Founded in 1865, Beaverhead County is Montana’s largest county with an area of 5,571 square miles. Of the 3.566 million acres of land, 69% is publicly owned, which contributes to the sparse population of the county. The population density in Beaverhead County is less than 1.7 people per square mile, but the average cattle population is 27.6 per square mile. The economy is driven largely by agriculture, mostly cattle and hay production, but tourism and recreation also contribute. The county is ranked first statewide in cattle production and annual forage production.

Crops
For the small grain and livestock producers in Beaverhead County, nitrate concentrations in feed can be a potential problem that can cost thousands of dollars. Grown as feed for cattle or rotational crops, barley and oats are the most common small grains in the county. In some cases, nitrate can accumulate in crops faster than it can be converted to protein and if eaten at toxic levels in the plants, it can be lethal to livestock. This year in Beaverhead County, approximately 64 nitrate tests were conducted, which led to producers making informed decisions on nitrate levels for safe feeding.

This year in Beaverhead County, 475 acres were certified as noxious weed seed free. Not only does this program increase the producers bottom line, but helps reduce the spread of noxious weeds on public and some private lands. In addition to gaining one new participant in the program, three producers walked their fields with the inspector to learn more about their weeds.

Doctoring calves on a sunny day

Riding in the Centennial Valley
Using the Schutter Diagnostic Lab at Montana State University, Beaverhead County MSU Extension submitted over 70 samples of plants and insects to identify pests and diseases. The county’s economy being largely driven by agriculture relies on MSU Extension to help identify pests and diseases that can affect crops. This year, samples of potatoes, barley, alfalfa, wheat, and hops were sent to the lab. Common scab, bacterial leaf streak, fusarium root rot, phoma, leaf spot, herbicide injury, aphid damage, black grass bugs, leaf hoppers, and grass flies were among the economically-significant problems that affected Beaverhead County crop producers this year.

4-H in Beaverhead County
The Beaverhead County 4-H program includes 200 youth in 10 clubs. Youth ages 6-19 are given the opportunity to explore education and interests by participating in youth activities. Sixty-five adult volunteers help to deliver the program to the county’s youth.

The Beaverhead County 4-H program had 134 members that participated in a livestock project. All 4-H and FFA members are required to be certified in livestock quality assurance to exhibit an animal, so Animal Quality Assurance workshops held this year focused on feed rations, injection practices, and water quality. Youth who participate in livestock projects are exposed to the industry at a young age, learn self-reliance, and sportsmanship. This year, Beaverhead County 4-H youth achieved livestock accolades with five Steer of Merits, eight certified lamb carcasses, and 27 hogs that fell within the Montana swine Symbol of Excellence criteria.

Many 4-H members participated in other projects that ranged from air rifle and archery to weed collections and baking. Through these 4-H projects, the kids learn initiative, responsibility, and to develop their leadership skills. Four 4-H members participated in 4-H Congress this year in Bozeman, where they were able to compete in or watch different contests, attend workshops, and meet other 4-H members from across the state. Attending events like Congress allow youth to be more involved in leadership opportunities and bring new ideas back to their communities. The Beaverhead County 4-H Foundation awarded one $1500 scholarship to James Kramer to further his education in agriculture.

4-H Member Asher at the Beaverhead County Fair.
Welcome to Big Horn County

Big Horn County encompasses over three million acres and over 13,000 residents, creating a land of diversity. Rural and urban, rangeland and industry, past and present, creates a rich tapestry that makes Big Horn County unique. About 65% of Big Horn County is within the Crow Indian Reservation and about 5% is within the Northern Cheyenne Indian Reservation.

A few of the major tourism destinations in Big Horn County include the Little Bighorn Battlefield, the Bighorn Canyon National Recreation Area, fishing the Bighorn River, and participating in Crow Fair, Teepee Capital of the World.

Agriculture and coal mining are the two primary industries in Big Horn County. Agriculture production in the county includes 76,000 cattle and over 270,000 acres of dryland and irrigated farming. Common crops grown in the area include alfalfa, sugar beets, and small grains.

Bred heifers trailing through the snow on their way to the feed ground.
Big Horn County is Creating Strong Women and Strong Men

The Strong Women & Strong Men Program (SWSM) helps participants keep joints flexible; muscles strong; maintain and increase balance; and improve well-being. In 2018, 82 people participated in Spring and Fall classes. Hand and ankle weights and exercise mats are provided in the free classes which are held at the MSU Extension office.

The Center for Disease Control estimates that millions of people aged 65 and older are treated in emergency departments due to falls. Over 800,000 patients are hospitalized because of falls, most often with a hip or head injury. Falls are among the 20 most expensive medical conditions, averaging $30,000, and costs increase with age.

Results from Spring 2018 classes show a 100% increase in flexibility to touch toes and increase bicep curl repetitions, 95% increase of marching in place and ability to stand from a seated position, an 85% improvement in reaching their back and standing from a chair to move around a cone and back.

Twice-weekly classes are led by Holly Jay, a trained SWSM leader. A grant for $1,000 was awarded for eHEART: Healthy Eating and Activity in Rural Towns, to be used toward improvement of community physical health and nutrition activities by Cornell University.

SWSM participants benefit from improved balance, increased muscular strength and flexibility. Couples also participate, and participants value social interactions. They report:
- “The program is more effective than my physical therapy.”
- “My husband recovered from surgery much sooner.”
- “I have not had shots in my knee since June 2017.”

New Leadership Will Guide the 22nd Year of SNAP-ED Programming in Big Horn County

The Supplemental Nutrition Assistance Program (SNAP-Ed), offers free nutrition and exercise classes to low-income participants. As Big Horn county welcomed 21 years of SNAP-Ed with a new MSU Extension instructor. Sloane Real Bird began as the newest nutrition instructor in June. Through SNAP-Ed, two adult curricula are provided, a 9-week Eating Smart Being Active series, and a onetime CREATE class. Youth programming is provided to first, third and fifth grade students at Lodge Grass, Crow Agency,
Wyola, Hardin, Pryor, Fort Smith, and St. Xavier elementary schools. Both adult and youth classes include a tasting of a healthy snack or recipe, information on MyPlate, basic food safety, paired with a physical activity. Adult participants also have a chance to learn knife skills, and how to plan healthy meals on a budget. A total of 202 class sessions were taught in Big Horn County. This year 100% of adult participants and 77% of children and youth reported improved diet quality after completing classes. Real Bird has collaborated with the Helping Hands Food Bank in Hardin, the River Valley Farmer’s Market, the Best Beginnings Coalition, and the Apsáalooke Abundance is Here Food Sovereignty Group. The work done in these collaborations will help to increase access to healthy foods across Big Horn County. Through these collaborations, Real Bird will also connect the Apsáalooke (Crow) culture and traditional food knowledge with the nutrition information currently being presented.

**Invasive Grasses in Big Horn County**

Since 2016, there has been more information coming to Montana about the economic impact of invasive grasses on rangelands due to the introduction of ventenata (*Ventenata dubia*) and medusahead (*Taeniatherum caput-meditusae*) winter annual grasses. In Big Horn County there have been several sightings reported of ventenata and medusahead near the state line. What makes identification of ventenata a challenge is its close resemblance to cheatgrass (*Bromus tectorum*), which may be a reason it has been able to spread across Montana before being identified.

In September, Big Horn County MSU Extension partnered with the USDA-NRCS Hardin field office to hold an Invasive Grasses Workshop for area producers. Topics covered included invasive grass identification, information about the Big Horn County Weed District, invasive grass control, and lastly, rangeland renovation when invasive annual grasses are present, with a field trip to cheatgrass control plot sites. Many producers who participated in the workshop reported that seeing the plot sites was very beneficial, and that they would be looking closer to identify and manage invasive grasses on their range. One specifically stated that as a result of the workshop, she intended to make the following change, “Be more observant in monitoring rangeland grasses and not just noxious weeds, [and] possibly spray a test plot area.” Another producer stated, “I need to understand plants and weed ID better.”

The workshop helped more producers become aware of ventenata and medusahead prevalence in Big Horn County and the surrounding area, and the economic impacts on an operation. Education is key to continuing the conversation of invasive grass identification and control.

**Big Horn County 4-H Program**

MSU Extension appreciates all the hard-working volunteers and leaders who make the Big Horn County 4-H program possible, and a huge success. We had another year of increased membership with 133 youth members and 55 adult leaders.

The major highlight of the 4-H year is the Big Horn County Youth and Open Fair, which had over 750 project entries. This event is the culmination of a year’s effort for many youth. Thanks to our generous community, the animal project sale generated $194,643, about a 12% increase over the last two years. Often, youth use earnings from the sale to invest in their future.
Leading up to the fair, there are several other 4-H opportunities for youth to participate. Competition events include Performing Arts, Fashion/Quilt Review, Demonstration/Speech Day, Cook-Off/Edible Arts, Big Horn County Horse Judging, and Big Horn County Livestock Judging. Each of these competitions teaches youth life skills including decision making, critical thinking, and communication.

Lastly, the Big Horn County 4-H program would not be possible without the support of the Big Horn County Commissioners, Big Horn County Fair Board, and the numerous adult volunteers and leaders who donate their time in helping “Make the Best, Better.” The Big Horn County MSU Extension staff thank you for your continued support of Big Horn County youth.
Welcome to Blaine County

Blaine County is located in North Central Montana. The Missouri River is the southern boundary and the Canadian border provides the northern boundary. Agriculture is the major industry in the county with cattle and wheat as the primary enterprises. Blaine County produces over 5.7 million bushels of wheat each year from 190,000 planted acres. There are 45,000 mother cows in the county supported by an irrigated hay base of over 60,000 acres located along the Milk River, enhanced by irrigation supplied by the Corps of Engineers St. Mary’s diversion project. The population in Blaine County stands at just over 6,700 people with approximately half of these residing on the Fort Belknap Indian Reservation.

Blaine County MSU Extension serves the community through a variety of programming carried out by two full-time Extension agents, a part-time SNAP-Ed paraprofessional and a full-time administrative assistant. Programming is concentrated in the areas of 4-H Youth Development, Agriculture and Family Consumer Sciences. The Extension program is supported through an annual county budget which includes a portion of the agent’s salary along with direct support of the agent’s salary from Montana State University. MSU also supports the program indirectly and the county benefits with returned services for every dollar invested. This is truly a partnership between MSU and Blaine County which continues to provide citizens access to high quality education and knowledge available from the state’s land-grant university.
Blaine County 4-H Youth Learn Leadership, Citizenship & Life Skills

Blaine County 4-H is a part of Montana State University Extension, and 4-H is the state’s largest out-of-school youth program. Through a variety of projects and educational activities, it reaches over 130 Blaine county youth within the traditional 4-H clubs. There are also over 40 adult volunteers who assist Blaine County MSU Extension with the 4-H program. The volunteers teach youth valuable life skills which help them to become confident, competent and compassionate individuals. Through the research-based curriculum of 4-H, the youth in Blaine County actively explore a wide variety of interests, with animal projects being the most commonly-chosen project. Every project that a youth participates in is unique to each member as they make the project their own.

Blaine County 4-H is supported by the local 4-H Council and the Blaine County 4-H Foundation. The Blaine County 4-H Foundation provides financial assistance in the form of scholarships to graduating high school seniors and 4-H alumni. The Blaine County 4-H Council provides financial support, as well as structure and guidance of the 4-H program. It is comprised of volunteers who work closely with the Extension agents to strengthen 4-H in a variety of opportunities such as the 4-H Ambassadors/teen leaders, officer training, Project Day, Quiz Bowl, Blaine County Fair, Shooting Sports, 4-H Camp, and the livestock program.

Youth Gain Life Skills

The 4-H Youth Development program creates an environment for youth to reach their greatest potential by acquiring knowledge, developing life skills and strengthening their values. Blaine County youth are provided opportunities to develop their talents and capabilities. Youth who develop these life skills become self-directed, productive and contributing citizens of their communities. Some of the life skills they develop are understanding of self; relating with others; communication; problem solving; acquiring and analyzing information; managing resources and working with others.

The Blaine County Fair is a yearly event with a wide variety of activities and events for the whole family to enjoy. This is a great opportunity for our youth to demonstrate the skills they have learned by exhibiting the projects they have been working on throughout the year. Although we experienced extremely high temperatures, youth and volunteers did an amazing job keeping the animals well-hydrated and cool throughout the fair. The fair provides opportunity for youth to showcase their projects, demonstrate their interview skills and work side-by-side with other youth to promote 4-H. The Blaine County Fair would not be possible without the hard work of our 4-H members and their families; our dedicated volunteers and leaders; as well as the generous support of the fair sponsors and attendees.
Blaine County Agriculture Working to Overcome Adverse Weather Conditions

In 2017-2018, Blaine County farmers and ranchers faced possibly the most wide-spread, catastrophic and diverse weather that has been seen on the hi-line for many years. The summer and fall of 2017 brought a drought to all of Blaine County. Then, the winter of 2017-2018 proved to be the coldest and harshest in the past three decades. Extremely cold temperatures and 100+ inches of snow brought extreme calving and lambing conditions. Snow was still on fields in late spring. In May, there was a record-breaking flood in the Milk River Valley, where producers saw their hay fields under water for more than 10 days. Sixty percent of alfalfa producers saw decreased hay production as a result. Following the flooding, the summer of 2018 brought the second year of drought to the county. Over the months of June, July and August, most areas of the county had less than four inches of rainfall. Rain started falling in September, which delayed spring wheat harvest, which caused many producers decreased yields and quality issues.

All of these conditions have created unique and costly challenges for producers of the county. Blaine County MSU Extension, with the addition of Julianne Snedigar, new Agriculture and 4-H Extension agent, was able to assist over 100 producers this year with various services. Over 40 samples were submitted for identification of diseases, insect infestations, and pest identification. In addition, over 75 samples were submitted for nitrate testing. These services allowed producers to make informed decisions about their operations.

SNAP-Ed Continues to Impact Blaine County and Beyond

The Supplemental Nutrition Assistance Education Program (SNAP-Ed) continues to provide nutrition education to eligible individuals within Blaine and Phillips Counties and the Fort Belknap Reservation. Individuals who are eligible are Blaine and Phillips County families with children, youth, seniors, single individuals and individuals with developmental disabilities. SNAP Educator Joann Beard delivers a series of lessons to eligible 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.

Over the past year, Blaine County provided 159 classes with an average of 3.61 classes per week. A total of 303 children and adults were directly reached through 26 total programs.

Participation in the SNAP-Ed program allowed participants to make healthier choices with their SNAP dollars while also making their SNAP dollars stretch farther. Ninety percent of adult participants showed improvement in one or more diet quality indicators. Participants stated they were willing to try new fruits and vegetables as a result of the program. They also stated they were drinking less soda, fruit punch, and sports drinks. In addition, they stated they were cooking dinner at home more. For the youth participants, 80% indicated they improved their diet quality. They stated they were snacking on fruits and vegetables as a direct result of trying them during the program.

The people of Blaine and Phillips County and the Fort Belknap Reservation continue to benefit from the direct and indirect contact they have had with the Blaine County MSU Extension SNAP-Ed program.
Family and Consumer Sciences Education

Blaine County residents consult with Kendra Seilstad, our Family and Consumer Sciences Extension agent, throughout the year to answer questions ranging from food preservation and safety to financial planning. Food Safety education is an important step to prevent the spread of foodborne illnesses and it is important that everyone who works in the food service industry, from concession workers to kitchen managers, obtains food safety education and training. Extension is one of the main educators offering food safety training to the public. Those restaurants and food service facilities requiring the ServSafe® certification benefit from having local trainings available, making it convenient and economical. More than 83 people were trained last year in the Food Protection Manager course with 90% of the students passing (70% or higher) with an average score of 83.33%.

With the increasing popularity of electric pressure cookers, Seilstad provided a hands-on cooking class to showcase the convenience of cooking meals at home in minutes. Participants learned the ease of using pressure cookers and the range of foods that can be cooked. After the long, harsh winter the Hi-Line experienced, the workshop proved to be an informational cooking class and an opportunity for people to socialize.

Blaine County MSU Extension is represented on the Mental Health Local Advisory Council (LAC). The LAC is a coalition of community members interested in accessing, planning, and strengthening public mental health services within our community. Our main goal is to promote mental health wellness by improving accessibility to services through education and reducing the gaps or barriers to needed resources. With the ever-rising concern of mental health issues, especially among our youth, Seilstad became certified in the Youth Aware of Mental Health (YAM) curriculum. This program is designed for youth in seventh to ninth grade, and promotes mental health awareness through five interactive sessions. YAM was implemented through the 2018 Chinook High School freshmen health class and is expected to branch into other schools in the coming year.

Kendra Seilstad and Denise Seilstad, fellow MSU Extension agent from Fergus County, team up to offer food safety programming.
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. The office houses one full-time Extension agent and a part-time administrative assistant.

Broadwater County is a fast growing county with a population of 5,936. The county encompasses 796,000 acres of agricultural land, small acreage subdivisions, rural communities and range or forested land. About 45% of the county is public land, making the area a popular choice for recreation. Primary industries include agriculture, manufacturing, mining and services. Townsend is the county seat and home to the MSU Extension office.

Bitterroot flowers in the Big Belt Mountains of eastern Broadwater County.
Welcome New Office Staff

In May, Tammy Rauser joined her husband in retirement after nearly nine years with the county including over two years with MSU Extension. In July, we welcomed the new Administrative Assistant, Katria Shindoll. Shindoll grew up on a farm in Milton-Freewater, Oregon, that had a variety of animals, a garden and hay fields. She received her Bachelor of Arts degree in Visual Communication Design and a minor in Journalism from Eastern Washington University. She lives with her husband in Townsend with their two dogs, two guardian dogs, two cats and their herd of 20 black Angus cross cattle. In her free time, she enjoys photography, baking and movies. Shindoll jumped in head first, just weeks before the fair, and hasn’t slowed down since! Welcome Katria!

For the first time, the office had the opportunity to host a summer intern. Mikayla Hudson, a senior at Montana State University, joined the office from May to August to assist with summer programming. Mikayla is a native of Potomac, MT, and a 10-year 4-H alumnus of Missoula County. Throughout the summer, she coordinated the insect crop monitoring program, chaperoned 4-H Camp and Congress, taught youth educational programs, assisted at the fair and jumped in wherever needed. With the changes in office staff, she was a welcomed addition to the team for the summer!

Sustainable Lands in Broadwater County

MSU Extension in Broadwater County provides services in the areas of agriculture, natural resources, and horticulture to a unique mix of commercial agricultural producers, small acreage landowners, and home gardeners. A diverse selection of programs was offered in 2018 including rancher roundtables, crop school, Master Gardener class, and water rights workshops. MSU Extension also provided services for forage and soil analysis, weed management, nitrate testing, pest identification, and crop insect monitoring.

The county continues to see an increase in subdivisions and small acreage landowners. Extension agent Allison Kosto provided one-on-one support and site visits in several subdivisions to help landowners with weed management, revegetation, and grazing management. A landowner in Lazy HM Estates in northern Broadwater County shared his experience working with the office, “My wife and I recently built a house in Broadwater County and Allison has been extremely helpful in educating us on noxious weeds versus other wild foliage and providing recommendations for herbicides and other forms of weed control to manage vegetation on our property. Having a resource like Allison is critical if we hope to be effective in managing noxious and invasive species.” A landowner in the Rolling Glen subdivision in southern Broadwater County credited a 70% reduction in weeds as a result of utilizing the services and resources of MSU Extension in Broadwater County.
Gardens & Backyards

Improving the home garden continues to be an area of interest in the county. Several programs were provided this year including Master Gardener class, fruit tree care and pruning, and the Backyards of Broadwater garden tour. Additionally, MSU Extension agent Allison Kosto responded to more than 65 inquiries on lawn, garden, and tree care in the county, assisting with issues including soil analysis, nutrient deficiencies, pest identification, tree care, and gardening.

In the spring, Master Gardener Level 1 was offered. Thirteen individuals successfully completed the course. Many participants choose to participate in the volunteer service portion of the program by assisting with school programs, working with the Townsend Tree Board, pruning trees for the Heritage Orchard Program, and serving as a 4-H leader. Together, they provided nearly 75 hours of community service. Upon evaluation, participants indicated they will make the following changes because of the program:

- Use integrated pest management
- Read pesticide labels
- Use more efficient watering
- Make informed choices on how and where to plant vegetables
- Make informed lawn care

Backyards of Broadwater is a program organized by local Master Gardeners. This event is a self-guided yard and garden tour highlighting community members with unique and innovative landscapes. It also provides an opportunity to network with others and share lessons learned. This year the tour featured eight gardens on the east side of Canyon Ferry Lake and around Townsend. Proceeds were donated to the school’s Wyse Acres garden, Townsend Garden Club & Study, and Townsend Tree Board. Nearly 70 people attended the event.

**RIGHT:** Patrick Plantenberg teaches pruning techniques to Master Gardener class participant Jan McAlpine.

**BELOW:** Broadwater County experienced a large amount of winter kill in alfalfa this year. MSU Extension provided guidance to help growers make management decisions.
4-H Grows Here
Growing by 40% in the last four years, Broadwater County 4-H had a record enrollment of 125 members in organized clubs. An additional 23 youth participated in the Babysitter Training and National 4-H Youth Science Day organized by MSU Extension.

The county program is supported by 41 certified volunteers who lead 4-H clubs, organize project work, serve on committees and coordinate events and activities. On average, leaders spent eight hours per month volunteering for the 4-H program. This commitment equates to a value of $87,325 of time given by 4-H volunteers to support the youth of Broadwater County.

Through 4-H, members learn life skills including leadership, communication, critical thinking, goal setting and healthy choices. In their 4-H stories, youth shared how they have grown during the past year:

“…I don’t mind what color ribbon I receive because in my mind I am already a winner because I raised my animal into the showing.”
-Cassidy Flynn, 11 years old

“Every year of my 4-H experience brings a new life lesson. … There were things that I had to prepare for, and when they finally arrived, they came and went in a blink of an eye. From this, I learned to not wish things away.”
-Kadyn Braaten, 15 years old

“…the skills and career-preparedness that it [the 4-H program] gives us is one of the biggest impacts that will last 4ever.”
-Taylor Noyes, 16 years old

“I know that the memories and skills I have learned through 4-H will continue to benefit me for the rest of my life, and I hope that I can someday give back to this wonderful organization.”
-Tyler Noyes, 18 years old

Youth engaged in hands-on activities at Livestock Quality Assurance Training. L to R: Jazel Ragen, Willow Rauser, and Ashley Rauser

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Montana State University Extension is an ADA/E0/AA Veteran’s Preference Employer and provider of educational outreach.
Welcome to Carbon County

The Carbon County MSU Extension Office is located in Joliet and is staffed by Extension Agent Nikki Bailey and Administrative Assistant Sheri Hatten. Assisted by support from Carbon County and its commissioners, MSU Extension has met the needs of clientele across the county including a robust 4-H program with more than 300 members, traditional agricultural producers, and new small-acre landowners. One of the exciting aspects of working in Carbon County is the opportunity to create programming that extends over many different areas of emphasis and groups of people.
Carbon County 4-H Exchange Experiences Louisiana History & Culture

Every year, MSU Extension in Carbon County strives to provide new leadership experiences for the teens within the 4-H program. This past year, the Carbon County 4-H Exchange group traveled to Louisiana to experience the culture, history, citizenship, and unique agriculture in that area of the country. Carbon County teens had the opportunity to visit a crawfish farm, learn about the swamp ecosystem on a swamp tour, explore the National World War II Museum, and experience the culture and history of New Orleans and Baton Rouge. Carbon County 4-H Exchange members reported that, “I learned so much about the history and culture of Louisiana; it is so much different than what we are used to.” Teens gained an appreciation for different cultures and ways of life. Instead of just learning about our nation’s history and diversity in books, they experienced it! A parent leader reported, “Trips like this truly prepare our kids for the future. It not only builds their leadership skills and independence; it also teaches them tolerance and respect for others.”

Through museum tours, interactions with local teens and leaders, boat tours, living history at historic plantations, Cajun food trials, and so much more, the 4-H teens were truly immersed in the culture and history of Louisiana. Programs such as this build leadership and cultural awareness skills that will serve each of the teens well into their future.

Meeting Producer Needs with New and Longstanding Agriculture Programs

In 2018, the MSU Forest Stewardship Program took root in Carbon County. This four-day program was held in Red Lodge for the first time and involved a combination of hands-on field classes and lecture in the classroom. Carbon County MSU Extension assisted with the implementation and teaching of the class. Participants learned how to gauge the health of their forest, explored different ways to manage their forested land, and built a management plan for their forest. They gained knowledge on aging trees, grazing in the forest, erosion management, and much more. This class was beneficial to both large-scale ranches and small-acreage landowners.

Throughout the year, a constant program of nitrate testing services and recommendations for agriculture producers was offered through Carbon County MSU Extension. Nitrates are a plant-produced compound that can be very detrimental to livestock causing abortion and in severe cases, death, when high amounts are consumed. Hay and forage producers worked with MSU Extension to test and then harvest their hay crop at the most opportune time for decreased nitrate levels. Several producers in the county approached MSU Extension with concerns about nitrates in cover crops and for recommendations on grazing these alternative crops. MSU Extension tested the crops for nitrates and also provided further information.
on best practices for grazing within this new system. Services and programs such as nitrate testing saved producers thousands of dollars in 2018 and decreased the likelihood of a nitrate poisoning event in livestock in the area.

Leadership & Communication Programs
From teens to adults, there has been a need in Carbon County and the state to build leadership capacity within communities. Carbon County MSU Extension has been working to address this need with programs for 4-H teens, leaders, and community members. Presentations have ranged from temperament assessments to generational communication discussions. Carbon County MSU Extension has developed a generational communication presentation that provides leaders with the knowledge and skills to understand and work with different generations. This presentation has assisted agricultural families, 4-H leaders, caregivers, and leaders across the region. When individuals understand how generational differences affect communication and decision making, it improves leadership skills and dialog within the group or family. Carbon County MSU Extension also recognized the need for a temperament training for 4-H leaders and taught a REAL Colors program for 4-H leaders, which will be expanded to 4-H parents and new leaders within the county next year. This program teaches a personal understanding of conflict and communication styles and allows for more emotionally intelligent conversations within the 4-H program. Leadership and communication programs within the county have begun to make an impact in many areas. Looking into the future, Carbon County MSU Extension plans to implement more leadership programs to increase the scope and depth of leadership capacity in local communities.

Learning how to measure the age of trees with a tree core at MSU Forest Stewardship
Contact us:

Sheri Hatten
Administrative Support

Nikki Bailey
Extension Agent

Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Cascade County, located in central Montana, is one of the population centers in the state and is known as the “Electric City” due to its historical significance in regard to the hydro-electric generation plants and smelter activity. The MSU Extension office is located in the county seat, Great Falls, which is on the Missouri River and is one of the pioneer cities in the state. The terrain is primarily gently rolling plains that are dissected by the Missouri River and its numerous coulees and tributaries. The Little Belt Mountains are found in the southeastern portion of the county.

Population of the county is approximately 82,300, which includes the rural area, the incorporated city of Great Falls and the towns of Belt, Cascade, Centerville, Fort Shaw, Monarch, Neihart, Sand Coulee, Simms, Sun River, Ulm, and Vaughn, many of which have complete K-12 school systems.

Cascade County’s economic base includes agriculture, the military, education, small manufacturing, food processing and many service industries. The majority of agricultural income is derived from crop production. According to 2014 Montana Agricultural Statistics, the county ranks seventeenth in crop production with over $56 million in cash receipts. Livestock production, primarily beef cattle, is also very important—generating over $78 million in cash receipts and ranking ninth in the state.

Great Falls is home to the Benefis Health Care System (one of the premier hospital and health care organizations in Montana), Malmstrom Air Force Base, and many cultural attractions including the Charles M. Russell Museum/Gallery, the Lewis and Clark Interpretive Center, the Paris Gibson Center and the First People’s Buffalo Jump. Great Falls is a primary destination point for tourism. Outdoor recreational opportunities include fishing, hunting, boating, golfing, hiking, and historical exploration.
Project Days for 4-H Members

4-H learning experiences are based on the principles and practices of positive youth development. Youth-driven 4-H experiences provide youth access to safe learning environments; challenging experiences that build skills, competencies, and resiliency to address life’s challenges and to actively contribute to society; and partnerships with caring adults to help meet youths’ basic needs. As part of the Cascade County 4-H program, county-wide opportunities for learning, connecting, and serving are offered through monthly Project Day events that complement regular 4-H project learning and club activities.

In the 2017-2018 4-H year, Cascade County 4-H hosted seven Project Day events, each providing multiple workshops and project areas for 4-H members. Each Project Day averaged 9-12 workshops with attendance of 76 4-H members.

4-H members may attend any project workshops provided regardless of the personal projects they take in 4-H. This exposes them to different projects that they may not have considered, as well as introduces them to other members outside of their club and specific project interests. 4-H members gained life experience in computer programming, sewing, cooking, raising livestock for consumption, woodworking, setting goals, record keeping, and more! As a direct result, members were given the chance to participate in project workshops, had a higher project completion rate at the end of the year, and broader project interests as reflected in their project selection for the new 4-H year.

DEEP: Consistency Is Key

According to the Centers for Disease Control and Prevention, there are more than 4,000 individuals diagnosed with diabetes or pre-diabetes in Cascade County. Diabetes can have a variety of effects on the health of individuals within our county, including an increased risk of heart disease. The Diabetes Education Empowerment Program (DEEP), a research-based education program, aims to help individuals gain confidence in diabetes management strategies.

Photos by Jerrica Seilstad
This program covers information on understanding the process of diabetes, risk factors, the importance of physical activity, complications, nutrition, mental health and local resources for individuals with diabetes.

During the 2018 year, three sessions of the six-week DEEP series were offered by MSU Extension, with 26 total participants ranging in age from 40-85. Participants attend classes once per week in a class session lasting approximately an hour. During the time spent in class, participants share their experiences and diabetes management, during the nutrition session one participant stated, “I have learned that consistency is key when making a lifestyle change.” In follow-up phone calls, 80% of participants reported they had made small changes to their diet and physical activity, and have seen their A1C (blood glucose) levels decrease by at least 0.25%, which has encouraged them to continue with healthier lifestyle choices. One participant reported, “the more I exercise, the better I feel, and I am able to control my blood sugar levels.” As a result of this class, the participants have requested to create a support group to continue the educational component and the friendship and support for diabetes management.

Cascade County Horticulture, Agriculture, and Natural Resources Programs

Level 2 Master Gardener classes were offered in Great Falls for students who completed Level 1. Students learned about binomial nomenclature, fertility, plant growth, trees, entomology, and more. Cascade County gardeners volunteered 15,961 hours at community gardens, farmers markets, greenhouses, and the Cascade County MSU Extension office. Vegetables grown by Master Gardeners in community and personal gardens were primarily donated to those in need.

Educational programs offered by Rose Malisani included Livestock Quality Assurance, Gardening 101, Pesky Pests, Cropping Seminar, Private Applicator Training, Pesticide Effectiveness, Forage Seminar, and Barley Seminar. These programs help participants make informed decisions to better save money and care for their acreage and the environment.

- Livestock Quality Assurance trainings were for 4-H members and the Great Falls Public School students.
- Malisani taught 4-H and other youth about caring for livestock and what is produced from livestock.

Gardening 101 participants. Photo by Rose Malisani
Malisani joined with Bundi Gardens to teach a Gardening 101 class, where 12 novice gardeners learned about how to start plants, transplant, grow, and care for a garden.

Pesky Pests was offered in Cascade and Teton Counties and covered how to control pests ranging from grubs to deer in gardens and yards; 29 people participated in both classes.

The annual Cropping Seminar covering the Golden Triangle was held in early January. The program featured MSU Extension specialists Clain Jones, Cecil Tharp, Kate Fuller, and Darrin Boss.

The Private Applicator training reached 56 attendees from Cascade, Chouteau, Fergus, Gallatin, Hill, Lewis and Clark, Liberty, Meagher, Pondera, Teton, and Toole counties. Attendees learned about licenses, laws, pests, safety, labels, calibration, and environment. The program is important to keep pesticide applicators aware of the most current and correct information and safety practices.

Malisani presented to the Montana Agricultural Business Association on Pesticide Effectiveness in January. Attendees learned about how unplanned and natural factors can lower pesticide effectiveness and how producers can help increase pesticide effectiveness.

The Forage Seminar is a popular educational program where producers learned about forage production, testing, evaluation, hay storage, fertilizer use, and weed control.

The Barley Seminar took place in Fort Benton where producers and industry representatives learned about rotations, marketing, sustainability, and management strategies; more than 75 people traveled icy roads to attend.

Rose Malisani, Cascade County MSU Extension Agriculture agent, assisted in over 2,250 calls of service in 2018. She conducted 47 nitrate quick tests, 20 shelterbelt consults, 1,714 phone calls, 95 office walk-ins, 105 one-on-one consults, inspected 311 Noxious Weed Seed Free forage acres, mailed 29 samples to laboratories, and attended numerous trade shows and conventions to promote MSU Extension.
Chouteau County, established in 1865, was one of the original nine counties of the Montana Territory. Once the largest county in the Montana Territory and second largest in the United States, Chouteau County is an area of 3,972 square miles and a total population of about 5,765. Fort Benton, Big Sandy, Geraldine and Highwood are the largest communities with smaller communities in Carter, Loma, Floweree, Shonkin and Square Butte. As part of the Golden Triangle, Chouteau County is the top producing county of winter wheat. With these statistics, it is no wonder agriculture production and agriculture-related businesses are the top industry.

"Guard, protect and cherish your land, for there is no afterlife for a place that started out as Heaven."
-Charles Marion Russell
Agricultural education and outreach for farmers was achieved through the 2018 Golden Triangle Cropping Seminar. A total of 45 producers were educated about integrating beef cattle into cover crops, soil fertility in pulses, transfer planning, pesticide performance, and partial budget analysis. Five producers stated they would make changes to their pulse fertilizer program, add more crops into their rotations and spray better water to increase herbicide efficacy. Through cost savings and increased net income, the economic impact of the Cropping Seminar would be $40,500.

Additional agricultural education and outreach included:

- 95 participants learned about soil acidity and soil health management. Twenty-eight participants indicated they increased their knowledge, awareness and skills about sustainable agriculture topics, practices, strategies and approaches. Without changes in management, producers would continue to see the problem of soil acidity expanding in their fields. If these 28 producers own 100 acres of winter wheat producing zero bushels per acre, potential lost revenue to soil acidity would total $630,000.

