bin could result in a cost savings of $25,000.

One producer will consider implementation of cover crops. Two producers will utilize summer fallow for disease management. One producer will add livestock to his rotation. Two producers will include legumes in their rotation. If two producers rotated 500 acres into green peas instead of winter wheat the economic advantage for the two operations would be $300,000 according to 2016 market prices. The field days near The Knees, and Highwood educated 58 producers on management of cereal grains and low pH soils.

Chouteau County Extension educated 184 Golden Triangle producers on Integrated Pest Management (IPM) or pesticides in the environment. IPM programs updated producers on a variety of topics including wheat streak mosaic virus, jointed goat grass, wheat stem sawfly, and knapweeds.

Welcome to Chouteau County
County Seat - Fort Benton
“Birthplace of Montana”
National Wild and Scenic Missouri River
Historic Sites of Lewis and Clark Expedition
Top County in Wheat Production in Montana

Chouteau County Extension is
Montana State University,
US Department of Agriculture and
Chouteau County cooperating

Chouteau County Extension provides access to useful information and expert knowledge via workshops, demonstrations, community meetings, publications, videos, the internet and other learning opportunities.

MSU researchers and educators work together to help communities, business, families, environment and agricultural enterprises thrive.
**Diabetes Empowerment Education Program™**

In close collaboration with and significant support from Mountain-Pacific Quality Health, MSU Extension in Chouteau County held its first Diabetes Empowerment Education Program (DEEP)™ series of sessions in Geraldine. The Geraldine Tuesday Club co-sponsored the DEEP sessions by enthusiastically recruiting attendees. We had six participants who attended weekly for a total of nine hours. The sessions were offered at no cost to the participants.

Attendees indicated a clearer understanding of what diabetes is, how it affects the body, why it is important to make lifestyle changes and how those changes can minimize complications a diabetic typically experiences. They also indicated the information they learned in the sessions would help them be more aware and influence behavior changes in their daily habits in regards to eating, physical activity and monitoring of their health.

**Food Preservation**

MSU Extension offered residents of the Golden Valley the opportunity to learn how to preserve fruits, vegetables, meats and fish through hands-on classes offered in Cut Bank, Shelby, Chester, Fort Benton and Big Sandy. Both hot water bath and pressure canning methods were taught and experienced by the participants. They also learned about canning equipment, why they would want to preserve foods, safe food handling practices and the most recent research-based food preservation protocols, resources and recipes.

The food preservation experience of the participants ranged in having never done it to very experienced. They also represented all ages. Ninety percent indicated they gained a better understanding of safe food preservation practices and also indicated they felt comfortable canning at home. Participants also had the opportunity to have their dial gauges tested to be sure they are pressure canning their food at the correct pressure in order to get the food to the correct temperature to destroy the microorganisms.

A total of 76 participants experienced the food preservation classes offered by the joint effort of Extension agents in Chouteau, Glacier, Liberty and Toole counties.

**Estate Planning**

Chouteau County residents had the great opportunity to have Dr. Marsha A. Goetting, Professor and Extension Family Economics Specialist, present a free workshop in March on estate planning. Goetting presented information on why estate planning is important and the different options on how your personal property can be distributed in the event of your death.

Goetting provided an interactive presentation with realistic examples of what happens if an individual does not have a will or has not properly initiated their estate plan. Everyone valued Goetting’s willingness to provide insight on their individual situations.

Of those in attendance, 71% indicated they “gained a lot” of knowledge as a result of attending the presentation. When they were asked to indicate the actions they expected to take, 17% indicated they would discuss estate planning with their spouse and also their adult children, 17% would review their insurance policy beneficiaries, 21% would review their ownership titles on their mutual funds, stocks and bonds and 25% would review the ownership titles of their checking and savings accounts and Certificates of Deposit.
Master Gardener Program Yields 240 hours of Community Service
A Level 2 Master Gardener Program was offered in Chouteau County. Eight gardeners completed their training. Gardeners learned about soils, plant biology, vegetables, lawns, irrigation, insects, diseases, trees, shrubs and integrated pest management. Eight Master Gardeners will return approximately 240 hours of volunteer service to the community through this program. In addition, 95% gardeners attended Extension-sponsored horticultural programs in Chouteau County including herb production, an orchard tour and Integrated Pest Management in trees.

“Rolling Cows” A Cattle Semi Rollover Exercise for Emergency Responders
A cattle semi rollover exercise took place in Fort Benton in an effort to train first responders and others in case of an actual incident involving livestock. The event began with introductions and logistics followed by a functional scenario and break-out discussion groups. Followed by a working lunch, a live cattle hands-on exercise at the Chouteau County Fairgrounds took place. Dr. Jeanne Rankin, MSU Extension Agro-Emergency Coordinator, and Linda Williams, Chouteau County Health Department, trained emergency responders from Chouteau County and neighboring counties such as fire fighters, DES coordinators, law enforcement, truck drivers, veterinarians, Extension agents and livestock producers how to humanely and safely deal with cattle at the scene of a trucking accident. The exercise was sponsored by MSU Extension, Chouteau County DES, The Montana Beef Council, The Chouteau County Health Department, and the Chouteau County Strengthening Community Agro-Security Committee (S-CAP).

Fundamentals of Farming and Ranching for Families Conference
The 2016 Fundamentals of Farming and Ranching for Families Conference took place in November. It included workshops on sharpening financial skills on an infrequent salary, yard and garden care, basic first aid, what to expect when you call 911, farm safety and home safety. In addition, a panel discussion of experienced farm and ranch individuals shared information about their own experiences related to: insight on the relationship as a spouse and as a partner of an operation; hints and suggestions for safely using technology to help add efficiencies to record keeping and/or organization; and being prepared for the unexpected. The panel took questions from attendees.

The attendees gained practical information to apply to their daily lives and be prepared for unexpected events that arise.

Over 22 Tons of Waste Recycled
MSU Extension in Chouteau County and Fort Benton Recycles held the fifth annual electronic recycling event for Chouteau County and neighboring counties in April. It was held in conjunction with the Fort Benton spring clean-up weekend. In addition to electronic recycling, we also collected books, textiles, shoes, soft toys, appliances and scrap metal. The one-day event was a huge success with 18,115 pounds of electronics recycled, in addition to 2133 pounds of textiles, 5.1 tons of scrap metal including appliances, 4347 pounds of cardboard, 9497 pounds of books and 20 bins of paper shredded. The recycling committee has collected a total of just under 58 tons the past five years. The volunteer recycling committee meets on a regular basis and holds monthly collections as well as oversees drop off bins that the public has constant access to. The recycling committee has included local high school students to help with our recycling efforts such as transferring the cardboard from the trailer to the cardboard compacting machine. The response to our recycling efforts has significantly helped to reduce the amount of refuse at the local waste disposal site, has freed up space in homes and businesses where e-waste and other unused items were stored, and ensured that toxic chemicals and/or metals in the electronics were disposed of safely and appropriately to protect our valuable natural resources.

Fort Benton Recycles was recently named 2016 Recycler of the Year by Recycle Montana.
The 4-H program cultivates responsibility in youth through experiential learning, which promotes youth and community development. Youth education and outreach was achieved through Market Animal Quality Assurance (MAQA), 4-H camp, Ag Days, project/demonstration day, noxious weed education for hunter safety classes and the Chouteau County 4-H Fair.

Twenty-six 4-H youth received MAQA certification. MAQA is a program designed to teach 4-H youth about producing a quality product. The goal is to assure livestock buyers that they are purchasing a safe, nutritious and good tasting product. Youth learn the importance of taking good care of their market animals. The end result is promotion of market animal quality, 4-H and the livestock industry.

4-H camp took place at the Kiwanis campground south of Havre. Four youth participated with Blaine, Phillips, Toole, Liberty, Pondera and Glacier County. The camp was an excellent opportunity for youth to meet new people and develop confidence and leadership skills.

Chouteau County Ag days educated 100 fourth and fifth graders about the importance of agriculture to Chouteau County and the state of Montana. Planning for the event was a collaborative effort between Extension, the Conservation Districts, School Principals, FFA, 4-H, NRCS and Farmers Union. Youth learned about soils, durum from field to pasta, farm machinery, soil erosion, and horsemanship on the ranch.

Fifty-three 4-H youth participated in project/demonstration day. Youth developed skills in projects which included entomology, public speaking, cooking and sewing.

Chouteau County Extension provided Entomology Education to ninety youth at Farmers Union Camp in the Highwood Mountains.

Forty-six youth were educated in noxious weed awareness and hunter/land owner relations.

The 4-H county fair provided educational opportunities including project interview judging, market livestock weigh-in, bred-heifer ultrasounds, market animal showmanship and confirmation, the heifer show, small animal show, round robin, livestock judging, awards ceremony, market livestock sale and 4-H carcass judging.
Custer County Extension Provides Leadership for New Livestock Pavilion at Eastern Montana Fairgrounds

If you have visited the Fairgrounds in Miles City recently you may have noticed a major change brought about by the replacement of the nearly 100-year-old livestock barns with a new 20,000 square foot livestock pavilion. The pavilion is an open-walled structure which provides the most comfortable conditions for livestock during the summer. This project has been spearheaded by the Custer County Extension office, Custer County 4-H and the newly formed non-profit organization “Friends of the Fairgrounds.”

The project idea began in 2014 when rain during the fair caused flooding in the livestock barns, prompting the early removal of the livestock from the grounds during the fair. Custer County Extension Agents garnered the support of the 4-H Leaders Council and formed a building committee. Once the concept drawings were approved, the fundraising effort commenced in summer of 2015. The project received great financial support from individuals, 4-H, FFA, community clubs and businesses in the area along with a $117,500 grant from the Montana Tourism department to reach the $370,000 that was required to bring the building to completion. Notable activities in the fundraising effort included a challenge by the 4-H clubs to each raise $50 per member to donate to the pavilion. A brand board project raised over $50,000 by providing local ranchers the opportunity to have their brand permanently displayed in the building for $500 per brand.

The pavilion houses livestock during the Eastern Montana Fair, the Montana Ram Sale, Bucking Horse Sale and will serve as a covered venue for community events such as the Miles City Brew Fest.
Custer County Agriculture at a Glance

Custer County represents an extremely diverse agricultural production system spread across almost 2.5 million acres. Land ownership division is roughly 78% private and 22% state and federal; the county contains a relatively high percentage of private land compared to some other Montana counties. The majority of land use in Custer County is agriculture land or rangeland. The variety of ownership and a mixed land use of irrigated and dryland crops and ranching provides diverse economic opportunities for local producers, businesses, and recreationists. Ranking fourteenth in the state the county agricultural commodity sales in 2012 were a combined total of $109 million with $88 million in livestock sales and $21 million in crop sales. Most people in the county are aware Custer County is beef country, ranking third in the state for numbers of cattle and calves at 111,800. The county also ranks second in the state in production of corn for silage in support of our beef cattle industry. Custer County raises a large quantity of livestock on the excellent rangeland. Pasture comprises 91.9% of the total land mass of the county. There are over 400 individual farms/ranches in Custer County, with an average market value of products sold of $250,000 per farm.

Custer County Extension supports agriculture in the area through a broad offering of educational and service programs. These programs include pesticide licensing and education, forage, water and soil testing, feed ration development, facilitating experts to present educational programs, weed and plant identification and management, on farm visits for problem solving and many other Extension programs as needs arise.

Custer County 4-H

Custer County has a very active 4-H program consisting of 163 members and 48 leaders. There has been an increase in Shooting Sports and Livestock Judging this past year with 4-H members attending numerous events across the state. The 4-H teen leaders continue to volunteer and help with many programs and functions. With the help of the members, leaders and parents we were able to make our new livestock pavilion a reality. Custer County 4-H is fortunate to have strong support within the community.
Program highlights for Family and Consumer Science in Custer County include:

- Provide Food Safety Training in a ServSafe and other venues to many age groups.
- Provide research-based nutrition classes to hundreds of school students in kindergarten through high school. The presentation includes hands-on learning to improve retention of the information.
- Teach Healthy Lifestyle Cooking Class six times per year for 25 adults. Most participants are either diabetic, pre-diabetic, or suffer from high blood pressure or high cholesterol. They learn about healthy ways to cook and try new, healthier foods they may not be familiar with.
- We provide free Montguides that contain proper procedures for food preservation such as canning, drying, pickling and freezing garden produce. The interest in food preservation is becoming more popular but can pose a real safety concern if not done correctly. One of the services we offer is testing of pressure canner dials to make sure they are accurate, assuring a safe product when pressure canning. In addition, we answer many questions concerning food preservation during late summer and fall.
- Maintain the Story Walk from Easter until Halloween, providing two storybooks each week for families to read as they walk on the Holy Rosary Healthcare walking path. The Story Walk provides physical activity for families and encourages literacy and a love of books and reading.
- Chef school provides second and third graders with the opportunity to learn to cook, learn basic nutrition and food safety as well as good manners.
- Youth prepare an entire meal with the help of Custer County 4-H teens and are encouraged to take the recipes home and prepare the meal for their family thereby encouraging the family to eat together. Families who eat together have children that do better in school, are less likely to be involved with drugs and alcohol, are more active in school activities and more likely to attend college.
- Extension and the Montana Health network teach the “Safe Sitter” babysitting course, preparing fifth and sixth graders to do child care in the community. They learn basic First Aid, CPR, discipline techniques, good business practices and age appropriate activities to keep children engaged.
- Arthritis Exercise is a twice weekly exercise program for those suffering from arthritis, as well as those that want a gentle exercise program that increases flexibility, strength, endurance and improves balance. Twenty to thirty participants take part in the 10-week sessions that are offered four times per year. Participants report greater mobility and less pain when involved in the program.

Arthritis Exercise class participants enjoying their morning exercise!
Big Sky Montana was the host location for the Annual NEAFCS conference in September 2016. The co-liaisons were Tara Andrews from Custer County and Sheila Friedrich from Sheridan County. Over 700 Extension professionals attended the conference from the United States. Many participants extended their stay to travel across the state and see Montana’s beautiful scenic diversity.

The positive tone of the conference was set by Montana State University’s President Waded Cruzado’s keynote address on the history and importance of Land-Grant universities and Extension. She also showcased MSU’s increasing enrollment and graduation rates.

A brief snow storm made the typical Montana tailgate party a unique experience for many at the conference kick off. Conference goers tried their hand at roping, branding and barrel racing, corn hole and a goal kicking contest.

States purchased a red wagon and decorated it as a float for a wagon parade. Wagons were donated to daycares and preschools in Gallatin County.

The success of this conference required the help of all of Montana’s Family and Consumer Science agents as well as many of our Agricultural Agents. This was a collaborative effort that the MSU Extension can be proud of.

Champ entertaining the participants at the Convention!
**Agriculture & Natural Resources**

* MonDak Pulse Day - Over 150 producers from Northeast Montana and Western North Dakota attended this regional program sponsored by MSU Extension, NDSU Extension and Northern Pulse Growers. Following presentations, attendees were asked if they would incorporate any of the management practices discussed at the program in their operation. 88% of the 150 attendees responded yes. Of the 150 attendees, approximately half considered themselves as experienced pulse growers.

* Northeast Montana Pulse Plot Tour - An annual event that provides an in-field look at the current research on pea, lentil and chickpea varieties, disease studies, and other pertinent information. The plot is a cooperative undertaking of MSU Extension, MSU Eastern Ag Research Center, Northern Pulse Growers, and local landowners, Richard Fulton and Marvin Tarum. Well attended, over 60 producers, landowners, agency personnel and researchers share experiences and expertise on the pulse industry through personal conversations and presentations. It has been estimated that over 500,000 acres of pulse crops were grown in Montana in 2015, with the greatest amount being planted in northeast Montana.

* Narrow-leaf Hawksbeard Research - Two research plots were established in Daniels County with a focus on understanding how to manage a new invasive weed species: narrow-leaf hawksbeard. Increasing acres of infestation of this weed has landowners, producers and land resource managers very concerned. One site in Western Daniels County is located on land currently enrolled in the Conservation Reserve Program. The second site is located in Eastern Daniels County in cropland with a focus on control of this new weed invader in small grains and pulse crops. Results of the research have been productive. Several recommendations for controlling narrow-leaf hawksbeard in both rangeland and cropland are now available.

* Northeast Montana Weed Tour - Bringing landowners, producers and interested individuals to the field is undoubtedly the best tool to teach how to identify and manage weeds, especially noxious weeds and what impacts can be expected from these invasive species if nothing is done to manage them. Over 35 participants attended the tour and learned about new invaders such as houndstongue and narrow-leaf hawksbeard. Participants also visited range sites infested with spotted knapweed, Canada thistle and baby’s breath.

* Pesticide Applicator Trainings - Continuing education is a large component for individuals who have private or commercial pesticide applicator licenses. The guiding principle towards assigning applicator credits to a program is if the topic (s) will contribute to the competence in the use and handling of pesticides by the applicator (40 CFR 171). Currently there are 85 private pesticide licenses issued in Daniels County.

Producers determining plant disease cycles of small grains and pulse crops. Understanding the path of the pathogen increases the probability that a producer's treatment will be more effective.
**Family Consumer Science**

* DEEP – Diabetes Education Empowerment Program - People in all walks of life are affected by many health issues. In the United States over 26 million people have diabetes. Rural Daniels County is not immune to those statistics. There has been a gradual increase in the number of Type 2 diabetes diagnosed in Daniels County in the last five years. The MSU Daniels County Extension Agent received training in DEEP after realizing diseases like diabetes do not discriminate, from a grandmother to a livestock producer, and the need for continuing education is growing. The goal of the DEEP program is to help people with diabetes live better and make better choices and to prevent and/or reduce adverse health outcomes related to diabetes. One participant wrote: “Thank you so much for offering this class. I learned so much. I appreciate all the reference materials and the format of the class. Great discussions within the class and good ideas. Overall you get a 5 star rating.” Kathy Greenwood, Rancher, Glentana, MT.

Carol Dighans, (left) has had type 2 diabetes for 40 years. Helping her locate information in the material furnished for the class is Teresa Danelson, RN with the Daniels County Health Department.

* Improving Behavioral Health Awareness in Daniels County - In 2015 the Daniels County community was shaken by three young women committing suicide. This prompted a Community Health and Needs Assessment in which results indicated the need for mental health education. The Daniels County Health Department received a grant from the Montana Health Care Foundation, with Daniels Memorial Healthcare Center as a partner, to implement and educate the community. MSU Extension Daniels County is an active member of the working group that has identified three items of high priority: (1) Develop a resource list for Daniels County residents with a list of places and phone numbers for help with mental health problem. (2) A media/communication action plan using various media tools to reach citizens; (3) Develop an assessment tool to be used in a clinic or hospital setting for a better clinical pathway.

**Youth Development & 4-H**

* The Daniels County 4-H Program continues to offer a solid foundation for youth and adult leaders to learn new skills and improve old ones. Understanding the potential for community members who have specific skills that can enhance a program is a great tribute to the mission of 4-H. The parents of 4-H members who wanted to participate in the shotgun project recently recruited a young deputy sheriff to become a certified shotgun leader, which has brought other successes for that project.

* County, Regional and State programming provides opportunities for youth to experience interacting with others and learning in a safe environment. County fairs offer a local connection, whereas 4-H Camp and State Ambassador Trainings give youth a platform to meet and make new friends, work on leadership skills and develop teambuilding skills. Daniels County is proud to sponsor participants in these traditional events and looks forward to continuing their support of local youth.
Local economies wax and wane. Opportunities come and go, but the work of making local communities productive and sustainable remains constant. Players may change and urgency may diminish, but many organizations are staying the course. Dawson County Extension has been one of those organizations that has been instrumental in developing the social, economic, and natural resources of Dawson County and eastern Montana.

Dawson County MSU Extension has a long and successful history of providing ongoing support for the community’s efforts to maintain and grow a sustainable, healthy environment for its diverse population. Dawson County Extension provides support and information for agricultural, horticultural, community development, 4-H, and family and consumer science activities. It is the community’s portal to the multitude of resources available across the state and nation through MSU Extension, Montana State University, and the national land grant university system.

In the months to come, making educated decisions founded on fact-based, non-biased information will become increasingly important for individuals and businesses to sustain and maintain their operations and their way of life.

Dawson County MSU Extension looks forward to a continued positive and constructive relationship to make Glendive, the surrounding county, and the northern Great Plains region the most productive and favorable environment possible for current residents and future generations to come.

Welcome to Dawson County

Dawson County straddles the Yellowstone River in eastern Montana. Interstate 94 runs through the center of the county which is 35 miles from North Dakota and 150 miles south of the Canadian border. The county encompasses 1,523,387 acres with 1.38 million acres in farmland, producing mainly dryland wheat and barley, irrigated corn and sugarbeets, and cattle. With a total population of 9,625, it has a population density of less than four people per square mile. Glendive sits astride the Yellowstone River and is the county seat with the city of Glendive and unincorporated West Glendive making up 7,396 or 77% of the county’s population. The main employers include the Glendive Medical Center, BNSF Railway, and Glendive Public Schools. Dawson County is home to Montana’s largest state park, Makoshika, Dawson Community College, and the Makoshika Dinosaur Museum. The county offers excellent recreational activities and outstanding tourist attractions.
Community Partnerships

Community GATE Partners to Develop Transitional Housing Facility

The recent oil boom and bust has amplified the need for affordable housing for those who are transitioning into or out of higher paying jobs or transitioning out of high-priced housing. Additionally, there is a need in the community for temporary housing for people moving through the area and individuals graduating out of regional addiction treatment facilities. Local churches have been swamped with requests for temporary housing for people who were in need and had little or no money and regional transitional residences have long waiting lists.

Community Giving Assistance Towards Employment (GATE) was established in 1996 to address welfare reform and has a long history of sponsoring local and regional community-based projects such as the Yellowstone Recycling Center, the Glendive Community Garden, the Glendive Food Development Center, the Saturday Farmers Market, and the Farm-to-Table Store, to name a few. For the past 8 years, Community GATE has been redeveloping and upgrading the facilities at the Prairie Development Center (PDC). The PDC currently houses a business incubator, the manufacturing facilities for Western Trails Foods, and the offices of Community GATE.

Bruce Smith, Dawson County MSU Extension Agent, serves as board Treasurer, Farm-to-Table Project Director, and is the board’s longest serving member.

Recognizing the need for transitional housing in the community, a partnership was formed with local service organizations and the PDC was opened to individuals and families who had no place else to go and/or lacked the resources to provide for themselves and their families.

In the recent past, a grant had been secured to redesign 10 offices on the second level of the PDC into dormitory-style lodging and three adjacent offices into men’s and women’s bathrooms for culinary arts students. The architectural renderings that resulted from that project included converting three offices into separate male and female bathrooms with showers, sinks, and restroom stalls. Until funding can be secured, this larger set of bathrooms is on hold. However, to accommodate the current need, a grant was secured from the Montana Community Foundation and the TransCanada Pipeline Company to fund construction of an additional single bathroom with a shower. The new bathroom complements an existing set of bathrooms and adds the benefit of providing a shower and laundry facilities for residents.

A recent article in the local newspaper stated that: “The goal of Community GATE has always been to help people get on their feet again,” board member Bruce Smith explained, so when board members were approached about assisting with the sober living home project, responding with an affirmative answer was easy.

The article goes on to say: “It is important to realize that everyone is touched by addiction at some point, either personally or through the experience of a friend or family member. Addiction is not just the addict’s problem, it is a community problem and the community needs to be part of the remedy. Establishing the home will take a huge commitment from everyone involved and help from (people) willing to be a mentor or willing to help with fund-raising and planning.”

County Extension Expands Regional Radio Coverage

For the past seven years Dawson County MSU Extension has recorded a weekly 3-minute radio spot heard throughout the region on KXGN-AM and KDZN-FM. In September, the program was expanded to include a weekly broadcast on KGLE-FM. KGLE has a devoted and consistent listening audience that seldom listens to other stations, so their listeners are a new audience for the information from Dawson County MSU Extension office.

The weekly radio programs cover topics ranging from home and yard to community and economic development with a major emphasis on timely, ag-related topics. MSU Extension partners with other ag-related government entities in the region to get press releases and news announcements on the air and out to the public.
Conservation and Youth Development

1,500 Bird Houses

Cavity nesting birds such as house wrens, chickadees, tree swallows, and eastern and mountain bluebirds are native bird species in eastern Montana. All are threatened by loss of natural habitat and encroaching invasive species such as house sparrows and starlings that are taking over most cavity nest sites and also aggressively damaging and destroying native bird species in nearby nests.

Manmade birdhouses provide the best alternative to natural nesting locations for native, cavity-nesting bird species.

Over the last 10 years, the Dawson County MSU Extension set a goal of building 1,500 bluebird houses to be distributed throughout eastern Montana, southwestern North Dakota, and northwestern South Dakota. In 2016, the total number of birdhouses constructed hit 1,451, leaving just 49 left to reach the goal.

Building the birdhouses is used as a hands-on, skill-building, educational exercise for local and regional youth groups such as country school students, Boy Scouts, and 4-H’ers. At least every other year at Camp Needmore in Ekalaka, attendees from ages 9 - 11 get hands-on experience turning recycled wood into birdhouses. Three different designs are used and other recycled wood projects are included in the craft projects’ rotation so camp-goers never have to build the same project twice.

In addition to the hands-on carpentry, each participant gains knowledge on what species of birds they can expect to see using their newly constructed bird domicile, the dimensions and styles of other birdhouses they could build, and the proper placement and maintenance of birdhouses.

Each workshop participant is sent home with a birdhouse of their own construction and with the knowledge they need to properly site their dwelling for the benefit of cavity-nesting birds native to this region. MSU Extension office will continue its efforts to build and distribute birdhouses throughout the region beyond the 1,500 birdhouse goal.

Pollinator Workshops

Due to the recent decline in native and non-native insect pollinators, protecting and promoting the health and well-being of pollinators has become a major priority with many private and governmental agencies.

In 2016, two workshops were presented in conjunction with the Dawson County Department of Natural Resources and Conservation Service and the Dawson County Conservation District on preserving and promoting pollinators.

The first workshop in March targeted home gardeners and urban residents with a focus on developing healthy garden soil and planting pollinator-friendly and beneficial insect gardens. Participants were taught how to amend soil to make it most beneficial for feeding plants and producing the best crop possible. They also gathered information on what plants to cultivate, how to lay out a pollinator friendly garden, and how pesticides and fertilizers affect the health and well-being of pollinators and beneficial insects.

At the NRCS Field Day in September, over 50 Dawson County eighth graders rotated through nine learning stations ranging from native plants to regional crops and cropping systems to invasive weed species to pollinator identification and habitat enhancement.

Participants gained knowledge on why pollinators are important to the production of our food supply and the role they play in keeping our ecosystem in balance.
Local Food Systems Still a Hot Topic

From presentations at a district student organization annual meeting to the Back to Basics Cooperative Summit, interest in the development of food systems continues to be a trending topic. People are looking to the development of smaller, integrated, local food systems as a viable solution to the various social and economic food-related issues of obesity, diabetes, food insecurity, economic stability, and risk management.

Dawson County MSU Extension has been leading the charge by facilitating the development of local food systems through the continued support and leadership for the Farm-to-Table Store, the Farm-to-Table Cooperative, the Glendive Food Development Center, the Prairie Development Center business incubator, the Glendive Community Garden, and Western Trails Foods. These projects help ensure that residents of this region have access to the resources they need to sustain themselves and their families.

Eastern Montana has several strategic advantages when it comes to food production in the region, not the least of which is climate. When asked about what types of food crops could be produced in eastern Montana, Dawson County MSU Extension Agent Bruce Smith responded, “Glendive and Miles City are prime areas for commercial vegetable production.”

When it comes to favorable climates and growing conditions for some of the non-traditional, commercial agricultural crops, Smith went on to say, “Miles City leads the state with 2,726 growing degree days while Glendive has 2,670. This compares to other Montana cities such as Missoula with 1,821 and Kalispell with 1,655. Miles City and Glendive also compare favorably with cities in Idaho and Washington where many of these crops are being grown. In Idaho, Caldwell has 2,803 growing days, but Twin Falls has only 2,576 and Idaho Falls only 2,076. In Washington, Quincy has 2,681, Yakima 2,381 and Moses Lake 2,331.”

The development of a more diverse base of agricultural crops within the state has an almost innumerable range of social and economic benefits for the residents of the state. Some of these benefits were further highlighted in a commentary recorded by the Montana Ethics Project featuring Bruce Smith discussing the state’s food economy. The video can be viewed at: https://vimeo.com/54118891

Non-traditional crops like onions have a sizeable potential in eastern Montana.
The role of MSU Extension in Anaconda-Deer Lodge County is to build leadership capacity with emphasis on community economic development, consumer horticulture, city beautification, 4-H youth development, and family consumer science.

The social, economic and environmental well-being of a community is the intricate work of the whole and the civic responsibility of each individual. County by county, Montana State University Extension strategically moves Montanans toward long-term solutions and success.

MSU Extension is a valued partner for community economic development work in Anaconda-Deer Lodge County.

Deer Lodge County has the smallest land area of Montana’s 56 counties (pop. 9,300), consisting of 741 square miles of scenic, mountainous terrain, with the highest population density in the city of Anaconda (pop. 7,700).

Anaconda-Deer Lodge is a consolidated city-county government with an ageing, declining population, where about 19% of the population are living below the federal poverty level. Anaconda, once an industrial boomtown for the Anaconda Copper Company smelting operation, has a service driven economy, enriched with cultural pride and potential for growth through jobs, housing and tourism.

In 2016, the office welcomed Paula Arneson as administrative assistant to the Deer Lodge County 4-H program and MSU Extension operations. Paula has been working for the city/county local government for eight years. MSU Extension is a great fit, where Paula can apply her years of adult education, social services case management, and volunteer community work.
Community Walking Group

A healthy community is defined by more than access to health care. We are the product of our lifestyle choices, fueled by access to nature, active infrastructure, social connections, and wholesome food. In Anaconda, MSU Extension hosts a daily community walking group from May to November. Participants complete 30 minutes of moderate walking and stretching Monday-Friday. They develop caring relationships with their fellow walkers and learn about aspects of their community, ranging from seasonal plants, tree species, wildlife behavior, community events, and planning initiatives to improve streets, trails, and neighborhoods.

Ray Loftin, an Anaconda resident and most senior walker in the group at 80 years old, has been walking with the community group for two years. Ray reported, “It is good to meet people in the community who share a common interest (like walking). I’ve always been into physical fitness, as it makes many outdoor activities possible.” The community walking group deepens social connections, “Listening to others in the walking group share their interests and experiences helps me learn more about this community and its needs. I’ve been impressed by and become acquainted with all the Chamber of Commerce does. I’ve been privileged to meet great people, become more fit and broadened my view of the community and how I fit into it.”

Master Gardener

A vibrant community engages its residents in co-creating a better future. Public horticulture education prepares people as leaders and stewards of their natural resources. The MSU Extension Master Gardener program in Anaconda-Deer Lodge County is a nine-module, university-caliber course that covers the basics of landscaping, gardening, and integrated pest management for the local climate and ecology. Participants demonstrate learning through a comprehensive test and completing 20 hours of volunteer community service related to gardens, parks, urban forestry, and food banks.

Participants report that the Master Gardener level one class is a good refresher that expands their gardening knowledge and skills. They value having a variety of MSU Extension experts present on horticulture topics. In-depth greenhouse and tree workshops have been identified as a community need for future education.

Anaconda Master Gardeners have more confidence and opportunities to assist elderly residents with their home landscaping and to volunteer with the urban forestry street tree project. “On my evening walks, I carry my hand pruners to cut the suckers on street trees. I chat with property owners to educate them on the importance of pruning, raising the canopy, watering, and how to contact local tree experts,” one participants said.

Residents participated in a tree planting and care workshop at the Anaconda Common in September 2016.

The “Walking to Wellness” group met each Monday through Friday during the noon hour. Classes met May through November 2016.
Beginning Farmers and Ranchers: Planning for On Farm Success

Montana Local Food initiatives seek to infuse rural development with new strategies for job creation, food production, income, and well-being. Special provisions in federal and state legislation (i.e. Farm Bill and Cottage Food Law) help farmers, ranchers and food businesses diversify their enterprises and participate in new markets that will bolster rural development and help alleviate food sovereignty issues. Participants valued the networking, the instructors, and the information. The participants reported that the class increased their knowledge of available services to finance farm operations, and new marketing tools. Also, their confidence and ability to manage financial records increased. As a result of the connections that participants made in the workshops, they met and attended additional workshops on small scale energy production. Among the participants, there was a high level of interest in future roundtable discussions and tours that focus on marketing local food products, as well as commercial composting and greenhouse food production.

In February 2016, MSU Extension in Anaconda-Deer Lodge County offered a four-day “Planning for On-Farm Success” course to farmers, ranchers and food businesses within a five-county region through partnerships with Headwaters Resource Conservation & Development (RC&D), the Food and Agriculture Development Center (FADC), Small Business Development Center (SBDC), MSU Ag. Economic Dept., National Center for Appropriate Technology (NCAT), Mission Mountain Food Enterprise Center, USDA Farm Services Agency (FSA), Community Food and Agriculture Coalition (CFAC), and Rural Employment Opportunities (REO).

Grandparents Raising Grandchildren

The Montana Grandparents Raising Grandchildren (GRG) project has been active in Anaconda-Deer Lodge County for two years. In Montana, extended families living under one roof may be considered traditional, however today, the number of grandparents raising their grandchildren without parents is increasing. Also, grandfamilies that are made up of grandparents, some or no parent(s), and children, are trending in our community. Since 2010 in Deer Lodge County, there has been a significant increase in the number of grandparents living in the same household as their grandchildren (US Census). Grandparents are helping single and dual parent households meet financial obligations, care for the children, attend the child’s school and doctor appointments, and in some cases have full responsibility, for example foster care, adoption, informal or formal guardianship, for their grandchildren.
Grandparents Raising Grandchildren continued

Thirteen families have attended group meetings and classes with MSU Extension and the Anaconda School District. Through community partnerships like the Anaconda-Deer Lodge County Best Beginnings Coalition, 250 local leaders have learned about the GRG project. The program offers monthly support meetings where grandparents, relatives, close family friends, and advocates can gather, learn, and build relationships with one another that promote self-care and build the leadership capacity of grandfamilies.

The most challenging aspects are my age, my health, and my relationship with my son, the girls’ father. I miss having time to spend with friends. I am excited to meet other GRGs and to form an excellent support system for each other. We don’t have to feel alone. There are resources available to us to navigate this wonderful but sometimes stressful, scary and overwhelming life change.”

4-H Youth Leadership Development and Camp H2O

The Deer Lodge County 4-H Youth Development Program membership increased from 74 to 166 in 2016. The program is made up of four community clubs, one school-based program for students in grades 9-12 (Anaconda Leadership Academy), and two summer programs for ages 5-12 (Boys and Girls Club Summer Gardening) and ages 12-18 (Camp H2O) accounting for approximately 160 youth. Two 4-H project areas experienced significant growth in 2016: Horse Project Western Games and Shooting Sports, attracting new membership, adult volunteers, and teen leaders.

Deer Lodge County youth participate in a Camp H20 exercise that encourages team building while developing analytical thinking skills.
Youth Leadership Continued

Seamus Hoolahan is a sophomore at Anaconda High School and a first year 4-H member in leadership and robotics. He reflects on his experience as a counselor at Camp H2O. “I saw how much our community is willing to give and stands to benefit by making Camp H2O possible for kids. I am an only child, so working with younger kids for multiple days to effectively communicate and work together to achieve a common goal taught me valuable people skills.”

High school counselors provide stability. “I became close with the other high school and adult counselors and realized how people with different opinions, communication styles and strategies can be successful together.” Today, Seamus is a youth leader with the community organizations that sponsored camp.

The benefits of camp can follow youth to school. Seamus goes on to say, “At camp, peer groups get mixed, and we develop new relationships and shared experiences that lead to fewer bullying problems at school. It’s easier to stand up for another person once you’ve seen them at their best. I have made connections with younger students who I mentor when they are struggling in their classes. I also tell kids to get involved with the fun camp experience. I want to see Camp H2O keep getting bigger and better.”

Anaconda Community Market

The Anaconda Community Market is an outdoor, public market where western Montana culture mingles with the flare and flavor of local businesses. Market-goers enjoy live music, goods, and mule-drawn wagon rides.

At the market, more than money exchanges hands. Gloria O’Rourke, the director of the Anaconda Community Foundation, the organizational market sponsor, values the time and conversations she is able to have with nonprofit leaders and prospective donors during markets.

Market manager Tess Kohoutek staffs the point of sale table and displays the token system for SNAP EBT. She is an AmeriCorps VISTA service member with the Anaconda Community Foundation.

The market is a community incubator, where people catch-up on local happenings, share ideas and learn about available services. The market season runs July through September at the Kennedy Common on Main Street.

MSU Extension serves on the Anaconda Community Market planning committee and has helped to establish the first Point of Sale (POS) for SNAP EBT (Supplemental Nutrition Assistance Program Electronic Benefit Transfer) through a grant totaling $1,312.92 from the National Farmers Market Coalition and the National Center for Appropriate Technology (NCAT).
Anaconda Community Market Continued

Only 25% percent of all Montana farmers/community markets offer SNAP EBT at their markets. The Anaconda Community Market is proud to provide this service, which has shown to increase local access to fresh, quality food, where an estimated 19% of our residents live below the federal poverty rate.

A founding committee member, Lydia Janosko, understands the potential impact on the local economy and community health, “Most of the money spent at the market stays in our community and state. The SNAP EBT program at market brings locally grown, nutrient-dense foods that lengthen lives, make us happier, and prevent disease.”

According to the national Farmers Market Coalition, “of every $100 spent at local markets, $62 stays within the community and $99 within the state.”

Further, the POS boosted shopper convenience and spending through debit/credit transfers for “same as cash” tokens.

The market is growing. There were five more fresh food vendors offering eggs, beef, vegetables, fruit, lentils, jams/jellies and baked goods. In combined sales, fresh food vendors earned an estimated $8,000, and they report a high level of interest in returning for the 2017 season.

Amanda Dour sold Montana grown lentils; “It was a wonderful opportunity to feel involved in the community. The lentils came from a quality source; I felt proud to sell them at the local market. Many buyers commented on how hard it was to find fresh lentils and appreciated being able to buy them locally. I loved being outside and seeing people laughing and talking; my six-year-old son had a great time at market playing and helping out.”

Cherry Street Neighborhood Garden

The Cherry Street Neighborhood Garden is part of a local food movement that will inspire community solutions to public health, hunger, hopelessness, and decay by creating leadership opportunities, leveraging resources and developing gardens with families and individuals where they can safely grow food in Anaconda-Deer Lodge County.

MSU Extension partnered with the Water & Environmental Technology (WET) engineering firm and Cherry Street Neighborhood Garden to plan and implement a nine-week gardening project for 4-H Youth and Boys and Girls Club of Deer Lodge County that included 13 youth, four adult volunteers, and 27 hours of lessons and gardening. The youth grew 50 pounds of potatoes, garlic, zucchini, onions, carrots, turnips, greens, and herbs. They tasted the produce in spinach smoothies and garlic toast with fresh parsley. Some produce was sold to earn $65 dollars at the Anaconda Community Market to pay for their rent and seeds.
Cherry Street Garden Continued
Phyllis Erck, landowner and director of the Cherry Street Neighborhood Garden, has connected with neighbors, children, and their families. “Community members have purchased the garden’s produce at the Community Market and attended our fundraiser concert. They get excited about turning urban blight into green space. Next year, I would like to see residents renting boxes and actively growing their own food. This model could be duplicated all over the town of Anaconda, where the population decreased from 30,000 to 8,000, leaving a lot of abandoned houses and buildings. Abbie Phillip demonstrated crops that grow very well in our high altitude climate, teaching adults and the kids how to grow and harvest a garden.”

The Cherry Street Neighborhood Garden is Anaconda’s first fully public garden. It plans to rent to individuals and families 200 square feet of clean soil for safe food production in six raised beds with easy access to water. The garden is centrally located on a residential lot where a dilapidated house was removed.

Children from the Deer Lodge County 4-H Clubs and Boys and Girls Club are working in their vegetable gardens at the Cherry Street Neighborhood Garden.

Phyllis Erck mentors the young gardeners of Cherry Street Neighborhood Garden. Phyllis guided the youth in salesmanship during the selling of their vegetables at the Anaconda Community Market.

One of the youngest Cherry Street gardeners has a look of amazement as he sees his harvested potatoes for the first time.
SNAP Education

According to the 2016 ADLC Community Health Needs Assessment, nutrition, lifestyle education, and community wellness programs are valued by our residents. The “Buy Eat Live Better” SNAP-Ed programs are nutrition education and obesity prevention designed for individuals and families who are eligible or participating in SNAP (Supplemental Nutrition Assistance Program, formerly known as Food Stamps). SNAP-Ed offers adult classes, “Eating Smart Being Active,” and youth classes, “Youth Understanding MyPlate (YUM).”

Molly Viall joined the MSU Extension team in June 2016 as the new SNAP-Ed Program Manager for Anaconda-Deer Lodge (ADLC) and Butte-Silver Bow. This is a shared position being housed in the Butte-Silver Bow MSU Extension office.

She has provided technical assistance on policy, systems and environmental change for a healthier community. For example, working with the school wellness committee, public health, the hospital and a local economic development nonprofit on the Food Corps Farm to School initiative.

In 2016, 130 community members were exposed to SNAP-Ed information through adult and youth classes and community partnerships. Fifteen youth at The Boys & Girls Club of Deer Lodge County and 43 youth at Fred Moodry Intermediate School participated in the YUM Program.

SNAP-Ed Program Manager Molly Viall
Farmer’s markets have been successful throughout Montana. There are 61 in Montana, anywhere from two-vendor markets to markets that occur throughout the summer with numerous vendors. The only market in Southeastern Montana is held in Miles City. With the number of local growers, gardeners, crafters, and small businesses there was an opportunity to host a successful market in Fallon and Carter Counties.

MSU Extension Fallon/Carter Counties offered a leading role in organizing a market for the local community. A group of seven volunteers was organized and developed the market. The vision was to establish and support activities that create a sense of community, social gathering and foster economic growth in the local community. The long-term goal is to create an annual farmer’s and crafters market that is run by volunteers and is supported by the community.

The 2016 Products of the Prairie market was held September 10 at the Fallon County Fairgrounds in Baker. It was held in conjunction with Fallon County’s Annual Fall Festival and was a family friendly event with kid’s activities, and produce and craft vendors. Our vendors offered high quality locally-grown and handmade items. The event was organized by the Products of the Prairie Board with support from Northwest Farm Credit Service, Mid-Rivers Communication, Red Ants Pants Foundation, Summit National Bank and Ag Partners LLC.

The Products of the Prairie market created an opportunity to strengthen the local economy and encouraged healthy lifestyles, increased knowledge of agriculture, and inspired small business owners to market their local products and talents. Products of the Prairie created a place where local farmers and crafters could sell their food and art at a higher profit margin, which benefited the local economy. The event brought people together, strengthening the fabric of a community and created a “spillover” economic effect for other downtown businesses.

To help prepare businesses to participate in the Products of the Prairie Market MSU Extension in Fallon/Carter Extension hosted workshop series.

- **Planning for Business Success** MSU Extension in Fallon/Carter Counties offered a six-week “Planning for Business Success” course to help build successful businesses. The goal of the curriculum was to provide business owners with the tools and strategies to thoroughly and clearly define business concepts and understand marketing, financing options, and risk management. New and experienced business owners benefited from this course. There were a wide range of businesses represented, from main street business to farm and ranch operations, from businesses in planning stages to others that have been operating for over 10 years.

- **Master Gardener Level 1** A six-week Level 1 Master Gardener class was offered in 2016 in Baker. This year we had MSU Extension Horticulture Specialist Toby Day, MSU Extension Forestry Specialist, Peter Kolb, and Lauren Kerzienik from Schutter Diagnostic Lab help teach the course.
Handling Calving Difficulties

MSU Extension in Fallon-Carter Counties hosted in calving expert Dr. Robert Mortimer to present a “Handling Calving Difficulty” workshop in Baker. Mortimer previously was a DVM and Associate Professor with the Veterinary College at Colorado State University. He presented a well-received workshop that discussed normal versus abnormal calving, signs of calving, and how to manage a difficult birth.

The workshop was filled with practical information for ranchers. The majority of the 80 participants felt the program could have a long-term economic impact on their operation. The changes producers intend to make as a result of the program include, getting heifers to lay down on their right side when calving, slow down with trying to assist, educate their help, try different pulling methods, handle calves differently after birth, and make sure all calves get colostrum as soon as possible after birth. A year after the workshop, producers are still sharing information they learned.

Nitrate Testing of Forages

2016 was a dry year for the area, which brought an increase concern for nitrate levels in small grains and other crops. High nitrate feeds that are fed to cattle can lead to chronic problems, abortion or even death. While a free qualitative nitrate test has been available for many years, this year a new quantitative test was offered to give producers a more accurate estimate on nitrate levels. This year, 120 forage samples were tested. Twenty-two percent of the samples were at 2,500 ppm of nitrates and were considered cautionary. Seven percent of the samples were 4,000 ppm or higher and recommended to feed at no more than 50% of a ration to prevent health concerns in cattle. The ability to give producers quick nitrate results helps with forage harvesting and balancing rations to minimize health problems in livestock.

Livestock Water Quality Testing

Water is the most important nutrient for livestock. A quality and safe water supply is essential to the production of healthy livestock. If water is not suitable for consumption, it can adversely affect the growth, reproduction and productivity of livestock.

Since 2012, we have seen elevated levels of total dissolved solids, specifically sulfur and sodium, in livestock water. Additionally, B & C Ag Consultants in Billings, Fallon County Veterinary Service and other Extension offices indicated that similar results showed up across the state. Some producers have been forced to fence off reservoirs and dams or are unable to use pastures with water dangerously high in sulfates.

Producers are encouraged to test their water if they are questioning its quality. MSU Extension in Fallon-Carter Counties will test for Total Dissolved Solids (TDS) free of charge. Several producers have taken advantages of this. In 2016, over 130 water samples were tested in the Fallon/Extension office. At $25-$45 for a Livestock Water Analysis, we have helped save producers $3,250 to $5,850, plus the cost of shipping. Additionally, there is economic value in the number of livestock that may have been saved from drinking poor quality water and weight gain on calves that may have been improved if they were put on higher quality water.

Elin Kittelmann presents on the impact of water quality on pesticide performance at Carter County’s Annual Spray Day. Producers learned that pH and hardness can have a major affect on the efficacy of pesticides. As a result of the program producers brought their water to the Extension office to be tested, or they purchased the supplies to do their own testing before spraying.

Dr. Robert Mortimer presents to producers in Fallon and Carter County on handling calving difficulties.
4-H Camp at Camp Needmore

Fallon County 4-H, along with the 4-H Programs in Carter, Custer, Prairie, McCon, Garfield, Wibaux, Rosebud-Treasurer, Powder River, and Dawson counties partner to plan and implement the Southeast Montana 4-H Camp for youth third through sixth grade. 4-H Camp is held at Camp Needmore. 4-H Camp was held in June and was attended by 129 youth, 15 teen counselors, 7 adult chaperones and 14 Extension Agents/educators.

