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. Major rivers in the county include the Yellowstone River and the Powder River which provide irrigation water for farmland in the river valleys. About 80% of the land in Prairie County is considered rangeland, 15% is considered cropland, and there are 186 farms.

There is one full-time county agent and one full-time program assistant in the Prairie County MSU Extension office. The Prairie County 4-H program has 36 youth and seven leaders in three clubs. There are four community Homemaker Clubs with 44 members.

Although the population of the county is small, the clientele needs are diverse. MSU Extension's role is to provide a wide range of educational opportunities and services for the people of Prairie County. Programming areas include agriculture, 4-H and youth development, family and consumer sciences, and community development.
Extension’s Agricultural Programs Benefit the Public in a variety of ways

**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, range monitoring, and Noxious Weed Seed Free Forage certification.

MSU Extension in Prairie County performs nitrate quick tests in the office to test for the presence of the toxin nitrate in forage. During the summer of 2017, 66% of the samples submitted tested positive for nitrate. MSU Extension in Prairie County utilizes a quantitative nitrate test that gives the grower an indication of how much nitrate is present in the sample, whereas the basic quick test just confirms if nitrate is present or not present. Of samples tested with the quantitative nitrate test, 22% were high enough that producers would have to feed cautiously, diluting the ration.

As a result, producers were able to make an informed decision about whether or not to delay cutting or grazing.

Due to severe drought across Eastern Montana, livestock water quality was of particular importance during the summer of 2017. MSU Extension in Prairie County has meters to measure Total Dissolved Solids and pH as an initial test to determine if further testing is needed. Upon testing, one producer found that one reservoir was unsuitable for livestock and another was borderline. As a result, this producer decided to test water in each pasture before rotating grazing this season. Another producer found that water was unsuitable in a reservoir and avoided grazing that pasture this season. A third producer had noted cattle avoided a specific water source in one of his pastures and upon testing, found the water to be undesirable. To remedy the problem, he drilled a new well with better quality water that he added to the pipeline to improve the water quality in that pasture. The local Natural Resources Conservation Service (NRCS) office also referred producers to MSU Extension to have water sources tested prior to applying for Emergency Conservation Program (ECP) funds to develop livestock water.

MSU Extension in Prairie County helped producers balance rations for feeding cows and for backgrounding calves. Ration balancing helped these producers more efficiently and economically utilize the feed resources they had available to meet the nutrient requirements of their livestock.

Combining winter wheat in Prairie County.
MSU Extension hosts Agriculture education events

MSU Extension agents in Prairie, Dawson, Wibaux, Fallon-Carter, Powder River, Rosebud-Treasure, McCone, Custer, and Garfield counties cooperatively plan the annual Extension Winter Ag Series focusing on topics of regional interest and importance. The third week in January 2017, guest speakers traveled to nine towns in Southeastern Montana. Winter Series is the largest adult education event in Prairie County. Topics in Prairie County included: controlling prairie dogs and pocket gophers, with Stephen Vantassel of the Montana Department of Agriculture; Montana data on cover crops from the Southern Ag Research Center, presented by Sharla Sackman, MSU Extension Agent in Prairie County; dynamics of hydrology in Southeastern Montana, by Bureau of Mines & Geology Hydrogeologist Jon Reiten; and drone use for agriculture, by Dale Galland, owner of the local hobby store Prairie Unique. Following Winter Series, one producer requested information on planting cover crops as a result of the presentation and plans to grow them for forage. At least two landowners contacted Reiten at the Montana Bureau of Mines & Geology to obtain information on possible well drilling locations based on the contact they made at Winter Series.