- Field days near The Knees and Loma educated 46 producers on management of cereal grains and resistant weed management.

- Emily Meccage gave a presentation on sainfoin versus alfalfa forage to 32 producers as a collaborative effort between the Chouteau County Livestock Protective Association and MSU Extension.

- 76 producers learned about prairie dog management and grazing.

- 16 gardeners attended the level 1 Master Gardener program. If all gardeners contribute community service, they will yield 320 volunteer hours to the Chouteau County communities.
Connections with the constituents of Chouteau County were made through a variety of programs which included diabetes, heart health, youth mental health, agricultural operation transfer planning, bicycle helmet safety, recycling and food and nutrition including food safety, making pie crusts, food preservation, pressure cooking, meal planning and candy making. Generational connections, improved health, wellness and safety, cost savings and self-accomplishment were some of the many benefits observed in those who participated in these programs.

Being prepared for disasters continues to be a top priority for Chouteau County. Through our Strengthening Community Agrosecurity Planning (S-CAP) committee, Chouteau County MSU Extension, Chouteau County Health Department and Chouteau County Disaster Emergency Services (DES) offered a tabletop exercise on food safety during a disaster. Representatives from volunteer organizations, medical facilities, senior centers, neighboring county DES and Public Health agencies participated in a foodborne illness scenario addressing response protocols for food menus, food preparation safety during disaster response and shelter operations and foodborne illness outbreaks. Participant comments after attending the tabletop lesson included learning “tons, tons” of information and having “a lot to think about.” The committee prepared and served relevant pressure cooker meals as an example of what and how food could be served safely to prevent foodborne illnesses.

Cooking Reinvented

The excitement of electric pressure cookers hit Chouteau County this year. MSU Extension hosted and assisted with several well-attended classes in Chouteau, Toole, Hill and Cascade Counties. Participants learned benefits and general principles of pressure cooking, how to safely and properly use an electric pressure cooker, how to adapt recipes for pressure cooking, tips and hints shared by instructors and other participants. They also learned considerations for deciding to purchase and what brand to choose, food safety and quick, healthy meal options. Many of the recipes showcased locally-grown foods from farms, ranches and gardens. After attending these classes, participants indicated they gained new knowledge using a pressure cooker, a new cooking method they would use, were more comfortable using their pressure cooker and enjoyed the time with others. A few participants indicated the pressure cooker was not for them, which saved them money. Post-class feedback has included increased amount of meals prepared with the pressure cooker, improved quality of meals prepared, new meal options, ease and quickness of foods that typically were off-limits due to time and effort required in advance, and an overall buzz of excitement about cooking. A majority of participants had the pressure cooker in their possession but feared using it, and used theirs for the first time either during class or after taking the class. The warm reception for pressure cooking feels like home-cooked meals have been reinvented.

A recycling event in Chouteau County. Photo by Janell Barber
Youth Development
A total of 362 Chouteau County youth participated in youth development or agricultural or natural resource programs.

- With help from Chouteau County Conservation District and Montana Farmers Union, fourth and fifth graders from Highwood, Big Sandy and Fort Benton learned the importance of agriculture during the Chouteau County Ag Day. Youth learned about sheep, wool, horses (presented by Keely Drummond, Miss Teen Rodeo Montana), field-to-table food by making bread, farm equipment and soils.

- 4-H Archery is one of the county’s top projects where 4-H youth improved their archery and leadership skills through the project, competitions and the Archery Council.

- 4-H and FFA youth learned about producing a quality product and taking good care of their market animals through animal quality assurance certification.

- Hunter safety students learned about the impact, identification and identification of noxious weeds. They also learned how to improve hunter/producer relations.

- Chouteau County 4-H youth participated in the 4-H Dog Show and attended 4-H camp and Montana 4-H Congress which included 4-H members from other counties. They interacted with new people, engaged in workshops which helped them develop confidence and communication and leadership skills.

- The Chouteau County 4-H Project/Communication Contest Day and Fair provided educational opportunities including hands-on learning of new projects, communication contest judging, interview judging, project exhibits, livestock judging, bred heifer ultrasounds and showmanship, market animal weigh-in, showmanship and confirmation, small animal showmanship, round robin, market livestock sale and carcass judging.

ABOVE: Chouteau County Archery Shoot.
RIGHT: 4-H chicken project members at the fair. Photo by Janell Barber

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Welcome to Custer County

Custer County MSU Extension serves the citizens of Custer County and citizens of our neighboring counties. The responsibility of Custer County MSU Extension is to provide education and leadership in programs related to family and consumer science, agriculture, youth development and horticulture.

Custer County is located in Southeastern Montana with the Yellowstone River flowing through the northern portion from West to East. Miles City is the center of commerce and is a transportation crossroads with I-94, US Highways 12 & 59, and the BNSF Railway all passing through the community. Custer County is home to the Fort Keogh Livestock and Range Research Station, one of the largest Agricultural Research Service stations in the nation, and serves the county’s 90,000-head beef cattle industry. The county includes approximately 12,000 residents and is a shopping hub for all of Southeast Montana.

Spring pasture in Kinsey, Montana. Photo by Mike Schuldt
Teen 4-H Council to Host New State Contest

The Custer County 4-H teen leader council continues to grow their role in the success of a very dynamic 4-H program. The teen leader council has 15 active members completing leadership projects, taking a leadership role in county activities and coordinating project workshops.

Teen leaders provide instruction, organization and learning activities for the annual one-day Cloverbud camp (for youth ages 5-8). Cloverbuds from across the county participate in the camp to learn more about what 4-H has to offer, build friendships and get to know the youth leaders in the program. This opportunity builds confidence in the Cloverbud members so they can find success as they move into regular 4-H membership. Teen leaders become the role models for these younger members.

The teens also provide the workforce for successful youth Chef School activities, which teach grade-school aged children basic cooking skills. The council members are also an integral part of the county fair, serving as clerks, announcers and judge assistants during many of the livestock shows.

Providing the leadership and organization to host a brand-new contest at Montana State 4-H Congress is the latest undertaking by this ambitious group. After participating in the National Western 4-H Roundup in Denver in 2018, the Horse Skill-a-thon team recognized that Montana has an untapped opportunity to send a Livestock Quiz Bowl team. The group proposed that if they were afforded the opportunity to compete as Montana’s team in 2019, they would bring their experience back and provide the leadership to host this contest at Congress. The statewide Montana 4-H Center for Youth Development endorsed this idea and five 4-H members from Custer County will compete in Denver in January, 2019.

The highlight of the year for the teen council members is their annual leadership trip. This year they organized a three-day canoe trip from Coal Banks Landing to the PN Bridge on the Missouri River. Team building, history and plant ID were all lessons that were learned along the trip through the historic White Cliff section of the Missouri River. The trip is made possible by funds raised by the youth selling concessions at the annual Miles City Bucking Horse Sale.

Teen council has two voting seats on the county’s 4-H council and they provide a meaningful youth-based perspective for many of the issues that come before the council. The teens are a great asset to the entire Custer County 4-H program.
Sausage-making Workshops Teach Many Lessons

Custer County MSU Extension, in cooperation with the MSU Extension programs from surrounding counties, have introduced sausage-making classes as a way to teach lessons on food safety, self-reliance, quality assurance and how processing can increase value. Following the guidance of Fort Peck Reservation Extension agent Wendy Becker, equipment was purchased to create a mobile teaching lab that provides students with the opportunity to gain firsthand experience in the processes required to convert bulk primal cuts of meat to a higher-value sausage product.

The curriculum that is utilized focuses on food safety and proper handling and storage of the meat product. Students can choose from a selection of fresh sausage recipes and create a unique product based on some of their personal taste preferences. Cuts of meat and where they come from are one of the learning objectives. Knife and equipment safety is also stressed throughout the program as the students complete each of the hands-on tasks including boning and cutting the meat before feeding it into the electric meat grinder, measuring and mixing the spices required, as well as operating the vertical stuffing machine to fill the casings and make the links. Students are also taught the proper technique to package the finished product in freezer paper to ensure air will be eliminated and freezer burn prevented. Students also learn the function and proper use of preservatives, salts, smoking and drying in meat preservation.

Custer County MSU Extension has presented two sessions in Miles City in 2018, one being an adult education-based program for the general public, the second being a session for the attendees of the Miles City Ram Sale. Over 40 individuals participated in the Ram Sale program, creating 60 pounds of lamb sausage links using four different recipes. These sausages were then served back to the producers at the buyer social that evening. Those making the sausage were proud of their product and extremely happy with the reception by the crowd – not one bite was left at the end of the evening.

Demand for the workshop is growing as the word gets out. Custer County MSU Extension agents have collaborated with area agents to present workshops in Powder River, Prairie, Fallon and Carter County. Fallon County received a Sustainable Ag Research and Education grant to purchase an additional set of equipment, doubling the size of the class that we can teach. The effort will expand to teach Quality Assurance and where food comes from to 4-H Market animal project members in 2019.

Sweet and Spicy Country Style Sausage

5 pounds coarsely ground pork
2 Tbsp dried sage
1 Tbsp dried summer savory
1 Tbsp ground red pepper
1 Tbsp coarsely-ground black pepper
¼ cup brown sugar

Mix all ingredients in a large bowl. This sausage can be either stuffed or formed into patties. For the best flavor, refrigerate overnight before cooking.

Making quality home sausage. Photo by Michael Schuldt
Family & Consumer Science Programming in Custer County

Family and Consumer Science programming in Custer County continues to evolve as the needs in the community change, new county and statewide issues are identified, and clientele request information on particular topics.

Montana currently has the highest suicide rate in the country, nearly twice the national rate. As part of a statewide effort to reduce the incidence of suicide and increase mental health education, Custer County MSU Extension facilitated the Youth Aware of Mental Health program, a research-based adolescent suicide prevention program for all 120 freshmen at Custer County District High School. Results of the program Montana-wide indicate that the knowledge about mental health increased, students experienced a decrease in anxiety symptoms, there was a 49% improvement in students reporting that they would seek help with feelings of suicide, and 79% improvement in students reporting that they would seek help for assistance with depression.

Custer County MSU Extension has also promoted the THRIVE program, a computer-based cognitive behavior therapy program to improve well-being and reduce depression.

After completing the Annie’s Project program, which provided education workshops for businesswomen in agriculture, a need was identified for education on inter-generational transfer of farms and ranches. To meet that need, Marsha Goetting, PhD, MSU Extension Family Economics Specialist, visited for three presentations in Custer County. Two presentations were on Estate Planning and the third was about inter-generational farm and ranch transfers. Attendance for the sessions was over 50 people and many attended more than one session.

Eastern Montana has an aging population, and with that comes increased cases of dementia in an area where services for dementia patients and their families are scarce. The goal of a five-week ‘Powerful Tools for Caregivers’ series was to offer support and education to families, as well as make them aware of the services that are available in Southeastern Montana. The participating group was particularly interested in financial issues created when one partner suffers from dementia, and we were able to provide resource packets from MSU Extension and the Alzheimer’s Association to address the interest.
Daniels County MSU Extension is a non-formal educational program designed to help people use research-based knowledge to improve their lives. Since 1922, MSU Extension has successfully provided a service to the citizens of Daniels County in the areas of agriculture, natural resources, family and consumer science, community development, and youth development, including 4-H.

The current population in Daniels County is estimated to be 1,737; there is one K-12 school serving the county. With agriculture being the main industry, Daniels County was considered the most rural county in the continental United States as measured by the Index of Relative Rurality in 2000. Geographically, the county lies south of the Canada-U.S. border with Saskatchewan.

Established in 1920, Daniels County boasts a variety of small-town community events including Lutefisk dinners, snowmobile races, ranch rodeos, and a county fair. Daniels County is also home to its annual Pioneer Days, a weekend-long celebration in June; at the center of the celebration is the historic “Dirty Shame Show,” a variety show composed of local talent. Pioneer Days takes place at Pioneer Town, a 20-acre plot just west of Scobey, which houses 35 buildings that have been restored to depict turn of the century homes and businesses.

ABOVE: Daniels County Courthouse and the Flower Bin.
BELOW: Local community member, Jim Buer, pulling the “train” at Pioneer Days.

All photos by Inga Hawbaker unless otherwise noted.
County residents can rely on MSU Extension

County residents contact MSU Extension with horticultural and agricultural concerns

Starting the first week of June, Daniels County MSU Extension agent Inga Hawbaker was promptly met with an influx of questions regarding gardening, tree health, plant and weed identification, and management decisions that would continue throughout the summer. With the county still showing effects from the 2017 drought, Hawbaker completed many site visits, both in town and rural, to look at various horticultural-related issues such as diseased and pest-afflicted trees, shrubs, garden plants, and lawns. Examples of the cases that Hawbaker encountered this summer included branch dieback, leafcurl ash aphids on Green Ash trees, leaf spot diseases on cottonwood species, cedar rust on serviceberries, and bronze birch borer infestations in birch trees. Hawbaker worked in conjunction with the MSU Schutter Diagnostic Lab to provide management options to the property owners. In addition, Hawbaker provided educational resources so that property owners gained a better understanding of the environmental factors that led to the condition of their tree or shrub.

In addition to site visits and seeing walk-in clients, Daniels County MSU Extension offers other services such as nitrate testing and water test kits. The Nitrate QuikTest provides a quick, qualitative analysis regarding the nitrate levels present in forage samples. Several Nitrate QuikTests were conducted for producers this summer in order to help determine a safe cutting window for small grain forages. Forages with high nitrates can be fatal to livestock if consumed. Conducting these tests provided an opportunity for Hawbaker to meet producers within the community and to gain insight into future programming needs.

Weed and Pesticide Education in Daniels County

Daniels County MSU Extension works closely with the Daniels County Weed District to provide education within the community regarding weed control. Some of the weeds that are considered priority in the county include Canada thistle, field bindweed, narrowleaf hawkweed, and baby’s breath. MSU Extension partners with the Weed District on grants through the Montana...
Department of Agriculture (MDA), which in turn helps alleviate some of the costs associated with annual weed control for the Weed District and provides cost sharing for producers in designated grant areas.

Another area where MSU Extension and the County Weed District partner is the Pesticide Container Recycling Program, also through the MDA. The third partner in the project is Daniels County Solid Waste. The county has four recycling bin sites located in Peerless, Four Buttes, Scobey, and Flaxville. Started in 2009, the focus of the program is to keep HDPE #2 pesticide plastic out of Montana landfills. Over the course of the summer, approximately 11,000 pounds of container plastic was collected by the MDA in Daniels County.

Hawbaker provided a public update on pounds of plastic collected and rejected at the sites in her MSU Extension weekly column in the local newspaper in hopes to generate more awareness and commitment to the project. The update included a reminder to individuals utilizing the sites to triple rinse containers, and remove all lids, foil liners, and pesticide booklets. The products created from the recycled plastic include lawn edging, speed bumps, field drain pipes and pallets; these products were highlighted in the piece to illustrate the resourceful nature of the project to readers.

**Transition in Daniels County**

2018 was a period of transition for Daniels County MSU Extension and 4-H. Long-time agent Bobbie Roos embarked on her well-deserved retirement the end of May and Inga Hawbaker was hired at the beginning of June.

Roos was honored for her service by colleagues, faculty and MSU President Waded Cruzado during the President’s Tour in Fort Peck in late June. An annual trip, this year the MSU administration’s bus tour made a three-day loop through northeast Montana, making stops in Glasgow, Fort Peck, Scobey, Plentywood, Froid, and Wolf Point, before journeying back to Bozeman. The tour titled “Follow the People and Places of Northeast Montana” focused on just that. It included activities such as presentations by area crop producers and agricultural businesses. The portion of the program that took place in Daniels County included a pulse plot tour, and a rendition of the county’s historic Dirty Shame Show-complete with can-can dancers and big band music! The program in Daniels County concluded with a luncheon hosted by community members and local 4-H members. The President’s Tour allowed new agent Inga Hawbaker to meet fellow Extension faculty.

Inga Hawbaker, a Miles City native, graduated in spring 2015 from Dickinson State University, in Dickinson, ND, with a Bachelor of Science degree in Agricultural Studies with an option in Agricultural Marketing. Having moved to the community of Scobey a few years prior, Hawbaker was excited for the opportunity to get back to her agricultural roots and serve the community through MSU Extension.
Welcome to Deer Lodge County

Welcome to Deer Lodge County, one of the first of nine counties originally created February 2, 1865, in the territory known as Montana. This county is surrounded by the Anaconda-Pintler Wilderness, Beaverhead National Forest, and Deer Lodge National Forest. It encompasses 737 square miles of land and 4.7 square miles of water. Its population is approximately 9,108, with an increasing number of citizens 65 years or older. Its landscape contains mountains, hills, valleys, and the iconic remnants of copper mining. Industry is centered around tourism, recreation, and small acreage operations of agriculture and horticulture.

Family Cooking Nights

Deer Lodge County has a 20.8% poverty level and most children qualify for free and reduced lunches. Food, much less healthy and nutritious food, is a commodity that can be unaffordable for most families. Realizing the complicated nature of food procurement within the county and lack of food resources and education, MSU Extension began researching solutions. In collaboration with Supplemental Nutrition Assistance Program-Education (SNAP-ED) educators and Food Corps representatives, MSU Extension began hosting Family Cooking Nights. The program was created to provide education about nutritious food, assist with food safety practices, encourage family participation in meal decisions and preparation, and let families enjoy a free meal together. Participants include traditional and non-traditional families. Extra efforts are made to ensure low-income households are invited and attend. Initial program success was determined when the principal of Fred Moodry School, Tammy Hurley, requested a Family Cooking Night for every grade level at her elementary school. Healthy food consumption and application for Deer Lodge County citizens is in its infancy and with programs like Family Cooking Nights, MSU Extension is supporting the way to healthy living through better nutrition for all citizens of Deer Lodge County.
4-H leadership increases with a new Deer Lodge County Ambassador

Deer Lodge County is thrilled to have its first 4-H ambassador in at least five years. Cody Ehman was elected to become a state 4-H Ambassador. He is a freshman at Anaconda High School, and an active member in the Montana Clovers 4-H club, where he is currently serving as the club’s reporter and historian. Ehman enjoyed his first fall training and learned a lot about leadership and the responsibilities of being a good leader. He provided the Deer Lodge County 4-H council with a detailed report of his experience at fall training and expressed his gratitude to council members for the opportunity to serve as the county’s ambassador. 4-H ambassadors are integral for assisting the county 4-H program in recruiting new members, engaging existing members, and volunteering where needed. Ehman is passionate about photography and is looking forward to the responsibilities of being Deer Lodge County’s 4-H Ambassador and helping to “Make the Best, Better.”

Next of Kin support group now available

Deer Lodge County has numerous households where relatives are raising their relative children. These living arrangements can be difficult for every individual involved. In cooperation with MSU Extension’s established Grandparents Raising Grandchildren program, MSU Extension in Deer Lodge County created a support group named Next of Kin (NOK). NOK’s founding was based on the county’s need for an organized support group for relatives raising their relative children. The group ensures caregivers have a safe and inclusive place to meet, discuss, and receive research-based guidance to help them survive and thrive in their new family dynamic. NOK provides information, mental health training, and supportive peer relationships for individuals who have felt hopeless and alone in their decisions to help raise their relative children. In rural Montana where mental health funding is often not a priority, the citizens of Deer Lodge County in the Next of Kin program and raising relative children can be welcomed, heard and understood.
Montana’s Short Grass Country

Fallon and Carter Counties are in the farthest-most Southeast corner of Montana. These counties encompass 4,960 square miles of short grass prairies and are home to a population of 4,037. Agriculture is a valued part of the community and history of the area. Deer, elk, and antelope hunting bring visitors from across the country to the area.

MSU Extension services are shared between Fallon and Carter Counties and staff strive to provide quality information and resources on topics ranging from livestock and crop production, home and gardening, to family living to enhance the lives of residents in Montana’s short grass country.

Providing unbiased, research-based information to assist land owners and managers

Fallon/Carter County MSU Extension is dedicated to providing land owners and managers with timely information and resources to ensure that land and operations are productive and profitable for years to come.

Educational workshops were held throughout the year focusing on topics that included weed identification and integrated management options, control of invasive plants, water quality for livestock, grazing management, soil properties and more. Furthermore, many producers take advantage of the services MSU Extension provides. Producers can trust bringing samples to the Fallon/Carter County MSU Extension office for testing and identification. Each year numerous forage nitrate tests and livestock water quality tests help producers make management decisions. New plants are brought in for identification and management recommendations. Additionally, producers can get one-on-one assistance when they are faced with challenging situations on their operations. This year brought a number of challenges with the long, cold winter, leading to a difficult calving season and a limited feed supply. The previous year’s drought followed by the harsh winter also caused a change in plant communities in pastures, and producers had questions and sought information from MSU Extension. Additionally, Fallon/Carter County MSU Extension participated in statewide pest monitoring projects to help farmers and ranchers be prepared to manage insect pests. This year, alfalfa weevil and orange blossom wheat midge were monitored and mapped on Montana’s Pestweb.
4-H Grows in Fallon and Carter Counties

4-H Promotion for Program Growth
MSU Extension in Fallon/Carter Counties and the 4-H Councils from Carter and Fallon Counties have been working to promote 4-H to grow membership and increase knowledge of the diverse project areas 4-H offers. Leaders and 4-H county ambassadors worked with MSU Extension to host 4-H Discover Days in the Baker, Ekalaka, and Plevna Schools for youth in third through sixth grade. Students participated in hands-on activities from non-traditional 4-H projects including: robotics, neuroscience, leathercraft, cake decorating, horse, dairy, sewing, electricity, dog, and water quality. Additionally, 4-H members and their peers were invited to explore new project areas through workshops including dairy, dog, sewing, art, and leathercraft. Beef cattle, rabbit and market swine Animal Quality Assurance workshops were also held to help youth livestock producers raise a wholesome, safe food product. All Fallon and Carter County 4-H and FFA youth enrolled in market animal projects have completed the Quality Assurance requirements for showing and selling at the fair. These interactive programs have provided youth the opportunity to explore interests and learn by doing. Youth have become more competent in their projects and learn more about the vast number opportunities offered through 4-H.

Youth promote 4-H by participating in a 4-H Hay Bale Decorating Contest during National 4-H Week. Fallon and Carter County 4-H Clubs decorated hay bales using the theme “Dive in to 4-H.”

At a sausage-making workshop in Ekalaka, participants learn how to make links.
**MSU Extension Sausage Making Workshops**

Making sausage at home can be a fun way to explore new seasonings and flavors in the convenience of home, and it’s a great activity to do with family. You also know exactly what is in your homemade sausage. Multiple MSU Extension Sausage Making workshops were held in southeast Montana. During these hands-on workshops, attendees learned the basic types of sausage and the advantages to making sausage at home. Sausage-making equipment, ingredients and food safety were discussed so that participants could learn by doing in the second part of the workshop. They worked in groups, picked a recipe and made their own sausage. Local meat was used when it was possible. Equipment and supplies for these workshops were purchased through the Montana Sustainable Agriculture Research and Education Mini-Grant program.

These workshops will continue to be held for both youth and adults in southeast Montana. Partnering MSU Extension locations include Custer County, Powder River County, Dawson County and Prairie County. Partnering with multiple county MSU Extension locations allows for a greater reach and impact when it comes to food safety.

**Products of the Prairie Summer Markets Grow**

There’s nothing more satisfying than the crisp snap of a homegrown carrot, the ‘pop’ of a jar of jam opening, or that first sweet bite of a homemade pie. Folks could find all of those things, and more, during the Products of the Prairie Summer Markets held in Baker and Ekalaka. For the first time since the market’s creation in 2016, it was held as a series of markets instead of just one day.

Products of the Prairie strives to create a family-friendly community event that strengthens the local economy, brings people together and inspires small, locally-owned businesses. This year’s markets featured kids and adult activities, educational booths and workshops, and local vendors offered high-quality, locally-grown and handmade items. The event encourages a strong sense of community. People enjoy supporting their neighbors and fellowship with their community at local events.

The planning committee is working on plans to continue to grow and improve the markets for 2019.

A crowd gathers to watch and cheer on Veggie Car Races at the Products of the Prairie Market. Fifth and seventh grade youth used local produce and engineering skills to build the cars.

Participants work together to test out their newly acquired sausage-making skills.
4-H ADVENTURE PROVIDES GROWTH
MSU Extension in Fallon/Carter County and in Wibaux County teamed up this year to plan the Southeastern Montana ‘OREO’ trip. The ‘OREO’ trip is designed for 4-H members in seventh and eighth grade (providing a travel learning opportunity before 4-H members start attending state 4-H events) from Carter, Custer, Dawson, Fallon, Powder River, Prairie, Rosebud/Treasure, and Wibaux Counties. Local youth helped plan the trip location and activities. Fifty-five youth and 11 adults participated in the adventure-packed trip, which included white water rafting, geocaching, team building, and a lot of fun. With each activity, youth gained communication and leadership skills and were encouraged to challenge themselves.
Welcome to Fergus County

The Fergus County MSU Extension office serves a population of 11,586 within the Fergus County boundaries. Fergus County MSU Extension also has a working agreement with Petroleum County (population 491) to provide Extension education and 4-H services to the county’s clientele. Fergus County is located in central Montana and covers 4,250 square miles. In addition to Lewistown, the county seat with a population of approximately 5,901, other communities include Denton, Grass Range, Moore, Roy and Winifred. Each community has its own school system. Agricultural production and business form the basis of the economy. Light manufacturing, timber and natural resources, health care, education and government services contribute heavily to the non-agricultural employment opportunities. The area is well known for tourism, outdoor recreation, hunting and fishing opportunities. Geographic features include mountains, spring creeks and mountain streams, foothills, large rivers, rough river breaks and rolling prairie. A big part of the Fergus County Extension office is the 4-H program, which includes 231 members and 59 volunteer leaders in 14 organized clubs.
Family and Consumer Sciences Education

Denise Seilstad, Family and Consumer Sciences Extension Agent, has been serving the residents of Fergus County for the past 19 years. Many residents visit the MSU Extension office for one-on-one consultations or with questions ranging from food preservation and safety to financial planning. The ServSafe Food Safety education program was provided for 447 people throughout the year. The 8-hour full Manager training was given for 72 people, while 126 took the 4-hour course and 249 received the 2-hour employee/concession training. ServSafe training helps train employees and managers to meet state standards for food safety training in retail food establishments, and to train others in the foodservice industry. In another effort for food safety, 11 pressure gauges used for canning food were checked for accuracy throughout the year, helping keep food preservers and their families safe, while 8 people attended a Food Preservation safety workshop. Two human services programs are provided to the Fergus/Petroleum county residents. The Diabetes Empowerment Education Program (DEEP) served 26 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 15 caregivers. Strong People, Strong Bones is in its eleventh 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 run twice weekly throughout the year to serve 35 to 40 people. Community Education classes served 91 people over the past year, on topics of healthy, quick and economic meal planning and preparation, encouraging families to cook and eat together. The Safe Sitter Babysitting Workshop had 25 youth attend, ages 10 to 13. Youth are provided the needed skills and medical education to become responsible, dependable babysitters. The program is offered from MSU Extension in partnership with Central Montanan Hospital.

Working with the Lewistown Boys and Girls Club

Throughout the year, the MSU Extension staff work in various ways with the Lewistown Boys and Girls Club. This past summer the Club ran a farm-to-table themed program with the involvement of the Extension office. For the farm-to-table workshop, Emily Standley met with students at a local ranch. There, she talked about what happens when cattle graze the land, and the many decisions ranchers make to keep their livestock and landscape healthy. Students learned about the nutritional benefits of beef and had the opportunity to see ranchers use low-stress techniques to move cattle. The group finished their ranch visit by eating a hamburger lunch made from beef grown on that very ranch. Denise Seilstad taught students about wheat, and the uses of wheat. She first met with the younger members and read the Little Red Hen story. She demonstrated to them what a wheat
Denise Seilstad working with Boys and Girls Club kids to make tortillas.

kernel looks like, how it looks in the stalk and then how it looks after it is milled into flour. Children then made their own loaf of bread-in-a-bag out of the flour. Seilstad later met with older children, sharing the same information, but they made tortillas for a taco lunch. Jennifer Saunders contributed to the Boys and Girls Club farm-to-table education by arranging guided tours of the animal barns, during the Central Montana Fair. Teen 4-H Leaders were paired up with groups of children from the Boys and Girls club to take through both the livestock pavilion and the small animal barn. They stopped to visit with 4-H members who told the groups about their animals and explained their 4-H projects. This collaboration contributed to learning opportunities for the Boys and Girls club youth who may not be exposed to agriculture as often as 4-H youth, and leadership opportunities for 4-H youth who guided tours during the fair.

**Ag Opportunities Tour**

Last summer, Emily Standley teamed with the Montana FFA Foundation to bring their Agricultural Opportunities Tour to Central Montana. This program showcases the wide variety of careers within the field of agriculture, and is open to students enrolled in FFA across the state. Thirty high school and collegiate FFA members, hailing from Bainville all the way to Stevensville, met in Lewistown to begin their tour. During the trip, students and chaperones traveled through Judith Basin, Fergus, and Phillips Counties to get a firsthand look at family farms, ag advocacy organizations, and ag-related businesses. The group visited organic and conventional farms to hear about different production methods. They explored the inside of a local grain elevator and a nearby fertilizer plant. Students learned about cooperative and corporate business models. They heard the importance of marketing a product, whether selling to a niche audience or on a nationwide scale. The group witnessed the value of partnerships by visiting with non-profits on the hi-line who cooperated to create a community grass bank for ranchers. Students learned about the importance of crop rotation and diversifying ag operations. And while many of the stops included what might be considered “traditional” Montana agriculture, such as wheat and beef, the group also visited a hops farm, a garlic farm, and learned how drone technology can be used in ranching. Throughout the tour, students also built friendships, engaged in leadership activities, and experienced Central Montana hospitality in the form of home-cooked barbecue and delicious homemade donuts! Standley and the FFA Foundation accomplished the goal of showcasing a diversity of Montana agriculture.
Small Animal 4-H Projects

In the last few years, Fergus/Petroleum 4-H program has seen an enrollment surge in the small animal projects, especially rabbit and poultry. These projects do not require a large financial investment to get started, nor do they require a huge amount of space. The animals can also be safely handed by a child of any age. Youth learn the same life skills they would with a large animal project. They learn responsibility by providing daily feeding and care. They learn to fit and show the animals, and that hard work and practice will pay off. Through their workbooks they expand their knowledge about animal health, nutrition, genetics, reproduction and anatomy. Completing their records requires them to set goals and discuss the outcome, and they also keep record of their income and expenses. Youth practice interview skills as part of their fair competition. Any visitor to the small animal barn during the fair will quickly realize the pride the members take in their projects and the details and critical thinking skills they learn through participation.

Central Montana Fair 2018 - Small Animal Participants
Located in Northwest Montana, Flathead County encompasses 3,262,720 acres or 5,098 square miles. Approximately 94% of the land mass is National or State Forest Land, Wilderness, Agricultural, and Corporate Timber Land. With Glacier National Park, the Bob Marshall Wilderness area and millions of acres of mountains and forest lands a short distance from any developed area in the county, there are thousands of miles of hiking, biking, cross-country skiing, and riding trails for year-round outdoor exploration. Two ski resorts, eight golf courses, Flathead Lake, and the Hungry Horse Reservoir exemplify several of the world class attractions that have helped to make Flathead County one of the fastest growing, and the third most populous county in Montana.

There are three incorporated cities in the county. Kalispell, which is the largest, has a population of approximately 22,052 (2015). Two additional major municipalities include Whitefish, with a population of 6,357, and Columbia Falls, with a population of 4,688. Countywide, the population has increased 22.1% from 74,471 in 2000, to an estimated 100,000 in 2017, according to the U.S. Census Bureau. Native residents are now outnumbered by new residents. A large percentage of new residents are retirees and middle-aged professionals attracted to higher income jobs and lifestyle.

Attraction development has greatly increased in recent years, contributing to the influx of tourists and tourism-based services, and moving the economic base towards recreation and tourism, and creating new jobs in the service industry. Flathead County’s population increases by 40% during the months of June through August. In 2016, tourists spent $635.4 million in Flathead County. The health care industry has also seen considerable growth in the past 25 years, and is now the largest industry in the county, employing over 6,300 people (2016). Growth in retail shopping opportunities has also made Kalispell a regional shopping center.

The MSU Extension office in Flathead County works closely with county commissioners as well as county departments to provide quality services in education and development throughout the area. Collaborating with local and federal agencies, non-governmental organizations, regional and national partners, MSU Extension staff and faculty in Flathead County continue to provide cutting-edge and relevant educational outreach through a commitment to the emerging needs of their community. (Sources: Flathead County Government; Kalispell Chamber of Commerce)

**International Connections**

Flathead County MSU Extension 4-H agent Ben Frenstos was invited by the National 4-H Council to establish a youth development program in Romania. During a three-year fellowship, Frenstos will provide leadership and guidance for the creation of a sustainable and scalable program. This new venture will allow MSU Extension to explore international partnerships, with the potential for exchange programs and opportunities for Montana youth to see the world. The pilot will also explore connections back to MSU for sharing best practices with other state 4-H programs.
Small Acreage Landowner Seminar Series

Flathead County land use has been changing dramatically over the last 10 years. Between 2005 and 2012, 59 farms and over 80,000 acres were lost to development. Over 2,500 new people have moved into the county each year, pushing the growth rate to 5.6% in 2018. Currently over 100,000 parcels of land in Flathead County are considered small acreage - less than 100 acres. MSU Extension has created new programming to meet the needs of the evolving resident demographic.

A collaborative team was organized by MSU Extension Flathead County that includes staff from the Montana Department of Natural Resources and Conservation, Department of Agriculture, Flathead County Weeds and Parks and Health Department, US Fish and Wildlife Service, MSU Extension, Glacier National Park, Flathead County Conservation District, and local agriculture businesses. A six-week Small Acreage Landowner seminar series was held in early 2018. This pilot class was limited to 35 and was sold out before it was advertised. All of the class participants had moved to the Flathead area from out-of-state or from eastern Montana.