Camp Needmore is the ideal playground for our 4-H camp. The kids are outdoors all day and are able to camp in rustic cabins. All youth are partake in eight hands-on educational workshops, campfires, games, and meals. 4-H Camp is a great opportunity to get kids outside to learn about nature, gain skills and meet peers. The object for 4-H Camp is to gather kids from Southeast Montana to spend time outdoors in a safe learning environment to gain knowledge about nature, disconnect from technology, and make friends.

Workshops at 4-H Camp provide a variety of activities to meet the needs of diverse interests: fishing, shooting sports, crafts, woodworking, rappelling, dance, and a nature hike.

The generous support from the U.S. Forest Service through a “More Kids in The Woods” grant allowed us to supply 4-H Camp with updated rappelling and safety equipment and cover the wages for our camp cook and our experience workshop educators and obtain supplies.

HEART of 4-H

Fallon County Volunteer Darold Brown was a 2016 Montana 4-H Hall of Fame recipient. Brown has been a fixture at the Southeastern Montana 4-H Camp for over 30 years helping with the rappelling workshops.

Brown does much more than just being an instructor. When one tells an eight year old 4-H member to step out to the edge of the cliff with a rope holding him/her, it’s not easy to convince them to take the first step. Brown is the master at knowing whether soft words of encouragement, gentle teasing, or gentle reassurance is the key to getting them over the edge. One cannot underestimate the impact to a young person of overcoming their fears to walk down the cliff and the thrill and feeling of accomplishment they experience.

SUMMER FUN SERIES

Youth and adults in Fallon and Carter Counties were invited to

Families enjoyed an Outdoor Adventure in the Chalk Buttes of Carter County. They learned about the history of Carter County and had a picnic lunch.
There is a long tradition of Homemakers Clubs in Fallon and Carter Counties. Despite membership decreasing for many years, Homemakers Clubs are regaining popularity in the local, rural communities. These volunteer organizations work to improve the quality of life for families and communities through leadership development, volunteer service and education. Clubs meet for exchanging of knowledge, social gatherings and community services. In addition to monthly club meetings, the clubs host a Spring and Fall Fallon-Carter Homemaker Council Meeting. The meeting is a great time for Homemaker members from across the counties to gather, learn and grow. The Spring Meeting was focused on Do-It-Yourself Crafters, while the Fall Meeting educated about sex trafficking. Furthermore, each club does community service projects each year. This year’s projects included painting the bleachers at the Carter County Rodeo Arena, servicing meals at community events and purchasing and donating tables to the community Event Center.

There are six active clubs in Fallon and Carter Counties with a total membership of 82 (up from 64 in 2014).

MSU Extension Fallon-Carter Counties strives to meet the growing needs of the Homemakers Clubs, by hosting educational programs and workshops. Additionally, all members are supplied with a quarterly Fallon-Carter County Extension Homemaker Newsletter.

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Montana State University Extension is an ADA/EO/AA Veteran's Preference Employer and provider of educational outreach.
Agriculture and Natural Resources
Agriculture is a major driver for the Fergus County economy.

2016 presented producers with many challenges due to weather conditions and low commodity prices, pushing producers to concentrate on cost cutting and find new revenue streams. MSU Extension has proven extremely valuable to producers in helping to evaluate new enterprises and to help modify existing practices to make sure that we are producing food and fiber in the most efficient way.

Extension has been promoting more crop rotation to help diversify farm income and to help producers take advantage of market conditions to improve farm income. Pulse crop acres have been slowly increasing for several years, and we saw a large increase in lentil production in 2015. MSU Extension taught producers new to pulse crops how to manage this new crop and how to effectively market them to make up for low wheat prices.

As part of a multi-year effort, Extension has helped producers use soil tests and infield comparison plots to evaluate the economics of fertilizing grass and alfalfa hay. Local fertilizer dealers have reported increased fertilizer application for forage and producers that are adopting these practices are seeing higher yields and larger profits. As part of this program, Extension is encouraging timely cutting and forage testing to help producers get the best combination of tonnage and quality to support our beef cattle industry.

Livestock producers are dealing with sharply lower prices in 2016, and Extension has been working with producers to help them utilize less expensive feed options and evaluate marketing options to manage risk and get the most value out of their production as possible.

Producers and landowners look to MSU Extension as a source of unbiased information, and many producers are utilizing Extension’s resources to help them develop fair and effective lease agreements. MSU Extension in Fergus County works with nearly 100 lease agreements each year to help producers and landowners develop a partnership that benefits both parties. This is likely to be in increasing need, as it is becoming more common for agricultural producers to lease a significant amount of land from neighbors and absentee landowners.

Fergus-Petroleum County 4-H

In the 2015-16 4-H year 213 youth ages 5 to 18 were enrolled in our 4-H program. Eighty-four adult volunteers enrolled as leaders.

Our members enroll in a wide variety of projects. We had 408 projects related to animal science, 42 in communications and expressive arts, 26 in family and consumer sciences, 20 in environmental sciences, 44 in leadership and personal development, 12 in plant sciences and 31 in technology and engineering.

We offer four different camps in Fergus-Petroleum County: Cloverbud Day Camp for 5 to 8 year olds; Junior Camp for 9 to 11 year olds; Tweeny Trip for middle school youth; and Senior Leadership Camp for all teens. Sixty-five youth attended our local 4-H camps in the past year. In addition to the campers, 11 teens served as counselors, planning and implementing Junior Camp.

Montana State 4-H Leaders Forum was hosted by our district in the fall of 2016. The conference was held in Lewistown. Six local leaders served on the planning committee along with our local Extension staff. One hundred and sixty-six 4-H leaders from across Montana attended forum, along with an additional 40 that attended the 4-H Shooting Sports Leaders Training held in conjunction with forum.

The MSU Extension in Fergus County handles the entry and implementation of the 4-H Division and the 4-H/Youth Livestock Division of the Central Montana Fair in Lewistown. Fergus County and all surrounding counties are invited to participate in the Central Montana Fair. We had a total of 253 youth enter the fair, one-187 local 4-Hers, 45 4-Her’s from surrounding counties, and 21 FFA members.
Family and Consumer Sciences Education

Denise Seilstad, Family and Consumer Sciences Extension Agent has been serving the residents of Fergus County for the past 18 years. Many residents use the Extension office for one-on-one consultations and questions ranging from food preservation and safety to financial planning.

ServSafe Food Safety education was provided to 372 people throughout the year. 108 had the eight hour Full Manager training, while 55 had the 4 hour and 199 received the two hour employee/concession training. Thirteen pressure gauges were checked for safety throughout the year, helping keep food preservers and their families safe.

Three human services programs are provided to the Fergus-Petroleum residents. Diabetes Empowerment Education Program (DEEP) served 28 people in Fergus County, providing six weeks of self-management education. Powerful Tools for Caregivers, an educational program for friends and relatives acting as caregivers for an adult with a chronic medical condition, served 12 caregivers. Living Life Well, a program for people with chronic disease, provided nine people with skills needed in day-to-day management of chronic health conditions such as arthritis, asthma, diabetes, and heart and lung disease to maintain and/or improve their ability to carry out activities of daily living.

MSU Extension in Fergus County participated in a Healthy Hearts for Rural Women, (Strong Hearts) research project with Cornell University. Thirteen women, over 40 years of age, physically inactive and overweight were part of the study. Cornell University is currently compiling the data.

Strong People, Strong Bones is in its ninth year in Fergus-Petroleum County. This is an Extension program helping men and women slow down or prevent osteoporosis and arthritis by doing strength exercises. Two sessions running twice weekly throughout the year meet, serving 35 to 40 people.

Community Education classes reached 62 people over the past year, with healthy, quick and economic meal planning and preparation, encouraging families to cook and eat together.

Twenty-five youth, ages 10 - 13 attended the Safe Sitter Babysitting Workshop, at which Extension teams up with Central Montana Hospital. These youth are taught skills and medical education to become responsible, dependable babysitters.

Denise Seilstad, teaching a class on Mediterranean Diet for Community Education.
Small Acreage Programming Plays Important Role in the Flathead

Hops Trial Continues to Grow

The MSU Extension hops research trial continues to assess the economic feasibility of commercial hops production in western Montana. The craft brewery industry continues to grow 12-18% by volume each year. Craft brews require 10 times the amount of hops compared to traditional beers. The challenge Montana hops producers face is harvesting and processing. The MSU hops trial was able to secure funding for German-made harvesting and cultivating equipment. In 2015, MSU Extension facilitated the use of a research sized mint still at the MSU Northwest Agriculture Research Center in Creston to extract hop oil from the hops cone. About 20 years ago, there were 15 mint stills in the Flathead, currently there are three. Two are used to distill dill oil and one continues extracting mint oil. In 2016, Tom Britz, the cooperator and landowner of the hops research trial, contracted with a Flathead dill grower to distill two semi-trucks of hops. This successful, initial venture has resulted in over $500,000 of hops oil and is now being marketed nationally. There is only one other manufacturer of hops oil in the U.S. The use of hops oil instead of bulk hops eliminates shipping challenges and costs and creates an avenue for brewers to have the taste of fresh hops all year round instead of just during harvest season. Drying hops and pelletizing, which is the conventional method, eliminates 2-3 of the five oils naturally occurring in the flower. Distilling hops keeps all five oils in place. If this marketing venture creates enough demand, it would mean a significant increase in farm profits for both the Glacier Hops Ranch, owned by Britz and the Fisher Farm, dill producers.

Pasture Management Workshop: one more tool to fight noxious weeds

The Flathead County Weed Department has over 4,000 open citations for landowners out of compliance with county and state weed policies. There are over 100,000 parcels of land in Flathead County between 5 and 100 acres. Weed control is a continual challenge for these small acreage landowners. To help educate residents, MSU Extension partnered with other state agencies to provide a series of weed workshops at the Flathead Valley Community College. Over 200 people attended each of these evening workshops. Participants learn biological, cultural and chemical control measures, including proper calibration and safe handling of pesticides, decreasing risk to human and environmental health.

A pasture management workshop was facilitated by MSU Extension to address the overgrazing situation throughout the county that is a cause of a significant amount of the noxious weed invasion. Emily Glunk, MSU forage specialist, instructed 30 residents on grass identification, proper grazing heights, animal behavior and the benefits of rotating
Small Acreage Programming Plays Important Role in the Flathead

livestock. The Flathead County Extension Agent wrote a lengthy follow up article for the local newspaper on the key points of the hands-on workshop. This article was subsequently used in a training at the Northwest Back Country Horseman meeting and posted on their website as well as on the Extension website. The majority of participants said that they did not understand grass biology before the workshop and would change their management practices. Most expressed interest in attending future opportunities to learn more about pasture care. One enthusiastic client, after a follow up private consultation, said, “I never knew I could be doing so many things wrong at one time! I am overstocked, overgrazing, putting the horses out too early in the spring and not fertilizing my pasture! I am starting with a soil test and taking the horses off as soon as I get home.”

Montana Grape and Winery Association builds on MSU Extension Research

MSU Extension has helped establish a new agriculture crop in Montana that in turn supports the creation of new agriculture business opportunities.

Flathead County farm size decreased 29% from 2007 to 2012. The number of farms decreased 32% in that same time period. That trend continues as population increases on an average of 6% a year. Farmland is being developed into private homes at a rapid pace. Agriculture producers are looking for higher value specialty crops to increase profits on smaller parcels of land. MSU Extension has been researching niche crops to meet grower needs. MSU Extension secured funding and initiated a cold hardy, hybrid wine grape trial in 2012. Montana grape growers, who were originally advisors for the research project, formed the Montana Grape and Winery Association (MGWA). The numbers of vineyards have expanded from less than 20 to more than 55 across the state in 2015. There are over 100 members of MGWA, who now share research information, set research priorities and are working with the Montana legislature to set guidelines that encourage the use of Montana-grown grapes. MSU Extension Agriculture Agent in Flathead County, Pat McGlynn, received state recognition and an award from MGWA at their 2016 conference for being a “Pioneer Leader and Visionary” providing the foundation for the MGWA Association.

Beekeeping as an alternative crop

There are 91 registered apiary sites in Flathead County. They belong to 22 different beekeepers and five are considered commercial, according to the Montana Department of Agriculture. Hobbyists are beekeepers with less than 10 hives and are not required to register. This segment of beekeepers is on a steady increase. Due to requests for more education on beginning backyard beekeeping, MSU Extension facilitated an all day workshop. Commercial beekeepers are concerned that uninformed hobbyists may bring diseases or pests that will impact the industry. Speakers from the Montana Department of Agriculture, a local beekeeping supply company and Montana Fish, Wildlife and Parks taught the 85 attendees about bee biology, setting up a hive, diseases and pests, and wildlife mitigation techniques. Only two of the participants already had established colonies. The remainder were looking to MSU Extension to learn best husbandry practices. After the workshop, 100 participants were able to make an educated decision on whether to pursue backyard honey production. The ones choosing to invest would have a much greater chance of success and the chance of contaminating commercial hives was reduced.

Montana Grape and Winery Association Award from Al Putnam, grape grower and winemaker.

Rick Molenda, owner of Western Bee Supply, demonstrates how to set up a bee hive.
Flathead County welcomes new 4-H Agent

Ben Frentsos has joined the Extension office as the new 4-H Agent. He enters the position after having spent eight years in education and youth development in Eastern Europe. Frentsos grew up in the Flathead Valley and is a graduate of Montana State University. The 4-H program has deep roots in the county and Frentsos looks to provide support to a long standing tradition of youth development and community involvement within the program. Additionally, as the organization has evolved significantly over the past several years, his aim is to guide that enduring process with sustainable programming and adaptability to the changing needs of the community. Frentsos brings a vision founded on community, education and passion. As the 4-H Agent, he hopes to facilitate and advocate for relevant, cutting edge opportunities for engaged and prosperous youth.

Northwest Backcountry Horseman teach 4-H youth wilderness safety

The Northwest Backcountry Horsemen (BCH) partnered with MSU Flathead County 4-H to create the newest project for its members. Seventeen BCH became leaders and 21 youth enrolled the first year. The goal was to get the youth ready for packing trips into the wilderness. Members were trained how to prepare their horses for trail obstacles, how to tie a mannie, how to balance a load and how to “pony” a second horse loaded with gear. The six-month project culminated with an overnight pack trip near Lake Kookanusa. All of the members have expressed their commitment to returning to the program and achieving the next level of packing criteria. The BCH is welcoming these youth into their club to help increase their opportunities to volunteer and assist in preserving the national parks.

Flathead 4-H prepares for centennial

Flathead County 4-H is celebrating its centennial in 2017. The new Flathead 4-H Foundation has created a website http://flathead4h.com and planned a year of activities to commemorate this historical event. Each month a different family will be featured in the local newspaper and on the website highlighting their three and four generations of 4-H club involvement. The leaders are being recognized for over 50 years of service to the organization and community youth. Additionally, an alumni birthday party will be held at the Northwest Montana fair for past members and leaders. An alumni float will be in the fair parade decorated with vintage projects and costumed participants. Time capsules will be created by local clubs and buried to be revealed in the next 100 years. Happy 100th Birthday banners will be posted throughout the county. Centennial commemorative items will also be available for purchase through the Extension office.
Supplemental Nutrition Assistance Program
Educates Adults and Youth in Flathead County

The SNAP-Ed program is thriving across the Flathead and is continuing to seek new agencies to partner with to help individuals and families learn healthy eating habits.

Supplemental Nutrition Assistance Program (SNAP) Ed assists in direct education with adults and youth in adopting smarter food choices and active lifestyles to support and encourage a healthy future. Adult audiences consist of individuals and families who are eligible for SNAP benefits, WIC or commodity assistance.

Nancy Roberts, the nutrition educator, has been working together with Community Action Partnerships for many years to show the importance of good nutrition to their young adult Temporary Assistance for Needy Families recipients. Classes run twice a week all year long, cycling every four weeks, for a total of eight classes per individual. These classes demonstrate how to stretch food stamp dollars by buying wholesome foods and learning the basics of “cooking from scratch” for healthier eating.

The Kalispell Women’s Recovery Home also makes use of the SNAP-Ed program. In a home environment setting, this program for chemically-dependent women teaches about healthy habits to replace their addictions to drugs and alcohol. With the SNAP-Ed program, the residents learn about healthy eating habits so they are better focused to battle their addictions. Roberts does two SNAP-Ed sessions at the home during the year since clients rotate there every nine months.

Roberts also taught at the Sunburst and Lamplighter Inn Mental Health facilities. Individuals with mental health issues go there to get their needs met and to relax and converse with others in large common areas. Roberts teaches the SNAP-Ed course in the kitchens of these facilities.

This July, a new partnership was formed with the Whitefish Food Bank. Fourteen adults signed up to take the SNAP-Ed Nutrition/Cooking course. It was conducted in their large commercial kitchen. The food bank got the word out to all their clients and even supplied some of the fresh produce for the class. It was a great success!

The SNAP-Ed program is also geared toward teaching youth. Roberts sees 12 area schools during the year. She teaches first, third and fifth grades about healthy eating habits. One round of classes lasts six weeks and each student gets a certificate of completion at the end. Through this program, Roberts taught 700 youth at various schools in Flathead County.

Roberts is taking part in the Smarter Lunchroom program for several schools and is a member of their School Wellness Committees as a new part of her position. The Smarter Lunchroom program is geared toward making school lunchrooms more “healthy food accessible” for all ages of children. School Wellness Policies are required at each school. School Wellness Committees include teachers and laypeople to help implement the policies and find solutions to problems.
Herbicides have been widely used to suppress spotted knapweed, a noxious weed that infests thousands of acres on the Flathead Reservation, and millions of acres throughout North America. However, herbicide control is expensive and must often be reapplied every three to five years. In response to the high costs, environmental concerns and health risks surrounding herbicides, the Confederated Salish and Kootenai Tribe (CSKT) and MSU have been working together for the past seven years to explore alternatives.

In the fourth and final year, our current study examines the combined use of targeted cattle grazing and bio-control insects at a site on CSKT tribal lands near Buffalo Bridge, southwest of Polson. Field work began in May 2013 and ended in August 2015, with an additional year of data collection in 2016. We are testing two different strategies to increase cattle consumption of spotted knapweed without harming the native grasses and wildflowers, and without harming the bio-control insects that already inhabit the site. The two strategies are: 1) diet training and 2) high stock-density grazing. The bio-control insects we monitor are two insects that feed on spotted knapweed roots (Cyphocleonus and Agapeta) and one insect that feeds on the leaves and seeds of spotted knapweed (Larinus).

While data analysis is still under way, preliminary results indicate that targeted cattle grazing and bio-control insects work well together. We found diet training did not increase cattle preference of spotted knapweed and targeted grazing was effective with or without diet training. After three years, targeted cattle grazing with bio-control insects decreased spotted knapweed plant density 66% (from 56.5 to 19.2 plants/m²). There were 26% fewer spotted knapweed plants than with bio-control insects alone.

Welcome to Flathead Reservation

The Flathead Reservation is comprised of the Bitterroot Salish, the Pend d’Oreille and Kootenai tribes. Aboriginal territory exceeded 20 million acres in present day Idaho, British Columbia and Wyoming. In the 1855 Treaty of Hellgate, the Tribes reserved for their use what is now known as the Flathead Reservation. The reserved lands consist of 1.317 million acres in northwest Montana. The Flathead Reservation overlaps four counties: Missoula, Lake, Sanders and Flathead.

A People of Vision

“Our stories teach us that we must always work for a time when there will be no evil, no racial prejudice, no pollution, when once again everything will be clean and beautiful for the eye to behold—a time when spiritual, physical, mental and social values are inter-connected to form a complete circle.”

Salish Culture Committee

Our mission is to protect, preserve, perpetuate and enhance the language, culture and traditional lifestyles of the Kootenai people.

Kootenai Culture Committee
Flathead Reservation 4-H Mentoring Program

Native American students make up the largest minority group in Montana—about 11 percent. Native students have the lowest high school graduation rate. Two major factors are their lack of social and emotional skills as they navigate the world of academia. Flathead Reservation Extension 4-H began a mentoring program in 2012. The National 4-H Center and the U.S. Department of Justice provide funding for 4-H National Mentoring Programs. The mission of the program is to increase the developmental assets of youth, ages 9-14 and their families. This is accomplished through hands-on activities that support social/emotional skill building, directly resulting in academic competencies.

During the past year 90 mentor-mentee matches participated in 12 months of mentoring. Mentees are in grades K-6 and are recommended to the mentoring program by a school counselor. Mentors are local high school students who complete an application and a review/approval process before being matched with their mentee in a one-on-one relationship. Matches participate in individual and group trainings to expand their knowledge and skills in appropriate relationship building. Forty-five matches met weekly for lunch and skill building activities.

A monthly 4-H club meeting is held in conjunction with a Family Night Out event. The program starts with mentees during after school hours where they engage in 4-H activities. When families arrive, everyone enjoys a complementary supper. Families can participate in family strengthening activities during this time. Areas of focus are: Building Trust, Family Support, Kindness/Community Service, Building Positive Family Communication, Working Together/Problem Solving and Strengthening Family Traditions.

During the past year, mentored youth showed competency increases in both social skills (75%) and emotional competence (70%). Youth also showed academic improvement in at least one subject (14%), two subjects (42%), three subjects (21%) and four or more subjects (23%).

Linking Youth to Environmental Practices using STEM Technologies

With the natural resources on the Flathead Reservation, the need for Native American students in Science, Technology, Engineering and Mathematics (STEM) fields continues to be critical for successful resource stewardship. Three years ago, the Montana 4-H Center for Youth Development received the Children, Youth and Families At Risk (CYFAR) grant. MSU Flathead Reservation Extension, Salish Kootenai College (SKC) and Two Eagle River School (TERS) partnered to support TERS goals to keep high school youth engaged in STEM based careers.

The team introduced video filming opportunities in year three to include field trips to the Ninepipes Reservoir, a tour of prehistoric Lake Missoula, and a two day trip to Bozeman with stops at the historic Butte Mining Museum and the Berkeley Pit. While in Bozeman, youth toured the MSU public television station, Native American Studies building and Museum of the Rockies. Youth took videos along the way, combining knowledge of history and film development.

Films were compiled and polished for a big screen debut and celebration in May at the Johnny Arlee and Vic Charlo Theater. Students honored visiting tribal elders as part of TERS Elders Week by gifting their elders with sweet grass and fresh flowers to support and strengthen the youth cultural and generational connection. Nurturing past and present connections are critical elements to the future success of native youth, and technology binds their success in today’s media world.
Supplemental Nutrition Assistance Education

Supplemental Nutrition Assistance Program Education (SNAP-Ed) addresses Montana’s goals for increasing food security and healthier food choices. Participants learn to choose foods with maximum nutrition at the lowest cost. Impact and data outcome show curriculum is working to improve food insecurity and nutrition in Montana and it will continue to improve as we work with key partners, making changes at the policy, systems and environment level.

On the Flathead Reservation, over 960 students in first, third and fifth grades learned about healthy eating, food safety and physical activity in a series of six lessons. A large percentage of students talked about reducing their intake of soda and other sugar-laden beverages. A fifth grade teacher says she heard her students discussing food labels and sugars in foods. They challenged each other to reduce intake of soda and other sugary drinks.

Both adult participants and youth are encouraged to participate in regular physical activity as well as choosing a variety of foods from the five food groups on MyPlate. This year 70 adults participated in SNAP-Ed classes. Many adults reported making healthy changes in their diets, as well as increasing physical activities.

- A young father says he learned a new way of cooking because of the lessons. He says he grew up eating very fatty, fried foods and always struggled with weight. He says he likes how he’s learned to cook healthy, delicious food with many different vegetables. He says he will continue working on portion control and include vegetables in family meals.

- A third grade student from Arlee reports that her family drastically decreased their sugar consumption. She says, “This program has changed me and my families’ lives. My mom quit buying sugary drinks and we even cut back on other foods with added sugars.”

- As a result of our lessons, a first grade teacher says she noticed even her pickiest students trying new fruits and vegetables at lunch.

Fresh SNAP

Prior to 2013, Supplemental Nutrition Assistance Program (SNAP) recipients were unable to purchase farm fresh produce with SNAP dollars at the Polson Farmers Market. SNAP recipients may spend $10 of their SNAP dollars at the market and receive an additional $10 matching funds to help stretch their food budget at the market. The Fresh SNAP recipients may take a variety of classes. They may learn to harvest and cook a nutritious meal as well as learn methods of food preservation to preserve fresh produce for future use. Participants learn practices that increase their nutrition intake and reduce food insecurity.

Sponsors and coordinators include Polson Farmers Market Co-op, Lake County Community Development Corporation, Salish Kootenai College and Flathead Reservation MSU Extension. Funding for this program is made possible through CSKT Department of Human Resources Development and Town Pump. This program has grown from 31 SNAP recipients (4 repeat customers) and $245 to local growers in 2013 to 53 SNAP recipients (14 repeat customers) and $1,840 to local growers in 2016. In addition, 32 SNAP recipients attended six classes. One SNAP recipient now volunteers for the market and is helping to teach others the benefits of Fresh Snap.

Keeping Food Safe for Montanans

In January, 2015, the Montana Rule for Retail Food Establishments went into effect and included the 2013 Federal Food Code to protect the safety of food for all of Montana and those who visit the Big Sky Country. To support this effort, Flathead Reservation MSU Extension partnered with the Confederated Salish and Kootenai Tribes sanitarian and both Lake County and Lincoln County Environmental Health offices to help license Montana food establishments throughout 2016. Ten eight-hour ServSafe classes were attended by over 250 participants representing a wide variety of individuals interested in keeping food safe, including volunteers, head start, culinary students, coffee shops, churches, K-12 schools, gas stations, lounges and other establishments serving food in their community.
Partnerships and Collaborations
Summertime success on the Flathead Reservation

During the school year, K-12 schools on the Flathead Reservation serve more than half of the student body free and reduced meals. During summer months, families need additional resources. Summer may cause hardships for families who depend on school year organizations to feed and provide supervision for their children. With this in mind, the Flathead Reservation MSU Extension, Friends Forever Mentoring, The Peoples Center and several school district Summer Feeding Programs came together to bring meals and healthy lifestyle activities to children and their families.

Daily programs and activities included four hours of supervision with the opportunity for youth to eat breakfast and lunch. Children and families in attendance enjoyed language learning, cultural arts and traditional games such as shinny, double ball and beading. Summer project leaders also used Science, Technology, Engineering and Math (STEM) curriculum projects to support summer learning.

Over 650 people participated throughout the summer. The partnerships and collaboration was successful in outcomes meeting the needs of children and their families.
Fort Belknap Reservation Embraces Food Sustainability Efforts

The Fort Belknap Reservation covers 650,000 acres of mostly rolling plains in North Central Montana and is home to the Assiniboine and Gros Ventre tribes. With only three towns, Hays, Lodgepole, and Fort Belknap Agency, the population of approximately 3,500 is very rural and access to fresh fruit, vegetables, whole grains and other staples of a good diet is a real concern. MSU Extension’s Federally Recognized Tribes Extension Program (FRTEP) has been a leading partner in the Fort Belknap Sustainable Foods Program (FBSFP). In cooperation with the tribes, successful community gardens have been developed in Hays and Lodgepole. The Wasay Wapka Community Council sponsors a community orchard in Lodgepole, where MSU Extension assisted in planting 72 new fruit trees. MSU faculty mentors individuals and provides tools and resources to create their own raised gardens at home. Through MSU Extension, elders and community partners provide holistic, culturally-based programming that empower families by going back to traditional ways of eating. Families learn to preserve fruits, vegetables and meats while learning about history and growing relationships. Last year more than 1000 pounds of extra vegetables from the gardens were provided at no cost to community members. During 2016, participants in FBSFP indicated they’d like to learn more about how to extend the growing season to produce more fruits and vegetables. MSU Extension staff wrote for and succeeded in earning a First Nations Food Sovereignty Grant of $10,000 to provide additional classes and support in building and utilizing high tunnels and root cellars. The funds will immediately help address the specific needs identified from families within the program, another great example of how MSU Extension’s structure encourages true engagement and local involvement and expertise.

Welcome to Fort Belknap Reservation

A healthy natural environment allows gardens to thrive on the reservation. Extension staff provided education on tools and techniques for gardeners to employ in the development of healthy soils and water sources. Classes on composting, mulching, and the use of organic fertilizers were well-attended.

This frog in Lodgepole provides an indication of a good growing environment!
The Fort Belknap Indian Community’s Nutrition Education Services for Food Distribution Program on Indian Reservations (FDPIR) project provided nutrition education services for 674 FDPIR participants and FDPIR eligible participants. The project has been largely successful, in terms of participation numbers and audience served. Nutrition education and garden education services have been provided to FDPIR participants and FDPIR eligible participants. The communities of the reservation have benefited from the partnerships, education classes, demonstrations, and resources associated with this project.

This project evidenced success in all areas of implementation, largely due to unprecedented participation rates among our community members. Our partnership efforts, classes, demonstrations, and community/resource distribution events were well-attended; participants were eager and interested to learn, share and expand efforts toward the important issues of nutrition, health/wellness, community cohesion and food self-sufficiency. Our goals were met by our frequency, variety, and locality of events.

Of particular note, the participants reported increased confidence in approaching the topics of healthy foods, gardening and community cohesion. This increase in confidence was, to us, a very important step in the educational process. The participants took a genuine and consistent ownership of the project tasks, and eventually began implementing activities without the physical presence of the educators and project staff. We were very encouraged by this shift in confidence, as it allows us to look to future projects with our own sense of confidence in the participants’ ability to “move ahead and beyond”, so to speak, toward more diverse and ambitious learning opportunities.

As we all know, confidence breeds more confidence, and we look forward to building onto participants’ now positive approach to learning with more advanced nutrition related topics and skill building.
4H agricultural, gardening, and nutrition classes were conducted throughout the 2015-2016 school year. Dodson School, Jr. High Science Class dove into vermicomposting, greenhouse gardening and community garden development with fifteen students starting a community garden.

Thirty third and sixth grade Mission Grade School students dug their fingers in the wormy vermicomposting and starter plants. While gardening was taking place during school, healthy cooking classes were offered after school at Hays/Lodgepole High School. The classes averaged 11 students making homemade pies to pizzas.

Head Start preschoolers enjoyed weekly garden classes at the new Hays Community garden while growing their own flowers, carrots and sunflowers.

Horse Play Days were conducted in collaboration with Blue Heaven Harnessing Hope during the months of June-August, averaging 30 youth and family members. Horse Play Days gives new and experienced riders an opportunity to enhance their horsemanship skills on and off the horse.
Fort Belknap MSU Extension conducted educational outreach workshops for local seasoned and potential cattle producers. Fort Belknap Extension co-sponsored with Fort Belknap Livestock Marketing Co-Op and Native American Community Development Corporation, the Rancher’s Roundup during the local Mid-Winter Fair. USDA, Rural Development, Montana Department of Agriculture, NACDC, Tribal Land, NRCS, FSA, and ANC tribal Extension Programs presented to area producers. This workshop brought 10 programs to one place, eliminated travel cost for 15 producers from as far away as Helena. Twenty-one local youth from Hays Lodge Pole High School attended and participated in the Junior Agricultural Loans workshop and learned about the variety of programs to help with starting or continuing the ranching lifestyle.

Fort Belknap MSU Extension collaborated with Fort Belknap Livestock Marketing Co-op to provide economic opportunities to local ranchers and encourage new youth producers. The Montana Department of Agriculture Loan Programs provides opportunities for youth and beginning ranchers to apply for small loans. NACDC and Fort Belknap MSU Extension conducted a Financial Literacy Workshop and Junior Ag Loan Workshop at Hays/Lodge Pole High School. Fifteen students attended and completed the steps to apply for a Junior Agricultural Loan. As a Result, the Extension Agent aided with the completion of two Rural Ag Loans and three Junior Ag Loans, bringing in five new young ranchers with a total of $120,500 in new cattle investment on Fort Belknap.
The purpose of the Federally Recognized Tribes Extension Program (FRTEP) is to support Extension Agents who establish Extension education programs on the Indian Reservation and Tribal jurisdictions of Federally-Recognized Tribes. This was enacted in 1990 by the “Food, Agriculture, Conservation and Trade Act” known more commonly as the Farm Bill.

The mission is to empower individuals and communities to increase economic opportunities and quality of life, improve nutrition and health, and to protect and enhance natural resources and the environment. The FRTEP presence has been with the Poplar-based office since 2000. This is a collaborative effort with the Montana State University-county-based Extension offices, the Fort Peck Community College Tribal Extension Program, and the Fort Peck Tribes. Agriculture, Natural Resources and 4-H Youth Development are what our programs strive to strengthen for our residents.

The Fort Peck Reservation Extension Program aims to address the needs for sustenance of traditional Assiniboine and Sioux values and practices. It also works to teach much needed life skills via 4-H programs to Fort Peck Reservation youth and families. This is needed to create healthy communities, schools, and families across the Fort Peck Reservation where poverty, suicide and school drop-out rates continue to plague Native American families. The program strives to address the need for positive leadership across the reservation.

Welcome to the Fort Peck Reservation

The Fort Peck Reservation is located in the extreme northeast corner of Montana, on the north side of the Missouri River. Poplar is the home to the Tribal Council headquarters. The Fort Peck Reservation is home to two separate Indian nations known as the Assiniboine and Sioux. The reservation is isolated from Montana’s populated areas as well as manufacturing centers, but does border the oil and gas developments. The main economic driver is agriculture. The area is made up of farmers and ranchers, both Native American and non-Native American and the land is rich in natural resources and most recently, oil and gas development. Communities included on the Fort Peck Reservation are Fort Kipp, Brockton, Riverside, Poplar, Wolf Point, Oswego, and Frazer.
Fort Peck Youth and Family Development Activities-non traditional 4-H

The Fort Peck Youth and Family Activities Development committee has been continuing efforts in all of the seven communities across the Fort Peck Reservation. Resources are pooled and gathered to make the greatest impact in schools, after school, and in communities. The committee is made up of youth-serving entities that wish to engage in youth development. The activities strive to reach all of the communities, some indoor and some outdoor. Some of the activities included in this year are craft days, safety days, health fairs, in-school teaching, cooking healthy snacks, demonstrations, and family fun days. Part of the 4-Health curriculum is used for healthy recipes and family activities. One of our focus efforts this year was on fire safety. Fort Peck Housing Authority donated much of the curriculum and equipment to use for teaching about fire safety.

Other traditional 4-H activities included giving poultry, rabbit, and market livestock showmanship demonstrations, clipping demonstrations and instruction, ultrasounding market animals for carcass data, and helping to structure the livestock committee in Roosevelt County. These combined efforts lead to healthier youth who are learning life-long skills they can share with their families.

Renovation of the Fort Peck Reservation Extension Tribal Garden

The Fort Peck Tribes had given the Fort Peck Reservation Extension office use of 99 acres for educational purposes located close to where the Poplar River meets the Missouri River. It has been used for various educational purposes over the years. The only problem with the location was that although it is near a water source, it was not close enough and water still had to be transported for the Tribal Extension Garden. This year the tribes gave another plot of land near the Tribal Building. It had been used many years prior as a garden area and was fenced off, there were remnants of tomato cages, berry bushes, and ground stakes. The water source had not been used in years and was non-working. The Community Services Department donated money to have the well and electrical work repaired since most of the food is donated to their program. It took most of the summer to get it fixed up right, but is now in excellent working order for next year and beyond. The Tribal Extension Garden produces food for community members who cannot grow a garden, or their garden has been compromised from weather. It is an agri-tourism education venture for the area Kindergarten class that is a pumpkin patch, and food is taken to the Community Elder program or local food banks. Over 700 pounds of potatoes are grown from the State Seed Lab, and 200 pumpkins were given to the classes, and over 400 pounds of other produce is raised. The Tribal Garden helps connect community members through volunteer work in the garden and distributions of the bounty.
MonDak Pulse Day -
The International Year of the Pulses

Northeast Montana and Northwest North Dakota collaborate to bring about the MonDak Pulse Day. This year it was held in Wolf Point, in the heart of the Fort Peck Reservation and prime growing conditions for pulse crops. Due to the poor prices of other small grains, pulse crops were an attractive product for producers. We had over 170 participants come to the full day of talks, including Native American farmers and those that lease Tribal lands. Speakers discussed pulse diseases, pulse pitfalls for beginners, weed issues, and the economic outlook. We also had a variety update for any new and upcoming varieties for this area, as well as an industry update. The participants ranged from new growers to seasoned pulse producers. Most of the production represented raising yellow peas, green peas, lentils, and chickpeas. There was a significant increase in knowledge learned about weed and disease issues, and over 88% of participants responded that they would incorporate pulse day learning in their operation. There was also a trade show that allowed farmers to interact with other growers and industry sponsors. Additionally, there were many samples of items made from pulse crops to try out at the event.

Crop scouting throughout the Fort Peck Reservation

Many of the calls on the Fort Peck Reservation are to look at a crop that has been damaged by hail, disease, or weed pressure. One of the monitoring projects that the Fort Peck Reservation takes part in is the Orange Wheat Blossom Midge statewide monitoring project. Insect traps are set out in co-operators fields to monitor population. Routinely the number of orange-looking insects are counted and posted on the statewide pestweb website to let others in an area know. During the prime flying time, it has been noted that the OWBM are prevalent on the Fort Peck Reservation, and in variable quantities. Weather-related activities had no effect, as all fields represented had some portion of activity in the traps. The economic threshold was reached to make the decision to do something about the midget, however the unknown factor was whether the natural predator M penetrans, minimized the economic impact. These natural predator insects were collected in sweep nets to determine their counts. Other crop scouting activities were conducted during the summer as well. There are several crops grown on the fort Peck Reservation, therefore, lots of diseases and pests are monitored. Weather also creates problems with crops. Several hail storms have done as much economic damage as other pests. The agent continues to work on monitoring activity and helping producers respond to challenges so they can remain successful.
Progressive Agriculture Safety Day
Becoming safer students and members of the Agriculture community and the Fort Peck Reservation

The Progressive Agriculture Safety Day has served over 1.5 million children and adults in its mission to promote safety in our rural landscape. It is a day for fun combining education with 100% hands-on activities. The Fort Peck Reservation and surrounding area is very rural and students can be as far as three-plus generations removed from agriculture. Programs like this are vital to remind younger generations to play it safe at farm operations. The safety day was held in this year in Froid school. Over 110 students and 16 volunteers participated. The school chose programs on Grain, Chemical, Fire, Pipeline, Food, Water Safety, Sun, PTO, and Bike Safety. A full scale 811 pipeline call was simulated on the school grounds to teach what can be underground. These programs come from the Progressive Agriculture Safety Day Curriculum which also sponsors the t-shirts and insurance to hold a Safety Day. Participants were all given t-shirts to wear, and bags filled with donated safety materials from Tribal departments, local businesses, the Fort Peck Reservation Extension Office, Fort Peck Housing youth activities, and many more. Participants were fitted with bicycle helmets at the end of the day.

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
The Gallatin County Extension office had many exciting changes this year. We moved into a new home and welcomed new employees.

Our office has been searching for new space for about three years as we had outgrown our old office. Thanks to the generous support of the Gallatin County commissioners we are happy to have settled back into the building on the Gallatin Fairgrounds known as the Ag Center. We now share the building with the Gallatin County Weed Department. This arrangement is convenient for clients that visit both of our offices. One trip can be made to reach more expertise and assistance.

Our office also welcomed three new staff members this year. Danielle Jones works one quarter time for Extension and three quarter time for the Weed District. Her Extension responsibilities focus on grant management and financial management.

Katie Robertson joined us in August as the SNAP-Ed Program Manager. SNAP-Ed is an evidence-based program that helps people lead healthier lives. She teaches free adult and youth nutrition curriculum to those eligible for SNAP and other assistance programs.

Ted Baker joined us in October as the 4-H mentoring manager. He works with Big Brothers Big Sisters, Greater Gallatin United Way and other local schools to provide educational opportunities for youth.

We are excited for the capacity our new office allows, including a large conference room for meetings. Our staff is fully equipped to meet our growing community needs; come visit us at 903 N. Black in Bozeman for a tour.

The new location of MSU Extension in Gallatin County on the Gallatin County Fairgrounds.

Expanding Capacity to Meet Community Needs

The 2016 MSU Extension intern in the Gallatin County Extension office was Jaylelyn Ruckman. She is studying Animal Science at the University of Wyoming in Casper and interested in becoming an Extension agent. Born and raised in Montana, she was familiar with Extension in the state and excited to experience the behind the scenes work of an Extension office.

Ruckman worked with Agriculture Agent Emily Lockard at various events and was able to interact with other county agents and broaden her knowledge in the agriculture field. The weekly plant clinic held in our office showed her what plant problems Gallatin County residents are dealing with. Ruckman enjoyed property site visits. The interaction of Lockard and the landowners was very educational, giving Ruckman the opportunity to learn more in the field than from a classroom setting.

Ruckman was a little apprehensive about working in Natural Resources, but Brad Bauer gave Ruckman a broad experience. With a little training, Bauer was able to help Ruckman understand more about hazardous fuel management and the importance of wetlands. Ruckman was able to take this knowledge and share it as Extension works to help landowners manage their resources. Again, on site visits, Ruckman learned more than she expected including; correct forest management, types of trees and forest, and also about plants and pests. Each visit was a different experience, and because of Bauer’s patience she gained knowledge to help others in the future.

As an eleven year 4-H member, Ruckman felt most experienced in the 4-H and youth development program. Kelton Jensen always looks forward to the assistance of an intern during the busy summer fair season.

In addition to working with Jensen, Ruckman also worked with Hayley White, the former 4-H mentoring coordinator. Together they held multiple day camps, assisted with 4-H summer camp, attended State 4-H Congress, and the Gallatin County Fair.

An Intern’s Story

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See Intern, continued on page 3.
4-H Program Overview

The Gallatin County 4-H program continues to grow and adapt to fit the needs of Gallatin County youth. Enrollment was up slightly from the year before to 639 youth members and 130 adult volunteers. Shooting sports, Swine, Robotics, Horse and Dog continue to be the most popular projects.

Gallatin County Extension this year focused on helping new families navigate their first year in 4-H with greater ease. By hosting workshops and informational Q&A type sessions, new families have more information about what to expect and the life skills that 4-H is providing their youth. 4-H leaders have also had the opportunity to attend workshops on topics related to welcoming new families. As youth join from families without 4-H experience, educating the entire family on the values of 4-H became a priority.

Recruiting and training volunteers is essential to continue the growth of the 4-H program in Gallatin County. New volunteer orientations and volunteer workshops are offered to ensure volunteers are receiving training on positive youth development topics. Volunteer development will continue to be a top priority for Gallatin County Extension.

Gearing up for Centennial in 2017

Gallatin County is excited to celebrate 100 years of 4-H in Gallatin County in 2017. In 1917 the Gallatin County Pig Club under the direction of W.J. Hartman was started and the swine were exhibited at the Gallatin County Fair.

Gallatin County 4-H has come a long ways in 100 years. In 1917 the Pig Club was just for boys. Now more girls participate in 4-H projects than boys. Gallatin County 4-H will work with youth members and volunteers to connect with our past as we look forward to another 100 years.

Silent Auction at 4-H Market Sale

The 4-H & FFA Market Livestock Sale is a tradition when it comes to the fair and 4-H. Gallatin County 4-H has tremendous community support at the market livestock sale. A silent auction was added as a new opportunity for buyers to bid on indoor projects that were made by 4-H youth.

Youth in projects such as photography, woodworking, cooking, and sewing now get to showcase their talents and sell one item of their choice. The youth that participate in the indoor projects work very hard learning their craft. Items sold included a wooden chest, framed photographs, a table runner and a cake.

Each youth included a short introduction about their project and their participation in 4-H for the buyers to read while bidding. One unexpected outcome was educating the buyers about the different opportunities that 4-H has to offer. One buyer said “I had no idea kids could do all that in 4-H”. The silent auction was a great success and the program looks to build upon that success for next year.

Leaders Appreciation Dinner

4-H relies on volunteer leaders to lead it’s many clubs and programs. Thanking volunteers and letting them know they are appreciated is very important. The Gallatin County Unlimited Leaders Council and the Extension Office put on a Leaders Appreciation Dinner to thank all the volunteers for their service to 4-H. The dinner provides a chance to recognize many of our volunteers with county and regional awards they have earned. The Friends of 4-H Award was awarded to community members in recognition of their support of Gallatin County 4-H. Big Sky Archery, Gallatin Valley Back Country Horsemen and Nancy Ferrier were awarded the Gallatin County Friends of 4-H Award.

Leaders and community members who attended the dinner enjoyed the evening and recommended the dinner become an annual event that all volunteer leaders should attend.

Gallatin County 4-H Delegation at Montana State 4-H Congress in 1955. Congress is held each year on the Montana State University Campus
4-H Newsletter Wins Regional Award
4-H Agent Kelton Jensen and JaNaie’ Veca won the Western Region Communication Award for the ‘Clover Post’ monthly newsletter. The award is sponsored by NAE4-HA (National Association of Extension 4-H Agents). State award winners in each category compete at the regional level, and Jensen and Veca were one of four finalists for the national award.

The ‘Clover Post’ is a monthly newsletter sent to all 4-H families in Gallatin County. Jensen highlights different youth development topics for the front page. Veca works closely with volunteers to ensure families receive all the information needed for their clubs and projects. Jensen and Veca take great pride in developing a newsletter serves Gallatin County 4-H well.

Gallatin County 4-H Mentor Partnership
The 4-H Mentoring program partners with several community organizations to bring 4-H programming to students who wouldn't be exposed otherwise. Current partnerships include the Greater Gallatin United Way (GGUW), within their kidsLINK after school programs in two schools in the Gallatin Valley; and the Big Brothers, Big Sisters of Gallatin County (BBBS), to provide their Bigs and Littles with Family Night Out experiences. Gallatin County 4-H has additional plans to provide school enrichment programs for local schools.

The after school program at Belgrade Middle School is flourishing with strong student turn out. Typically serving 10-20 students daily, the program provides opportunities to complete homework, participate in craft projects or compete in outdoor activities. Twice a week, Montana State University Pre-Service Teachers host book and tech clubs where students are afforded the opportunity to learn new and exciting curriculum from young people in our local community.

Program accomplishments over the past year:
- These programs allow over 375 youth to engage in learning, skill development, character building, and community engagement - free of cost.
- Evaluations show all youth have an increase in self-confidence and an improved outlook on life. They make more positive choices after enrollment in the program.

Summer Day Camps
Gallatin County 4-H launched a new summer day camp program during the summer of 2016. The camps were coordinated by Hayley White, the 4-H Mentor Coordinator. The camps helped fill the need for affordable summer activities in Gallatin County, especially in Belgrade. Camps were held in both Bozeman and Belgrade and participants ranged in ages from 5-12.

Keeping the cost low was a priority with most camps costing between 12 to 20 dollars. Available scholarships made sure no youth were unable to participate due to cost. The camps covered a variety of topics from robotics, basketball, and cooking to natural resources. Camps were connected to a 4-H project that would allow the youth to continue their interest by joining the related 4-H project.