MSU Extension in Prairie County works cooperatively with the Prairie County Grazing District and a team of local producers to select topics of local interest for an annual range tour featuring researchers from Fort Keogh Livestock and Range Research Laboratory. In 2017, the tour featured Dr. Mark Petersen, who shared Fort Keogh history and how research conducted there has impacted modern agriculture; Dr. Megan VanEmon discussed alternative feeding options during drought; Dr. Andy Roberts talked about long-term effects of altering a breeding season; and Dr. Lance Vermeire took participants to view range drought plots in the field. Dr. David Branson from the USDA-Agricultural Research Service in Sidney summarized drought research relating to grasshoppers, and Dr. Kris Ringwall from the Dickinson Research Education Center demonstrated how the Cow Herd Appraisal System (CHAPS) can be used to evaluate operation efficiency. This annual tour has been a great way for Prairie County livestock producers to form a relationship with scientists at Fort Keogh. Forty-one producers engaged in active discussions at the tour, asking questions about research and seeking advice about their own operations.
MSU Extension helps landowners with invasive plant management

Houndstongue has become an increasing problem in Prairie County in recent years with favorable weather conditions contributing to the emergence of the weed. A Cooperative Weed Management Area (CWMA) was instigated at the request of a private landowner struggling with houndstongue on his property and his desire to enlist help from others to manage the weed. MSU Extension facilitated the process of writing 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. Producers in a five-township area in northern Prairie County attended an informational meeting about the NWTF grant that the Prairie County Weed District had received. Landowners learned about timing of Houndstongue control, proper herbicide use, and basic houndstongue biology. Six landowners used the recommended herbicide, metsulfuron methyl, to treat houndstongue for the first time. Landowners and the Weed District have reported superior control with the metsulfuron methyl. Additional landowners have an interest in becoming a part of the houndstongue grant project for 2018.

Prairie, Fallon, and Wibaux Counties have worked together since 1990 on the Tri-County Leafy Spurge Project. The Tri-County area of Prairie, Fallon and Wibaux counties is a location where leafy spurge is and will continue to be a permanent problem. Twenty-five years of educational programs and sustained integrated weed management efforts on the part of landowners have helped contain the leafy spurge infestation to the same area of Cabin Creek and slowed the spread to outlying areas.

The project began as a cooperative grant project and even after the grant concluded, an annual tour still takes place to educate producers about noxious weed management. 2017 tour topics were cheatgrass suppression and houndstongue management, presented by Jane Mangold, MSU Extension Invasive Plant Specialist; monitoring weeds with drones, by Brady Woodward with Moore Engineering; little bluestem invasion by Jeff Mosley, MSU Extension Range Management Specialist; and tips on using sheep to graze leafy spurge by local sheep producer and herder Les Thomason. One producer reported on feeding hay on his patches of little bluestem to make more use of that grass.
Supporting the community in Custer County

MSU Extension supports community development efforts

MSU Extension in Prairie County supports local government and organizations in their community and economic development efforts through facilitation of community discussions, assistance in project planning and implementation, infrastructure development, and leadership training.

Residents in Prairie County are concerned about gradual decline in population and school enrollment. In general, Prairie County has an aging population with fewer young people to fill community leadership roles as the older generation leaves leadership positions open. MSU Extension offered two leadership training sessions in the summer and fall of 2017 to meet that particular local need.

Paul Lachapelle, MSU Extension Community Development Specialist, visited with community leaders about open meetings statutes, how to take minutes, noticing meetings, public records management and effective meeting techniques. MSU Extension agent Sharla Sackman also led an exercise for the group on conflict management. School Board, Town Council, County Commissioners, Library Board, Airport Board, Fair Board, Cemetery Board, Hospital Board, and Chamber of Commerce members were represented at the training. Three of those in attendance at this workshop chose to receive further training at the Leading Local training offered in the Fall and also recruited other board members to attend.

Leading Local is a program offered by the MSU Local Government Center, taught by Dan Clark. The training focused on personal leadership skills, board member engagement, and organizational management. Personality assessment and public participation in meetings were the main focus areas of the training. Elected officials including all three County Commissioners, the Clerk & Recorder, and the Mayor of the Town of Terry participated in the training. The county and the town also helped sponsor the cost of the training to enable Town Council, county-appointed board members, and county employees to participate in the training. Other groups represented at the training included the hospital, churches, and economic development organizations. Town and county officials reported at the training that they may adjust when they ask for public comment in meetings to better meet the needs of the public as well as enhance the efficiency of their meetings.

