2021 MSU EXTENSION HIGHLIGHTS

Stillwater County



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North Stillwater County.

rom the beautiful Beartooth Mountains and river valleys to the rolling plains with big beautiful skies, Stillwater County has it all. Located in south central Montana, the county offers fishing in rivers or streams, floating the Yellowstone and Stillwater Rivers, hunting in the Beartooth Mountains or the open plains to the north, Art Walks in Absarokee and more. Stillwater County has a population of 9,131 (according to 2011 Census), with 1,891 people in the largest incorporated town of Columbus. The Extension office has two agents and one support staff: Lee Schmelzer, agriculture and 4-H agent, Haley Barker, FCS and 4-H agent, and Raya Logan-Jackson, 4-H administrative assistant. We look forward to continuing to serve the needs of our neighbors and communities in Stillwater County.

Stillwater County Extension helps producers manage drought

2021 will be recorded as one of the driest on record in Stillwater County. Much of the current year's agriculture programs revolved around providing services to help producers make drought-related decisions about their operations. This includes in-house testing for nitrates and sulfates in water, water quality testing, insect and weed identification, plant disease diagnostics, forage crop variety information, ration balancing, feed analysis, and providing local weather and soil moisture monitoring data.

Small grains, sudangrass, sorghum, corn, and several common weed species can accumulate toxic levels of nitrate while growing under stressful drought. When livestock consume forages containing elevated levels of nitrate, severe health problems can occur.

As a result of educating producers about the importance of testing forages for nitrate, Extension Agent Lee Schmelzer tested 75 feed samples for nitrates. Fifteen producers using MSU Extension's free, effective, accurate nitrate testing received peace of mind to feed or sell their hay. Additionally, 61 producers were prevented from feeding high nitrate feed which could cause decreased weight gain, decreased milk yield, abortion, and death in cattle and sheep. Seventy-five producers representing 6,300 acres of hay saved \$1,125 in testing and shipping expenses. Based on these tests, all producers know how much they can feed to protect the herd from abortions from nitrate poisoning symptoms.

Cover crop cocktail mixes are increasing in acreage for grazing, having, or as annual forages. Those contemplating cover crops should know that plants that work well as cover crops may not be suitable for forage or grazing. In fact, some species can be toxic or fatal to livestock. Stillwater County MSU Extension evaluated 33 sorghum sudangrass fields for prussic acid. Eight of the fields had potentially fatal levels of prussic acid, requiring producers to adjust grazing plans to prevent livestock sickness or loss.

Stillwater County MSU Extension has also helped strengthen drought monitoring accuracy by collaborating with the Montana Mesonet to install eight Montana Mesonet Weather Monitoring Stations in Stillwater County. This ongoing relationship led to one of the first "Enhanced Climate Monitoring Stations" in Montana to be installed in Stillwater County. The purpose of the network is to provide soil moisture and snowpack monitoring (in addition to standard weather measurements) currently unavailable through existing weather station networks.

These stations were invaluable in helping provide accurate data to the Montana Drought Team that crafts the weekly Montana Drought Maps, which are shared with the media and the U.S. Drought Monitor (USDM). The USDM is the accepted qualifier for drought disaster relief programs. Producers also used the weather stations for accurate weather and soil moisture conditions to inform management decisions.

Farm to Fork

In today's world of processed foods, youth struggle to understand the concept of farm to fork, and the importance of knowing where food was produced, who produced it, and how food impacts them and their bodies. Extension agent Haley Barker designed a lesson to teach youth all the components of a cheeseburger and the health benefits of all parts.

The lesson asked: "Did you know a cheeseburger also has fruit in it? Well at least 'technically' has fruit on it? This lesson discussed how and why tomatoes are considered a fruit, of a vegetable plant, much like many other fruits of vegetable plants. This lesson also highlighted the nutritional value and sustainability of beef.

Barker taught this 20-minute lesson to multiple grade levels and groups of elementary-age youth at Absarokee High School as part of their farm and agriculture day.

4-H Welcome Dinner

Stillwater County 4-H hosted a dinner and informational gathering for all new families who have joined 4-H in the last couple years. New families were invited to learn more about how to choose projects, requirements, and more. The dinner began with an introduction of everyone, a discussion on "where 4-H can take you," including to 4-H camp, exchange and teen leaders/ambassadors. Current 4-H members each







Previous Page: (top) Farm and Agriculture days in Absarokee schools by; **(bottom)** Weather and Soil moisture station by Kevin Hyde; **This Page:** 4-H Welcome Dinner, by Raya Logan-Jackson

hosted a station to discuss their projects (livestock, dog, horse, small animals, foods/cake decorating, sewing, photography, shooting sports, welding/woodworking and Cloverbuds). This gave everyone insight into what each project entails and requirements for the project. Guests were given handouts upon arrival, one of record books and another explaining various parts of 4-H, to ask questions about. One hundred people attended the dinner, 41 of those individuals were in families new to 4-H. It was a successful format to meet and welcome our new, enrolling families.

Stillwater County Staff



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

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