Intern

Continued from page 1.
Ruckman’s main job within 4-H was to assist in preparation for fair: with 4-H fair entries, record book interviews, setting up the 4-H promotional booth, and coordinating 4-H fair events. The fair has very long days, but it was some of the most rewarding time of the internship. Even with her 4-H experience, she was surprised at all the time put in by Jensen and volunteers to make each event successful. By including Ruckman in decisions and meetings, she was better able to understand the everyday work of 4-H agents.

In addition to the work of the agents, Ruckman worked with support staff member, JaNaie’ Veca. Working with Veca, Ruckman learned about all parts of a successful Extension team.

The internship offered real job experience for Ruckman to use as she continues her education. She said she hopes to make a personal impact for community members much like all the staff in the Gallatin County Extension Office.
Program Areas and Capacity

The Natural Resource Program works in several program areas that have been developed primarily through grant funding. Additionally, in-kind support has come from MSU, MSU Extension, Gallatin County, and community volunteers. The program strives to meet areas of need within the community while also developing the required funding capacity. The majority of funding has been project specific which has precluded the development of several program areas. Funding requests in the form of grant proposals and foundation solicitation have been developed for these additional areas.

This year the program focused on several project areas, including: (a) assisting private landowners manage their forest to improve forest health and reduce wildfire risk, (b) supporting the State of Montana efforts to monitor the extent and scope of aquatic invasive species, (c) improving our management and understanding of our high elevation forest, (d) monitoring the condition and function of our wetlands, and (e) developing climate science education and tools.

This year we supported two Natural Resource temporary positions. One of these positions was an MSU intern, while the other was an educator. The two positions worked in the same programmatic area with distinct roles. Their dedication and skill greatly improved the programs capacity and developed an extensive network of volunteers which we hope to continue to engage.

Program Area’s Abstract

(A) Assist Private Landowners—provide technical assistance and cost share to manage private forest across Big Sky and the Bridger/Bangtail mountains. This consisted of one-on-one consultation with property owners/managers, the development of forest management plans, and the delivery of cost share funds to help private landowners manage the health of their forest while reducing the risk of wildfire.

(B) Aquatic Invasive Monitoring—monitor portions of the Missouri River, Fishing Access Points, and several lakes for the presence of aquatic invasive species. This consisted of surveying miles of rivers, lakes, and ponds for the presence of aquatic invasive species. Additionally, outreach focused on community events and social media.

(C) High Elevation Forest—work with Big Sky to form a working group and develop project capacity to address the declining condition of whitebark pine. This consisted of contracting a local partner to develop prioritization for land conservation in Big Sky with an eye towards reducing human/wildlife conflict.

(D) Wetland Monitoring—implement a monitoring tool to capture the long term trend in wetland condition and function in Gallatin County. This consisted of engaging community members and citizen scientists to collect information regarding wetland condition and function. Additionally, outreach focused on community events, tours, hikes, public presentations, newspaper articles, social media, and education materials.

(E) Climate Science—work with Extension Faculty at a statewide and regional level to improve climate science outreach and education. This consisted of working with Extension faculty and partners on the development of outreach and education events and materials for use to communicating climate science and adaptation.
A Volunteer Coordinator’s Experience

Evan Barrientos spent the summer recruiting and training volunteers for Wetland Environment Teams (WET).

I was drawn to this position by the potential to engage people in natural resource management through hands-on experience. In my eyes, raising public understanding is the most impactful way to address these natural resource issues. Coordinating volunteers for WET showed a new and exciting way to do this through citizen science.

Volunteer programs provide excellent opportunities to connect people to local issues, raise community support for them, and provide personal learning experiences, all while increasing an organization’s capacity. As a volunteer, you see first-hand the realities of an issue, get connected to people working to resolve it, and learn new skills.

During my time with MSU Extension I conducted dozens of wetland surveys in order to prepare the protocol for volunteers. Already very familiar with natural resource management and conservation, the surveys still changed the way I look at a landscape. For example, when looking at a road, I now can’t help but visualize the flow of water that it blocks, redirects, and channelizes through a culvert, likely adding sediment in the process. After training 24 volunteers, leading six hikes, giving four presentations, writing nine blog posts, and creating a wetland video series, I could recite the values of wetlands in my sleep. But what mattered to me most was seeing other people learn these things too.

Our volunteers were students, parents, professionals, and retirees, but they all brought enthusiasm to the project. These people enjoyed spending three hours in a wetland completing a complicated survey, and I think that the beauty of the survey is that it helps people see and think about things that they wouldn’t normally. Most residents love Gallatin County and they want to do something good for it. Wetlands Environment Teams and its volunteers have created an excellent way for Extension to serve Gallatin County’s residents and for residents to serve the county.

A Summer Technician’s Experience

Savanna Stendahl spent the summer on various projects. Her work with aquatic invasive species was supported by a DNRC Aquatic Invasive Species Grant. The project worked within areas identified by Montana Fish, Wildlife and Parks as priority survey areas. Known populations of aquatic invasive species species have been located in and adjacent to the region. Prevention and early detection and rapid response (EDRR) are important tools in controlling populations of aquatic invasive species (AIS).

Through this grant she surveyed portions of the Missouri and Madison Rivers. The Missouri River was surveyed from Toston Dam to Indian Flats (22 miles) and the Madison River from Raynold’s Pass Fishing Access to Valley Garden Fishing Access (49 miles). Additionally, Ruby Reservoir, Quake Lake and a series of ponds in Bozeman, Belgrade, and Big Sky were surveyed. Savanna surveyed for Eurasian watermilfoil, curly leaf pondweed, zebra mussel, quagga mussel, and New Zealand Mudsnail.

“Many of the boat launches were full of other boaters. Many boaters would ask us what we were doing when we were looking for New Zealand Mudsnails off the ramps. It was interesting how concerned many of the fellow boaters were, yet I rarely saw anyone actually checking their boats for hitchhiker weeds. Many invasive weeds can survive days out of the water and don’t need much to set up roots in new areas underlining the importance of checking your boats each time you take them out and put them in the water.”
Agriculture

One of the most enjoyable teaching experiences for Agriculture Agent Emily Lockard was when she led a Rangeland Plant Identification walk. Extension partnered with Gallatin Valley Land Trust on their Discovery Walk series to use local trails as a place for fun educational walks. Over 20 individuals came on the walk to learn how to identify grasses, forbs and shrubs. Lockard identified plants, spoke about grazing management, the value of different plants for natural ecosystem value as well as grazing value.

New and beginning farmers are important to agriculture in Gallatin County as the average age of farmers and ranchers continues to increase. To meet the needs of these new farmers and ranchers, for the second year, Lockard offered workshops based on the Planning for On-Farm Success workbook. Three separate workshops were offered: financial management; marketing and land access; and financing and land access. Participants gained tools to help create agricultural business plans. They also became more connected to local resources that can assist them as they develop and manage their agricultural businesses.

Working with the Gallatin County Weed Department, Lockard finalized two Noxious Weed Trust Fund Grants to help control noxious weeds on private land. Two areas were identified to contain noxious weeds, and with willing participants we were able to help landowners start or expand their current control efforts.

Yearly workshops and gatherings continue to be popular events. The annual Crop School has an attendance of 80, the Beef Producers Educational meeting also has an attendance of 80, the Beef Producers Annual Banquet tops out at 220 and the Annual Beef Producers and Farm Bureau Summer Picnic rounds out at 40. Producers hear presentations such as this summer’s talk by Rachel Endecott, Beef Extension Specialist on the Veterinary Feed Directive. These important events help producers receive the information they need to improve their management.
Small Acreage

The growing demographic of small acreage management is a large part of the job in Gallatin County. Working with Natural Resources Extension Agent Brad Bauer, Lockard organized the third annual small acreage management course facilitated by the Gallatin Extension office. With 20 participants, it was the largest class to date. Speakers were brought in from MSU Extension, Gallatin County Weed District, Department of Natural Resources and Conservation, Natural Resources and Conservation Service, Fish Wildlife and Parks, and the Gallatin Local Water District. Participants learn methods for managing their land, resources that can help them accomplish goals, and how to create a management plan for their property. On the final night they presented their management plans. Many follow-up after the class by requesting a site visit from Lockard or Bauer. While Lockard and Bauer both perform many small acreage site visits to those that haven’t attended a class, the class gives a multidimensional education to those that wish to actively manage their land.

Master Gardener Classes

Master Gardener classes in Gallatin County continue to be very popular. Nearly 100 participants in the Level 1 and Level 2 classes performed volunteer work in the community. Volunteer opportunities include the Master Gardener booth on Saturdays at the Gallatin Valley Farmers Market, working with local non-profits to design and maintain their gardens, assisting with workshops and helping to maintain educational gardens.

Plant Clinic

This year, funding allows us to hire part-time staff to work at the Gallatin Extension office Plant Clinic. Dara Palmer, Assistant Master Gardener coordinator, worked Tuesday and Thursday afternoons in the Gallatin County Extension office. Palmer answered phone calls, assisted walk in clients, responded to questions via email and helped to facilitate five workshops. The workshops held this summer helped to supplement knowledge of Master Gardeners and other clients to improve their horticulture skills.

Canning Classes

This year we held three canning workshops: hot water bath canning; pressure canning; and drying and freezing preservation. Partnering with the MSU Dietetic Internship program for the second year was very successful. With 25 participants in the workshops, we were able to promote safe preservation of local foods while offering teaching experience to the dietetic interns.
Adult Education Series: Eating Smart, Being Active

The SNAP-Ed program provides lessons to adults as well as youth on understanding MyPlate (the nutrition guidelines set by the USDA) and physical activity. The goal of the program is to not only to provide direct education, but also to create community environments where making the healthy choice is the easy choice. Working with committees and schools, the program manager provides knowledge and assistance to address the needs of low-income populations. They will continue to work toward fostering healthy environments where those on a budget work, play, eat, learn, live, and shop. The program devotes time towards meeting with services around town that are already serving this population and collaborating to bring the educational series to them. With specialized lessons and teaching tools, the program manager travels to multiple locations for recruiting and teaching.

The adult curriculum includes ways to plan and shop for a healthy, balanced diet while on a budget. Classes have been held at the Bozeman Senior Center, Community Café, and various other locations throughout Gallatin and Park Counties. The lessons include information on nutrition facts label reading, identifying whole grains, and why each food group is so important. With continued community interest, the program manager continues to provide adult education in Gallatin and Park Counties.

Online Resources

Please check out the website BuyEatLiveBetter.org for recipes, meal planning tips, and physical activity ideas, as well as the information to sign up for local, public classes. A Facebook Page and Pinterest have been added this year to provide digital content, especially to those who have completed the class, and want a consistent source of research-based information about eating and living healthy.

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Daily, MSU Extension exists to serve the needs of Glacier County residents through education in agriculture, 4-H and youth, and family and consumer sciences. The ability to educate and respond to the local needs is due to support from MSU Extension and Glacier County.

There have been numerous partners in the success of MSU Extension in Glacier County this past year. With the local Farm Service Agency (FSA), Marias River Livestock Association, and Front Range Counties Farm Bureau, the 2016 Montana’s Next Generation conference drew over 250 participants to engage in production workshops and succession planning for the farm and ranch. In partnership with the Glacier County FSA, 20 farmers, ranchers, and small business owners developed their proficiency in Quicken and Microsoft Excel. In partnership with the Glacier County Library, nearly 20 residents attended the ‘Tech Savvy Tuesdays’ series, developing basic computer technology skills over the four-class series.

On the agricultural front, Glacier County Extension partnered with Montana Department of Agriculture and Blackfeet Community College to offer pesticide education and trainings on the Blackfeet Indian Reservation.

Through partnerships with the Glacier County Conservation District, 100 youth learned about soils, grazing management, and weed identification through two workshops.

Glacier County EMS, along with financial support from CHS, Albertsons, Norman’s Outdoor Sport, and Glacier Community Health Center, provided 25 4-H youth with an outdoor safety kit and training of safety and first aid when exploring the outdoors. Officers from the Cut Bank Police Department and Glacier County Sheriff’s Office met with 30 4-H youth to teach them about law enforcement and how the police and sheriffs are available to assist them.
Glacier County sends three delegates to Montana 4-H Congress

For the first time in several years, Glacier County sent three 4-H youth to the Montana 4-H Congress in Bozeman in early July. Sarah Thies and Myla Cundall competed in the Fashion Revue while Sienna Cundall competed in Horse Judging. Following their competitions, these 4-H youth participated in leadership and career workshops throughout the week.

Myla Cundall, a first year sewing member, was the runner-up in the Fashion Revue, in her first debut at the contest. At the closing banquet, Sarah Thies was announced as a state award winner in the Sheep project, earning her a trip to the National 4-H Congress in Atlanta, Georgia over Thanksgiving break. Sarah has been extremely active in the sheep project both in breeding and market projects, in addition to organizing multiple learning opportunities for younger members.

Glacier County hosts ‘Down on the Farm,’ Cloverbud Day Camp

Glacier County boasted nearly 20 enthusiastic Cloverbud youth this past year. To cap off their year, a Cloverbud day camp was held in June with Toole, Liberty, and Pondera counties invited. At the ‘Down on the Farm,’ day camp, which 17 youth from three counties attended, Cloverbuds completed multiple activities with help from older 4-H members. Cloverbuds made their own lunch including pigs in a blanket and fruit kabobs, decorated paper bag puppets, made homemade butter in a jar, planted flowers in a jar they decorated themselves, and created their own ‘stick horses’ out of swimming pool noodles. One highlight of the day was a visit from Sarah Thies and her market sheep, which exposed the Cloverbuds to a potential 4-H project when they reach 4-H age. By day’s end, Cloverbuds had multiple exhibits for the Marias Fair and were able to develop friendships with Cloverbuds from other counties. In addition, seven 4-H youth developed their leadership skills during the day camp and provided a positive influence for the Cloverbud members.

Glacier County 4-H

By the numbers

$532,784 Gross total on 148 head sold at four county Marias Fair livestock auction, illustrating the tremendous local support for 4-H

78 4-H members (18 Cloverbuds) enrolled in four 4-H clubs and one Cloverbud group

20 Project oriented workshops taught by leaders and agents in sewing, leathercraft, livestock judging, showmanship, cake decorating, etc.

25 Youth received outdoor survival kits and training on first aid from Glacier County EMS

17 Cloverbuds from three counties participated in a Cloverbud Day camp in Cut Bank

11 4-Hers attended Multi-County 4-H camp, including two youth who served as camp counselors to develop their leadership skills

3 Youth attended Montana 4-H Congress in Bozeman, the first Glacier County delegates in several years
Gopher and Ground Squirrel Control Methods Demonstrated

Glacier county producers have experienced significant crop and pasture damage in recent years from gophers and ground squirrels. In response to this damage, Dr. Stephen Vantassel, Montana Department of Ag Vertebrate Pest Specialist, presented a workshop in late May on management and control methods of these species. The workshop drew 31 producers from five counties and the Blackfeet Indian Reservation who collectively manage over 125,000 acres. Participants ranked the impact to their operation in the last year from gophers and ground squirrels as Extremely High Damage (18%), High Damage (50%), and Some Damage (32%). Monetary loss in the last year due to gopher and ground squirrel damage was estimated at close to $235,000 collectively, with many producers not quantifying the loss but simply stating there has been, ‘lots of damage.

Participants learned how to identify damage from Richardson or Columbian ground squirrels or pocket gophers, and control techniques for each species. Following a classroom discussion, participants moved to a local wheat field where they identified damage in the field and were also able to practice applying various control methods that Dr. Vantassel demonstrated.

As a result of the workshop, numerous producers said they learned how to correctly apply bait applicant, what to do and not do regarding control, the importance of prebaiting, the correct timing for applications, and the importance of reading the label. Many producers said following the workshop, they plan to begin using control methods earlier in the spring and to use bait stations for increased success.

During the workshop, there was discussion on the need for research on large scale broadcast applications of zinc phosphide to provide effective control in large fields. As a result, research is planned for Spring, 2017, to investigate the efficacy of broadcasting zinc phosphide in chem-fallow fields.

Succession planning and production education focus of Next Generation Conference

The 2016 Montana’s Next Generation Conference, of which Glacier County MSU Extension was an organizing sponsor, drew nearly 250 producers from multiple Montana counties for two days of succession planning and production workshops. Kevin Spafford of Legacy by Design walked families through succession planning the first day. The second day featured 36 production workshops which covered crops, livestock, succession planning, business and financial management. To conclude the day, three local crops and three local livestock producers were featured on the ‘Hot Seat’ where they shared a success story from their operation. These ‘Hot Seat’ topics ranged from intensive grazing management to crossbreeding to using bulls that had been HD50K tested to growing pulse crops or balancing a family operation with an outside partnership.

A new feature of the 2016 conference was follow-up succession planning sessions for nine families two weeks after the conference. At this session, families had the opportunity to meet both with Dr. Marsha Goetting, MSU Extension Family Economics specialist, and an industry professional (accountant, lawyer, or succession specialist) to begin succession planning for their farm or ranch.

Pesticide education offered through three workshops

With 2016 being the start of a new pesticide cycle for Region 3, there was much interest in an initial certification class. A private pesticide applicator training in February attracted nearly 50 participants from seven counties and the Blackfeet Reservation to learn how to read a pesticide label, calibrate boom and backpack sprayers, pesticide safety, proper equipment, etc. Following a presentation in Browning regarding the private and commercial pesticide programs, a request was made for pesticide education through the Blackfeet Community College (BCC). In partnership with BCC and Montana Department of Agriculture (MDA), one day of initial private pesticide applicator training was organized followed by a commercial training. The initial private applicator training resulted in seven new private pesticide applicators being certified and five producers receiving recertification credits, with a request for follow-up education through BCC in the spring.
Glacier County MSU Extension’s focus on technology
Quicken, Excel, and Tech Savvy Tuesdays featured

Responding to the needs of local clientele is a crucial component of MSU Extension, and what sparked numerous technology related classes in 2016. One consistent comment following the Next Generation Conference was that producers wanted more hands-on practice learning to track their finances and developing a bookkeeping system. As a result, Glacier County MSU Extension and Glacier County FSA teamed up to offer four classes of Quicken for the Farm, Ranch, or Small Business. Each hour and a half long class allowed participants hands-on practice through a Quicken installed laptop. Participants learned how to categorize their expenses for tax and budgeting purposes, how to download bank statements into Quicken to expedite the bookkeeping process, and how to summarize their data into a useful format for their banker. Following the Quicken series, two Microsoft Excel classes were offered which helped participants learn to write formulas to summarize their production data.

This fall, Glacier County MSU Extension partnered with the Glacier County Library and their Teen Advisory Group (TAG) members to offer four weeks of ‘Tech Savvy Tuesdays,’ with two class sessions each week due to the large demand for the class. Through the classes, 20 participants learned to effectively and safely search the internet, download and edit documents and pictures, format documents in Microsoft Word, navigate Facebook, and identify phishing schemes. Each class session demonstrated a topic and then included hands-on practice with additional one-on-one help from Extension, TAG members, and library staff.

Highlights from the class included:

• One participant said because of the class she had been able to download, complete, and e-mail in an insurance claim form which she would not have been able to do prior to the class.
• One participant planned to use the library more for continued help and access to computers
• One participant created an e-mail account
• One participant organized family pictures on their computer

By partnering with the Glacier County Library’s Teen Advisory Group (TAG), class participants were able to receive one-on-one help and TAG members developed their leadership skills.

Skill Knowledge Before and After
Tech Savvy Tuesdays

<table>
<thead>
<tr>
<th>Skill</th>
<th>Before</th>
<th>After</th>
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</thead>
<tbody>
<tr>
<td>File Organization</td>
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<td>5</td>
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<tr>
<td>Phishing Scams</td>
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</tr>
<tr>
<td>Picture Formatting</td>
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<td>5</td>
</tr>
<tr>
<td>Document Formatting</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

By partnering with the Glacier County Library’s Teen Advisory Group (TAG), class participants were able to receive one-on-one help and TAG members developed their leadership skills.

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Return on Investment

MSU Extension Agents Katrin Finch and Nicole Gray extend gratitude and appreciation to the Hill County Commission and Hill County constituents that support the Hill County MSU Extension Office. MSU Extension would also like to recognize all the volunteers and participants that utilize and share the information provided through Hill County MSU Extension.

The education and resources provided to Hill County comes from tri-funded support between county, state, and federal governments. The county provides almost 40% funding, state almost 40% funding, and federal about 20% funding. This support provides Hill County MSU Extension with resources to provide pertinent, unbiased, research-based information and programs.

Hill County Quick Stats

- 16,596 population
- 2,916 square miles
- Median age: 34 years old
- Median Household Income: $43,509
- #1 Economic Driver: Agriculture
- Rocky Boy Indian Reservation population of 3,323 residents
- Top 3 Employers: U. S. Border Patrol, BNSF Railroad, healthcare and education

Hill County MSU Extension By the Numbers

- 24 new private applicators earned certification
- 150 crop samples received from Hill County producers
- $20 Fast from Freezer class weekly grocery savings per family
- Eight lives saved through proper canning procedure recommendations

Contact Us

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Agriculture in Hill County

The 2016 growing year was unusual for Hill County producers. A mild winter with an early spring presented some challenges for producers. Continued unexpected growing conditions from the year before caused a large increase in insect populations that affected cereal crops.

Wheat Streak Mosaic Virus (WSMV)

- Hill County ranks second in Winter Wheat and third in Spring Wheat
- It is estimated that 60% of winter wheat had different levels of WSMV infection
- Over 70 samples sent to Schutter Diagnostic Lab for tests
- Over 70 producers attended an in-field presentation in Hingham from five counties with Mary Burrows, MSU Plant Pathologist Specialist
- 122 producers attended the MSU Northern Agricultural Research Center field day. Nicole Gray, Hill County MSU Extension Agent gave a WSMV and insect update during the cereals tour
- Third party recommended crop termination
- MSU Extension recommendation on average saved producers $14,169.60 per farm
- Estimated 24 farmers who contacted MSU Extension in May applied glyphosate a week prior to planted and delayed planting winter wheat by at least 3 days

Nitrate Quick Test

Cattle nutrition is a key component of any ranching operation. Proper cattle nutrition can improve breeding potential, increase weaning weights, and improve calf health. The majority of a beef cow’s nutrition comes from forages. Therefore, it is in the rancher’s interest to implement best management practices while haying or purchasing hay. The Hill County Extension Office assists producers with implementing best management practices through numerous methods including the Nitrate Quick Tests that help detect the presence of nitrates. High amounts of nitrates in a cow’s diet can lead to poor appetite, slow growth, and potential abortion. Over 50% of nitrate tests were positive for the presence of nitrates. Samples that were quantitatively tested for nitrates gave producers an option to utilize these forages through ration balancing. The Hill County Extension Office worked with these four ranches that had high presence of nitrates to safely feed cattle.

Nitrate Test Savings for Producers

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of losing 1 calf</td>
<td>$690</td>
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<tr>
<td>Safe hay to mix (20 tons)</td>
<td>$3,500</td>
</tr>
<tr>
<td>Total cost</td>
<td>$4,190</td>
</tr>
</tbody>
</table>

Calving is an important time of year for ranchers.
Family and Consumer Sciences Education

Serving Safe Food for All

The CDC estimates that one in six Americans receive treatment from a foodborne illness each year. In a continued effort to reduce the occurrence of foodborne illnesses providing food safety education has been an important piece of programming in Hill County. Individuals from health care, churches, and a variety of other small establishments participated and received their Food Handler certification.

- 181 people were provided Food Safety Education throughout the year.
- 48 Hill and Blaine County participants took the 8-hour ServSafe® Food Manager certification class
- 38 completed their 8-hour ServSafe® Food Manager certifications.
- 75 4-hour ServSafe® Food Handler class participants
- 69 High School Students earned ServSafe® Food Handler certification.

Saving One Penny at a Time

Determined in the 2015 needs assessment, financial management is a major concern for Hill County individuals. In April of 2016, Katrin Finch of Hill County MSU Extension teamed together with a consumer loan banker to provide a three-week financial series. The educational series highlighted spending plans, development of a budget, determining net income, emergency savings, types of credit, credit scores and home loans. While the focus was to provide tools to advance individuals financial situation, attention was also brought to record keeping. Record keeping is a lost art as we move into a digital age. Participants were encouraged to use the “Track’n Your Savings Register” supplied by MSU Extension. After attending this class one participant said “I did not realize how many different things go into calculating my credit score.”

- 80% of participants reported taking active steps to improve credit scores (ie: submitting on time payments, not utilizing the maximum spending limit, reviewing credit scores)
- 75% of participants reported establishing an emergency savings account

Community through Cooking

Nothing tastes better than a home cooked meal after a long day at work. A group of 12 individuals attended the “Fast From the Freezer” workshop to reduce the occurrences of eating out in their households. This class provided nutrition information about home-cooked meals, tools and tips for freezer meals, and how to keep food safe in household. Participants also learned about the cost of “pre-made” meals can cost more than buying separate ingredients to make the same meal at home.

- Eight meals for 12 different households in less than three hours
- Average savings of $20 on bi-monthly grocery bill

One participant said “it is so nice to be able to spend more time with family and less time in the kitchen during the busy week days.” Another stated “as a result of this class, our family has started making seven to ten meals every Sunday afternoon.” The importance of family meal time provides time to visit, create tradition and provides time to slow down from our busy lives.
“Making the Best Better” with Hill County 4-H

Hill County 4-H

- 142 Youth Participants
- 60 Adult Leaders
- Top three projects: Beef, Swine, and Photography
- Five youth participated in State Recreational Lab
- Two members participated in the Make It With Wool Contest
- 2 members participated in the NILE

Exchange Trip to Dawes County, Nebraska

Twelve Senior members and three adult chaperones of the Hill County 4-H Program traveled to Dawes County, Nebraska. This was part of the Interstate Exchange program. This program’s purpose is to educate youth for global living in an ever-changing world. The group traveled to a uranium plant, the fur trade museum, and among other adventures, visited Mount Rushmore in Rapid City, South Dakota, before they headed home. This coming summer Hill County 4-H members plan to share the treasures of Montana with the Dawes County 4-H.

SNAP Education in Hill County

On average one in nine Montanans face food insecurity or hunger. In an effort to help the individuals of Hill County navigate the food system on a budget, Hill County SNAP Educator Rhonda Gregoire provides education to individuals that are eligible for SNAP benefits.

Many participants in both the youth and adult classes report having an increased intake of fruits and vegetables as a result of this program. One student said, “When I went to the store with my mom, I told her how many servings of vegetables we need, we vegetables with every meal now.”

- 12 Adult participants completed the six week course
- 350 + youth ages 8-12 participated in the six week course
- 92 % reported an increase in safe food handing practices
- 69 % of youth reported eating more vegetables

Participants of SNAP-Ed with new crockpots, a roast and potatoes donated by Cattle Women of Montana.
Welcome to Judith Basin County

The legendary White Wolf resides at the Basin Trading Post in downtown Stanford. This wolf harassed livestock and pets in the area for many years before meeting his end. Stop in the Trading Post to ready the whole story.

Nitrate Quick Tests Serve Judith Basin Producers

The MSU Extension Office in Judith Basin County carried out 25+ nitrate quick tests in 2016. Of those tests, there were several that prevented possible issues with livestock. Nitrates are tested in cereal grain forage that is intended to feed livestock because it can cause abortion or even death. Elevated nitrate levels are caused by stresses the plant endures while growing, such as drought or hail. Nitrate is an important nutrient as it is converted to protein by the plant and then utilized by the livestock feeding on it.

Spotted Knapweed Biocontrol Effort

1,500 Biocontrol agents released in Judith Basin County

Thirty people attended two workshops held in August to learn more about biological control of a common weed pest here in central Montana. Spotted knapweed was the focus of the meeting, along with information about Houndstongue, Canada Thistle, and Cheatgrass biocontrol agents. Guest speaker Melissa Maggio-Kassner, the Montana BioControl Coordinator, discussed some of the common misconceptions and myths surrounding biocontrol. After the classroom presentations in Raynesford and Geyser, we headed to the field and made two releases. The Cyphocleonus achates, a root weevil, was the insect dispersed. Some in the area may remember a previous release of a seed head weevil of the Larinus spp. years ago. In searching the knapweed stands, the Larinus larvae was discovered in many plants. The Larinus makes its home in the seed head of the mature knapweed plant, and then exits in the summer of the following year through a hole in the seed head. The releases made will be repeated next summer in an effort to reduce the cost of weed control for local producers. Biological control efforts are a useful tool in areas that are hard to access with sprayers or animals. Once established, these populations will survive as long as the plant it feeds on is present.

Above: Exit hole from Larinus spp. in a seed head. Right: Cyphocleonus achates waiting to be dispersed.
4-H Afterschool Program
MSU Extension in Judith Basin County partnered with Stanford Schools to host the inaugural year of the 4-H Afterschool program. Held October-May once a month in the multi-purpose room at Stanford School, attendance averaged 30 youth from pre-school to sixth grade. Topics for each session included wildlife, wind energy, health, aerospace, and entomology. In addition to Stanford, students came from Denton, Geyser, and Hobson to participate in the learning activities.

During the course of the afterschool program, 55 students were reached. Of those 55, 24 were already 4-H members. Seven have enrolled in 4-H as a new member as of October 2016. There are 15 more that aren’t old enough to be a full 4-H member yet, but are waiting patiently to join!

Youth Participate in 4-H Congress
Seven youth leaders from Judith Basin attended 4-H Congress in Bozeman this year. This was a sharp increase from one attendee the previous year. Youth participated in public speaking and judging contests. One member placed 3rd in their category, narrowly missing a trip to National Congress. The youth leaders learned many new leadership and networking skills at the workshops they attended. They also made many new friends to add to a growing network of energetic youth around the state.
Forage and Vertebrate Pest Workshop

The second year of a forage workshop held in conjunction with MSU Extension in Cascade County met the need for additional methods of control for vertebrate pests in the area. Ground squirrels have been a perennial problem, with pocket gophers recently adding their name to the list of nuisance pests in Judith Basin County. Stephen Vantassel, Vertebrate Pest Specialist for the MT Dept. of Ag., presented several management methods including: trapping, toxicants, fumigation and rodenticides.

The classroom portion preceded the hands-on demonstration of management techniques. Those in attendance agreed that the workshop was very informative. The knowledge gained has been put to use by several producers.

MSU Extension Judith Basin County participates in the “Bale Trail”

For over 25 years, the “What the Hay” contest near Utica brings hundreds of people to Central Montana. In the spirit of community involvement, MSU Extension has had an entry in many years of the “Bale Trail.” This year’s entry was “Hurray for Bull-Hay.” In 2015, Judith Basin County produced over 150,000 tons of hay to support its 84,000 cows and 7,000 sheep. Judith Basin was 4th in the state for alfalfa production last year.

Too busy to cook? Extension provides Freezer Meal class to help save time and money

A common problem for busy families is having time to prepare nutritious meals. Through freezer meal and slow cooker workshops, this problem can be alleviated. Partnering with MSU Extension in Fergus County, safe food handling techniques and proper freezing protocols were taught to interested participants. Learning how to make shopping lists for several recipes, and dedicating a day to making several dishes to wrap up and freeze is very helpful to families on the go in the working seasons. Advance preparation allows for saving time and money, while still eating healthy. Through this class, attendees were given the opportunity to make and keep two dishes each. They also received the recipe and instructions for many more.
Range Renovation Conference
Extension Provides Range Management Resources for Local Area Ranchers

Many producers consider renovating their rangeland to increase grass production. In addition, seeded pastures supply nutritious forage at times during the year when other sources are inadequate or unavailable. To ensure a satisfactory return for each dollar invested, seeded species must be adapted to the site’s soil, climate, fit a rancher’s needs and be properly established and managed. MSU Extension in Judith Basin partnered with Extension in Chouteau County to host Dr. Jeff Mosley, MSU Extension Range Management Specialist. Mosley gave a presentation on weed control and ground preparation focusing on management of sagebrush species, fringed sagewort, broom snakeweed and cheatgrass. During hour two, Mosley recommended desirable grass species, cover site preparation, and seeding techniques. He concluded with a presentation on post-renovation grazing management. This conference was well attended, and received several compliments. A Geyser area rancher commented, "He summed up everything I learned in two years at CSU in three hours." Several area ranchers were not able to attend, and expressed interest in more information in this area. Meetings are being planned to meet this need in the future. Management practices that increase the value and production of current assets can help operations stay profitable in times of economic down-turn.

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Almost 60 adult volunteers serve as certified leaders for 4-H clubs and projects throughout the county. Volunteers organize and run club meetings, provide project instruction in more than 30 project areas, coordinate and contribute to events, fundraise for activities, lead record keeping workshops, training and numerous other leadership opportunities.

Impacts:

- More than 2,000 volunteer hours were contributed, equivalent to more than $45,000 in contribution of community time.
- A caring adult positively impacts a 4-H member’s life.
- Youth learn useful skills such as decision making, record keeping, self-discipline and self-confidence.

Four adult volunteers, Christina Evelo, Amy Vaughan, Karen McLeod and Teresa Cullis, attended the 2016 Montana 4-H Leadership Forum in Lewistown. While there, they improved leadership skills and explored new 4-H curriculums while networking with 4-H leaders from around the state.

Lake County 4-H Shooting Sports volunteer leaders are the catalyst for the State 4-H Shooting Sports Camp at Loon Lake each summer. Many Lake County 4-H leaders are sought to share their skills, management and ideas with other counties and at statewide events.

4-H Activities, Training and Travel Energize Lake County Extension

“To me, 4-H is all about leadership, learning, and loving. By giving back to the community and teaching the next generation of youth, 4-H has taught me how to become a better citizen. I’ve gained a larger understanding of the world that we live in and overall it’s been one of the best experiences of my life.” Natalee Wheeler, 2016 high school graduate and 11 year 4-H member

Volunteers Make the Difference

4-H member Sackett Andres waits for a question from a shooting sports judge. Sackett was participating in 4-H interview judging during the 2016 Lake County Fair.

4-H members Kiara Sherman, left, and Brooklyn Kenelty learn from long-time sewing leader Michai Ann Stedje.
Teen Leaders Engage Other Members

Just as volunteer leadership is important, developing youth leadership is an integral part of Lake County’s 4-H program. More than 15 4-H members actively participate as Lake County 4-H Ambassadors. Led by adult volunteers Judy Smith and Amy Vaughan, these members are an essential ingredient in the planning and implementation of many 4-H activities, including Winter Project Day and the annual Achievement Program. These youth leaders attend Lake County 4-H Council meetings, share their ideas and thoughts while participating in decisions and policy review. Fundraisers allow them to create a county retreat and attend state leadership activities each year where they learn more about becoming leaders.

Impacts:

- 10 teens attended 4-H Fall Ambassador Training.
- 9 Ambassadors participated in Winter Teen camp.
- Rec Lab attracted 11 Lake County teen leaders.

During Lake County Fair, the Ambassadors created daily Cloverbud activities and implemented the Small Fry Livestock Show. Teens served as show clerks, assistants, runners and general ambassadors of 4-H goodwill.

Lake County 4-H Ambassadors stepped up to serve and help others within Montana 4-H. In the past year, Anya Smith served as District 1 Secretary and Hannah Vaughan served as District 1 Vice-Chair. Collaborating with other western Montana teens, they hosted the first regional 4-H dance and supported each other at regional and state events.

Two Lake County 4-H Ambassadors learned more about leadership at the state level by applying for State Ambassador positions. Landar Fangsrud, Saddle Mountain 4-H Club, and Sierra Hutchin, Mission Valley Ranch Hands, participated in the process. Though not selected, both came away from the process with more knowledge about themselves.

Travel Widens 4-Hers’ Worldview

Eight 4-H members and four adult chaperones traveled from Van Wert County, Ohio, for a 4-H Exchange this past summer. Lake County 4-H members shared 4-H projects and activities with the Ohio 4-Hers. All were amazed by the diversity of the agricultural products grown and raised in Lake County.

In June of 2017, Lake County 4-Hers will travel to Ohio to learn about 4-H and agriculture in that area. This winter the Lake County 4-H members will raise funds to support members travel to and from Ohio.
Lake County 4-H Travel and Awards

Ryan Harrop, Pistols and Ponytails 4-H Club, took the initiative for an exchange with Norway, after watching a presentation by Keergan Fangsrud, Lake County 4-H member who was a 4-H international exchange delegate to Japan in 2015. Ryan stayed with host families in Norway for six weeks during the summer. As a result of her travels, Ryan hopes to participate in a six-month 4-H exchange and to travel more frequently.

“Even though my host families would chat in their native language, I felt completely at home,” Ryan said. “This has been the most extraordinary summer of my life. Being in Norway reminded me that there’s a whole world out there besides the small town I grew up in. I had the privilege of meeting so many amazing people along the way, and I’d do it all again in a heartbeat. None of this would have been possible without the 4-H program, so thank you for giving me the adventure of a lifetime.”

Lake County Sends 10 to State Congress

Ten 4-H members and three adult chaperones participated in the State 4-H Congress in July — a record number of attendees for Lake County! Youth representing Lake County in state contests during Congress did an outstanding job.

Philip Vaughan participated in the first ever Montana 4-H video contest and earned first place. Alyssa Liddle modeled in the State Fashion Revue and received Reserve Champion. The livestock judging team, Josey Motichka, Devi Knutson, Courtnee Clairmont and Ty Smith — placed third overall and will be traveling to Denver to represent Montana at the National Western Stock Show in January 2017. Public speaking contestant Anya Smith placed fourth.

Leaders & Members Honored

Karen McLeod, 4-H Dog Project leader, received the Montana Tribute to Volunteer Excellence Award this year. This award recognizes individuals in Montana who have served as a 4-H volunteer for 10 years or more. Karen, as dog project leader, teaches dog obedience, showmanship, and agility. Under her leadership and guidance, 4-H members have improved their obedience and showmanship skills and have placed in classes at national level American Kennel Club shows. Karen is passionate about sharing her love of dogs and showing with youth.

Three 2016 Lake County graduating seniors received a total of $4,000 in 4-H State Foundation scholarships.
Tai Chi Brings Balance

Lake County residents 60 years of age and older have enthusiastically embraced the eastern tradition of Tai Chi. Members of this program are reporting improved balance and more fluidity in their daily movements due to increased muscle movement.

This age group frequently reports joint pain and stiffness, leading to chronic disability and a diminished quality of life. Utilizing a basic program involving eight traditional Tai Chi movements, these exercises help participants engage in non-impact and mindfully-controlled motions. Participants regulate their breathing and focus on smooth, slow and orchestrated movements.

Impacts:
- Over and under weight limit livestock were eliminated because all entries met the weight limit regulation
- Injection site damage of carcasses was reduced by 90 percent
- Carcass evaluation showed 25 percent quality increases for all species.
Living a healthy life helps people, young and old, at all income and educational level get the most out of every day and their life span. MSU Extension in Lake County approaches healthy living with a variety of programs. Participants range in age from 5 to 85, with diverse cultural backgrounds.

**Class Empowers Caregivers**

The “Powerful Tools for Caregivers” program is offered to individuals in Lake County who are caregivers, either as family or a professional. This class promotes self-care through communication skills, assertiveness awareness, and relaxation techniques while caring for special needs children and chronically ill family members. Comments from participants include, “This class has validated what I have been doing and has given me options for what I can do better,” and “This class has taught me better communication skills by using the tools taught.”

Participants report increased confidence when communicating with families and health care professionals. Balancing the needs of their own family members with the individual needing care is primary when considering long-term care outside the home. They also felt an improved ability to manage guilt and emotions which surfaced when caring for others. All the caregivers realized they needed to schedule time to take care of their own needs and health and noted an improved ability to make decisions related to caregiving.

MSU Extension volunteer Debbie Barnhill from Polson helps teach these programs with Nori Pearce, MSU Extension Lake County agent.

**Food Preservation Gains in Popularity**

Nori Pearce is leading the development of a statewide Master Food Preserver program. This program will train volunteers and staff in proper USDA food preservation methodology to assist MSU Extension Agents with numerous questions and concerns associated with canning, freezing, drying and fermenting foods. Curriculum from Washington State University, the University of Alaska, and Colorado State University is being used in the development of this program.

**Impacts:**

- For Lake and surrounding counties, more than 10 individuals participated in the Master Food Preserver training.
- More than 500 questions concerning food preservation and/or testing gauges for pressure answered by Lake County MSU Extension in the past year.

**Intergenerational Culinary Classes**

Programs encouraging learning between generations were held for food preparation programs this year. Volunteers from the Retired Seniors Volunteer Program (RSVP) shared their knowledge with adults and youth through food preparation classes, including a bread making day.
More than 125 cattlemen were able to take advantage of a seminar series highlighting financial management, inheritance taxes, and the veterinary feed directive. This series of topics is chosen by the Western Montana Stockmen’s Association board of directors who advise Lake County MSU Extension Cattlemen’s College.

Results:

- 30 ranches developed a marketing plan that coincided with the information presented at the financial management class. These plans will give the individuals calculated decision power as commodity markets fluctuate.
- 45 percent of the inheritance class attendees have begun developing plans for passing the ranch business on to the next generation or preparing to downsize business and transfer the holdings to family members.
- 128 cattlemen received current information on the regulations associated with the Veterinary Feed Directive, allowing them to be proactive with management methods that comply with new regulations.

Tool Chest for Weed Control

Noxious weeds are a serious threat in Lake County. Lake County MSU Extension administers an integrated control program to assist landowners in their efforts to solve a variety of weed problems. This integration involves tools applicable to the landowner’s resources with a broad approach to environmental protection and re-establishing a desirable plant community. Each landowner is given a consultation on best approaches to their specific property goals and resources using weed control tools:

- Identification
- Mapping
- Herbicide solutions and strategies
- Physical and mechanical control
- Grazing methods
- Replanting selections and methods
- Long-term management

A biological weed control also helps distribute control agents to sensitive areas and is monitored in conjunction with the Lake County Weed Control Office.

Impacts
Fifteen landowners wrote and incorporated a five-year weed control plan. More than 900 acres were placed in an intensely managed weed control program starting in summer 2016.
Gardeners Study Horticulture

Montana State University Extension Master Gardeners are volunteers working in partnership with MSU Extension in Lake County to encourage and promote environmentally sound horticulture practices. The Master Gardener program is one way Lake County MSU Extension teaches citizens how to beautify their communities, learn the art and science of horticulture and participate in a volunteer network. Master Gardeners help Lake County MSU Extension solve gardening problems and teach sound practices by:

- Working at information booths at community events and the fair.
- Maintaining information gardens.
- Participating in fairgrounds beautification.
- Teaching horticulture to youth.
- Starting plants in a greenhouse to benefit community gardens.

Impacts and Outputs:
Since 2007, 2,400 hours of education have been extended to Master Gardeners through Lake County MSU Extension
Total of 170 graduates: Fifteen in 2016
Total volunteer hours: 2,630 since 2007. Volunteer hours valued at an average wage of $15 an hour equals $39,450 in volunteer time donated to the community.

Food donated to the local food bank in 2016 — 550 pounds x $2 per pound = $1,100.

Urban Tree Care and Maintenance

To improve the survivability and structure of trees in Lake County, especially urban areas, an initiative was established to train residents to care for and maintain their shade and fruit trees, saving the cities substantial cost for trimming and/or removing problem trees.

Successes:
- Three pruning clinics were attended by a total of 38 people.
- Five orchards were given individual attention for pruning.
- Ronan Tree Board community workshop brought over 40 participants to the city park for tree planting instruction.

Impacts:
- Seventeen people saved or maintained trees on their property, valued at $500—$1,000 per tree.
- Home growers and backyard orchardists substantially improved fruit size and quality as a direct result of fruit tree pruning and maintenance.
- At an Arbor Day celebration after the Ronan Tree Board workshop, two 10-year-old trees (valued at $2,400) were planted in Ronan City Park.

Ronan Plans Community Improvement

Multiple groups came together to develop a community improvement plan using information gathered by listening sessions conducted by Montana Department of Commerce and the Montana Economic Developers Association (MEDA) www.medamembers.org. Information was gathered from community members during five listening sessions and a town hall meeting to construct an action plan that will advance the economic and community goals for Ronan.

Impacts and Output
- 100 individuals interested in Ronan’s future attended listening sessions and made comments.
- Assessment report from all listening sessions and those submitted by email or in writing were compiled by the MEDA team.
Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.

Lake County

Nori Pearce
Extension Agent Family and Consumer Science and 4-H Youth Development

Berl Tiskus
Administrative Assistant

Jack Stivers
Extension Agent Agriculture and 4-H Youth Development

With support of the Lake County Commissioners Bill Barron, Gale Decker and Dave Stipe
Welcome to Lewis and Clark County

Thank you for your support of Montana State University Extension. MSU Extension is a partnership between Lewis & Clark County, Montana State University and the United States Department of Agriculture. This three-way partnership provides educational programs in the areas of Agriculture, Natural Resources, 4-H Youth Development, Community Development, Family and Consumer Sciences, and Supplemental Nutrition Assistance Program (SNAP) Education Programs. Enjoy some highlights of the 2016 educational opportunities in Lewis & Clark County.

Family and Consumer Sciences Expands to Jefferson County

This year, the Lewis and Clark County Extension office was fully staffed with an Agriculture Agent, 4-H Youth Development Agent, Office Administrative Assistant, 4-H Military Program Coordinator, and a SNAP-Ed Program Manager/Family and Consumer Sciences Agent joint position. In June, our SNAP-Ed Program Manager was promoted to a one-quarter time Family and Consumer Sciences Extension Agent in partnership with Jefferson County. The partnership helped expand the Family and Consumer Sciences Program to provide education in communities that may be hit with job losses or other economic hardships due to the recent closures of the Golden Sunlight Mine and the Mental Health Development Center in Jefferson County. The focus of the Family and Consumer Sciences Program in both Lewis and Clark and Jefferson Counties includes Food Preservation, Family Economics, and Health Education.

In October, Agent Kim Lloyd partnered with a local community group, Growing Community Naturally, and Jefferson High School to provide a canning class in the community of Boulder. The hands-on class drew six participants from Boulder and neighboring communities who had little previous canning experience and wanted to learn the economical practice of preserving food at home. Participants canned a jar of pickled beets to take home and extra jars were prepared for use in the school cafeteria.
Lewis & Clark County 4-H

By the Numbers

In 2016, Lewis & Clark County 4-H reached over a thousand youth through short term educational programs. Year-round, 24 active 4-H Clubs engage 138 4-H volunteer leaders and provide educational programming for 411 youth 4-H Club members from ages 5 to 19.

“Learning is an active process. We learn by doing. Only knowledge that is used sticks in your mind.”
-Dale Carnegie

4-H empowers youth to take on leadership roles. Learning by doing in 4-H provides a safe place for kids to speak in front of a group, learn how to run a meeting, engage in service learning, and so much more.

Teaching Generosity through the 4-H Club Program

Each year 4-H clubs complete a community service project. This year the Scratchgravel Wranglers 4-H Club purchased, assembled, and delivered a picnic table for the Little Children’s Home, a local foster/group home. After the delivery the 4-H members toured the home to learn about foster care and foster needs in our community.

4-H Camp Teens Learn Independence

The 4-H camp counselors, ages 14-19, manage the 4-H camp for members ages 9-13. Duties include choosing the theme, planning activities and cleanup after meals. The teenage counselors work with younger 4-H members to learn and teach team building and life skills. While fostering youth-adult partnerships in the planning stages is critical, when Lewis and Clark County 4-Hers get to 4-H Camp, the spotlight is on the teenage counselors to truly manage the camp while creating great experiences for the youth who attend.

