K-STATE Research and Extension | Meadowlark District

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Keeping Calves Healthy

Prevention of disease is, of course, preferred to treatment. One key to prevention, according to some, is to keep things simple or as natural as possible. But in nature or the wild, disease of the newborn often causes rates of loss that would be unprofitable for livestock producers. And while it might be wise to keep things natural or simple, the fact is, the situation has been made unnatural by putting up fences, crowding the animals, fixing the calving season, and giving the cattle no choice as to feed. Is there a way to prevent that occasional loss?

Three factors are extremely important in determining whether a calf remains healthy, survives a disease, or dies. Managers must recognize all these factors: The amount of immunity the calf receives from the dam via colostrum. The kind and amount (dose) of infectious disease agents in the calf's environment and stress is a factor that facilitates or encourages disease establishment.

The colostrum contains antibodies that are absorbed from the intestine into the calf's bloodstream and search for and destroy viruses, bacteria, and some parasites. It follows that the cow has to do a good job of manufacturing these antibodies, and to do that, she has to be doing well herself for the many months before calving. If she is not given the proper nutrients to be in excellent health, not only will she not produce good colostrum, but she may produce a calf that is weaker and smaller than desirable. A newborn healthy calf will usually get up and find the milk supply within a few hours. Keep in mind that if the cow has been lying in some scours from an earlier calf in the pen or pasture, the newborn may ingest massive doses of pathogens (germs) before it finds the colostrum. In some cases, this automatically results in severe diarrheal disease and quick death. The newborn calf has the capacity to absorb the colostral antibodies into its bloodstream only for the first 12 to 24 hours of life. Difficult birth and stress may dramatically shorten the duration of this ability and thus reduce the amount of protection against life-threatening pathogens. After the first 12 to 24 hours, the unabsorbed colostral antibody is digested like any other protein. Milk replacers or milk don't have this protective effect. The beef calf should consume at least 2 to 3 quarts of colostrum in the first 12 hours after birth to receive enough protective antibodies.

Sick cows, cows with blind quarters, and perhaps some first-calf heifers may not produce that quality and quantity. Also, some heifers may not bond with the calf soon enough. When in doubt, first milking colostrum obtained from dairies, frozen and stored in advance, can be fed to the deficient calf—2 quarts right away and 2 quarts 6 to 8 hours later. In the case of first-calf heifers, prolongation of the time before the calf gets up and tries to suckle may interfere with bonding. Therefore, when supplementing the calf of the first-calf heifer, probably no more than 3 cups should be fed at a time. Dairy cow colostrum tends to be a little less concentrated in terms of antibody, hence the need to feed a little more than the 2 to 3 quarts of beef-cow colostrum mentioned previously when supplementation is the only source of colostrum.

Vaccinations The protective spectrum of the colostrum can be enhanced by vaccinating the cow against the diseases li (E. coli), Clostridium perfringens, rota virus, corona virus, infectious bovine rhinotracheitis virus (IBR), bovine virus diarrhea virus (BVD), and others. Some of these vaccines' effectiveness is sometimes questionable, with apparently great results on one farm and poor outcomes on another. Some of the apparent failures of vaccines are due to not following directions or vaccinating cows that are not in good enough condition to mount a good response to the vaccine. Also, the vaccine organisms may differ slightly from the ones carried in the herd, and therefore protection by vaccination may not be optimal in such a case. Since many of the calf disease agents are carried by the cows, those agents will be in the calf's environment in large doses when it is born, especially if all the cows are crowded in an area that also serves as the maternity area. Infections through the navel (navel ill) occur at birth, especially under conditions of heavy contamination of wet, muddy maternity areas. The infections commonly spread to joints (joint ill), belly cavity, heart-sac, and brain from the navel. Clean calving areas

and the practice of soaking the navel with a potent tincture of iodine soon after birth seem to be important and logical factors for preventing navel infections. One management objective is to keep an environmental load of pathogens at the lowest possible level. The area where the calf is born is of particular concern because the time before suckling is when the calf is most susceptible. Therefore, the calving area should not be the area where (possible disease-carrying) cows have been congregated before calving.

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Broomsedge Bluestem – Why it Thrives

One of the forages that responded well to growing conditions last fall was broomsedge bluestem. You know the one: orange to bronze-colored native-looking grass, typically about two feet tall? In places where it has gotten a start, the end of the 2020 growing season gave it an opportunity to gain an even better foothold – and that's *not* a good thing.

How does it 'take over' so successfully? In our cool-season forage systems, there are multiple reasons.

It's a warm-season grass. When cool-season grasses slow growth in the heat of summer, broomsedge continues to thrive. If the cool-season forages are further slowed in their recovery by drought/overgrazing/etc, broomsedge can expand even further.