Leading Local training in Terry.
Prairie County 4-H provides members many opportunities to learn leadership, citizenship, and life skills

One of the goals for the 4-H program locally has been to provide educational opportunities in a wide variety of projects. Sixty-four percent of 4-H members participated in at least one project workshop during the 4-H year. Projects included market and breeding livestock, horse, visual arts, leatherwork, shooting sports, foods, and STEM activities. The workshops occurred over the course of the 4-H year with a winter project workshop, one overnight 4-H campout at the local fairgrounds, a series of mounted 4-H horse clinics to practice horse project skills, a livestock judging training and practice contest, 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. Volunteer leaders and 4-H teen leaders were engaged to lead project workshops with the county agent. Seventy-seven percent of Prairie County 4-H members between the ages of 13 and 19 served in leadership roles during the 2016-2017 4-H year by coordinating county events including project workshops, All Events Day, and Achievement Day.

A 4-H Communication Survey demonstrates that 4-H has positively influenced communication skills in Prairie County 4-H members. Eighty percent of 4-H members over the age of 13 reported improvement in knowing how to prepare a presentation from beginning to end because of their participation in 4-H communication activities. Sixty percent of members in that same age group also reported that they are now more willing to speak in front of groups. For members 12 and under, 64% reported an improvement in their ability to answer questions about their topic or ideas. Sixty percent of the younger age group reported that they now know how to prepare a presentation from beginning to end. One member shared, “Because of 4-H communication skills, I am comfortable when speaking in front of large groups.” Another member stated that he has more friends and did better in school because of 4-H.

Prairie County 4-H members participate in a number of regional and statewide activities such as the Southeastern Montana 4-H Camp, Eastern Montana Regional Small Animal Judging Day, Montana State 4-H Rec Lab, and Montana State 4-H Congress. These experiences provide an opportunity for 4-H members to travel, network with members from other areas, and gain valuable communication skills and take on leadership roles outside of the county.
MSU Extension offers programming in Family & Consumer Sciences

There are four active homemaker clubs in Prairie County whose interests include nutrition, horticulture, and community improvement. MSU Extension staff assist homemakers in meeting their educational goals by publishing a monthly newsletter containing information on subjects like food preparation and safety, nutrition, health, financial management, and gardening.

An example of a program MSU Extension presented for this audience was a lesson on “Eggs as a Part of a Healthy Diet” for the Cabin Creek Homemakers Club. Club members learned about eggs as an inexpensive source of protein and other nutrients as well as tips for safe handling of eggs and preparation techniques. MSU Extension agent Sharla Sackman also assisted the Prairie County Homemaker Council in submitting an application to Humanities Montana to host a Montana Conversations Program. Arch Ellwein presented his program “A Visit with Theodore Roosevelt” in November of 2017. Participants reported learning a great deal about the history and culture of that time period.

At the request of community members, MSU Extension organized a visit to the yard of a local certified flower judge to teach community members about care of perennial flower beds, fruit trees, vegetable gardens, and aquatic plants, as well gardening methods such as use of hoop houses and mulching.

MSU Extension in Prairie County has added a Family and Consumer Science track to the annual Winter Ag Series program to appeal to a broader audience than just agriculture producers. Speakers were Alice Ann Carlton with the Eastern Montana Mental Health Center, assisted by a local doctoral student on coping with stress and anxiety; and Tara Andrews, MSU Extension agent in Custer County, on recycling and re-purposing fabric scraps into coasters and trivets.

PRAIRIE DOG CONTROL WORKSHOP

Over the last few years prairie dogs have significantly increased the land they occupy and new prairie dog towns have appeared. To address the control of prairie dogs, the Extension agent coordinated a program by Montana Department of Agriculture Vertebrate Pest Control specialist Stephan Vantassell. Sixteen producers attend the workshop. Vantassell highlighted that due to their biology, control efforts must reach 90% to be successful or the pest is able to recolonize the area. Attendees received two private pesticide applicator recertification credits for attending.

Montana Department of Agriculture Vertebrate Pest Control Specialist Stephen Vantassel talks to livestock producers.
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Montana State University Extension is an ADA/EO/AA Veteran’s Preference Employer and provider of educational outreach.