4-H In School and After School

Though the 4-H Club Program is well known, the opportunity to work in schools and in after school programs helps reach more youth. Partnerships with Jim Darcy Elementary Ag Day, Four Georgians Elementary, Central Elementary Afterschool, The Afterschool Alliance, and the PEAK (Promoting Enrichment Activities for Kids) Program allows over 700 youth the opportunity to experience learning life skills through 4-H.

The majority of stations at Jim Darcy Ag Day are run by 4-H members, volunteers, and staff.

Through a sponsorship from McDonald’s, 4-H is reaching out to Helena schools. This opportunity offers youth who live in town the chance to raise a 4-H animal. McDonald’s owner Terry Gauthier says, “4-H teaches everything I want my employees to know. Responsibility, critical thinking, and a good work ethic. I want to help more kids have this opportunity.”

Sponsor Terry Gauthier pets the pig he helped 4-Her Madelynn Smith purchase to raise in 4-H, even though she lives within the city limits.
4-H Project-based Learning Leads to Showcasing Mastery during the Fair

4-H has a strong history and presence at the Last Chance Stampede and Fair. 4-H members have the opportunity to showcase their projects each July. Projects range from sewing to sheep, leathercraft to beef, and welding to cooking. The market swine project has the most entries. During the year, shooting sports has the most youth participating.

Before the fair starts, 4-H members explain their projects to local community members that serve as judges. Saturday at the fair, buyers pack into the stands for both the Livestock Auction and the Indoor Project Auction. The 2016 4-H Livestock Sale was the highest grossing sale in history at $343,792. The Indoor Project Auction grossed $1,535.

4-H Military Partnership Grant

This year the 4-H Military Partnership Grant in Lewis and Clark County was all about collaboration. For National 4-H Week, with the assistance of numerous volunteers, the 4-H National Youth Day Science Experiment was combined with an open house to promote 4-H to more than 85 youth and families. Youth learned about trajectory, wind speed and initial force while learning about recent global issues. Youth and families learned about different projects and how to join a 4-H club while doing fun activities.

4-H teamed up with the Helena Middle School and the YMCA to offer babysitting and First Aid certification to middle school youth using the 4-H Military Babysitting curriculum. In November, working with Carroll College, the Student Assistance Foundation and the Montana National Guard, help was given finding resources to pay for college. More than 60 people attended and learned how to fill out successful college applications and financial aid applications. Youth interested were able to discuss with National Guard recruiters different options to help pay for their college education.

The college readiness series continued through collaboration with Helena Middle School, Montana National Guard, Montana State 4-H Ambassador Officers, and Broadwater County 4-H. Resiliency training teaches youth to bounce back from tough situations, especially during deployment. Youth also learned ways to prevent bullying. Adults learned more about 4-H and being a leader by attending 4-H Leader’s College. The Montana 4-H Ambassador Officers provided numerous opportunities to the almost 30 youth and 10 adults in attendance.

In the near future, partnerships of this kind will be more vital in making impacts with limited funding available to support military youth in Lewis and Clark County.
The Master Gardener Program has completed its seventh year in Lewis & Clark County. Since the spring of 2010, 299 people have taken the Level I course, 99 people have taken the Level II course, and 18 people have taken the Level III course in Bozeman. The Level I course is taught every spring and the Level II course is taught every fall in Helena. The Level III course is taught in Bozeman in the summer.

An evaluation of the spring Level I course indicated participants were satisfied. The instructor, Brent Sarchet, received an overall rating of 4.83 out of five. Course participants indicated the course exceeded their expectations or met their expectations, 67 percent and 33 percent respectively. The majority, 67 percent, of the spring Level I class, indicated they were familiar with Extension prior to taking the Master Gardener course, but they had not utilized the offices’ services or taken any courses. The data shows with the Master Gardener program we are reaching clientele that may not otherwise utilize Extension’s services. One respondent said, “How anxious I am to put the information to use! I was surprised that after every class I was so energized and looked at everything a bit differently.” They continued, “To be honest, I’m sorry the sessions are over. Every class offered something surprisingly wonderful.” In addition to the knowledge course participants obtained, 67 percent indicated a healthy/well being benefit, 25 percent indicated a social/networking benefit, and 25 percent found a financial benefit from the program. One respondent said, “I am new to the Helena area, so these classes helped me focus on how to get a good start with making peace with the earth here, and it has been years since I’ve taken any course, so to jump into this was huge. I learned so much each time, I couldn’t wait to attend the next week. I also didn’t want to miss any of the extra classes offered on other evenings.” When asked if they would recommend the course to others, 100 percent of the respondents said yes, and 100 percent indicated they plan to attend future MSU Extension programs and courses.

Volunteer Project Highlights

Master Gardeners are putting their gardening knowledge and skills to work in their communities through many projects. Since the spring of 2010, Master Gardeners have logged over 3,803 volunteer hours; These hours valued at $19.89 per hour, are worth $75,642 in volunteer time that has been given to their communities. Following are a few of the volunteer projects in which Master Gardeners have been involved.

Fairgrounds Landscaping Project

Six years ago the Extension office and Master Gardeners built seven raised beds and planted them south of the Exhibit Hall at the Lewis & Clark County fairgrounds. These beds would soon require major maintenance or removal. Extension agent Brent Sarchet approached the fairgrounds board with a plan to install permanent landscaping in the area. The plan was approved, and this spring the raised beds were removed and permanent landscaping installed. This project will be completed over three years. The first stage of the project included: dirt work, installing the irrigation system and planting some trees. The area will eventually have a gazebo and further perennial plantings.

Number of volunteers involved - 15
Volunteer hours on this project - over 180
Value of volunteer hours on this project - $3,580
Value of the work performed - over $5,000

Master Gardener volunteers removing the raised beds to make room for permanent landscaping at the Lewis & Clark County fairgrounds.
Informational Booth at Farmers’ Market

The past six years, the Extension office and the Master Gardeners have maintained an informational booth at the Helena Farmers’ Market. The last four years, Level III Master Gardener Jim Clark has taken over the organization and coordination of the booth. This year Jim received assistance from the Gold Country Montana Master Gardener Association. This is a group of over 50 Master Gardeners that have formed an association to help organize additional volunteer projects and provide continuing education opportunities. The booth is a great way to get research-based gardening information to the public. People at the booth field horticulture, gardening and food preservation questions.

Number of volunteers involved in 2016 - 10
Volunteer hours in 2015 - over 300
Value of volunteer hours in 2015 - $5,967
Contacts made in 2015 - over 360

Vole, Pocket Gopher and Ground Squirrel Management Workshop held in Helena

Twenty-two people attended a course this summer on vole, pocket gopher and ground squirrel management. The course was taught by Brent Sarchet, MSU/Lewis and Clark County Extension Agent and Stephen Vantassel, Montana Department of Agriculture Vertebrate Pest Specialist. Participants learned to identify pests and different ways of managing them. The course had participation from a diverse group of gardeners, farmers and ranchers. Participants were asked to identify their skill or comfort level in identification and management of the three species prior to the course. The largest group, 47 percent, indicated they were not comfortable, followed by 32 percent who indicated they were somewhat comfortable. After taking the course, the highest rating was very comfortable, 43 percent followed by comfortable at 38 percent. These three pests can cause significant damage to gardens, crops and pastures. The course received an overall rating of 4.48 out of 5.

Course participants commented, “Good presentation, very informative, well done!”

Fruit Tree Research Project Concludes the Fourth Year

Fruit is largely lacking in most local food systems in Montana. Montana has 33 of 56 counties that have food deserts. Brent Sarchet, MSU Extension Agent in Lewis & Clark County and Toby Day, MSU Extension Horticulture Specialist, along with statewide partners, are leading the effort on fruit tree research in the state. The work started with a Montana Department of Agriculture (MDA) Specialty Crop Block grant in 2013, followed by a MDA Growth Through Agriculture grant in 2014. Together these grants funded the establishment of 10 fruit tree cultivar research sites. An additional Specialty Crop Block grant was received in 2014 to conduct research on historic orchards. In the fall of 2016, another Specialty Crop Block grant was received to partner with Montana PBS to develop a series of “how to” videos on growing fruit trees and small fruit. The video series will feature fruit tree research projects and other fruit research from colleagues that is being conducted across the state. Sarchet and Day released a publication “Growing Fruit Trees in Montana” in the winter of 2015. The publication has been very well received by the public with over 1,125 copies distributed to date. The publication will be updated every three years as data is collected about growing fruit trees in Montana. The fruit tree research and education efforts will encourage and support future fruit development. Fruit production is an enterprise that farmers and ranchers can adopt to assist them in diversifying operations.

Goodland apples, one of the best performing apple cultivars so far in the cultivar research.

Stephen Vantassel teaching about pocket gophers and voles at the workshop.
Montana State University Extension

Family and Consumer Science Programming

Food Preservation

Hands-on food preservation classes provide an opportunity for participants to practice canning in a group setting before trying at home. This year, four hands-on food preservation classes were held at the Lewis and Clark County Extension office throughout September. Water bath and pressure canning safety and best practices were topics covered. Twenty-two community members attended. The classes were a mix of experienced and new home canners. Experienced canners shared tips with each other and discussed current methods. Participants made ginger pear preserves in a water-bath canner as well as beets or green beans in the pressure canner.

Canning classes are a popular and important program in Lewis and Clark County. Both water-bath and pressure canning are an economical alternative to preserve food and save money. A number of participants asked questions about practices that are no longer recommended for safety such as using paraffin wax to seal, open kettle canning, and water bath canning tomatoes with no additional acid. All three of these practices can result in an extremely unsafe product that could grow mold, bacteria, or even the botulinum toxin in low-acid foods, which in some cases can be fatal if consumed.

To increase outreach of food preservation resources from MSU Extension Lewis and Clark County, a new partnership was created this year with RockHand Ace Hardware in Helena. Ace Hardware sells a number of canning supplies including jars, canners, and new pressure gauges. Every Saturday in September, an Extension Volunteer was present to answer canning questions and share information, which included MontGuides and resources from The National Center for Home Food Preservation. Kim Lloyd, Family and Consumer Science Agent, was even featured in one of Ace Hardware’s commercials as an opportunity to promote the resources and classesExtension provides.

SNAP-Education

The partnership between Lewis and Clark County Extension and MSU Extension’s Supplemental Nutrition Assistance Program Education (SNAP-Ed) Program continued providing Cooking and Nutrition Education Programming for families eligible to receive SNAP Food Stamp benefits. Class partnerships included the YWCA, the YMCA, WIC, Florence Crittenton, the Salvation Army, the Friendship Center, Helena Food Share, Bryant Elementary School, Helena Housing Authority, Helena Industries, Career Training Institute, and the Lewis and Clark Library.

A series of eight adult classes are taught in SNAP-Ed on meal planning, reading Nutrition Facts labels, physical activity, and the nutrition messages of MyPlate. Adults enrolled in the program receive small kitchen gifts such as measuring cups and meat thermometers, and graduates receive a certificate and cookbook once they have attended seven or more classes. There were a total of 49 adult participants this year with 21 graduates. A new youth curriculum was also introduced and will be taught this coming year in first, third, and fifth grade classrooms in Title I Schools.

Another component of the SNAP-Ed Program is Policy, System, and Environment Programming. The SNAP-Ed Program Manager works with community partners to help develop policies, systems, and environment changes that can help make the healthy choice the easy choice for the populations we work with and the communities where they live, work, and play. A few examples of projects in the past year include the installation of a new school garden at Bryant Elementary School, helping to organize a free community dinner with partner agencies, and developing nutrition education resources for a local grocery store with the Kid’s Hunger Coalition—Lewis and Clark County.
Bryant Elementary School Garden

Over the past year, SNAP-Ed Program Manager Kim Lloyd has been working with the Bryant Elementary School Principal to provide nutrition education in the Title I School. One need the principal identified was that the school would like a garden to use in programming to provide space for students to learn where their food comes from. The principal was concerned about students’ access to fresh food and wanted to see a space where students and maybe even the community could grow food.

In February 2016, a $1,000 grant from the Montana Partnership to End Childhood Hunger (MT-PECH) was awarded to MSU Extension Lewis and Clark County to help Bryant Elementary install a school garden. Master Gardener volunteers were recruited to manage the design and building of six raised beds on the school property in partnership with the school principal and the YMCA 21st Century Learning Program over the summer. Students planted the garden and the SNAP-Ed Program Manager visited the garden once a week to provide nutrition education to the first and second graders.

The YMCA Summer 21st Century Learning Program had 14 students enrolled June-August 2016 and there were 225 students enrolled for the 2015-2016 school year at Bryant Elementary School. The SNAP-Ed Program will be at Bryant Elementary in the Spring of 2017 and plans to incorporate the garden in the SNAP-Ed Nutrition Education Programming. There will also be efforts to recruit local community members to help with the garden.

StrongWomen—Healthy Hearts

StrongWomen—Healthy Hearts is a cardiovascular disease prevention program that aims to help midlife women reduce their risk of heart disease through fitness and nutrition education. This program was provided this year at the Helena Indian Alliance. The program was free of charge and open to the public. This program is designed for women who get very little to no exercise and are interested in increasing heart health. Half of the class includes leader-directed discussion around eating for heart health and hands-on cooking activities. During the other half of the class, participants engage in aerobic activity by walking outside or dancing to music. According to pre-and post-surveys taken by the group, after the program there was a 45% increase in the number of women who felt they now have more self-control when eating and more motivation for physical activity. There was also a 75% increase in those who reported they now record their physical activity. There were twelve women who participated in the program. After the series of classes finished a core group of women decided to keep on meeting at the Indian Alliance to continue with a walking group.

Additional FCS Programming

- **Diabetes Empowerment Education Program** is a program provided by Mountain Pacific Quality Health (MPQH) for diabetes patients on Medicare to receive diabetes management education. The agent is now a certified Peer Educator and is partnering with the local MPQH office to co-teach community classes.
- **Solid Finances** is a financial education program which provides financial education through a series of webinars covering topics such as budgeting, student loans, identity theft, and retirement planning. A series of three webinars was hosted at the Public Library this year.
- **eParenting** is a program shared with MSU Extension from the University of Wisconsin Extension. This curriculum provides parents and caregivers with weekly emails on using digital media as a powerful parenting tool. This program was shared with Helena Middle School and distributed to their email list of 680 parents and caregivers weekly from February through May.
Lewis & Clark and Jefferson-Madison County Partner in Offering Cover Crop Education to Producers

A cover crop seminar was hosted in Sheridan and Helena in February. The group of presenters were Clain Jones, MSU Extension Soil Fertility Specialist; Fabian Menalled, MSU Extension Cropland Weed Specialist; Zach Miller, Superintendent Western Research Station/Assistant Professor; and a panel of producers who are currently using cover crops. Cover crops are becoming popular among producers, but there is misleading information. The goal of this seminar was to provide examples of applications of cover crops and to discuss the benefits. When asking attendees if they would incorporate cover crops into their operation after attending the seminar, 39 percent responded that they plan on incorporating them, and 26 percent said they plan to use them on a trial basis the next growing season. Eighty-three percent of attendees indicated they would attend a similar future seminar.

4-H Youth/Adult Partnerships

Through developing youth/adult partnerships, 4-H members have an opportunity to learn valuable life skills directly from business and community leaders. Leadership trainings offered this year included Leadership 101, Leader’s College, Indoor Judge’s Training, and 4-H Club Leader Update. Several sponsors have stepped up to provide pro-bono services, such as welding and graphic design, as well as offering two new scholarship and grant opportunities directly for youth projects.

The opportunity for 4-H youth to participate in activities such as Demonstration Day and Fair Interview Judging provides them a platform for developing public speaking skills and critical thinking skills. Many volunteers enjoy seeing youth in action. This year 4-H volunteer Luke Duran said, “This is the most valuable training I’ve been to.” Through focusing on the experiential learning model and the growth mindset, adult volunteers completed several “Learn By Doing” activities to apply skills and share ideas on how to reach kids that may learn in a different style than what works for them personally.

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Liberty County Extension works with a diverse population throughout the county. These 2300 people turn to Extension for needs in agriculture, 4-H, family and consumer sciences and community development. Liberty County Extension works to meet all their needs and questions, from the first year 4-H Cloverbud to the budding 4-H club officer, and from the young growers seeking to make a living on family farms, to the home gardener seeking healthy gardens, and from the homemakers seeking current information on home food preservation methods to those throughout the county that serve on various advisory and governing boards. In agriculture that means getting out on farms to examine crops. For those home gardeners and homemakers it could involve teaching classes on how to raise and preserve garden produce. 4-H youth learn important life skills by participating in county demonstration days as well as specific project events. Community leaders learn how to lead meetings and work with the
**4-H Leadership Wanted**

Liberty County 4-H has seen a large jump in enrollment over the past six years, with enrollment reaching 73 youth and 35 adult volunteers in the 2015-16 year. Many youth and volunteers were new to 4-H, or within two to three years of joining. With this relative inexperience it has been necessary to provide leadership trainings to club officers, organizational leaders and project leaders to maintain 4-H expectations as set forth by 4-H policy and the Liberty County 4-H Council.

Many club officers in the three Liberty County 4-H clubs held office for the first time this year. Understanding of basic parliamentary procedure and parts of a meeting was lacking. Officer training included meeting with officers and using activities to reinforce parliamentary procedure that they would find in a club business meeting. Phrases such as “I move,” how to restate a motion and how to properly record meeting minutes were all reviewed and practiced in small group settings. This practicum, along with reinforcement and encouragement by volunteer club leaders has allowed 4-H clubs to return to how they need to be led, by the youth themselves. Youth have developed confidence in their abilities to lead and how to run effective meetings. As a result, participation in club meetings by individual members has also increased as they recognize that they are the ones making decisions for the clubs and not their parents.

In Liberty County, many 4-H club organizational leaders are also newer and hesitant about how they need to be organizing 4-H members in clubs to be effective. Club organizational leader training was conducted with the goal of helping club leaders understand the ages and stages of youth development and how to help the youth achieve their goals during the 4-H year. With youth ranging in age from five to 18 there are different needs to meet and plan for. Club leaders better understand now the need to encourage and plan different activities to engage all youth. Leaders also understand the importance of record books, and are prepared to work with youth at club meetings so record book completion is not left until the end of the year. This will have lasting effects on youth as they learn to keep accurate records during their lives.

Project leaders’ unique role in 4-H is to help youth meet individual goals. As such, leaders were trained about their role in helping youth set and achieve goals. With other expectations, project leaders now understand their role in 4-H and are better organized to hold productive, monthly project meetings with 4-H members.

**Game of Carcasses**

Youth that participate in the Marias Fair with large livestock have a responsibility to care for their animals for much of the year. The success of the Marias Fair livestock auction depends upon the quality product they bring to the fair. To help youth understand characteristics they need to be aware of in their recently harvested animals and what they can look for in future animals, there is a yearly carcass education class held after the fair.

In 2016 the carcass education was made into a board game based on the categories of animal selection, nutrition, management and circumstance. Approximately 70 youth from four counties had the opportunity to answer questions on game cards related to their animals, and then advance around the board if they answered correctly.

As a result of the game, youth better understand that decisions they make throughout their projects have long lasting implications, not only for themselves but for youth around the Marias Fair.
Don’t Forget About Alzheimer’s
Liberty County’s aging population keeps the small hospital in Chester busy meeting their needs. Liberty Medical Center partnered with Extension to offer a five part class on Alzheimer’s caregiving at home.

Classes focused on how caregivers can provide respite for themselves and adequate care for their loved ones. This included safe-proofing the home, creative solutions to dining, managing personal stress and legal and financial issues for caregivers. Classes also facilitate discussion among participants, acting as a therapy group to an extent. This proved to be the most beneficial part of the classes as caregivers were able to visit with each other about concerns they had or were facing. Using techniques and skills, they could formulate plans with each other on how to better help and cope with how the disease affected family dynamics.

Staying in Hot Water
There has been an increased interest in home food preservation in recent years. For many people food preservation is a new concept and there are concerns about correctly preserving acidic and non-acidic foods.

A canning class in Chester focused on correct techniques for hot water bath and pressure canning. Nine participants learned about safe food handling, when and how to use hot water bath canners versus pressure canners and were able to successfully can samples of fruit and vegetables using both methods. Participants in the class and others outside of the class also took the opportunity to test their pressure canner gauges. Instructions on correct time and pressure for canning non-acidic foods could be altered accordingly if the pressure was only slightly off. If pressure gauges were more than two pounds per square inch off, the recommendation was made to discard the gauge. One participant gained confidence in pressure canning enough to seek out new foods to can that she previously had been scared to try. This allows her to better feed her family economically.

Board Leadership Training
A resident of Liberty County once stated that, “Every resident a president,” meaning that every resident has an opportunity to serve somewhere. Many residents serving on advisory or governing councils have little in the way of practical training for the positions they serve in.

Dan Clark, Director of MSU’s Local Government Center, instructs local board members about Montana laws governing meetings.

Participants in the home food preservation class successfully preserved food using hot water and pressure canner methods.

Dan Clark, Director of the MSU Local Government Center, presented twice in 2016 to approximately 40 residents representing 20 local boards. Clark presented on the basic parliamentary procedure, legalities of closing a public meeting, conflict resolution and topics that should be included in board bylaws.

Of those present, 60% had never been to an Extension-sponsored program and several organizations sent nearly their entire board to the training. All governing boards further learned about enabling powers, further research was conducted about where those enabling powers were filed, helping those boards to be better organized in understanding their roles, responsibilities and powers granted to them through bylaws and state statutes.
Farm Safety Affects All Ages

Approximately 97% of Liberty County’s economy is agriculture. This also means that a large number of people in the county have some sort of job in agriculture, or live on a farm or ranch. Those that work in any aspect of agriculture, from driving large vehicles to spraying weeds need to understand how to be safe and responsible at their jobs and how to respond quickly and efficiently should an emergency arise.

Liberty County Extension, with Chester-Joplin-Inverness High School, Liberty Medical Center and Liberty County Emergency Medical Services, hosted a county-wide farm safety day to meet the needs of the local farm families and those that work there. Approximately 25 youth and adults participated in classes in tractor safety, basic automotive skills, weed identification, backpack sprayer calibration, and basic first aid practices. Individuals were able to participate in hands-on activities in several classes. Tractor safety included identifying important tractor safety features, while sprayer safety had youth demonstrating the importance of personal protective equipment through the calibration and use of a backpack sprayer. Individuals were also able to try their hand at weed identification and to learn about basic first aid techniques applicable as they work by themselves or with others.

All of these classes together worked to demonstrate that farming can be a safe endeavor for families and individuals as proper safety procedures are followed. Participants, whether youth or adults, were able to understand the importance of sprayer calibration for environmental and economic considerations, how knowing basic first aid techniques could save lives and how keeping farm and automotive equipment in proper running order can save money and improve efficiency.

Two young men prepare to calibrate a backpack sprayer by checking their personal protective equipment for a correct fit.
Welcome to Madison & Jefferson Counties

Located in Southwest Montana, this two-county Extension area reaches as far south as the outskirts of Yellowstone National Park and as far north as Helena. It extends from Three Forks west to the famed Beaverhead Rock along the Lewis and Clark trail just east of Dillon. The area is home to multiple blue ribbon trout streams and river drainages that combine to form the Missouri River.

The area’s economy is sustained by agriculture, tourism and recreation. It ranges from skiing at Big Sky, to fishing and hunting in the vast expanses of uninhabited lands, mining, and livestock production. These two counties boast a varied population base that creates a unique diversity in each community.

Waterways Tie Counties

Pipestone Creek Sedimentation and Jefferson Slough Eurasian Milfoil

Jefferson County MSU Extension agent Tom Harrington has been actively involved with the Jefferson River Watershed Council with two additional-legislative approved projects. The Pipestone Creek sedimentation project will help reduce stream bank erosion and will reduce sediment buildup downstream that contributes to flooding events. Landowner coordination to reshape stream banks, repair areas of high erosion and replace a major canal head gate are ongoing. Increased sediment created conditions for the noxious aquatic weed, Eurasian Water Milfoil, to establish a nursery in the Jefferson Slough. Currently, Eurasian water milfoil is flourishing and impacts fish, recreation and the general health of the entire Missouri River drainage. The control of this noxious weed involves moving the existing slough channel, replacing culverts with a bridge and using herbicides to control the spread of the plants and is a good example of a successful public/private partnership. Ongoing public meetings have been routine and have been an opportunity to help educate the public on the progress of the projects.

Groundwater studies

Water is a vital part of the Madison and Jefferson County landscape. It is essential for agriculture, recreation and future growth. Understanding the groundwater natural resource and the interaction it plays with surface water will help to better manage this valuable resource.

Jefferson County MSU Extension agent Tom Harrington has been assisting the Montana Bureau of Mines and Geology with two legislative-approved groundwater studies on the Boulder and Jefferson River Watershed areas that will help identify opportunities to increase stream flows during low water flow periods. The Boulder study has been finalized and indicates there is an opportunity to recharge the aquifers and increase stream flows by adding new water storage impoundments and using existing irrigation canals outside of the normal operating periods. The Jefferson study is currently underway with monitoring, data collection and landowner coordination. Public meetings have been a part of the process to provide updates on findings and educate interested parties on water management practices.
Pesticide, crop and other agricultural considerations

Cover crop seminar
The Madison - Jefferson Extension agent joined efforts with the Lewis & Clark Extension agent for a cover crop seminar for farmers, ranchers and small acreage producers. Operators from Sheridan and Helena attended the seminar. MSU Extension specialists presented information so producers could enhance their soil health, profitability and production. Also featured was a panel including local producers who have incorporated cover crops into their production system. Producers shared successes and challenges with cover crops. Murdoch’s Ranch and Home Supply sponsored meals. Other area sponsors and organizers of the event included both the Madison and Ruby Valley Conservation Districts, Madison Natural Resource Conservation Service office, Agri Feeds and Circle S Seeds. Attendees left with an increased knowledge of how cover crops can be incorporated in a variety of production systems.

Multi-county pesticide training
Three Montana State University Extension offices from Madison - Jefferson, Gallatin, and Broadwater counties held a pesticide training. The training was for those who wished to obtain a private applicators license to legally apply restricted use pesticides to land they own, rent, or lease.

Conflict resolution training
Montana State University Range Extension Specialist Jeff Mosley provided a conflict resolution training titled “How Not to be an Old Goat about Conflicts.” The training was held in the Madison County communities of Twin Bridges and Ennis for area residents and agricultural producers. The focus of the training was on resolving conflicts that can result from succession planning, disagreements with governmental agencies and special interest groups.

The workshop was sponsored by 3 Rivers Communications and held at the Wagon Wheel Restaurant. Participants left with increased confidence and knowledge of how to work toward a constructive resolution of life’s conflicts. Due to the popular demand and success of the program, it will be continued in the upcoming year.
Vaccine and animal health

Vaccines represent an annual per head cost to livestock producers of $15-25 depending upon animal health protocols and needs. Thirty-six producers and the Ruby Valley FFA chapter came together at the Wagon Wheel restaurant in Twin Bridges to get the latest information on vaccines, storage, handling protocols and animal health protocols.

During this workshop, participants had the opportunity to do customized mixing of vaccines, see the effects of temperature on the efficacy of vaccines and look at actual financial losses due to improper use or handling of vaccines throughout the livestock industries. The education was provided by Billy Whitehurst and Zoetis Animal Health Representative Nick Campbell. Participants enjoyed a meal courtesy of Zoetis. Many producers were headed home to make sure their refrigerators were set to the proper temperature for storage to improve the efficiency of their vaccines.

Grazing cover crops

Farmers and livestock producers crowded around fire trucks in the Harrison Fire Hall to listen to speakers from the National Center for Appropriate Technology (NCAT), Natural Resource Conservation Service (NRCS), and MSU-Extension present information on grazing sheep and cattle on cover crops and the soil health benefits of doing so.

Dave Scott, NCAT, presented information on using sheep grazing to terminate an annual cover crop and proper herd management strategies to ensure a field is ready for the next year’s crop. Sue Tallman, NRCS, presented soil health information to show the difference in water infiltration rates and organic matter retention with fields that are cover cropped and those that are not. Billy Whitehurst presented rate of gain data and cost of grazing cattle on cover crops. Producers left with new ideas for alternative forages that could augment pastures as well as financial implications of incorporating cover crops into their grazing regimen.

Exchanging knowledge

Madison - Jefferson County MSU Extension Agent Billy Whitehurst was the invited speaker at three events outside Madison - Jefferson counties over the past year. The events took place in Broadwater County, at the University of Montana Western, and in Winnett, MT.

In Broadwater County, the event focused on nutrition of the pregnant cow and fetal nutrition during gestation. Many producers who attended were cross county producers working in both Jefferson and Broadwater County.

Livestock producers gather to receive winter nutrition information from Agriculture Agent Billy Whitehurst.

At the University of Montana Western in Dillon, Whitehurst spoke to equine science students about proper pasture management in horse operations. Given the proximity to Madison County, many of the students enrolled were local students who took the information straight back to local ranches.

At the Natural Resource Conservation Service event in Winnett, Whitehurst presented information and led a discussion on better livestock handling skills. Those skills can enhance land management, consumer confidence in meat production and a business financially. This event provided an exchange of new ideas for producers. Shared conversations provided knowledge which Whitehurst brought home to Madison and Jefferson Counties.

Area producers gather in the Harrison Fire Hall.
CORE 4 business classes offered
Golden Sunlight Mine went through a workforce reduction in November 2015. Jefferson Local Development Corporation (JLDC) and Headwater’s Resource Conservation & Development Council worked with the mine to provide two business planning courses called CORE 4. The first CORE 4 class held in December was attended by 22 individuals. The second course, held in January 2016, was attended by seven individuals including a Borden’s Hotel business tenant. Additionally, JLDC and the mine collaborated to host a job fair to assist displaced employees.

Tree planting workshop
In early summer, an Urban Tree Planting Workshop was conducted on the east side of the Borden’s building. During the planting, experts from Wagner Nursery demonstrated how to properly plant curbside trees. Planting the six trees makes the look of the hotel similar to in the 1920s. The Whitehall Garden Club was a partner in the workshop. Tree planting was completed for the annual Whitehall Frontier Days celebration and it will provide downtown shade and beautification for years.

Recreation Trails
Trails west of Whitehall have grown into a popular motorized and non-motorized recreation area. The increase in traffic presents an opportunity for county-wide economic development.

To determine ways to capitalize on this potential economic opportunity, JLDC is working with ALDEA, a marketing strategies and process company. ALDEA has surveyed individuals recreating in the area. Results from this study will be used to assist in the development of an overall trails utilization marketing strategy. This strategy will serve the use of motorized all-terrain vehicles and non-motorized hikers, bicyclists, horseback riders and canoeists.

Borden’s Hotel
JLDC continues to put the finishing touches on the Borden’s Hotel project. Increasing the overall community vitality, the building is fully occupied and has been a significant contributor to the revitalization of downtown Whitehall. The Madison-Jefferson Extension Offices are located in the Borden’s Hotel.

Borden’s Hotel has two Vacation Rentals by Owner (VRBO) units. To increase the occupancy of these units, new marketing strategies were implemented during the summer. All the apartments continue to be rented at full capacity.

Ringing Rocks of Montana. The rocks give off a musical ring when hit and are a popular stop along the trail system.

Participants listen while Wagner Nursery staff demonstrate proper tree planting techniques for urban areas.

Six Radiant crabapple trees are planted along Borden’s Hotel.
New community group forms
MSU Extension assisted in the creation of the Boulder Transition Advisory Council (BTAC) in fall 2015. BTAC holds monthly meetings at the Boulder Town Hall on the first Thursday of each month.

The ‘Making Boulder’s Future Bright’ project is a result of the BTAC group. BTAC is a collection of elected officials, business owners, community organizations and engaged citizens of the Boulder area who are working together to find ways to rebrand their community after the 2015 Montana legislature passed Senate Bill 411. SB 411 mandated the closure of the Montana Developmental Center (MDC) in Boulder by June 2017. MDC has been the largest employer and a central part of Boulder’s heritage and culture for more than 120 years.

Study Circles
Jefferson County Extension Agents Tom Harrington and Micky Zurcher, with the Local Government Center Director Dan Clark and associate Tara Mastel, worked with Everyday Democracy, an organization which helps people and organizations build capacity to engage communities in creating change, to initiate study circles for the Boulder community. In March, a kick-off event brought together 50 residents to learn about the study circle process.

Following the kick-off, Boulder residents participated with government officials in study circles to discuss four major topic areas: 1) what is their connection to Boulder, 2) how will the Montana Developmental Center (MDC) closing impact Boulder, 3) how can Boulder build a strong and vibrant community, and 4) how does the community make a difference and move from words to action. There were six study circle groups which met for two hours a week for four weeks. The groups contributed more than 570 hours in community conversations.

Action Forum
Following the study circles, Dan Clark, Director of the MSU Local Government Center, returned to Boulder to facilitate community decisions from the study circle process. One hundred community residents and government officials attended.

Sub-committee groups were created and continue to meet on the four main focus areas from Making Boulder’s Future Bright study circle process. The work of these groups helped to create the Information Hub which provides residents an opportunity to stay informed on Making Boulder’s Future Bright ongoing conversations. The Information Hub can be found at http://www.makingbouldersfuturebright.com/.

Big Sky Trust Fund Grant
As part of the ongoing BTAC meetings, Extension Agent Micky Zurcher and Headwater’s RC&D Operations Manager Barbie Durham applied for and received a Big Sky Trust Fund Grant to fund a Master Plan for the future of the Boulder community. Community Development Services (CDS) is conducting the Master Plan and provided a preliminary report to BTAC. Six pathways have been identified to help guide Boulder with its continuing efforts for Making Boulder’s Future Bright.
Economic & Community Development Committee Meetings

Monthly community updates
Jefferson County MSU Extension agents Tom Harrington and Micky Zurcher facilitate five monthly committee meetings each month. All meetings are open to the public.

Boulder Transition Advisory Committee
BTAC meets at 8 a.m. the first Thursday of each month at the Boulder City Town Hall. BTAC encourages Boulder community members to engage in dialogue for future community planning in the wake of the Montana Developmental Center closure. BTAC helped create the Making Boulder’s Future Bright process. The committee is chaired by Boulder resident and newest board member of JLDC, Drew Dawson.

Community Transition Advisory Committee
CTAC is a monthly Golden Sunlight Mine community informational conduit meeting. It focuses on sustaining the economy of Whitehall. The meeting takes place at 8 a.m. on the second Thursday of the month in the Borden’s Hotel Conference room in Whitehall.

Jefferson Local Development Corporation
A 12-member Board of Directors constitutes JLDC. This group meets the third Wednesday of each month in rotating locations. JLDC is managed by the local Community and Economic Development Extension Agents, Tom Harrington and Micky Zurcher.

Science/Technology/Innovation
STI is a monthly meeting focused on encouraging technology and innovation programs for Jefferson County. The meeting is held at 7 a.m. on the second Thursday of the month at the Borden’s Hotel Conference room in Whitehall prior to the CTAC meeting. Successes in 2016 include a gigabyte link to Whitehall and the Borden’s Hotel.

Tax Increment Financing Industrial District
Jefferson County has two Tax Increment Districts. The South TIFID includes the Sunlight Business Park in Whitehall. The North TIFID is located on the northern boundary of Jefferson County. These meetings are held quarterly in Boulder. The districts promote value added industries and are shovel ready for new business development.

North Jefferson County Business Round Table
The north county business round table is coordinated by MSU Extension Agent Micky Zurcher and Office Manager Gena Nellis. The meetings rotate between Clancy, Montana City, and Jefferson City. Meetings are held over the lunch hour on the third Wednesday of the month.

The December 2015 meeting was a question and answer session on accounting, sponsored by Montana City Bank and Anderson Zurmuehlen. The March meeting was on employee retention, with speaker Deb Chouinard from the Helena Job Service. The September meeting was presented by the Jefferson County Planner, LaDana Hintz about county planning.

LaDana Hintz discusses county planning.

The South TIFID known as the Sunlight Business Park is north of I-90 between Cardwell and Whitehall and sits just below the Golden Sunlight Mine.
4-H Update

4-H programs booming in Madison - Jefferson counties

The past few years, Madison-Jefferson 4-H has had record numbers of members become involved. The 2015-2016 year boasted 326 total enrollment between Madison and Jefferson Counties, up by 52 members from the previous year. Approximately 40 of those new members were new to 4-H. When Montana 4-H lowered the age requirements for 4-H Cloverbuds, younger siblings of 4-H members were able to sign up sooner than expected. Many took the chance to kick start their 4-H careers. The 4-H increase in membership and changing demands of 4-H members and 4-H volunteers are causing Madison and Jefferson counties to review and update protocols and procedures to better serve 4-H families and local communities.

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Members</td>
<td>256</td>
<td>274</td>
<td>326</td>
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</table>

4-H online enrollment and fair entry

Last year Madison-Jefferson Extension used 4-H Online and Fair Entry computer online programs to expedite procedures. This year all members are able to get full access to the information in their profiles. Members were given two months to enroll online in 4-H. Members enter information themselves for their projects into the online system.

By implementing this process, office staff went from chasing paperwork around the office to having all of the information in one place accessible from anywhere there was an internet connection. For fair entries, members were able to access their 4-H Online information and to enter their projects. With the use of the two online programs, administration of enrollments and fair entries for 300+ 4-H and FFA members was made easier. There was less paperwork to process. However, there was more time on the computer and phone answering questions from families, helping them with various computer problems and making sure projects were entered correctly for fair. Overall the online enrollment and fair entry options are a great improvement to the program.
## Madison - Jefferson 4-H Statistics

<table>
<thead>
<tr>
<th>Total Enrollment</th>
<th>Number of Clubs</th>
<th>Certified Volunteers</th>
<th>Ag/4-H Staff</th>
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</thead>
<tbody>
<tr>
<td>326</td>
<td>15</td>
<td>41</td>
<td>2</td>
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### Shooting Sports Members
(Largest to smallest group)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Members</th>
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<tbody>
<tr>
<td>Archery</td>
<td>62</td>
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<tr>
<td>Air Rifle</td>
<td>28</td>
</tr>
<tr>
<td>Shotgun</td>
<td>16</td>
</tr>
<tr>
<td>Air Pistol</td>
<td>10</td>
</tr>
<tr>
<td>BB Gun Safety</td>
<td>5</td>
</tr>
<tr>
<td>Western Heritage</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>124</strong></td>
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### Top 5 Indoor Projects

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<thead>
<tr>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photography</td>
</tr>
<tr>
<td>Foods</td>
</tr>
<tr>
<td>Woodworking</td>
</tr>
<tr>
<td>Sewing/Textiles</td>
</tr>
<tr>
<td>Leathercraft</td>
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</tbody>
</table>

### Where are the 4-H Members Located?

<table>
<thead>
<tr>
<th>Year</th>
<th>Farm/Ranch</th>
<th>Towns of under 10,000 and rural non-farm</th>
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<tbody>
<tr>
<td>2015-2016</td>
<td>169</td>
<td>157</td>
</tr>
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</table>

### Animal 4-H Members

<table>
<thead>
<tr>
<th>Animal</th>
<th>4-H Members</th>
<th>FFA Members</th>
<th>Total Enrolled</th>
<th>Attended Fair</th>
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<tbody>
<tr>
<td>Swine - Market</td>
<td>117</td>
<td>20</td>
<td>137</td>
<td>133</td>
</tr>
<tr>
<td>Sheep - Market</td>
<td>39</td>
<td>2</td>
<td>41</td>
<td>39</td>
</tr>
<tr>
<td>Beef - Market</td>
<td>34</td>
<td>3</td>
<td>37</td>
<td>35</td>
</tr>
</tbody>
</table>

### Contact Us

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McCone County MSU Extension provides non-biased, research-based education to constituents in the county and neighboring areas. In 2016, McCone County MSU Extension offered programming in Agriculture, Natural Resources, Family and Consumer Science, and Youth Development.

Agriculture

McCone County MSU Extension offers programming that addresses production issues, nutrition, and marketing for livestock producers. Programming is also offered for crop producers dealing with specialty crops, weed control, rental rates, and general crop production topics. Face-to-face programming is done through producer meetings and workshops, as well as one-on-one consultations in the office and/or at the farm or ranch.

A very effective means of communicating with the producers about a wide variety of issues is the weekly newspaper article, “Notes from Nelson.” The focus of this weekly column is current agricultural issues. The issues addressed often result in calls or visits to the Extension office to further discuss topics addressed.

McCone County MSU Extension agent also teams with several other Extension agents who present current issues and information via a weekly radio spot on a Miles City radio station.

Late winter and early spring brought a number of questions about current land rental rates. Efforts were made to assemble available resources to be used in determining fair rental rates for the area. Newspaper columns and radio programs were used to address area land rental rates.

A very popular service of MSU Extension continues to be in the area of weed, plant and insect identification. Samples are brought in on a regular basis. Samples that cannot be identified immediately are submitted to the Schutter Diagnostic Lab. Although not as many as in previous years, a number of forage samples were also brought in for nitrate content analysis.

Livestock water quality continues to be a local concern. Educational efforts were put forth to help make livestock producers aware of water quality concerns. Extension personnel were also active assisting MSU researchers by involving local cooperators in the wheat sawfly parasitoid distribution and Orange Wheat Blossom Midge monitoring.

A major programming focus for the past year has again been in the area of All Terrain Vehicle (ATV) safety. ATV’s are widely used on most Montana farms and ranches. Farmers and ranchers, as well as their employees and family members, are involved in too many accidents involving ATV’s resulting in serious injury and deaths. Approximately 400 youth and adults were involved in ATV Safety-related events through the McCone County MSU Extension office. Programs included ATV Safety Rider Courses, school presentations, and farm safety camps. Office staff were also involved in editing and reviewing script and film from the previous year’s grant funded online ATV Safety project. A special request was received from the University of Wyoming Extension for permission to use printed and web-based material previously developed by McCone County staff.

Other specific programming efforts included addressing Stocking Rates, Rangeland Noxious Weeds, Alfalfa management and cover crops.
4-H Youth Development

McConé County has four 4-H clubs with 57 members and 15 leaders. 4-H continues to offer opportunities through a number of events and activities throughout the year.

Enhanced life skills are gained through club meetings, project work, judging events, summer camp, mini-congress, market quality assurance, Rec Lab, club trips and outings, special interest group meetings, shooting sports events, trainings and educational workshops, County Fair, fundraising events, a livestock jackpot show and the achievement program and banquet.

Involvement in 4-H allows for hands-on experience through project work. That hands-on experience forms the basis for post-secondary institution selection and, ultimately, career choice and development.

The 4-H Cloverbud enrollments continue to rise with increased interest and participation. The 2015-2016 year we had seven Cloverbuds. We have added many new options to work on throughout the year and to bring to fair. 4-H Program Assistant promotes 4-H and gives hands-on efforts working with each member to introduce them to what 4-H is about as well as working diligently to meet the needs of each member within their project.

Nikki Heide, Kama Urton and Candy Milroy have been a great asset to our Horse program. During the winter months they meet to work on books and this year they hosted a Horse Clinic. During the summer months they meet at least once a month to work on horse and rider assessments, showmanship, and general riding skills, maneuvers and reading and memorizing riding patterns for fair.

This year they will introduce a vet to discuss vaccines, worming problems and basic first aid. They will also host a Horse Clinic again.

McConé County has four active clubs. Ambitious Ants, Green & White, and Washington Warriors are our oldest clubs and the Redwater Wranglers is a fairly new club.

We have a few countywide fundraisers throughout the year including fruit sales in the spring and Greytak calendars in the fall.

The 4-H program also allows many opportunities for adults to be involved in life skills development of youth through project leadership as well as assisting the various projects and activities.
Family and Consumer Science

Day-to-day office contacts in the area of Family and Consumer Sciences most often involve basic food safety, home canning, estate planning, home gardening, plant care and home weatherization. Many of the daily contacts address economic concerns. With today’s economy, making the dollar go further will be as important as ever in most households.

McConé County has four Family and Consumer Science Clubs with a total 37 members. Those members are active in a number of community functions such as: fundraisers, community service, nursing home resident functions, college scholarship, and providing Bingo, prizes and premium money at the County Fair.

Our local Homemakers groups include the Friendship, Prairie Elk, Brockway and the Triangle Club. Each club is active within the community and donate time and services as well as money to several charities.

In September the McConé County MSU Extension hosted a Canning 101 class with 16 participants. It was held at the Circle High School and Shiela Friedrich, the Sheridan County MSU Extension Agent shared the most up-to-date information about safely canning and freezing for the seasoned pro or the beginner. The participants were encouraged to bring their pressure canner lid for Ken Nelson to test the dial gauge.

The workshop focused on the basics of home canning and preservation and was appropriate for people with all levels of experience.

The emphasis was on the science behind preservation, so everyone who canned or froze fresh fruits and vegetables would understand why certain procedures must be followed precisely to ensure a high-quality, safe product that they and their family could enjoy.

The class addressed:

* Basic food safety principles
* How to use a water bath canner and a pressure canner
* Canning tomatoes, pickling, and making jams and jellies,
* Freezing fruits and vegetables
* Accessing resources from the U.S. Department of Agriculture, MSU Extension, and other research-based food preservation information.

The class broke into 4 groups and half of the class made salsa and the other half made apple pie filling. Each group worked together and made wholesome canned produce.
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Beef Producer meetings help maximize growth, health and profit

Three MSU Extension beef producer meetings were presented in fall on beef calf marketing, nutrition, and backgrounding weaned calves, and fetal programming affected by winter nutrition of beef cows. Featured speaker Dr. Eric Belasco, Montana State University Agriculture Economics associate professor, discussed current cow-calf marketing cycles. Bob Sager, Meagher County MSU Extension agent and Veterinarian, presented a program on retained ownership, post-weaning health and nutrition toward potential of increasing profit by holding calves for 60 days post-weaning.

Another program explained supplementation of protein during specific gestation periods to increase muscle fiber mass and potentially increase weaning weights for maximum profit. These programs teach basic understanding of specific nutritional programs to return more profit with little input cost post-weaning. This type of Extension education supports increased production and profit for local ranchers.

Meager County MSU Extension worked with beef cattle producers to formulate custom mineral programs for ranchers, which included both summer and winter mineral formulations specific for beef cow (nursing, breeding, and gestational requirements) and heifer replacement needs. Custom mineral programs aid production goals and often reduce costs. Extension offers ongoing instruction with demonstrations to help area producers analyze forage and water samples.

4-H and Youth Development

Extension agent Bob Sager assisted in the local high school animal science classes to dissect and study pigs. Meagher County MSU Extension looks for opportunities to support local youth development through school and community programs as well as through 4-H.

The 2016 Meagher County Fair saw a record number of entries in equine, and a record 4-H and FFA market sale (12% increase from 2015).

4-H is coordinating a fund drive with the 4-H Council to build a new outdoor covered arena for the 4-H and FFA county fair livestock show and sale. Donations and grant writing are being coordinated to achieve our goal for a new structure for 2017.