It likes low fertility. If soil tests are an indicator, many stands are low in phosphorous. Broomsedge likes that – brome/fescue do not – and it thrives in that environment?

Allelopathic chemicals in broomsedge play a role as well. Not only do they inhibit the growth of other plants, but they can affect nitrogen-fixing bacteria as well. That means clovers may have difficulty getting established, and plants, in general, might struggle to compete.

Cattle don't like it. They might consume it to a degree early on when it's young and tender, but it is a low quality forage that tends to be unpalatable as a general rule.

Control is often most successful by following a multi-year/multi-faceted effort. Next week, I'll share more about management ideas to help combat broomsedge.

Using Old Garden Seed

Tis the time of the year when a few nice days will get us thinking about gardening. It *is* time to, at the very least, start the planning process.

One of the things you can do now, even as days are short and temperatures cool, is take inventory of leftover seed. Has it been kept in a good location – cool, dark, dry? If so, most seeds will remain viable for three years or so. There are exceptions (carrot family seeds are typically shorter-lived…), but the correctly stored seed may still be good – saving you from purchasing more this year.

If you want to check saved seed to see if it's still good, consider a relatively simple method that requires only a damp paper towel, plastic bag, and a little bit of time.

Moisten a paper towel with warm water and place ten seeds on it. Cover with a second moistened paper towel and roll them up. Place the rolled-up seeds/towels in a plastic bag with enough holes to allow for air exchange, but not so many that it will dry out quickly.

Place the bag in a warm location. The top of the refrigerator works well. Add water to the towels if they start to dry, then check for germination after one week. If seed has sprouted, count it as such and remove it. Do so again after week two. If eight of the ten seeds have germinated, you have an eighty percent germination rate. Now, you can start to determine if you need a new seed or not.

Clear as mud? Check out this video to see how to build your 'germination kit' on our Meadowlark Extension District Facebook page: https://fb.watch/2UhZ28aPUe/.

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Food, Nutrition, Health, and Safety

In The New Year, Stay Healthy, Drink Water

Most people know the importance of drinking a lot of water during the spring and summer. It is essential to drink plenty of water during the fall and winter as well. Hot and dry air can dehydrate you in the summertime, but did you know dry, cooler weather can dehydrate you too? Before talking about how much water your body needs, we need to address some myths around hydration.

Myth: Dehydration is not dangerous, just uncomfortable.
FACT: Extreme dehydration can be deadly. Most dehydration is mild. Mild dehydration is characterized by headaches, feeling sluggish, decreased sweat, and urine. If not treated, mild dehydration can become severe quickly. Young children and the elderly are the most vulnerable.

Myth: Everyone needs to drink eight glasses of water a day.
FACT: This used to be a general rule, but now it is outdated. Current research points to drinking about half of your body weight in ounces a day. For example, a 140-pound person should try to drink 70 ounces of water a day.

Myth: You are dehydrated if you are thirsty.
FACT: Being thirsty is your body's way of telling you to drink water. You can feel thirsty if you are dehydrated. Often times, we are thirsty when we are dehydrated and starting to need a little water.

Myth: There is no such thing as too much water.
FACT: Overhydrating is rare but dangerous. You have to drink a lot of water to overhydrate. If you are worried about overhydrating, do not drink to the point where you feel full from water alone.

Myth: Coffee dehydrates you.
FACT: It depends. Caffeine is dehydrating, but the water used to brew coffee makes up for caffeine's effects. There is a pint where the caffeine is greater than the water, around 500 or more milligrams in a day.

Why stay hydrated when it's cooler? Staying hydrated when it is cooler outside has a number of health benefits. First, staying hydrated helps your body maintain a healthy temperature. In the colder weather, staying hydrated will make you feel warmer. Second, staying hydrated will help your skin from drying out and becoming chapped. Finally, drinking enough water to stay hydrated helps you maintain your current weight. When your body is properly hydrated, it is more likely to break down unwanted fat while keeping your digestive system functioning properly.

How to stay hydrated in the cooler months. There are many ways to stay hydrated in the cooler months. If you have a system to keep hydrated in the summer, try using it in the fall and winter. For people who do not have a system, making drinking water convenient. Try carrying a reusable water bottle around with you or have one somewhere close by. Keeping track of how much you drink a day is an issue, try keeping a journal. By keeping a water journal, you will be more mindful of needing to drink and how much you have had in the day. Finally, if you are one of those people who do not like drinking water for the sake of drinking water, try changing it up. Add cut-up fruits or vegetables to your water, get some 100% fruit juice extract, add a little to each glass, or eat soup with high broth/water content. This trick is to find a way that works for you without adding sugar.

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Nancy Nelson
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Family Life

Nancy will have no news this week.