Topics included living with a well and septic system; mitigating wildlife interactions; pasture management for cattle or horses; planting a native pollinator garden; noxious weed identification, impacts and control; woodlot management; creating defensible space from wildfires; and soil basics. Evaluations rated the class at 90% or higher.

Quotes from participants include:
“Excellent information. We made a plan, brought in someone to thin our forest and do fire mitigation. We used the information to inventory how vulnerable our house is to fire. We also walked through our acreage to check on pest damage.”
“Installed electric fencing on chicken coop and run.”
“Useful weed identification publications allowed me to identify and prioritize weed mitigation.”

In 2019, the class is being relocated to accommodate 50 people. Saving lives due to wildfire or wildlife interactions is priceless. New residents in the Flathead area feel ready to embrace the Montana lifestyle and feel successful caring for their small acreage.

Dahl Lake, Lost Prairie National Wildlife Refuge. Photo by Pat McGlynn

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For more than 20 years the Flathead Reservation Extension Office (FREO), a part of Montana State University Extension, has served the people of the Confederated Salish, Pend d’Oreille and Kootenai tribes (CSKT). With over 1.317 million acres reaching into four counties, program staff work to bring research-based information to reservation communities. The office is grant-funded and offers a number of opportunities in positive youth development, food and nutrition, security and safety. Current community offerings are in Master Gardening, Master Food Preservation, ServSafe classes, Pesticide Applicator Training, Soil Sampling, Hay/Forage analysis, and Pest/Disease Identification and Management. Youth education offerings include in-school/after school 4-H activities, a youth mentoring program and a STEM (Science, Technology, Engineering and Math) project focused on connecting youth to agriculture using technology. A youth mental health program has been introduced into local high schools. A strong SNAP-Ed (Supplemental Nutrition Assistance Education) program delivers healthy lifestyle lessons to more than 1,000 youth and adults each year. FREO recognizes the importance of promoting cultural awareness and diversity. Staff work to incorporate cultural activities that honor and support CSKT traditions. Quality programing is successful due to the support of our local community members, partners and tribal support. Thank You!

Honoring the Past to Ensure the Future…

“The Flathead Indian Reservation is home to three tribes, the Bitterroot Salish, Upper Pend d’Oreille, and the Kootenai. The territories of these three tribes covered all of western Montana and extended into parts of Idaho, British Columbia and Wyoming. The Hellgate Treaty of 1855 established the Flathead Reservation, but over half a million acres passed out of Tribal ownership during land allotment that began in 1904.

The subsistence patterns of our Tribal people developed over generations of observation, experimentation and spiritual interaction with the natural world, creating a body of knowledge about the environment closely tied to seasons, locations and biology. This way of life was suffused with rich oral history and a spiritual tradition in which people respected the animals, plants and other elements of the natural environment. By learning from our Elders and teaching our children, those Tribal ways of life continue to this day.” www.cskt.org
SNAP! Buy-Eat-Live Better

The Buy-Eat-Live Better Supplemental Nutrition Assistance Program Education (SNAP-Ed) program addresses Montana’s goals for increasing food security and healthier food choices. Participants learn to make the healthy choice the easy choice through focusing on nutrition, as well as physical activity.

On the Flathead Reservation, SNAP-ED Nutrition Educator Ginger Pitts reached 1,041 children and adults with 56 lessons/series. Students in first, third, and fifth grade received six lessons focusing on healthy eating, food safety and staying physically active. Eighty-six percent of the youth improved their diet quality. Many students reported reducing consumption of sugary beverages and increasing fruit and vegetable consumption. Eighty-eight percent of adults showed improvement in diet quality as well as an increase in physical activity.

A senior woman who attended the series at the Flathead Reservation Extension Office (FREO) says the classes helped her cook in a new, healthier way. “It tastes so much better to use fresh vegetables - a lot better than just using foods from a box or can.” She says learning how to cook with spices instead of salt has been good to lower her high blood pressure. She also says she is walking a few blocks every day with her walker and practicing the chair exercises taught in class.

The mother of a first grade student saw Pitts in the produce section at the grocery and introduced herself. She said, “My daughter loves bringing home the newsletters and sharing with our family what you are teaching her class. She’s been asking me to buy different fruits and vegetables (she held up her two bags of vegetables to show) so as a family we are trying new things! Thanks!”

Mentors, Mentees and Families: Growing Up Together

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 in this are lacking 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 5-17 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, 30 mentees were matched and participated in the year-long mentoring program. Mentees are in grades K-7 and are recommended to the mentoring program by a school counselor. Mentors are local high school students or community adult volunteers. All mentors go through a stringent application process before being matched. Matches may be one-to-one or in groups of one-to-four depending on the needs of youth involved. Mentors attend monthly trainings that help to support and build their skills in appropriate relationship building. Mentors meet weekly with their mentees for fun, skill-building activities.

Bingo for blankets. Photo by Brenda Richey
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. Activity areas of focus include building trust, family support, kindness/community service, building positive family communication, working together/problem solving and strengthening family traditions.

Youth Aware of Mental Health—One tool in the fight against teen suicide on the Flathead Reservation

Youth Aware of Mental Health is a project meant to improve the mental health resilience of youth on the Flathead Reservation. The project is a collaboration of MSU Extension and the MSU Center for Mental Health Research and Recovery (CMHRR). The project is designed for adolescents. In the largest and most rigorous study of its kind, YAM reduced suicide attempts by 54.6% and suicidal thoughts by 49.6% over one year in students who had not previously had suicidality.

YAM aims to provide youth with better resiliency through education and discussion about mental health and the development of problem-solving skills and emotional intelligence. The intervention utilizes a didactic booklet to increase knowledge, and posters, lectures and role plays to increase the awareness of students about their mental health and that of their peers and to enhance students’ ability to cope with stress and crisis and to seek professional help.

An important component of YAM is a requirement that it is adapted culturally for each setting in which it is used. An adaptation of YAM to Montana was completed in the summer of 2016. In the last year, over 80 high school freshman on the Flathead Reservation participated in the YAM program. One student said, “...we got a chance to be educated about mental health and it was okay to feel certain emotions.”

Surveys done this past year across the state of Montana showed that there was 79% improvement in students reporting they would seek help from school staff for depression and 49% improvement in students seeking help from school staff for assistance with feelings of suicide.
Flathead Reservation MSU Extension Goals

- Empower youth in a variety of programs to develop social, emotional, and academic competencies using culturally appropriate, and approved methods. Objectives include providing youth development programming in mentoring to strengthen social, emotional, and academic competencies, provide cultural and natural resource 4-H projects, Youth Aware of Mental Health training, and 4-H project clubs.

- Empower families toward a self-determined food-secure lifestyle with the ability to respond to personal needs for healthy and/or culturally-adapted Indigenous foods through hunting, fishing, gathering, growing, eating, nutrition and preserving. Objectives include providing youth and adults with hands-on educational experiences in gardening, cooking, and food preservation of foods grown, gathered and hunted, meat cutting, diabetes educational resources, and nutrition education.

- Enable community members through research-based education, to learn about food and nutrition, food safety in the food supply chain, growing and selling commodities while managing land use for productivity and financial security. Objectives include providing youth and adults with food safety knowledge when cooking for foods served in the community food supply chain, provide instruction on produce safety and developing food safety on the farm, pest management, weed management, and educational resources to develop on-farm success strategies.
Welcome to Fort Belknap Reservation

Fort Belknap Indian Reservation is homeland to the Gros Ventre (Aaniiih) and the Assiniboine (Nakoda) Tribes. Fort Belknap Indian Reservation is located 40 miles south of the Canadian border and 20 miles north of the Missouri River. Fort Belknap Indian Reservation is the fourth largest Indian reservation in Montana. The Fort Belknap Indian Reservation encompasses an area consisting of 675,147 acres, mostly rolling plains. The main industry is agriculture, with small business development. The Little Rocky Mountains, located at the southern end of the reservation, have two small communities. Hays, which has both a public high school and Saint Paul’s Mission, and Lodge Pole, which has a public elementary school. Fort Belknap has a tribal membership of 7,000 enrolled members.

MSU Extension, Fort Belknap Reservation: Federally Recognized Tribal Extension Program

The MSU Extension program on the Fort Belknap Reservation is one of the long-standing 33 Federally Recognized Tribal Extension Programs (FRTEP) in the country. The role of FRTEP on the Fort Belknap Reservation has been historically integral to knowledge acquisition and skill development in the lives of tribal members at Fort Belknap for over 30 years. The Fort Belknap Reservation Extension staff have had a very busy year, providing education and outreach to many of the 7,000 members of the reservation. As agents worked to identify and prioritize the needs and interests of the reservation, community members of Hays, Lodge Pole, Dodson, and Agency showed increased interest in learning about and participating in a variety of topics.

Though it was a difficult year due to the extreme weather conditions affecting our reservation, there seemed to be a steady interest in continuing to address our goals and objectives as we respond to the emerging needs of families, producers, businesses and industry. We continue to see how MSU Extension’s structure encourages true engagement and local involvement and expertise. In response to new technologies, staff have developed social media efforts that have reached a new demographic of participants; the Extension Facebook page has 522 followers. Additionally, direct contacts number over 600, and indirect contacts are estimated at 1,500. Partnerships and collaborators, both on- and off-reservation, number over 40 agencies, specialists and tribal programs.
Accessing Healthy Lifestyles

MSU Extension classes in cooking, sewing, gardening, and other healthy lifestyle topics continue to be well-attended, with increased participant ownership of resources and direction.

A produce safety training was held to enable local growers to learn good agricultural practices, food safety and environmental management. Efforts toward building parameters around food laws, rules and codes have taken place. A partnership with NADC/Healthy Communities has provided direction and resources in local business planning for healthy lifestyles. The opening of the Red Paint Creek Store and Trading Post has been a major victory for healthy options in a rural community. A family that had limited access to vegetables has been able to try new options, and particularly are enjoying fresh carrots that are grown in the garden and sold at the store. On-going healthy lifestyle programming continues to be well-attended.

Food Sustainability Programming

Fort Belknap Reservation Extension food sustainability programming continues to be successful, interesting and viable.

This year, the Fort Belknap Reservation’s efforts toward food sustainability has increased in scope and participation. Many more people have initiated home garden plots, the community gardens are thriving, and food preservation programming has expanded. An effort toward developing high-density fruit growing is underway, including apples, grapes, pears and plums. Community members have learned how to graft fruit trees. The Hays-Lodge Pole School has begun efforts to cultivate a large squash and corn plot. Horticultural knowledge is increasing, particularly regarding soil health, growing fruits, and Montana’s growing season. Additionally, several community members have offered leadership in assisting others to learn food preservation. The target group in 2018 was interested younger people. One couple has stepped forward to learn safe canning techniques for meat preservation, and they were able to safely process 96 quarts of venison. They reported that “it’s a great feeling to know we will have meat through the winter, no worries!”

Rancher Roundup & Producer Outreach

Fort Belknap Extension conducted educational outreach workshops for local seasoned and potential cattle producers. Fort Belknap Extension co-sponsored the Rancher’s Roundup with Fort Belknap Livestock Marketing Co-Op and NACDC Financial Services during the local Mid-Winter Fair. USDA, NACDC, MSU Extension specialists, NCAT, FSA, Blackfeet ARMP and local community garden leaders presented on relevant agricultural topics.

A ‘Planning for On-Farm Success’ workshop was attended by 26 residents, featuring Ross Racine from Inter-tribal Ag Council. Topics included farm planning, financial basics and identifying your market. Partners included USDA, NCAT,
FarmLink, ATTRA, Western SARE, Wild Sky Beef, BIA, and Food & Ag Development Centers.

Fort Belknap Extension collaborated with Fort Belknap Livestock Marketing Co-op to provide economic opportunities to local ranchers and encourage new youth producers. The Extension agent aided with the completion of three rural ag loans and two junior ag loans to bring new, young ranchers into operation on Fort Belknap.

A renewable energy workshop was presented by Ed May, of Renewable Energy Management, LLC. There were 30 participants who engaged in a lively discussion of options available to ranchers, producers and homeowners in choosing more renewable energy opportunities.

The workshops provided agricultural producers opportunities to solve their everyday challenges and obstacles. Producers left with knowledge and resources to improve their ranching and farming techniques.

**Youth Development & 2018 Mid Winter Fair - Celebrating 50 Years of Resilience**

As most of Fort Belknap Extension involves families, the local youth have opportunities to participate in learning activities with us throughout the year. The community gardens continue to create opportunities for youth to be involved in agriculture. Youth participated in cooking classes during the summer months, and they engaged in community garden tasks through the summer youth employment program. We were fortunate to have had a summer MSU Extension intern, who offered archery classes in Hays and Lodge Pole.

The fourth-sixth grade students at the Lodge Pole School will continue to participate in school-based 4-H activities, allowing for more learning in the classroom.

The 2018 Mid Winter Fair celebrated its 50th anniversary, and was a huge success. The fair was opened with a family banquet in Dodson which highlighted a youth talent show. Youth from all over Fort Belknap Reservation shared their dancing, singing, storytelling, drumming, and art with the crowd. The next day, baked goods, pies, canned goods, and Chopped cooking contest participants showcased their culinary skills. The Fiddle and Jig Night brought musicians and dancers from all local areas. The fair finished off with a Stick Game Tournament and Traditional Pow Wow. There was a little bit of everything for everyone!
The Fort Peck Reservation is made up of 2,094,000 acres located in the northeast corner of Montana. Poplar is the home to the Tribal Council headquarters. The reservation is isolated from Montana’s populated areas as well as manufacturing centers, but does overlap oil and gas developments. The largest employer on the Fort Peck Reservation is the Fort Peck Tribes. The main economic driver is agriculture with the land rich in natural resources, generating over $78 million in cash receipts and ranking ninth in the state.
Extension Programs Benefit the Public in a Variety of Ways

**Sausage Making - Advancing Your Market Livestock**

In Montana, market livestock projects are one of the most popular and rewarding projects. When meat science is discussed, we educate about loin size, tenderness, and intermuscular fat, not the lesser valued cuts. This goal of this program is to improve comprehension of food value particularly in marginal cuts, and to demonstrate and educate on meat processing techniques. A hands-on approach was used for 4-H market livestock project enrollees, and non-traditional 4-H programs in the classroom. Since the beginning of the program, over 810 students, leaders, and adults have participated in 32 programs. They learned various cuts of meat, muscle structure, recipe framework, food safety, equipment safety and packaging. Invaluable program outcomes have been student-learned decision making, math and communications skills, and pride in their projects. Before the program, only 4% had made fresh-stuffed sausage, 26% had made jerky products, and none had made summer sausage or snack sticks. Students and adults were also able to transfer the education into wild game ground meat production. From evaluations, 96% of attendees wanted to learn more about meat science and forms of sausage making, and 100% remembered the correct internal temperature for ground meat products—important for food safety. People who have benefited include those in Tribal Programs, 4-H programs, adults, and teachers that are mandated to include Indian Education for All in their classrooms. Through start-up grants and local support, MSU Extension has been able to provide this program for free, creating a net savings of $200 per person, or $162,000.

**Mon-Dak Pulse Day**

In Northeast Montana, pulse crop acreage has been increasing due to the favorable growing conditions for cool season crops, incorporation of crop rotation, no-till practices, and economic returns. Producers began experimenting with pulse crops near the turn of the century, but had little knowledge specific to Montana. The need for producer education regarding disease and pest identification, rotations, marketing, and weed management has grown rapidly. Local programs were developed that alternate delivery between Montana and North Dakota in order to bring as many producers as possible together with nationally-recognized experts in the field. Recently, the pulse crop education...
program expanded its coverage and grew to a full day of presentations, a commercial trade show, networking opportunities, and specialized topics. It grew from 40 participants to 170, and from six commercial trade show booths and sponsors to 33. Stats from program participants:

- 49% of attendees were very experienced in growing pulse crops with 5% raising them for the first time.
- Top pulse crops grown regionally are chickpeas, lentils, and yellow peas.
- 59% of producers had not used the nitrogen credit supplied by legume crops.
- A new invasive weed was found in 46% of the acres.
- New management practices learned at seminars were incorporated by 88% of producers, and 100% would like the program to continue.

Pulse crops and cropping practices in Northeastern Montana have become more sustainable by enabling producers to manage rotations, develop markets, select herbicides, and take advantage of continuous cropping strategies.

**Tribal Extension Garden**

Fort Peck Reservation MSU Extension developed an educational program based on rural agri-tourism, working with cultural educational customs, and horticulture practices of Northeastern Montana. The Fort Peck Reservation Tribal Executive Board gave use of 99 acres of land owned by the Tribes to Fort Peck Reservation’s MSU Extension for educational functions. The purpose of this project was to showcase horticulture on the Fort Peck Reservation and help people who grow gardens, do landscaping, or purchase horticulture products with networking possibilities. Grants were awarded to fund program activities used to achieve the goals of this project. Activities included horticulture tours which included local businesses, with local garden and landscape enthusiasts, growing and tending a pumpkin patch, garden food preservation classes, a rain barrel workshop, and now a community garden.

A large garden was grown and showcased, and then all of the produce was given to the Tribal Elderly Program, community members that had lost their gardens from adverse weather conditions or hard times, and to supplement other healthy programs that were directed from Fort Peck Reservation MSU Extension. Over 350 people benefited from the activities provided from these activities over the course of the last few years. Program participants indicated that the information obtained was invaluable for feeding their families, conserving water, sharing ideas, networking with other horticulturists, and was deemed highly successful. Fort Peck Reservation was in at least one stage of drought for over a year, so educational opportunities, both failures and successes, were crucial to learning and local food production.
Progressive Agriculture Safety Day

According to the National Children’s Center for Rural and Agriculture Health and Safety, about every three days, a child dies in an ag-related accident. Every day, 38 children are injured in an agriculture-related accident, yet 80% of those injuries were not from working when the injury occurred.

For the past 24 years, the Progressive Agriculture Foundation has trained hundreds of volunteers about agriculture safety and how to hold a Progressive Agriculture Safety Day in our communities. The Fort Peck Reservation is the only community hosting one in Montana, and the MSU Extension office has been granted curriculum, t-shirts, and insurance for the program.

Participants this year included the Wolf Point Schools Pre-Kindergarten to third grade, and faculty. The curriculum provided by the foundation encourages hands-on activities so that everyone can learn and participate. Topics included ATV, chemical, grain, sun, emergency preparedness, fire, railroad, bike, water, food, hand-washing, disability awareness, hearing, PTO, and seatbelt safety.

Students were fitted with bike helmets provided by Fort Peck Housing Authority, and take-home bags filled with $6,000 worth of donated items from local programs, businesses, and MSU Extension.

The Progressive Agriculture Safety Day program is the largest rural safety and health education program for children in North America. Their mission is to provide education and training to make farm, ranch and rural life safer and healthier for children and their communities, and the Fort Peck Reservation was excited to provide this to our youth.
Welcome to Gallatin County

Gallatin County has a population growth rate of 10.06%, currently estimated at 107,810. With a high growth rate, the landscape of Gallatin County is in continuous change. Gallatin County MSU Extension is positioned to meet the current needs of the population while continuing to gather resources and partnerships to meet future needs of Gallatin County. In 2018 Gallatin County MSU Extension was once again fully staffed with the addition of Dominique Woodham serving as the Natural Resource Agent.

Invasive weed tours, crop school and small acreage management

A new annual invasive grass took center stage this year in Gallatin County. MSU Extension agriculture agent Josh Bilbao worked diligently with the Gallatin County Weed District, MSU researcher Jane Mangold, and the Gallatin Valley Land Trust to host two tours to highlight a grass named Ventenata dubia. Tours were attended by more than 100 individuals. The tours informed attendees how to identify this new grass and what strategies can help mitigate its invasion. The second tour for Gallatin County livestock producers, led to five individuals finding the annual grass on their property and a small group was encouraged to apply for a Noxious Weed Trust Fund Grant to help with control in 2019.

The annual Crop School continues to gain popularity with more than 90 attendees in 2018. This collaboration between Broadwater, Gallatin and Madison/Jefferson provides ag producers with information on current and relevant topics in agriculture.

Small acreage management is a continued need in Gallatin County. Bilbao hosts a small acreage management lecture series and made site visits to more than 40 landowners who requested land management assistance. Site visits often included identifying noxious weeds, advising on best vegetation/species for the landowners needs, and helping develop a site management plan to strategically reach property improvement goals.
**Horticulture**

The Master Gardener horticulture program was very popular in Gallatin County again this year. Almost 100 participants in Level I and Level II attended the courses, and also provided hundreds of hours of volunteer work. Volunteers manned a Master Gardener booth at the Gallatin Valley farmer's market while others were helping local gardens and non-profits with labor and educational needs.

One big project that began in fall, 2018, was the conversion of the lawn at Gallatin County MSU Extension into a large demonstration garden. The garden will provide the citizens of Gallatin County a place for hands-on learning about gardens and orchards that can succeed in our climate. This garden will also showcase Montana native grasses, forbs and agricultural commodities grown in the state.

MSU Extension agriculture agent Josh Bilbao facilitated and presented at a pollinators workshop in Bozeman in early 2018. The workshop introduced native and non-native pollinators to those who attended, as well as strategies for homeowners and land managers to attract more pollinators to their properties.

Garden management advice was highly sought in 2018. Bilbao was called to speak to the Brackett Creek women's club with an introduction to garden management, where 17 individuals learned about soil health/management and what vegetable species grow best in the Brackett Creek area.

**Grant-funded programs help reduce wildfire risk**

The Gallatin County MSU Extension natural resources education program is a diverse program that is very active with local, statewide and multi-state education. The program is 100% grant-funded, with grants helping determine the focus of education and outreach efforts. Grant funding is from various sources: U.S. Department of Agriculture, Montana Department of Natural Resources, Montana Farm Bureau Foundation, Western Sustainable Agriculture Research and Education, the Northern Plains Climate Hub, and the National Science Foundation. Highlighted impacts include:

- Management of a cost-share reimbursement program providing over $350,000 to private property owners in Gallatin, Park and Madison County who are taking steps to reduce wildfire risk through forest management.
INTRODUCING THE NATURAL RESOURCES EXTENSION AGENT

Dominique ‘Domo’ Woodham joined Gallatin County MSU Extension in January 2018 after working in wildland fire management for the USDA Forest Service on various national forests in Montana, California, Nevada, Arizona and Wyoming, and the U.S. Department of the Interior, Bureau of Indian Affairs, in Crow Agency, MT.

She graduated with a Bachelor of Science degree in forestry (concentration on range resources management) from the University of Montana in 2007, and is currently completing courses for a Master of Science degree in Agriculture Education through Iowa State University (with emphasis in youth natural resources non-formal education). She is also nearing completion of the Master Beekeeper Certificate Program through the University of Montana.

As a former University of Montana Griz athlete, Woodham still enjoys trail running and hiking. She has been a beekeeper for three years and keeps bees at her home in Sweet Grass County. She enjoys travel and exploring new places, however most trips are to Lewis County, Washington where she and her husband help manage a century-old family farm.

- Outreach and education for agricultural decision-making during climate variability, provided through membership on the MSU Extension Climate Science Team.
- Design of the Fire Adapted Montana Network and delivery of collaborative wildfire outreach and education programs.
- Production and distribution of Montana Wildfire Information Directories to improve capacity of Extension and local emergency response members to serve landowners before, during and after wildfire.

- Creation and distribution of 100 Wildfire Preparedness Kits to Improve Agricultural Sustainability; other state Extension programs expressed interest to adopt the idea for other natural disasters.
- Creation and offering of new pollinator and honeybee-specific outreach and education programs.

LEFT: a round baler fire in West Park County. Photo by Dominique Woodham.
ABOVE: Dominique Woodham.
Communication Skills Through 4-H

Communication skills are vital to the future success of our youth. Whether through an interview, speech or simply giving directions, the ability to communicate thoughts and ideas to others in a clear and concise manner is important. Gallatin County 4-H helps youth grow their communication skills through the annual Communication Day contest and record book interviews.

In the past three years, participation in the Communication Day contest has gone from 30 youth to over 60 youth. Youth can select to compete in the following contests: speech, demonstration/illustrated talk, career communication, video, commercial or promotional package. The quality of presentations has increased through workshops dedicated to teaching communication skills. Gallatin County 4-H has been well-represented at the state Montana 4-H Communication contest, with youth finishing in first and second place in different events.

Survey results from 4-H member participants in Gallatin County Communication Day:
- 100% indicated they developed greater communication skills through 4-H
- 96% indicated they improved their ability to prepare presentations
- 80% indicated they are willing to speak in front of groups

2018 Gallatin County 4-H Communication Day Winners. Photo by Kathy Cheney.
Welcome to Glacier County

Glacier County is home to Glacier National Park, the Blackfeet Indian Reservation, 75 miles of international border, and thousands of acres of small grains, pulse crops, rangeland, and hay fields that support agriculture production. The nearly 13,500 residents are immersed in agriculture, oil and gas, and tourism industries.

MSU Extension in Glacier County strives to meet the needs of community, 4-H, and agriculture producers. Programming highlights this past year included the annual Cropping Seminar, Montana’s Next Generation conference, the regional barley meeting, workshops for 4-H, pressure-cooking, Babysitting Basics, and much more. In the past five years, 4-H enrollment has grown from 41 to 81 members, with enthusiasm continuing to build.

Photos by Kari Lewis.

MSU Extension improves the lives of Montana citizens by providing unbiased research-based education and information that integrates learning, discovery and engagement to strengthen the social, economic and environmental well-being of individuals, families, and communities, and right in Glacier County!
Don and Carolyn Popelka honored as District 2 Volunteers of the Year

Glacier county 4-H shooting sports leaders Don and Carolyn Popelka were honored as District 2 Volunteers of the Year at the Montana 4-H Leadership Forum. Don and Carolyn became involved with 4-H when they first moved to the community and their sons were invited to join 4-H. Despite their children having since graduated from 4-H, Don and Carolyn have continued to be involved in archery.

As coaches, they provide instruction to youth and run six hours of practice each week from November through March, in addition to time setting up and cleaning the range. They ensure that each youth has proper equipment that fits them and their discipline. They conduct practice interview sessions to prepare youth for fair interviews and plan fun 3-D shoots and parties.

Bess Hjartarson wrote in her nomination, “The Popelkas willingness to volunteer their time does not go unnoticed. As a busy parent, I truly appreciate the time, energy, and resources that they devote to the weekly practices, the extra activities such as holiday parties and 3-D shoots, and the competitions.” 4-H parent Kathleen Barbie said “Don and Carolyn are very deserving of this award because they go above and beyond for the kids; they really invest a lot into the program, and for me represent the very best of 4-H leadership and volunteer work.”

The archery program in Glacier county continues to grow each year, with 27 members currently enrolled, the most of any project and almost 45% of the county membership.

SNAP-Ed Program Impacts Blackfeet Reservation, Glacier, and Toole Counties

The Montana State University Extension Supplemental Nutrition Assistance Program – Education supports low-income Montanans in making the healthy choice the easy choice. We know that 77% of Montana adults do not participate in enough physical activity to meet guidelines, that 74% of Montana adults eat less than five servings of fruits and vegetables each day, and 29% of Montana children ages 10 to 17 are overweight or obese. To combat these challenges, SNAP-ED teaches low-income youth and adults how to eat, live, learn, work, play, and shop within their communities to make healthier choices.

Locally, Jodi Duncan reached a phenomenal 517 children and youth with nutrition education through 33 classes in the last year.

Of the 368 youth reached through the Understanding MyPlate series, 85% of the children and youth improved their diet quality via their ability to choose foods according to recommended guidelines. Over half of the participants gained knowledge in using safe food handling practices more often and 35% of children and youth improved their physical activity practices.

In the Eating Smart Being Active series, 100% of participants showed improvement in one or more food security indicators. Half of the participants showed improvement in one or more food practices such as washing hands before preparing food or properly thawing food. At least half the participants improved their physical activity behaviors and showed improvement in diet quality indicators such as eating more fruits and vegetables, drinking less soda, cooking dinner at home, etc.
Tackling Pest Management in Glacier County

Pest management continues to be a high priority in crops, rangeland, and the local community.

After Chuck Smith began preparing a presentation on spotted knapweed for his Level 3 Master Gardener class, his commitment to helping keep Cut Bank knapweed-free took off. By the end of the year, Smith had logged over 90 volunteer hours digging spotted knapweed, talking with homeowners and businesses about knapweed on their property, and providing knapweed management recommendations. Even though Smith is only one person, he exemplifies the ‘boots on the ground’ approach of Master Gardeners within the community.

Within the farming community, concerns over herbicide resistance continues to grow. In order to provide clear and concise recommendations, agents from five Golden Triangle counties worked together with the Southern Ag Research Center to produce three MontGuides addressing herbicide resistance in Kochia, Downy Brome, and Russian Thistle. The MontGuides provide information on identification, current resistance prevalence in Montana, management techniques, and herbicide use recommendations. A one-day herbicide-resistance symposium is planned in Conrad and Fort Benton for February 2019 to continue the discussion.

Ground squirrel infestations are a tremendous problem in Glacier County, with producers reporting significant damage. Effective control on large, extensive farming operations is a challenge for many producers, which prompted a joint research study between Glacier County MSU Extension and the Montana Department of Agriculture regarding broadcast baiting with zinc phosphide on fallow fields. The three-week study is the beginning of additional research to help producers most effectively manage ground squirrel populations.

GROW jump starts middle school 4-H opportunities

‘Why are we doing what we’re doing? Is it working? Is there a better way?’ These were all questions that area Extension agents were grappling with regarding a longtime 4-H event, Junior Leadership Camp. Answering those questions led to a new event for middle school 4-H members, GROW (Goals, Recreation, Opportunities, Will), which attracted nearly 40 sixth through eighth grade 4-Her’s from Hill, Blaine, Liberty, Toole, Glacier, Pondera, Teton, and Cascade counties. The one-day event provided learning opportunities for members to share with their club and develop their leadership skills.

Workshops included parliamentary procedure, public speaking, knowing self and developing self-confidence, and time management for teens. Members also enjoyed a scavenger hunt and recreation that they could use with their club. Ignite talks (short, timed presentations) exposed members to future 4-H opportunities including being a camp counselor, ambassador, attending Congress, participating in Citizenship Washington Focus, hosting an exchange student, applying for scholarships, and more.

As a result of GROW, members set goals to become a county teen leader, run for a club office, compete at Congress, and participate in Citizenship

Chuck Smith earned his Level 3 Master Gardener certification after fulfilling his volunteer commitment, which for him exceeded 90 hours of pulling knapweed and educating the community! Photo by Kari Lewis.

Five Glacier County 4-Her’s attended the first regional 4-H GROW event in Great Falls in April. Photo by Kari Lewis.
Washington Focus. Parents reported that their child discussed bringing ideas back to their 4-H club and opportunities they wanted to take advantage of in the future. One parent summarized the day by saying, “The kids were both nervous to go. However, they are now looking forward to other opportunities from camps and workshops that they may be able to attend. The day really got them thinking.”

**Home Alone and Prepared**

With limited after school care in the community, an increasing number of youths are home alone with younger siblings, which prompted requests for youth first aid and CPR training. By working together with the Glacier County EMS department, basic first aid and CPR training, and a Babysitting Basics class, were provided. The class attracted youth interested in babysitting, who serve in youth development positions such as a soccer coach, and those who watch younger siblings. Thirty-four youth from three counties and the Blackfeet Reservation attended the event and received training on the business of babysitting, saving and investing babysitting earnings, and emergency response skills.

The business of babysitting covered how to advertise for a babysitting job, questions to ask potential clients, and safety during babysitting. Youth were given numerous babysitting resources to add to their toolbox including family questionnaires, potential advertising methods, and ways to follow up with families following babysitting. Youth also received an MSU Extension credit card slider for analyzing scenarios of how much various expenses would cost if paid with a credit card versus saving and using babysitting earnings.

Over 90% of participants said the session was easy to understand, provided them with information relevant to their situation, and taught them something they didn’t know. As a result, participants are better equipped to responsibly care for other youth and to jumpstart their savings through babysitting.

An increasing number of youths are home alone with younger siblings and the Babysitting Basics course equipped them to responsibly care for other youth. Photo by Kari Lewis.

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Welcome to Granite County

Granite County is a rural, natural-resource supported county in central Western Montana. Winter and summer recreation draw visitors to the scenic beauty year-round, while agriculture is the economic base. Georgetown Lake provides a variety of recreational experiences, and is next door to the Anaconda-Pintler Wilderness. The population of the county is about 3,000, and the County Seat of Philipsburg has a population of around 900. The other incorporated town in Granite County is Drummond, with a population of around 300. Montana State University Extension in Granite County is supported by three strong and important partners. County, state and federal funding sources work together to assure that MSU Extension in Granite County has the resources to provide timely and relevant education addressing locally-identified issues. Montana counties provide about 40 percent of the funding to support local offices, state funding provides about 40 percent, and federal partners about 20 percent. Like many Western Montana communities, the Granite County area has a rich mining past, but agriculture has provided the base of economic activity through the boom and bust cycles associated with historic mining. Granite County . . . Montana at its best!
4-Her’s Unlock New Livestock Quality Assurance Curriculum

The Granite County 4-H program is comprised of 62 members and 14 leaders participating in various projects. The 4-H program in Granite County combines efforts to share the unique hands-on learning experience that is 4-H. Members in the Granite County 4-H program have the opportunities for hands-on learning at several different county events: Project Possibilities, Foods Fair, Stir-Ups, Quality Assurance, Countywide Demonstrations, IPYA (International Program for Young Adults) Presentations, and the Skill-A-Thon. The Granite County 4-H Council wanted to emphasize Livestock Quality Assurance for all members and all species during the 4-H year. We integrated new curriculum and lock box games to teach kids how to problem-solve situations they might encounter with their project animals and provide real world applications for those looking to pursue animal husbandry as adults. In Granite County, multiple workshops were held, and there was 100% participation from youth in market animal projects. Kids with breeding projects and small animal projects also participated in their species-specific activities. Afterwards, youth had learned about and taught each other proper feeding and nutrition, animal shelter design, and proper medication use, among other things. And they also had fun! Granite County will continue to identify educational needs of the youth in the 4-H program while also providing educators and leaders to help them reach their goals.