Bethany Steinken has more than nine years experience in working with 4-H and has increased student involvement the past few years. We are offering three new programs this next year to help accommodate increased enrollment.
Extension programs are offered throughout the year on a variety of topics

- Several pesticide training programs will recertify both commercial and rancher/ farmer operator licenses.
- Marsha Goetting, Extension Family Economics Specialist, presents estate planning programs.
- A crop rotation and pulse crop workshop will highlight new alternative crops.
- Fall forage samples (24) were tested for nitrate for local producers after increased moisture caused regrowth on cereal grains.

Find local Extension information in twice-monthly news articles in Meagher County News, on topics of lawn and garden winterizing, mole and rodent prevention, fungal spruce tree damage, and other concerns.
Mineral County and MSU Extension

“A long, narrow valley…”

“‘A long, narrow valley…’” was the description of Mineral County in a report on timber resources published by the then Montana Department of State Lands and the Forest Service (USFS) in 1983. At that time, Mineral County produced over 86 million board feet of timber from one major sawmill and six smaller mills. Additionally, at that time, there were two post and pole operations, two cedar mills, and one log home producer. The fact that the largest ponderosa pine tree in Montana is found in Mineral County alluded to the potential of the area to produce timber resources.

Today, that wealth of timber industry is gone from Mineral County; Tricon Timber is the sole remaining small mill and Big Sky Forest Products the only post and pole operation. Yet the resource that once supported the industry of Mineral County remains. Public lands, either federal or state, account for over 90% of the acreage in Mineral County. As such, decisions made regarding the management and activities directly impact local residents. Decisions regarding the management of public lands rely on input from the public. To facilitate input from Mineral County citizens, MSU Extension, and the USFS, Superior Ranger District, established a working collaborative called the Mineral County Resource Coalition (MCRC).

MCRC provides a forum for Mineral County residents to voice their informed opinions to those making management decisions. Discussion revolves around the community input process and information from the USFS, the agency responsible for managing over 82% of the public land in Mineral County. Since MCRC began, USFS public meetings have gone from 10-15 in attendance, to 70 or more. Similarly, field trips to view proposed actions have increased from less than 10 to more than 50 citizens in attendance. Relationships, conversations, tours, questions, and answers are the functions and products of this collaborative effort.

This process has brought the forest back to the community and lessened the sense of disenfranchisement felt by local residents and the sense of separation felt by USFS personnel. Local government, congressional staff, state agencies, industry, schools, health industry, recreationists, and citizens at large all contribute and participate. As this collaborative continues, we look forward to many more successes as MSU Extension supports and sustains this effort.

MSU Extension and Economic Development

Mineral County is no stranger to hard times, and hard times lead to hard choices as people struggle to maintain some semblance of quality of life in Mineral County. Like other small, rural counties in Montana that cannot provide the variety of services and amenities of larger metropolitan areas, residents of rural areas are accustomed to doing without and making things work. MSU Extension answers the call to serve them in a variety of capacities.

Economic Development has become an important need in Mineral County and MSU Extension adapted to meet this demand. MSU Extension developed the capacity to manage the county’s revolving loan fund, provide assistance to local businesses, and created a private, non-profit 501(c)3 to assist other community organizations.

Services provided by MSU Extension include business planning for new and established businesses and grant writing and administration for county efforts. These efforts have yielded over $2.36 million in grant funds for projects totaling over $3.8 million.

The most recent project brought three-phase power to the Mineral County Airport for future development of an industrial park and expansion potential for businesses located nearby. One business, Superior Meats, is now able to install and operate industrial grade equipment and create 11 new, full-time positions. Additionally in 2016, seven business startup clients received assistance with planning, marketing and initial projections, two loan packages were prepared and funded, and over 20 business inquiries resolved.

MSU Extension staff represent Mineral County on local and regional economic and community development boards and coalitions, bringing a multitude of state, regional, and federal financial and technical resources to the residents and businesses of Mineral County.
Mineral County and 4-H

Hard Working Volunteers for Hard Working Youth

Participation in 4-H has a positive impact on the choices youth make, both in their daily lives and future careers. Adult volunteers working with youth fosters active learning and enriches self-esteem, all of which builds a strong foundation for positive youth development and achievement.

Mineral County youth enrolled in the 4-H youth development program continue to explore new opportunities. Whether it be new projects like robotics or cake decorating, qualifying for national shooting sports tournaments, or leadership roles as camp counselors or club officers, all 4-H work includes an adult volunteer or Extension staff. It is the mission and role of MSU Extension to make these opportunities possible for both youth and adults and provide programmatic support.

Youth working alongside and learning from caring adults has long been a hallmark of the 4-H program and this continues to be the case in Mineral County. Youth in 4-H report learning responsibility, planning, and community service skills; in addition to the hands-on, practical skills necessary to finish projects or tasks.

The 2016 Mineral County 4-H program enrollment consists of 53 youth members and 24 adult volunteer leaders. Superior and St. Regis are home to organized clubs and there are several “at-large” 4-H families in areas without organized clubs. Livestock projects, especially market swine, remain the most popular with 4-H youth, with shooting sports and cooking following close behind. Adult volunteer leader participation continues to improve as they challenge youth to improve their efforts and expand their interests. The combined enthusiasm of youth and adult 4-H members has a cascading effect within the community. An increasing number of adult volunteers are interested in sharing their time and life experiences with youth members of 4-H. Likewise, community support for the 4-H program remains high which is also encouraging in these times of strained economic conditions.

“There is no magical show stick or lucky brush. What there is, is hard work, confidence, passion, and a desire to succeed.” -- Anonymous
Healthy Acres, Healthy Communities
County Extension and Weed District partnership to provide greater community opportunities

Healthy Acres, Healthy Communities
Foundation Kick-off
by Jean Jenkins

In September 2016, the Healthy Acres, Healthy Communities Foundation (HAHCF) held its introductory event at Caras Nursery. The HAHCF Foundation was established to support the three main program areas combined in the Missoula Weed District and Extension: Land management, Youth Development, and Family and Consumer Sciences. The demand for educational solutions continues to grow in Missoula County. Each year we see the need to supplement our efforts with grants and donations.

A new facility for the Missoula County Weed District and Extension offices lends itself to individual and corporate investment in the facility and ongoing programs. Establishing a foundation opens the doors for additional funding support.

Providence Health Services provided the inaugural gift in the amount of $5,000. Thank you Providence Health Services, for recognizing the value of our youth education programs and the potential for future programs. Others supporting our foundation kickoff include Caras Nursery, Frost Top Orchards, Western Montana Growers Association and the MPG Ranch. Thank you all for your support.

New Facility for Missoula County Weed District and Extension
by Jean Jenkins

In July, Missoula County Fairgrounds Advisory Council (MCFAC) forwarded a master plan recommendation for the Fairgrounds to the Missoula County Commissioners. Following a public comment period and further discussion with the City Council, the master plan for the Fairgrounds was approved by the Missoula County Commissioners at a public hearing in October 2016. We commend the County and City leadership for the thorough and inclusive process used to develop the plan.

Missoula County Weed District and MSU Extension has long been planning for a new facility as part of this master plan. We now have a layout with approximately four acres for the building and grounds. We look forward to finalizing a facility design, financial plan and utilizing our newly formed Healthy Acres, Healthy Communities Foundation to identify potential funding sources for areas such as the wet lab, demonstration gardens and demonstration kitchen.
Montana Invasive Species Advisory Council Completes Goals

by Bryce Christiaens

Through the leadership of Bryce Christiaens, the Missoula County Weed District played an instrumental role in the establishment of the Montana Invasive Species Advisory Council. Christiaens serves as the county weed district representative and the District serves as the fiscal agent for the council’s projects and operations. The council was created for the purpose of “advising the governor on a science-based, comprehensive program to identify, prevent, eliminate, reduce and mitigate the impacts of invasive species in Montana.”

In 2016, the council completed all three of its goals:

1. The assessment report, completed in March, compiled responses of over 120 individuals, representing 85 agencies/entities that manage invasive species, including federal, state, county, municipal and tribal government agencies, universities and non-profits.

2. Clear gaps and challenges were identified in relation to coordination of effort across agencies and taxa, species prioritization across taxa for prevention, early detection and control, perimeter defense, data sharing, standardized mapping and monitoring, regulations and funding. These gaps and challenges were presented to approximately 200 interested stakeholders at the Governor’s Summit on Invasive Species in Helena in April. Over the course of two days, stakeholders helped to refine the gaps and challenges, began providing possible solutions and created the beginning structure of the Montana strategic plan.

3. The third and final goal of completing a strategic plan for Montana’s approach to invasive species was accomplished in November. A draft framework was created from the results of the assessment and summit, and vetted through multiple listening sessions held across the state from Miles City to Pablo. The Montana Invasive Species Framework organizes prioritized invasive species tasks into five categories:

- **Coordination** focuses both on the need for a single coordinating entity as well as the clarification of invasive species laws into a single Invasive Species Act.
- **Prevention** focuses on the need to bolster our perimeter defense, a risk analysis for prioritizing invasive species based on potential impact and an analysis of high risk vectors of spread and associated regulations.
- **Early Detection** focuses on the need for data sharing, the potential for a statewide data coordinator and standardized mapping/monitoring efforts to aid in detection.
- **Rapid Response** focuses on the need for a standardized rapid response plan as well as the need for coordination and staff training across agencies in emergency response.
- **Control** focuses on the need for sustainable funding, research into the development of best management practices and staff development in underserved regions of the state.

All in all, it was a very successful year for the Montana Invasive Species Advisory Council. The assessment, a summary report of the Governor’s Summit on Invasive Species and the Montana Invasive Species Framework can all be found on the Council’s website at: [www.dnrc.mt.gov/divisions/cardd/MISAC](http://www.dnrc.mt.gov/divisions/cardd/MISAC).
MTBCP’s Statewide Growth Continues
by Melissa Maggio-Kassner

The mission of the Montana Biological Weed Control Coordination Project (MTBCP) is to provide the leadership, coordination, and education necessary to enable land managers to successfully incorporate biocontrol into their noxious weed management programs. MTBCP was established in 2013 and has grown significantly in three short years; increasing the number of people reached at workshops, number of workshops held, locations of workshops, number of collection days held, and number of insects distributed throughout the state.

In 2016:

- **34 days** spent collecting insects, up from 10 days in 2014 and 32 in 2015
- **Six insect species** collected (yellow toadflax stem weevils, Dalmatian toadflax stem weevils, leafy spurge flea beetles, leafy spurge stem borers, spotted knapweed root weevils, and spotted knapweed flower-head weevils)

 MTBCP will continue to focus on these priorities for at least a few more years before we survey to re-evaluate land managers biocontrol needs. There has been a steady increase of assistance provided by the Biological Weed Control program across the state of Montana. As long as the numbers continue to increase, we can be confident that these focus areas are still benefiting weed management programs in Montana.
On-farm research provides learning opportunities
by Seth Swanson

The MSU Extension Horticulture program has partnered with regional farmers as well as the Western Agriculture Research Station to carry out a variety of trials to help farmers and gardeners alike.

Through the support of the Specialty Crop Block Grant, we have been investigating annual strawberry production for the last two years. Strawberries are a high value specialty crop with varieties hardy enough to grow in Montana, but the high labor demands and pest management limit statewide production. Annual high tunnel production may reduce these issues and add diversity and profits to high tunnels/hoop houses. This could also be a great option for home gardeners. Through the farm partnerships in this project, we have had opportunities to extend learning moments into teaching moments.

- From planting to harvest and data collection, 25 students at the PEAS farm were directly involved and learned about the challenges that many small producers in Montana face and how this research could benefit producers.

- The strawberry research was showcased to over 200 people at four field days, workshops, and tours. Post-workshop survey results indicated that all survey participants who are not currently growing strawberries would after learning about annual production, and that most already growing strawberries would consider annual production.

Bringing organics to the MSU diagnostic labs
by Seth Swanson

The MSU Extension Horticulture has been involved with the Montana Organic Association (MOA) for several years, and has contributed to the organization of MOA’s annual conferences. The agenda for the 2015 Montana Organic Association annual conference was packed full of great speakers, sessions, and timely content; and the pre-conference tours were no different. Since the conference was hosted in Bozeman this past year, there was a unique opportunity to visit some of the resources Montana State University has to offer. As one tour group headed to learn about the livestock processes of two local farms, the other group went onto the MSU campus to visit four analytical laboratories: Schutter Diagnostic Lab, Seed Potato Lab, Regional Pulse Diagnostic Lab, and the Montana State Seed Lab. This provided a unique opportunity for 30 conference attendees to learn about the valuable resources provided by Montana State University as well as MSU Extension, which most of these organic producers had never utilized.
Better connections through Missoula’s farmer’s markets

by Seth Swanson

For the fourth consecutive year, the Missoula County MSU Extension and Weed District has hosted an informational booth at the Clark Fork Farmer’s Market in Missoula. For 26 weeks each year, staff provide information, answer questions, and inform community members about upcoming programs. This year, the group took a more proactive role and hired Tori Heath (participant in 2016 Master Gardener program) to direct outreach efforts to improve our connection with the community. As a result, we had greater interaction, multiple radio and television interviews of guest attendees, and an increase in specified inquiries at the MSU Extension office. This was a valuable approach in increasing our abilities to connect with the Missoula community and to share the type of work done at the MSU Extension office.

Plant Clinic continues as valuable resource to community

by Sandy Perrin

Providing options for a healthier environment in which to live, work and play, the Missoula County MSU Extension Plant Clinic provides leadership and education on least toxic option pest management materials, soil test analysis, pest and plant identification, gardening advice, and plant recommendations. Whether giving recommendations on tree thinning or removal, when to spray apple trees for the worms that get into the fruit, or identifying a poisonous weed in a horse owner’s pasture; the Plant Clinic makes direct impacts on many community members.

Throughout every growing season, the Plant Clinic performs field monitoring and trapping for a variety of horticultural pests.

Monitoring codling moth traps in orchards to develop regionally specific pest management recommendations.

This provides valuable and timely information to share on our Pest Alert Hotline which disseminates management recommendations throughout the community. Additionally, this information along with on-site diagnostics, helps to provide management options for the nearly 2,000 calls, emails, and walk-in questions that the Plant Clinic receives from community gardeners, landscape professionals, and regional farmers.

In addition to providing direct assistance in diagnostics or management decisions, the Plant Clinic participated in a variety of educational events throughout the community:

- Demonstrated how to easily grow fresh salad greens and herbs in containers at the Natural Grocer Food store.
- Instructed a class of 25 Ravalli County Master Gardeners on Integrated Pest Management options for the most prevalent local insects and diseases.
- Collaborated with local nursery owners to organize tour sites for the Montana Nursery and Landscape Association Fall Tour which hosted 50 people from around the state.
- Collaborated with Kelly Moore, FCS Agent, on several classes on how to grow and utilize salad greens, as well as use local apple varieties.

Extension /Weed District informational booth at the Clark Fork Farmer’s market, showcasing Five Valleys Seed Library.
Preserving Missoula

by Kelly Moore

In order to be an effective Family Consumer Science MSU Extension Agent in Missoula County, one must be familiar with community leaders, the needs of the community, and available resources. That knowledge is essential in the development and maintenance of vital partnerships and programs that enhance the health and well-being of Missoula County citizens. Food preservation, local foods, food safety/ServSafe, financial education, Grandparents Raising Grandchildren, Powerful Tools for Caregivers, pre-diabetes education, and other human development programs continue to be topics of great interest that provide partnership opportunities for MSU Extension in the community.

Approximately 90% of FCS annual office calls are related to food preservation, especially canning. In response to this demand, eight canning classes were offered this past year with an average of eight participants per class: two beginning water bath canning classes, two beginning pressure canning classes—focusing on canning vegetables, a fruit leather dehydration class, two jam making classes, two salsa making classes, and one pickle making class. In the surveys taken at the completion of canning classes, 98% of participants said they learned something that would help them in future canning endeavors and that the introductory classes provided helpful hands-on learning absent in other lecture-only canning classes they had been to before.

During one October huckleberry jam making class, 16 Native American participants (organized in conjunction with the Missoula Urban Indian Health Center) of all ages came together on a Friday evening, with several gallons of huckleberries in tow. Together, we talked, measured, stirred, and waited for the magic of pectin, heat, and patience to transform the huckleberries into a jar of jam that everyone would be proud of. Only two people in the group had ever canned before, so the applause that erupted when the jars sealed at the end of the water bath process, was to this agent’s delight, signified ultimate success!

A meat pressure canning class has been consistently requested; one is scheduled for late January and another for July 2017.

First time pressure gauge checks were up this past year as were returning checks (48). Several families brought in multiple pressure canner gauges to be checked so that they could all can together last September. Helping decipher recent Montana Cottage Food Industry mandates, giving out local food directory information, fielding nutrition label questions, and providing information on family financial planning issues (in conjunction with the MSU Extension-led, Missoula Financial Educator’s Alliance) helped promote Extension programming and introduced more people to MSU Extension and The Missoula County Weed District Office.

Improving financial literacy in Missoula County is a goal shared by the MSU Extension-led Missoula Financial Educator’s Alliance. Representatives from area credit unions, financial planning offices, human resource organizations, and financial counseling services meet quarterly at the Extension office to share program information and develop a directory of services that provides free information. Two small group estate planning classes were held this past year where participants were encouraged to actively participate in the improvement of their financial health by becoming more organized and informed using readily available resources such as MSU MontGuides and “Solid Finances.”

Representing Missoula County as a MSU Extension Agent instills a great sense of pride and responsibility. The opportunities to make change, build trust, develop relationships, gain understanding, and provide useful information come every day. It becomes more important each day to create a safe and comfortable space for people to learn in and to be heard. Which makes for a healthier Missoula County.
MSU Extension Expanded Food and Nutrition Program

Buy-Eat-Live-Well

by Diann Pommer

MSU Extension’s Expanded Food and Nutrition Program (EFNEP) has assisted limited resource audiences in gaining knowledge, skills, and attitudes to change behaviors necessary for healthier diets for nearly 50 years. EFNEP targets youth and limited-resource adults with children and reaches individuals through a series of lessons and demonstrations.

I’m glad I know how to make one now.”

The EFNEP program developed a new partnership with the Missoula Urban Indian Health Center to do the series group classes. A single dad brought his two children to one of the classes offered. The son’s favorite foods were cheese and sour cream. The fish tacos made in class substituted plain non-fat yogurt for the sour cream and the son really liked it. He told his Dad he wanted to try swapping it more often. The next week, the family came to class again and the son told how they bought plain yogurt and had it on their tacos over the weekend.

EFNEP adult classes graduated 97 families this year. They learned to plan and prepare meals based on the USDA “My Plate” guidelines, make healthier food choices, and increase their physical activity. EFNEP welcomed two new nutrition educators this year; Julia Goar and Bonnie Medlin. As a result we are looking forward to increasing participation of families and youth.

This year, Missoula EFNEP was excited to partner with the homeless women and children at the Union Gospel Mission. A participant in her thirties was struggling with taking what she knew about healthy eating and applying it to her everyday life. She learned how to make a grocery list and plan ahead to make quick, affordable and healthy meals for her family. She commented “I never knew making a grocery list was important.

EFNEP Nutrition educators from Missoula County taught first, third and fifth graders in schools where at least 50% of the student population were receiving free or reduced price meals. The series of nutrition lessons was taught to 835 students. Learning this information on healthy nutrition and physical activity resulted in 76% of students making healthy choices, 54% participating in more physical activity, and 26% eating more vegetables.

Missoula EFNEP keeps nutrition issues moving forward in the county with its involvement with Missoula County Public Schools Graduation Matters/Nutrition Subcommittee, Eat Smart Coalition as well as Harvest of the Month at Hawthorne School.
Marketing efforts help 4-H members increase profit and save money for college

by Campbell Barrett

4-H members learn responsibility, financial management, decision making and record keeping skills by participating in the market animal projects. Many members save enough money through the sale of their animals over the years to pay for all or part of their college education. Through observation and statistical analysis, it became apparent that the number of buyers at Western Montana Fair’s 4-H and FFA Livestock Auction had declined, and that sale prices received by youth participants were suffering.

In 2014, a Livestock Sale Marketing Committee was formed with goals of improving the experience for buyers, teaching marketing skills to 4-H youth and families, and improving the average price per animal sold at the fair. The committee, comprised of 4-H youth and adult volunteers with guidance from the 4-H Extension Agent, developed easy-to-use marketing tools for members, contacted past buyers for ideas on improving the sale, and solicited donations from local businesses to sponsor radio, print and television advertising to promote the sale.

Each spring at Market Animal Quality Assurance workshops, youth are taught to think like entrepreneurs with bringing a product to market. They are all small-scale ag producers with one steer, hog, lamb or goat to sell. They learn how to speak to business owners, identify and invite potential buyers to the livestock auction, keep records of project expenses and set financial goals. They learn that, even in the inflated 4-H market, where average sale prices are far above regular market prices, profit margins are slim, and budgeting is an important tool.

Since 2013, the last livestock sale prior to the creation of the marketing committee, the average price per animal sold at the Western Montana Fair 4-H and FFA Livestock Auction has increased 23.3%. At the 2016 fair, local youth sold 260 animals for a total of $467,904.43. This money goes directly to the 4-H members, who use it to pay feed bills, purchase show equipment, buy animals for next year’s project, and save for college or other financial goals. One graduating senior said “... because of 4-H, I am able to attend college and have some money to use for living that I don’t have to take out college loans for.”

Brooklynn Newbary with the 2016 Grand Champion Market Steer.
2016 Program Highlights

Musselshell and Golden Valley counties make up the Lower Musselshell Valley, a winding river corridor that is home to cattle and forage producers aplenty. The Valley is also home to large infestations of Spotted Knapweed, Leafy Spurge, Dalmatian Toadflax, and the ever-present prairie dog and ground squirrel.

One hundred-fifty individuals across the two counties hold a Private Applicators license to combat these pests with Restricted Use Pesticides (RUPs). Beginning January 1, 2017 these individuals will have one year to finish collecting six applicator points required to maintain their license. This will mark the final year of our five year cycle where applicators must make an effort to obtain those credits. Since October of 2015, the new Agent in Musselshell and Golden Valley has been offering an abundance of programming to get these applicators re-certified for the next cycle. Training courses have been designed around the needs of the local applicators, focusing on their problem pests, areas of interest, and frustrations.

In 2016 MSU Extension has organized six pesticide programs for producers to obtain credits. These programs have put forward 18 points of credits for producers, an opportunity which many took advantage of.

Programs have included real scenarios of producers; tank mixing, herbicide selection, off-target damage, and of course rodent control. Varmints play a large factor in many producers choice to obtain a license to apply RUPs. For many of these applicators, information on varmints plays a big role in their attendance. At our spring training in May, Stephen Vantassel, the Vertebrate Specialist with Montana Department of Ag, spoke to producers about controlling their rodent problems.

That same training in May saw a record number of attendees at 45 across both counties, since the average number of attendees is between 20-25. Those numbers have contributed to the 56 applicators across the two counties who have met their re-certification goal, with another 37 expected to reach their goal with the next training in March.

With the number of invasive species in the county, which in recent years has been promoted by flood and fire, applicator knowledge is at its most critical. Having this many individuals in the field applying, having up-date information and trainings that focus on their concerns, rather than rote-memorization, has become especially critical. And the number of individuals who come to the trainings continues to grow, including those who do not hold a license, but choose to attend based on the information provided.

Pesticide Programming Helps Applicators Keep Up Requirements

Musselshell & Golden Valley Counties
2016 Program Highlights

MDA Vertebrate Pest Specialist Stephen Vantassel speaks to a room of applicators at the MGV Spring Training in May 2016.

Arianna Bennett, a Junior at Ryegate High School, shows the new sign she made for the Extension Office, which she did free-hand with a plasma cutter.
Master Gardener 2016
MSU Extension had an outstanding Level Two Master Gardener group during the 2016 winter months. The group consisted of five volunteers from both counties; Loretta Albert, Joan Bergin, Jean Kimmel, Nancy Rademacher and Janet Hamill. They intend to take the experience and the knowledge gained and apply it to their community and home gardens. Bergin has spent time with young students in Musselshell and Melstone teaching basic gardening skills, and Albert has worked diligently on the local park and cemetery.

Condensed Master Gardener Program Helps High School Horticulture Class
The Master Gardener program has been a great success for MSU and also for communities around the state. One interested party however was feeling slightly left out. The local Roundup High School horticulture class was interested in attending one of the Level Two MG classes to learn about the program, and gardening facts that they could take back to their greenhouse.

Instead MSU Extension chose to take the class to the students. For a week of school, the MG Level One material was condensed and taught to the students as a gardening unit.

Based on the unit they were able to increase production in their on-site greenhouse, which they use as both a learning tool, and as a fundraising option for selling fresh produce. This year they used knowledge from the class to plan, and plant a row of trees for the local BUD (Beautification and Urban Development) society along the street to the new Roundup Elementary School.

FFA Chapter Students Use State FFA As An Opportunity To Learn More About MSU Diagnostics Lab
During the 2016 State FFA, several students took an opportunity to tour one of the diagnostic labs at MSU. One of the students, Senior Katelyn Angel, also took the opportunity to learn about some of the work-study opportunities that could be found while attending MSU, where her studies will take her.

Inevitably the students found themselves in the Insect Diagnostic lab where Specialist Laurie Kerzicnik showed them Rosie the tarantula. The students were first a little leery, but ultimately gave in to the experience.

The tour was an opportunity to show students the “boots-on-the-ground” aspect of the university. They have always seen the university as a source of higher learning, which it is, but it’s also a place that provides service and outreach. The insect lab was a great example, because every young person can relate to the fear of creepy-crawlies.

They learned how insects can be identified by the tracks they leave beneath bark, and how to recognize our states venomous spiders. They even learned that despite being exceptionally creepy, hissing cockroaches are particularly hygienic. At the end of the day those who attended could brag about nothing else to those who missed out, which immediately garnered volunteers to attend next years tour.

FFA member Kately Angel holds Rosie the tarantula as she tours the Insect Diagnostic lab at MSU.
New Skill-a-Thon at 2016 Fair

The 2016 Musselshell & Golden Valley 4-H fair was a success in many aspects. Being able to see members come full circle in their 4-H year is always a source of pride to those who have been able to watch them grow. But in the long run the fair is only a finish line. This year we decided to expand the opportunity for our members to display their knowledge at a skill-a-thon event which would test their memorization skills. The goal of a skill-a-thon is for members to complete posters featuring fill-in-the-blank scenarios. We utilize Ohio Learning Lab kits, which feature up to a dozen posters that challenge members and students to distribute information in the correct spots. One example comes from our Horse Kit, where members were tasked with filling in descriptions of a hoof, anatomy, breeds and feed types. The event was a success, with 30 members choosing to participate. Next year we will add kits to our collection to give members more options for the event.

Ryegate FFA Chapter Joins as 4-H Club and Creates New Office Sign

The Ryegate FFA chapter has begun to make something of a name for themselves in the Musselshell Valley as craftsmen, and certainly as go-getters. Recently they received funding to start their own school farm just inside the town of Ryegate. This gave them the confidence to join our 4-H program as a club. The farm will be used by the students to obtain hands on experience not only with animal husbandry, but also with construction, as they will be building the farm themselves. This made for the perfect opportunity to invite them to join the program, as they will be raising livestock, and growing produce. It also gives members the opportunity to enter much of the work they do in class. A perfect example is the new office sign for the Musselshell Golden Valley Extension Office (Page 1). The 7x5’ steel sheet was donated by Midland West out of Billings, and the work was done by Senior Arianna Bennett using a plasma torch and free-handing the sign.

Outstanding Youth Experience at 4-H Camp Rotary

Camp Rotary was an event that I began hearing about as soon as my first day on the job. Members and parents all shared how great an experience it is, and how I should look forward to it. Of course the more they talked about it, the more I anticipated. Little did I understand the experience that Camp Rotary, or any 4-H camp, provides for our members, counselors and even our Agents.

Camp was held again in Monarch Montana. A scenic drive to be sure, and a complete disconnection from the electronic world, something that everyone can appreciate from time to time. The excitement that the counselors produced was immense, not for their own experience, but from looking forward to when campers would arrive.

When teens are encouraged to be models for youth, and they succeed, it’s a great sight. It’s even more rewarding when we are able to see the connections they make with our campers and each other. It gives them a sense of pride that they have made a difference in these kids’ summer, and given them an experience that they will hopefully remember when they grow to become counselors.
Spring Trials
For the first time in over a decade, Musselshell County was able to host one of the coveted, off-station spring wheat variety trials overseen by Dr. Kent McVay of the Southern Ag Research Center. The off-station variety trials provide an important tool to agents making variety recommendations to producers, especially when grown locally. In the Musselshell Valley there are not large numbers of grain that go to the elevator, but there are plenty that go to the feed bunk. The Musselshell trial did very well considering the lack of cumulative rainfall in the area. Being able to provide this homegrown data to producers and growers is a huge boon for us in the valley, and we look forward to continued cooperation with the station and breeders.

Pasture Rec
Beginning in December 2016, MSU Extension will be offering a pasture reclamation and rehabilitation course for local land owners. Whether you are on two acres or 200, the information provided during the four-week course will help anyone looking to rehabilitate their property after suffering the effects of floods, fires, or invasive species.
Excellence in Extension: Working to Build Community Capacity

Education, leadership development, and capacity building are at the foundation of Extension work. Knowledgeable and engaged citizens are critical in building strong, healthy, vibrant communities. Research shows that successful communities invest in the development of their people. This is why all three Park County Extension agents incorporate this work across their discipline areas.

From the Leadership 49 program, to hosting educational events with Temple Grandin and the Redevelopment Symposium that drew hundreds of people from the county and state, to building capacity for service providers and Livingston Graduation Matters, to the many youth leadership development programs, we recognize that by empowering the youth, adults, and communities in Park County, we are increasing the number of engaged citizens and effective leaders.

Participants who step into leadership roles in their school, home, business, or community contribute positive impacts across Park County. These impacts affect all communities and are establishing a strong foundation for a culture of positive change.

Welcome to Park County

Park County spans nearly 85 miles from north to south and encompasses almost 1.7 million acres of land. Nearly 16,000 residents live here and enjoy the expanse of scenic beauty the landscape offers. Agriculture, healthcare and social services, and tourism are major economic drivers.

County Tri-Funded Support

Funded jointly by the City of Livingston, Park County, and Montana State University, Park County Extension maximizes taxpayer investment by leveraging funds and resources to improve lives, landscapes, and livelihoods. For every $53 dollars invested by Park County taxpayers, MSU invests $47—an 89% return on investment.
Master Gardeners Give Back

Sixteen Park County Master Gardeners attended eight, two-hour classes to learn how to improve home gardening skills to grow their own food, improve landscape and irrigation efficiency to conserve water, and best practices for using Integrated Pest Management to reduce pesticides in the environment. Additionally, eight of these students contributed 160 hours of volunteer time to improve the lives of Montanans.

Over half of volunteer hours were spent with youth. Research shows that early exposure to gardening fosters a lasting positive relationship with gardening, bonding experiences with parents and other adults, and healthy eating habits. Two volunteers developed a Garden Therapy curriculum for 53 special needs children in a Life Skills class. Students learned how to plant and grow seedlings, wash and cut fruits and vegetables, and use technology to plan a garden. Nearly 80% of students tasted and approved of novel fruits and vegetables. Three volunteers taught youth about general gardening principles, harvesting techniques, and how to winterize garden tools.

Nearly 25 hours of volunteer pruning occurred in Montana’s Heritage Orchards in Park County, which were planted by homesteaders and are up to 100 years old. This program works to preserve heritage orchards and tree cultivars in Montana, as well as to contribute to rural economies through agro-tourism where orchards exist. Other volunteers pruned in the Livingston Community Garden, cleaned medians to beautify Livingston, propagated geraniums at Eagle Mount, and worked with Yellowstone National Park officials to plant native shrubs and grasses and collect native seed.

Temple Grandin Engages All Ages Across a Wide Demographic

Nearly 400 people packed the gymnasium at Park High in September to listen to Temple Grandin, a world renowned speaker and expert on autism, animal behavior, and low-stress livestock handling. Grandin’s hour-long presentation focused on animal behavior and livestock handling. However, people from all walks of life attended the presentation due to Grandin’s reputation.

Grandin specifically requested that there be a strong youth component in the crowd. The youth represented 4-H clubs in nine counties and FFA chapters in five counties. These students increased their knowledge of animal behavior and how those principles apply to sound livestock management, which results in healthier livestock that generate greater revenue. Impressively, nearly 75% of the questions asked of Grandin came from youth inquiring about how to improve their livestock projects.

Adults in the crowd represented nine counties from diverse professions, representing agriculture, non-profits, interior design, accounting, mental health, hospitality, local government, insurance, news media, education, real estate, and more. One individual stated, “I don’t have livestock or 4-H kids, but knew the information Temple provided would be valuable to hear.” The sentiment regarding the value of the program was repeated by many in attendance.
4-H: More Than $229,000 in Gross Sales

The community believes that 4-H can help youth learn a great deal about financial management. Why? Before the auction, every market livestock exhibitor, 86 in total, completed a financial inventory of their project including fixed and variable costs, income earned, expenses incurred, and the cost of feed per pound of gain. At fair, these 4-Hers interviewed with an industry professional about their project and their records. One 4-H’er commented, “Now I know how much feed I need. I can shop for it in bulk and save at least 20%.” Another 4-H’er said, “I paid $50 to have my lamb shorn before the fair. Next year, I am going to learn how to clip and do it myself.” The end results: better future businessmen and women to help build this community.

Learning by Doing: A Success Story

Forty 6-10 year olds attended and completed a week long, day camp learning basic food preparation and food safety skills. Why? Because as of July 2016, a USDA ERS report on Where Households Get Food in a Typical Week: Findings From USDA’s FoodAPS, stated that 85 percent of American households reported eating out on average 5.4 times per week. One third of all food expenses were away from home. Kid’s Cooking Camp, a partnership between MSU Extension and the Livingston Food Resource Center hopes to change that. At the camp, children learn the skills to turn cooking from a parent-only activity to a family activity.

One participant remarked his favorite part was “the independence I had while making the food. I used a knife, a stove, and mixed ingredients all by myself!” Six months after camp, half of parents reported that their child or children made one meal per week. One parent commented, “I spend time and money making sure my kids get to participate in team sports. Because of this camp, I realized I should be focusing on life-long skill development. They will always need to eat! Thank you!”

4-H: More Than Youth Development

A letter from the outgoing Park County 4-H Council President and Yellowstone Helitack Crew Foreman, Wendy Hafer, to the Park County 4-H Council:

I wanted to just drop you all a note on what would be my last meeting as President of the Park County 4-H Council. I wanted to thank all of you for helping me. For helping me grow as a leader, a teacher, a mentor, and a parent, and even a human. These years as president have taught me more patience, diplomacy, and the ability to look at the big picture with professionalism and integrity than any paying job could have ever done. This is definitely not goodbye, but just a heartfelt thank you. My favorite thing about living in Montana is the people. And you are those people.
Growing Businesses, Communities, and Leaders

The challenges and opportunities for communities across Park County are as varied as the landscape. While the strategic direction is clearly outlined for the economic and community development program, the ability to work with communities in areas of need is the real strength.

Business assistance and training through one-on-one counseling/consultations, Business Expansion and Retention program, and the Entrepreneur fwd Business Series continues to help grow strong businesses to create and retain jobs in communities across Park County. To date, Extension programs have assisted in retaining 43 jobs with an estimated $1.3 million in wages and creating 11 jobs with an estimated $330,000 in wages. Extension has also assisted 12 successful business startups, strengthening and diversifying Park County’s economy.

Leadership 49 successfully graduated 14 participants in its second year, increasing the number of leaders engaged in our communities. In June, the National Association of Community Development Extension Professionals awarded Leadership 49 the Excellence in Community Development Team Award for the Western region.

Housing and workforce challenges continue to impact many across Park County. Gardiner continues to work on housing solutions identified in the 2015 Housing Report and allocated resort tax funds for dedicated assistance. The old hospital in Livingston is currently in the process of adaptive reuse to become affordable housing using tax credits. Extension-supported workforce development projects have created connections between industry and local high schools. Park High will pilot a series of manufacturing modules in early 2017.
Weather and Disease Impact Phillips County

Crop disease major economic impact

Wheat Streak Mosaic Virus (WSMV) expanded its impact across Phillips County in 2016. The Extension agent submitted eight samples to the Schutter Diagnostic Lab. Another seven producers were consulted on the phone about the possibility of WSMV in their crop. Direct crop losses ranged from 100 to 50 percent. It is estimated that WSMV affected over 60,000 acres.

It appears that 2017 is shaping up to be another year of WSMV. Fall moisture was significant enough to germinate weeds and volunteer on summer fallow, and the nine and one half inches of precipitation during September through October was enough to keep farmers out of the fields due to wet soils. Consequently, many acres went into the winter with significant vegetative growth, creating a green bridge for WSMV in the 2017 crop year.

Weather becomes challenging

Weather continues to be a factor in agricultural production. Though the winter of 2016 was dry through April, from April to October of 2016, Phillips County received between 25 to 30 inches of rain. This provided challenges during haying as well as delayed small grain planting. In early October we received a four to five inch rain event on saturated soils that caused widespread flooding of crop and hay ground. The Extension agent has provided advice on forage quality issues to livestock producers when feeding wet hay.

Agent continues to work with livestock producers

Every winter, Extension agent, Marko Manoukian works with livestock producers at a daylong educational program. The Jim Schumacher Memorial Livestock Day has been an annual event since 1989. In 2016, 45 producers learned about the Veterinary Feed Directive, proper usage of a dart gun for remote vaccination, as well as the market outlook from a cattle feeder from Minnesota.

Additionally, Manoukian has performed 19 nitrate tests on forages and formulated rations for 10 producers. A listserv has been used to make producers aware of upcoming events and important impacts to the livestock sector, like the recent decision by United State Department of Agriculture to import fresh beef from Brazil.
**Educating Landowners about Pesticides**

The Phillips County Extension agent plays a vital role in the certification and recertification of private landowners with pesticide licenses. Every five years, Phillips County must recertify farm and ranch pesticide licenses. Producers must receive six credits over the five-year period to maintain their license. In November, a daylong meeting was held for the 36 producers who needed additional credits to maintain their private pesticide applicators license.

The pesticide license is important so that producers can purchase restricted use pesticides for weed, insect, and or fungicide control. The role of the Extension agent is to provide education in the areas specified by the calibration, environmental concerns, identification, safety and biology related to pesticides. In addition to the daylong educational event, the agent provides smaller two credit educational opportunities throughout the year and over the five-year recertification time frame. Without these local educational opportunities, producers would be forced to travel greater distances to receive their recertification credits or attend limited regional trainings. For the daylong certification program, the agent cooperated with Steven Vantassel, Montana Department of Agriculture, small vertebrate pest specialist, Cecil Tharp, MSU Extension Pesticide Specialist and Shelley Mills, Valley County agent to provide educational topics. This also allows producers to learn about pesticide issues from a wide range of specialists.

Additionally, the Extension agent works to coordinate other speakers for educational opportunities. An example includes Peter Kolb, Montana State University Forestry Specialist, presenting on shelter belts to include a discussion about pesticide use in shelterbelts and safety. This workshop provided two recertification points.

**Noxious weed grant for Houndstongue**

The Phillips County Extension agent is working with four landowners in the southeastern part of the county in the Larb Hills to address the expanding presence of houndstongue, a noxious weed. Houndstongue is a biennial weed that reproduces by seeds. When the seeds dry they are covered with sharp hook structures that stick to livestock, humans, and wildlife.

The noxious weed project allows for producers to be compensated for half of chemical costs. In 2016, the four producers sprayed or controlled houndstongue on 35 acres within the 14,000-acre project area. Also in 2016, the cooperators and the county agent hosted a weed tour of the project area. Fifteen producers learned about houndstongue control options, how to calibrate a backpack sprayer, as well as discussed the current status of noxious weeds in Montana. Unfortunately, noxious weeds in Montana continue to move at their biological potential, as if no action is being taken. Grazing loss from the houndstongue infestation is low. However, we have reached a critical point in its distribution in the project area, that if control measures are not taken, houndstongue will continue to expand annually at an exponential rate.
Shooting Sports is thriving

The Phillips County 4-H Shooting Sports program is going strong. In 2016, the program had 69 youth competing in 78 disciplines, some youth take more than one discipline. Youth ages 9 to 19 participated in air rifle, air pistol and archery. The special program runs for about 12 weeks, with youth shooting 8 to 10 weeks. Youth learn the proper way to handle the equipment, safety rules, eye dominations and marksmanship skills. Youth practice under the watchful eye of certified leaders in a shooting discipline. Leaders must become certified by attending a two day training. Phillips County currently has 14 certified leaders, two youth leaders and five helpers.

Youth continue their skills by competing on the state level in Bozeman the first weekend in March. Twelve youth from Phillips County competed in 26 events. The County had two youth that received first place in their discipline.

Number of male and female participants per discipline in the shooting sports program

Teen Youth teach other

Teen youth take time to teach younger 4-H members about the importance of interview judging. Eight teen leaders put on a mock interview judging activity for first time 4-H youth. Teen’s provided the youth with an interview showing everything that you should not do, versus a proper interview. Youth then were put through a mock judging to prepare them for the fair. Youth learned the appropriate ways of talking, dressing and expressing themselves. They learned how to tell an adult about their project, what they learned, liked, disliked and even if they made a mistake. This is an important part of the life skills that the 4-H program teaches all youth in preparing them for their adult life.
Youth Quality Assurance

Youth who participate in a market animal project must attend a Youth Quality Assurance (YQA) class once every three years. Youth learn the best management practices in the areas of herd health, livestock handling, facilities and nutrition. The Extension agent helps educate youth concerning their role as a livestock producer. Providing the best quality product for their buyer is the main focus. The program takes into account all livestock, beef, swine and sheep that youth may raise.

This year the Extension agent chose to teach youth what the role of the carcass grader is in the harvesting portion of the food chain. Youth reviewed a power point on grading a carcass and were provided a hands-on demonstration of how to measure the size of a beef rib and loin chop in a swine. Most participants had a better idea of how a carcass is graded for quality and quantity of lean meat, and ways to improve carcass quality.
This business planning series was geared towards assisting young or beginning producers pursuing value-added ag business opportunities. Often, family operations must diversify and add income to an operation in order to support the parents as well as the next generation during a successful transition of the business. Other producers need to add value to what they produce in order to be able to quit their job in town and work on their agriculture business full time. To address this need in business planning education, participants received instruction in the following areas:

- Strategic Planning and the Business Plan
- Financial Management
- Business and Financial Planning
- Market Analysis and Differentiation
- Financial Planning and Risk Management

The classes were held in a small group setting with time for discussion, which allowed participants to learn from one another and discuss business ideas. Instructors included field staff with the Montana Manufacturing Extension Center, successful entrepreneurs, local lenders and the local port authority. All participants agreed that the instructors were well prepared and helpful and that the information they learned would help to start, expand or enhance their farming or ranching operations. Many thought the most valuable aspect of the classes was exposure to new ideas and experiences and the group interaction. We look forward to building on this interest as producers add value by diversifying ag operations in Pondera County.

Welcome to Pondera County

Pondera County is a rural agricultural county approximately 1,640 square miles in size. It has private, state, tribal and federal lands. Pondera County is on the western edge of the Golden Triangle area of north central Montana and produces some of the best winter wheat grown in the United States.

In addition, barley, pulse crops, hay, and livestock (cattle and sheep) support many families and five Hutterite Colonies as the largest income producing segment of the local economy. The educational role of MSU Extension in Pondera County is significant to the producer’s bottom line.

Ag Program Highlights

Shaelyn Meyer, Ag Extension Agent, offered many programs, workshops and services in 2016:

- Weed ID and Crop Disease Diagnosis
- Forage Management and Salinity Control
- Nitrate testing of forages
- Lowest cost/highest return feed plans for livestock producers
- Emerald Ash Borer Education
- Cropping Seminar: Best Practices for Farmers
- Education for Private Pesticide License Holders
- Coordinated volunteers to spray weeds at Swift Dam campground and trailhead
- Youth Ag Safety Program
In 2016 the Pondera County 4-H program had 15 first time 4-H members. This year 4-H members collectively are enrolled in 27 project areas from Aerospace to Woodworking. The Top Ten projects are listed below:

A project day to recruit new members kicked off the year, offering six different project opportunities for youth to try something new. Dedicated 4-H leaders provided monthly hands-on workshops for the 6-8 year old Cloverbuds, numerous 4-H Club meetings, project specific workshops, community service projects, livestock weigh-ins and fun events like the Halloween Horse Costume party, shooting sports tournaments and the Marias Fair. Pondera County 4-H also hosted a statewide shooting sports leader certification.

Rural Healthcare was a dominant theme this past year. Wendy Wedum, FCS Agent, participated on the Pondera County Health Department Community Health Improvement Planning Committee (CHIP). Issues related to mental health were specifically identified and resulted in community-wide educational opportunities including suicide prevention, mental health first aid, living with chronic disease and food preservation.

Overall FCS highlights included:
- Modified ServSafe Manager’s training which included members from five Hutterite Colonies.
- Food Preservation Class with hands-on activities in preparing and canning pickles and jam.
- Lefse making class and Home Extension Club making lefse for residents at the Pondera Medical Extended Care.
- Talking about Rural Health issues with Pondera County Health Nurse to MSU President Cruzado’s leadership team on a bus tour of central Montana.
- Teaching a Living Well with Chronic Disease class with the Pondera County Health Department.
- Teaching over 100 youth proper personal hygiene at the Conrad FFA Farm Safety Day event.

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Powder River County Extension

AGRICULTURE

Noxious Weed Control is a priority for landowners in Powder River County. MSU Extension has been instrumental in acquiring funding from the Southern Montana Resource Advisory Council (RAC) for the purpose of increasing the control of noxious weeds on and adjacent to Custer National Forest Service lands. Powder River County was awarded $66,000 to continue the program in 2016-2017. Implementing the program involved working with the County Weed Coordinator, the Powder River Weed District, Forest Service representatives and County Commissioners to coordinate noxious weed control. Four hundred acres of noxious weeds were treated by the Noxious Weed District utilizing RAC funds.

At the annual MSU Extension Ag Winter Series, we discovered the transfer of farm/ranch property was a hot topic. Sixty-two producers attended the winter series program; and as a result of the transfer of property program, 35 families requested copies of the publication, “Transferring Your Farm or Ranch to the Next Generation.” In addition, Extension established an Estate Planning committee to work on organizing individual estate planning documents and to develop program ideas for future presentations to educate more families about the importance of communicating in family businesses.

Livestock production is a key enterprise in our county. This year, the summer was hot and dry, resulting in 50 percent less hay production than average. Consequently, almost all small grains were cut for forage. As a result, we tested 70 samples of forage for nitrate for 39 producers. Three samples tested high enough to recommend further testing at a lab. The forages included barley, sudan grass, millet, wheat, and oats. MSU Extension also assisted producers in locating hay through the Montana Hay Hotline and provided protein supplement choices to a rancher who ran out of grass in late summer for his herd of cattle.

