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Grass Tetany

Calving season is officially over at our house, for the most part! As we worked cows and calves to go to grass. I was the keeper of the calving book, the Holy Grail of all the important details. It was a big responsibility, but I thought I was up for the task. Obviously, my husband didn't think so. He instructed me to put the book in a zippered pocket. I think you know where this is going. It turns out that our KSU Calving books don't go through the washer and dryer very well! The minute I opened the dryer and saw the extreme amount of "lent", I knew what I had done!! Thankfully, I can reconstruct with computer spreadsheet. I may never live this down!

It is always a relief to get the cattle out to pasture. Dr. Steve Ensley, KSU Vet Diagnostician told me once, not many reasons to have dead livestock in the pasture. But, one of them this time of year is grass tetany.

Grass tetany is a serious problem in many livestock herds. It is characterized by low blood serum levels of magnesium from a dramatic deficiency of this mineral in forages and pastures. Symptoms of grass tetany (winter tetany, grass staggers, magnesium tetany) usually first appear as extreme nervousness, an awkward gait, muscle spasms, and collapse. The symptoms may progress rapidly. Therefore, sometimes no clinical signs are observed and a cow may simply be found dead. Other symptoms may include grinding the teeth, violent convulsions, and coma. Cows suffering from grass tetany may often resemble those with cases of milk fever and have low calcium as well as low serum magnesium levels. A positive diagnosis is difficult to obtain, but the status of the herd may be evaluated through blood samples. Serum magnesium levels below 1.0 mg/100mL would indicate magnesium levels low enough to result in grass tetany.

Grass tetany can occur at almost any time of the year, but most often will occur in April and May in our area. Other conditions which are favorable to the incidence of grass tetany include:

- Warm temperatures in early spring followed by cool, cloudy weather.
- It occurs more often in cows 6 years old or older nursing calves under 2 months of age.
- Grass pastures which contain few or no legumes are the most likely to cause grass tetany.
- Soil types that have a high level and availability of potassium are related to increased cases of grass tetany.

So how can you prevent grass tetany?

- Keep magnesium additions to mineral supplements available from May until October. Commercial mineral mixes that are high in magnesium are readily available. A mix can be made at home, which also features a selenium supplement, with the following recipe (Wahlberg, 1995): 22.5% trace-mineralized salt, 22.5% dicalcium phosphate, 10% of a 0.06% selenium mix; 22.5% magnesium oxide, and 22.5% ground corn. Cattle should eat about one-fourth of a pound of the mixture daily.
- Wait until early spring grass growth reaches 8-10 in. before grazing.
- Graze grass-legume pastures first in the spring. Cases of grass tetany are seldom seen when legumes are included in pastures.
- Graze heifers, stockers, and dry cows on high-risk pastures.

- Identify cows that suffer from grass tetany as they tend to be more susceptible in following years

Cows that suffer from grass tetany and go down for more than 12 hours seldom recover. Those in earlier stages should be handled gently and quietly. Stress and exertion will often cause infected animals to go down or die suddenly.

An emergency treatment includes preparing 200mL of a saturated solution of epsom salts. This solution should be injected under the skin of the animal in at least multiple sites with 10 mL injected at each site. A veterinarian should be consulted to provide intravenous magnesium supplements.

David G. Hallauer
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Soybean Inoculation

Like other crops, soybeans utilize nitrogen. We just don't apply it, instead letting the plant's biological fixation and nodulation processes take care of it. It's a process we take for granted, but shouldn't considering a 60-bushel soybean crop requires almost 300 pounds of nitrogen. Not only do we take for granted the nitrogen benefit fixation provides, but that the process will happen like it's supposed to. Unfortunately, that isn't always the case.

The instances are rare when soybeans planted in a field with soybeans in the regular rotation don't fix nitrogen correctly, but it can occur, with fertility and weather stresses the primary issues. Nodulation issues can occur when soil P levels are low, inhibiting N fixation as part of the plant's normal growth and development. Low pH levels do the same and high soil nitrate levels actually make the bacteria responsible for nodulation less competitive. Weather stresses are another issue. Drought stress on one hand or excessive soil moisture levels on the other contribute to reduced nodulation with high temperatures doing the same.

With most of the soybean crop in the ground or on its way, the choice to inoculate or not may be passed. What isn't passed is the chance to monitor fields for poor nodulation. Fields that deserve the most attention are those with pH levels below 6.0 or low P levels. If this weather pattern switches to higher temperatures, plant bacteria establishment can be affected, meaning some monitoring of nodulation might be helpful.

Start checking plants once they reach the second or third trifoliolate leaf stage. Nodules should start to form at this point and can be evaluated to see if they are doing what they are supposed to. If nodulation failures occur, rescue nitrogen treatments may be helpful.

Dandelion Control in the Spring

Just about this time every spring, I kick myself for not doing a better job of broadleaf weed control last fall. It's easy to wait until you can see the problem to treat it, but in the case of dandelions, it just isn't effective.

In the fall, dandelion seeds germinate and start to grow. Those plants, combined with the ones already established, are what continue to result in weed issues year after year. The start they get in the fall makes them very difficult to control come spring time. Grass is growing and covering up foliage, preventing herbicide from reaching rosettes. Dandelion plants are well established and more difficult to kill with limited product reaching the key parts of the plant. Lots of other plants are also growing in the landscape in the spring, making herbicide applications a challenge, particularly with spring winds like we've experienced this year.

Your options right now are limited at best. Spot treating *might* do some good, but in many cases will not be nearly as effective (or easy) as it will be in fall. Unlike henbit and chickweed that die off when it gets hot, dandelions continue to bloom. Hand removal is possible, but time consuming, leaving mowing as your most effective option in many cases.

For best results, make a note on the calendar right now for mid-October, reminding yourself to implement your control program this fall. It won't make you feel much better this spring, but might make spring 2022 all the better.

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Cindy Williams
Meadowlark Extension District
Food, Nutrition, Health, and Safety

No news this week

Nancy Nelson
Meadowlark Extension District
Family Life

Managing Pain from Arthritis

Arthritis is common, affecting about 1 in 4 adults in the United States. The most common types are osteoarthritis and rheumatoid arthritis, and the main symptoms are joint pain and stiffness, which typically get worse with age.

Here are some suggestions for your pain management toolbox.

Stay ahead of your pain. Learn all you can about your condition. Communicate with your doctor about any changes in pain and work together for the best pain management options.

Practice daily routines. Always pay attention to your joints, how they feel when you sit, stand, or do any kind of activity. Keep your joints moving with gentle stretches daily; practice good posture when sitting, standing and moving; and know your limits so you don't overdo.

Exercise. Movement can decrease pain and stiffness from arthritis, will improve your range of motion, strengthen your muscles, and increase your endurance.

Choose activities that build the muscles around your joints but don't damage them. Low-impact activities like walking, cycling, and water exercise are good.

Follow a medication plan. There are many types of medications available for arthritis pain relief and most are relatively safe. You will need to work with your doctor to determine a medication plan specific for you.

Try other therapies. Relaxation therapy can be helpful. Try meditation, yoga, deep breathing, listening to music, being in nature. Massage, acupuncture, and use of heat and cold can help relieve pain temporarily.

Pain is personal. Each person feels pain differently and treatments for pain that work for one person may not work for you. There is also a strong mind-body connection, and your thoughts and emotions play a role in how you experience pain.