Herdsmanship School Continues in Granite County

The Granite County Herdsmanship School was developed 24 years ago as a way to bring educational programs to ag producers in Granite County that would be important to the success of their way of life. In the summer of 2017, Montana experienced drought and Granite County was no different. Livestock and hay are two main sources of income to people living in the county and they regularly deal with pests that impact their bottom line. The Herdsmanship School held in 2018 looked to address these problems that many in the area dealt with. Experts and speakers from around Montana were invited to talk about drought risk management, livestock markets, hornfly control in cattle, vertebrate pest control in hay and pasture, and vaccination efficacy. Some attendees made changes to their operation based upon attending the Herdsmanship School and saw results in higher calf weights in the fall, and reduced pocket gophers in hay fields. In the winter of 2019, Granite County MSU Extension will look to deliver more locally-impactful information through this program.
Noxious Weed Control Remains Important in Granite County

Once again, the Granite County MSU Extension office partnered with the Natural Resources Conservation Service (NRCS), and the Granite County Conservation District to host the 11th Annual Noxious Weed Clinic. Controlling noxious weeds is a high priority for landowners and managers in Granite County. This year’s clinic brought a variety of topics. People attending learned how to identify noxious weeds of concern to the area, poisonous plants that had been popping up recently, sprayer calibration, and weed control after fires. Over 40 attendees also received Private Applicator Credits, which allow them to stay up-to-date on their Private Applicator License certifications. Evaluations showed that participants benefited from visual aids and tools for noxious weed identification and quick and easy sprayer calibration. In addition to educational programs, Granite County MSU Extension worked with over 15 landowners to establish three cooperative weed management areas through the Noxious Weed Control Trust Fund. This brought $32,000 dollars in matching funds to the county to help private landowners combat noxious weeds like spotted knapweed and houndstongue.

Knapweed infestation in Granite County.
Welcome to Hill County

Hill County is awash with color - Black Angus cattle, green pulse crops, golden wheat, yellow mustard, orange prairie sunsets, and blue mountains contrast against the Montana sky. It’s as diverse as it is colorful. Havre, the economic hub, is located 40 miles from the Canadian border. It is home to the Chippewa Cree Tribe at Rocky Boy, MSU Northern University, MSU Northern Ag Research Center, Northern Montana Hospital, a Walmart, the BNSF Railroad, the Border Patrol and a population of 16,596.

With over 6,500 households, 113 4-H members and much socio-economic diversity, MSU Extension Agents Shylea Wingard and Jasmine Carbajal organized many programs during the year to address county and community local needs.

Snow piled up in the Hill County towns of Havre and Gildford. The winter of 2018 won’t be forgotten, especially when named the ‘worst winter in the U.S.” by the Weather Channel. Photo by Shylea Wingard.

Black Angus cows graze the northern prairie outside of Havre with the Bears Paw Mountains as a backdrop. Photo by Shylea Wingard.
Cooking Across Cultures and other Family and Consumer Science Programs in Hill County

In 2018, Family and Consumer Science (FCS) Extension agent Jasmine Carbajal focused on contributing to a healthier county by offering the ServSafe Food Handler certification course. This national class was offered to food industry employees, community organizations and community members. A total of 148 people received the training as well as an additional 116 high students through a partnership with the Havre High School FCS department.

A strong collaboration also developed with the Havre Public Schools Adult Education Program and MSU Extension Hill County. Carbajal offered a diverse range of classes that included: food budgeting, label reading and canning for food preservation. Other community classes offered through MSU Extension were Meals in Minutes (pressure cooker class), Pie Crust class and Cooking Across Cultures.

Cooking Across Cultures is a new curriculum developed in collaboration with MSU Extension in Cascade County, with Carbajal and Katrin Finch (Cascade County MSU Extension agent). The series consisted of four classes that covered four distinct cultural cuisines: Irish, Italian, Latin and Asian. MyPlate recommendations were taught in each class and different food groups were discussed. Evaluation results of the class showed impressive outcomes: 100% of participants gained new knowledge, 86% indicated the class provided them with new, diverse recipes to use at home, and it was reported that one of the intended changes of a participant was to “cook more balanced plates” at home.

Carbajal is excited to expand 2019 programs in Hill County to include mental health programming like Mental Health First Aid and Youth Aware of Mental Health (YAM).

Every Dollar Counts in Agriculture

Hill County producers barely recovered from the drought and fires of 2017 when winter 2018 hit, bringing record snowfall and cold temperatures. Chinook winds and warm temperatures never came, and snow piled to 2 foot levels. By April, the Weather Channel named Havre “The Worst Winter City in the U.S.” Hay was limited and ranchers used bulldozers to clear feed grounds and calving lots. Despite laborious effort, many had 80% calf crops. It was dubbed “the winter that wouldn’t die.” Farmers couldn’t start planting fields until late April/early May. Flooding washed out roads and tractors got stuck. Some planted spring wheat, concerned it was too late for peas, and others diversified with mustard, lentils or chickpeas. Fusarium root rot, acidic soils, pesticide injury and global trade issues added to the summer challenges. Positively, crop yields exceeded average. One producer summed it well “I used to aim for bushels and protein. Now I have both and it still doesn’t pay.”

Given the economic and global uncertainty, one thing was constant, MSU Extension agent Shylea Wingard, who offered programming and services to address the needs of Hill County constituents. She organized four producer workshops, presented

Plantains for mangú at Cooking Across Cultures - Latin Night. Photo by Jasmine Carbajal.

The chart summarizes Hill County MSU Extension agricultural services to constituents in 2018.
at four grower meetings and gave seven private applicator tests. A Master Gardener class series and a tree care workshop were offered for urban homeowners, as well as four gardening classes presented to the Food Commodity program at Rocky Boy. Program outreach included 480 constituents and feedback indicated that attendees implemented practices learned, including wearing proper protective gear for pesticide application, garden soil testing, watering trees more deeply, checking fields for soil acidity and testing hay for nutritional and nitrate analysis.

One producer brought two hay samples for a nitrate quick test. Wingard disclosed how the discoloration only indicates a “presence” of nitrate and doesn’t identify toxic levels, while an $11 nitrate test by the lab might be worth doing for the results versus a dead cow. The producer responded with a lecture on “how every dollar counts in this business.” The following week, the producer brought in two hay samples and asked that they be sent to the lab for analysis. The following week, eight samples were brought in to be sent to the lab for feed value and nitrate testing. As the producer ordered four water quality tests for his livestock ponds and wrote the check, he smiled and said “it’s worth every dollar.” The change in opinion (costs versus potential savings) and informed decision making happens after a one-on-one consultation with MSU Extension.

Currently Wingard is delivering Risk Management education workshops from a grant proposal that was funded by USDA-RMA.

**Hill County 4-H - Meeting People & Goals**

2018 will be remembered as the year the 4-H Chuckwagon was built. Each year, 4-H members are asked to set three goals regarding what they hope to learn or accomplish during the project year. At the end of the year, they summarize their progress, accomplishments, or shortfalls in their 4-H record book. Over seven years ago, Hill County 4-H set a goal to rebuild the old and deteriorating 4-H Chuckwagon building when it had trouble passing a fire marshal inspection. Years of fundraising, bake sales and raffles by 4-H members and the community alike, plus countless hours of donated labor by volunteers and professional contractors, culminated into a 150’ x 40’ steel-sided building complete with commercial kitchen. In July, a ribbon cutting ceremony was held. Clubs branded the wooden boardwalk with their names and the “4-H” brand. Then the doors opened to serve the public for the first time on the first day of the Great Northern Fair. Over 3,000 milkshakes, 80 pies and 1,600 burgers were served and enjoyed by all in air-conditioned comfort.

The 4-H Chuckwagon wasn’t the only highlight. A total of 113 4-H members had opportunities to learn and grow as community leaders. Sydney O’Neil was elected as a State 4-H Ambassador (one of five). Wyatt Johnstone’s hog placed fourth in the statewide Swine of Excellence (SOE) contest out of 1,553 hogs. Thirteen 9-12 year old members attended 4-H camp at Beaver Creek

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**SNAP EDUCATION - EATING WELL ALONG THE HI-LINE**

Our SNAP-Ed (Supplemental Nutrition Assistance Education Program) Educator, Rhonda Gregoire, had another busy year in 2018. Gregoire served 449 children and adults in Hill County, including Havre, Rocky Boy, Box Elder and Gildford, in elementary grades first, third and fifth. Positive behavior change was shown in areas of diet quality, physical activity, and food safety in both children and adults. She also worked on policy, systems and environmental work in the county. Gregoire was able to participate in two professional development opportunities and complete training: Systems Approach to Healthy Communities (SAHC) and Adverse Childhood Experience (ACE). Gregoire is happy to work with the people of Hill County and the Rocky Boy Reservation.

Rhonda Gregoire sharing a nutritional story with first graders at North Star Elementary School. Photo by Jasmine Carbajal.
Park and participated in learning activities with 4-H members from seven northern Montana counties. Members also learned and had fun at 4-H Congress, Ambassador Training, and Rec Lab, as well as showing their projects at the county fair and performing community service. One club, the Chirping Meadowlarks, opened a “free library” for the community at the grocery store.

Twelve members of the Hill County 4-H Interstate Exchange group journeyed to Pima County 4-H in Tucson, Arizona, for eight days in June. There they met up with 14 Arizona 4-H members. The weather was warm and so were the friendships. Activities included touring the Sonoran Desert Museum, the Anaconda Copper Mine in Bisbee, AZ, the University of Arizona, the Pima Air and Space Museum, the Santa Rita Ranch and taking a trip to the Mexican border. Hill County 4-H looks forward to hosting Arizona 4-H members and sharing the best of North Central Montana in 2019.

After seven years of 4-H planning, fundraising, and countless hours of volunteer and community support, the new 4-H Chuckwagon was erected at the Great Northern Fairgrounds. Photo by Shylea Wingard.
Welcome to Judith Basin County

Judith Basin County is located in central Montana in a fertile basin between the Highwood, Big Snowy, and Little Belt mountains. The county population is 1,940. The principal communities are Stanford, Hobson and Geyser, and there are numerous other small communities. Judith Basin County’s economy is based on agriculture. The major components of this industry include livestock, small grains and forage production. The county ranks tenth in Montana for beef cattle numbers, eleventh in winter wheat production, and sixth for alfalfa hay production. Timber and mining enterprises take place on a small scale.

The MSU Central Ag Research Center is located in the county near Moccasin. The Judith Basin 4-H programs consist of over 90 youth members and 31 volunteer leaders in four organized clubs. The county offers a variety of recreational opportunities, which include hiking, hunting, fishing, camping, snowmobiling and skiing. A major ski area is about 45 minutes from Stanford. The Judith Basin was the home of the legendary western artist Charlie Russell. Many of his paintings were scenes captured by the artist between Lewistown and Great Falls.

Daisy Peak, Little Belt Mountains
Forage and Hay Workshop

The forage workshop hosted by Cascade and Judith Basin counties this year included presentations on forage production, forage health, forage testing, evaluation, data analysis, hay storage, fertilizer use, and weed control. Speakers included Rose Malisani, Cascade County MSU Extension agent; Katie Hatlelid, Judith Basin County MSU Extension agent; David Wichman, MSU Central Ag Research Center Superintendent and Agronomist (retired); Emily Meccage, MSU Extension Forage Specialist; and Jane Mangold, MSU Extension Invasive Plant Specialist. This was the third year a forage workshop was held, and the information presented has now reached over 75 producers in the area. With forage production being one of our major revenue sources in the county, information on how to be more efficient raising and storing a high quality product is very important to local producers.

Biocontrol Education

For the third consecutive year, Judith Basin County has hosted Melissa Maggio from the MT Biocontrol Coordination Project for a workshop. Previous workshops included releasing insects with the intent of establishing an insectary for other landowners and producers to come and collect Cyphocleonus achates. This root weevil attacks spotted knapweed plants by entering the stem and burrowing all the way down into the root. As it attacks the plant from the inside, it allows outside stresses to take a higher toll and more effectively control this noxious weed. This year, participants were able to use sweep nets and collect enough insects for one of the attendees to make a release in a weed-infested area.

Right: Sweeping for biocontrol insects. Photo by Katie Hatlelid

All in a day’s work... Photo by Katie Hatlelid
4-H Afterschool Program

MSU Extension in Judith Basin County partnered with Stanford Schools to host the third year of the 4-H Afterschool program. Held from 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 cooking, electricity, forestry, wildlife, and outdoor adventure.

During the course of the afterschool program, 55 students were reached. Of those, 11 were already 4-H members. Sixteen have enrolled in 4-H as a new member as of October 2018. There are several more students who aren’t old enough to be a full 4-H member yet, but are waiting patiently to join!

In addition to Stanford, students came from Denton, Geyser, and Hobson to participate in the learning activities.

Students learning about simulated forest fires. Photo by Katie Hatlelid
75th Annual Judith Basin County Fair

Judith Basin County celebrated its 75th annual County Fair this year. In the spirit of recognizing the past and future generations, historical displays were assembled in the exhibit hall. The parade was also brought back after a long hiatus. The weather also blessed attendees with the highest temperatures of the summer, and unfortunately, no dunking booth! This year there were over 100 exhibitors between the 4-H and Open Class categories, and many outstanding performances and products were brought to show.

Return of the parade to the Judith Basin County Fair. Photo by Katie Hatlelid

contact us:

Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Welcome to Lake County

Montana State University partners with Lake County to provide quality education programs and services which brings MSU to our residents. Local MSU Extension agents respond to citizens and stakeholders by developing, implementing and evaluating educational programs that address local needs and issues.

The following statements summarize the program goals of MSU Extension in Lake County for 4-H youth development, agriculture, healthy living, natural resources, community economic development, and family and consumer sciences:

- Prepare youth with life skills for the future so they can be productive, positive and contributing adults
- Develop through trainings, experiences and activities the youth and adult leaders necessary for a viable and engaged 4-H program
- Ensure sustainable agricultural enterprises on multiple levels
- Facilitate avenues for Lake County residents and families to improve their financial literacy, knowledge of consumer debts and needs while caring for themselves and their families through all stages of life
- Encourage healthier lifestyles and prevention of chronic diseases through promotion of positive health-related behaviors and self-care
- Enhance natural resource conservation and management by achieving defined objectives
- Expand access to Extension education and knowledge resources by meeting organizational goals and objectives affecting program quality and delivery, accountability, resource management and employee professional development

Horses hang out on a hillside in Irvine Flats.

Cows in a canola field enjoy a summer day.

Photos by Berl Tiskus
4-H market livestock members apply Animal Quality education

Lake County’s 4-H market livestock project includes around 120 enrollees each year. Market livestock projects help enhance youth education and understanding of the modern livestock industry. Members who enroll in one of the market projects make a commitment to care for and train their project animal for more than three months (lamb and swine projects) or up to seven months (beef project).

During this time, 4-H members participate in a multitude of learning activities in animal science and building life skills.

Life skills learning includes:

- Responsibility
- Follow-through - outcomes related to work efforts
- Recordkeeping - expense charting
- Financial investment - break even analysis

Animal science skills learning includes:

- Livestock selection for desirable traits
- Quality housing
- Nutrition
- Health care
- Carcass quality
- Sound environmental practices

Tim Herreid, Lake County Market Committee volunteer and 4-H parent, has observed that the income generated from a market animal project is often used by 4-Her’s for college tuition and/or to purchase other livestock, such as heifers, to help start them in the livestock business.

Raising Grandchildren

In Montana today, more than 7,400 grandparents are raising their grandchildren without parental involvement. These children most often end up at a grandparent’s home because of a family crisis. The grandparents may be ill-equipped to face the emotional, physical, financial and social hardships of raising their grandchildren. This issue is present in all socioeconomic and racial/ethnic groups. Here in Lake County, there is a large percentage of grandparents raising grandchildren. They may have become the primary caregivers for their grandchildren because of incarceration, death, deployment, teen pregnancy, parental substance abuse, physical or mental health issues of the parents or a number of reasons. But they all share the common faction of not having planned to raise more children, nor planned for the financial and emotional issues that accompany the responsibility.
MSU Extension partnered with Sunburst Mental Health agency in Polson to present the “Parenting a Second Time Around” to grandparents raising grandchildren in Lake County and to increase the awareness of the Montana Grandparents Raising Grandchildren Project. More than 20 grandparents attended the six-week program to help them deal with the emotions and opportunities for caring for their grandchildren.

One grandfather shared, “We didn’t know where to start.” Another grandmother said “I thought I was supposed to be enjoying my life now, not caring for kids.” The number of children cared for by the group which attended was more than 50 youth, ranging in age from newborn to teenagers. One teenaged daughter still living at home attended with her mother, the grandmother who was raising her two grandkids. She came to learn more about being a parent so she could help her mom. She was already adept at changing diapers, cooking, and many of the skills of being a parent, at a time when she should be able to focus on school activities and her own personal development.

The Montana Grandparents Raising Grandchildren (GRG) Project, the only one of its kind in the state, was founded in 2002 to offer these caregivers support, education and access to resources so they can live happier, healthier lives and can, in turn, raise children who know emotional and physical safety, excel in school and social situations and are prepared to take on the challenges of their new life.

Task force plans bedbug decimation

Bed bugs infest Lake County homes, apartments, and motels. Essentially wherever people are, bed bugs can be there also.

Health agencies, extermination businesses, and the medical community have all put forth effort to educate, treat, and control this pest in attempts to eliminate bed bugs and the problems they cause. MSU Extension in Lake County was approached in 2017 by Lake County Public Health Department to:

- Determine what businesses and agencies are involved in bed bug control and prevention
- Organize a task force to unite efforts and awareness
- Conduct an education program to help all task force members with prevention and control

Results:

- Organizational meeting attracted 40 people representing 24 entities that are associated with bed bug issues on a variety of levels.
- Task force organization involving all 24 entities outlined a strategic plan to coordinate activities and distribute information that will lead to better prevention and control.
The moon shines down on snow-dusted mountains and farmland. Photo by Berl Tiskus
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 (USDA). This 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.

Lewis and Clark County hosts a population of 67,773 (2017 estimate). Helena, the county seat of Lewis and Clark County and state capital of Montana, hosts a population of approximately 29,000. Other communities include East Helena, Augusta, Lincoln, Wolf Creek, Craig, the Milford Colony, Wilborn, York, Silver City, Birdseye, Canyon Ferry, and Marysville.

Our county is a mix of forests, mountains, prairies, valleys, and fields. The Missouri River runs through, creating water features and a wealth of recreation opportunities.

Enjoy some highlights of the 2018 educational opportunities in Lewis & Clark County.
4-H Military Program

The Montana National Guard Youth Program changed their programming this year with a bi-monthly STEAM program during drill weekend. Through hands-on activities the kids learned how long human intestines are, how the digestion process works, and they learned what it takes to make a magazine cover and sparked interest in different magazine ideas. Then through the partnership with the Montana National Guard, the program trained youth and adults about NXT Lego Robotics. During the year, participating youth learned about the pitfalls of using credit cards, and the basics of money management. They also worked with some master gardeners to learn how to grow the best plants for their flower or vegetable gardens.

Montana Air National Guard families were given the opportunity to attend a College Readiness Workshop in partnership with MSU – Great Falls, University of Providence, Reach Higher Montana, MSU Extension and Montana Air National Guard. The attendees learned tips to make their applications stand out from others, different options for financial aid and how to select the program and school that would best fit their needs.

Lewis and Clark, Jefferson, and Broadwater Counties, as well as Malmstrom Air Force Base, now have several more certified and qualified babysitters. The youth went through an intensive training that included First Aid and CPR certification to qualify for the Babysitter Certification.

Camp Runnamucka was a great time where the kids were able to engineer the best blades for the wind turbines. They had the opportunity to use different materials and develop blades that worked the most efficiently. Many of the adult volunteers competed in the contest at the end to see which blades worked the best.

Throughout the past year, the 4-H Military Program partnership has impacted more than 100 military youth and adults, giving them the opportunity to experience 4-H projects and programming that they would not have otherwise.

We’re Going Through Changes

Both Kim Lloyd and Brent Sarchet have left MSU Extension to pursue other opportunities. They are widely missed for their contributions to Lewis and Clark County and the state.

Catherine McNeil continues as the 4-H Military Program Coordinator for Lewis and Clark County. In addition, Catherine advises the state and county 4-H Ambassadors, and is an active board member and treasurer for our local 4-H Foundation.

Maureen Theisen has been with MSU Extension as the Administrative Assistant for a year.
Kara Tangedal joined MSU Extension as the new 4-H Youth Development Extension agent in July of 2018. She grew up involved in Sanders County 4-H. She graduated from Montana State University with a bachelor’s degree in microbiology and another in secondary science education. She has experience working as an assistant in a research lab studying viruses, and taught for three years at Malta High School. Kara plans on sticking around as county agent for a long time. She describes her position as “the dream job.”

Lewis and Clark County 4-H

4-H provides our 480 enrolled youth with engagement in learning, service to others, and a sense of belonging. This fall, our 49 project superintendents and their youth superintendents attended a workshop put on by MSU Extension. These workshops promote inquiry-based learning and allow a space for project superintendents and their youth counterparts to detail goals and roles for the 4-H year. One volunteer said, “You can always learn something new. I realized that I need to communicate what I do with my junior superintendent so they can take the lead someday.” A junior superintendent in attendance agreed, continuing, “I feel better prepared to take on project responsibilities this year. I understand how 4-H in our county works now.”

4-H is a vital part of Lewis and Clark County communities, as current members and 4-H alum are highly engaged community members, business leaders, and volunteers. Terry Gauthier owns the local McDonald’s franchise and takes an active role as a Lewis and Clark county 4-H Foundation board member and livestock project sponsor. Gauthier supports 4-H because it teaches entrepreneurial skills and a sense of responsibility. Dedicated community members like Gauthier truly keep 4-H at its best.

4-H promotes positive relationships with our 103 enrolled, caring adult volunteers. This fall, our 49 project superintendents and their youth superintendents attended a workshop put on by MSU Extension. These workshops promote inquiry-based learning and allow a space for project superintendents and their youth counterparts to detail goals and roles for the 4-H year. One volunteer said, “You can always learn something new. I realized that I need to communicate what I do with my junior superintendent so they can take the lead someday.” A junior superintendent in attendance agreed, continuing, “I feel better prepared to take on project responsibilities this year. I understand how 4-H in our county works now.”

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Welcome to Liberty County

Liberty County covers 1,458 square miles through the heart of the Hi-Line region of north-central Montana. Liberty County MSU Extension works with the Liberty County Commissioners, Chester-Joplin-Inverness Public Schools, the local conservation district, and others to ensure that needs in agriculture, family and consumer science, 4-H and community development are met. From teaching about mental health awareness in school, to making sure the community is kept abreast of current agricultural issues and home gardening techniques, to working on community development strategies, the name of the game in Liberty County is all about being a team.

Agriculture is a way of life for many Liberty County residents. Photos courtesy of Janice Hendrickson.

Working with county government and citizen advisory groups, MSU Extension in Liberty County provides services at the local level.
Golden Prairie Community Foundation Reaches Fundraising Goal

The Golden Prairie Community Foundation was founded in 2014 with a USDA Rural Development grant, in part funded by Montana State University Extension. With a local advisory board and an affiliate agreement signed with Montana Community Foundation in late 2014, the Golden Prairie Community Foundation began fundraising and strategic planning efforts in 2015.

Fundraising appeal brochures and direct appeal letters have been sent out each year to approximately 1,500 mailboxes in nine different communities with ties to Liberty County. Each year, $3000-5000 was raised through these efforts, with monies going into an endowment account held with Montana Community Foundation. The Golden Prairie Community Foundation reached their goal of $25,000 to permanently endow the account in the fall of 2018.

To date, the Golden Prairie Community Foundation, with an advisory board of nine members, has given out $3,000 in grants to six local non-profit organizations. These funds have been used around the area for projects such as campground renovations, bathroom renovations at a local park, the purchase of “jump kit” equipment for emergency first responders, computer equipment for ambulance crew reporting, museum expansions, and community events. Many of these projects would continue unfunded or vastly underfunded if not for the community foundation. With the establishment of a permanent endowment, continued grant-making possibilities are expected, providing a continuing support to local non-profit organizations and benefits for local communities for years to come.

Plotting a Course for Agriculture

Liberty County sits in the heart of the Triangle, one of the main agriculture producing centers of Montana. According to Montana Agricultural Statistics, Liberty County is ranked seventh and fifteenth in durum and spring wheat production in Montana counties. Liberty County MSU Extension and the Northern Agricultural Research Center collaborated on a spring wheat and durum variety plot tour in June to bring in Peggy Lamb, Research Scientist in Agronomy at NARC, to share research-based information on spring wheat and durum wheat varieties for the Liberty County area. Luther Talbert, PhD, MSU agronomist and spring wheat breeder, joined Lamb and shared current research on spring wheat varieties.

The 18 producers who attended developed a better understanding and awareness of current and upcoming spring wheat and durum varieties that could prove to be economically important to them. Producers also utilized the opportunity to network with each other and ask questions regarding farming practices for nearby pulse crops, including learning to recognize specific pulse diseases such as Ascochyta blight. As producers look towards varieties and crops that improve yield and other important production factors, Liberty County will continue to be a leader in agricultural commodities in Montana.

Members of the Hi-Line Emergency Medical Services team showcase jump kits purchased with a grant from the Golden Prairie Community Foundation.
Master Gardener Level 1 Class

Master Gardener classes were collaboratively co-taught in 2018 by Liberty and Hill County MSU Extension in Rudyard. Rudyard, 17 miles east of Chester, while in Hill County, is geographically closer to Liberty County services and has had a consistent complement of Extension resources brought to them in the past. Nine participants met once a week for eight weeks to learn research-based principles of gardening. Students of the class were taught about a variety of topics including soils and nutrients, plant growth and development, annuals and perennials, pruning, lawn maintenance, small fruits, and integrated pest management. In addition to the local Extension agent instructors, Toby Day, MSU Extension Horticulture specialist, also presented to the class.

Class participants gained basic gardening knowledge and became resources of research-based information to their communities. Additionally, participants were encouraged to complete 20 hours of community service to certify as Master Gardener Level 1 gardeners. This further builds the Master Gardener program through serving communities and also develops civic engagement and pride.

Discovering How to Be Smart with Finances

If you think legacy planning is a boring topic, then you haven’t been to one of Dr. Marsha Goetting’s estate planning presentations. Goetting partnered with Liberty County MSU Extension and taught local residents in the fall of 2018 about estate planning tools through a program titled, “Wildflower Reflections: Families and Legacies: Challenging Decisions.”

Participants learned who would receive their property if they passed away without a written will. They also discovered when a will or a trust has control over their property and when neither one does. Through class participation with response clickers, attendees further discovered how to avoid probate with the Montana estate planning tools of payable on designations (PODs), transfer on designations (TODs), and beneficiary deeds. End of life planning was explored as well as changes in Montana Medical Care Savings Accounts.

Twenty-four participants stated their intentions to review their current estate plans, updating beneficiary deeds and wills as necessary. Participants also expressed desires to create lists of tangible property to attach to their wills.

While in Chester, Goetting also met with the Personal Finances class at Chester-Joplin-Inverness High School. The class included an introduction to a credit card debt slide calculator and how to calculate credit card debt interest. Youth participants learned to work a credit card slide calculator to calculate interest accrued on credit card debt and also developed a better understanding of how important it is to pay off debt as it occurs and the cost savings with prompt debt repayment.

Youth and adults alike discovered how to be smart with finances when Marsha Goetting visited Chester.
Promoting Youth Awareness of Mental Health

Mental health awareness has received an abundance of attention in 2018 across Montana communities and specifically in the school systems. While Liberty County has fortunately not seen any youth suicides in many years, there have been instances around the county of adult suicide and depression. To promote a better understanding of how to maintain positive mental health and how to help those around them, Liberty County MSU Extension partnered with Chester-Joplin-Inverness High School and Liberty County Commissioner Maureen Wicks to offer a five-hour long curriculum to high school freshmen. The curriculum, Youth Aware of Mental Health (YAM), showcased an interactive program for youth promoting increased discussion and knowledge about mental health and the development of problem-solving skills and emotional intelligence.

Over the five-session course, 15 youth gained an awareness of mental health and suicidal thoughts and developed problem-solving skills in relation to those issues. Youth stated the following observations from the class: “I understand how to recognize the signs of if my friends are depressed” and “I know the difference between good and bad mental health.” Students also recognized the need to think problems through and that mental health is serious business and not a joking matter. They also recognized and stated an awareness that anyone can have mental health issues and that everyone has problems of some kind, thus becoming more focused on helping others while still addressing their own problems. Students have also begun to have conversations with their parents about decision-making and the choices they make.

Youth worked together as a class and in small groups to recognize how to work through mental health challenges.
Welcome to McCone County

McCone County MSU Extension provides non-biased, research-based education to constituents in the county and neighboring areas. In 2017, McCone County MSU Extension offered programming in Agriculture, Natural Resources, Family and Consumer Science, and Youth Development.

McCone County was established in 1919 and was named in honor of state senator George McCone.

McCone County encompasses 2,594 sq. miles. Circle is the single incorporated town in the county and is also the county seat. The county has a population of 1200 people. Agriculture is the primary business in McCone County.

Photo by Tandi Kassner

McCone County seeks to provide quality services to its citizens with integrity, fiscal accountability, and positive leadership through encouraging public participation, communication, collaboration, and innovation in working to build a strong community.
Rolling Cows

A workshop on livestock truck accident protocols was held in March at the McCone County Fairgrounds. The workshop was a joint effort between Jeanne Rankin, DVM, Associate Specialist with MSU Extension, and the McCone County Extension Office. Twenty-five individuals from a three-county area took part in the classroom and hands-on workshop, which helped first responders, volunteer firefighters, law enforcement personnel, local farmers/ranchers, and truck drivers be better prepared in case of an accident involving vehicles transporting livestock. The workshop addressed dispatch and first responder roles, methods for animal containment, determination of animal survivability, extrication of animals from the truck, animal behavior, relocation of animals, and animal euthanasia issues. Participants are now trained to act quickly and save animal or human lives in case of future livestock truck accidents.

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 daily contacts address economic concerns. With today’s economy, making the dollar go further is as important as ever in most households.

The McCone County Extension office hosts many cooking classes throughout the year, including “Once a Month Cooking” and “Mastering the Pressure Cooker,” which served 47 local people this year. Office staff teamed up with Tara Andrews, FCS Agent from Custer County to teach “Once a Month Cooking,” which offers an instructional way to cook once a month. Locals learned to choose recipes, make and customize a menu, shop a grocery list, and prep ingredients. The workshop included hands-on instruction to prepare a meal, using recipe cards and cooking instructions to assemble, cook and package multiple meals, and how to freeze and label packaged meals for later use.

Another class offered was “Mastering the Pressure Cooker,” which is a hands-on class with samples of a variety of foods cooked in a pressure cooker. Pressure cooking can save time and money while producing food that is ultra-tender, low in fat and full of flavor. The pressure cooker reduces cooking times by ⅓ or more, allowing quick delivery of a delicious and nutritious meal to the table. Pressure cooking also retains more nutrients than other types of cooking and uses less energy.
4-H Youth Development

McConе County has four 4-H clubs with 58 members and 12 leaders. 4-H continues to offer youth learning opportunities through a number of events and activities during the year.

Enhanced life skills of public speaking, leadership, social skills, and more are gained through club meetings, project work, judging events, summer camp, mini-congress, market quality assurance, Rec Lab, club trips and outings, shooting sports events, training 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 and lessons learned can form the basis for post-secondary institution selection or ultimately, career choice and development.

The 4-H program also allows many opportunities for adults to be involved in life skills development of youth through project leadership and volunteer work to assist with various projects and activities.

The 4-H Cloverbud enrollments (for youth ages 5-8) continue to rise with increased interest and participation. The 2017-2018 year saw six Cloverbuds, who had added options for activities and projects geared to their age group to work on throughout the year and bring to fair.

Agriculture

McConе County MSU Extension offers programming that addresses production issues, nutrition, forage testing, water testing 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.” This weekly column focuses on current agricultural issues, which often results in calls or visits to the Extension office to further discuss topics addressed.

The McConе 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.

The severely dry summer brought on concerns of high nitrate levels in area forages. From June through November, approximately 50 forage samples were tested for nitrate content in the McConе County Extension office. Of the samples tested, approximately 5% contained nitrates at a level that required special management.

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.

A major programming focus for the past year has again been All Terrain Vehicle (ATV) safety. ATVs are widely used on most Montana farms and ranches. Farmers and ranchers, as well as their employees and family members, are involved in many accidents involving ATVs, resulting in serious injury and deaths. Approximately 185 youth and 28 adults attended ATV safety-related events through the McCone County MSU Extension office. Six events were held, including three ATV Safety Rider Courses, three school presentations, and two days of instruction at the Montana Boy Scout Camp.
Meeting goals with success at Meagher County MSU Extension in 2018

In 2018, MSU Extension agent Bob Sager set goals to work with beef cattle producers to lower feed costs and help with specific, custom nutrition programs that would provide required nutritional requirements and lower costs of production. Feed costs on most Montana beef cattle ranches are often more than 60% of total costs of a year’s production. Two specific programs and workshops were offered in January and September to show producers advantages of winter feeding custom cake and specific, customized mineral programs using “leftover malt barley straw” for lowering winter feed costs. Use of malt barley straw with supplementation has the potential of cost savings of greater than $56 per cow during the winter feeding period. This can increase profit per cow by as much as 30% in most units. Some ranchers in Meagher County have saved as much as $45,000 during the year using alternative feed. Montana State University Extension shares current information and the newest research with beef cattle producers to help with decisions that can make production more efficient and profitable. The custom feed and minerals workshops have gained interest and more ranchers will be involved for 2019.

A new 4-H barn was completed in the past year that benefits the Meagher County 4-H program. The new metal structure was used for indoor fair projects, the livestock show and sale during the county fair, and for 4-H members training and workshops throughout the year. This structure can be used for community events and other activities in the future and has been a pride for the community, as private donations covered over 50% of the total construction costs.

MSU Extension agent Bob Sager published a book in August for Montana beef cattle producers to use in production. “Handbook for Beef Calf Health” is a reference book for students, Extension agents, and new beef cattle producers to help inform them of new technology and recommended programs to support improved performance, increased health in beef calves, and increased profit for producers. This book was a completion of a Master’s project during Sager’s degree work at Montana State University several years ago.
Welcome to Mineral County

We may be in the heart of “Griz Country,” but folks out in Mineral County continue to support the programs and information offered by MSU Extension. In Mineral County, Extension programs and expertise serve the needs of an increasingly diverse clientele at the local level, face-to-face.

