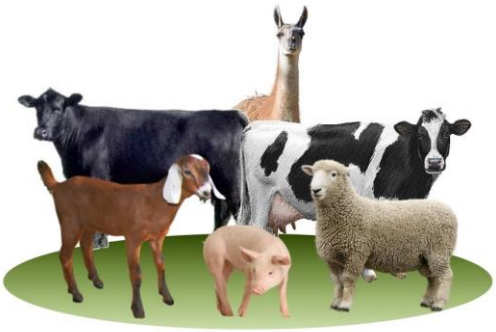

Word from the Herd

Louisa Veterinary Service

Fall 2024

Grazing in a Drought

by: Cody Campbell, Virginia-Maryland College of Vet Medicine, Class of 2027

One thing that has been on everyone's mind recently is the lack of rain that we have received in this area; however, there has probably been little thought on how this weather can affect the forages that your animals are eating.

Hot and dry weather can decrease the availability of favorite food sources out in the pasture, causing your animals to search elsewhere to fulfill their nutritional needs. These hungry animals sometimes decide to snack on **toxic plants** in the pasture that are typically passed over when forages are abundant.

There are some plants that are actually physiologically changed when in drought environments. **Nitrate toxicity** is a perfect example of how plants change during droughts. Hot and dry conditions can prevent nitrate from being converted to proteins in plants causing excess nitrate buildup in these forages. Excess nitrate intake in animals can lead to death within a few hours if severe enough. Johnson grass is another example of plants that have physiological changes when in a drought environment. Extreme heat and lack of water stresses and damages these plants, and they start to produce a toxin called **prussic acid**. If ingested by your cattle, this toxin can prevent cells in the body from being able to take up oxygen from the blood.

This is important for producers to keep in mind as the ingestion of these toxic plants can lead to serious complications in your herds such as abortions or even death.

Signs and symptoms of toxicity to watch out for in your herd include:

- Muscle tremors
- Weakness
- Increased respiration rate
- Excessive salivation
- Diarrhea
- Collapse

If you are seeing any of these issues and suspect toxicity, please contact us. We are able to perform blood tests or take samples from animals that have recently passed.

Small ruminants can have an especially tough time this time of year with parasites. The drought weather prevents forages from thriving which means these animals are eating plants down to the root. This makes it more likely for your animals to ingest **parasites** at a time when they are more susceptible to them because of the weather.

Ways you can protect against these issues from happening to you:

- Give hay just before turning hungry animals out onto new pastures when going through drought conditions. If these animals have an empty stomach, they will be less selective about the forages they eat.
- Pay close attention to animals when drought conditions are happening
- Be aware of any possible toxic plants in your pastures.
- Closely monitor parasite load in small ruminants by checking mucous membranes often

Heating Up Your Love Life…

It isn't always a good idea

by Dr. Melinda McCall

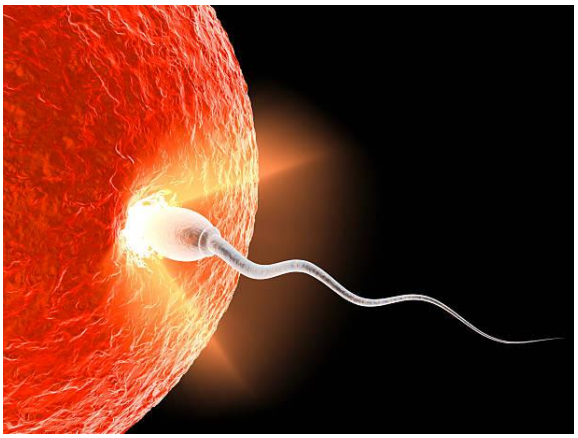

*Photo from an electron microscope of a sperm cell fertilizing an egg

One thing to consider when you are planning your fall breeding season is how this intense summer heat might affect your bulls and your cows well into the breeding season.

The University of Kentucky Department Of Animal Science states that for every 0.9 degrees the temperature of a cow's uterus increases, her **conception rate will decrease** by 6%. Although this doesn't sound like a lot, it is a significant loss to your bottom line. The good news is that once the summer heat breaks the quality of the cow's eggs will return to normal within 40-60 days.

Bulls can also be affected by high temperatures, especially cases where there is insufficient evaporative cooling. A bull's testicles are usually 3-10 degrees cooler than their body temperature, but if the relative humidity is high, it can affect a bull's ability to effectively dissipate heat through the skin when the temperature is also high. If heat stress has occurred 8 weeks prior to the time bulls are put in with cows, **semen quality and motility can be reduced**.