Soil Health and a No-till Gardening Workshop was attended by 45 participants from a six-county area. The importance of keeping the soil covered was a key principle. Speakers demonstrated the difference between traditionally tilled soil and non-tilled soil. The workshop stimulated a great deal of interest and discussion, with participants considering changes in their current gardening practices.

Weed & Pests – Prairie dogs and pocket gopher populations seemed to love the warm, dry conditions last summer and fall. In addition to helping ranchers, MSU Extension provided control and product availability information to the Commissioners who were dealing with prairie dog encroachment of a county cemetery.

Ninety-eight producers are private applicators in the County. We worked closely with them to obtain recertification credits toward license renewal. Extension and the Noxious Weed District have offered 33 hours of recertification opportunities during the 2012-2016 cycle.

Water Quality for livestock and irrigation were concerns with the dry summer. When water is too high in total dissolved solids (tds), it can be harmful for livestock and crop production. We assisted two landowners in testing water for conductivity, total dissolved solids and salt content to determine suitability for irrigation; and helped a producer test water to determine suitability for livestock consumption. Another rancher was concerned about blue green algae in a reservoir and moved his cattle to an alternate water source as a result of the information we provided.
YOUTH DEVELOPMENT
A Snapshot of Youth Development in Powder River County

Seventy-four 4-H Members enrolled in 266 projects
Twenty-two 4-H Volunteer Leaders

OREO Trip: 50 4-H youth and 10 4-H adult volunteers from Southeastern Montana traveled to the Black Hills for an active and educational three-day event. Powder River County 4-H youth, and parents worked with MSU Extension to organize the event. Participants took in the aerial adventure park, a trampoline facility, paintball and the recreation center. Participants also learned about the fire at Crow Peak, and toured a fish hatchery and Black Hills State University.

The Powder River County Fair included 65 project interviews with 4-H members and judges with 297 entries. In total, there were 77 livestock entries, which included market and breeding animals, showmanship and carcass contest entries. $1,581 in premium money was earned by exhibitors, with an additional $6,630 in awards for both 4-H and open class exhibitors. The additional award money came from numerous donors. The livestock auction raised $66,348 for 49 market animals. A silent auction is organized to help non-livestock members offset some of their project costs. Twenty-two 4-Hers sold 25 items to raise $630.

The annual Bug’s Life After-School Literacy program attracted 40 participants from kindergarten through fourth grade. The theme, “Inside Out” explored feelings and group activities further enhanced understanding feelings and actions related to feelings. “The volunteers, both adults and teens, were very helpful and considerate,” commented first grade site director Twila Talcott. “The younger children really look up to those older students,” she added. Two hundred twenty-three books were read during the five-week session.

Teen 4-H planned the 22nd annual Mini-Congress event. Thirty-one youth in third through seventh grade participated in the day-long event. Eight teen 4-Hers developed leadership and organizational skills as they taught workshops and led icebreakers and large group activities for the participants.

Thirty-three youth enjoyed the Summer Fun Day organized by the Powder River Teen 4-H Club that was held in Cottonwood Park. Eightteens taught fun and active workshops that included making complicated airplanes, tie-dying t-shirts or making delicious ice cream and healthy snacks.

MSU Extension Agent Mary Rumph worked with two Teen 4-H members to present the Farm Safety Puppet Show to 13 kindergarten students. They learned the importance of protecting their heads by wearing helmets and to recognize potential dangers on the farm and ranch.

Ten 4-H members and one Teen 4-H member attended 4-H Camp Needmore.

MSU Extension agent Julie Riley worked with volunteers and Teen 4-H members on Community Clean-up Day trimming trees and picking up trash along the highway.
YOUTH ISSUES

The Youth Issues Coalition, a collaborative community effort to address youth issues, was first organized 14 years ago. The purpose of the coalition is to create a healthy community for our youth and to help them make positive, healthy choices. Three main areas of focus this year were Suicide Prevention and Mental Health Service; Underage Drinking; and Life Awareness (College Prep).

The Coalition hosted an MSU Researcher, Kaylin Greene’s findings on why young people in rural areas drive after they have been drinking. Greene conducted 10 focus group discussions with young adults in Montana, including youth in Powder River County. The results of the study have been helpful in developing strategies to decrease underage drinking and driving.

FAMILY AND CONSUMER SCIENCES

Healthy Living

MSU Extension offered several programs to increase access to physical activity and healthy eating in 2015-2016.

Strong Hearts, Healthy Communities...a research project with Cornell and Montana State University Extension. Thirty-one people from Powder River County were screened, and 13 people qualified. The program that met twice a week for six months was designed to reduce the risk of cardiovascular disease. Participants completed a baseline screening and blood draw four times throughout the year to assess their progress. The goal was to increase awareness of how to make small lifestyle changes by either increasing physical activity or the amount of fruits and vegetables consumed.

The program provided over $500 in equipment so that healthy food preparation was easier. One woman reported her resting heart rate has decreased, something her doctor said wasn’t possible. Two participants increased fruit and vegetable consumption. Another woman has lost 10 pounds. Health education topics were wide ranging and included reducing sodium in the diet, creating healthy recipes and reducing stress. The final results of the research project will be available at a later date.

The Powder River Heart Club was created because of Strong Hearts, Healthy Communities. Their assignment was to increase access to physical activity or healthy eating. The group chose to improve and expand the walking trail system in Broadus.

Several grants were written and meetings were held to plan improvements. The group met with Beth Schumate, coordinator of the Recreational Trails program to learn how to submit a more successful grant. Strong Hearts, Healthy Communities paid $200 for Tongue River Electrical Cooperative (TRECO) to determine the cost and number of lights necessary to light the trail and extend its use in wintertime. The School Community Development Council (SCDC) and the Powder River Recyclers funded two benches and one trash bin for approximately $4,000. The group also organized the first annual Moonlight Walk. Forty-nine people participated in the first annual walk to raise $1,600 for the Broadus Trails. The SCDC and the Powder River Tobacco Prevention Coalition sponsored the walk, which was a family fun event that encouraged physical activity.

The Powder River Recyclers offered to buy an additional bench, if the Powder River Strong Hearts Club pulled weeds and grass from the boulevards east of town. Over 25 volunteers cleaned the boulevards over a five-day period. The boulevards are beautiful, and two benches and one trash bin have been installed.

The Strong Hearts Program teaches that regular physical activity is one of the most important things we can do for our health. It can help:

- Control weight
- Reduce risk of cardiovascular disease
- Reduce risk for type 2 diabetes
- Reduce risk of some cancers
- Strengthen bones and muscles
- Improve mental health and mood
- Improve ability to do daily activities and prevent falls in older adults
- Increase chance of living a healthier, longer life

Powder River County Extension Service meets the needs of Powder River County residents by offering programs that increase strength, improve flexibility and balance and build endurance.
Montana Arthritis Exercise Program
This program is offered twice a week, September through May. Participants have improved their overall health by 12 percent from when they first started the program. Tests measure their flexibility, endurance and arm strength and blood pressure and weight.

One woman said that she has lost 25 pounds since going off the drug she used to take for arthritis pain; one man shared that the classes have helped with his golf game. Another has said “going to the arthritis classes twice a week, increasing time spent walking and exercising at home have helped me manage pain caused by arthritis.”

Strong Women
This program is offered twice a week, September through May. One participant said that the muscles that support her knees are stronger; she is now able to kneel where she wasn’t able to before. Another has gradually increased strength in her arms and legs, and has improved her balance.

Walk With Ease
Twenty-three women signed up for the six-week Walk with Ease program; 11 of the participants are new to the Arthritis Foundation program. One person appreciated an article on the benefits of exercise in dealing with anger. Another has said "I keep changing my goals. My last half mile is uphill. When I start to slow down I start pumping my arms and it not only keeps me going but is great cardio!"

The local Farmer's Market is promoted in the fall. There were 10 vendors who sold locally-raised produce, increasing consumption of healthy, garden vegetables.

FOCUS ON MENTAL HEALTH

Mindfulness for Health was a series of classes presented by Cody Kinzer, Licensed Counselor. Twenty-four people learned to develop relaxation techniques. They said they were better able to focus on the present and were more aware of distractions.

A THRIVE Mental Health focus group was held in Broadus. Nine people gave input on mental health in Broadus, from services to any perceived stigma. Antonia Klein, Eastern Montana Mental Health, commented on working with MSU Extension Service in Powder River County “I am so happy to work with the Broadus community because they are great people who really care about others. I tell everyone Broadus is a force to be reckoned with because they are out there doing so much. You may be small but you are MIGHTY! Others need to follow your example.”

A Mental Health First Aid Class was organized. Based on our population and average statistics, 100 women and 200 men could be dealing with anxiety and depression. With limited resources available, it is difficult to provide services for treatment and healing. MSU has established the Center for Rural Mental Health Research and Recovery. The director for the center will be developing links with Extension for the purpose of education, research and prevention programming; with the possibility of providing specialists on a regional or statewide basis to support county efforts. As a step in providing knowledge and skills locally, a Mental Health First Aid Class was organized. Twenty-one people became certified in mental health aid training including many teachers, youth, clergy, law enforcement, EMTs, MSU Extension staff and medical professionals. The eight-hour class provided tools to help identify people in crisis and how to talk with them. The training also aims to change the negative stigma associated with mental illness. Watch for more on this topic in future MSU Extension programs.
Extension in our Communities

Deer Lodge Community Garden

To get from farm to fork, food in the United States travels an average of 1300 miles, changes hands half a dozen times, and consumes 10 calories of fossil-fuel energy to produce a single calorie of modern supermarket food (Kloppenburg, Hendrickson and Stevenson, 1996, Pollan, 2008).

Producing food locally greatly reduces the greenhouse gas emissions related to transportation of food. With that said, it was once again another fabulous year for the Deer Lodge Community Garden in which we saw more growth, more vegetables and more community involvement. The project was started in 2012 and has proved its sustainability. Extension Agent Jodi Pauley feels this is one of the most positive community development projects that Deer Lodge has embraced. Volunteers spent over 400 hours of service for the garden this year. This included building new boxes, filling the boxes with soil, upkeep of the grounds, hosting a garden tour and a pick-your-own farmers’ market. This year the garden grew from 41 outside plots to 45 plots and the greenhouse is now at capacity with 24 boxes.

Volunteers ran the Community Garden Farmers’ Market for seven weeks during August and September. Volunteers planted garlic, onions, tomatoes, carrots, potatoes, green beans and lettuce in 10 of the boxes at the garden. The market is designed to be pick-your-own and for a donation. This generated $500 for the community garden and this money is used for insurance and maintenance of the greenhouse, boxes and grounds around the garden. The garden donated more than two gallons of tomatoes for the fifth grade harvest day, which were made into soup for the class.

Several educational events were held at the greenhouse. MSU Extension Agent Jodi Pauley and the community garden board held an open house in late May. Twenty-six participants learned the benefits of raised bed gardening, how to take a soil sample, and how to plant seedlings. Mont-guides were provided on vegetable gardening, herbs and short season gardening. Gardeners gave tips on their square foot gardening techniques.

Fourth grade students toured the garden and planted all of the flower boxes.

Informal education happened at the garden between gardeners, this included watering tips, planting care and how to install row covers on their boxes. The Greenhouse is a great incubator of community garden education!

The garden averaged about 72 pounds of produce per 4x8 box and over 50 pounds of tomatoes in the 4x4 boxes in the greenhouse. Several folks benefited from the garden as families rent boxes, the elderly who are living on a fixed income, young individuals who do not have a space for a garden and many who have the desire for fresh local grown produce.

Extension looks forward to many more years of great community gardening.
Show Camp

Show camp was again a great success for 4-H members from western Montana. This camp, held locally by Extension Agent Jodi Pauley, older 4-H members and local mentors has been a great way for 4-H animal project members to enhance their showing and fitting skills. One of the participant’s mothers said her daughter came home with the confidence to clip and fit her steer on her own. That is exactly why this camp was developed. The first night of camp all the members worked on their showmanship skills and every participant showed all species of animals. This gave members a new confidence to think about taking other animals in 4-H besides the species they are currently showing.

The second day of camp was spent fitting the animals for the show. Each member had to bathe their animal and then learn how to handle combs and clippers to make their animal shine.

One 4-H member set up a show camp “Amazing Race.” Participants took clues and did different projects, all related to the items they learned at show camp. Stations included setting up a fitting chute, calculating a corn ration, finding by-products from their animals and much more. It was a great team building exercise among the older and younger members of 4-H.

All participants won great prizes that they could use for future showing and fitting. After the camp many of the members participated in the local jackpot show using the skills they learned at show camp.

We start them young at Show Camp!!

Harvesting the Garden

Powell County Extension Agent Jodi Pauley and Master Gardener Sheila Gill again embraced youth development spending six weeks teaching the fourth grade students of Deer Lodge elementary fundamentals of gardening. Students spent time learning about soils, seed growth, planting, eating pea plants, onion and garlic tops and several types of herbs, and visiting the community garden.

Studies show that children who are familiar with growing their own food tend to eat more fruits and vegetables and are more inclined to continue healthy eating habits through adulthood. Utilizing this research, Master Gardener Sheila Gill expanded the program and included a harvest day in September that all the fourth graders who were now fifth graders could fully understand the components of garden harvesting.

This year the students harvested strawberries, kohlrabi, carrots, beans, tomatoes, herbs, potatoes and squash. They had lunch from the garden with fresh tomato soup, fresh squash soup, and carrot cake. Sheila volunteered more than 30 hours toward this educational project by providing her expertise in horticulture to MSU Extension through youth development.
Sustainable Agriculture Research and Education Grant

MSU Extension in Powell County and Dry Cottonwood Creek Ranch are investigating the effects of split-season water leases on hay crops in the Deer Lodge Valley. The purpose of this study is to analyze the agronomic and economic benefits and impacts of split-season water leases on forage crops over several years under various growing season conditions. Two AM400 soil moisture recorders were purchased in 2013 to monitor soil moisture. These probes are put at 30 inch and 12 inch depths, placed strategically under the irrigation systems that are being monitored to gather soil moisture data. Jodi Pauley, MSU Extension agent, also worked with producers completing soil testing, hay sampling and clipping to determine yields that are in the study. Some of the factors that have affected the study have been older stands of alfalfa, weather, cheat grass, dandelion and Kentucky bluegrass encroachment and also the vastly different soil types. The primary benefits shown have been labor savings, reduced equipment and power costs, and studying soil moisture more closely to determine proper timing of irrigation. This project will be wrapping up in January 2017 with a final educational report with an educational tour planned next spring for producers to get out in the field to discuss the ramifications.

Farmer Fly-In

Due to her work with the SARE program, Jodi Pauley, MSU Extension agent, had the rare opportunity this past March to participate in farmer “fly-ins” not only from the standpoint of administering a grant but also benefitting from the work other SARE projects have provided to her both personally and professionally. Below is the news release on that experience:

This week the National Sustainable Agriculture Coalition (NSAC), one of the nation’s leading voices in food and agriculture policy, kicked off a month-long series of “farmer fly-ins” in an effort to raise legislators’ awareness around the importance of funding sustainable agriculture programs and policies in the FY17 budget. During the fly-ins, advocates, farmers, and ranchers, like Jodi Pauley of Montana, will descend upon the capital to speak with their legislators about important food and agriculture issues.

“In our view, there are no better advocates for these critical U.S. Department of Agriculture (USDA) programs than the farmers who use and benefit from them,” said NSAC Policy Director, Ferd Hoefner. “Each year, as Congress prepares to develop its annual funding bills, we bring farmers and ranchers from NSAC member organizations to Washington to speak with their congressional delegations about what matters most to them. This year we are honored to host a great group of farmers and program leaders from across the country who can testify first-hand as to the importance of these programs.”

Montana rancher and MSU Extension Agent Jodi Pauley has been working in agriculture her entire life. She and her family raise cattle, sheep, hogs, and hay on their Deer Lodge, MT ranch, and have had the opportunity to work with the USDA’s Sustainable Agriculture Research and Education (SARE) and Environmental Quality Incentive (EQIP) programs on multiple occasions.

“SARE has been very beneficial to my work,” says Pauley. “SARE grants are a great opportunity to bring research to producers at a reduced cost, to help them implement new practices and to develop conservation methods. For me, one of the best parts of programs like this is working together with other ranchers, farmers, and producers. We need programs like SARE for the viability and sustainability of agriculture and everyone involved in it.”

SARE is the only USDA competitive grants research program with a clear and consistent focus on sustainability and farmer-driven research. This is the first time in several years that the Administration has requested an increase in funding for SARE, from $24.7 million to $30 million, representing an acknowledgement of the importance of cutting-edge research that is easily accessible, regionally appropriate, and farmer-tested.
Welcome to Powell County

Hi, my name is Jodi Pauley and I am your MSU Extension Agent in Powell County. I am here to provide you, the clientele, research-based knowledge to strengthen the social, economic and environmental well being of families, communities, and agriculture enterprises! Extension is an outreach of Montana State University and we are committed to the overall university goals of integrating learning, discovery and engagement. And as always GO CATS!!

Clientele benefit from MSU Extension in Powell County in the areas of agriculture, youth development, horticulture, community development, 4-H and more. The MSU Extension office sits in the county seat in Deer Lodge, housed in the county courthouse. The office provides free publications to the public on a requested basis, provides workshops in several program areas, and works with school children and youth all across the county.

Agriculture is the backbone of Powell County with approximately 263 ranches with the average size being 2,240 acres. The population of the county is around 6800 people. The population of cattle is around 39,000. We are home of the Montana State Prison. One of the larger landowners in the county (38,000 acres) is the Montana Correctional Enterprise where they provide daily training to over 500 inmates in the areas of vocational, agricultural and industry programs. They operate one of the larger dairies in the state and also have over 12 miles of handline gravity fed irrigation lines to grow crops on 2,800 acres of farmland. Powell County is also home of the Spotted Dog Wildlife Management area and provides over 40,000 acres of public access, winter elk range, and wildlife habitat. Fish, Wildlife and Parks continues to work with surrounding landowners and the public on policies and management schemes to ensure the viability of the WMA in Powell County. MSU Extension has been very involved in working with FWP to help develop a wildlife management plan for the Spotted Dog. MSU Extension administers the 4-H program within Powell County with seven clubs, 38 volunteer leaders and 81 youth. MSU Powell County Extension takes pride in working with individuals one-on-one with horticulture issues, insect problems, weed recommendations and estate planning. This year, in collaboration with the Rocky Mountain Stockgrowers and Granite County Extension, a workshop was provided on calving difficulty. It was presented by Dr. Robert Mortimer, Colorado State University. One producer commented that there was something for everyone and he would be implementing some of the techniques in his barn. The MSU Extension office provided newspaper articles locally, reaching over 3000 homes this year with 30 articles of unbiased and research based information for the clientele of Powell County and beyond.

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Agriculture Programs

Agricultural Services

MSU Extension in Prairie County offers services to assist producers including: forage testing, insect and weed identification, plant disease diagnostics, plant variety information, ration balancing, feed analysis, range monitoring, and Noxious Weed Seed Free Forage certification.

MSU Extension Winter Series

MSU Extension agents in Prairie, Dawson, Wibaux, Fallon-Carter, Powder River, Rosebud-Treasure, McCon, Custer, and Garfield counties cooperatively plan the annual Extension Winter Series. The second week in January, guest speakers traveled to 10 towns in Southeastern Montana. In Terry, 41 men and women attended Winter Series. Speakers and topics were Dr. Kate Fuller, MSU Extension Economics Specialist, on agriculture leases; Cecil Tharp, MSU Extension Pesticide Specialist, on alfalfa weevil management; and Sharla Sackman, Prairie County MSU Extension Agent, on pesticide safety and proposed changes to the private pesticide applicator program. Winter Series is the largest adult education event in Prairie County. Producers report that they appreciate being able to hear from university experts and request topics to be presented throughout the year. Producers requested information from MSU Extension in Prairie County Extension on agriculture leases before entering into a lease agreement. As a result of increased awareness of threshold levels for alfalfa weevil, two producers swept their fields to assess weevil larvae populations. Producers gave testimonials during the program about the importance of taking safety precautions when handling pesticides.

Wheat Streak Mosaic Virus was a crop disease that affected producers in Prairie County in 2016. Positive diagnosis from the Schutter Diagnostic Lab at MSU and advice from MSU Extension Agents helped producers respond to this disease.

MSU Extension performs nitrate quick tests in the office to test for the presence of the toxin nitrate in forage. During the summer of 2016, 74% of the samples tested positive for nitrate. MSU Extension in Prairie County is in the second season of piloting use of a quantitative nitrate test that gives the grower an indication of how much nitrate is present in the sample, whereas the original quick test just confirms if nitrate is present or not present. These tests were especially useful to growers while their crop was still standing in making the decision whether or not to delay cutting or if they should graze. 27% of samples tested with the quantitative nitrate test were high enough that producers would have to feed cautiously, diluting the ration. As a result, one producer made the decision not to graze crop regrowth and another producer delayed cutting until test results were satisfactory.

Producers learn about alfalfa weevil management from Cecil Tharp, MSU Extension Pesticide Specialist, at Winter Series in Terry.
Agriculture Programs

Tri-County Weed Tour

Prairie, Fallon, and Wibaux Counties have worked together since 1990 on the Tri-County Leafy Spurge Project. Each year, an annual tour helps educate producers about noxious weed management.

Twenty-eight producers attended the Tri-County Tour in 2016. Tour topics included water quality and pesticide performance by Fallon-Carter Counties MSU Extension Agent Elin Kittlemann, protecting you and your operation by Jim Larsen with the Montana Ag Safety Program, multi-species grazing by NDSU Range Science’s Kevin Sedivec, monitoring for range health by Cheryl Schuldt with the Montana Rangelands Partnership, and record-keeping reminders for pesticide applicators by Prairie County MSU Extension Agent Sharla Sackman. Following the tour, one producer commented, “I came for the (pesticide recertification) points but got a whole lot more.” Another producer is looking into a molasses co-product being used to spray on weeds to encourage livestock to graze the weeds.

The Tri-County area of Prairie, Fallon and Wibaux counties is a location where leafy spurge is and will continue to be a permanent problem. Twenty-five years of educational programs and sustained integrated weed management efforts on the part of landowners have helped contain the leafy spurge infestation to the same area of Cabin Creek and slowed the spread to outlying areas.

Prairie County Range Tour

MSU Extension in Prairie County works cooperatively with the Prairie County Grazing District and local producers to select topics of local interest for an annual range tour featuring researchers from Fort Keogh Livestock and Range Research Laboratory.

Dr. Andy Roberts shared new research comparing Line 1 Herefords and Angus to study the effects of line breeding; Dr. El Hamidi Hay discussed use of genetically enhanced expected progeny differences (EPD’s) in bull selection; and Dr. Lance Vermeire summarized range drought research taking place at Fort Keogh. Two guest speakers from the Montana Bureau of Mines & Geology discussed the dynamics of hydrology in Southeastern Montana, and interim Miles Community College Ag Instructor Dr. Merilynn Shantz discussed her research on annual grass management on the tour.

This annual tour has been a great way for Prairie County livestock producers to form a relationship with scientists at Fort Keogh. Thirty-nine producers engaged in active discussions at the tour, asking questions about research and seeking advice about their own operations. Producers reported knowledge on new hydrology resources as a result of attending the tour.

One producer has implemented a visual obstruction monitoring method demonstrated at the 2011 Range Tour. This method is used to determine forage standing crop in his annual range monitoring in addition to photo monitoring of the sites.
4-H Program

Thirty-two members and 12 adult volunteer leaders were enrolled in 4-H for the 2015-2016 4-H year. Prairie County’s total school enrollment for the 2015-2016 school year was 159, hence 4-H members constitute approximately 20% of the school population. Prairie County 4-H provided members many opportunities for young people to learn leadership, citizenship, and life skills.

4-H has a lasting effect on the lives of members. One Prairie County 4-H alumni reported that the first grant she had written was as a senior in high school to the Montana 4-H Foundation about the time the Foundation was established for a community service project. Her project, picnic tables in the park, are still used by community members at the park and at the Prairie County Fairgrounds today. Since that time, this 4-H alum has written many grants professionally and for the community.

Regional and State 4-H Activities

Prairie County 4-H members participate in a number of regional and statewide activities such as the Southeastern Montana 4-H Camp at Camp Needmore in Ekalaka, Southeastern Montana Junior High Oreo Trip to the Black Hills, Eastern Montana Regional Small Animal Judging Day in Miles City, statewide shooting sports competitions, and Montana State 4-H Congress. These experiences provide an opportunity for 4-H members to travel, network with members from other areas, and gain valuable communication skills and take on leadership roles outside of the county. Members participating in these events shared their experiences with other members at Prairie County 4-H Achievement Day.

County Events

All Events Day is an annual event that provides 4-H members with opportunities to showcase their skills and talents in sewing, public speaking, demonstrations, and food preparation. The day is planned and implemented by a team of teen 4-H leaders under the guidance of the county agent.

One of the goals for the 4-H program locally has been to provide educational opportunities in a wide variety of projects. As a result, nine separate workshop sessions were planned throughout the course of the 4-H year, plus a series of Shooting Sports and Horsemanship workshops. Members gained skills in project areas such as food and nutrition, sewing, market livestock care, horse, arts and crafts, shooting sports, farm safety, livestock showmanship, and livestock evaluation. Volunteer leaders and 4-H teen leaders were engaged to lead the project workshops with the county agent. 90% of 4-H members participated in at least one project workshop during the 4-H year.

For the second year, a 4-H orientation and training was held for 4-H families in Prairie County. The training explained the basic organization and operations of 4-H in Prairie County and how positive youth development goals are accomplished in the 4-H program. A focus of the session this year was how project work contributes to life skill development in 4-H. Families attending reported a greater understanding of how to utilize 4-H project curriculum.

A 4-H member prepares his Stir-Ups dish at All Events Day.

4-H members learn some basic first aid skills from an EMT at a farm safety workshop.
Horticulture Programs

MSU Extension provides community members with information on seeding and fertilizing lawns, lawn disease identification, transplanting trees, tree selection, tree disease and abiotic issue identification, selection of garden plants, and plant and insect identification. One of the most frequently used services that MSU Extension offers is assistance with horticulture-related questions, and tree care ranks among the highest areas of concern.

MSU Extension in Prairie County organized a tree care workshop in the spring of 2016. Laurie Kerzienik, MSU Extension Insect Diagnostician, discussed common tree pests, their life cycles, and when control may be necessary. Peter Kolb, MSU Extension Forestry Specialist, talked about general best management practices for tree care and pruning trees for health, shape and after storm damage. One homeowner was able to have her apricot tree properly pruned during the workshop.

Family & Consumer Science Programs

There are four active homemaker clubs in Prairie County whose interests include nutrition, horticulture, and community improvement. MSU Extension staff assist homemakers in meeting their educational goals by publishing a monthly newsletter containing information on subjects like food preparation and safety, nutrition, health, financial management, and gardening. MSU Extension Agent Sharla Sackman assisted the Prairie County Homemaker Council in submitting an application to Humanities Montana to host a Montana Conversations Program. Anne Foster presented her Fashioning Montana: Clothing and Culture in the Victorian and Edwardian Eras program in November of 2016. Participants reported learning a great deal about the history and culture of this time period.

MSU Extension in Prairie County has an added Family and Consumer Science track at the annual MSU Extension Winter Series. Tara Andrews, Custer County MSU Extension Agent, gave a presentation on incorporating a variety of grains in your diet. Vicky Tusler, Terry High School Art and Family & Consumer Sciences Teacher, led participants in a re-design and recycle project.

Winter Series participants learn how to re-design and recycle plastic grocery bags.

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A guide to a year in EXTENSION

MSU Extension provides unbiased research-based education and information that integrates learning, discovery and engagement to strengthen individuals, families and communities.

Ravalli County

population 40,212
median age 46
27% of children under 18 are living in poverty
median household income $42,902
1,438 farms averaging 163

education

In 2016, MSU Extension in Ravalli County provided educational services including workshops, seminars, and one-on-one assistance on topics ranging from controlling rodents in alfalfa to making

2,498 hours of instruction provided
11,682 individuals served

4-H youth development

Having one of the largest 4-H programs in Montana, Ravalli County reaches 2,408 youth ages 5-18, providing them independent and community learning experiences to achieve their goals.

One in five households use resources provided by MSU Extension in Ravalli County.

155 adult volunteers contribute a value of $156,980 in personnel time
2 of 5 Ravalli County youth receive educational services from MSU Extension staff and volunteers

agriculture and horticulture

Extension supports the efforts of experienced and novice land managers through forage and soil testing, pest identification, management recommendations, personalized land management plans and many other science-based resources to
Supporting Future Leaders
Leadership development. Problem solving skills. Learning by doing.

4-H Mentoring Partnership: connecting youth with a caring mentor

The 4-H Mentoring Partnership connects youth in Ravalli County who are considered at-risk with an adult or teen in the community to create a mentoring relationship. Most of the mentoring experiences take place during afterschool hours, either on school campuses or at organizations in the community, such as public libraries.

Currently, Ravalli County has 22 mentors serving 56 youth in the Hamilton, Darby, and Corvallis school districts. The mentoring program has not extended to other communities due to funding constraints, though collaborating with other non-profits to reach out to area youth has been beneficial. Through partnerships with organizations, resources are leveraged to expand services to provide summer workshops and Family Night Out activities. Currently, the program collaborates with Rotary International, The Bitterroot Cares for Kids Network of Ravalli County, Darby Library, as well as the schools in the served communities.

This past summer, the youth in the mentoring program attended the Ravalli County 4-H summer camp for the first time since the start of the grant six years ago. Many of these children do not regularly experience the opportunity to enjoy the great outdoors, learn how to navigate a canoe or have the social skills to meet and secure a best friend. 4-H Camp provided these opportunities and created lifetime memories. The mentoring program recently received a substantial grant to provide a Family Summer Camp for the mentored youth to attend with their family. The camp will focus on family bonding through fun and experiential learning. As a result of the 4-H Mentoring Partnership, youth and adults create a stronger, community in Ravalli County.

Safe Food Preservation Education

Food preservation is a popular pastime in the Bitterroot Valley, especially with new families who move to Montana for the country lifestyle. Raising homegrown produce and preserving it safely is a goal for many. For some, it is a way to save money during tight economic times; the cost savings in one growing season is easily accounted for and helps to save money year round.

Consumer who preserve their food not only help family finances, they help facilitate a healthy lifestyle of eating nutritious, homegrown fruits and vegetables. Families are growing their own vegetables and preserving their garden bounties for use year round through one-on-one conversations, self-learning publications and educational classes available through MSU Extension. Over 175 youth and adults learned how to properly preserve produce by partnering with Hamilton High School, Corvallis High School and adult education classes.

The Extension office also provides free canning pressure gauge tests. In 2016, over 75% of the tested gauges would have resulted in under processed food. Additionally, eight gauges had significant errors and the test protected approximately 40 people from the deadly toxin of botulism. This free service is an important tool to educate and empower constituents to preserve food safely.

MSU Extension provides a holistic approach to saving money by growing a garden and saving the produce to enjoy after the growing season is gone. The lessons learned are of value throughout a lifetime and can be passed on to generations.

Food preservation has been taught by Extension in partnership with the schools to educate them on safe canning practices with hands-on experience.
Building Healthy Communities

Fork to Farm: a win-win event for agriculture and the local economy

Fork to Farm riders enjoy local hard cider and a variety of apples at Frost Top Orchard in Corvallis, MT.

The Bitterroot Valley is famous for our apples, irrigated pastures and quality hay, but the climate offers opportunities for much more including wine grapes, a variety of berries, vegetables and opportunities for small acreage enterprises. In addition, the valley is a nationally-recognized recreation area for cyclists and home to a community interested in promoting non-motorized transportation as a means of healthier living.

Recognizing this, MSU Extension office in Ravalli County partnered with Bike Walk Bitterroot, local small acreage producers and the Western Agriculture Research Center (WARC) to host a bike ride showcasing the valley’s potential to be a destination for agritourism, a benefit to the local economy and agriculture. The bike ride, Fork to Farm, included stops at four farms where meals prepared from local produce was served. In addition riders received tours of each farm and learned about the diversity of agriculture in the Bitterroot from grape growing, to cheese making to apple and berry production.

The ride raised over $2,000 to support Bike Walk Bitterroot’s efforts to increase safety for non-motorized transportation in the valley. The post-survey results demonstrated that the event provided marketing opportunities for local producers and attracted new riders to the Bitterroot, strengthening the local economy. For example, 49% of participants said they would seek out the farms and products they learned about on the ride; 48% said they are more likely to choose the Bitterroot as a cycling destination while the remaining 52% reported it is already a destination for them. One rider noted, “This was an awesome ride and a real eye opener to the farms in the Bitterroot. Well done! Excellent ride! Do it again and let me know when.” Plans are already being made for spring and fall 2017 rides with greater opportunities for producer participation to help boost CSA (Community Supported Agriculture) and summer sales.

SNAP-Ed: Integrating healthy living into everyday life

Entering its fourteenth year of funding, the SNAP-Ed Nutrition program is continuing to build momentum through community partnerships. In 2016 new relationships were formed with the O’Hara Commons Sustainability Center, SAFE (Supporters of Abuse Free Environments), Bitterroot College, Master Gardeners, and School Wellness Policy Boards at Hamilton and Darby school districts.

These partnerships leverage funding by recruiting adults, providing space for classes, and partnering on engaging projects broadening the clientele served through the SNAP-Ed Nutrition program. For example, SNAP-Ed coordinator Laura Henderson partnered with SAFE, the Extension office, Master Gardeners, and Huls Dairy to help start an onsite garden (pictured below) for residents of SAFE’s housing program. Participants learned to grow and harvest their own food from seed to table.

Another project integrating classroom concepts into the daily lives of participants is the 22 Group. This group is a HeadStart partnership in which parents meet once a week and walk 22 minutes. After strong summer participation, the group will continue into the fall.

SNAP-Ed classes continue to provide nutrition education to youth and adults. With the help of Bitterroot College, the adult ‘Nutrition Made Simple’ classes have been a major success. The college listed the class in their Fall 2016 catalog reaching an audience of over 20,000 Bitterroot residents. The class filled up immediately and will be held on the college’s campus near the Extension office.

With updated curriculum, the youth program is engaging students and their parents with realistic and relevant scientific information about food. Stevensville third grade students and teachers loved it. Teachers gave it rave reviews on surveys. Parents consistently remark how excited their child is when they come home from the nutrition class and report the family is making changes at home because of it.

The Ravalli County SNAP-Ed program is looking forward to continuing this momentum into 2017 as they provide free nutrition education to income eligible adults as well as first, third and fifth grade students in Ravalli County’s Title 1 schools.
Exploring new opportunities for Montana small acreage producers

Known as the banana belt of Montana, the Bitterroot Valley enjoys a milder climate than many locations in the state. However, dramatic temperature fluctuations throughout the year can be hard on several varieties of specialty crops. Growers often turn to high tunnels to extend the growing season for annual crops, presenting challenges for soil fertility management. For perennial fruit growers, discovering suitable new varieties is often a game of trial and error.

In 2016, the MSU Extension office in Ravalli County and the Western Agriculture Research Center received two grants to assist small acreage specialty crop producers address issues around season extension and navigate the frontier of fruit production.

Six growers with high-tunnels received comprehensive soil tests in their tunnels and fields, getting baseline information on pH, organic matter, nutrients and soil health parameters. The producers then received one-on-one assistance with evaluating soil results and participated in a Soil Health Workshop with speakers from MSU and WSU who discussed cover cropping, reduced tillage and livestock integration for soil fertility. The workshop was attended by producers from Lake, Missoula, Ravalli and Gallatin Counties. Survey results indicated that over 90% of participants would change their soil management approach.

The second grant provided monetary resources to explore new varieties of apples to be used in cider production. While producers have attempted to plant cider apple varieties, many have been damaged by disease and sudden temperature fluctuations. Hard cider producers often buy juice from out of state.

Several heritage orchards remain in the forests of Montana and Idaho, many of which contain lost apple varieties or new wild seedlings. These established apples have developed in our region and may be more suitable to the climate than apples from the East Coast and Europe. Three orchards along the North Fork of the Salmon River were sampled in addition to several locations around the Bitterroot Valley. Scion wood from promising varieties was grafted at WARC for future variety trials. Forty-eight fruit samples were pressed and the juice was analyzed for cider qualities. In addition local apple producers and hard cider makers participated in a flavor panel to determine priorities for future propagation. Participants were excited about several apples sampled and plans have been made to continue exploring the region and these orchards for potential cider fruit.
Both the Yellowstone and Missouri Rivers flow through parts of Richland County and the confluence of these two large rivers is located just to the north and east of the county. Richland County also has areas of rocky badlands and dense prairie cover. These features make for excellent habitat for deer, waterfowl, and upland game birds which makes hunting and outdoor recreation an activity that many residents and visitors participate in. Because of these activities, there is a good chance that youth in the county will be exposed to a firearm or a bow and arrow at a young age.

The 4-H Shooting Sports program provides youth with engaging activities that convey the safe and responsible use of both firearms and archery equipment in an educational, safe, yet still fun environment.

**Rifle, Pistol, and Archery:**
Members enrolled in the rifle, pistol, and archery projects through 4-H met monthly to hone their skills and improve marksmanship. Throughout the year eight volunteer leaders met with 32 youth, working one-on-one, creating a positive relationship with a caring adult, where the youth developed important life skills that will aid them throughout their lives. Most importantly, the volunteers worked with the youth on safe practices. Volunteers taught sight pictures, shooting positions, different types of firearms, bows, targets and ammunition. During the one-on-one sessions the youth gained goal setting skills, confidence and decision making skills. Guest speakers, specialists in their respective area, were asked to give an educational lesson once a month. This year the speakers included avid outdoorsmen, competitive archers and a local game warden.

**Shotgun:**
The shotgun program was re-energized in 2016 and 8-10 youth met weekly during the months of July, August, and into October to hone their skills at shooting clay targets flying from a trap house. At each event, participants shot 20 clay targets and recorded their scores. In addition to shooting, participants learned about how to safely operate shotguns, different gauges of shotguns and how to shoot a moving target.

**Tri-funded Support**
Richland County MSU Extension is very appreciative of the financial support that is provided to ensure that non-biased, educational programs are available to the citizens of the county. The Richland County Commissioners Loren Young, Shane Gorder, and Duane Mitchell, along with the State of Montana and the United States Department of Agriculture, provide the funding necessary to accomplish this mission.
**Youth Participate in Experiential Learning**

Two hundred twenty-three Youth, 11% of the school aged youth in Richland County, are engaged in learning through the 4-H program. The youth partner with 150 adult volunteers to acquire decision making skills, develop a positive self-concept, learn lifelong skills and understand the value of citizenship. Mazie Madison, a nine year old Richland County 4-H member reported “4-H has been a good thing for me. It has made me more confident. It has taught me to be a person that is proud of what they are doing.” Youth in the 4-H program participate in club meetings, service learning projects, events and activities that all aid in their growth and development. They also enroll in learn-by-doing projects that aid them in the experiential learning process. In Richland County the top projects are beef, visual arts, foods and nutrition, swine, woodworking and photography.

**Youth Serve as Leaders in Richland County**

Leadership is an integral part of the 4-H program, where we strive for youth to gain leadership skills as well as to put those skills into practice. During the 2015-2016 4-H year, 21 senior members in Richland County 4-H met once a month to promote 4-H, organize and conduct local events, and continue to gain important life skills. The Junior Leaders hosted a 4-H Winter Carnival and a dinner and dance fundraiser. The 4-H Winter Carnival is an annual event that is open to all members in Richland County 4-H. This year 46 youth and three adults were a part of this night of learning and engagement. With an influx in population, this event has been instrumental in allowing members of Richland County 4-H to build relationships with other youth in the county. The Junior Leaders also hosted a dinner and dance fundraiser, with all proceeds of $1824 going to a local 4-H family that lost everything in a fire. The yearlong collaborative effort of this group has proven beneficial for our community, all while providing youth the opportunity to develop and practice valuable leadership skills.

**Food Safety and Science**

Foods and nutrition is a popular and ever growing project in Richland County 4-H. This year to provide a hands-on educational workshop for all members, a pie baking day was hosted. The MSU Extension Agent, along with two certified volunteers, taught the youth and adults food safety and science. Twenty-six youth and 11 adults were taught the importance of safe practices in the kitchen such as proper hygiene, how to identify tools, how to safely use baking tools and proper behavior in the kitchen. They were also taught how to read a recipe, identify proper ingredients for a recipe, measure and mix ingredients for a recipe and properly bake pies. Approximately 63 pies were made to be served at the Richland County Fair.
Weed Identification Workshop

Richland County MSU Extension partners with the Northern Plains Agricultural Research Laboratory (NPARL) to plan and organize an annual dryland field day. At the 2016 field day, the Extension Agent and a Biological Science Technician from the NPARL teamed up to identify 14 weeds at the field day location. These weeds were flagged and field day participants were asked to individually identify each of the flagged weeds. At the end of the field day, the Extension Agent went over each weed with the participants and identified distinguishable characteristics. Participants who correctly identified the most weeds were awarded prizes and all participants received free weed identification booklets.

Lower Yellowstone Wool Pool has banner year

In 2016, the Lower Yellowstone Wool Pool collected 8,268 pounds of wool, nearly 2,000 pounds more than the previous year. Through the efforts of the pool, this wool was able to be sold for a total of $10,300 meaning that each producer that contributed to the pool averaged approximately $1,030 before pool and shipping fees were paid. The average price contributors received for their wool was $1.24 per pound across all wool classes. Producers contributing to the pool continue to express gratitude to Extension staff for organizing, collecting, bagging, and coordinating the shipping. Montana continues to be a large contributor to the nation's total wool production. Many smaller producers, however, do not have large enough lots to market wool on their own and pools like the Lower Yellowstone Wool Pool ensure these producers still receive good prices for their product.

Veterinary Feed Directive (VFD) Short Course

January of 2017 will bring new regulations in how livestock producers will be able to purchase and use certain medically-important livestock medications. These new regulations will require that, prior to purchasing certain medicated feeds, producers have an established veterinarian-client/patient relationship, and will require that producers have a VFD form filled out.

In August, Richland County MSU Extension hosted MSU Beef Specialists Rachel Endecott and Megan Van Emon to discuss the new rules and what producers must do in order to assure compliance. In all, 15 producers, veterinarians, and Extension Agents from across northeastern Montana were in attendance to learn about the rule and ask questions of the experts. All participants were given VFD binders to take back to their operations and businesses that contained informational sheets and protocols related to the VFD ruling.

MSU Extension Hosts Board Development Workshop

There are several not-for-profit and government-appointed boards in and around Richland County. Many times, board members are either appointed or they are asked to join them without much direction in regards to how a board should function.

In an effort to provide guidance and leadership Richland County MSU Extension hosted professionals from the Montana State University Local Government Center. More than 20 people attended the four-hour workshop representing county government, city government, and local not-for-profit organizations. The workshop focused primarily on the roles and responsibilities of board members, but also gave participants insight into the legalities associated with various boards and how to conduct successful meetings.

Participants were appreciative of literature distributed during the workshop and one participant quoted that he “was not aware of some of the stipulations associated with serving on his particular board.”
Area Teachers Participate in Training

In June, 17 teachers representing schools from across northeastern Montana attended a training in Sidney put on by eight MSU Extension Agents, and an additional 30 teachers attended the same training hosted in Plentywood. All of the teachers were given an online evaluation after completion of the course. Of the participants who replied 80% of the teachers who attended the training received their OPI Renewal Credits, while 5% received a MSUN Undergraduate Credit and 15% received a MSUN Graduate Credit. The theme of this training was a historical Montana unsolved murder mystery. The two-day training challenged local educators to work in groups to solve the historical murder. As teachers attended workshops, they were given methods and tools to use in their own classrooms. 65% of the teachers report that they have used the materials provided to them at the training in their classrooms. The opportunity to earn credits and have professional curriculum provided locally saves time and travel costs for these teachers.

Teachers from across northeastern Montana participate in the “murder mystery” teachers training workshop.

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All universities engage in research and teaching, but land-grant universities like Montana State University have a third critical mission – Extension. Extension means reaching out and “extending” resources, solving public needs with university resources through non-formal, non-credit programs.

Montana State University Extension is an educational resource dedicated to improving the quality of people’s lives by providing research-based knowledge to strengthen the social, economic and environmental well-being of families, communities, and agricultural enterprises. MSU Extension offers university resources for all Montanans to explore, even if they never set foot on campus. We provide access to useful information and expert knowledge via workshops, demonstrations, community meetings, publications, videos, the Internet and other learning opportunities. Extension links a network of MSU faculty, topic specialists on the MSU Bozeman campus and our Roosevelt County agents, to the people.

The Roosevelt County Extension staff is proud to provide services in the following areas:

- 4-H Youth Development
- Agriculture and Horticulture
- Family and Consumer Sciences
- Community Development

Welcome to Roosevelt County

Roosevelt County encompasses 2,385 square miles of Montana’s land, has a population of approximately 11,125 and averages 4 people per square mile. The county seat is Wolf Point and was founded in 1919. Other incorporated cities include: Bainville, Brockton, Culbertson, Froid and Poplar. The Fort Peck Community College is located in Poplar.

County Tri-funded Support

Programs of the MSU Extension Service are funded cooperatively through a legal partnership among federal, state, and county governments. Research-based education and programming that integrates learning, discovery and engagement to strengthen the social, economic and environmental well-being of individuals, families, and communities would not be possible without this unique funding structure. Quality MSU Extension programming in Roosevelt County is successful due to local financial support from the Roosevelt County Commissioners and community involvement and support. Community input and advisory councils provide ways to identify major issues and plan programs important to the residents of Roosevelt County.
4-H Members Sew for Others
Sewing and textiles project members learned basic sewing skills and techniques while making a teddy bear to donate to their community. Along with participating in learn-by-doing projects and service learning, additional life skills such as decision making and concern for community were also developed.

Twenty-five 4-H leaders and members from Roosevelt, Richland and Sheridan Counties attended the 14th annual tri-county sewing event. Each member constructed a six-pocket bag, sunglass case, and soft stuffed teddy bear for a child in need.

During an evaluation of camp, participants reported that they learned how to wind a bobbin, pivot with the needle down, how to sew on the curve, how to work with batting, and the importance of keeping your fingers away from the needle. In addition to learning basic sewing skills, 4-H members were able to make new friends and complete three sewing projects to enter in their local county fair.

4-H Camping
4-H camps provide positive youth development in an outdoor setting. Programming offers campers a greater chance to learn, develop life skills, and form attitudes that will help them to become self-directing and productive members of society. Roosevelt County 4-H members have the opportunity to participate in a multi-county 4-H camp that includes Daniels, Richland, Sheridan, and Valley Counties.

Teen counselors are selected and as a group determine the camp program. They also play an important role at 4-H camp, being responsible for leading groups of campers and serving as cabin leaders. During the camp, agents and adult volunteer leaders serve in support roles to the teen leaders and fill in as needed to provide educational programs.

4-H camping offers young people the opportunity to explore educational activities and classes such as outdoor cooking skills, environmental science, science and engineering, fiber arts, leadership and recreation. The 11 counselors and 13 adult volunteers were able to practice a wide variety of skills including leadership, communication, conflict resolution, problem solving, decision making, teamwork, and concern for others during the three-day camp. The relationships, the natural environment, and the carefully-planned programs at camp can be life changing for a young person.