Natural resource use has long been the basis for Mineral County’s economy. Mining, forestry, ranching, and farming are the heritage of the county’s residents. Life was never easy for the settlers of this county, living in a land in which nature had the upper hand and convenient access to resources was difficult. Much has changed, but today’s residents continue to struggle to remain in the area. In recent years, increased recreational use of the public land in Mineral County has expanded. Out-of-county visitors flock to the area for diverse recreational activities, straining local infrastructure in new ways. Compounding this situation is the incredibly small tax base for county infrastructure; public lands make up 92% of Mineral County, leaving only 8% private, taxable land for reliable support.

Public support for MSU Extension remains high and it is helpful that every dollar of county support for Extension in Mineral County leverages three times as much support from federal and state partners to meet the needs of our citizens.

RIGHT: Overlooking the Triple Bridges section of the Alberton Gorge near Fish Creek.
BELOW: Overlooking Superior from the Vista hiking trail.
Photos by Tim Read.
4-H Youth and Volunteers Work Hard Together

MSU Extension’s role in the 4-H Youth Development Program would not be successful without involvement of the youth themselves and the help of adult volunteers. Youth engage in active learning and community service under the tutelage of adult volunteers and MSU Extension provides the programming and support resources. Mineral County 4-H members addressed an important need at the fairgrounds this year; replacing a worn, non-certifiable, 30+ year-old livestock scale and chute. Through donations and hard work, a brand new electronic scale was purchased and a new livestock chute built just in time for the county fair in August. This small project spurred several others that improved the look and safety of the livestock area for the fair. 4-H youth and adult volunteers together addressed the need and succeeded to such a degree that new goals were created, enthusiasm remains high, and public support for positive outcomes and the 4-H program continues to expand.

Mineral County Resource Coalition

The Mineral County Resource Coalition (MCRC), facilitated by MSU Extension, started in 2015 as a group of diverse citizens working together to support the management of natural resources on public lands to improve the economic stability of our communities and citizens. Currently, collaborative processes are the means to advance public interests in public land and resource management. Developing and securing a reliable supply of resources for local manufacturing facilities is a need and emphasis of the coalition. Monthly, MCRC meetings bring together private and public agencies to work toward this common goal. Occasionally, representatives from Montana’s congressional delegation and state legislators also attend.

As a result, during the scoping phase of proposed land management actions, substantive local input is provided to federal and state land management agencies. In 2018, six of ten fire salvage projects on the Kootenai and Lolo National Forests were either modified or new alternatives created due in part to the efforts of the MCRC. This resulted in over 2500 acres of timber resources added to the projects, thereby benefiting local communities.

The level of engagement that the collaborative groups encourage from the public help U.S. Forest Service staff understand the public’s interests and concerns, in turn leading to better decisions and results. They feel confident that the community and local government support their efforts to manage federal lands in the county. Impacts to the local community as a result of MCRC engagement consist of conventional timber sales that have directly provided logs to local sawmills, increasing employment opportunities in a struggling economy; field trips to potential project areas that will in turn stimulate recreation and employment opportunities, while providing much-needed forest management; stewardship projects to help achieve land management goals while meeting local and rural community needs, including contributing to the sustainability of rural communities and providing a continuing source of local income and employment; Title III projects to educate and financially-assist local landowners with fuel mitigation practices such as removal of vegetation from around homes. All of these have improved habitat and forest health (made
a minuscule dent in fire threat), and are small areas of the restoration we seek. Much more can be done, however, seeing some success has energized the group to continue to work locally for the good of the community and healthy public lands.

**Individual Approach to Local Needs**

Mineral County MSU Extension has a history of an individualistic approach to most agricultural and natural resource-related issues on the local level. Responding to new and changing needs with university-researched data and resources remains a strength of the MSU Extension program in general. Although the spring and summer weather-related calls for assistance were ordinary, the fall of 2018 took an unusual turn with new and unique contacts with clients. Client calls concerning an “epidemic level” occurrence of western hemlock looper moths, a native forest insect that typically reaches high populations every 15-20 years, alarmed many people in the western end of Mineral County. Not to be outdone, a homeowner in Superior reported an unusual infestation of Asian lady beetles, never before reported in Mineral County, moving into a local residence and seeking shelter to overwinter. On the other end of the pest spectrum and the other end of the county, a case of willow black canker, caused by a fungus, was identified in an 80-year-old willow.

In each case, individual attention, service, and distribution of university-researched data concerning management addressed the varied needs. While the success of client decisions (based on the information provided) remains to be collected, local clientele appreciate and report favorable results from individual assistance as opposed to more formalized programming events.

**Building Better Communities by Building Better Leaders**

MSU Extension and the MSU Local Government Center (LGC) collaborate to provide training, technical assistance and research to local communities to strengthen the capacity of today’s community members and volunteers.

In February, Tara Mastel, Associate Specialist with the MSU Extension LGC presented a Leading Local, one-day, activity-based workshop at the Alberton Community Center. The workshop was sponsored by the Mineral County Economic Development Corporation (MCEDC), MSU Extension Mineral County, Alberton Community Recycling Project, Alberton Community Center, TrailWest Bank, MSU Extension LGC, and Blackfoot Telecommunications.

The Leading Local workshop offered tips and insight to assist new and seasoned community volunteers to feel more prepared and effective in their roles, with activities on: a review of leadership style differences by generation, what makes an effective meeting, how to engage board members.

80-year-old willow tree showing signs of willow black canker. Photos by Dave Brink.
and recruit new members, and how setting a course can help re-energize an organization.

MSU Extension plays a vital role in providing tools and guidance to assist organizations throughout the county in obtaining their goals. The local Certified Regional Development Corporation (CRDC) involves Mineral, Sanders and Lake Counties, and is responsible for assisting local development organizations and the communities, governing bodies and businesses they serve to assess, plan, and facilitate economic action within the region. By offering various business development workshops, MSU Extension strives to enhance the quality of life and sustainable economic well-being of all residents of the community.

Leading Local workshop in Alberton. Photo by Emily Park.
Welcome to Missoula County

Missoula is known as the Garden City because of its ability to grow local food crops. In the early days, fruits and vegetables were marketed to surrounding mining communities. Today, stores and restaurants use locally-grown food crops, and producers can market through seven farmer's markets.

Missoula County has a population of 117,441 people. Missoula, the county seat, has a population of 72,072. The major industry for many decades was timber, though that has declined significantly since the early 1970s and Missoula has become a regional trade center. Additional categories of economic importance are education services, health care and social services.

Due to interest and concerns about invasive species, the MSU Extension office and Weed District are combined into one department. Considerable effort has resulted in new tools and sustainable methods of managing invasive weeds such as the biological weed control program. Through the encouragement of the Governor, the department has provided statewide leadership in organizing a Montana Invasive Species Council.

Family and Consumer Sciences Summary for 2018

Providing innovative, relevant, evidence-based programs in Missoula County MSU Extension continues to be the goal in Family and Consumer Sciences programs. To best serve the community's ever-changing needs requires knowledge of existing programs, finding a niche among community-based services, and being involved in planning for the future. Building strong partnerships is one of the greatest keys to success. Missoula Aging Services, Missoula Food Bank, Missoula Urban Indian Health Service, Missoula YMCA, Community Diabetes Education Program, MSU School of Nursing (U.M.) campus, Moonlight Kitchens, and Missoula Housing Authority have been especially strong supporters of MSU Extension programs in 2018.

Powerful Tools for Caregivers (PTC) classes held in spring and summer had 17 participants. Given the challenge of attending any event away from caretaking responsibilities, completing a six-week class is a big deal. Nearly all participants reported learning at least one new strategy for coping with ongoing stress of family caregiving, including learning to be more assertive and express feelings more confidently to family members. One person was, for the first time, able to schedule a family meeting with difficult siblings; another reported loving the group support and hearing other stories like her—that humor and tears during class gave her strength to face the next caregiving day. Participants exchange contact information to continue building relationships that began in PTC.

Wellness programs such as DEEP (Diabetes Education Empowerment Program) continue to be important. DEEP classes provide basic information on diabetes, nutrition, stress management, resources, and self-management. Participants said class helps them feel less embarrassed about having diabetes and that it was made more manageable with the support of others also dealing with doctor visits, new medications, and less-informed family members.

Food Bank monthly cooking classes have become popular because they are available and interesting for retired seniors, those who are working, income-challenged, kids, and college students. One single parent father who brings his two sons says it is a
great way to spend time together, improve his kid’s math skills (measuring and reading recipes), and build confidence and independence. Having recently been released from prison, this father wants “to get it right” by learning how to make quick, nutritious meals with his kids. Seniors enrolled in the ROOTS program (they receive a bag of groceries each month) attend classes that assist them in making a nutritious meal using the commodity and fresh food items. One participant said he didn’t know canned beans could taste so good with a “little seasoning and love.”

**Keeping Invasive Species at Bay**

Since 2015, Missoula County Weed District/MSU Extension has worked with Montana’s Department of Natural Resources and Conservation and the Governor’s office to create the Montana Invasive Species Advisory Council. The council was created by Governor Bullock through Executive Order No. 13-2014 for the purpose of advising his office on a science-based, comprehensive program to identify, prevent, eliminate, reduce, and mitigate impacts of invasive species in Montana. The council was composed of 21 members, representing local, state, federal and tribal land management agencies as well as private land managers, industry and natural resources groups.

In addition to representing Montana county weed districts on the council, Missoula County also served as the fiscal agent for the council’s projects and operations, and led the fundraising effort that helped the council accomplish its goals of:

1. Conducting an independent all-taxon assessment of Montana’s invasive species programs;
2. Sponsoring a Governor’s Invasive Species Summit to engage Montana’s agriculture and natural resource communities in a discussion of the results of the statewide assessments;
3. Creating the first Montana all-taxon invasive species strategic plan.

During the 2017 legislative session, the council was restructured as the Montana Invasive Species Council, and continues to advise the Governor’s office and the legislature on a science-based approach to the management of invasive species in Montana.


### The Plant Clinic: Missoula’s go-to spot for plant care and pest management information

The Missoula County MSU Extension Plant Clinic provides leadership and educational opportunities to the public on the identification and integrated pest management practices (IPM) of plant diseases, pests and related plant health problems.

- Performing weekly scouting trips, checking on pest levels that challenge gardeners, landscapers and homeowners in maintaining healthy plant communities and environment.
- Trapping for insects such as the codling moth, cherry fruit fly and Spotted Wing Drosophila to give timely warnings on when to spray for pests to control fruit damage. This information helps reduce unwarranted pesticide use. Spotted Wing Drosophila was found for the first time in Missoula County. This fruit fly can infest many fruit crops, and further trapping will be done to determine its threat and range.
- Scouting information is used to update the Pest Alert Hotline which is distributed via email, the MSU Extension website and phone recordings.
- Providing information to 1,600 phone call, walk-in and e-mail clients this year, including information on soil testing, pruning, plant identification, and pest control.
- Assisting the City of Missoula Parks department to train 10 volunteers on round-about plant maintenance.
- Hosting a fruit tree grafting class with local expert Roger Joy. Thirty-two people learned grafting techniques and took home 20 different types of apple, crabapple and pear wood to graft onto their own trees.
- Hosting two rodent control classes for 35 people at the Missoula Ag. Vo-tech farm with Montana Dept. of Agriculture Vertebrate Specialist Stephen Vantassel.

![Zebra mussels. Photo courtesy of National Park Service: https://www.nps.gov/articles/zebra-mussels.htm](https://www.nps.gov/articles/zebra-mussels.htm)
Montana Biocontrol Coordination Project

Biological weed control in Montana dates back to 1948 with the release of Chrysolina beetles on St. Johnswort by then State Entomologist, George Roemhilt.

The Montana Biocontrol Coordination Project works to provide leadership, coordination, and education necessary to enable land managers across Montana to successfully incorporate biological weed control into their noxious weed management programs.

Busy Summer of Competitions, and Big Winning for Missoula 4-H Members

While summer is a time of rest and relaxation for many, 4-H members across Montana are busy participating in leadership events and competitions. Missoula 4-H members had a tremendous summer in 2018. Below are the details from two events: Montana 4-H Congress and the National 4-H Western Heritage Project Competition.

National 4-H Western Heritage Project
Youth in the 4-H Western Heritage Project learn about the history of the American West from the years 1860 through 1900. They gain public speaking skills and they get an in-depth, hands-on education about the food, clothing, customs, and firearms of the period. In August, six teens from Missoula attended the National 4-H Western Heritage Project Conference and Individual Shoot in Deer Lodge, Montana. There, they attended workshops and competed against 4-H members from Colorado, California, Missouri, Kansas and Montana. Of the 17 award categories, Missoula County members placed in 12 at the national level and 13 at the state level – more than any other county or club in the nation or state!

Montana 4-H Congress
Teens in 4-H gain confidence through competition. They learn how to work toward goals, and how to be humble in defeat and in victory. In July, 19 teens from Missoula attended Montana 4-H Congress on the MSU campus in Bozeman. They all competed in state contests, and one ran for state office. Kylee Billingsley, from the Frenchtown Valley 4-H Club, was selected as one of only five State 4-H Ambassador Officers. She will represent Montana youth on the state 4-H Leaders Council. McKenna Quirk from the Two Rivers 4-H Club (Blue Mountain 4-H Club), and Trevor and Zac Zimmerman (Mullan Trail Mustangs 4-H Club) won the state Gavel Games contest, displaying their skills in Parliamentary Procedure. They will compete in the national contest in Denver in January.
2018 EFNEP Grant Year Recap

The Expanded Food and Nutrition Education Program (EFNEP) in Missoula County is a nutrition education program for limited-resource families with children, as well as youth. The main goal of EFNEP is to help limited-resource families and youth acquire the knowledge, skills, and attitudes necessary to change behavior for nutritional well-being.

In 2018, Missoula’s EFNEP educators Julia Goar and Bonnie Medlin reached 45 adults and 1,192 youth through a total of 470 classes. At right, a graphic summary of the 2018 program year.

New Horticulturist Kaley Hensel

New horticulturist Kaley Hensel was planted in Missoula County in August. Hensel attended the University of Missouri, lived and worked on a diversified farm, and worked as a horticulturist after graduation. She has a Bachelor’s Degree in soil and environmental science, and a Master of Science in Horticulture. Since settling in, Hensel has enjoyed learning and experiencing a new community and climate. She taught her first Master Gardener series and looks forward to developing new horticultural programs.

Some future goals for horticulture education in Missoula County include:

- Collaborate with the horticulture community to increase knowledge and success of specialty crops
- Provide hands-on classes and learning opportunities for gardeners and producers
- Expand Farm-to-School programming
- Develop a Junior Master Gardener program
Musselshell and Golden Valley Counties make up the central two counties of the Musselshell Valley, where the Musselshell River makes its way to meet Fort Peck Reservoir. The two counties have a footprint of 3,046 square miles with a population of 5,409. The Bull Mountains are the central landscape of the counties, with prairie and foothills to the east and west. The two counties encompass over 1.9 million acres, 1.7 million of those are in agricultural production. The Musselshell and Golden Valley County MSU Extension agent position has traditionally been shared between the two counties.

Welcome to Musselshell-Golden Valley Counties

Musselshell Valley 2018 Fall Pest Update

MSU Extension in Musselshell and Golden Valley counties offered a 2018 Fall Pesticide Update. This annual program is tailored each year to pesticide applicator needs that have been expressed through the year. The 2017 update focused on vertebrate pest control and grass establishment. In 2018, the program focused on invasive species, especially new invasive grass species. In the past three years, several species have begun to establish throughout the state and have encroached closer to both Musselshell and Golden Valley counties. Those species are Ventenata and Medusahead, both of which are extremely difficult to manage. The importance of keeping these grass species out of the counties was emphasized in three of the six program lectures which were specific to invasive grass control. Musselshell and Golden Valley counties have large cattle and sheep industries and due to last year’s drought, a lot of forage has been shipped in for feed, and producers should be able to react to any new invasive plants brought in with that hay. The program also included a lecture on poisonous plant identification and control, which is steadily becoming a more recognized problem throughout the state. Many of the species covered, particularly Death Camas, are becoming a very real problem to producers and creating awareness about the management and identification of this species is paramount to the producer’s success. Medusahead has not yet...
been found in any surrounding counties in South Central Montana, but Ventenata has been found in Big Horn and Yellowstone Counties. Working with other agencies in the county, including NRCS and the Musselshell Weed District, we have understood that these invasive species will eventually show up in our county, so we collaborated to ensure there is as much information and education to identify these invasive plants as possible before they arrive.

**Musselshell-Golden Valley 4-H Fair Skill-A-Thon**

2018 marked the first year that the Musselshell Valley Fair held the livestock Skill-a-Thon. Based around six categories, 4-H members are tested on their comprehension of the tasks laid out in the competition. Members may sign up for as many of the six categories as they choose: horse, beef, sheep, swine, dog and plant parts. Each category comes in a bag we call a “kit,” which contains seven to eight posters and tests that require the participant to match parts or answer verbal questions. The Skill-a-Thon has provided a great alternative for our members to participate in our fair. Traditionally members showing any animal (large or small) were required to bring an informative poster on the subject. Our ten- and eleven-year members soon became underwhelmed with the repetition of the project. This year we instituted the Skill-a-Thon to allow members to choose whether to bring a poster or participate in the Skill-a-Thon. The event is held the week before fair and members can choose as many or as few of the categories as they please. Our first year showed great participation from both new and old members who decided to test their knowledge. Each category had five subject tables to be completed. For example, horse category topics consisted of labeling parts of the hoof, filling out and matching a medication label, transportation, parts of a skeleton and parts of a horse. The event was also split into classes so that Junior and Senior members had different difficulty levels. This event has provided a great skill test for our members. They participate in a minimum of three practices through the year and the kits are available to clubs and members to check out for practice. The kits ($200-300) were purchased through grants obtained from the Musselshell Valley Community Foundation, as well as private donations.

**Skill-A-Thon 2018**

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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Welcome to Park County

Park County encompasses over 1.7 million acres, including 57% public lands and the highest peak in Montana – Granite Peak. Just over 16,000 residents enjoy the beautiful expanse of scenic mountains and river valleys the landscape offers. Agriculture, healthcare and social services, and tourism are major economic drivers in Park County.

Park County MSU Extension is funded jointly by the City of Livingston, Park County, and Montana State University and 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.

Photo by Tracy Mosley.
Cooke City Tackles Infrastructure Needs

Cooke City is a community of 100 year-round and 300 seasonal residents located three miles from the northeast entrance to Yellowstone National Park (YNP). Cooke City’s antiquated systems of wastewater management are failing and in dire need of updating. Many septic systems were constructed in the 1950s and because of its proximity to YNP, any discharge into streams must be pure enough to adhere to drinking water standards. Although this type of technology exists, it is quite expensive, prohibitively so for a community of this size.

Eight years ago, the community held three elections to form a sewer district that failed by a close margin, primarily because of the anticipated cost of a community wastewater management system. The 100 residents that rely mainly on summer tourism simply cannot afford a multi-million-dollar project. However, community leaders recognize that they cannot ignore the need for effective and safe wastewater management as a gateway to YNP and the 250,000 annual visitors to Cooke City.

In 2016, Park County MSU Extension began facilitating community meetings where water and wastewater were identified as the top community priorities. In 2017, local, state, and federal agencies joined the community for an infrastructure meeting that was attended by over 40 people. It was shortly thereafter that the Cooke City Water District secured grant funding for a Preliminary Engineering Report (PER) to address wastewater challenges. The PER began in November 2017 and is currently underway with anticipated completion in 2019.

Park County MSU Extension continues to support the PER process through meeting facilitation, education and outreach, and preparation for a 2019 election to form a sewer district. “This project is about helping Cooke City come to terms with its growth and to be prepared to accommodate the future increase in tourism,” said Deb Purvis, Cooke City Water District President. This effort championed by local leadership and supported by MSU Extension faculty embodies the importance of capacity-building work to ensure communities are prepared for the future.

Ranchers Proactively Address the Difficulty of Drought

Park County MSU Extension’s agriculture agent partnered with One Montana and the USDA Northern Plains Climate Hub to convene ranchers from Park and Sweet Grass Counties to reflect on past experiences with drought and to share ideas about how to become more resilient to future drought. During the day-long workshop, ranchers worked in small groups and engaged in whole-group discussions, sharing personal experiences with dealing with drought, resiliency strategies they’ve used in the past, and successes and failures, with a specific focus on the 2017 flash drought.
drought. Participants shared perspectives on range management strategies during and after drought, and thoughts on agency resource availability for managing drought.

Participants discussed strategies for being more resilient to drought. Some of these included being proactive, not reactive to combating drought; altering timing of culling cattle and age classes to cull each year; managing processed and annual forages for emergencies; developing new and existing water sources for increased storage; evaluating operational vulnerabilities; alternative fencing; keeping good records; and leasing additional pasture. One participant shared, “I’m leasing pasture and I don’t need to lease pasture. I’m doing it to rest my own grass and arranging it so we don’t go to the same pasture every year in the same way.”

Outcomes of this workshop included landowners and land managers collaborating to share and pool ideas for reducing the negative impacts of drought and how to better prepare for it in their management. Participants stated that it was a great forum to build community and network with others that have similar struggles when drought occurs, and to share ideas for the future.

**Leadership for Local Governments**

Park County MSU Extension faculty partnered with Park County and City of Livingston governments to host the Leadership Engagement Series, a program designed to improve personal leadership, teamwork, and public engagement skills for local government employees and elected officials. The program was initiated by Park County MSU Extension faculty in response to a need identified in the 2017 Park County Strategic Plan for improved public engagement.

Leadership participants discuss characteristics of different personalities. Photo by Tracy Mosley.

Thirteen City of Livingston and 12 Park County employees from diverse departments committed to the two-month program. Participants learned about their own personality type and characteristics of other types by engaging in a Real Colors® personality-assessment training. Additionally, they engaged in individual activity, small group breakouts, and large group discussions to learn about ethics and values, generations, communication, and conflict management.

Participants of this leadership series improved their self-awareness and the awareness of how others behave, to more effectively interact with co-workers, employees in other departments or across governing bodies, boards and committees, as well as to better serve the public in their respective departments. In response to the generational understanding workshop, one City of Livingston police officer stated that, “Everyone at the police department should have this training.” Another participant stated, “I am getting more comfortable with who I am. Understanding me is huge!”

**Extension and Park High are reaching out to students before suicide strikes**

**What is happening?**

Montana ranks first per capita in the number of suicides in the nation, according to the June 2018 Centers for Disease Control (CDC) Vital Signs report. Within the state, Park County’s suicide rate (22.5%) has consistently ranked the third highest per capita since 2005. From 2005-2014, Park County experienced 76 suicides. The Montana 2016 Suicide Mortality Review Team Report found suicide was the second leading cause of death for children and adolescents ages 10-24 behind unintentional injury.

**MSU Extension’s Response**

Park County MSU Extension taught the research-based suicide prevention program Youth Aware of Mental Health (YAM) to 104 freshman students at Park High School. YAM is a highly successful program that was developed in Europe. The program is currently only available in Montana and Texas. Montana is the only state where Extension agents are certified to offer YAM in rural schools. Because rural schools often have small class sizes and not all students volunteered to participate in the evaluation, the results of the YAM program are based on statewide results.
Results

Statewide results indicate students who participated in YAM experienced a significant decrease in depressive symptoms. There was also a trending decrease in anxiety symptoms. Almost 80% of students reported that after participating in YAM they would now seek help from school staff for assistance with depression and 49% indicated they would seek assistance with feelings of suicide. One local student wrote, “I just wanted to say thank you for coming to talk to us for five weeks…I feel like you guys have helped me out with a lot of my problems. I went through depression a lot over the past two years because I’ve had two of my best friends pass away…talking about depression helped me out a lot. Thank you!”

Test Driving a Career: MSU Extension Partners with PHS to Give Students a Variety of Experiences

From 2011-2016, Park High School graduating seniors have been interviewed about their after-graduation plans. Consistently, 30% (approximately 30 students each year) have indicated they will directly enter the workforce. However, when questioned further, the majority (25-28 students) said they had no specific plan and didn’t know where they were going to work. During the same period, Park County experienced a shortage of skilled workers.

Together, the Montana Department of Labor and Industry, Park County MSU Extension, and the Livingston School District developed a plan to allow all PHS student to explore career options, intern at local worksites, and develop a concrete future plan.

In the first year of the project, 300 students assessed their interests and skills and matched them with potential career options. Students selected several career options and then reviewed classes at PHS that provided them with skills to work in those careers. Twenty-one students are participating in career internships. Ardis Steinmetz, PHS guidance counselor, said, “This project is so exciting! All the students are engaged. You can hear them talking about careers in the halls even after our presentation ends.” The project will continue through the spring of 2021.

The YAM booklet is provided to every student with insights into mental health and a list of local resources.
Phillips County is in North Central Montana along the Hi-Line. It encompasses 3.2 million acres. Agriculture is the main industry in Phillips County, consisting of 54,000 mother cows, ranking third most in the state; 5,900 sheep; 157,400 acres of wheat; 40,000 acres of pulse crops; and 40,000 acres of irrigated land. The gross value of all agricultural commodities in 2014 was over $60 million dollars, excluding any government program. Recreation is also an industry in the county.

Weather continued to play a major role in 2018 for agricultural producers. Winter was long and cold with permanent snow cover beginning December 20, 2017 and staying through April 20, 2018. The National Weather Service in Glasgow estimated over 59 inches of snow for the winter. Having had a drought in 2017, hay supplies were short and with most of the older cows in the county calving in April, this created an unfortunate death loss among cattle producers. It is estimated that 7,000 head of calves (15%) were lost during March and April snows.

For the second straight year when the snow cleared in the spring, the winds started. Phillips County received no moisture in May and only about an inch of rain in June countywide. With July and August being traditional moisture-short months, it was impossible to catch up from the lack of moisture.

Better conditions finally came to winter wheat farmers as in September 2018, Phillips County received 2-3 inches of rain countywide. This moisture will be invaluable once spring comes in 2019 in case we are again in a dry spring weather pattern.
**Jim Schumacher Memorial Livestock Day**

More than 30 producers attended the annual Jim Schumacher Memorial Livestock Day on January 24, 2018. A Utah State Veterinary Specialist discussed how liver biopsy from cattle can aid in determining an animal’s mineral status, which is important because mineral imbalance can significantly affect weight gain of calves. Emily Meccage, PhD, Montana State University Extension Forage Specialist, discussed new research varieties for annual forage production. She has performed many statewide trials and reported that spring Triticale is a promising crop. Eric Riley from Montana Farmers Union provided an overview of the Pasture Range Forage (PRF) insurance program. PRF insurance can be placed on pasture, rangeland, and forage that is owned or rented. Brian Warr, veterinarian from Feedlot Health in Canada, discussed how producers can perform necropsy investigations on animals that are post mortem (pm). Warr demonstrated the critical photos that are helpful in determining cause of death for a pm animal with a video of a necropsy. Producers learned that a simple necropsy can provide clues in determining the cause of an animal’s death.

**Pulse workshop provides education, outlook for pulse industry**

Pulse production in Phillips County has grown to 40,000 planted acres according to the Montana Agricultural statistics in 2016. In response to this growing industry, the Phillips County MSU Extension agent held a pulse workshop. Kevin McPhee, PhD, Montana State University Pulse Breeder, explained how his breeding program will grow to meet seed and variety demands. Specifically, he discussed how to access to pulse genetics, pulse crosses, and winter pulse variety development. Jessica Rupp, PhD, Montana State University Extension Plant Pathologist, presented disease identification of pulses, control of pulse diseases with rotations and fungicide treatments. Joe Janzen, PhD, Montana State University Assistant Professor Department of Agricultural Economics, presented a market outlook for pulse crops, which is important as India had proposed significant trade tariffs on all imported pulses.

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**Crop Seminar 2018**

A crops seminar was held in Phillips County in November, 2018. The focus of the seminar was root diseases of pulse crops, herbicide carryover, and crop rotation. With commodity prices for wheat, peas and lentils at their lowest point since 2014, many producers are producing at or below their break even price. Producers must decide if each input is going to improve production to remain economically viable. Alan Dyer, PhD, Montana State University Plant Pathologist, discussed the limited seed treatment options for pulse production and encouraged the growers to apply seed treatment correctly and follow recommendations made in the Small Grain Seed treatment MontGuide from MSU Extension. With an input cost of $2 per acre to seed treat, producers need to make sure they are using the right product and rate.

Tim Seipel, PhD, Montana State Extension Crop Weed Specialist, cautioned growers to read the label to avoid carry over of herbicides to the next crop. Moisture or lack of it can also cause herbicides to carry over for a longer period. Kent McVay, PhD, Montana State University Extension Agronomist, showed how growers could grow the same amount and value of grain by using crop rotation as opposed to just wheat fallow. This can increase marketing options for producers. Thirty producers from Phillips, Blaine and Valley Counties participated in the program.
Extension Programs Benefit the Public in a Variety of Ways

Wool Pool Receives Record Prices
The Eastern Consolidated Wool Pool sold 102,191 pounds of wool in June, 2018. The Eastern Consolidated pool represents growers from the areas of the Front Range, Hi-Line, Plentywood, Sidney, Wibaux, and Beach, North Dakota. Total pool value was $282,583. There is a global shortage of fine wools, which has resulted in these record high prices. To place this into context, selling one ton of fine wool would equal $6,624 per ton. Not many “legal” agricultural crops can yield so much value.

Phillips County 4-H 2018
The Phillips County 4-H program started the 99th year with 180 youth. Youth range in age from Cloverbuds (five years old) to seniors in high school. Phillips County has 42 adult volunteer leaders and 14 youth leaders who give their time and talents to help youth achieve their goals to become productive members in our society.

Youth are engaged in 447 projects ranging from gardening to leadership, child development to rabbits. The top five most popular projects for Phillips County in 2018 were market swine, archery, air rifle, horse and market beef. The charts illustrate that you don’t need to have an animal and live on a farm to be a productive member in 4-H, as more youth are enrolled who live in town than live on farms and ranches.

4-H Livestock Judging
Forty-five youth participated in judging events, where the 4-H member practices sound reasoning and decision making skills by interpreting the topic, comparing the items, and ranking the items in proper order. The task is to decide which item is the best, which ranks second, third, and which is the least desirable. Youth started the judging with six classes of livestock: replacement heifers, breeding bucks, bull calves, market steers, market swine and swine feed. Area producers and feed businesses provided the animals for the classes. Youth then honed their skills by participating in miscellaneous judging classes which included bicycling, silverware setting, dog food labels, sheep card combs, soils and mixing tools.

Phillips County Youth by Grade

Phillips County Youth by Gender and Residence

4-H members attending judging events

Shearers carefully removing valuable wool.
Shooting Sports

The 4-H shooting sports program has been a great asset to Phillips County in helping youth develop an understanding of the safe, responsible use of firearms and archery equipment. Phillips County offers three disciplines including air rifle, air pistol and archery. In 2018, the Phillips County shooting sports program taught 51 youth the importance of safety, marksmanship, sight alignment, archery techniques and types of equipment. With the disciplines being taught, youth went on to compete at the state level, which demonstrates their dedication and responsibility, as well as self-confidence in a competitive project.

4-H youth receiving their award from shooting sports competition.

Marko Manoukian
Extension Agent
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Pondera County is located in the heart of the Golden Triangle, famous for quality wheat and malt barley production. Grain and livestock production provide approximately $70 million in gross revenue. The county contains 1,625 square miles and is very rural with approximately 6,400 residents in the communities of Conrad, Valier, Dupuyer, Brady, and Heart Butte, and there are five Hutterite Colonies.

The elevation varies from 3300’ on the eastern plains to 8500’ at the Continental Divide. Major watersheds include the Marias and Teton River drainages. Lake Frances near Valier and the Lake Elwell – Tiber system supply irrigation and household water to many of the county’s residents.

Other crops include alfalfa, seed canola, lentils and chickpeas. Unique to Pondera County is a mustard processing plant which purchases mustard seed from all over the state and southern Alberta.

Schools, medical care, retirement homes and hunting are important economic contributors in Pondera County. The Pondera Medical Center is the largest employer and serves a multi-county area with an economic impact of over $12 million.

Pondera County has four 4-H clubs with 92 youth and 31 leaders. Top 4-H projects include beef, swine, shooting sports, sewing, and horse. Fundraising and Marias Fair sponsors generously support the activities the 4-H members and leaders.

The MSU Extension Pondera County office has two Extension agents, Wendy Wedum and Adriane Good, who provide leadership in family and consumer science, agriculture, and the 4-H youth development program.
**Succulent Savvy**

In recent years, succulents have become a popular family of plants. They come in a wide variety of shapes, sizes, and colors, and are easy to care for. The term succulent is used to cover a broad category of plants that can store moisture in their stems, roots, and leaves. One succulent species is native to Montana and is our state flower – the Bitterroot.

Just before Mother’s Day, MSU Extension hosted a succulent workshop in partnership with Marias Greenhouse. Approximately 20 succulent enthusiasts from Pondera County and three surrounding counties gathered to learn about different succulent varieties, care requirements, how to propagate succulents from leaf cuttings, and how to make an attractive arrangement. Lynne Knobel, owner of Marias Greenhouse, offered an assortment of plants, containers, and decorative mosses and gravel. Thanks to the variety of options, the arrangements varied from simple glass containers with one plant to larger containers with complementary plants arranged around each other.

This program was well-received by the community, with some remarking it was a fun social evening as well as a great learning opportunity. One attendee noted that she found it a great way to get to know people in the community. There were a few mother-daughter pairs who were able to celebrate Mother’s Day early with an evening of horticulture-based bonding. Marias Greenhouse benefited from co-hosting the workshop as they profited from the extra traffic brought in and people buying plants locally instead of traveling to a bigger city to shop.

**Pressure Canner Best Practice**

Home food preservation has many benefits. People can control the amounts of sugar and salt in their food, save money on groceries when produce is home-grown, and provide high quality food for their family.

Food preservation is a well-researched topic. How food will be processed is just as important as the food’s preparation and the cleanliness of the jars and kitchen. Proper canning practices remove oxygen, destroy enzymes, prevent the growth of undesirable bacteria, yeasts, and molds, and help form a high vacuum in jars. Good vacuums form tight seals which keep liquid in and air and microorganisms out.
Low-acid foods must be pressure-canned in order to reach the high temperatures that kill many naturally-occurring bacteria that were not killed by washing, removing bruises, damage and spoilage.

