



Welcome to Sheridan County

Sheridan County is located in the northeastern-most corner of Montana. Plentywood, the county seat, is located approximately 18 miles south of the Montana/Canada border and 24 miles west of the Montana/North Dakota border. MSU Extension is a three-way partnership between Sheridan County, Montana State University and the United States Department of Agriculture. Through the strength of this partnership, Extension agents in Sheridan County provide research-based programs to county residents in the areas of Agriculture/Natural Resources, 4-H Youth Development, Community Development and Family and Consumer Sciences.

Agriculture production and agribusiness is the basis of the economy in Sheridan County, with oil production and development also being a component. Wheat and cattle are the major agriculture products. Three-fourths of the land in Sheridan County is tillable and most of the crop production is dryland. Durum wheat production accounts for five to seven percent of the nation's durum wheat. Pulse crops of peas and lentils and oilseeds are also major crops. There are approximately 527 farms in Sheridan County with an average farm size of 1,977 acres.

Sheridan County Courthouse



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Health and Wellness Education

Arthritis Foundation Exercise Class

Why do you keep coming here? That was the question. The answers varied, yet all agreed that the Arthritis Exercise Program is of great benefit to them and expressed appreciation that it has continued to be offered. Now in the fourth year of completion, arthritis exercise classes are going strong and many of the participants have been attending the entire four years. The classes are offered twice a week in two locations and total participation has stayed constant at about 30. Here are some of the benefits the participants cited they receive from participation in the class:

Almost every person commented on the social aspect and the comradery they feel being part of the program, which is a secondary benefit. They enjoy the company and have become great friends. They build muscle and flexibility while they share stories of children and grandchildren and support each other during birthdays, holidays and other life events.

"I won't do this at home by myself. I get the benefits of the exercise by coming to this group as well as social time with a great bunch of people."

"I have less pain from my arthritis because of the exercises in this class."

"It is good for us; it helps us stretch and use our muscles; if I miss a few sessions, I know it; it's important to keep going."

"I come for the humor; this is a fun group."

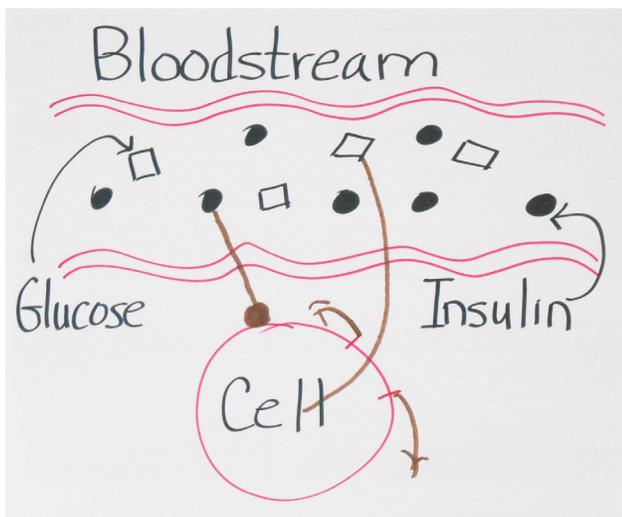


Lifting hand weights is a regular part of arthritis exercise classes.

Self-management is goal of diabetes program

In collaboration with Mountain-Pacific Quality Health, Sheridan County MSU Extension offered a six-week series of the Diabetes Empowerment Education Program, also known as DEEP.

During the first session of a six-week series, it was not uncommon to hear, “I’ve been told by my doctor to avoid eating whites and that testing my blood sugar is not necessary; I need to understand my diabetes better.” The goal of this evidence-based self-management education program is to empower people to take charge of their pre-diabetes/diabetes, avoid complications from the disease, and improve self-management skills. In 2017, the DEEP program served 14 people in Sheridan County. Of significant importance is that several participants took steps to start monitoring their blood sugar. All participants with pre-diabetes/diabetes reported that following the program, they felt better equipped to make healthier lifestyle choices, to talk with their doctor about diabetes, to monitor their health as it relates to diabetes, and to manage their diabetes including sugar levels, diet, and physical activity. One participant commented, “I have learned so much and I’m so thankful that this class was offered! I’m now aware of food choices and blood sugar testing. I test daily before breakfast. I know who I can talk to for help managing my diabetes.”



Poster showing what happens to glucose when the body doesn't produce enough insulin.



The Gift of Warmth and Security

Service projects allow youth and adults to work together to help others and provide an opportunity to give back to the community. In the spirit of giving back, the members of the Tumbleweeds 4-H Club took time at their holiday party to create fleece tie blankets which were donated to the local Child Protective Services Office. The blankets provide a gift of warmth and security when the workers have the daunting task of removing a child from their home, oftentimes having to take them with only the clothes they are wearing. This is only one example of ways that Sheridan County 4-H members engage in projects that provide opportunities for members to experience caring, relating, giving, working, being and living through community service in 4-H.

