



BY RACHEL ENDECOTT, BEEF CATTLE SPECIALIST

COW SENSE CHRONICLE

APRIL 2015

GRASS TETANY AND AN EARLY SPRING

We haven't had much of a winter in most of Montana in 2015. With many signs and symptoms of an early spring, grass tetany is probably a timely topic. Grass tetany is a metabolic disease of cattle associated with grazing lush, green pasture. The condition is caused by low blood concentrations of magnesium, which is a required mineral for cattle. When pastures are growing rapidly in the spring, grass may not contain adequate amounts of magnesium to meet requirements.

High potassium and crude protein concentrations found in rapidly growing forage complicate the grass tetany issue, because they can both interfere with the absorption of magnesium from the rumen. Magnesium requirements increase during lactation, so lactating cows have increased risk of developing grass tetany, and the risk increases as milk production increases. Low calcium intake combined with inadequate magnesium intake can result in more severe cases of grass tetany. Stress, storms, or other conditions that result in cattle being off-feed for 24 to 48 hours may decrease blood magnesium levels and cause grass tetany in several cows in a herd at one time.

Signs of grass tetany could include finding dead cattle with evidence they may have struggled. Symptoms in live cattle could include convulsions, weakness, disorientation, or aggressive behavior. Testing for grass tetany can be accomplished by collecting a blood sample in live animals, although care must be taken. Life-threatening convulsions can be caused by simply running the animals through the chute to collect a sample. Blood concentrations of magnesium return to normal after death, but magnesium concentrations of fluid from the eye or cerebrospinal fluid do not change near death and are good sources for testing for grass tetany in animals found dead.

Prevention of grass tetany is the key to successfully managing this condition. Achieving increased calcium and magnesium consumption through supplementation is the main goal. Daily intake of magnesium is important, as grass tetany can occur within 48 hours when blood magnesium concentrations are too low. This can be accomplished in several ways, from salt-mineral mixes to molasses-based lick tubs, all of which are available in “high-mag” formulations at your local feed store. Supplying additional magnesium during the early growing season can help your operation avoid losses from grass tetany.

Just how good is that lush green grass? Don’t forget that lush pasture can be 70-80% water. This results in a dilution of the other nutrients in the forage and means that cows may not be able to meet their dry matter intake requirements with green grass alone. For example, a 1400-lb cow consuming 2.5% of her body weight on a dry matter basis would need 35 lbs of dry feed per day. If the forage she were consuming contains 70% water, she would have to eat about 116 pounds of that fresh forage in order to get 35 pounds of dry matter. In other words, it might not be time to put up the hay processor or bale feeders just yet.

Questions for Rachel?
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ROADMAP OF TOMORROW: 2015 MONTANA NUTRITION CONFERENCE AND LIVESTOCK FORUM GRANTREE INN, BOZEMAN, MT

Tuesday, April 28, 2015

11:00-12:30 – Registration

12:30 – Welcome

1:00-1:50 – **The US Cattle Cycle and Calf Prices** – Dr. Gary Brester, Montana State University

1:50-2:40 – **Hay Production Options for Cow-Calf Producers** – Dr. Emily Glunk, Montana State University

2:40-3:10 – Break

3:10-4:00 – **Obesity During Sheep Pregnancy: Implications for the Following Generations** – Dr. Stephen Ford, University of Wyoming

4:00-4:50 – **A Closer Look at Weaning in Beef Cattle** – Dr. Joe Stookey, University of Saskatchewan

5:00 – Social

6:30 – Dinner and Program

Scholarship presentations

Evening speaker: **Food, Consumers, and Their Influence on Agriculture** – Dr. Nevil Speer, AgriClear, Inc.

Wednesday, April 29, 2015

7:00-8:00 – Breakfast, Grad student poster judging

8:00-8:30 – **How to Prepare for the Veterinary Feed Directive (VFD)** – Dr. Bruce Hoffman, Elanco Animal Health

8:30-9:40 – **VFD and Feed-Grade Antibiotics Panel Discussion** – Dr. Bruce Hoffman, Elanco Animal Health and Dr. Marty Zaluski, Montana State Veterinarian

9:40-10:10 – Break

10:10-11:00 – **Common Vitamin/Mineral Abnormalities, Effects, and Their Diagnoses in Cattle of Montana** – Dr. Jeff Hall, Utah State University

11:00-11:50 – **Replacements females: buy or raise?** – Mr. John Gates, Northwest Farm Credit Services

11:50-12:00 – Presentation of graduate student poster awards – Dr. Pat Hatfield

12:00 – Conference wrap-up

\$115 BEFORE APRIL 20; \$135 AFTER APRIL 20

REGISTER ONLINE AT:

<https://www.montana.edu/nutrition/>

COMPLETE CONFERENCE BROCHURE AND REGISTRATION INFORMATION AT:

<http://animalrange.montana.edu/conferences.htm>