Pressure canners have two types of gauges, a dial gauge or a weighted gauge. A dial gauge needs to be tested annually to make sure the correct processing temperatures are reached. If the correct temperatures are not reached, there is a greater potential for bacteria to grow and multiply. One in particular, *Clostridium botulinum*, creates a toxin that causes botulism, a neurotoxin that can be fatal or leave long lasting neurological effects.

Dial gauge testing is a simple test that takes about five minutes. It ensures that the gauge is reading the correct pressure during the cooking process. Gauges that do not pass the test need to be replaced to avoid foodborne illnesses. MSU Extension offers gauge testing and instruction on how to test gauges, as well as factsheets with the most up-to-date canning information.

**The Best of Both Worlds – 4-H Horse & Livestock Camp**

Horse and livestock 4-H members from Pondera, Glacier, Toole, and Liberty counties gathered on a warm weekend in June for fun and learning about their horse and livestock projects. Members got to learn about a variety of topics, including horsemanship, livestock judging, round robin showmanship, proper tack, roping, ration formulation for livestock projects, marketing, the basics of horse health, and the differences in eating habits and digestive tracts of horses, cattle, sheep, pigs, and goats.

4-H members appreciated the learning experiences and the practice of skills that they can use throughout their 4-H career. During the round robin showmanship workshop, everyone in attendance had the opportunity to practice showing every species, giving them early and varied experience before the Marias Fair competitions. At the livestock judging practice, members spent the afternoon learning how to judge livestock and practicing verbal reasoning for interviews. During roping practice, skilled ropers taught 4-H members the proper way to swing and throw the rope, leading to many excited whoops as the kids finally “caught” their fence post. Through all the workshops, there were many instances of mentoring between the older and younger 4-H members and a sense of community was developed.

In addition to all the learning, 4-H members got to have some fun. They were treated to root beer floats, watched a movie both nights of camp, did a nail and string art activity, had a horse relay, and capped the weekend with a very competitive horse and livestock quiz bowl. By Sunday morning, campers were full of smiles and begging to stay a little longer because they enjoyed camp so much.
Top Ten Projects in Pondera County 4-H

1. Beef 20%
2. Swine 20%
3. Horse 12%
4. Leather 7%
5. Leadership 6%
6. Sheep 8%
7. Archery 9%
8. Wildlife 6%
9. Goat 4%
10. Swine 8%

 Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Powder River County is a rural, agricultural county of 3,297 square miles, located in southeastern Montana. The county was created from Custer County on March 17, 1919, and named for the Powder River which runs through it. The Powder River was named because of the dark gunpowder-colored sand on its banks. Powder River County encompasses 2,109,728 million acres, most of which are used for rangeland.

The population of Powder River County is 1773, according to the 2015 census. The population is aging, with 52 years the average age.

Powder River County is primarily rural and agricultural, and mostly grazing land. There is limited oil and timber production. Since 1954, farm acreage has fluctuated between 1.54 and 1.72 million acres. The number of ranches has decreased and their average size has increased. Noxious weeds are a big concern in Powder River County – probably because there are an estimated 144,814 acres infested!
**Landowners use bio-control in the war on Leafy Spurge**

The fight against the spread of the noxious weed, leafy spurge, united landowners at Powderville last summer. The annual MSU Extension Range/Weed tour focused on all available tools for the containment and control of this noxious weed. The Powder River is completely infested, with control efforts primarily aimed at keeping the leafy spurge from spreading into alfalfa meadows; and using sheep and goats to utilize infested acres. Landowners on the tour encountered a sea of leafy spurge and questioned whether the past two decades of biological control (flea beetles and other insects which interfere with a plant’s life cycle) were of any use. After being armed with sweep nets and harvesting a healthy, substantial population of biological-control agents, the question then became, “what would this area look like without bio-control agents?” The spokesperson with Montana Bio Weed Control encouraged landowners to integrate weed management using a variety of control methods and besieged them, “don’t ever give up!”

The purpose of Annie’s Project is to empower women in agriculture to be better business partners through networks and by managing and organizing critical information. Twelve women attended the six-week program, receiving 18 hours of instruction in areas of production, financial management, human resources, marketing and the legal field. After participating in the “Real Colors” workshop, used to identify personal temperament and how to distinguish the personality type of co-workers, one participant stated, “even though we are all a different color, it is possible to communicate with others effectively with a little practice.”

**Empowering Women in Ag**

“I love the opportunity to learn, discuss and ‘cuss’ with women the issues we face daily working in agriculture,” said one participant of Annie’s Project. “It is the perfect venue to share problems and seek solutions with women who share similar lifestyles,” she added.

**Sheep Symposium**

Economic tools designed to help producers with their marketing and budgeting decisions were introduced at a Sheep Symposium in April. Twenty participants explored the use of online tools tailored to fit their individual needs. In addition, they learned how to control internal and external parasites in the flock.

**Irrigation Management on the Powder River**

Water quality and its long-term effect on soils was of key interest to irrigators on the Powder River. High Total Dissolved Solids (TDS, which is a measure of minerals in water—a negative one being nitrate, which can be toxic to livestock) and limited water supply contribute to a loss of production. Jim Bauder, retired MSU Extension Soil Scientist, provided 30 years of data on water quality and best management for irrigation to 51 producers.
4-H Youth Development

Project Fridays
4-H Project Fridays gave the 85 members of the Powder River 4-H program an opportunity to explore a variety of projects. Project workshops were held after school on three different days and highlighted the digestive track of a ruminant in beef nutrition; the importance of gravity in aerospace; measuring dry ingredients in Baking 101; identifying insects in Entomology, and more.

4-H is a Hoot!
Seventeen members of Powder River County 4-H gained knowledge about birds of prey at 4-H Camp Needmore. Dissecting owl pellets, learning about birds of prey and personally meeting an owl gave members insight into the life of raptors. Camp enriches lives by offering growth in physical, emotional and social competence. Through the camp experience, youth gain social skills, learn self-respect and character building, and create a sense of community living enhanced with service skills.

Teen 4-H Builds Community Leaders
Collecting “Books for Africa,” a community service event at State 4-H Congress led locally by the Teen 4-H Club, resulted in $150 donated to assist with freight and six large boxes of books. Nine members organized and taught workshops at the annual 4-H Summer Fun Day attended by 29 elementary-aged children. The event provides an opportunity for teens to develop leadership skills, enhance positive relationships with peers and younger children, practice teamwork and have fun. Teens also led activities and mentored 25 elementary-aged students at a literacy-based after school program, reading more than 200 books together.

Healthy Living in Powder River County
Montana's county health rankings in 2018 placed Power River County 28th out of 47 in health outcomes. Particular challenges included physical activity, alcohol use, and health care access. A 2015 regional needs assessment indicated that mental health and tobacco use were top community health needs. MSU Extension is using information from the rankings to help build a healthier community, making the healthy choice the easy choice.

Diabetes Empowerment Education Program (DEEP), brought diabetes education to Powder River County. Participants learned:
- how exercise benefits the absorption of insulin;
- to eat less sugars and more vegetables;
- the need to see an eye doctor once a year; and,
- to take diabetes medication.

Two people tracked their calorie, fat and carbohydrate intake and one person scheduled an appointment with their healthcare provider.

Broadus' Powder River Trails, an organization created and managed by MSU Powder River Extension, was selected as one of six organizations or communities to send a team to Montana’s Building Active Communities Initiative. A few steps closer in building a more active local environment include a $3,777 grant to build a community garden; $3,000 to build a fitness trail; and a year of technical assistance from the National Park Service to build a trail system.

Steps for Charity walking challenge, 4th of July Freedom Run and Moonlight Walk were events organized through MSU Extension to promote physical fitness and raise funds for building trails—raising $3,000. The farmer’s market raised
approximately $4,000 for local vendors and increased access to healthy foods.

The Youth Aware of Mental Health project, an adolescent suicide prevention program, was facilitated with high school freshmen. Montana results indicated there was a 49 percent improvement in students who were more comfortable to seek help with feelings of suicide, and 79 percent improvement in students seeking help for assistance with depression.

**Parenting is the Most Important Job**

MSU Extension worked with the Youth Issues Coalition to offer an Active Parenting class. A school psychologist, pastor and county superintendent assisted in teaching the class and offering child care. Participants learned the following:

- To channel negative thoughts because anger does not get results;
- To take two seconds to diffuse, regroup and be patient;
- To put oneself in other’s shoes and understand their reasoning;
- The meaning of the acronym HALT, which is hungry, angry, lonely and tired;
- To use polite requests, “I” messages, and firm reminders as discipline tools;
- Dictator, doormat and authoritative parenting styles and how and when they fit into those styles;
- To give physical affection daily;
- The importance of building a child’s self-esteem;
- And, to say “I love you” more.

Six participants learned the importance of building relationships with their children, and developed skills and the self-confidence to understand what they were doing right as parents. Volunteers provided a safe and caring space for eleven children to enable the parents to attend the six week program.

“It takes a village to raise a child.” African Proverb

Taking time to read and connect. Photo by Kelda Page

Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
Hi, my name is Jodi Pauley and I am your MSU Extension agent in Powell County. I am here to provide research-based knowledge to strengthen the social, economic and environmental well-being of families, communities, and agricultural enterprises! MSU Extension provides outreach for Montana State University and we are committed to the overall university goals of integrating learning, discovery and engagement.

Clientele benefit from MSU Extension in Powell County in the areas of agriculture, horticulture, 4-H/youth development, community development, and more. The office provides newspaper articles, free publications, and works with individuals one-on-one in several capacities, provides workshops in numerous program areas, and works with school children and 4-H youth across the county.
Gardening with MSU Extension around Powell County

Inmates have opportunity to complete Master Gardener education

Powell County is the home of Montana State Prison and Montana Correctional Enterprises (MCE). MCE provides daily training to over 500 inmates in the areas of vocational, agriculture and industry programs. While working with MCE in the summer of 2017, Pauley realized that there was a need for a Master Gardener class for inmates. Several of the inmates had asked Extension agent Jodi Pauley for horticulture information, MontGuide factsheets, and any types of literature related to gardening and horticulture. Pauley approached the MCE Ag director about holding a class and he was open to the idea, and in January of 2018, the first Master Gardener class was held at MCE.

There were six inmates allowed to take the class, all with an interest in gardening and the horticulture industry. The inmates interacted with instructors, did exceptionally well on the test, and all of them completed their volunteer hours. For their volunteer hours, they built six handicap-accessible raised gardening beds for the Community Garden in Deer Lodge and grew and planted all the flowers for the Powell County Museum and Old Prison Complex.

Comments from the inmates included: “thank you for this wonderful class, your wealth of knowledge and expert guidance added yet another tool to the toolbox. This was invaluable information I will use the rest of my life and I cannot wait for the next level.” Another inmate commented that he had two potential future employers and they were delighted to hear about his new knowledge through the Master Gardener program.

Pauley felt it was a new challenge to work with the inmates through her Extension work and enjoyed giving them skills that they can apply in their everyday life as well as having additional skill sets once they are released from prison.

Harvesting the Garden

Powell County MSU Extension Agent Jodi Pauley and Master Gardener Sheila Gill teamed up to spend six weeks teaching fourth grade students of Deer Lodge the fundamentals of gardening. Students learned about soils, seed growth, planting, herbs, and edible plants, and visited the community garden where they planted sunflowers and beans.

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 so that all the fourth graders who were now fifth graders could fully understand the components of garden harvesting. Gill incorporated the high school nutrition classes to harvest and cook fresh produce as well. Thirty students harvested produce out of Gill’s garden and then were tasked to find recipes in which they could use the garden produce. They made soups, salsa, salad and desserts incorporating the produce.

On harvest day, fifth grade students and high school nutrition students came together to harvest and learn about the vegetables and fruits of the garden. Pauley developed educational materials for various stations and the high school students...
facilitated the learning at each station. Afterwards, the high school students played garden jeopardy with the fifth grade students. The day ended with a lunch made completely from the garden, which the high school students served and everyone loved.

Gill volunteered over 50 hours towards this educational project plus over $500 dollars of produce and supplies throughout the project. High school students and their teacher volunteered over 170 hours in preparation and facilitation of the harvest day. Nutrition instructor Mrs. Perkins reported from her evaluations of the 2017-18 nutrition class that her students said the thing they liked best and learned the most from was Harvest Day.

**Deer Lodge Community Garden**

The community garden had another successful year in 2018. Volunteers spent over 300 hours in service to the garden by planting flowers and vegetables. They also did maintenance to the high tunnel, the grounds, and upkeep of items such as hoses and tools needed for the garden. Other volunteers took on early planting of flowers in the high tunnel and then transplanted them to containers to beautify the local library, City Hall, and main street bridge. Some volunteers planned the annual garden tour which incorporates the community garden. Three volunteers spent seven weeks in August running the community garden Farmers Market. Volunteers planted 11 boxes at the garden and the market is designed as a pick-your-own produce stand. Sales generated $481 in donations for the community garden, which help to pay the insurance and maintenance of the high tunnel, boxes and grounds around the garden. The garden also donated several pounds of tomatoes and onions to high school nutrition classes. The garden itself continues to support a thriving community of gardeners from all walks of life who share ideas and produce. A 4x8-foot box produces on average 72 pounds of produce, and 4x4-foot boxes in the greenhouse typically produce over 50 pounds of tomatoes.

The community garden project was started in 2012 and has proven its sustainability. Extension agent Jodi Pauley feels this is one of the most positive community development projects that Deer Lodge has embraced.

**CAREER FAIR**

Approximately 350 high-school-aged children from Philipsburg, Drummond and Deer Lodge were introduced to Powell County MSU Extension at the second annual career fair. Jodi Pauley, Extension agent for Powell County, displayed items about Extension ranging from 4-H to Agriculture. Students played Jenga and answered questions that were correlated on the pieces about Powell County, and state and national agriculture. Other questions were about MSU Extension in Montana and the 4-H program in Powell County. Most did not realize that agriculture brings in $34 million dollars annually to Powell County, cows outnumber people 5 to 1, and that currently there are 60,000 national job openings in the field of agriculture and only 35,000 graduates coming out of college with agricultural degrees.
4-H Highlights

MSU Extension agent Jodi Pauley visited with all seven county 4-H clubs and introduced members to effective Parliamentary Procedure with a lesson in making trail mix. Each member had to make motions and go through the steps to build the trail mix. It was reported that some members who did not participate at meetings before Parliamentary Procedure training now had better confidence in making motions and participating in discussion.

Pauley taught two sessions of Animal Quality Assurance for 4-H members. Many of the older members have reported that by doing hands-on exercises such as reading vaccine labels and giving shots in fruit gives them a better understanding of animal health needs.

4-H Show camp was held in June and gives large animal project members who are in their first to third year of the project a chance to learn how to fit and show their animals. Many of the past participants now help teach the camp. 4-H teen leaders taught the participants how to get their animals ready for show and taught them the skills needed to get ready for fair and other shows. The peer-to-peer teaching went well, giving the teen leaders new skills in teaching and communication, and the younger kids the ability to work in-depth with their animals. Many of the members participated in the local jackpot show the day after camp, using the skills they had just learned.

All photos by Jodi Pauley.

Jodi Pauley
Extension Agent

Sheila Finco
Administrative Support
Welcome to Prairie County

Prairie County is a rural county, covering 1,730 square miles with a population of 1,182. Terry is the only incorporated town in the county and serves as the county seat with a population of about 600.

Agricultural production and agriculture business form the basis of the economy in Prairie County. Livestock and dryland small grain production dominate the plains, while hay, corn, sugar beet, and pinto bean production are most prevalent on the river bottoms. About 80% of the land in Prairie County is considered rangeland, 15% is considered cropland, and there are 186 farms.
MSU Extension Offers Agricultural Services to Assist Farmers and Ranchers

MSU Extension in Prairie County offers services to assist producers including forage testing, insect and weed identification, plant disease diagnostics, crop variety information, ration balancing, feed analysis, and range monitoring.

Nitrate quick tests are performed in the Prairie County MSU Extension office to test forage for the presence of the toxin nitrate. As a result of educating producers about the importance of testing their small grain forages for nitrate, 17 producers submitted nearly 30 feed samples to be tested. During the summer of 2018, 52% of the samples tested positive for nitrate, and 29% of those samples tested high enough that producers would have to delay cutting or feed cautiously by diluting the feed ration.

The quality of livestock water remains a priority for livestock producers in Prairie County because water sources in the county tend to have high levels of total dissolved solids, especially sulfates, which can cause serious livestock health issues. MSU Extension in Prairie County, in cooperation with the Prairie County Grazing District, have provided a great deal of education over the years about the importance of assessing livestock water quality and the need to continually monitor that quality as values can change year to year. As a result, several producers now routinely test their livestock water resources. One of these producers submitted a water sample for testing this fall based on the knowledge he had gained about how high rainfall events can increase the concentration of sulfates.

MSU Extension Hosts Agriculture Educational Events

MSU Extension agents in Prairie, Dawson, Wibaux, Fallon-Carter, Powder River, Rosebud-Treasure, McCon, Custer, and Garfield counties cooperatively plan the annual MSU Extension Winter Ag Series, which focuses on topics of regional interest and importance. Winter Series is the largest adult education event in Prairie County. 2018 topics included water quality and irrigation management, controlling marestail and narrowleaf hawksbeard, and cropping strategies to reduce soil salinity. As a direct result of this program, a producer received advice on irrigating with poor quality water on a field that had recently been converted from dryland to irrigation.

Prairie County MSU Extension works cooperatively with the Prairie County Grazing District and local producers to plan an annual range tour featuring researchers from the Fort Keogh Livestock and Range Research Laboratory. Rangeland soil health, pasture utilization and animal behavior resulting from different post-weaning management strategies, livestock water quality, rangeland fire research, annual brome grasses, and new technology in research were topics of discussion at the 2018 tour. Producers have formed relationships with researchers at Fort Keogh as a
long-term result of hosting tours over the past 12 years, and report using relationships with these experts for advice in their livestock operations.

MSU Extension Helps Landowners With Invasive Plant Management

The noxious weed houndstongue has become an increasing problem in Prairie County due to the easy nature of seed spread via wildlife and livestock. MSU Extension wrote a Montana Noxious Weed Trust Fund (NWTF) Grant to aid private landowners, public land agencies, and the Prairie County Weed District in coming together to educate producers about houndstongue management, as well as implement a concerted effort to reduce spread of the weed. MSU Extension and the Prairie County Weed District teamed together to host a Spring Weed Tour where the main focus was identification and control of houndstongue, Canada thistle, spotted knapweed, Russian knapweed, and diffuse knapweed. In the second year of this project, the Weed District has reported success with control efforts utilizing recommended herbicides.

The Tri-County area of Prairie, Fallon and Wibaux counties is a location where leafy spurge is a permanent problem. More than 25 years of MSU Extension educational programs and sustained integrated weed management efforts have helped contain the leafy spurge infestation to the same area and slowed the spread to outlying areas. The project began as a cooperative NWTF grant project, and even after the grant concluded, an annual tour still takes place to educate and engage producers in noxious weed management. 2018 tour topics were plant identification, grazing systems to manage weeds, and the role of bio-control in noxious weed control. At the tour, participants learned to collect and sort bio-control leafy spurge flea beetles, which are used to feed on the leafy spurge plants to decrease viability. Additional flea beetles were released in a Cabin Creek drainage on the tour day.

Prairie County 4-H Provides Members Opportunities to Learn Leadership, Citizenship, and Life Skills

The Prairie County 4-H program strives to provide educational opportunities in a wide variety of 4-H project areas. More than 80 percent of 4-H members participated in at least one project workshop during the 4-H year. Projects highlighted were livestock, horse, visual arts, leatherwork, baking, sewing, electricity, woodworking, and Cloverbuds (for youth ages 5-8). The workshops occurred over the course of the summer with five project work sessions, a series of mounted 4-H horse clinics, and a livestock showmanship clinic. 4-H members demonstrated competence and confidence in these project areas during the 4-H interview judging process at All Events Day and the Prairie County Fair.

In 4-H, we are intentional about providing youth opportunities to gain communication, leadership and teamwork skills to enable them to become contributing citizens. Volunteer leaders and 4-H teen leaders were engaged to lead project workshops with the county agent. Ninety percent of Prairie County 4-H members between the ages of 13 and 19 served in leadership roles during the 2017-2018 4-H year by coordinating county events and teaching at project workshops.

A recent Prairie County 4-H alumni was able to make use of the skills gained in the 4-H photography project and her photographs were featured at an exhibit at the Evelyn Cameron Heritage Center this summer. She works around the state as a traveling CNA, and was recently accepted to travel abroad with the Montana 4-H International Program for Young Adults. She credits 4-H with giving her the experience and confidence to take advantage of these life-building experiences as an adult.
MSU Extension offers programming in Family & Consumer Sciences

MSU Extension in Prairie County had a Family & Consumer Science track of workshops during the annual Winter Ag Series program in January. Tara Andrews, MSU Extension Agent in Custer County, taught food preparation techniques with electric pressure cookers, and Prairie County Public Health Nurse Tylene Eaton spoke on the importance of preserving family histories and stories. Participants with electric pressure cookers reported that they learned to operate their appliances safely and that they now use them regularly to prepare quality meals for their families.

MSU Extension Family Economics Specialist Marsha Goetting visited Terry in September to speak about estate planning. This program focused on Montana’s law for distributing tangible personal property after the death of the owners. The program also addressed tools to designate beneficiaries, such as contractual arrangements that specifically provide for the passing of property to a beneficiary. One of the key messages that the participants reported learning was that a contractual agreement takes precedent over a will. Participants also shared their experiences and exchanged ideas on strategies to distribute personal property.

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 and civic goals by publishing a monthly newsletter containing information on subjects like food and nutrition, preparation, and safety, health, financial management, and gardening. These clubs contribute significantly to the community, donating over $3,500 from fundraisers to the fire department and fairgrounds in 2018.
Welcome to Ravalli County

Nested between two mountain ranges in western Montana, Ravalli County and the Bitterroot Valley are a haven for those who wish to live the Montana lifestyle. The 43,000 residents of Ravalli County enjoy blue-ribbon trout fishing on the Bitterroot River, hunting, hiking, and recreating in the Bitterroot National Forest, and partake in a diverse and growing local food scene. Agriculture, natural resources, recreation and tourism, construction, and small business opportunities all combine to contribute to the county economic base. There are nine small, rural communities spread through the valley. Hamilton, the largest of our communities and the county seat, serves as a gathering point for a variety of events and needs. The MSU Ravalli County Extension office has four staff members offering services to all Ravalli County residents.
Community & Family Health and Wellness Education

Nutrition Education, Food Safety and Cooking Classes

In Ravalli County, access to evidence-based nutrition education is available to all age groups and individuals through programs and partnerships with Extension faculty. Three diverse programs were offered in 2018 to the community, serving 242 adults and 348 youth.

The Supplemental Nutrition Assistance Program-Education (SNAP-Ed) offers free cooking and nutrition classes to SNAP eligible adults and elementary students in the first, third and fifth grades. A school’s eligibility is based on participation in the Free and Reduced Lunch Program. In Ravalli County, qualifying schools for the nutrition classes include Darby, Hamilton, Stevensville and Victor. These same communities are offered the nine-week Eat Smart, Be Active program to help adults create healthy, nutritious meals while staying within a tight food budget.

In addition to the SNAP-Ed program, individuals in the community have expressed interest in making nutritious meals using an electric pressure cooker, which has grown in popularity in recent years. Over 150 adults have completed the two-hour class called Meals in Minutes, which was created in Ravalli County in partnership with other agents across the state. The class taught individuals safety mechanisms, nutrition information, and knife skills to create quick, healthy meals for their family.

Restaurants, food trucks and other food establishments have depended on Extension resources for ServSafe food safety training in recent years due to the change in the FDA Food Code, requiring every food establishment to have at least one person trained in an eight-hour food safety class. MSU Extension in Ravalli County provides this course twice a year in partnership with Missoula County MSU Extension.

4-H Youth Development

Montana’s 4-H Youth Development program in Ravalli County offers experience for youth to learn, discover and engage, with an emphasis on teaching life skills, responsibility and the value of citizenship. In the 2017-2018 4-H year, MSU Extension served over 485 youth in 21 community clubs through the assistance of 150 registered volunteer leaders. Every year, nearly 2,000 youth are reached through school enrichment and afterschool programming opportunities, such as the Fourth Grade Farm Fair and Sixth Grade Conservation Days. Experiential learning occurs throughout the year with their enrolled projects, ranging from photography to livestock, as well as at county-wide opportunities such as annual junior and teen camping programs.

Youth have the opportunity to build skills and knowledge in the project of their choice. Many youth engage in the 4-H program through club work as a member and complete a project. This past year, the 4-H program grew in
Community walking maps, encouraging residents to get out and move. Photo by Katelyn Andersen

Wellness in the Bitterroot

Personal health and well-being is an important facet of living an enjoyable life. Research shows that physical activity is a primary prevention tool used to prevent chronic diseases and improve mental health.

Starting in the fall of 2016, the MSU Extension in Ravalli County partnered with MSU College of Nursing students enrolled in the Population Based Nursing Care in the Community course. As a part of the class, the Family and Consumer Science Extension agent works with college nursing students to complete a community outreach project. The students chose to create a walking map to provide a resource to encourage physical activity in the City of Hamilton. This partnership has continued through the spring and fall semesters in 2017 and 2018 with new nursing students and expanding the project with an incentive program called Bike, Walk, Roll & Win and development of community walking maps, which now include Hamilton, Stevensville and soon-to-be-released Darby Walking Maps. In November 2018, the health-incentive program, WINter Wellness kicked off by engaging adults to complete any form of physical activity through the holidays and winter months.

In two short years, the impacts of this partnership have elevated the desire to create a culture of health in the county and strengthened collaboration with other county non-profits, individuals, businesses and government entities. As an example, the City of Hamilton and Hamilton Downtown Association plan to incorporate the Hamilton Walking Map as a part of their wayfinding program to increase physical activity and tourism by showing how quickly individuals can walk to wildlife and river access from downtown Hamilton.
Supporting Growers of all Sizes in Ravalli County Agriculture and Horticulture

MSU Extension in Ravalli County organized and hosted workshops and educational opportunities to meet the needs of landowners and growers of all sizes and focuses throughout the Bitterroot Valley. Seminars, field days, and workshops serve agriculturalists and backyard horticulturalists in Ravalli County and target the needs and desires of the producers to have up-to-date, research-based information and methods to help them make decisions.

A presentation held in Stevensville highlighted perennial forage management and integrating legumes into pastures, and was well-attended by 35 people. Two specialists from MSU Bozeman led a half-day grazing and pasture management field day, teaching 27 participants about how to scout and collect data for the health and utilization of grasses. Two full-day pesticide safety, equipment calibration, and weed management programs were all offered to support agriculturalists looking for new ideas, and provided license recertification credits to 64 participants.

Horticulturalists and backyard enthusiasts learned and practiced how to properly prune fruit trees on a snowy February weekend in Hamilton, and others learned about the importance of soil testing and soil fertility in their yards and gardens in May. A cohort of 10 Master Gardeners completed the level 2 Master Gardener class series, and have been engaged in volunteer actions throughout the communities of the valley, sharing their knowledge and love of gardening pursuits.

Participants listen to Megan Van Emon and Emily Meccage, MSU Extension Specialists, during a grazing field day. Photo by Patrick Mangan
Welcome to Richland County

Named in an attempt to attract settlers, Richland County is Montana’s twenty-first most populous county, with an estimated 10,810 residents as of the 2012 census. Sidney, the county seat, is the state’s seventeenth-largest city, with a population estimated at 5,934 in 2012. Other towns in Richland County include Crane, Fairview, Lambert, and Savage.

Agriculture and oil production are widely recognized as two of the staples of Richland County’s economy. Much of Richland County is located in the Bakken Oil Zone and cattle, wheat, sugar beets, pulse crops, and other small grains are the top agricultural commodities produced.

Federal, State, and County research entities combine to highlight agricultural research conducted in MonDak Region

Agricultural producers in Richland County are fortunate to have three laboratories located within a 45-mile radius, all focused on agricultural research. The United States Department of Agriculture’s Northern Plains Agricultural Research Laboratory (USDA-NPRL) located in Sidney, the North Dakota State University Williston Research Extension Center (NDSU-WREC) in Williston, North Dakota, and the Montana State University Eastern Agricultural Research Center (MSU-EARC) also in Sidney, are all facilities dedicated to solving problems and conducting research with the end goal of increasing agricultural profitability in the MonDak region.

In a show of solidarity for local agricultural producers, it was decided to host an event to showcase the facilities latest and greatest research. Bringing together scientists from each research center, Richland County MSU Extension Agent Tim Fine helped coordinate and host the first annual MonDak Ag Research Summit.

More than 100 producers from counties in northeastern Montana and Northwestern North Dakota attended the summit held at the Richland County Fair and Rodeo grounds. Producers received updates on the latest research, and were given opportunities to visit with research scientists from each laboratory and share concerns and ideas for needed research.

From a research scientist in attendance “the MonDak Ag Summit is as beneficial to me as a scientist as it is to the producers in attendance. I feel that the research that I am doing is validated and have new ideas for what types of research producers are most interested in.”
QPR: Ask a Question to Save Lives

According to data from the American Foundation for Suicide Prevention, 44,965 Americans die by suicide each year, an equivalent to 123 people per day. In the state of Montana, one person dies by suicide every 33 hours, placing Montana with the highest suicide rate per 100,000 people in the nation. A suicide prevention training called Question, Persuade, and Refer (QPR) invites everyone to develop skills to aid in a suicide crisis. QPR walks a person through three intervention steps: asking the question, persuading a person who is suicidal to stay alive and referring them to professional help, which will aid in saving a life from suicide. Training from a certified instructor is an hour long, and it provides people with tools to help in their own community. Since January of 2018, 122 adults and 79 youth across the state have been trained in QPR. One adult class participant stated “this training provides basic training that ensures that anyone can help prevent suicide and I plan to use it in my mentoring instances.” A youth participant stated “I came here to try to find out how I can help and I came out inspired to make a difference and knowing how to make a difference. The stuff we talked about was deep and hard but it was reality. I feel that everyone needs to hear and take this course because it is a very real thing that is rarely talked about.” Through QPR training, Montana community members are learning important skills to help save lives.

StrongPeople is Back in Richland County

StrongPeople (StrongWomen) is a moderate strength training program for middle-age to aging individuals to help them improve their overall health and wellness. Benefits of strength training can include increased muscle mass, strength and balance, all of which help participants age with ease.

Upon request from members of Richland County, the StrongPeople program is back in action. Classes were offered in the spring with participation of nine individuals and classes currently have an enrollment of six. One Richland County resident from the spring classes said “The exercises made me feel stronger and more energetic-a good way to get back in shape after the long winter. Enjoyed exercising with the other women-fun!” Another Richland County resident said “I am so glad because now I am up to 4-pound upper body weights and 1-pound ankle weights, and can proceed to 2-pound ankle weights.”
According to spring class participants, 94% felt their health was much better, 91% felt they had more energy and 85% felt much less joint pain at the completion of classes. From a mid-class check-up, a Richland County resident noted “I feel more sure of myself as far as balance goes.” The StrongPeople classes have been shown to help individuals in Richland County better their health and wellness.

Richland County Youth Participate in Experiential Learning through 4-H

“This year I learned that 4-H is not about the ribbons, but about making new friends, trying new things and doing your best no matter what.”

– Richland County 4-H Member

4-H provides opportunities for youth to participate in learn-by-doing projects that guide them in the experiential learning process. In Richland County, 202 youth are engaged in learning outside of the classroom through 4-H. Projects with the most participation are beef, swine, visual arts, woodworking, photography, sewing and textiles. Richland County 4-H added two new projects this year: market rabbit and market poultry, which allowed three new members to participate in educational livestock projects. Members also participate in club meetings, service learning projects and a variety of activities and events that aid in their growth and development. 4-H provides youth with positive experiences through relationships with caring adult volunteers in safe and inclusive environments. Youth in Richland County partner with 129 volunteers to find belonging, develop independence, secure opportunities for mastery and to practice generosity. Members and volunteers in 4-H practice generosity through service learning activities or community service projects. This year, Richland County 4-H clubs reported completing 65 service projects that benefitted Richland County and surrounding area residents. Overall, the 4-H program engages youth to help prepare them for their future.

4-H Youth at the Richland County Fair
Welcome to Roosevelt County

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 Extension agents to the people.

The Roosevelt County MSU Extension staff is proud to provide services in the following areas:

- 4-H Youth Development
- Agriculture and Horticulture
- Family and Consumer Sciences
- Community and Economic Development

Roosevelt County was founded in 1919. It encompasses 2,385 square miles of Montana’s land and has a population of approximately 11,305. The county seat is Wolf Point, and other incorporated cities include: Bainville, Brockton, Culbertson, Froid and Poplar.
2018 Roosevelt County Range Tour

Range land is an important, but finite resource for cattle and sheep production. Maintaining and improving range health is vital to the economic and environmental health of the local area. To help address a need for range health education, the Roosevelt County Range Tour was created. Fifteen people attended this first year. In addition to the invited speakers, three local producers’ efforts to improve range health were featured in this year’s tour. These producers’ efforts included bio-control for the noxious weed leafy spurge, use of bale grazing, and installation of solar-powered wells to provide drinking water for livestock. Attendees found this aspect of the tour especially useful, as they were able to hear firsthand about the successes and difficulties producers have had when implementing these projects. For example, one attendee has had a pasture with difficulty in maintaining adequate grass coverage. After the tour, the attendee stated “I have to do something with that pasture, I think bale grazing may be the way to go.” In fact, 83% of attendees planned on implementing in their own operation something they had learned on the tour.

37th Swank Variety Tour

The Swank Variety Tour is a joint program of MSU Extension in Roosevelt County and MSU’s Eastern Agricultural Research Center. The variety tour allows local producers to view different varieties of spring wheat and durum under local farm conditions. Area producers have often voiced the importance of the variety tour when they are making seed-purchasing decisions. The tour also featured talks about local weed issues, including control of Narrowleaf Hawksbeard. Education continues to be an ongoing need due to the relative novelty of this weed and the difficulty in controlling it, especially in pulse crops.

Additionally, the tour has become important to the area as a long-standing tradition, with over 100 people attending this year.