Agriculture Highlights and Programs

2017 was an interesting year for Sheridan County Agriculture Agent Colleen Buck. The year started off with below zero temperatures and Winter Series programming in full swing. Winter Series offers a program each month: January, on supplementation strategies; February, on growing alternative forages; and March, on rangeland weeds and noxious weed identification. Specialists from MSU-Bozeman came to give presentations in multiple counties across northeast Montana. February also hosted the Northeast Montana Sheep Symposium and the MonDak Pulse Day. Buck and fellow Richland and Wibaux County MSU Extension agents worked to bring back the Northeast Montana Sheep Symposium program for sheep producers of eastern Montana and western North Dakota. Sheep producers from as far away as Roundup came to the Symposium. MonDak Pulse Day was held in North Dakota this year to update producers who grow pulse crops. This event is a joint venture between Montana State University Extension personnel and North Dakota State University Extension personnel. This year the program reached over 100 producers in the MonDak area. Buck is part of the MonDak Pulse Day organizing and planning committee.

The cold temperatures let up and seeding in Sheridan County started in early April. However, April 24 would be the last day that Sheridan County would

receive any measurable moisture until the first part of August. Stored soil moisture from the fall of 2016 and some spring rain in 2017 are what helped crops germinate this year. Crops and rangeland were dramatically affected during this time and Sheridan County was listed as a D4 drought county. These extremely dry conditions caused a significant decrease in crop yield and hay yield potential. Producers reported decreased yields of 50-75% and some fields were zeroed out through insurance. Due to the severity of the drought and the increasing questions about options in a drought, specialists from MSU and Fort Keogh came and gave multiple presentations in drought-affected counties on water management considerations and drought management strategies.

Buck continues to participate in the Wheat Midge monitoring project and was asked this year to participate in the Alfalfa Weevil project. Programming is ongoing and always changing for Buck and she strives to coordinate programs that will benefit the producers and the community.



LEFT: Lentil field affected by drought. ABOVE: Winter Series - Noxious Weeds. Photos by Colleen Buck



LEFT: Hay to be tested. BELOW: Nitrate testing supplies. Photos by Colleen Buck



Nitrates in Sheridan County

In 2017, Sheridan County agriculture agent Colleen Buck tested 53 forage samples, which represented approximately 10,000 acres for the presence of nitrates in Sheridan County. Forty-eight of the 53 samples came back with a positive result for nitrates using the Nitrate Quik-Test provided by MSU Extension. Forages sampled included: durum wheat, spring wheat, lentils, alfalfa, hay barley, barley, oats, peas, corn stalks, and kochia. Buck also used a new protocol for testing nitrates to attain a quantitative number, which helps to determine nitrate levels in the plant. This protocol uses a color scale to give an estimate of the level of nitrates in the plant. Samples were further tested by a certified lab so that accurate and safe rations could be calculated for the livestock in the winter feeding months.

Drought conditions, hot weather, low crop yields and finally some rain in mid-August set Sheridan County producers up for the possibility of high nitrates in forages. Because of low crop yields, producers decided to utilize crops for grazing and/or hay. Nitrate occurs in plants naturally, but at elevated levels can be harmful to the livestock consuming forages containing high nitrates. In both the plant and the rumen of the animal, nitrate is converted to nitrite extremely

quickly, however the conversion from nitrite to ammonia, which is a component of building amino acids and proteins, is extremely slow in the rumen. This is where a buildup of nitrite can be harmful to the animal. As nitrite is being converted to ammonia, the excess nitrite can pass through the rumen wall and into the bloodstream of the animal, where it binds to hemoglobin, which is the oxygen carrier in blood. Since nitrite is now bound where oxygen would generally bind, oxygen can't be transported to the body and the animal suffers or dies from oxygen deprivation depending on the severity of the level of nitrates consumed.

Nitrate levels varied in the 53 samples tested, depending on maturity, timing of last moisture, and variety tested, but overall there were more samples with high levels of nitrates than samples with low levels. Testing nitrates created multiple opportunities to educate and interact with the producers of Sheridan County.

Breakout Boxes at State 4-H Leader Forum

District 4 hosted the 2017 State 4-H Leader Forum in Glendive. MSU Extension agent Colleen Buck presented a workshop on making livestock nutrition fun for 4-H youth. Buck used a breakout box format for the delivery of the workshop. The concept of a breakout box is similar to a breakout room and requires people to solve problems to advance through the rooms, or in this case, to open multiple locks on a box. This is the second time Buck has used breakout boxes this year. It is a new way for teachers and 4-H leaders to present materials or to review material that has already been presented. During the livestock nutrition workshop at State 4-H Leader Forum, 17 leaders signed up for this workshop. Buck designed the lesson so that the group was split into two groups and each group then answered a series of questions and solved problems to unlock their boxes. The topics that were covered included: knowing livestock requirements, reading a feed label, balancing a ration, calculating average daily gain and using resources available to help answer the questions. One 4-H leader stated in an evaluation “The lock box idea made the subject matter more engaging.” This is the second year that Buck has presented a livestock nutrition workshop at State 4-H Leaders Forum.



Breakout Boxes. Photo by Colleen Buck

contact us:



EXTENSION

Sheridan County

Sheridan County Courthouse
100 W Laurel Ave.
Plentywood MT, 59254-1619
(406) 765-3406
sheridan@montana.edu
www.msuextension.org



Sheila Friedrich
Extension Agent



Colleen Buck
Extension Agent



Lorrie Eggen
Administrative Support