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 precedence 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.