Annual MSU Bus Tour Visits Northeastern Montana

Montana State University deans, faculty, administrators, and student leaders visited the northeastern part of the state during the seventh annual MSU Bus Tour on June 19-21. The bus tour featured Valley, Daniels, Sheridan, Roosevelt, Petroleum, Garfield and McConé counties and the Fort Peck Reservation. Tour stops included Fort Peck, Froid, Glasgow, Jordan, Lewistown, Malta, Plentywood, Poplar, Sand Springs, and Scobey.
Bozeman and the rural areas of northeastern Montana are neither close on the state’s map nor in population, but Montana State University in Bozeman is making a commitment to support Montana’s smaller schools and communities. In Froid, Principal Janessa Parenteau addressed the educational challenges in smaller communities. Parenteau noted the Froid community was settled in 1910 and some of the current students represent the fourth generation of families that have walked through the school’s hallways. “We’re just not a school, we’re a family,” Parenteau explained to MSU officials. Jayne Downey, director of MSU’s Center for Research on Rural Education, told the group the areas of focus for the Center for Research on Rural Education include: preparing new teachers and leaders for rural contexts, developing resources for Montana’s rural teachers and leaders, and supporting Montana’s communities.

Following the discussion of rural education, Joni Sherman, Manager, and Heather Robertson, Project Service Manager for Dry Prairie Rural Water joined the bus tour for the short ride to Culbertson. They explained how Dry Prairie has provided clean, safe drinking water to thousands of northeastern Montanans.

**A Taste of the Past: Gathering Montana’s Food Heritage**

Montana State University’s Center for Western Lands and Peoples and the Montana Historical Society gathered documents and artifacts related to northeastern Montana’s food history and customs at “A Taste of the Past: Gathering Montana’s Food Heritage” event in Sidney this past September. MSU Extension agents in Richland and Roosevelt Counties collaborated with project directors and invited area residents to bring traditional recipes, community cookbooks, historical photographs, menus, records of home demonstration clubs, and artifacts related to food preparation and preservation to the event. While the historians collected the stories, the students scanned and gathered information about the documents and artifacts.

Area residents brought in items ranging from cookbooks and recipe cards to bread rising bowls and krumkake bakers. The Roosevelt County MSU Extension agent brought in her family’s set of three krumkake bakers, dating from the early twentieth century to the present, which showed continuity in area food traditions. Debra Rasmussen of Culbertson brought in a group of items including a large wooden bowl, paddle, and mold that illustrated how butter was packed into one-pound blocks for use. All of these items were made around 1900. These and many other recipes and artifacts that were documented speak broadly to the history of the region’s local food customs.

The digital images and information collected will be used to study Montana’s food heritage and history. Additionally, the historians will return to Sidney in 2019 for a public program based on the stories and information gathered.

**County Tri-funded Support**

A legal partnership among federal, state, and county governments cooperatively fund MSU Extension programs. This unique funding structure provides research-based education and programming. Quality MSU Extension programming in Roosevelt County is successful due to local financial support from the Roosevelt County Commissioners and community involvement.
Roosevelt County Day of Service Held in Culbertson

Over two dozen community groups in Roosevelt County and beyond collaborated to offer a Roosevelt County Day of Service in Culbertson. The event provided a free meal for over 200 residents in addition to many services. The meal was prepared by Communities in Action, AmeriCorps, and Richland Federal Credit Union; Blue Rock Distributing and Sheridan Electric were sponsors.

One service that people utilized was the shredding truck, sponsored by Action for Eastern Montana. An additional receptacle was obtained due to demand for shredding documents. Roosevelt Medical Center and the County Health Department provided hearing, vision, blood pressure and glucose checks and offered medication disposal bags. Additionally, the Richland County Department of Health and AmeriCorps provided information on skin cancer and chronic diseases. The Roosevelt County DUI Task Force and the mobile veterans’ truck offered their services to the public. Those attending received smoke and carbon monoxide detectors and reusable shopping bags sponsored by (LIEAP) Low Income Energy Assistance Program.

Resources specifically for seniors were available from the Roosevelt County Sheriff’s Office, Richland County Federal Credit Union and Aging Services. These entities provided information on fraud, state health insurance assistance programs and Medicare.

The Missouri River Rats 4-H Club and Culbertson FFA clubs provided tire and antifreeze checks on over a dozen vehicles. Youth activities included painting projects, books, and drawings for small door prizes. Taste-testing and education on healthy foods for youth was provided by Montana No Kid Hungry and AmeriCorps VISTA.
Welcome to Rosebud-Treasure Counties

Rosebud and Treasure Counties represent a diverse landscape and population. Covering 6,000+ square miles, the two counties include three incorporated cities, Forsyth, Colstrip, and Hysham, along with several additional communities and the Northern Cheyenne Reservation. The northern portion of both counties provides wide-open prairies met by the Yellowstone River. The southern portion offers more rugged, pine-covered hills. Farming, ranching, energy development, and railroad make up the majority of the diverse economic drivers. MSU Extension in Rosebud and Treasure Counties is in large part funded by the taxpayers in both counties and your local and financial support is greatly appreciated.
Community Foundation Hits $500,000 Goal

Just over 10 years ago, a major effort was underway to create long-term funding for Northern Rosebud County communities. The Community Foundation began with a financial gift from an area rancher. Either through good fortune or pure coincidence, the gift came about during the MSU Extension-led Horizons Project, a statewide community development effort being conducted in Forsyth. Through this effort, MSU Extension helped initiate community discussions, recruit volunteers and organize the first planning committee of the newly created Foundation.

This September, the Community Foundation achieved a $500,000 endowment and has reinvested over $125,000 back into Northern Rosebud County. Financial support has helped create and build amenities like a community park in Rosebud and new playground equipment in Forsyth. It’s also assisted with the development of needed programs like a new non-profit daycare, a community garden and expansion of the local food pantry.

MSU Extension agent Jennifer Anderson, who’s been involved since the beginning, said “the truly wonderful thing about the Community Foundation is its permanency. It’s an investment in our future. The funds given today will be helping generations to come. This is extremely important as the landscape of rural communities is changing dramatically across Montana. We will need to think creatively about funding important quality of life initiatives.”

Looking back over the past 10 years, she’s quick to add, “I’m so incredibly proud of the volunteers and donors who have helped grow the Foundation to what it is today. It’s a wonderful legacy to leave future generations.”

Little Champs Basketball Proves Youth Development Comes in Many Different Shapes

MSU Extension agent Jennifer Anderson admits it’s unconventional. She’s quick to add that Extension youth development programs are about kids, and sometimes it takes a different approach to get them hooked. Case in point: Little Champs Basketball Program. Launched this past summer, the program attracted over 40 youth, many new to Extension.

“It came from some unfortunate circumstances,” said Anderson as she described the situation - the need for skill development, the desire for a program and the lack of any existing organized effort. Anderson saw this as an opportunity to organize volunteers and add a traditional 4-H spin, recruiting junior leaders to lead in a different way when they were high school sports players.

“It was a win-win situation. The older players developed leadership skills and relationships with younger members. They became great role models...
on and off the court. The impression they left on the younger members is still evident while the younger participants learned and improved their skills. Plus, they were physically active and increased their self-confidence. When asked if this was a good investment, one parent offered a resounding, “YES! This benefits the kids in our community, promoting good behaviors and life lessons.”

Reflecting back on the program, Anderson said, “teaching basketball is not an innovative idea, it’s a little different than what MSU Extension has done traditionally. However, there was an identified need and we created a successful outcome. This is what MSU Extension has been doing for over a hundred years; helping communities meet their own needs with sound solutions.”

Living with Dementia series provides lifeline to local caregivers

More than five million Americans are living with Alzheimer’s, and even more stunning, one out of three will die from Alzheimer’s disease or another form of dementia (according to [CDC? what is source for statistic?]). Living with any debilitating disease is hard. It’s even harder in rural areas, where people tend to feel more isolated and alone.

As people age, more families are filling the role of caregivers. They may be unaware of resources and support available, and set out on the caregiving path alone. Recognizing this, Rosebud County Senior Services, Public Health and MSU Extension teamed up to develop a program focused on education and social support. Living with Dementia became a locally-delivered program with a $1,000 grant from the Montana Geriatric Education Center.

MSU Extension agent Jennifer Anderson talked about the program’s impact, “the demand and tremendous need for this was immediate. We had an overwhelming response from the community. More so, at each session, people shared how dire their situation was, how isolated they felt and how incredibly grateful they were to hear from others in similar situations and to visit with each other and resource people. It was clear many found a lifeline through this program by leaning on each other and learning about available resources they didn’t know existed prior to the sessions. Once again, this is a great example of how MSU Extension identifies a community’s needs and creates a collaborative environment to offer real solutions. I have no doubt this simple program made a positive impact on many lives.”

Empowering Women In Agriculture

MSU Extension Rosebud-Treasure County agents Jennifer Anderson and Melissa Ashley opened the doors for local women who gathered in Forsyth to participate in the initial Rosebud-Treasure County Annie’s Project series. Annie’s Project is a national nonprofit organization designed to strengthen women’s roles in the modern farm or ranch enterprise.

It was evident that Annie’s Project filled a need after Anderson and Ashley successfully introduced the project to local women at a preliminary planning meeting to gauge interest and brainstorm local topics of interest. The first Rosebud-Treasure Annie’s Project cohort met weekly, where they found themselves in a safe learning environment alongside local agriculture-minded women.

The six-week program aimed to empower and equip women to develop useful skills to become better partners and leaders within their farm or ranch operation. Speakers covered five risk areas: financial, human, legal, marketing and production. Not only did the participants benefit from the expertise of each speaker, they gained knowledge and new practices from discussion amongst each other.

A pre- and post-evaluation was conducted where the need for estate/succession planning within agricultural operations in Rosebud and Treasure Counties became evident. One participant shared that she had made a will because of her involvement in Annie’s Project. Another shared that she had made an appointment with a lawyer to begin their family’s succession plan.

Farming and ranching is a complex business, involving many moving parts and business partners. Annie’s Project helped participants improve skills needed for a sustainable, thriving agricultural operation.
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 is located in Northwestern Montana. It is bordered on the west by Idaho’s Panhandle and is Montana’s 18th most populous county with a population of about 11,336 (2015 estimate). The county was established in 1905 and named after Wilbur Fisk Sanders, pioneer and U.S. Senator from Montana. Sanders County encompasses 2,790 square miles and just over 1.7 million acres. There is a diverse mix of agricultural land, small acreage subdivisions, rural communities and range or forested land. The economy of Sanders County is specialized in agriculture, forestry, fishing, hunting, mining, quarrying, oil, gas extraction, and construction, which employ more people than what would be expected in a location of this size. The largest industries in Sanders County are healthcare & social assistance, construction, and retail trade. Sanders County includes the city of Thompson Falls as the county seat, Plains, and the town of Hot Springs. The Clark Fork River, a tributary of the Columbia, runs the length of the valley in Sanders County. The county also encompasses the Cabinet Mountain Wilderness and two National Forests. MSU Extension provides a unique set of services and educational resources to meet the diverse and changing needs of local clientele. Sanders County MSU Extension is supported by Commissioners Carol Brooker, Anthony Cox, and Glen Magera.
Sanders County 4-Hers visit Hopkins County, TX

In July 2018, Sanders County 4-H members traveled to Hopkins County, TX, for their first outbound 4-H interstate exchange with five youth and one adult. An interstate exchange program is an exciting opportunity for youth and adults to experience the geography, culture and heritage of a local community of 4-H youth and leaders with a common 4-H identity yet potentially different perspectives. Participants learn how states are similar but also how they are different, such as weather conditions, geography, local industry, and history of each state. For example, some states are better suited than others for agriculture and produce a large part of our nation’s food. Other states boast beautiful beaches and provide places for recreation. For one week, youth learned about the Hopkins County 4-H Program and the livelihoods of citizens throughout the county. Youth were guided through Caddo Lake in Jefferson, toured a local dairy museum, the historic courthouse and heritage park, fed calves and milked cows at a 1,000 cow dairy, and played at Splash Kingdom. They visited Mount Rushmore, Crazy Horse, and the Arches National Park in Moab along the way as well. Youth were surprised at the many differences in programs between the states such as Texas 4-H having several major state livestock shows in Fort Worth, Dallas, Houston, Austin, San Antonio, and San Angelo. Members created new and lasting friendships. Youth from Sanders County will be fundraising to travel for future exchange experiences.

Canning Class Teaches Students How To Safely Preserve

Community members were eager to learn new skills for preserving their harvest during the three-week canning series: You Can! held in May of 2018. This series included learning basic principles of food safety, avoiding foodborne illnesses, water bath canning and canning in a pressure canner. As participants were just beginning to get their local gardens started, this class came at an ideal time to prepare for the bounty the gardens would produce.

Participants varied from those who frequently canned and were in need of a refresher to those who had never before canned. All participants learned how and why low acid and high acid foods are preserved using different methods. Students were able to bring family heirloom recipes to class and analyze them to determine if they were safe under current safety standards.

Master Food Preserver, Sarah Cooper, served as the guest instructor after completing a food

Photos by Juli Thurston

Master Food Preserver Sarah Cooper. Photo by Jeanette Allday
preservation instructor class offered through MSU Extension. Cooper walked students through canning green beans and triple berry jam. Each student left with a knowledge of proper canning tools, canning supplies, tips for successful canning and some delicious products to start their own supply of home preserved foods.

**SNAP-Ed Reaches Families County Wide**

The Supplemental Nutrition Assistance Program – Education (SNAP-Ed) offers classes teaching the importance of good nutrition, physical activity, food resource management and food safety. Classes are free of charge and available to SNAP eligible adults and elementary students in first, third and fifth grades.

This year, 113 SNAP-Ed classes were conducted, reaching 212 adults and children. Classes were taught in partnership with a variety of organizations including a community hospital, mental health center and five school districts. In addition, a class was held for adults who access a local food bank but often return items like dried beans and rice for lack of knowing how to cook these types of foods. In class, participants were taught knife skills and how to prepare dried foods, in addition to basic nutrition and food safety.

Participants showed positive behavior changes in a variety of areas including improving their diet, increasing physical activity and putting into practice safer food handling principles. Students have reported leading their families in making healthier choices like purchasing lower fat dairy products and whole grains instead of refined grains.

In addition to classes, SNAP-Ed works within the community to develop changes that make the healthy choice the easy choice for community members. Current campaigns in this regard include partnering with a local school that participates in Montana’s Harvest of the Month program, exposing the students to locally-grown products, helping a local school district begin school wellness policies, and assisting a local farmer’s market in accepting SNAP cards.

**Preserving Family Heritage**

Sanders County MSU Extension through partnership with Kaniksu Land Trust and Idaho Forest Group hosted a ‘Ties to the Land Initiative’ workshop for local landowners. The Ties to the Land Initiative assists landowners in addressing communication, emotional and legal aspects of succession planning. A succession plan is a more effective means for land owners to pass on their legacy than a traditional estate plan. An estate plan is just one step in succession planning. A good estate plan will ensure heirs receive the land with lowered tax obligations. Good succession planning is a way of building shared vision and passion for the land among the current owners and the heirs, as well as passing on the land with reduced estate taxes. We recognize there are differences among family members’ values, goals, and skills, and help owners form an effective plan to keep land in the family or identify alternative paths when continued family ownership is not an option. The workshop provided the essential tools and resources to help landowners make the decisions necessary to achieve objectives and pass their land to succeeding generations. During the week concluding the session, many participants requested another workshop, so they could bring additional members of their family as well as friends and neighbors who would be interested in the tools provided. They had already started implementing what they had learned during the workshop.
Assisting Landowners with the War on Weeds

With the vast weed and invasive grass infestations and the difficulty in controlling these populations, much time is spent by the local agriculture Extension agent to assist landowners and producers in managing their plant communities on their property. Advice is provided on weed identification, management and integrated control methods in pastures, hay fields, range, garden and yards. In addition, the agent coordinates the county pesticide education program under the umbrella of Montana State University Extension and Montana Department of Agriculture. This education program promotes the proper use of pesticides to protect public health and the environment. This includes providing educational resources regarding pesticide use, pest management, reading the label, pesticide law, health, safety, and the environment. Programs support all applicators, businesses and homeowners by combining educational resources and knowledge from scientists, governmental agencies and the public. Currently Sanders County has 74 applicators whose license will expire this year. Pest Management continuing education workshop opportunities were provided in October and an Initial training for new applicators will be offered in April of 2019. Landowners can benefit greatly from implementing weed control practices, such as enhanced property value, improving wildlife habitat, providing increased forage for horses and other livestock, and increase profits through higher yields.

Ventenata (Ventenata dubia)

AKA "wiregrass"

Photo by Jane Mangold
Sheridan County is located in the northeastern most corner of Montana. Plentywood, the county seat, is located approximately 18 miles south of the Montana/Canada border and 24 miles west of the Montana/North Dakota Border. The MSU Extension Service is a three-way partnership between Sheridan County, Montana State University and the United States Department of Agriculture. Through the strength of this partnership, Extension Agents provide research-based programs to county residents in the areas of Agriculture/Natural Resources, 4-H Youth Development, Community Development and Family and Consumer Sciences. Agriculture production and agribusiness is the basis of the economy here.

A wheat field in Sheridan County. Photo by Colleen Buck.
**2018 highlights and challenges**

2018 presented unique challenges for Sheridan County Agriculture agent Colleen Buck. The flash drought of 2017 and its lasting effects on agriculture, coupled with bitter cold temperatures in January and February without snow, left farmers and ranchers wondering how the year was going to turn out. Then calving season came, and so did the snow. A late, wet spring pushed planting back a month, but crops soon caught up and did well, despite the cold and late start. The weather would throw another challenge farmers way in July when hail storms, straight-line winds and a tornado graced Sheridan County. Multiple crops were hailed out or flattened due to wind. Crops still standing yielded on average with other years, however due to low market prices, most crops are being stored on-farm. Wet weather at the end of September and early October caught farmers in the middle of harvest. In 2017, Buck tested over 50 samples of forage for nitrates and did multiple education events about precautions to take when feeding forages that may accumulate nitrates, which can be toxic to livestock. The education presented resonated with producers in 2018 and resulted in increased contacts with MSU Extension. One-on-one contacts this year have significantly increased as producers are stopping in to gather information on a multitude of subjects.

**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 Extension personnel at Montana State University and North Dakota State University. Montana continues to lead the nation in pulse crop production, and Sheridan County remains one of the top three pulse-producing counties in the state. With the weather swings we have seen in the last couple of years, disease pressure on pulse crops is heightened. Furthermore, with the markets not performing as well as in the past, it is imperative that producers get the most up-to-date information on markets and cropping practices to aid in making difficult business decisions. This year, the MonDak Pulse Day reached over 125 producers. MSU Extension agent Colleen Buck is part of the MonDak Pulse Day organizing and planning committee.

An off-station research plot in Sheridan County. Photo by Colleen Buck.
Montana Harvest of the Month

Montana Harvest of the Month (HOM), a program of Montana Team Nutrition, showcases locally-grown foods and exposes students to new, healthy foods. Monthly lessons include education, activities and taste tests on a focus food of the month. The Plentywood School participated during the 2017-18 school year and MSU Extension agent Sheila Friedrich provided the lessons and taste tests for four classrooms, including lessons on beets, grains, beef and lentils. HOM uses a voting system of Tried It, Liked It, Loved It to measure the success the lessons are having in encouraging students to try new, healthy foods. We have seen success in the numbers of the 74 students who have tried a food they had not eaten before. Ninety-four percent of participants tried the healthy foods offered; 56% reported liked the food; 26% loved the food; the remaining 18% were not sure or did not care for the food. School cafeteria staff report an increase in students who are selecting the featured food for the month when offered. “Harvest at Home” is a handout sent home with students to share with their families. The program has continued in the new school year and students and teachers are enthusiastic about opportunities to try locally-grown, healthy foods.

Arthritis Foundation Exercise Class

Now in the fifth year, the Arthritis Foundation exercise classes are going strong and many participants have attended since the beginning. Classes are offered twice weekly in two locations and total participation has increased to about 35. Local physicians and physical therapists refer their patients to the classes as a way to continue to build strength and flexibility and relieve arthritis joint pain.

Participants state benefits to the class:
“I believe I am doing as well as I am because I come to this class. I think my arthritis would be a whole lot worse if I didn’t do this.”
“My doctor told me I need to attend these classes. I probably wouldn’t do this at home by myself.”
“When I was done with physical therapy, they told me I should come to classes so I wouldn’t go backwards. It is important for me to be here.”
“I have less pain from my arthritis because of the exercises in this class.”

Almost every person commented on the social aspect and comradery they feel being in the program, which is an intended secondary benefit. The Montana Pioneer Manor (retirement facility) continues to be an important partner, providing the opportunity to use space in the facility for classes for their residents.
Winter Series and Adult Education

Intermixed with the third year of the Winter Series, Sheridan County MSU Extension agriculture agent Colleen Buck was asked to teach an adult education class on the Basics of Livestock Nutrition. Class met once a week for three weeks, and participants reported that information presented changed the way they thought about feeding livestock. Winter Series topics in 2018 included Weather and Crop Market Predictions, Understanding Artificial Insemination Protocols and Beef Cattle Nutrition, and Rangeland Management, Rangeland Weed and Narrowleaf Hawksbeard. The Narrowleaf Hawksbeard session was very well received. Narrowleaf Hawksbeard is a hard-to-control weed that is showing up in crops and rangeland alike. It can be extremely difficult to control, and therefore education on control measures is extremely important to agriculture producers.

A narrowleaf hawksbeard plant found in Sheridan County. Photo by Colleen Buck.
Welcome to Silver Bow County

Silver Bow County is located in Southwest Montana along the Continental Divide in the Rocky Mountains. There is a county population of 34,403 with a land area of just over 718 square miles, making it Montana's smallest county. It is unique in the government, as Silver Bow County shares a government with the county seat of Butte. The Butte-Silver Bow Government is run by an elected Chief Executive and 12 county commissioners. The county’s economy is driven by health care, education, retail and mining, with St. James Healthcare and NorthWestern Energy being the top employers. The MSU Extension office is staffed by Family & Consumer Science/4-H Youth Development Agent, Kellie Kahtani, and SNAP-Education Agent, Abbie Phillip.
**County MSU Extension Brings Mental Health First Aid to Butte**

During 2018, Silver Bow County Extension agent Kellie Kahtani added new programming to the county. In July, she traveled to Phoenix, AZ, as part of a grant to become trained as an instructor for Adult Mental Health First Aid, and in November, traveled to Helena, MT, to become an instructor for Youth Mental Health First Aid. These programs will be offered throughout the community to help adults recognize the signs and symptoms of a mental health crisis and institute the ALGEE plan to help community members get the help they need. The ALGEE plan is a mnemonic device to help us remember the steps of “asses for risk of suicide or harm, listen non-judgmentally, give reassurance and information, encourage appropriate professional help, and encourage self-help and other support strategies.” The steps are nonlinear and give a guide to follow depending on the situation. The Mental Health First Aid course is designed to help bring local resources to attention for our community and train community members to be mental health first aid responders. During the first class offered through MSU Extension, partnering with another agent, 100% of the class stated they felt “more confident” in their ability to “reach out to someone who may be dealing with a mental health problem or crisis.” We are excited to be adding the Youth Mental Health First Aid class to our programming and training our community members who work with youth.

**News from SNAP-Education**

In 2018, Abbie Phillip, the Supplemental Nutrition Assistance Program Education (SNAP-Ed) agent for Silver Bow County, taught 206 classes of Youth Understanding My Plate (YUM), Essentials in Creating Family Meals (CREATES), and the Eating Smart Being Active series, reaching over 700 community members. In Butte, the YUM classes were taught to first, third and fifth grade students at Emerson, Kennedy, Margaret Leary, and West Elementary schools, reaching 410 students. The
classes focus on making healthier food choices and increasing exercise, with 76% of those students reporting the classes “improved their diet quality” and ability to choose foods according to the Federal Dietary Recommendations. In the adult Eating Smart Being Active series, 75% of participants showed improvement in one or more diet quality indicators, such as eating fruits, vegetables, or drinking less regular soda, and cooking dinner at home.

**Silver Bow County 4-H Grows**

The 2018 4-H year has been one of growth and education in Silver Bow County. We implemented a few new areas within our programs, including project books and turning record books in for review at the fair. Our focus for the 2018 year was education. We added 10 new volunteers during the year to help with projects, adding new opportunities in robotics, embroidery, Cloverbuds (for youth ages 5-8), rabbits, poultry, horses, and teen leadership. With the addition of new volunteers, we also added 23 new members to the county 4-H program. Seeing the trend in numbers, we were also able to add a new 4-H club, bringing the number of clubs to three, with 71 members, and 30 volunteers.

Another area of change for our program was the Butte-Silver Bow County Fair. This year, the fair moved from the Butte Civic Center to the Vigilante Saddle Club and Rodeo, allowing us to move our animal projects outside and have a new experience for our members. Members exhibited outstanding projects in livestock, horses and indoor areas. Community members came out to see the projects and to support our members during the 4-H Cake Auction and Market Livestock Sale, ensuring a successful event.

This fall, our county added a “4-H Fun Day,” which hosted 20 members of our county 4-H program. This event provided workshops on arts & crafts, National Youth Science Day curriculum, Cloverbud curriculum, teen leadership, livestock reasons/public speaking, and community service. The workshops were presented by teen leaders as well as project leaders and the MSU Extension agent.
Welcome to Stillwater County

As MSU Extension Agents, our job is to provide information and education to the people of Stillwater County. Often this takes the form of a phone call or office visit. The service provided can be as simple as looking up a safe internal meat cooking temperature, or as complex as balancing a least-cost ration for multiple classes of cattle. These calls range from horticulture to holiday cooking and from food preservation to farm financial management.

These contacts often lead to a more in-depth home or ranch visit and provide guidance on needs for in-depth training, linking Stillwater County to subject matter specialists on the Montana State University-Bozeman campus as well as to resources in the U.S. Department of Agriculture. In Stillwater County, MSU Extension has been an integral part of local education since 1914 when the first agriculture agent arrived in the county, followed in 1917 by the first Family and Consumer Sciences agent.

Stillwater County MSU Extension is proud 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 176 enrolled 4-H members. 4-H members in market animal projects and Cloverbuds (youth ages 5-8) continue to have the highest enrollments.

**Montana Mesonet Weather Stations**

Weather phenomena can be sudden and violent. Drought, although less dramatic, can cause even more damage. From 1997 to 2006, Montana was in a dramatic drought. In Stillwater County, there were 12 years of declining precipitation totals. The effects of this drought had an enormous impact on Stillwater County. While not as long, recent droughts have also affected Stillwater County. Real-time drought monitoring is essential for adaptive management to mitigate the negative impacts of drought on the people, economy, and ecosystems of Montana. Cumulative rainfall data alone is a poor predictor of drought impacts. Short-term soil moisture deficits can occur in years of average or above average rainfall. Resource managers need reliable information on the available reserves of soil moisture to enable effective management (e.g., crop marketing contracts, cattle stocking rates, hay purchases, fertilizer rate adjustments).

To obtain the detailed monitoring information, weather stations (picture at right) were installed to measure soil moisture and temperature. With a grant secured by Stillwater County MSU Extension from Western Sustainable Agriculture Research & Education (SARE), and the support of the Stillwater County Commission, a total of seven stations were installed in Stillwater County. The weather stations report a full suite of current weather conditions as well as soil moisture and temperature at four depths, transmitted instantaneously from the sites to the Montana Mesonet.

The Montana Mesonet is Montana's first early drought warning tool that integrates sensor outputs and site-specific soil properties. It was released in November 2018. A partnership valued by both sides has been formed between Stillwater County MSU Extension and the newly formed Montana Mesonet. During 2019 and 2020, Stillwater County MSU Extension will be developing additional tools that use the soil moisture and weather information to help farmers and ranchers make critical decisions.
Youth Aware of Mental Health (YAM) Program

In 2018, Stillwater County MSU Extension had the opportunity to facilitate the Youth Aware of Mental Health (YAM) program in local seventh grade classes with 44 youth. This unique program is designed for youth and their mental health needs. YAM is an interactive program promoting discussion and knowledge about mental health and development of problem solving skills and emotional intelligence.

Facilitators guide youth participants through important topics such as: the meaning of mental health and information that mental health is not a negative thing; self-help advice, ways to feel better, how to make sense of feelings, what to do if someone is being bullied or bullying, parents are fighting, and more; stress and crisis, understanding stress isn’t always bad, how to cope with stress and crisis; depression and suicidal thoughts, how to know if you are depressed; helping a friend in need, identifying common communication phrases and knowing what to say to them when they are in need; and lastly who can they contact for advice if they are suffering.

With facilitator guidance, the youth led most of the discussions and expressed their feelings, reactions, etc. through discussion and role plays. The youth were very open to talking and opening up to the class as there were no teachers, counselors or school staff present, and confidentiality around the discussion is encouraged (unless it was a life threatening matter).

Youth were able to open up about their feelings and thoughts on tough topics because of the confidentiality this program offered. The program illustrates a positive impact on youth as they participate. These youth grew closer to each other after knowing what they may be going through and knowing how to handle certain situations. At the conclusion of the five week course, youth were disappointed the program was complete and we would not be coming back to teach them more. They requested the program returns to the schools to continue, as they benefited tremendously and wanted others to benefit from it as well.
4-H Ideas Have Been Firing, Now They Can Ignite

With increased 4-H program recruitment and enrollment, the need for an extra position became apparent for MSU Extension and 4-H office needs. We welcomed Karen Marts in January of 2018 and have benefited from her assistance. Having Marts on the team has allowed Ashley House, the 4-H Program Administrative Assistant to accomplish more. In the new 4-H administrative role, House has been implementing new ideas to benefit and grow the 4-H program in Stillwater County.

With the additional staff, the 4-H program was able to involve more kids through fun Cloverbud workshops, Easter egg decorating contests, pumpkin carving contests and more. Cloverbud (youth ages 5-8) participation has increased by 25% for fair entries, nearly 30% increase for their participation at fair, and almost 5% increase in overall fair entry participation, totaling 906 fair entries for 141 participants. MSU Extension 4-H staff have been able to visit the clubs and sit in on demonstrations and take a more active role in making connections and helping the clubs be the best they can be. 4-H program staff are looking forward to 2019 as there are lots of new and exciting things happening in the county 4-H program and the MSU Extension office.
Welcome to Sweet Grass County

Sweet Grass County is located in south central Montana. Don’t confuse the town of Sweetgrass with the county of Sweet Grass. Sweet Grass County became a county in 1895, formed from parts of Park, Meager, and Yellowstone Counties. It has been at its present size of 1,855 square miles since 1920. The current population is 3,623. Ranching and mining are the primary economic drivers.

When Lewis and Clark traveled through this region, they named the area where the Boulder River and Big Timber Creek empty into the Yellowstone River as “Rivers Across.” In the late 1800s, an Irish immigrant named the settlement Dornix, meaning “a rock that fits in the hand and is handy for throwing.” In 1883, the town was moved due to complications with the railroad and was re-named Big Timber for its abundance of cottonwood trees lining the Boulder and Yellowstone Rivers. In fact, a majestic 125-foot-tall cottonwood is located on the banks of the Yellowstone River right outside the city limits and was close to being the national champion cottonwood. Today, 200-year-old cottonwood trees still line the banks of the Yellowstone River, meaning they are the same trees as the ones Lewis and Clark passed by two centuries ago.

Sweet Grass County is home to the Crazy Mountains. There are several theories on how this range was named. The Indians called them the Mad Mountains for their rugged beauty and haunting winds that blow down the canyons. The Mad Mountains were so called because they could not tell if the weather was going to be fair or stormy, as all signs failed in that region.

GO HERDERS! The logo for the Sweet Grass County High School Sheepherders
Agriculture across Sweet Grass County

Livestock Nutrition
The winter of 2017-2018 was one of the coldest and snowiest winters on record since the late 1970s in Sweet Grass County. It proved to be extremely challenging to livestock producers in terms of meeting the nutritional needs of all species of livestock. MSU Extension responded by hosting several nutrition workshops that served to educate producers on a variety of topics, including forage testing, ration balancing and the nutritional requirements based on stage of production for various livestock species. Producers were able to interpret feed tests on their forages and with these tests in hand, develop rations to meet the production needs of their livestock while stretching their annual forages supplies. This, in effect, helped to minimize the economic impact to these ranchers by limiting the amount of extra forage they had to purchase to make it through the winter. Winter feed costs are considered to be the single largest input affecting profitability of ranches in Sweet Grass County.

The Life Blood of Agriculture is Water
Without water, agriculture and life as we know it cannot survive. Sweet Grass County, according to the DNRC, lies in a closed basin in regards to water rights and water use. MSU Extension presented a seminar that was attended by area ranchers and landowners to discuss the current status of water rights in Sweet Grass County. Participants learned about priority dates, allowed uses, how to check the current status of their water rights and some of the legal standings of the current water laws in Montana. This seminar, which was co-hosted with the Crazy Mountain Stockgrowers Association, proved to be one of the highlights of the 2018 year in terms of participation and follow-up questions fielded and answered for landowners in Sweet Grass County. Water and water use will continue to be a fiercely debated topic, not only for agriculture but for all property owners and continued efforts will be made to fill the educational demands of clientele in Sweet Grass County.

Photo by Kandi Schuman

Photo by Marc King
Active Lifestyles

Research has shown that individuals who participate in some form of physical activity tend to enjoy better health, higher self-confidence and reduced illness. For the past 12 months, a diversified group of co-eds ranging in age from 13 - 60 have met five days per week to gain instruction from MSU Extension agent Marc King on weight lifting techniques and fitness. Students have recorded their progress on basic lifts and have reported on their general health and academic performance. According to the participants, most have reported improvement in their academic endeavors, as well as experiencing reduced days missed due to illness. The older participants have reported fewer incidences of joint pain and an increased desire for physical activity. Furthermore, increased physical activity of older adults has been shown to improve balance, leading to reduced injuries due to falls. Developing healthy habits at a young age has been shown to improve the health status of rural Americans in numerous research articles.