Camper surveys indicate that camp helped them want to try new things; the campers reported making new friends; and most campers learned at least some new skills at camp that they will use at home. They also learned to complete jobs on time that they were responsible for.
Froid Field Day

The Froid Field Day, held in June at the USDA Froid Research Farm, is an annual event held in conjunction with MSU Extension, Roosevelt and Sheridan County Conservation Districts and USDA-ARS Northern Prairie Research Laboratory (NPARL). Thirty-three individuals attended this year’s field day. Attendees were presented with updates on research being conducted at the farm, demonstrations on subsurface drip irrigation systems, soil sampling techniques for soil analysis, cross slot drills, and classes on weed identification and control. Soil analysis allows for informed decisions on fertilization needs to maximize production without over-fertilizing, saving money and improving sustainability.

Swank Variety Tour

The thirty-fifth annual Swank Variety Tour, held at the Swank Family Farm located north of Poplar, was attended by 108 people from the surrounding area. The variety tour provides the Eastern Agriculture Research Center, under the direction of Chengci Chen, a way to familiarize producers with different aspects, including yield, test weight and protein, of newer varieties of spring wheat and durum wheat. Understanding how different varieties perform under conditions encountered in northeast Montana allows the producer to make informed decisions on which varieties work best.

Tatyana Rand of the USDA-ARS NPARL conducted a demonstration on the proper technique to sweep for insects, and a workshop on “Enhancing Beneficial Insects to Control Crop Pests” at the variety tour. Correctly identifying insect pests allows for targeted control of pests, reducing pesticide cost and impact on the environment. Enhancing beneficial insects additionally decreases costs and promotes sustainable agriculture by reducing insecticide use.

Background and Control of Narrow-Leaf Hawksbeard in Crops and Rangeland

A workshop on “Background and Control of Narrow-Leaf Hawksbeard in Crops and Rangeland” was held in Culbertson. Forty-six people from six counties and two states attended to learn about Narrow-Leaf Hawksbeard. Producers were provided with current research on control of Narrow-Leaf Hawksbeard and education on identifying the plant at different stages of development.

This weed, which is related to dandelions, is a growing problem in Northeast Montana and can be problematic in no-till cropping systems, hay crops and in CRP. Early identification is critical for control of the spread of this weed, since most herbicides are not effective past the rosette stage of maturity. Additionally, many control methods cannot be used in pulse crops, which are important crops economically to the area, once the crop has emerged.

Bovine Connection

After a three-year hiatus, the Bovine Connection 2016 was held in Culbertson. This year’s program offered area cattle producers and affiliated industries with strategies on culling, the new Veterinary Feed Directives (which go into place on January 1, 2017), heifer management for longevity and tactics for increasing profits on the ranch. Keynote speaker Dave Pratt has spoken throughout the world on how ranchers can increase profitability. Forty-eight people from Northeast Montana and Northwest North Dakota attended. All attendees evaluated found the information helpful and would like to see the Bovine Connection continue, while greater than ninety-four percent were extremely likely or somewhat likely to use the information received in future decision making.
Board Development Training
MSU Extension in Daniels, Richland, Roosevelt and Sheridan counties sponsored a board development training for all members of local boards. The training was conducted in four different locations by Dan Clark and Blake Christensen of the MSU Extension Local Government Center in Bozeman.

Workshop participants were able to describe and clarify many of the complex issues confronting boards and board memberships. The training also introduced board members and interested citizens to various concepts and techniques for successful board meetings. Participants gained knowledge in Principles of Good Governance, Roles and Responsibilities of Board Members, Montana Open Meeting Laws, Executive Session or Closing a Meeting, Montana’s Code of Ethics and Meeting Minutes through this interactive workshop session.

Knowledgeable and engaged leaders are a critical component of strong, healthy, vibrant communities. Research shows that successful communities invest in the development of their people. An effective board member can provide essential leadership to their community.

Reducing the Spread of Germs through Hand Washing
According to the Centers for Disease Control and Prevention (CDC), handwashing is one of the best ways to avoid getting sick and spreading germs, and to prevent both infectious diseases and foodborne illnesses. The Family and Consumer Sciences Extension Agent educated Culbertson third grade students and teachers on the importance of handwashing and how to properly wash hands to reduce their risk of infectious and communicable diseases.

On the same day as the presentation, the Roosevelt County Health Department released a news article informing the residents of the reports of the Hand, Foot and Mouth Disease in multiple schools and daycares. As a result of the program, the third grade students improved their knowledge of proper handwashing technique. Teachers indicated that their students wash their hands more often since participating in the program. Prevention of disease in a school environment reduces absenteeism and may decrease lost time from work and lost wages for parents/guardians who must stay home with sick youth.

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Community Garden Helping Feed the Community

Forsyth Community Garden Aids Local Food Bank in supplying Thanksgiving Dinners

During the fall of 2015, MSU Extension in Rosebud-Treasure County began planning the return of the Forsyth Community Garden. Shortly after, two enthusiastic Forsyth Family, Career, and Community Leaders of America members, Mickey Bidwell and Lex Heberle, called the Extension office in hopes of partnering with Extension to aid in planning and implementing a revived community garden for the town of Forsyth. Extension Agent, Melissa Ashley, Bidwell and Heberle met several times to begin working out the logistics of a new garden. MSU Extension was awarded a special project grant from the Community Foundation of Northern Rosebud County and plans for a community garden were no longer simply pen and paper.

Melissa stated “It was great being able to show Bidwell and Heberle the process of planning a community project, working together with local government such as county commissioners and city hall, writing grants and the impact this project had on so many different groups of people within their own community.” Bidwell and Heberle prepared an illustrated talk about their involvement with the community garden to present at the State FCCLA convention. They received a gold medal at state and continued to the National FCCLA convention in California where they also received a gold medal.

As temperatures began to rise, gardeners itched to plant their seeds and watch them grow. Each gardener came with their own gardening practices and were excited to meet fellow gardeners and learn new methods from each other. The Rosebud Conservation District secured a plot in the garden to showcase the soil health benefits and production ability of a non-traditional, no-till garden. At the fall clean-up day, a BBQ was held that highlighted dishes made from produce grown in the community garden. By the end of the growing season, gardeners were asking to expand their garden plots next year as well as start their own composting station.

One gardener praised the community garden for helping her become more active. By getting up early to tend her garden before work hours, she began to walk for half an hour each morning after she visited her garden plot. Another gardener that lives away from his family during the work week celebrated his time in the community garden because it provided him an opportunity to work outdoors and grow his own food.

With the help of the community gardeners, Ashley grew a pumpkin patch in the community garden. These pumpkins were harvested and 13 large pumpkins were given to the Family Consumer Science classes and Forsyth FCCLA chapter. Students learned how to bake, process and preserve fresh pumpkin. Later, students made the preserved pumpkin into pies for the Forsyth Samaritan’s Pantry Thanksgiving Dinner donation. The pantry donated 58 complete Thanksgiving dinners to families in need. Forsyth students and FCCLA members supplied the pantry with 35 pies to help complete their dinner boxes. Thirty-five families in the community ate pies at Thanksgiving that were grown, baked and donated locally.

Through the good works of the Forsyth Community Garden, MSU Extension was able to bring individuals together that share a common interest in community development and enhancement, growing and sharing locally produced food as well as helping others in need. Ashley noted that “The community garden had a much greater impact on so many more individuals than I had expected for its very first year! I am excited about everyone wanting to be involved in such a great project. Bidwell and Heberle plan to continue their FCCLA project with the community garden and we have high hopes of adding raised beds this year to accommodate an even wider range of garden enthusiasts. We plan to keep producing locally grown food for the Samaritan’s Pantry and can’t wait to see what other great projects stem from the Forsyth Community Garden!”
Montana State University Extension

Next Generation Gets A Head Start
Support From 4-H Alum Ignites Young Producer's Dream of Starting a Herd

The Rosebud-Treasure County 4-H program received an outstanding donation of a registered heifer calf from a gracious local 4-H alumna. The donor stated that when she was a 4-H member, she was awarded a heifer calf from a local donor who gave her the opportunity to evaluate his herd and choose her own project animal. This memory was so impactful as a young producer and 4-H member that she wanted to share this same great experience with the next generation of hard-working 4-H youth.

A formal application was sent out to every 4-H member in Rosebud and Treasure counties. Once all applications were returned to the Extension office, Melissa Ashley, the local Extension agent, and the heifer donor reviewed each enthusiastic application. Members were asked to write about the facility, feed schedule, feed ration and appropriate care they would provide this heifer if they were to receive her. They were also asked to explain how they plan to use the asset in the future.

After much deliberation, Ashley and the donor came to a decision. Adaline Reilly, a 13 year old member of Rosebud Roundup 4-H club was awarded the registered Black Angus heifer calf. Reilly has been a 4-H member for five years and keeps busy year around with her other livestock projects: market swine, market lamb and breeding lamb. She is very excited to begin her cattle herd and thankful for such a great opportunity. Reilly will show her heifer at the Rosebud-Treasure County Fair in July 2017 as a yearling.

Reilly wrote in her application, “I understand the cost of starting a herd and this donation heifer will help me achieve my goal of starting my own herd. I would use the money that I get from selling the calf that this heifer produces for a bred heifer. I will plan on buying a bred heifer each year from the sale of my calves to increase my herd. The money I earn from calf sales will go into savings for college. Also, I could use the money to buy a horse of my own so I could help out on the ranch more!”

The 4-H program is such a rewarding experience for generations past, present and future. MSU Extension Rosebud-Treasure County was able to deliver an avenue for such a supporting 4-H alumna to reciprocate the generous donation a 4-H alum had once given her. In doing so, a young producer gets the opportunity to begin her own herd.

Livestock Barn Gets a Facelift For Generations To Come

After serving as the livestock barn for hundreds of 4-H members for over 70 years, the old white beef barn at the Rosebud County Fair Grounds finally met its expiration date in 2015. Depreciated beyond the point of restoration, the white barn was finally dismantled. After pieces of the barn were salvaged for memorabilia, years of planning a new livestock facility were underway the following spring of 2016.

Cement was poured, steel beams raised and finishing touches put on. The new hog-sheep-goat barn was built just in time for the 2016 Rosebud-Treasure County Fair. On the cement floor, hog stalls were placed centered around drains in the floor, while on the dirt, lamb and goat stalls were pieced together. Many 4-H and FFA families came together with helping hands for the final push to prepare the livestock facilities for fair the following week.

If this outstanding livestock facility will withstand as many years and 4-H’ers as the old white beef barn, it will no doubt accumulate as many cherished memories from 4-H and FFA members and their families as the barn before it.
Community Foundation Reaches Exciting Milestone
$100,000 of giving back to Northern Rosebud County

In 2007, a family from Nebraska gave Northern Rosebud County the gift of lifetime; not just money, but an opportunity. A chance to create a permanent source of funding to help support the people and communities of Northern Rosebud County. Swede Schlesinger, a long time rancher who had recently passed away, left his estate to his extended family in Nebraska. These folks saw an opportunity to honor their loved one by creating a forever legacy. They set up a permanent endowment for the benefit of Rosebud County through the Montana Community Foundation.

Montana Community Foundation was in search of a local group to take the lead of building and managing the newly formed endowment. At the time, the small community of Forsyth was deeply engaged in the Extension-led community development program, Horizons. These two endeavors matched up well, and MSU Extension took the lead on developing and implementing a local board to oversee the growing local community foundation.

Nearly 10 years later, the Community Foundation of Northern Rosebud County has flourished. 2016 marked an incredible milestone. $100,000 has been given back to the people and communities of Northern Rosebud County through strategic grants supporting a wide variety of improvement projects. One grant went to the local Boy Scouts organization who oversaw the rebuilding of the local hospital helipad. A much needed improvement, the helipad has been used over 30 times to safely transfer emergency medical patients to facilities in Billings. Living in a rural area, the helipad is a necessity. Without the Boy Scouts working with the Community Foundation, the task of rebuilding the pad would have been left to the non-profit medical facility, increasing the financial burden of a small, rural hospital.

Another grant went to the local food bank to purchase upgraded equipment. In 2016 the Forsyth Food Pantry gave out enough food to feed over 800 people. The new freezer and refrigerator allowed the pantry to receive and store more perishable necessities. This Thanksgiving the pantry gave out 58 complete meals to families in need. Some of the pumpkin pies in these meals were made from pumpkins grown in the local community garden, which was another project started by MSU Extension and funded by the community foundation.

Lastly, over $15,000 from the community foundation has been invested back into the local school system, supporting youth. Over 90 different projects have received support from the community foundation.

Almost 10 years since its beginnings, the Community Foundation of Northern Rosebud County has become a very important resource in Northern Rosebud County. Small, rural communities are increasingly faced with a variety of challenges, one specifically is locating and securing the funds needed to carry out improvements. Through the creation and continued development of the local community foundation, MSU Extension has helped facilitate and lead the way to sustaining the communities of Northern Rosebud County.

A Novel Market for Local Goods
Starting a Community Market

MSU Extension in Rosebud-Treasure County is planning the beginnings of a community market. After speaking with individuals in the community, it became apparent that providing an outlet for people to sell their locally grown produce, handmade goods, homemade goods and other products would be well received. A community market is both a farmer’s market and a crafter’s market. Individuals will be able to showcase their goods to sell, as well as promote their business, organization or club.

The desire to buy local is a fast-growing trend that allows communities to support their own local economy. Supplying this local market will increase the community’s knowledge of local agriculture as well as inspire small businesses in southeast Montana. A community market will also create a sought after market for consumers to purchase unique, high-quality, affordable products made right here in Montana.
For the past five years, a group of Forsyth-area women have been gathering faithfully every Tuesday and Thursday to build muscle and friendships. They lift weights while also staying up-to-date on each other’s lives. Strong Women, a community-based strength training program for women, was designed by Dr. Miriam Nelson of Tufts University. The research behind the program indicates that women 50 years old or older who actively engage in a regular strength training program can maintain muscle mass along with bone density as they age.

MSU Extension adopted the program and many ladies across the state, for the first time, began exercising in a different way—lifting weights. The very basic program, taught by trained MSU Extension Agents, provides women the opportunity to learn how to lift weights in a very safe, non-threatening environment. The local program has been so successful, it hasn’t stopped. In 2016, MSU Extension Agent Jennifer Anderson applied for and received a $2,500 grant from the Holy Rosary Health Care Foundation to purchase additional weights for the programs in Forsyth and Broadus. The extra weights come in handy for a number of reasons, but mostly it provides the participants with the equipment needed to work hard. Anderson notes, “Many of the participants are progressing at the same level, so we need multiple sets of specific weights. Plus, the weights are expensive to purchase and can be a barrier for some participants.”

It’s no wonder the program has such a great following. When discussing the benefits of it, the participants are quick to respond. Increased stamina, better balance and feeling stronger are repeatedly-heard benefits. Recently one participant went as far to say her cholesterol was better because of the added exercise and strength training and her doctor agreed.

Extension sponsored programs like Strong Women are an asset to the community. In many small, rural towns there are very few opportunities for people to engage in these kinds of activities led by a trained instructor. With the growing aging population in rural communities, it is increasingly important to provide folks with the opportunity to stay healthy so that they may continue living independently at home and be vital members of the community.

Strong women participants benefit from weights purchased from funds received from a Holy Rosary Health Care Foundation Grant.
Welcome to Sanders County

MSU Extension in Sanders County is a three-way partnership between Sanders County, Montana State University and the United States Department of Agriculture. This partnership provides educational programs in the areas of Agriculture/Natural Resources, 4-H Youth Development, Community Development, and Family and Consumer Sciences. Sanders County currently has a population of about 11,363 (2013 estimate). There is a diverse mix of agricultural land, small acreage subdivisions, rural communities and range or forested land. MSU Extension provides a unique set of services and educational resources to meet the diverse and changing needs of local clientele.

4-H = Positive Youth Development

Demonstrations Prepare Members for Future Public Speaking

More than 130 4-H members participated in the county demonstration program building the life skills of communications, planning and organizing, self-motivation, responsibility, self-discipline and learning to learn. These life skills reward demonstrators in their adult lives. 4-H alumni testimonials credit experience gained via the Sanders County 4-H Public Speaking Program as very valuable.

Youth Learn Leadership at State 4-H Congress

Sanders County 4-H members earn the opportunity to compete at the Montana 4-H Congress Contests. This year a small but talented delegation represented Sanders County in the Demonstration and Fashion Revue contests as well as attended to represent the Sanders County Ambassador Program. Rachel Wrobleski took first place with her demonstration and qualified for a trip to National 4-H Congress. Madeline Snell and Tressa Lyscio gained valuable leadership skills to advance their Ambassador efforts.

4-H Projects Teach Life Skills to Members at County Fair

Over Labor Day weekend each year, approximately 140 Sanders County 4-H members, their families, and leaders come together for the County Fair. The purpose of the fair is to enrich the learning experience of the 4-H member through exhibiting project work they have completed the past year. It serves as a learning laboratory for youth going far beyond winning ribbons.

The County Fair provides a backdrop for youth to reflect on the important life skills they have learned and about their own personal accomplishments. Leaders and members work together as a team preparing to put on livestock shows, display exhibits, serve delicious food raising funds for the program, and even completing a service learning project to bring the community together.

Supported by Sanders County Commissioners
Carol Brooker
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Aquatic Invasive Plants Threaten Lower Clark Fork River System

In its eighth year, the Sanders County Aquatic Invasive Plant Task Force (AIP Task Force) continues its work targeting invasive aquatic vegetation, primarily Eurasian Watermilfoil, in the lower Clark Fork River system. The Task Force is comprised of representatives from multiple public and private entities which share an interest in the welfare of Noxon Rapids and Cabinet Gorge reservoirs. A set of bylaws binds the Task Force to the Sanders County Board of Commissioners, who act as program sponsors. MSU Extension agent Jason Badger serves as chairman of the AIP Task Force.

Past efforts focused on defining the extent of the infestation of AIP (aquatic invasive plants) in the lower Clark River drainage. Dr. John Madsen, UC Davis, and Dr. Kurt Getsinger, US Corp of Engineers, conducted herbicide trials to better plan the effective use of aquatic herbicides in a flow through system. All treatments prior to 2014 occurred in Noxon Rapids Reservoir. During 2014 and 2015, treatments were also conducted in Cabinet Gorge Reservoir, with varying degrees of control.

During the 2016 season, treatments occurred during August. A total of 198 acres were treated in Noxon Rapids Reservoir. Herbicide rates and timing were based upon data collected during plot trials. Post-treatment vegetation analysis occurred in mid-October and will take place again one year after treatment to estimate the effectiveness. In the past, control of Eurasian watermilfoil has been estimated at 90 percent or greater, depending on the site and reservoir conditions, which is considered excellent. Treatment applications were conducted by Clean Lakes, Incorporated, with the method used being variable depth injection (Littline). permitted aquatic herbicides used on the project included Triclopyr, Endoethyl and Diquat. The operational goal of treatment is to reduce infestations of Eurasian watermilfoil to a “maintenance level” on Noxon Rapids and Cabinet Gorge reservoirs. Being an integrated program, management strategies include mapping, chemical treatment, education, bottom barriers and two boat check stations, separately funded through Montana Fish, Wildlife and Parks. Treatment costs in 2016 came to approximately $180,000.

Additionally, the Task Force participated in a grant project with Dr. Ryan Thum from Montana State University to study the Hybrid milfoil (invasive Eurasian watermilfoil x native Northern milfoil) in Noxon Reservoir. Test plots were identified and new herbicides were tested for efficacy against this hybrid that has historically displayed a resistance to conventional control methods. Initial post treatment surveys show 90+% control, but next year’s surveys will reveal how effective treatments will be long-term.

Soil Analysis Helps Producers Maximize Yields

Analysis and interpretation of soil samples is an offered service for residents of Sanders County through MSU Extension. To date in 2016, our office has submitted 13 soil samples from 12 different clients to a private lab in Nebraska. These samples represent a wide range of clientele including homeowners and hobby gardeners to commercial farmers. Soil analysis describes soil characteristics. This is the basis for making soil amendment recommendations. Soils education has been and continues to be a very popular service in Sanders County. Some clientele submit samples each year and use results and recommendations to build soil management programs to boost crop production over time. This service has resulted in many producers increasing their yield.
Farm Management Plans Help Local Landowners Prioritize and Reach Goals

Our office worked with five different landowners and producers to develop individual management plans for their properties during 2016. The plans vary from managing their land for wildlife to diversifying forage production. One particular highlight comes from a producer in Trout Creek. After working on implementing their plan for a couple of seasons, with discussions on species and varieties, analyzing soil samples and making fertilizer recommendations, they have implemented appropriate and effective weed and insect control techniques. In spite of reduced production seen across much of Sanders County, his forage crop yields and quality were above average and he was able to participate in the Noxious Weed Seed Free Forage Program this year. This resulted in higher prices for his hay, as well as ecological benefit.

Noxious Weed Seed Free Forage Program Slows Due to Drought

Administered by the Montana Department of Agriculture and certified inspectors from governmental organizations, the Noxious Weed Seed Free Forage Program’s goal is to reduce or eliminate the spread of noxious weed seeds on public lands. Only certified forages are allowed on government managed lands. At the same time, producers may market certified weed free forage above uncertified retail prices. MSU Extension Agent Jason Badger is the inspector for Sanders County. In 2016, only two local producers requested certification and both passed. Below average growing condition brought on by drought and spotty grasshopper infestations prompted several other producers to forgo the expense and effort this year. This program offers positive economic and environmental impacts. Producers receive more money for product while minimizing the risk of spreading noxious weeds to our public lands.

Apiculture Workshop Helps Shed Light on Beekeeping Challenges

In 2016 our office held its first Apiculture workshop. We have been receiving an increasing number of inquiries on this topic so we teamed up with Western Bee Supply, the University of Montana’s Master Beekeeping Program, and Montana Fish, Wildlife and Parks to provide this educational training. Eighteen people attended and the workshop received great reviews. Many attendees got answers on site about why previous apiculture attempts have been failing. We are excited to see how changes in husbandry practiced after this class will affect apiculture in Sanders County.

Grasshopper Infestation Spotty but Still Causing Mayhem

There were scattered two-striped grasshopper infestations throughout Sanders County in 2016. In general, this infestation was fairly mild compared to 2015, though it did affect crop production in many areas. Between a lack of precipitation and grasshoppers, dryland forage production was about 70-75% of normal. Once again, our office worked with USDA-APHIS to arrange for a bait-spreading vehicle to be housed in Sanders County. This vehicle was loaned out to local producers to help them alleviate some of the grasshopper damage. MSU Extension also consulted with many landowners individually, explaining treatment options. After devastating results in 2015, landowners and producers seemed more willing to act early and control methods were implemented in time to help minimize the infestation in many areas.
Strong Hearts Healthy Communities

Thompson Falls was one of six Montana communities selected to participate in the Randomized Controlled Intervention Stage of the Strong Hearts Healthy Communities (SHHC) Study. SHHC is a research project that is exploring programs that will help prevent cardiovascular disease in rural communities. Cornell University chose several communities in Montana to conduct the research and worked in conjunction with Montana State University and Extension in those towns. If the results of the study are favorable for positive change, the programs will potentially be replicated in rural communities all across the nation.

Eleven participants were selected in Sanders County to complete the 24-week community-based randomized controlled intervention trial. This group met twice per week, for one hour each time, for approximately six months and focused on eating and physical activity for a healthy lifestyle. Participants reported improvements in their lives, which they attribute to SHHC. Improvements reported include sleeping better, more energy and stopping the use of painkillers.

This group also participated in six monthly community events during this period as part of the “Heart Club” portion of the curriculum. The group chose a Heart Club mission to increase and encourage physical activity through the development of an indoor exercise/activity program, which they planned and implemented. The results of the Thompson Falls SHHC group and others throughout the state were gathered and finalized in August 2016. Impacts will be published through Cornell University communication soon.

Strong Women

One by one, women in Sanders County have been getting stronger with Strong Women. The Strong Women Strength Training program was developed at Tufts University to increase strength, muscle mass, bone density, and balance in women. Those who attended the sessions twice a week for two to four months reported moderate to considerable improvements in general health and balance, feeling stronger physically, doing everyday activities more easily, and increasing weight they are able to lift and flexibility. Through this program, women of all ages in the county will continue to improve their quality of life.
Winter Series
2016 was a busy year for MSU Extension Agriculture Agent Colleen Buck. The year started with the continuing of Winter Series programming that was started in November 2015. In January and again in April, specialists from the MSU campus came to give talks on winter nutrition for beef cattle, alternative forage options, saline seeps and range management techniques. These topics addressed concerns that were identified as needs or topics of interest by Buck during conversations with producers.

MonDak Pulse Day
In February the MonDak Pulse Day was held in Montana to update producers who grow pulse crops in Montana and North Dakota. This event is a joint venture between Montana State University Extension and North Dakota State University Extension. Montana led the nation in pulse production in 2015 and Sheridan county is one of the top three pulse producing counties in Montana. This year the program reached over 100 producers in the MonDak area. Buck is part of the MonDak Pulse Day organizing and planning committee.

2016 Agriculture Highlights
Spring came relatively early in Sheridan County and farmers were in the field seeding crops by the last week of March. This early spring caused some concern since rain was scarce, but come mid-May, the rains started and the crops blossomed. The hay crop, however, was stunted and yields off fields were lower than normal. With all the rain, rangeland grew and regrew, allowing producers to leave cattle on rangeland until November. Harvest success varied this year depending on producer. All the moisture caused crops to grow tall and thick, but because of the thickness of the canopies, molds developed in lentils that caused a significant decrease in yield. Also an issue this year was vomitoxin in the Durum fields, resulting in lighter test weights and decreased yields. Even though producers struggled with disease and insect pressure on crops, Sheridan County yields remained on par with previous years. To help producers, Buck sent multiple samples to the Schutter Diagnostic Lab on campus and wrote multiple news articles throughout the summer to alert producers of what to look out for.

Plant Identification
Expanding on the Plant Identification workshop from last year, Buck added new plants and an identification activity to the workshop and invited the County Weed District Coordinator to talk about the five noxious weeds of importance in Sheridan County. Narrowleaf Hawksbeard was also talked about as the “new” plant to watch for in Sheridan County.

Wheat Midge
Buck again participated in the Wheat Midge monitoring project that was being conducted around the state. Five traps were placed around the county this year, and although there is wheat midge in the area, there are also parasitoids present that prey on the wheat midge. The wheat midge is a continuous concern for farmers in the area, and by monitoring their numbers, actions can be taken to reduce the impact they might have on grain yields. Trap monitoring allows for a quick response as populations can change throughout growing and harvest seasons.
Meeting the Needs of Sheridan County Residents

Private Applicator Tour
2016 was the last year for Region 4 private pesticide applicators to recertify with six continuing education credits. Since Sheridan County lies in Region 4, Buck offered to host the Integrated Pest Management Team as they made their way around the region putting on programs. The program was held at the Sheridan County Civic Center and there were 45 participants. Buck will also present at initial pesticide trainings that are taking place in Sidney and Plentywood in December.

Buck continues to encourage producers to stop into the office or give her a call. She is continually looking for programing areas and projects to be a part of that will benefit the producers of Sheridan County.

4-H Shooting Sports
Due to the increasing amount of youth involvement in the 4-H Shooting Sports program in Sheridan County, a training was held in Plentywood with three shooting sports disciplines offered. MSU Extension Agent Colleen Buck, along with fellow northeastern Montana agents, organized the training that was attended by 17 participants from seven different counties from the east side of the state.

Arthritis Foundation Exercise Class
“I’m here because Dr. Stoner told me to,” was the reply from a sassy little lady. The question – in reference to the Arthritis Foundation Exercise Class – Why do you keep coming here? Now in the third year of completion, arthritis exercise classes are still going strong and many of the participants have been attending the entire three years. The classes are offered twice a week in two locations and total participation has stayed constant at about 30. Inquiring minds wanted to know, so Extension Agent Sheila Friedrich sat with the eager exercisers one day and asked, “Why do you keep coming here?” Here are some of the responses, which confirm the importance to county residents.

“I need this for my legs; I’ve had two hip replacements and the exercises help both my lower and upper body.”
“I have improved upper body strength and agility.”
“I feel it improves general health; I have a better attitude; it’s good being around people.”

Almost every person commented on the social aspect of the program, which is a secondary benefit. They enjoy the company and have become great friends. They build muscle and flexibility while they share children and grandchildren stories and support each other during birthdays, holidays and other life events.

Montana 4-H Leaders’ Forum
Buck traveled to Lewistown to present at the Montana 4-H Leader’s Forum. She teamed up with Wibaux County MSU Extension Agent Danielle Harper to present livestock nutrition on a basic level to 4-H leaders from across Montana.
Ag Education in the Classroom

Adopt-A-Cow

What do dog biscuits, toothpaste and marshmallows have in common? They are all beef by-products. That’s just one of the lessons learned during the Adopt-A-Cow Ag in the Classroom program. Sparked by the concerns of parents that their kids were being told at school not to eat meat, a group of local citizens joined together to form an Ag Education Council, with the main objective of bringing Ag topics back to the classroom. The Adopt-A-Cow program was organized by MSU Extension Agent Sheila Friedrich and the Chairman of the Sheridan County Stockmen’s Association. It was developed to teach students about the cattle industry and the importance of nutrient-dense beef in their diet. Fifty-three second and third graders participated in a morning-long program during which they adopted a cow and learned important aspects of its life such as tagging, branding, handling, sheltering, and the rumen and digestive system. They also learned about the biggest cheeseburger; the nutritive value and how all parts of a cheeseburger come from Sheridan County farms and ranches. The morning ended with the students being treated to a cheeseburger lunch, donated by members of the Sheridan County Stockman’s Association and prepared by one of the County Commissioners.

National Ag Week Bread Fair

It’s not unusual to see flour flying through the room, but it’s all part of the fun and learning during the annual Fourth Grade Bread Fair, a cooperative effort between MSU Extension and KATQ Radio. Each pair of students made whole wheat bread dough in a plastic bag, enough for each to go home with a loaf of bread ready to bake. It may have seemed to this year’s 39 students that this was an opportunity to get their hands in to something sticky and gooey, but what really happened is they are learned about wheat – from the field to the finished product. There was also a bit of a science lesson involved in that students experienced how yeast mixes with water and sugar to form carbon dioxide, a gas that makes bread rise. The reward for their labor was a loaf of bread they took home in a box with instructions on how it should be baked.

Ag Production in the Classroom

MSU Extension Agent Colleen Buck and two local producers put together a presentation that highlighted agriculture production in Sheridan County. The three presented to sixth and seventh grade students in the Plentywood School to give the students insight into what and how agricultural products are produced in the county they live in. The presentation was well received and students participated by asking questions and being active learners. The presentation went over some facts about Montana agriculture, start to finish on a livestock operation, and seeding to export of crops on farming operations.
Modern day Crime Scene Investigators have the latest and best technology and forensic science available to investigate and solve crimes. But how does that compare to crime scene investigations in 1922? This year’s summer teacher workshop provided an opportunity for participants to explore, apply and compare forensic science of today to a Montana murder case of 1922, which could quite possibly be Montana’s own unsolved murder mystery. Each year, MSU Extension Agents in northeast Montana collaborate to provide a two-day workshop for teachers. Offered in two locations, 55 educators from five counties participated in the 2016 workshop. Teachers report the benefits of participating in the workshop as being: “no-cost, low-cost activities, lessons & curriculum” (80% of respondents), “availability of an undergraduate and graduate credit” (45%), “availability of Office of Public Instruction (OPI) renewal units” (65%) and “not having to travel out of the area to find a for-credit class” (75%). Sixty-five percent of participants reported they have used the curriculum, lessons and/or activities in their classroom and 90% indicated they intend to. One educator responded, “What a wonderful opportunity to gather as teachers, to learn, to visit, and to become better educators for our students! Thank you!!” Another commented “It was so much fun, and so engaging and interesting. I look forward to using some of the activities when I do a CSI section in my Spanish 1 Class.”

Looking for strands of DNA from a strawberry.

Learning how blood spatter patterns are used to determine angle of impact.

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Friends of the Urban Forest Board along with MSU Extension agent Kellee Anderson had an eventful two years. “Busier than ever,” reports a board member at a recent meeting. In 2015 and 2016 Urban Forestry is at the forefront in Butte. With this win, Montana Tree City of the Year, the group set out on a grant hunt to fund the $48k project proposed, Victory Circle.

This pocket park at the corner of Park and Arizona Streets is at a main corridor to the historic uptown district. It will serve as a nice spot to rest during festival season, and will replace a lost park to needed development uptown. This green space will be the home to public information boards, benches, and a walking path around a garden.

This project is truly a community effort, applications for partnership and grant aid were made to Superfund Advisory and Redevelopment Trust Authority, and East Butte Renovation and Rehabilitation Agency. Due to the time necessary to fundraise for a full design installation of the project and showing signs of winter early, we will not see this green space come to fruition until spring 2017.

Montana Tree City of the Year
For a Second Time!

MSU Extension Butte-Silver Bow and Rotary Find Common Ground to Beautify Butte

While participating at the statewide Rotary conference in Fairmont, Montana hosts decided to engage members in a project to plant vegetation at the World Museum of Mining. The museum, on the west side of Montana Tech campus, has long served as a destination to learn about mining for students and the public alike. Agent Kellee Anderson led the group to plant 75 saplings on site. Each tree was flagged and watered. In the spring plans are made to return to see their progress.

Opportunity and partnership has emerged from this project. The local Rotary chapter will join the fundraising effort in hopes to sponsor the large Spruce tree to be installed at Victory Circle. One day, these groups hope it serves as Butte-Silver Bow’s destination to start the holiday season in Uptown Butte with Main Street Christmas Stroll and a tree lighting ceremony.
Hello! My name is Molly Viall, I am the new SNAP-Ed Program Manager for Butte-Silver Bow and Anaconda-Deer Lodge Counties. The SNAP-Ed Program is brought to our community through the MSU Extension Nutrition Education Programs, known as Buy Eat Live Better. It is designed to address health disparities and obesity issues that are often found among limited-income populations.

The SNAP-Ed (Supplemental Nutrition Assistance Program-Education) Program is designed for individuals and families who are participating in SNAP (formerly known as Food Stamps) or those who are eligible for benefits. SNAP-Ed is conducted in three ways. First, there is the eight-class series for adults known as Eating Smart; Being Active. The lessons provide practical nutrition knowledge and skill development for food preparation, planning and shopping for healthy meals, food safety, and easy ways to increase physical activity. In 2016, classes were taught at Rosalie Manor, the North American Indian Alliance, Southwest Montana Aging and Disabilities Services office, and the Silver Bow Developmental Disabilities Council.

Second, there is the new youth class series, Youth Understanding MyPlate (YUM), which was debuted in June. YUM is a six-lesson series which engages students in hands-on learning about healthy food choices and physical activity. YUM is available to eligible Title 1 schools, afterschool and summer programs.

And third, SNAP-Ed engages in public efforts to improve the general wellness of the community through Policy Systems and Environment change. This involves working with school wellness committees, the National Center for Appropriate Technology, Montana Team Nutrition, community gardens, and other organizations. These efforts increase relations with agencies that have health-oriented goals, and serve to improve the wellbeing of everyone in our area, especially those living on limited incomes.

In the coming year, we plan to partner with all eligible schools and reach more children through the YUM program. Another goal is to continue pursuing our partnership with the Butte Emergency Food Bank in order to reach more recipients of the food bank program and improve the efficiency of the food bank operations. Also, SNAP-Ed will be working with local community and school garden committees to increase gardening participation and knowledge. Nutrition and lifestyle education, as well as community wellness efforts. The SNAP-Ed Program is a great investment in Butte-Silver Bow and will continue to serve the wellbeing of our community.

**SNAP-Ed by the Numbers**

Community members exposed to SNAP-Ed information: 466
Partnering community organizations: 12
Eligible Title 1 elementary schools: 4
Adult class participants: 39
County Support of Forestry at an All-Time High

Butte-Silver Bow Parks and Recreation, Public Works, Community Development, Planning, Reclamation, Community Enrichment, Weed Control and Heath Departments come together to help the volunteer-based Urban Forestry Program in many ways. County department heads have seen the needs of Butte’s urban forest and delivered. Not only with extra funds for tree projects, or turning over labor to help volunteers with planting, picking up debris from tree related activities, watering trees, and weeding tree wells, these departments have involved groups in the planning process to find more ways to preserve and enhance our cityscape through forestry.

Natural Resource Conservation

Elected: Mile High Conservation District

In 2016, Kellee Anderson, MSU Extension Agent Butte Silver Bow, was elected to be the Urban Supervisor of the Mile High Conservation District. She will fulfill a limited term of two years. This group is entrusted by the state with mandated activities and serves as the local point of contact for numerous federal programs as well as the role of educating landowners and youth about sound conservation practices, tree planting and organizing outdoor classroom educational activities for elementary school children.

Over the past year this district hosted two outdoor classrooms for sixth graders. In the spring and fall, the district invited 10 volunteer presenters, including Anderson. This group of volunteering experts taught on many conservation topics including forestry, fish, weed identification, ground water, archeology, range, soils, and wildlife. Each group consisted of 20 students spending 20 minutes with each presenter, translating to over 600 sixth graders receiving four hours of conservation education.

This group works with many partners including Watershed Restoration Coalition of the Upper Clark Fork, USDA Natural Resources Conservation Service, Resource Conservation and development organizations, Fish Wildlife and Parks, as well as Extension. Anderson being part of this group will be beneficial through agency partnerships and more significant projects in forestry, horticulture and agriculture.
The future is bright for Butte-Silver Bow 4-H program. A bright fresh new crop of volunteers has stepped up to reenergize the program, keeping some of the old traditions and adding some new favorites.

For starters, the 2016 Silver Bow County Fair went off without a hitch thanks to many hours of dedication on the part of 4-H leaders, parents and MSU Extension. 4-H’ers had a great time showing off their animals and indoor projects at the Butte Civic Center. A dunk-tank was added to the line-up of fun Fair activities to the delight of many.

Livestock members were particularly well prepared for fair this year thanks to a special “Fit and Show” event planned by the new leaders who have stepped up to guide the program for the county. Special guests this year were members of the Montana State University Livestock Judging team. The MSU students demonstrated showmanship and livestock fitting techniques and shared secrets of the skill of livestock judging. Several 4-H members have now expressed an interest in starting a livestock judging team in the county as a result of the event.

Staffing changes are the big news this year in the Butte-Silver Bow 4-H program. Silver Bow has been the largest county by population in Montana with only one Extension Agent until now. A second agent will be added to the Extension Office in early 2017 to administer 4-H and Family Consumer Science programming.

In the interim, MSU Extension assigned two veteran Extension Agents to help with fair and getting the new 4-H year off to a good start. Meghan Phillippi, Montana 4-H Volunteer and Program Delivery specialist brought her decade of experience in 4-H program management to help volunteers plan an educational and fun fair. Tara Mastel relied on her decade of experience as an Extension Community Development agent to help get new Interim Council members seated and oriented and headed in the right direction for the 2016-2017 4-H year. Mastel, in cooperation with the Montana 4-H Center, is guiding the Interim 4-H Council to modernize its bylaws and fair book with an eye to best practices across the state in order to create a strong foundation for future growth and development of the program.
Welcome to Stillwater County

Stillwater County Extension is proud to be able to serve the people of Stillwater County. MSU Extension is a partnership of Stillwater County, Montana State University and the United States Department of Agriculture. The three-way partnership provides funding for educational resources dedicated to improving the quality of people’s lives by providing research-based knowledge to strengthen the social, economic and environmental well-being of families, communities and agricultural enterprises.

The Stillwater County Family and Consumer Science Agent uses expertise in food and nutrition, housing, health, family issues, personal finances, and environmental health to provide innovative and targeted programs based on the needs of Montana families, individuals, businesses and communities.

The Agriculture Agent works with farmers, ranchers, small landowners and researchers through field demonstrations, workshops, and individual visits to help producers and landowners remain profitable.

Stillwater County 4-H strives to provide ample opportunities to the 245 enrolled 4-H members. Market animal, foods project and Cloverbuds had the highest enrollments.
Livestock Production
Agriculture Agent, Lee Schmelzer helped Stillwater County’s cattle, sheep, and horse producers with production and management questions. Producers were assisted with forage testing, ration balancing including water and trace mineral antagonist balancing. Additionally, 4-H members were assisted with their 4-H livestock rations.

Ration formulation and mineral balancing are extremely important in Stillwater County due to the high levels of antagonists that can block the uptake of required trace minerals necessary for healthy livestock.

When livestock consume forages such as small grains, sudan grass, sorghum, corn, and several common weed species containing elevated levels of nitrate, severe health problems can occur; including decreased weight gain, decreased milk yield, abortion, and death. New cover crop grazing methods increase this risk. Through the Nitrate Quik-Test and a new more accurate nitrate test, 1650 acres of winter wheat, barley, and oats were tested during the 2016 season.

Forage Crops
Producers received information and education on suitable grass species, alfalfa and grain variety selection, disease and pest management, and weed identification and control. Schmelzer provided educational material to eight producers on alfalfa establishment, which enabled them to plant the highest yielding disease-resistant varieties. He also assisted eight producers with crop disease problems, enabling them to treat the fields if economic thresholds were met.

Weed Ecology, Management & Identification
Schmelzer provided advice on weed management, identification, classification and integrated control methods in crops, range, gardens and yards. Field and office contact topics included pesticide recommendations, application timing recommendations, alternative pest control methods, and integrated pest management practices. Schmelzer identified and provided information on several species of poisonous plants.

Horticulture
Extension helps educate landowners about establishment, care, and management of their lawns, trees, and gardens; and provides assistance in the selection of windbreak trees and garden plants that will survive in Stillwater County. This education increases landowners’ awareness of plant species, insect species, and diseases, as well as their biology, control, and management, and gives them peace of mind and a chance to save economically or sentimentally valuable trees.

Impacts
15 producers used Extensions free, effective, accurate nitrate testing and have peace of mind to feed or sell their hay, while Six producers were prevented from feeding high nitrate feed which could have resulted in abortion or death of cattle and sheep.

25 producers representing 1650 acres of hay saved a total of nearly $500 in testing and shipping.

All producers know what actions may be needed to protect his or her herd from nitrate poisoning.

By core sampling and analyzing rations, ranchers made more informed decisions and reduced costs when purchasing supplemental feed, using ranch-raised forages, making feeding decisions on cow nutritional needs, and improving cost and operation efficiency.

One producer testified that balancing rations saved him $35 per head or a total of $5000.

Community members are more aware of noxious weeds and the methods to manage or control them.

Gardeners have developed landscapes with adapted tree and plant species

Master Gardeners gave 560 hours of volunteer service to their communities.

Landowners across Stillwater County increased implementation of water quality best management practices related to livestock production and animal agriculture.
DEEP™: Diabetes Empowerment Education Program

The National Diabetes Education Program’s theme is: Managing Diabetes – It’s Not Easy, But It’s Worth It. This theme highlights the importance of managing glucose levels to prevent diabetes-related health problems such as heart attack, stroke, kidney disease, vision loss, and amputation. DEEP is an educational program which teaches self-management to people with diabetes and their families.

Initial results of the DEEP program shows significant improvement in two areas. HbA1c levels represents the average blood sugar a person has over a three month time period and is a good indicator of diagnosing pre-diabetes as well. Participants in the DEEP program saw their A1c levels drop from an average of 8.2 to 7%.

The second area of improvement relates to systolic blood pressure levels. Participants decreased their systolic blood pressure by 10 points which is outstanding, showing evidence of the effectiveness of the DEEP diabetes program.

MSU Extension Agent, Lisa Terry is now training other Extension agents and community partners throughout Montana to duplicate this program in their own county. To date, DEEP training was provided to 26 county or reservations by MSU Extension Agents or health care professionals reaching an estimated 5000 people with diabetes education.

Strong Hearts for Montana™

Strong Hearts, Healthy Communities

A new research study was conducted in Stillwater County with a program called Strong Hearts, Healthy Communities (SHHC). The number one cause of death in Stillwater County is heart disease. This program aims to reduce cardiovascular (CVD) morbidity and mortality, improve quality of life and reduce CVD-related health care burdens in underserved rural communities through a community-informed intervention. The SHHC program was a class that met twice a week for six months.

With this program, participants would:

- Get 15 to 30 minutes of aerobic exercise twice a week
- Learn nutrition education based on dietary guidelines and Mediterranean diets as well as have healthy snack demos and tastings.
- Get 15 to 25 minutes of upper body, core, and lower body progressive strength training at least once a week
- Initiate projects to support community health to enhance sustainability of lifestyle changes.

Participants in this study were women 40 and older, physically inactive and overweight or obese. Behavioral aims of the program included increasing fruit and vegetable intake, increasing whole grains in the diet, increasing aerobic exercise and taking part in progressive strength training. It also aimed to decrease calories, desserts, processed foods, saturated fats, sodium and stress levels. Preliminary results suggest a reduction in CVD risk as evidenced by weight loss and an increase in physical activity levels. There was also an increase in functional fitness in midlife and older women as evidenced by testing in strength and stamina. Blood pressure was also lowered.

**Impacts**

Statistically-significant weight loss averaging 5 pounds per participant.

Increase in muscle mass, bone density and strength.

Significant increase in physical activity levels averaging 30 minutes per day for at least 5 days per week.

Two-minute Step-test increased an average of 22 steps per participant.

Cups of fruit and vegetables consumed per day showed increase in nutrient-dense and fiber-dense foods and less consumption of processed and sugary foods.
What’s going on in 4-H in Stillwater County?

4-H is continually growing in Stillwater County. Efforts of the Extension staff in recruitment the past two 4-H years have resulted in an increase in membership. After large graduating senior classes decreased enrollment numbers, recruitment became necessary. The recruitment started out as an idea by our administrative assistant, Ashley House, to get enrollment numbers up. Her goal was to get the word out about all that 4-H has to offer.

Extension staff set up booths at the local Farmer’s Market and multiple school events in towns in our county. This led to a huge increase in 4-H interest and club membership. Potential members were contacted by Extension as well as existing club leaders. The excitement was overwhelming.

Plans are underway to meet the growing demand by hiring a 4-H Program Assistant. This will allow more recruiting and training efforts, giving members and leaders tools they need to organize and run a successful club and club meeting. More office help in the office will allow us to better meet the needs of our 4-H leaders and members, by providing additional club support. We are excited for the future.

What’s New?
We have a new enrollment software which allows members and leaders to enroll online. We also switched to a new Fair Entry software system to manage the 1134 entries in the fair each year, as well as manage a $153,000 livestock sale and the delivery of all animals. This was a learning process for everyone, however, we have heard great things about this change and are very glad to have made the switch. We are truly excited to see where our members, leaders and volunteers will propel 4-H in our county.

