Prairie County is a small, rural county (population 1,182) with an abundance of public land. In fact, just 53% of Prairie County’s land is privately owned, while 41% is federal land and 6% is state-owned land.

Agriculture forms the basis of the economy in Prairie County. Just over 80% of Prairie County is considered rangeland, so it is not surprising that range livestock production is one of the most important agriculture sectors in the county. Major crops include alfalfa, barley, millet, winter wheat, spring wheat, lentils, peas, and corn. Other crops of importance are sugar beets, dry edible beans, chickpeas, and soybeans.

Although the population of the county is small, clientele needs are diverse. MSU Extension provides a wide range of educational opportunities and services for the people of Prairie County. Program areas include agriculture, 4-H and youth development, family and consumer sciences, and community development.

**MSU Extension offers Agricultural services to assist farmers and ranchers**

MSU Extension in Prairie County offered many critical services to help agriculture producers navigate drought conditions in 2021.

Nitrate 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, producers brought 69 feed samples to be tested. Of the forage tested for nitrates, 68% was safe to feed, 26% tested at a level high enough that dilution of the feed would be necessary, and 6% tested as extremely high with a potential for lethal effects. This information provided producers with the information needed to make decisions about timing of cutting a crop, when grazing a crop was safe, and how to safely feed the forages tested.

The Prairie County MSU Extension Agent balanced rations for feeding cows and for backgrounding calves to efficiently and economically utilize the feed resources producers have available. Forage quality testing is an important component of ration balancing and marketing forage for sale. MSU Extension assisted producers in submitting 23 forage samples to an accredited lab for nutrient analysis of crude protein, total digestible nutrients, and net energy values to aid in feeding and marketing forages.

In addition to drought and heat, Prairie County landowners were impacted by high grasshopper populations. Prairie County MSU Extension staff served as a local liaison to help facilitate communication between landowners and the USDA.
Animal and Plant Health Inspection Service (APHIS) Plant Protection and Quarantine (PPQ) for a grasshopper suppression program. Gary Adams, State Plant Health Director for USDA-APHIS-PPQ, reported that 337,430 acres were protected in the Prairie County treatment blocks with 37 private landowners participating in the suppression program. A total of 1.3 million acres were protected in Montana, which means the Prairie County treatment block made up 26% of the total acres protected in Montana.

**Prairie County 4-H provides members opportunities to learn leadership, citizenship, and life skills**

The Prairie County 4-H program provides educational opportunities in a wide variety of 4-H project areas. All 4-H members participated in at least one project workshop during the 4-H year. Projects and skills highlighted were robotics, horsemanship, sewing, visual arts, livestock, STEM, leadership, communication, and record-keeping. 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 youth development, 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. All Prairie County 4-H members over the age of 13 participated in leadership training or served in county-wide leadership roles during the 4-H year by coordinating county events and teaching at project workshops.

Each year, 4-H members look forward to participating in regional and statewide 4-H activities. Prairie County 4-H members participated in Southeastern Montana 4-H Camp, Eastern Montana Regional Small Animal Judging, Champion of Champions beef and showmanship contests, and Montana State 4-H Congress. These experiences provide an opportunity for 4-H members to network with other 4-H members, gain communication skills, and take on leadership roles outside of the county.

**MSU Extension helps landowners with invasive pest 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 Montana Noxious Weed Trust Fund (NWTF) grants in 2017, 2018, 2019, and 2021 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. In the fifth year of the Prairie County Houndstongue project, the Weed District has reported success with control efforts utilizing recommended herbicides. Since 2017, 12 landowners plus three commercial contractors applied recommended herbicides to 530.25 acres of houndstongue and 263.25 acres of Canada thistle. By applying for a NWTF grant, MSU Extension helped landowners and the Prairie County Weed District secure $31,667 in grant funding to cost share herbicide and commercial application costs.