Applications of old and new technologies in the beef industry

In today’s beef cattle industry, predictors of genetic merit and actual data help producers to capture increased value on their livestock sales. Predicting genetic performance has advanced significantly in the past decade through the use of DNA evaluation. Producers were introduced to genomic testing and interpretation of results during an MSU Extension one-day seminar. Producers learned how to collect and submit samples for genomic testing, interpret, and apply the results. Further, in an effort to assist producers in collecting actual data, MSU Extension has gathered carcass data on over 1,000 head of beef carcasses in 2018. The combination of genomic information and carcass data has aided producers in making genetic decisions for their cow herds. In theory, producers should be able to realize more value for their calf crops with the addition of this information.

Photo by Marc King

A Prime quality grade of beef.
Photo by Marc King
contact us:

Sweet Grass County
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515 Hooper St.
Big Timber, MT 59011
(406) 932-5146
sweetgrass@montana.edu
http://sweetgrass.msuextension.

Marc King
Extension Agent

Kandi Schuman
Administrative Assistant

Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.
The communities of Teton County – Choteau, Dutton, Fairfield, Power, Pendroy and Bynum – are bordered by the Rocky Mountains to the west and plains to the east. County population hovers around 6,000. Crops include wheat, barley, chickpeas, dry peas, lentils, canola, dill, mint and hemp. Alfalfa is a major forage crop. Livestock production leads with cattle, followed by sheep, goats and horses. Hutterite colonies add to the diversity of agriculture with dairy cattle, swine and poultry production. The MSU Extension team includes Brent Roeder, Jane Wolery, Jamie Smith and Sharla Hinman, who are honored to serve in Teton County.

Agriculture by the Numbers

We know of two confirmed yearling steers and two horses that died from consuming high nitrate forages in Teton County in 2018, so the issue is real. If the forage from the 135 nitrate tests completed was fed to 250 head of livestock each, more than 30,000 head could have been affected. MSU Extension agent Brent Roeder certified 457 acres of Noxious Weed Seed Free Hay for 15 producers. These acres produced an estimated 769 tons of premium hay, which returned an additional estimated $38,450 to producers in the area. The office facilitated delivery of just over 5,000 trees and shrubs for conservation purposes in Teton County in cooperation with the Montana Conservation Seedling Nursery. A conservative estimate of savings for Teton County participants would be $11,700. This does not include the increase in value to the property due to these long-term enhancements. Roeder also coordinated the delivery of 37,626 pounds of wool for the Front Range Wool Pool. This marketing cooperative is comprised of 36 sheep producers from across the Golden Triangle area. This year, growers received historic high prices and added 16.5% to the value of the clip by working together. This amounted to $11,160 in either cost savings or added value to the clip. Because of programs managed through the MSU Extension office in Teton County, we generated a documented $64,145 in positive cash flow for area producers in either cost savings or added value.
4-H Grows in Teton County

Communication skills provide cornerstones for 4-H youth to build upon throughout their lives. Photos by Daniel Asselstine, Teton County 4-H Ambassador.

Teton County 4-H members lead and mentor others.

Numerous Club Service Projects at the Community, County, State, National and International Levels

<table>
<thead>
<tr>
<th>160</th>
<th>Enrolled Youth Members</th>
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<tr>
<td>18</td>
<td>Cloverbuds</td>
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<tr>
<td>87</td>
<td>Certified 4-H Volunteers</td>
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<td>350</td>
<td>Youth reached with enrichment programs</td>
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<tr>
<td>6</td>
<td>Community Clubs</td>
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<td>Project Clubs - Shooting Sports</td>
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<td>Teton County Fair project exhibits</td>
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<td>Youth in executive officer positions</td>
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<td>Participants in Leadership Retreat</td>
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<td>Youth and adults serving on county committees</td>
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<td>46</td>
<td>Youth learners at 4-H Camp</td>
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<td>Donations generated for Food Pantry</td>
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<td>Livestock evaluation participants</td>
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<td>Teton County 4-H Ambassadors</td>
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<td>Members in livestock projects</td>
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<td>District Make It with Wool contestants</td>
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<td>Montana 4-H Congress participants</td>
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<td>First place Career Communications winner at Montana 4-H Congress</td>
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<tr>
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<td>Second place Quilt winner at Montana 4-H Congress</td>
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<tr>
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<tr>
<td>2</td>
<td>National 4-H Western Heritage Shooting Sport Competitors</td>
</tr>
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</table>

Photos by Jane Wolery.
The Teton County delegation to 4-H Congress included two state award winners, one scholarship recipient and a second-place quilter, while three advanced to National 4-H Congress.

**Mental Health**

Mental health was one of the top three concerns identified in Teton County’s 2017 Community Health Needs Assessment and Improvement Plan. Depression, anxiety and stress were rated top mental health issues in Teton County. MSU Extension is meeting these and other needs in Teton County through a variety of efforts.

The Youth Aware of Mental Health (YAM) program reached 125 high school students in Teton County in 2018, with every high school agreeing to participate. By request, MSU Extension agent Jane Wolery facilitated three sessions with 42 students in a community hard hit by suicides. Three months after participating in YAM, students reported an increase in general mental health knowledge, significant decrease in depressive symptoms and a trending decrease in anxiety symptoms. Almost half of students reported they would seek help from school staff for assistance with feelings of suicide and 79% said they would seek help for depression.

Thrive online cognitive behavior therapy was offered. The learning modules include assertive communication, constructive thinking and rewarding activities. Teton County had the highest per capita participation. Informational meetings on Thrive were held in Teton County in 2018 with 57 in attendance. Each participant was challenged with sharing the Thrive information with at least five other people.

In response to mental health issues in the agriculture sector, Wolery was invited to work with the Farm Service Agency at a state conference. Forty farm loan officers attended, learning about mental health resources, resilience and how to assist agriculture producers facing stress, depression, anxiety and suicidal ideation. Wolery presented “Ag Under Pressure” at MSU Extension Annual Conference to increase awareness of mental health resources for those who serve the agriculture community.

**Wellness**

A variety of wellness classes are offered by MSU Extension, including a Diabetes Empowerment Education Program, Strong People, Healthy Tracks, Living Life Well with Chronic Conditions, Pressure Cooking, Knife Skills and individualized Powerful Tools for Caregivers. These classes teach skills needed to improve individual health profiles. As Benjamin Franklin stated, “An ounce of prevention is worth a pound of cure.” According to the American Public Health Association, food and nutrition interventions alone have 1000% return on investment in health care costs, in addition to life-years saved, increased well-being and empowerment.
Participants in these classes have said,

“Because of Powerful Tools for Caregivers, I have done a much better job taking care of my husband who has Parkinson’s. Because of the class, I also sought medical treatment for myself and I’m pretty sure I avoided a heart attack as a result.”

“I am more aware of portion size, reading labels and keeping up my exercise routine.”

“I was able to hike and hunt with my son and grandson. Without the Strong People class, I wouldn’t have been able to keep up.”

“I was able to do my own home maintenance, tree trimming, pruning and cleaning rain gutters because of the MSU Extension class.”

“I took Strong People knowing I had an upcoming surgery. Because of my condition going into surgery, I was released from the hospital much earlier than usual. The shortened stay saved us $25,000 in out-of-pocket medical expenses. I encourage everyone I know to take Strong People classes.”

**Diagnostic Services**

The MSU Extension office in Teton County recorded 1,057 contacts on ag/natural resources issues in the 2018 production year. We strive to offer the best diagnostic capabilities for commodity grain and pulse producers, forage growers, commercial horticulturists, and homeowners. Services include insect and weed identification, disease analysis through the Schutter Diagnostic Lab at MSU, pest insect monitoring, water testing through Energy Laboratories, forage analysis through Midwest Labs and in-house testing for nitrates in forages pre- and post-harvest. We provided diagnostic and educational services to 320 residents. We provided traps and monitored five fields weekly across the county for pest insect Orange Wheat Blossom Midge, submitted 28 samples for disease diagnosis or identification to the Schutter Diagnostic Lab, sent 131 forage samples and soil samples for analysis, and conducted 135 nitrate tests for producers. Forage producers saved $2,835 on nitrate tests for their hay. We sent three cropland weed samples to be tested for herbicide resistance. Producers need to be aware of the growing issue of local problems with important agronomic weeds. The office identified the first field in the county with soil acidity problems due to the long-term, misapplication of nitrogen fertilizer in a no-till, dryland crop rotation. Orange Blossom Wheat Midge numbers were low this year but will continue to be monitored.
Welcome to Toole County

Toole County is made up of 1,915 square miles and has a population rate of 2.8 persons per square mile. The incorporated city of Shelby, population 3,376, serves as the county seat. Other Toole County cities and towns include Ethridge, Galata, Kevin, Oilmont, Sunburst, and Sweetgrass. Situated in northern Montana, Canadian provides the northern boundary, with the Marias River flowing along a major portion of the southern boundary.

Mining, agriculture, utilities, and transportation and warehousing are competitively positioned for growth and new business opportunities. These capitalize on the county’s geographic location (major rail service, east/west & north/south highways, on the Canadian border, access to raw materials).

Toole County MSU Extension’s 4-H program is unique in Montana because of the four-county Marias Fair, held at the Marias Fairgrounds outside of Shelby. Our 65 4-H members join together with Pondera, Glacier, and Liberty County to exhibit projects and sell their livestock at the Marias Fair.
Extension Partnerships Benefit Afterschool Programs

Afterschool Partnership

MSU Extension Toole County and the Shelby School District after school program have partnered to provide enriching experiences to youth in the community for over a decade. MSU provides curriculum, staff time and volunteers to provide the programming. Materials are funded through the afterschool program.

The theme for the 2017-2018 school year was entomology. Students spent time discovering the world of creepy crawlies. Topics included insect anatomy, environmental adaptations, and the sounds insects make. Students discovered that insects develop different mouth parts suited to their specialized ways of eating. They created handmade viewers to experience what the world looks through the compound eyes of insects. Students had an opportunity to experience how insects move while competing in the Insect Olympics.

Lesson plans included live observation of insects in the classroom. As the critters moved about in their enclosures, students could observe anatomy, behavior and habitat. In the cricket unit, youth were introduced to how insects make sounds using body parts. In the butterfly unit, students explored the life cycles of insects.

Twenty-eight students participated in the entomology unit. Eight members of the Blazing Saddles 4-H club provided guidance and instruction to the students for the insect units.

In 2018-2019, after school students will be gaining life skills while learning how to craft handmade items. Lessons will include leatherworking, sewing, and making foods and other crafts. The Blazing Saddles 4-H Club will be again be assisting with the program, providing science and life skill learning for after school students and leadership learning for 4-H members.

4-H and Afterschool Youth Use Squishy Circuits to Learn About Electrical Circuits

The 4-H program has always emphasized the value of first-hand learning known as experiential learning. In the tradition of experiential learning, Toole County MSU Extension agent Alice Burchak introduced Squishy Circuits to Toole County youth this year. Squishy circuits are a great example of how hands-on interactive learning can enhance youth understanding of concepts. Squishy circuits are a fun way to learn and explore the basics of electricity and electrical circuits.

Burchak assembled a Squishy Circuits kit that contains all the materials needed for students to learn about and create their own electronic circuits. Youth use the familiar mediums of play-doh and modeling clay to explore how an electric current works using insulating and conducting materials. Youth gains skills in creating open and closed circuits. Using this hands-on learning method allows youth to gain a greater understanding of how electricity works and how it is an integral part of their daily life.

Squishy Circuit workshops have been facilitated locally at afterschool programs and at local 4-H clubs, as well as statewide 4-H events. The Squishy Circuits kit is available for other leaders or organizations to borrow from Toole County MSU Extension.
Meals in Minutes

2018 seemed to be the year of the electric pressure cooker. The electric pressure cooker, which uses heat and pressure to cook faster than traditional oven cooking, has been all the rage and seemed to be one of the top gifts of the 2017 holiday season. However, many recipients were unsure how to use it and were fearful of using their new electric pressure cooker. After all, we are talking about hot pressure here! Many folks remembered the days of their mothers and grandmothers pressure canning and the thought of using the appliance was rather daunting.

MSU Extension agents in Toole, Hill and Chouteau County teamed up to provide an interactive workshop for electric pressure cookers to alleviate fears of using the appliance. A Meals in Minutes workshop gave participants an opportunity to operate a pressure cooker in the classroom setting with support from agents and fellow attendees. Participants also explored recipes that helped them provide a healthy meal to their families in half the time it would take to cook a dish normally. Participants learned the basics of pressure cooking, how to care for their new appliance, as well as safety suggestions. Participants were surprised to learn they could even make desserts like cheesecake in their new multi-purpose appliance.

Agents Alice Burchak, Janell Barber, and Jasmine Carbajal trained people how to use their pressure cookers in class and answered questions in their offices throughout the year. They are offering a new workshop in spring of 2019, focusing on cooking freezer meals in the electric pressure cooker.

Shelby Market and Music

Toole County MSU Extension has partnered with the City of Shelby to bring Shelby residents the Shelby Market and Music on Thursday afternoons from July to September. The partnership has introduced music to the established local farmer’s market with a Summer Concert Series.

The market hosts a few local vendors with various foods items and unique crafts. Three regular vendors are from nearby Hutterite Colonies and after every market, they donate unsold items to our local food pantry. Residents of Shelby enjoy the market every summer, but many of the visitors to the Shelby Market are tourists who are passing through Shelby on Highway 2 on their way to visit Glacier National Park for the weekend. The market provides a way keep some food production and food dollars very local, which provides a health and financial benefit for Toole County residents.

Finding musical acts for the concert series has not been difficult because Shelby has an abundance of local musical talent. Local bands from Shelby usually bring in over 100 people to the City Park on Thursday nights. The Summer Concert Series is a great place for Shelby residents to bring children, and even residents of the nearby Senior Center come down to the park to enjoy a night out and listen to music. The Shelby Market and Music is proving to be a fun and beneficial partnership for the community. The Shelby Market and Music committee is always on the lookout for new and exciting ideas to get residents to come to the park and enjoy an evening outside.
Toole County Master Gardener

In 2018, six Master Gardener students completed the springtime eight-week Level 2 Master Gardener training course, sponsored and taught by Toole County MSU Extension. Crazy winter weather set back the schedule with three classes getting cancelled and rescheduled, but the students are tough gardeners and were up for anything!

The Level 2 Master Gardener class is designed for intermediate gardeners who have already taken Master Gardener Level 1. Montana State University’s Horticulture Specialist, Toby Day, teaches Level 2 Master Gardener and he covers subjects including soils, fertility, plant growth and development, growing flowers and food in the garden, lawn care, irrigation, pest management, composting, insect names and diseases, and proper tree, shrub, and vine planting and care.

Two Toole County gardeners attended the Master Gardener Level 3 training in Bozeman in fall, 2018. Lisa Hurley and Sue Smith from Shelby have attended the program through two Extension agents, and both show a great passion for gardening. Hurley, who is Treasurer of the Shelby Community Garden, helped in starting the Community Garden in Shelby. Smith is such a dedicated Master Gardener that she took Level 2 a second time for a refresher, and she has been watering and caring for the flowers on Shelby’s Main Street for volunteer hours in the Master Gardener program.

Master Gardeners give back to the community through volunteer hours given caring for public space gardens or teaching others at farmer’s markets or informally, and growing food that is donated to local food banks. Toole County MSU Extension is planning to offer a Level 1 class again in 2019.

Master Gardener Level 2 Celebration
Welcome to Valley County

Montana life has many benefits, but it is not for the faint of heart, as evidenced by Valley County residents who are coping with a challenging economic environment. In the past seven years, agriculture producers have found themselves recovering from one of the worst droughts in history after overcoming one of the worst floods in history. Depressed markets and increased inputs have added stress to an already apprehensive existence. The slow agricultural economy affects businesses, potentially leading to a community-wide feeling of hopelessness. MSU Extension in Valley County offers a glimmer of light as we meet the needs of our many-faceted community. Producers learn new management techniques and marketing options, horticulturists become more self-sufficient, families build strength through education and youth are empowered to see themselves in their own futures.

TOP RIGHT: excessive snow drifting. ABOVE: National Weather Service photo of flooding. RIGHT: drought-cracked field. FAR RIGHT: after the fire.
Valley County Horticulture Update
Valley County MSU Extension supported the advancement of gardening and horticulture knowledge by offering its seventh Master Gardener program in eight years. This program has fostered community beautification, stronger self-sufficiency, better gardening knowledge, and greater crop yields. It has spawned a junior master gardener program that has fostered inter-generational ties as students learn to garden and share their produce and the beauty of flowering gardens at Prairie Ridge Assisted Living Facility.

Valley County Free Tree Day 2018 gave away 1,600 trees and shrubs to improve the biodiversity of the ecosystem, improve home property values, and to support conservation practices. Since its inception in 2009, the program has given away over 20,000 trees.

Valley County MSU Extension offers beekeeping courses for commercial beekeepers, hobbyists, or anyone concerned about honeybees. Interest and support of this program has spurred the agent to use a Western Sustainable Agriculture Research and Education (WSARE) professional development grant to complete the Master Beekeeper course to become a better resource for beekeepers and pollinator conservationists. Ninety-four percent of the beekeeping participants rate the workshops as excellent and 100% learned something they didn’t know before.

Learning to split honeybee colonies at a summer workshop. Photo by Shelley Mills

Valley County MSU Extension can identify and provide management strategies for insects, plants and diseases brought in to the office. This quick response helps clients address problems in a timely manner and with the safest approaches available.

Valley County Agriculture Update
Valley County MSU Extension created a learning environment for local producers by identifying gaps in knowledge and providing workshops to help producers maintain or improve their economic viability, support ecologically-sound farming practices, improve yields, and become more efficient.

Weed management workshops offered growers the opportunity to learn techniques and strategies for mitigating impacts from noxious and problematic weed species in cropland as well as range and pasture. Educational outreach on narrowleaf hawksbeard has saved producers potentially-lost revenue of over $6 million without the management practices taught by Extension. Raising awareness of the threat of the aggressive pigweed species Palmer amaranth is MSU Extension’s priority for 2019 due to its challenging control and proximity to Montana.

During and following the driest year since 1889, nitrate testing of forage crops has become critically important in Valley County. The new strip test for nitrates has expedited the use, sale and shipment of feedstuffs for our constituents. Fifty nitrate samples were tested in 2018, representing more than 10,000 acres of forage and approximately 8,000 cattle. Education and outreach on potential problems from concentrated sulfates and nitrates in livestock water supplies has allowed producers to be proactive and discerning in water resource management.

Field peas are one pulse crop that has changed the face of Valley County. Photo by Shelley Mills

Narrowleaf hawksbeard
MSU Extension has worked closely with growers to improve their knowledge, skills and abilities to successfully raise pulse crops in rotation with small grains through an annual Northeastern Montana Pulse Plot tour. These plots have proved to be an invaluable resource for pulse producers, industry representatives and pulse researchers. Wheat stem sawfly, once a prolific pest, is no longer a problem in Valley County since producers have moved to rotational cropping.

Positive Youth Development Grows Here

Dr. Richard M. Lerner, Director of Institute for Applied Research in Youth Development at Tufts University found that “structured out-of-school time learning, leadership experiences, and adult mentoring that young people receive through their participation in 4-H plays a vital role in helping them achieve success.” Instilling leadership skills and a sense of community in our youth has become the focus of Valley County 4-H. Through youth/adult partnerships, youth are given the support necessary to fully reach their potential. Outreach in the high schools, at 4-H camp, in 4-H afterschool programs and with emphasis on community service gives youth opportunities to learn and make good choices.

Community service has always been an important part of 4-H. Youth service learning goes beyond just volunteering and moves into an expanded experience resulting in learning as well as genuinely helping the community. Valley County youth take on leadership roles in their clubs, serve on community boards, and learn citizenship through travel to Boston, New York City and Washington D.C. They hone their public speaking skills, develop confidence and build character.

Teen 4-H members apply leadership skills while serving as camp counselors to ensure a positive learning experience for all campers. They share the knowledge gained through their own learning experiences with younger 4-H members while remaining dedicated to their own projects. 4-H members face the future from an informed experience. They have won, they have failed, they have shared and they have served.

Escape the School: Escape room-themed Teacher Workshop

Continuing education is an ongoing requirement of our state’s educators. Valley County MSU Extension aims to bring professional development to local teachers, offering 16 renewal units or one undergrad or graduate credit to participants.

In this year’s workshop, teachers applied their inquisitive minds to solve a historical murder mystery. Following an escape room theme, all disciplines were incorporated into the process. Forensic science, historical data, literature, and technology lessons at all grade levels were included.

Because incorporating science, technology, engineering and math (STEM) in the classroom is important, teachers were introduced to STEM boxes which were distributed to every elementary, middle and high school in Valley County. Designed and created through a grant from the Valley County Community Foundation and MSU Extension, these boxes included lesson plans and supplies to teach a multitude of STEM topics. The teacher workshop also included art in the form of barn quilts, transforming STEM to STEAM.

Participants reported the following impacts from the workshop:

- created a learning environment to explore innovative teaching methods
- savings of between $75 - $300 per teacher
- making teachers think outside the box in our teaching strategies
Living and Caring with Dementia

Over 20,000 people in Montana have been diagnosed with Dementia/Alzheimer’s disease. This disease knows no boundaries and all communities face the challenges of caring for families needing support and guidance. The gradual slipping away of mind and memory is frightening and frustrating, both for the person with the disease and for family and friends.

Perhaps one of the greatest costs of Alzheimer’s disease is the physical and emotional toll on family, caregivers and friends. The changes in a loved one’s personality and mental abilities; the need to provide constant, loving attention for years; and the physical demands of caregiving duties can be hard to bear. As the number of people suffering from or caring for someone with Dementia/Alzheimer’s grows, the need for information on caregiving increases.

Valley County MSU Extension partnered with the Frances Mahon Deaconess Hospital, Prairie Ridge Village, Valley View Nursing Home, and Valley County Respite to form Glasgow Neighborhood Health Partners, which recognized a need for dementia training for both home and professional caregivers. Combining resources made it possible to invite Heather McKay, an award-winning occupational therapist and dementia care specialist, consultant, and international trainer/speaker, as well as MSU Extension’s family economics specialist Marsha Goetting, who provided insight for those making estate planning and financial decisions.

McKay provided training for professional and family caregivers on topics related to dementia and Alzheimer’s care. She has worked in the hospital, home health, and community settings, and with personal and professional experience with dementia caregiving, she addressed caregiving from both perspectives. Over 200 participants from six counties attended one of three full-day workshops, which led to greater understanding of dementia, awareness of caregiving—including self-care, and appreciation for both those with the disease and those in caregiving roles.

Marsha Goetting, top left, and Heather McKay, left, lead training sessions for caregivers.
Welcome to Wheatland County

Wheatland County is located just south of the center of Montana. The rural community has a population of around 2,200 residents. Its roots have been in agriculture, with many generational ranches. The main agriculture products are cattle, sheep, and forage crops. Taking advantage of the strong winds, wind power electricity has also become a significant component in the local economy. In addition to agriculture and wind power, the community is home to many small businesses.

On Their Own and OK

Afterschool childcare is very limited in Wheatland County, which leaves many youth home alone after school. In January 2018, Wheatland County MSU Extension partnered with the Wheatland County Sheriff’s Office and Hillcrest grade school to offer a series of workshops to help youth learn the skills they need to feel more confident staying home alone.

During the first session, many of the youth expressed that they didn’t really like being home alone. They were “nervous, unsure of what to do, and kind of scared.” Through the workshop series, youth learned how to safely make snacks, brainstormed ways they could responsibly use their time to do things they enjoyed, and used role play to review information about household safety.

Wheatland County Undersheriff Randy Cameron attended one of the workshops and talked to the youth about serious emergencies. The students had the opportunity to ask questions about what they should do in situations they were worried about and have an officer answer them. They were also able to practice making a call to 911, where the dispatcher answered and asked them questions. This part was a highlight for the students and eased many of their concerns.

After attending the workshop series, the youth were less anxious about being home alone for short periods of time and felt much more prepared. They understood the safety precautions they should take and what situations were real emergencies. Youth felt empowered by their new responsibility and were excited to make choices about how to spend their time.
Wheatland County MSU Extension is hosting the second year of Annie’s Project, which is an educational program to specifically empower women involved in agriculture. The program provides information in a safe, informal learning environment so that participants can feel comfortable learning more about farms and ranches.

Part of the strength of Annie’s project is that a local steering committee designs it. Each Annie’s Project program addresses financial risk, human capital, legal risks, marketing, and production, but the local steering committee develops specific topics covered in each area. Each session is customized to meet the needs of participants. One participant shared “I love the program, it has helped me be more effective on our ranch.” The program also provides an opportunity for women of different generations and perspectives to connect and support each other. Participants are finding that a lot has changed, and a lot is still the same.

By building the capacity of the women involved in family farms and ranches, Annie’s Project is helping build the capacity of each operation. Participants have the time to work on portions of their operation and increase their understanding, while working on the day-to-day operation. Participants have shared that after being in Annie’s project, they want to step into more of a management role on their ranch, where before they felt like they didn’t have the skills or knowledge. “The information being presented is information we can actually use.”
Wibaux County’s population has maintained around 1,000 residents in the 890 square miles that compose the county. The major industries include farming and ranching, and some oil production on the county borders. The average income for Wibaux residents is $40,833. Currently 75 percent of Wibaux County acreage is certified farm and ranch production. Cover crops and pulse crops have been on the rise in production popularity in Wibaux County with a large majority of producers being beef cow/calf operators as well.

With a small community, Wibaux has shown some big changes and continued success. The fairgrounds showcased a new set of covered grandstands in the last few years with many additional improvements to the grounds. The Wibaux fairgrounds host the Wibaux County Fair and numerous other events throughout the year, including community gatherings, birthday parties, weddings, horse shows and more.

The continued success of local wool producers has shown that the MonDak Wool Pool remains an important factor in wool production in Wibaux County. The MonDak Wool Pool contributed 14,735 pounds of wool from eight growers worth $43,860.

The Wibaux County Weed Board has reported an increase in noxious weed control across the county with assistance from grant money and because of producer’s increased awareness and participation.

The beautiful view of green lush land from a country road.
Wibaux Health Fair shares ‘Pearls of Wisdom’ for the past 30 years

The Wibaux Health Fair has been serving Wibaux County and surrounding communities with health-saving testing and informational booths for many years. The 30th anniversary of the Wibaux Health Fair ‘Pearls of Wisdom for Better Health’ was open for business before the sun came up. The 2018 health fair, held in March, opened its doors to over 525 youth and adults.

The health fair is also a social event. Farmers, ranchers, and retirees welcome the opportunity to visit with friends while enjoying a continental breakfast sponsored by local individuals and businesses. Youth enjoy the hands-on booths and picking up a snack or a free pencil.

With an emphasis on prevention and healthy lifestyles, the health fair is sponsored by MSU Extension in Wibaux County. The fair has grown to serve more than 500 people (in a county with a population of 1,000) with typically over 20 organizations exhibiting their health-related services.

With the cooperation of many volunteers and the local 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 staffed two days a week by Glendive Medical Center, and two days a week by Fallon Medical Complex.

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, A1C, anemia panels, Vitamin D, and PSA screening at reduced costs. Other services offered include 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, MSU Extension Agent; Patti Goroski, MSU Extension Administrative/ Program Assistant; Trish Olson, Wibaux County Health Nurse; and Barb Maus, former Wibaux County Health Nurse.

The health fair has proven to save community members 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.

Because of the information presented, participants are aware that increased physical activity and improved dietary habits are a necessity to prolong their lives. Offering testing 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.
Wibaux County 4-H Inspires Growth

Wibaux County 4-H consists of 58 youth members, 21 adult volunteers, and four active clubs. Although the 4-H program is small in numbers, the members are very active, participating in one to seven projects, averaging three projects per member. The 4-Her’s show their enthusiasm for 4-H in their project loads and also by exploring different project interests. Our 4-H members completed a wide variety of 107 projects.

The past year has been busy with numerous 4-H clinics including horse (weekly), livestock feeding, showmanship, poultry, and a few craft workshop days. This year was Wibaux County’s turn to co-host the OREO trip (designed for 4-H members in seventh and eighth grade—providing a travel-learning opportunity before 4-H members start attending state 4-H events). There were 56 youth and 14 adults who traveled to Livingston, MT, to experience a wide range of activities from whitewater rafting to touring a vintage blacksmith shop.

With increased interest in the dog project, the need was seen to purchase our own dog agility equipment, rather than borrowing from another county. The members had fun helping put together a dog agility course, building obstacles, painting, and purchasing a few unique pieces.

Archery program membership has grown and became the most popular project in Wibaux County. Within the archery program, hard work and dedicated practices have been proven at regional and state competitions with members placing in multiple age groups. The growth of state event participation has also increased from Wibaux County 4-H with attendance at 4-H Congress, Rec Lab, and Fall Ambassador Training.

Nicole Rolf evaluates open class goats at the Wibaux County Fair.

4-H Cloverbuds working on a STEM activity at 4-H Achievement night.
Welcome to Yellowstone County

Yellowstone County, the most populous in Montana, is home to a blend of urban and rural communities who work together to make it a thriving industry hub. As the population steadily grows, the agriculture, energy, and healthcare industries continue to lead economic forces and provide thousands of job opportunities. The agriculture sector is largely comprised of receipts from wheat, barley, sugar beet, alfalfa, corn, and beef production, while the energy market is led by oil, natural gas, and coal. Yellowstone County and Billings, specifically, also play a role as the regional healthcare destination for many individuals across Montana and Wyoming.

Yellowstone County MSU Extension is an off-campus arm of Montana State University. Our purpose is to provide unbiased, research-based information, educational resources and outreach programs through the land-grant university system. Agents help community members interpret information and encourage the application of it to the solution of problems. This unbiased base of knowledge gives people the means to meet ever-changing needs and make sound decisions that impact their lives and their communities.

View of the Yellowstone River and rimrocks from Coulson Park, Billings, MT.
2018 Square Foot Garden Upgrades

In 2003, Yellowstone County Master Gardeners were granted the use of a plot of land at MetraPark for a square foot demonstration garden. This technique reduces single row-sized gardens to a quarter of the size, without losing production. Row paths are eliminated, and plants are spaced the same distance apart as in row spacing.

In 2018, with hundreds of volunteer hours, the following upgrades were implemented in the demonstration garden:

- Nine raised-box growing beds installed.
- Weed barrier installed on walkways, covered with scoria gravel.

This demonstration garden, in place for 15 years, is a regular go-to spot for fair-goers, carnival workers and garden enthusiasts. Many community members commented on this year’s improvements and how these gardens are a great addition to the noisy environment of the fair’s midway.

The garden area was also used as a classroom this summer. Master Gardeners teaching a bee class said it was wonderful to have this outdoor location with all the seating options.

Plans for 2019 include installing raised-box perimeter beds and a rock garden along the front of the garden site to demonstrate xeriscape (low-water use) planting.

The purpose of this garden is to demonstrate the easy, square foot garden technique (usable no matter what the soil challenges are), to reduce garden size, eliminate tilling, and utilize smaller space gardens for maximum production. This style of garden can result in an abundance of locally-grown, fresh produce from an attractive garden system with less weeds, less water, and less work.

Mental Health in Yellowstone County

MSU Extension is working in partnership with community organizations and schools to increase mental health literacy and provide tools to respond to mental health crises in youth and adults across Yellowstone County.

Through the Mental Health First Aid certification program, similar to physical first aid training, participants learn how to offer support for someone in crisis until professionals can be reached. Through a grant with the Eastern Service Area Authority, over 75 participants have been trained in Eastern Montana by Family and Consumer Sciences agent, Jackie Rumph.
Youth Aware Mental Health (YAM) is a resiliency program delivered by MSU Extension in collaboration with the MSU Center for Mental Health Research and Recovery (CMHRR). It is meant to provide basic information about mental health, coping skills and emotional intelligence as well as problem-solving and positive peer-relationships in youth.

YAM is taught by the 4-H and Youth Development agent, Roni Baker, in five highly-interactive sessions involving lectures on mental health, discussions of stress and crisis problem-solving, role plays of challenging life situations, and peer-to-peer feedback regarding healthy behaviors and coping strategies.

During the 2017 – 2018 school year, YAM was delivered to 72 youth in rural Yellowstone County and statewide to 641 youth. Mental health general knowledge increased. Pre- and post-surveys indicated a significant decrease in depressive and anxiety symptoms and 79% report they will now seek out school staff for mental health support.

Cooking for One

MSU Extension in Yellowstone County collaborated with the Billings Community and Senior Center to offer a Cooking for One class for county residents. Participants varied from couples with different food preferences who wanted to cook separate meals, to seniors who had lost their partners and had never cooked before in their lives. Participants gained hands-on cooking skills and experience in preparing single portion meals for themselves. An unforeseen benefit was the gathering of a group of isolated community members who were experiencing similar life circumstances. This created social support within the class and friendships that lasted beyond the three-part series.

Preparing meals at home and feeling comfortable doing so allows participants to maintain their independence. By sampling the meals in class, participants could choose which recipes they wanted to prepare at home. One participant stated this was the first time he had cooked for himself in all of his 60 years, and he now had multiple recipes he could prepare and would enjoy.

Montana State University Extension is proud to offer a class that positively impacts participants’ knowledge, skills and behavior.

Connecting Dots in Agriculture

For over 20 years, MSU Extension in Yellowstone County has played a vital role in teaching fourth graders the importance of agriculture during their visit to the Northern International Livestock Expo (NILE). This year, 1,881 students from 38 schools participated in Fourth Grade Ag Education. The students learned about crops, livestock (production and by-products), range health, soil health, weeds, and honeybees.

With increasing consumer concerns about food origin and safety, and decreasing connections to agriculture, the need for education is evident. Billings, specifically, has seen steady growth in its urban population, which has allowed the program to not only reach more students, but a more diverse group of students. Those involved share a common goal – for students to learn the role that Montana’s number one industry plays in their everyday lives, whether that be linking wheat to flour or pigs to bacon.

Without collaboration, program growth and impact is limited. MSU Extension in Yellowstone County partnered with the NILE, Yellowstone Conservation District, Montana CattleWomen, Sunshine Apiary, Yellowstone County Weed
Fourth graders experience hands on learning at the crop production station. District, Extension agents and specialists, and many invaluable volunteers to give students the best possible learning experience. Ag Education’s impact is verified through surveys, as well as through personal conversations. In 2018, 95% of teachers rated the program as excellent, with over 96% indicating all stations engaged the students and taught them something new. Furthermore, teachers, parents, and students continually comment on Fourth Grade Ag Education’s importance, noting it as one of the most valuable school field trips.
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