Impacts
Stillwater has the highest percentage per capita of youth ages 5-18 enrolled in 4-H in any Montana county.
4-H youth are more than twice as likely as other youth to contribute to their communities.
4-H youth are more likely than other youth to show the lowest signs of depression
4-H participation increases educational achievement, and motivation for further education.
4-H youth have a 41% lower risk for problem behavior compared to other OST (Out of School Time) activities.
4-H youth are less likely to abuse drugs or alcohol
Livestock Education

MSU Extension in Sweet Grass County collaborated with the Crazy Mountain Stockgrowers Association and the Sweet Grass County Wool Marketing Association to present a livestock-focused educational series. The series began with a calving primer followed by a lecture on futures marketing, a lecture concerning the Veterinary Feed Directive, and a discussion about cover crops and soil health. Considering that many in Sweet Grass County still use sheep as a way to diversify their operations, a lecture was included on sheep mineral nutrition, wool quality and the textile industry. The series wrapped up with a hands-on class on processing a beef carcass along with instruction on how to figure quality and yield grades. The series reached 147 producers. Producer reactions to the calving primer indicated that over 90% of the participants learned new techniques to save more calves during the stressful calving season. The wool seminar was met with great response from the producers, who marketed wool in Sweet Grass County with a 21% premium for the finer lines of wool this year.

Nitrate Levels Challenging in Sweet Grass County

Nitrate levels on grain hay during the 2016 growing season proved to be a real challenge for forage producers. Extension staff tested samples supplied by local producers and found that nitrate levels were sporadic. The high test levels resulted in timely discussions concerning harvest management and utilization of these forage resources in safe ways.

Meet the County Agent

(Reprinted from the Crazy Mountain Stockgrowers Assoc. Newsletter)

As we look forward to the Sweet Grass County Fair 2016, there isn't a more deserving Stockgrowers member to recognize than Marc King, especially this time of year! Our CMSGA motto is "Preserving our way of life," and we think one of the best ways to do that is to support, encourage and bring up the next generation of ranching leaders to care for the land, the livestock and our way of life. Marc King does that better than anyone we know.

Marc has positively influenced and brought up an entire generation of Sweet Grass County students and leaders as a livestock judging coach and Extension agent. We know he teaches young people so much more than how to evaluate an animal and articulate their thoughts and decisions — although those are important traits, too. He teaches and leads by example with integrity, hard work and good humor. We know the future of agriculture in Sweet Grass County is in good hands when our young people and future leaders have been under Marc's guidance.

Of course, that’s not even half of it — Marc has an open door policy to help ranchers in our community, to answer questions, share ideas, research and education. He organizes many of our Rancher Roundtable discussions in the winters with interesting, informative speakers and topics that help us grow and learn on our ranches.

Members of the Month are chosen by our board of directors to recognize Stockgrowers who are exemplary representatives of the CMSGA and the cattle industry. Please join us in saying 'thanks' to Marc for his work and dedication to ranching in Sweet Grass County!

Healthy Habits for Youth

In an effort to promote health and healthy lifestyles with teenage youth, MSU Extension in Sweet Grass County introduced 18 high school boys and girls to weigh lifting and plyometrics instruction five days a week from 6-7 a.m. The students meet daily at the High School gym and spend three days a week lifting weights to improve core strength and two days a week they receive instruction on speed, agility and plyometrics. The students are tested once a month to track improvement in their speed, strength and agility. Over the past three years, 62% of the participants have continued with the morning fitness program and those that have continued to do so have shown a .42 improvement in their grade point average.

All of the attendees of the classes presented in 2016 were grateful for the knowledge and ideas that they gained to benefit their livelihoods.

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Life Skills and Learning Styles

Recognizing the fact that many youth, as well as adults, learn better in hands-on sessions, MSU Extension in Sweet Grass County has focused on using livestock judging as a way to teach time management, decision making, public speaking and critical thinking skills. Forty youth participate in practices on a weekly basis in which each of these skills is worked on and mastered. Besides the weekly practices, these students also get the opportunity to travel the country to compete.

In an effort to involve adults, the Extension faculty from Utah, Idaho, Colorado, Wyoming and Montana have developed the Intermountain Livestock Judges Training. In 2016, the training was held in Spanish Forks, Utah. The three day training resulted in 76 adults learning how to evaluate livestock, speak publicly on a microphone and manage a county fair.

Innovative Livestock Technologies

Introducing youth and producers to emerging technologies within the livestock industry led to a collaborative effort between the MSU Extension in Sweet Grass County, Crazy Mountain Stockgrowers and GeneSeek. All of the heifers entered in the Sweet Grass County Fair were genetically tested using the GeneSeek program and the results were presented to youth as well as the general public during a presentation at the Sweet Grass County Fair. The youth were presented with printed copies detailing the genetic probabilities for several economically-important traits for their cattle. As a result of this effort, five ranches have begun testing their replacement females to assist them in selecting cattle that should help improve their marketable product, while at the same time improving their economic returns to the ranch.

**Sweet Grass County 4-H Clubs**

- Boulder River Bandits
- Livestock Busters
- Otter Creek
- Pioneers
- Porcupine Butte
- Reed Point Riders
- Timber Tech Robotics
- Yellowstone Victorians

**Sweet Grass County Enrollment 2015-2016**

- Total Leaders: 24
- Total Members: 130
- Total Cloverbuds: 19

**Sweet Grass County Top Projects**

- Swine
- Woodworking
- Photography
- Lamb
- Sewing

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Thank you for your part in making Montana State University Extension relevant and successful in providing educational programs for the citizens of Teton County. This annual report highlights a few of the MSU Extension success stories in Teton County.

We want to extend a special thank you to the Teton County Commissioners and voters in Teton County for their continued support of MSU Extension. We also want to thank the many volunteers, the participants, the readers and listeners who help us deliver our important educational messages.

When you support MSU Extension, the citizens of Teton County and Montana benefit.

**Return on Investment**
Montana State University Extension

Wellness and Health

Program description
MSU Extension in Teton County recognizes the value of healthy, productive citizens of all ages. Education offered in 2016 included:

• Healthy Tracks: Diabetes and Cardiac Prevention, a nine-month series
• Living Life Well with Chronic Conditions, a six-week series
• Powerful Tools for Caregivers, a six-week series
• Operation Concession Intervention: Healthy Food Changes for Serving the Public
• Strong Hearts Healthy Women, five-year research project with Cornell University
• Real Colors Personality Inventory and Team Building
• Strong People Strength Training, a two-month series
• Physical, Mental and Social Wellness
• Food Safety, Food Preservation and Pressure Canner Testing
• Media outreach through newspaper, blog, radio, social media/internet
• Individual consultations

Impact Numbers
In the wellness area alone, we reached 526 students, plus an estimated additional 25,000 media participants (radio, internet, newspapers), with an approximated 435 hours of preparation and instruction. We know from a needs assessment survey that 83% of those who learn through MSU Extension share the information with others, thereby increasing the educational reach exponentially.

Impact of Program
In Montana, 6.8% of adults reported having prediabetes in 2013, but data suggest the prevalence is actually 35%. MSU Extension in Teton County uses evidence-based programs that support healthy lifestyle changes for adults who are at risk for developing Type 2 diabetes. Results indicate a reduction of the risk of developing diabetes by 58% over 3 years, and by 34% over 10 years after program participation. By learning a variety of wellness management tools, participants added 2.5 hours of exercise weekly, lost weight, reduced medications and lived their lives more vibrantly. Because many of the programs such as Healthy Tracks have been a long-term effort, the overall impact has been much greater.

Looking solely at impacts from the Healthy Tracks Diabetes and Cardiac Disease Prevention Program since 2011, 120 people have completed the nine-month course, with nearly 40% losing 5% of their body weight and nearly 30% losing 7% of their body weight. Sixty percent of participants increased their exercise to 150 minutes per week.

The Strong Hearts research program has not concluded, but will inform national-level wellness programming. Preliminary evidence suggests that the program is promising for reducing cardiovascular disease risk by reducing weight and caloric intake and increasing physical activity and functional fitness in midlife and older overweight/obese women.
4-H and Youth Development

**Program description**

MSU Extension facilitates 4-H and youth development programming in Teton County, from project meetings to club and council meetings, to regional, state and national events. We also provide enrichment courses for all youth in Teton County.

**Impact Numbers**

- 177 Youth Members
- 85 Adult Leaders
- 16 Youth Leadership Retreat Participants
- 69 Overnight Campers
- 16 Camp Counselors
- 20 Textile Competitors
- 6 Communications Competitors
- 7 4-H Council Leaders
- 14 Babysitter Boot Camp Students
- 1 Montana 4-H State Award Winner
- 1 Montana 4-H Livestock Committee Representative
- 11 Montana 4-H BioScience Program Students and Coaches
- 9 Montana 4-H Congress Participants
- 4 Montana 4-H Rec Lab Participants
- 7 Montana 4-H Leadership Forum Participants
- 1 Montana 4-H Ambassador State President
- 2 National 4-H Congress Attendees
- 1 National Make It with Wool Competitor
- 1 National Shooting Sports Competitor
- 258 Additional youth contacts
- 1,800 pounds of food and $500 in donations gathered for Teton County Food Pantry
- 3,468 hours of volunteer leadership

**Impact of Program**

4-H members and families report their involvement in the 4-H program in Teton County has been fundamental in allowing them to develop leadership skills, organizational skills and record keeping skills. Many report that learning how to conduct meetings helped them prepare for future service in their communities. 4-H members are more likely to continue service to their communities as adults, not only by serving on volunteer boards, but also in general service projects needed to keep Montana communities vibrant. Numerous 4-H alumni from Teton County have reported that their current occupations started with early exposure through 4-H enrichment projects. One participant said, “4-H taught me how to work with a team to develop and meet goals that were primarily for the benefit of others, such as the food drive for the Teton County Food Pantry. I have a feeling I’ll be using those skills my whole life.”
eParenting

Program description

MSU Extension performed a countywide needs assessment in 2014 that revealed a desire for parenting classes or information be offered through MSU Extension. To meet that need, we combined efforts with University of Wisconsin Extension to offer the eParenting program. Not only did our county make this connection for our local clientele, but we also provided leadership statewide. The eParenting program offered weekly email training from January through May. MSU Extension contacted and partnered with local schools, Extension in counties across the state, and the Montana 4-H program to disseminate information.

Impact Numbers

Montana residents visited the eParenting: High-Tech Kids website 11,518 times from Jan. 1 to May 31, 2016.
• 6,834 people visited once
• 3,133 people visited 2-4 times
• 930 people visited 5-8 times
• 437 people visited 9-14 times
• 184 people visited 15 or more times

Impact of Program

Of those responding to a survey, 88% reported using at least one new parenting idea or developing a new parenting skill based on information from the eParenting program, 71% reported reading most of the 18 educational messages and 14% read all of the messages, 57% used links provided to sometimes read more resources on parenting, 14% used the links provided most of the time to learn more and 29% used the links each time they received an eParenting message to study further parenting techniques. Of those surveyed, 57% reported they shared the information they gained with others.

Respondents said, “Gave quick little parenting tips to think about, and additional resources if it was something I wanted to pursue.” And “It helped me realize that I am not the only parent having these issues with my children and it offers strategies that can get you back on track with teaching and helping your child develop into an adult.” The eParenting program, “Reminded me to take a minute to simply reflect on being purposeful in my parenting, whether technology was involved or not.”

Front Range Wool Pool

Program description

To maximize income opportunities, local growers need to work cooperatively to compete in the global marketplace. The Front Range Wool Pool is a marketing cooperative facilitated by MSU Extension that allows producers from the Golden Triangle area to deliver their wool to Choteau on a set date each year. The MSU Wool Lab grades, weighs and samples each grower’s wool and assigns the wool to one of seven marketing lines depending on fineness, length, color and contamination. The wool from this area is shipped to Jordan, Montana, combined with wool from seven other pools in the Eastern Montana Consolidated Pool, and sold through a sealed bid process on the international market.

Impact Numbers

Thirty-seven sheep producers in the Golden Triangle area delivered 36,676 pounds of wool.

Impact of Program

By transporting the wool to a central location for delivery, the pool members saved more than $9,000 in transportation costs. Due to economies of scale realized by selling in a large lot, the pool marketed the wool for 10% more than they would have individually. Front Range Wool Pool members realized an additional income of $14,135 or roughly a 25% increase in the value of their wool clip.
### STEM and Youth

**Program description**
Projections show that growth in science, technology, engineering and math (STEM) careers will outpace the number of skilled citizens to fill positions. MSU Extension in Teton County is aware that early exposure to STEM concepts and careers can influence student learning and career goals. We have offered the Youth Experiences in Science (Y.E.S.) program for 18 years. We have also added STEM concepts to the majority of lessons and 4-H project training. We have implemented the Montana 4-H BioScience program in Teton County.

**Impact Numbers**
Through the Y.E.S. program approximately 500 youth have been taught science concepts and science career development at an early age. Through the Montana 4-H BioScience program, 16 youth and five adults received 170 immersive hours of direct science training and experimentation.

**Impact of Program**
Students learned about science careers and concepts and that any person can succeed in science classes and careers. Because of Wolery’s teaching on state and national levels, MSU Extension in Teton County has impacted an additional 20 educators and 450 youth across the nation.

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### Pesticide Applicator Certification

**Program description**
Pesticide applicator certification enables producers and commercial applicators to purchase and use restricted-use pesticides. MSU Extension, with cooperation from Montana Department of Agriculture, is responsible for continuing education to keep applicators and handlers advised of current regulatory changes and safety precautions. The two agencies work together to keep people and the environment safe.

**Impact Numbers**
One hundred twenty-seven producers and landowners received training on pesticide use and safety.

**Impact of Program**
A new five-year cycle of certification for private applicators with Montana Department of Agriculture in this region of the state started on January 1, 2016. More than 100 producers in Teton County either recertified licenses or became newly certified to apply restricted-use pesticides on their property. These producers now have more options to control weeds and a better understanding of how to protect themselves, their family and the environment from pesticide misuse.
### Program description
MSU Extension in Teton County strives to offer the best diagnostic capabilities for commodity grain and pulse producers, forage growers, commercial horticulturists and homeowners. We offer in-house testing for nitrates in forages pre- and post-harvest, insect and weed identification, disease analysis through the Schutter Diagnostic Lab at MSU, pest insect monitoring, water testing through Energy Laboratories and forage analysis through Midwest Labs.

### Impact Numbers
Records indicate that 275 Teton County residents received diagnostic or educational assistance through MSU Extension in Teton County. The office provided traps and monitored 11 fields in the county weekly for Orange Blossom Wheat Midge, submitted 45 samples for disease diagnosis and/or identification to the Schutter Diagnostic Lab, sent 29 forage and soil samples for analysis, and conducted 20 nitrate tests for producers.

### Impact of Program
One spring wheat field required additional monitoring due to high Orange Blossom Wheat Midge numbers, but no insecticide application was ultimately required. Twenty forage producers saved $400 on nitrate tests for hay. One sample tested 12,000 ppm nitrates and would have caused many production issues if used as feed, including death of livestock. The office forwarded 74 samples on to professional laboratories for more detailed analysis. We diagnosed several cases of *Dothistroma* Needle Blight in Ponderosa Pine trees around the county. At one municipal location, one tree had already died and the rest were treated in time to save them. The business owner considered these trees invaluable. Through a combination of fieldwork, lab analysis at the Schutter Lab and consultations with specialist at MSU, we concluded a field of chickpeas did not properly inoculate. This 130-acre field should have yielded 37 bushels/acre, but ultimately yielded 19, and without a last minute application of 50 units of nitrogen fertilizer, would have potentially yielded nothing. The nitrogen application conservatively returned $64,220 to the grower based on the current price of 9mm Kabuli chickpeas.
**DNRC Conservation Seedling Nursery Program**

**Program Description**
MSU Extension partners with the Department of Natural Resources and Conservation Seedling Nursery to provide technical assistance to landowners planting windbreaks. Windbreaks provide numerous benefits in Teton County to both people and wildlife. MSU Extension in Teton County promoted and advised landowners on species selection, windbreak design and planting techniques of conservation trees and shrubs in Teton county and surrounding areas.

**Impact Numbers**
The Extension agent facilitated and consulted with 21 landowners on windbreaks and coordinated delivery of 5,087 conservation trees and shrubs.

**Impact of Program**
Planting windbreaks in Teton County is a long-term and expensive project that can be marked with a high degree of failure due to our dry, windy and cold environment. MSU Extension in Teton County provided landowners with site-specific species selection and planting guidelines to help ensure success. The office also provides post-establishment consulting on disease and insect diagnosis to ensure the investment of trees and shrubs reach maturity.

**Certified Weed-Seed-Free Forage Program**

**Program description**
As Teton County is considered a point of access for the Bob Marshal Wilderness, preventing the spread of noxious weeds into our pristine backcountry is vital. To prevent the further spread of noxious weeds, certified noxious weed-seed-free forage is required when horses or pack animals are used on public land in Montana. The MSU Extension office in Teton County certifies fields of weed-seed-free hay for county producers to prevent the spread of weeds on public lands.

**Impact Numbers**
Certified 531 acres in Teton County that yielded approximately 911 tons of hay.

**Impact of Program**
While trying to minimize the spread of weeds into pristine areas, the weed-seed-free hay program also adds value to the forage. Only weed-seed-free hay can be used on federal land. The certification process is strict, so producers who meet the standards can sell their hay for a premium. Conservatively, the sale price will be $50 more per ton for the certified hay, increasing the producer’s gross sales in the county by more than $45,000.

**Alfalfa** is one of the hay crops that producers grow to sell as certified weed-seed-free livestock forage.

**What do citizens say about MSU Extension in Teton County?**

“Extension provides a source of up-to-date information in all areas of agriculture and home and family. The 4-H clubs have provided many children with lifetime skills.”

“I would say that by enriching the lives of individuals and families MSU Extension does a great deal for the county as a whole.”
An MSU Extension Teton County participant praises the value of Extension:

“Extension is extremely relevant to us in many different ways. First, our job. We farm and ranch and have found Extension a VERY valuable resource for information to help us do our jobs. We utilize everything from hay certification, crop questions, hay testing, and general agricultural topics. Secondly, our children have benefited greatly from 4-H. We are still in the early stages of 4-H, but the last few years have offered our children many opportunities to grow and develop into productive citizens. We have watched them meet other children with similar interests. We have watched them work hard on a project they didn’t know anything about until 4-H introduced it to them. They have gained a great deal of confidence in public speaking. They have a strong work ethic that is further developed with their 4-H animals. They have learned empathy and good animal stewardship through 4-H. 4-H is absolutely one of the best youth organizations out there!! Lastly, I have utilized Extension for helping in raising my family. I have learned cooking techniques that I would have never known. I enjoy having a friendly face to ask questions. Without Extension, we would miss out on a very valuable service!!”

Teton County 4-H’ers help with the annual Teton County Food Pantry food drive and the Choteau community 4th of July fireworks fundraiser, learn new skills at summer camp, take part in Demonstration Day, practice making pasta, participate in a Western Heritage program and more during the 2015-16 4-H year.

Recycle this publication by sharing it with another person.
Health and Wellness in Toole County

Montana: Living Life Well is a research-based chronic disease self-management program offered to Toole County residents. The program was co-sponsored through Toole County Extension and Toole County Health Department. Montana: Living Life Well workshops empowered participants to take an active role in managing their health. Participant meet once a week for six weeks.

Seven local residents participated in the program this past June. Participants learned techniques to deal with problems associated with chronic disease, appropriate exercise, appropriate use of medications, communicating effectively with family, friends, and health professionals, nutrition, and, how to evaluate new treatments. Each week, participants created an action plan to accomplish a realistic, attainable goal in their self-management plan. Participants who completed a workshop demonstrated significant improvements in exercise, ability to do social and household activities, less depression, fear and frustration or worry about their health, reduction in symptoms like pain, and increased confidence in their ability to manage their condition.

Diabetes Empowerment Program (DEEP) is a program accredited by the national American Association of Diabetes Educators. The evidence-based diabetes self-management education program is for people with pre-diabetes or diabetes. The goal of the DEEP program is to empower people to take charge of their diabetes, avoid complications from the disease, and improve self-management skills.

In November eight local residents participated in the four week DEEP program. Participants of the program gathered a greater understanding about how the disease process affects their body and learned how to manage diet, exercise, medication and stress to reduce their blood glucose level and manage their overall health long-term.

Strong Hearts for Montana is an exciting collaborative research study developed by Cornell University that is funded by the National Institutes of Health (NIH) Heart, Lung and Blood Institute. Cornell has partnered with Montana State University and county Extension educators to deliver the Strong Hearts, Healthy Women study. Montana and your community are helping lead the way in what could prove to be a very exciting breakthrough in cardiovascular disease prevention in rural areas throughout the country.

Toole County was selected as one of twelve rural locations in Montana to participate in Strong Hearts for Montana. In this study, we examined the effects the program in the prevention of cardiovascular disease. The leading cause of death among adults in Montana, including women, is heart disease.

Eleven participants volunteered to be part of the Strong Hearts Study. The women participated in a baseline data collection of blood pressure, cholesterol, bone density, weight and body composition. After the women participated in the six month Strong Hearts, Healthy Women program, there was a follow up collection event to see if the program made improvements in the women’s overall health.

Participants of the Montana Living Life Well Program
Youth Development

Toole County 4-H Program

The Toole County 4-H program offers a wide range of education and leadership opportunities for area youth. The top three projects in the program currently are shooting sports, market animals, and foods. Currently, Toole County has four clubs: Blazing Saddles, Steppin’ Up, Kountry Kids, and West Butte. There are around 80 kids and 30 volunteers in the program. Many dedicated volunteer hours go into making the program a success.

Carcass Quest!

This year, Extension Agriculture agents from Glacier, Toole, Liberty, and Pondera Counties teamed up to create a board game for the Carcass Contest. The game was titled “Carcass Quest” and was a hybrid mix of “Monopoly” and “The Farming Game”. The 4-Hers chose cards from Steer, Swine, or Lamb depending on which animal they took to the fair, and the card choices were Selection, Nutrition, Management and Circumstances. Each card had a situation based on real life with a real life circumstance.

This game got the 4-H members more interested in Carcass Information than a PowerPoint presentation. We have never had so many compliments on how fun the game was and how much the 4-Hers learned.

Family & Consumer Science

Food Preservation Workshops

MSU Extension offered two opportunities for Golden Triangle residents to learn how to can fruits, vegetables and meats.

The first workshop was offered in the fall in Cut Bank, Shelby, Chester, and Fort Benton. Participants gained hands-on experience using both pressure and hot water bath canning methods. The class covered the equipment needed for canning, recommended research-based recipes and resources, safe food handling practices, and proper protocol for canning fruits and vegetables. At the request of the workshop participants a second workshop was offered on preserving meat, poultry and fish.

Almost all participants gained understanding of safe food preservation practices and the participants indicated that they would feel comfortable canning at home. There was a total of 76 participants in the canning workshops, which were hosted by agents in Choteau, Glacier, Liberty and Toole County.

Food Safety Training

During 2016, 41 people participated in the ServSafe Food Safety Managers training course to meet the 2015 Montana legislative requirement. MSU Extension provided the training in conjunction with the Toole County Sanitarian. This certification helps local restaurants meet the food code requirements of the state as well as assure the public that the establishment is following best practices in providing the community with safe food to eat.
Agriculture

Orange Wheat Blossom Midge

This summer, Agriculture Agent Kim Suta was involved with studying the Orange Wheat Blossom Midge around Toole County. Five traps were placed around county and checked weekly. The traps have a sticky paper bottom and a pheromone in them to attract the midges. If found, midges can be very disastrous to farmer's yields. The midges lay their eggs on the awns of wheat and when the midges hatch, they eat the kernel in the head of the wheat, and the damage is not easily seen.

Two of five traps had an abundance of midges after monitoring for two months. The midge seem to like humid, non-windy areas, so we tested in different locations. The trap that had more than 1,000 midges was very concerning, so we scouted the field at sunset. None could be found on the wheat or in the heads. The farmer confirmed the midges didn’t seem to affect yields and he got around 55-60 bushels to the acre. While this farmer was very lucky to have such good yields despite a high volume of midges, the midges may still become a problem for Toole County in the future and will need to continue to be monitored.

Fruit Tree Cultivar Research

Brent Sarchet, MSU Extension Agriculture Agent in Lewis & County Extension Agent, is conducting a research project to find and develop recommendations on fruit tree cultivars in the state. He hopes to determine which cultivars are most successful given a certain geographic region to encourage more producers to local grow fruit, which will be successful and profitable for the landowners, thus increasing the accessibility of local fruit across the state. Fruit tree production can be an economical enterprise for farms to diversify their operations. Local producer Brad Munson has volunteered an area on his farm for a research orchard plot in Toole County. Over 20 varieties of apples have been planted at the research site to determine what will grow best in Toole County.

Interested in Helping to Determine Future Programming for MSU Extension in Toole County?

MSU Extension in Toole County is planning on implementing a needs assessment for the upcoming year. We are asking for volunteers to serve as members of focus groups and advisory committees to develop a strategic plan for the next five years in the areas of agriculture and natural resources, family and consumer science, and youth development. If you are interested in volunteering to help with the needs assessment, please contact the MSU Extension office at 424-8350.
Hello, I’m Kim Suta -- your new Agriculture Extension Agent in Toole County. I am originally from a wheat farm south of Cut Bank. I just graduated from Montana State University in May of 2016 where I studied Agriculture Education—Relations and I received a Minor Degree in Natural Resources and Range Sciences. At MSU I was involved with the Collegiate Young Farmers and Ranchers and the Range Club. Previously, I have had great agriculture experience with summer internships with MSU Extension in Glasgow and Dow AgroSciences. I was involved with 4-H in Glacier County for 10 years and my favorite project was Market Hog. I am very excited to get to know my new community and get involved with agriculture and 4-H!

Website and Facebook Updates

With Kim Suta as a very tech savvy agent, our website has gotten a full overhaul. The website features an “Upcoming Events” section that is updated bi-monthly and it includes the latest 4-H newsletter in PDF form for anyone to view or download. Kim Suta will also be working on a website for the Marias Fair for all the counties to add content in one simple site!
Valley County Positive Youth Development Efforts Expand to Include All Area Youth

STEM programs, science, technology, engineering and mathematics, combine the strengths of experiential, hands-on education and inquiry-based science learning within a positive youth development framework. Valley County Extension strives to address the developmental and educational needs of young people in an effort to develop a foundation of skills students need to be productive, civic minded and competitive in the 21st-century workforce.

STEM develops a set of thinking, reasoning, teamwork, investigative, and creative skills that students can use in all areas of their lives. STEM activities focus on real-world issues and problems often identified by the students. The lessons are guided by a flexible process that takes students from identifying the problem to creating a solution through productive teamwork.

Valley County Extension serves hundreds of students during school time and out-of-school time settings by offering engaging STEM programming Valley County youth are provided with a variety of free choice and hands-on learning opportunities that promote excitement in learning about natural phenomena.
PEOPLE TALK—What People Are Saying....

2016 Weed Tour

Bobbie Roos, Daniels County Extension Agent, educates weed managers about houndstongue biology, spread, and control west of Scobey, Montana, as part of the Valley/Daniels County weed tour in July 2016.

“...the pulse plots received a lot of great attention this year. Some of the industry people I am affiliated with came back multiple times to them for information gathering. “ (Rob Davis, local producer and president of the Montana Grain Growers Association)

“I have been fighting hawksbeard and marestail with chemicals for a couple years without much luck. After following Shelley’s recommendations about what to use and how to do it, it worked perfect. I am getting my ground cleaned up and it saved me money. The Extension Service is an invaluable service to our entire community.” (Paul Tweten, local grower and Valley County Commissioner)

2016 Pulse Plot Tour

Pulse Producers listen to Eastern Ag Research Center Superintendent, Chengci Chen, discuss the Montana and Northwest regional pulse variety trials located in northern Valley County.

“Narrow-leaf hawksbeard has been a huge issue for us here, you have brought information to us as producers that has helped curb the problem, and promote practices that keep it under control. “ (Rob Davis, local producer)

“Your presentation on controlling hawksbeard at the Oct. 2016 private applicator training was excellent (most of what was said was new information to me).” (Marc Breigenzer, local producer)

New Agent Training

New Agent Training Workshop. Valley, Daniels, and Richland County Agricultural Agents collaborated to obtain a Western SARE grant to train new agents in cropping practices, pest identification and provide resources to improve confidence and lead to success for MSU Extension Agents.

“The field tools I obtained from the WSARE training and the producer and Extension speakers were an invaluable opportunity to learn while you are actually in the field. This was not my area of expertise and I greatly benefitted from these programs.” (Wendy Becker—Fort Peck Reservation Agent)

“The trainings increased my confidence in talking to producers about crop practices and potential issues.” (Colleen Buck, Sheridan County Ag agent)
...About MSU Extension in Valley County

Left, below: Heirloom Gardening Workshop - Presented by life-long gardener, James Sagmiller to a crowd of over 50 interested gardeners from three counties. The workshop was sponsored by MSU Extension and Gumbo Gals Garden Club.

“Thanks again for all you have done in our community. The educational value of your classes goes far beyond what we perceive. You have made a great improvement in our community.” (Dave Pippin, retired Valley County Commissioner)

Teachers Integrate Disciplines To Solve the Education Mystery

Continuing education is an ongoing requirement of our state’s educators. Valley County MSU Extension aims to bring professional development to the teachers, offering 16 renewal units or one undergrad or graduate credit to participants. This year teachers applied their inquisitive minds to solve a historical murder mystery. All disciplines were incorporated into the process as forensic science, historical data, literature, and technology played a role in the results. Skills gained included critical thinking, inquiry-based learning, and public speaking as they presented their “whodunit” to the group.

“I appreciate that we have professional development opportunities close to home. It saves me money in travel expenses and time.”

“I depend on MSU Extension’s Teacher Workshop to meet my continuing education requirements each year.”

“Shelley and Roubie are so creative. I love the hands-on learning.”

“I will totally be using this in my classroom.”

“The class flew by because I was very engaged!”

(Taken from participants' MSU Northern Evaluations)
Strong Hearts, Healthy Communities, (SHHC) is “a community-based intervention trial aimed at cardiovascular disease risk reduction among overweight and obese sedentary women living in medically underserved rural areas,” which was implemented in Valley County. The Glasgow community supported a full intervention with 12 members meeting twice weekly for six months and the Hinsdale community offered nine members who met monthly for six months as the control group.

The SHHC intervention was designed to target and support behavior change at the individual, social, and community levels. The program design involved evidence-based programming including progressive strength training, aerobic exercise, and nutrition education components combined with a civic engagement and capacity building initiative tested in Montana’s rural communities.

Preliminary evidence suggests that SHHC has potential to reduce Cardiovascular Disease risk by reducing weight and caloric intake and increasing physical activity and functional fitness in midlife and overweight/obese women. Local impacts reported by participants include:

“My husband bought a pickup that I had to have help getting into. Because of this strength training, I can get in without help.”

“We are walking partners and walk at least 10,000 steps four days a week”

“I buy dog food in the 14 pound size because now I can lift it”

“From Strong Hearts I have learned to try different foods and make more heart healthy choices”
Community Development

Chief Joseph Park Playground Renovation

Wheatland County MSU Extension worked closely with the City of Harlowton and the Harlowton Mom's Group to renovate the playground at Chief Joseph Park. The Mom's Group identified that the playground was unsafe and didn't meet the needs of young families in Wheatland County. After extensive planning and finalizing a design, Wheatland County MSU Extension assisted in writing and has received $135,000 in grant funds for the project and has helped coordinate fundraising of over $45,000 in donations, in-kind donations, and volunteer hours.

This community project has empowered young adults to take a leadership role in our community and has brought groups from throughout the community together. Working cooperatively, we have been able to make a significant change in the community and create a destination playground. The new equipment is a highlight in our park for the community and a draw for visitors.

Wheatland County Community Foundation

The Wheatland County Community Foundation will be able to support community growth for generations. Wheatland County MSU Extension facilitated the formation of a diverse board which formed the foundation and got the process started. The WCCF board is actively educating the community about the vital role a community foundation plays in the future of our community and the great things it can help us accomplish. We are excited to have a community foundation to support our future.

Family and Consumer Science

Ten participants from Wheatland County, along with 30 others from across Montana, were part of a research program that targeted the reduction of cardiovascular disease in rural women. The participants meet twice per week for 24 weeks to exercise and participate in education aimed at improving the health of the participants and reducing their risk of cardiovascular disease.

The preliminary evidence suggests that the participants increased the amount of time they were physically active during the day and also increased their physical fitness level, so they were more able to engage in physical activity. As a result of the program and the education, participants changed their eating habits and included more fruit in their daily diet.

Research has shown that rural women are among those at greatest risk for cardiovascular disease, and the Strong Hearts for Montana program integrated aerobic exercise, nutrition education, and strength training to help women reduce their risk.
Wheatland County 4-H and Youth Development

Wheatland County 4-H

Communication skills are one of the many life skills developed through 4-H and MSU Extension youth development activities. Forty-five Wheatland County 4-H members learned public speaking skills, written communication methods, record keeping, and interview techniques while working on projects they are passionate about throughout the year. They practice and develop these skills by participating in contests, giving demonstrations, participating in interviews at the youth fair or for awards, and by teaching or leading workshops at 4-H camp and other events. Mastering strong communication skills builds 4-Hers confidence and allow 4-Hers to excel in their lives and achieve their goals.

Wheatland County 4-Hers waiting to compete in 4-H Congress communications contests.

In June, 24 middle school youth attended Teen Leadership Camp in Shawmut, MT. The camp is carefully planned to improve their leadership skills and their resilience with hands-on activities and a camp setting. The high school aged counselors increase their leadership skills by participating in every aspect of planning camp. Counselors learn facilitation to help the campers process the activities a camp. Counselors communicate with adults, peers, and campers during camp and while planning the event. Our evaluation surveys have shown that campers are more willing to engage as leaders in activities they are excited about and more confident in their skills after participating in Teen Leadership Camp. Youth are also more prepared to make authentic choices and reach their goals, rather than be influenced by peer pressure.

Youth at Teen Leadership Camp during a team challenge event.

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Wibaux Health Fair “Hops into Health” Once Again
28th Annual Health Fair reaches over 525 Youth and Adults

Just a few days before Easter, the Wibaux Health Fair opened its doors to a crowd of over 525 youth and adults. The theme of the fair, “Hop into Health,” matched the enthusiasm of the Health Fair Committee, volunteers, and attendees.

Nutrition and health education are essential components needed to emphasize the importance of developing healthy lifestyles. Routine medical examinations also play an important role in prevention, as well as early detection.

The Wibaux Health Fair offers complete blood profiles and a PSA screening for men, at reduced costs. In addition to the blood work offered, the exhibitor services provide blood sugar testing, blood pressures, free hearing evaluations, and a wide variety of services for all ages.

The Health Fair Committee consists of Danielle Harper, County Extension Agent; Patti Goroski, Administrative/Program Assistant; and Barb Maus, County Health Nurse.

The Health Fair has proven year after year to save members of Wibaux and its surrounding communities thousands of dollars in health care costs. It has also saved the lives of those who have been referred to their primary care physician due to an abnormal blood profile or other screening tests provided at the Health Fair.

Because of the information presented, participants are aware that increased physical activity and improved dietary habits are a necessity to prolong their lives. Offering the blood profile and the PSA screening at a reduced cost encourages people to complete their blood work in a timely and cost-effective manner. Incorporating a variety of informative/hands-on booths provides supplemental information to those attending.

The Wibaux Health Fair is a social event as well. Farmers, ranchers, and retirees welcome the opportunity to visit with friends while enjoying a complimentary continental breakfast sponsored by donations from local individuals and businesses. Youth enjoy visiting the hands-on booths and picking up a snack or a free pencil. In its 28th year, the Wibaux Health Fair was held March 23.

With an emphasis on prevention and healthy lifestyles, the Wibaux Health Fair is sponsored by MSU Extension in Wibaux County. The fair has grown to serve more than 500 people with typically over 25 providers exhibiting their health-related services.

With the cooperation of many volunteers and the Wibaux County High School, which serves as the location for the fair, this is one of Wibaux’s most anticipated annual events.

Healthcare in Wibaux consists of a county-owned clinic building staffed two days a week by Glendive Medical Center, and two days a week by Fallon Medical Complex.

Laureen Murphree, of the Dawson County Tobacco Prevention Control Program, speaks to a Wibaux resident while the Dawson County Domestic Violence representative mans her booth. The long line of attendees waiting to get their blood drawn is also visible.

Frank Datta, Editor of the Wibaux Pioneer-Gazette, visits with representatives from the Wibaux County Nursing Home.
Diving into Extension in Wibaux County, Montana, was not at all what I expected. My name is Danielle Harper and in January 2016, I accepted the job as the Wibaux County Extension Agent. My husband, Austin, and I then moved from Dickinson, North Dakota to Wibaux, Montana. I met my husband at Dickinson State University, where we both belonged to the golf team. As recent graduates of DSU, we thought our life adventures would settle down after graduation, but we were wrong. Accepting the job as the Extension Agent in Wibaux County has been the best adventure so far.

We love living in Wibaux and have felt a heartwarming welcome from the whole community. Our first year in Wibaux has been a wild adventure thanks to the opportunity that Extension has given us. I have learned more than I could imagine about topics I had not realized were included in my new job, from running nitrate tests on livestock feeds, to testing drinking water, and numerous weed ID questions. There is always something new happening in Extension. A year has never gone by so fast. “Time flies when you are having fun,” and fun it has been.

A few highlights include the thrill of working with our 4-H youth, especially the horse program members. My passion in 4-H was showing my horses and I feel very fortunate to be able to work with the horse project members in Wibaux County and help strengthen the program by hosting weekly horse clinics.

I have enjoyed hosting a variety of different craft workshops in Wibaux and surrounding communities. Crafting brings community members together for a fun bonding experience and sharing ideas.

Through my position in Extension, I am also tasked with the title of fair manager. The Wibaux County Fair is very important to the community and has always been a huge success thanks to overwhelming volunteer support and resources. Due to incredible community support, my first year as a county Extension agent has been a success. I will never be able to fully thank all the incredible individuals in Extension that have helped me through my first year as an Extension Agent.
Developing the Best 4-H Camp

4-H Camp participants learned to develop new skills, make new friends and became more independent by attending 4-H Camp for a week. The social, moral and physical growth of each camper can be enhanced by well-planned camping programs like the ones offered by MSU Extension.

Many times we focus on the logistics of program planning and forgo some of the attention needed on the goals and purpose. 4-H teens received basic youth development training by incorporating aspects of the 4-H Eight Essential Elements to intentionally design the best camp possible. Teens determined what combination of elements were necessary.

The Eight 4-H Essential Elements are:
1. Positive relationship with a caring adult.
2. A safe emotional and physical environment.
3. An inclusive environment.
5. Opportunity for mastery.
6. Opportunity to see oneself as an active participant in the future.
8. Opportunity to value and practice service to others.

Each of these elements is critical for positive growth and development of youth. Intentional focus on these elements allows youth to benefit from participating in hands-on, experiential activities and events, feeling nurtured in a safe environment, mastering new skills and abilities, and knowing that they are contributing to their communities in a positive way.

Youth Understanding MyPlate (YUM)

Since the early 1980’s the rate of childhood obesity in the United States has tripled. Children who are overweight or obese are at a higher risk for weight related problems as adults. According to the Community Health Needs Assessment of Yellowstone County, 28.7% of Yellowstone County children aged 6 to 17 are overweight or obese and nearly 50% of school-age children have three or more hours per day of total screen time for entertainment (television, computer, video games, Internet, etc.).

Nutrition Educators in Yellowstone County have introduced the new USDA approved curriculum “Youth Understanding MyPlate” to youth in Title 1 schools. YUM is a six lesson curriculum designed to teach children the messages of MyPlate through experiential activities that encourage healthy eating choices and physical activity.

To meet the new Health Enhancement and Physical Education Standards for Montana, the YUM curriculum helps children understand concepts related to health promotion and disease prevention. It gives them a chance to demonstrate the ability to practice health enhancing behaviors. Youth will learn skills to achieve a higher level of physical fitness and exhibit personal and social behaviors that respect themselves and others.

From October 2015 through September 2016, Yellowstone County EFNEP taught 1,066 first, third and fifth grade youth how to eat healthy and be active. Additionally 369 adults were taught to prepare healthy, nutritious meals for their families while stretching food dollars. EFNEP programs impacted a total of 1,898 family members through these educational efforts.
Livestock Loss Due to Death Camas

Steve Lackman, MSU Extension Agricultural Agent in Yellowstone County was contacted by a producer that reported a death loss of four cows in a two-day period. A field inspection confirmed the large presence of death camas (Zigadenus spp.). Death camas can be a highly toxic weed in the spring, especially the underground bulb. Death camas is one of the first plants to green in the spring making it a desirable plant when other forages are still in dormant stages or in low supply. In this instance forage was in short supply where three of the cows perished in a single night. The plant also seemed to be more abundant and toxic than previous years. Death camas is a plant that most ranchers are familiar with and try to avoid in early spring grazing, however, losses of livestock are very rare. Minimizing the concentration of toxins is the only way to safeguard against mortality because there is no cure for death camas poisoning.

The county agent’s collaboration with Dr. Jeff Mosley (MSU Rangeland Specialist), Dr. Jane Mangold (MSU Weed Specialist), and Dr. Emily Glunk (MSU Forage Specialist) resulted in a rapid statewide warning. Dr. Mosley authored a Montana Ag Alert, warning producers that death camas could be a toxic weed problem on their rangeland. This early warning gave producers a chance to reconsider livestock grazing rotations, as pastures thought to be safe in previous years should be grazed with caution or avoided until later in the grazing season. This MSU collaboration reminded producers in Montana that poisonous plants exist on rangeland and steps should be taken to minimize livestock losses.

This example illustrates the ability of MSU Extension to respond rapidly as needs arise. The agent and specialists network worked well to bring timely information to a producer in distress and also provided a warning to other producers across the region.

Strong People and Arthritis Exercise Classes

Social interaction, humor, the ability to climb in and out of a boat and get down and up from the floor - would you believe all of these are a result of a 45-minute exercise class? MSU Extension Family and Consumer Sciences Agent in Yellowstone County, Jackie Rumph, teaches two research-based programs in her community, helping residents work toward their 150 minutes per week of physical activity recommended by the USDA. Both Strong People Strong Bones, and an Arthritis Exercise class, help to increase participant strength, mobility and endurance.

Ten classes of Strong People Strong Bones were offered to rural residents in Yellowstone County; both men and women were in attendance. An elderly woman, upon coming to the sixth class, shared how the Strong People Strong Bones program is helping build her strength. She is now able to get down on the floor to clean and then stand up without a struggle. At 81 years of age, she could not remember the last time she had tried that. She also announced she and her husband, who also attends the class, experienced so many benefits from the class that they would be continuing the free weights on their own through the holidays.

These programs have lasting impacts. An arthritis exercise participant shared her story: When she began the arthritis exercise class, she was unable to walk from her vehicle into the exercise room without resting. To stand up out of her chair without using her hands to push herself up or standing to make a sandwich in her kitchen, were impossible. After consistently attending six weeks of class, she was able to ‘pop’ out of her chair using only her legs to balance. Four months later she now works out on the machines at the gym, stands up to make a sandwich and climbs in and out of a boat to go fishing. She credits these impacts to beginning the arthritis exercise class.

Through the classes, participants now have ways to practice safe free weights in their home and experienced connection with others as they practiced the program together. Participants reduce their personal health care costs and the cost of health care for all Montanans by keeping active and staying strong. Health care professionals agree that the majority of the aging process is affected by factors within our control. Through Strong People Strong Bones and Arthritis Exercise, MSU Extension is helping local residents to enhance their health, reduce health care costs, and improve their quality of life.
Innovative Advertising Product - Wooden Nickels

This year, once again, came the challenge of trying to figure out something clever to hand out at the fair’s Master Gardener Information Booth. While looking at all the options, keeping costs down, and trying to think of something folks wouldn’t just toss, the classic wooden nickel became the item of choice. Not only was it a fun blast from the past, but it served to advertise both realms of the Yellowstone County Extension Urban Horticulture program’s outreach.

One side is devoted to the Master Gardener program, complete with the web page address, to access class information and applications. The second side is devoted to the MSU Extension urban yard and garden program, with the direct phone number for the fastest access.

Not only were these an excellent value, but very successful with 1,500 nickels handed out during the 2016 fair. They are also a handy option to distribute to clients at the office. These will become a standard handout item at the summer farmers market information booths which are staffed by Master Gardeners and at various horticulture presentations.

Master Gardener Volunteer Impact

The impact of the Master Gardener program’s outreach has expanded in our community, through its many hours of volunteer service.

Since 2016, 90 new participants have attended the Master Gardener Education classes. These classes consist of eight, two-hour sessions for Level 1 and Level 2, and a 3-day class taught by MSU Master Gardener Coordinator Toby Day, for Level 3.

With an ongoing base of nearly 120 active Master Gardeners, the impact has been substantial, with 7,270 hours donated the past two years.

Volunteers make it possible for the zoo to have its spectacular gardens on a limited budget. They are entirely responsible for preparing, planting, and maintaining these gardens. Dedicated Master Gardeners also invest heavily in coordinating the annual Geranium Festival, put on by the Botanical Society at ZooMontana. This is the major fundraiser for zoo garden maintenance. MontanaZoo’s Sensory Garden is one of Billings go-to locations for beautiful summer weddings and other special events.

As a result of the excellent care given through this volunteer program:

- These gardens will be classified as American Botanic gardens, by the American Botanical Society.
- The gardens are expected to become a public test garden for the PlantSelect program through Colorado State University. This program introduces new high plains and intermountain plant varieties.

Each year new opportunities develop and are presented to Yellowstone County Master Gardeners for consideration. These are seen as opportunities to project our program’s outreach even further.

4-H and the Military Working Together for Youth

Montana has over 7,000 children living within its military families. When military parents are deployed, their children have unique needs for special support. With the help of the MSU 4-H Center for Youth Development and 4-H/Military partnerships across the State, the Yellowstone County 4-H Program is reaching out to those military youth.

The Yellowstone County 4-H/Military program is focusing on critical life skills taught through the 4-H Mission Mandate areas of Science, Technology, Engineering and Math (S.T.E.M.), Healthy Living and Citizenship to better prepare our young people for the future. Last year, over 500 military youth were impacted across the state, by being involved in the following workshops and events.

S.T.E.M. – Robotics, Aerospace, Renewable Energy, National Youth Science Experiment (Drone Discovery) and Spy Science. These workshops engage children in
research, mathematics, problem solving and team building.

**Healthy Living** – In a series of classes, youth gained a better understanding about ways to prepare healthy meals with a limited income. They learned ways to improve their lifestyle with better eating habits and fun physical activities.

**Citizenship** – Youth spent time thinking about issues they are passionate about changing and how to write a bill and present it. Several of these participants wrote bills to interview for citizenship trips to Helena and Washington D.C.

**Camp** – A Saddle and Paddle camp for youth in Air Force families was held in Yellowstone County in 2016. Participants enjoyed fun, high adventure opportunities such as white water rafting, horseback riding, hiking and swimming. Activities and workshops held throughout camp helped youth build positive relationships, and gain a greater sense of resiliency to help them become a person of good character and a contributing citizen in their community.

While the servicemen and women of Montana continue to step up to fight for our freedom, their families need our support. Yellowstone County is committed to continuing a support network in our community and across the state. Our service members are better prepared to focus on the mission at hand, confident that their children and families have the education, support and services they need to cope while they are deployed.