

Custer County



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Cattle graze outside of Miles City, by Mike Schuldt.

Miles City, located in Custer County, serves as the economic hub for much of Southeastern Montana. With 8,500 of the 11,700 people in Custer County residing in Miles City, the bulk of the land in the county is rangeland with a portion of the county along the Yellowstone and Tongue rivers producing irrigated crops. Cattle are the major agricultural enterprise in the region. Ranchers are preparing to rebuild after drought and grasshoppers caused a 40% liquidation of the cow herd which normally numbers 53,000 head in Custer County. MSU Extension agriculture programs will be centered around a focus on education to assist in rebuilding this cow herd in the coming years.

Custer County MSU Extension is a non-formal educational program designed to help people use research-based knowledge to improve their lives. The primary mission of MSU Extension is to bring information from the Land Grant University to the people of Montana. Our program includes, in addition to traditional activities like Winter Series, Arthritis Exercise, 4-H project workshops and contests, educational delivery through web-based platforms including WebEx, virtual meetings and blended techniques, allowing virtual instruction delivered

to both a physically present and virtual audience. New for 2023, in partnership with Custer County Commissioners and MSU Extension, we have created a Community and Economic Development Extension Agent position to address opportunities and needs for community growth.

Connection, wellness, and stress management

Farming and ranching can be a tough job, both physically and mentally. So tough in fact that MSU Extension has created a Montana Farm and Ranch Stress Management website. This resource can be used personally and for those that live and work beside farmers and ranchers.

The MSU Extension Custer County Agent used this clearing house to discuss overall well-being and stress management with a homemakers group in Custer County. The group comprises 10-15 members, with attendees up to 80 years old. Adult attendees discussed what contributes to their well-being by utilizing the seven dimensions of wellness to reflect on their well-being. Participants used this reflection

opportunity to share areas where they were doing well. This allowed for connections across the group, from a young mom to a grandma of many, and all were able to share something they were doing well for themselves.

The homemakers in Ismay all grew up or currently live in this area of Eastern Montana. With shared farming and ranching experience and an understanding of place, they shared their experiences pursuing physical and mental wellness. Many still living in the area are co-ranchers, partners, wives, and neighbors to people working in the farming and ranching industry. Participants discussed how they will utilize the MT Farm and Ranch Stress website resources to support themselves and their loved ones in managing the stress that comes with the job.

4-H Flourishes in Custer County

The Custer County 4-H program provides educational opportunities in various 4-H project areas. Members participated in project workshops during the 4-H year. Members of the teen council led the Cloverbud Day Camp and Market Beef Production workshops, while adult leaders led workshops in leathercraft, a weekly horse clinic, sewing, livestock showmanship, foods, shooting sports, and small animals. 4-H members demonstrated competence and confidence in their projects during the 4-H interview judging process and at livestock shows held during the Eastern Montana Fair.

In 4-H we strive to provide youth opportunities to gain communication, leadership, and teamwork skills to enable them to become contributing citizens. Volunteer leaders and 4-H teen leaders were invited to lead project workshops with the county agent. Eighteen Custer County 4-H Teen Council members over age 14 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. More than 125 Custer County 4-H members participated in Southeastern Montana 4-H Camp, the Junior High Youth OREO trip, and Eastern Montana Regional Small Animal Judging, Regional, State and National Shooting Sports competitions, Livestock 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 the county.

Forage Nitrate Risk Assessment - Utilizing new Technology

The ability to accurately evaluate the risk of potentially toxic nitrates in various forages in the field has long been a service producers rely on MSU Extension to provide. Changes in production practices coupled with three years of drought have caused a drastic increase in the use of annual forage crops as feed for livestock. Along with this comes an increased demand

Well-Being in Rural Eastern Montana

Each month a group of homemakers in Eastern Montana gather to connect with each other, and learn about something new.

Attendees

10 people ages 3 months to 80 years old were in attendance.

What is Well-Being

Attendees discussed how they recognize and prioritize their own well-being. Utilizing a wellness wheel, and discussing stress management tools from the Montana Farm and Ranch Stress Clearing House.

Support for loved ones and neighbors

As co-ranchers, partners and wives in an operation, often times attendees are the ones who recognize when stress is taking a toll on their partners. Attendees discussed the resources available from the Montana Farm and Ranch Stress Clearing House and how they may use these resources to help their partners, neighbors and friends recognize and manage their stress.





Previous Page: (top) Well-Being in Rural Eastern Montana flyer; **(bottom)** Electronic nitrate ion meter in use at the MSU Extension office, by Mike Schuldt; **This Page:** Rappelling workshop at 4-H Camp Needmore, by Mike Schuldt

for evaluating nitrate risk as these annual crops accumulate nitrate at toxic levels much more readily than traditional perennial grass or legume forage crops.

Testing methods traditionally utilized by MSU Extension agents for field testing were developed in the 1960s. Current research shows that the methods are not as reliable as they could be and may result in incorrect risk analysis of the forage being tested. Nitrate toxicity can result in production losses due to nutritional stress, late-term abortions, and even animal death. The Custer County MSU Extension agent has identified the need for better testing methods.

An improved testing method developed by a research scientist at the University of Georgia in the 1980s was implemented at Custer County MSU Extension in 2016. This method utilizes a water extraction and test strip measuring process that is more reliable than the acid test of the 60s, however, accuracy and result interpretation are issues that impede good analysis of risk for producers.

Utilizing information published by the Ag Research Service on a study of field-testing methods for nitrate, the Custer County MSU Extension agent has identified three potential “new technology” methods that promise to provide more accurate results. Two of these methods have now been employed to evaluate forage samples submitted for nitrate analysis to run parallel comparisons and evaluate applicability for use in the county office setting.

Results are still preliminary, however, for a modest investment of \$600-\$700, an electronic nitrate meter can be purchased. When used according to the developed protocol, this meter will provide improved information and accuracy of nitrate risk analysis. This improved information will allow Extension agents to provide recommendations to producers that will increase the quality of harvested forages and safer utilization of grazed forages.

In Custer County, the impact of this effort is wide-ranging. During the last two drought-impacted seasons, over 700 samples were evaluated for nitrate risk by the staff at Custer

County. With an average of 15 acres represented by each sample, 10,500 acres of forage have been tested, representing a harvested forage value of just over \$3 million (1.5 ton per acre at \$200/ton).

Custer County Staff



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

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