Here are a few things to consider as herd managers to help heat not affect your breeding season as severely. First, consider using breed of cattle you are trying to raise. Some breeds are much more heat tolerant than others. I'm certainly not suggesting that everyone switch to Brangus bulls this fall, they have some serious disposition issues! I simply encouraging you to look around while you're driving and see which breeds of cattle are out grazing and which ones are standing in the pond panting.

Another consideration is **adequate shade and water**. If no wooded areas are available you need to provide shade structures with ample amount of room for the amount of cattle you have. Also, check waterers every time you check cattle in the summer! Nearly every creek dried up this year, so supplementing with fresh, clean water is paramount in these situations. An average 1200 lb beef cow requires 12 gallons of water per day. If cattle are out of water, you will often see them pacing the fence line fiercely.

Finally, improper handling can affect the ability of cattle to dissipate heat. Chasing them with four-wheelers, yelling, and crowding them can all increase an animal's internal body temperature, not to mention the release of the stress hormone cortisol that negatively impacts their well-being. If you need to work cattle in the summer the cattle should be gathered at daybreak and worked efficiently with low stress cattle handling techniques.

The moral of the story is that our summers are becoming longer and more intense, so let's do our part to make sure we are helping the cattle be as comfortable as they can during a miserable time of year. We need to realize that the effect of **heat stress will cause problems with egg quality and sperm quality for up to 8 weeks** and plan accordingly to ensure a successful breeding season!

HAY, HAY!!!!! BY JULIE C.

Hay there, Julie again! Hay talk never goes away, each year variations in weather creates changes. Louisa Veterinary Service is always on the lookout for the best information to help you plan for the coming months. Here are some common questions we hear from clients to help you plan. Also adding some facts about hay quality for your information and a current hay provider lists we are collecting for Central VA area.

1. **Where do I look for hay in Central VA?**

    - Look for lists from extension offices and feed stores that know the clients offering hay.
    - Ask local farmers for recommendations.
    - See the list provided here.

2. **How do I make my hay last longer when feeding?**

    - Just know small ruminants are going to **waste** up to 40% of offered hay.
    - If hand feeding hay, look into feeding percentages according to body weight, averaging 2-4 % of body weight of total hay portion, but be **very careful** not to starve them by holding back forage.
    - Give a certain amount and adjust depending on waste or cleaning hay up and remember this is a balance and can change.
    - Use feeders that prevent urine or feces getting on the bale and keep contained.
    - Add a complete grain ration during off pasture months, averaging 2% of body weight as grain portion.
    - You can feed hay pellets, but it is best to have a balance of hay and complete grain while waiting for grass to come back in the spring.

3. **If I want to test the hay I'm currently feeding, how do I do that?**

    - Ask your hay provider if they have tested.
    - Set up an account with Cumberland Valley Analytical Services.
    - Receive your sample bags and follow directions.
    - Your local Co-op feed store should be able to give you directions on how to collect and send your sample off.
    - Will need a probe to take samples.

4. **I'm hearing Hay is going to be hard to come by, is that true?**

    - Hay is going to be in short supply for this winter. Plan ahead now and be mindful of what you're purchasing. **Plan for the winter months ahead**.

5. **What do I need to know about hay without sending off sample for evaluation?**
    - What cutting of hay are you feeding and why that ***matters***?
      Second cutting is often best in nutrition for digestion where first cutting can be good for heavier body scores to fill of roughage requirements for the rumens needs
    - Is the bale green?
    - How does it smell, good or moldy?

*Currently working on a hay provider list to send out using our Louisa Veterinary Facebook page. Look for that soon! Adding what we have as far as a **current list**…

- **Chelsea Bickley** – (434) 466-9854; Orchard Grass round bales

Cody Goodwin – (540) 406-0084

- **Hay Clearing House**

https://www.vdacs.virginia.gov/pdf/hay.pdf

- **Virginia Department of Agriculture and Consumer Services**

https://www.vdacs.virginia.gov/markets-and-finance-market-news-hay-feed.shtml

- **Chris Coleman** : 1-540-894-7207

- **Trey Watkins** : 1-540-894-1569

- **Facebook**

Look for Virginia hay sources on local pages. Use caution buying feed on social media!

Case Studies on Listeriosis

by Dr. Katie Lukowicz

Most owners learn that animals don't always "read the textbook" when it comes to presentation of illnesses. This can make diagnosing disease difficult. Listeria is usually known as the refrigerator bacteria because it grows well in cold temperatures, but we have seen an unusual number of cases this summer. It could be because the animals are grazing down to the drought stricken soil, which is where Listeria lives.

Here are outcomes from 3 **very different cases** of Listeriosis from this year:

#1 Young Doeling with the **Clinical Signs:**

- Fever
- Depression/Dull Mentation
- Incoordination
- Teeth Grinding
- Poor Appetite

Although her symptoms could fit other possible diagnoses, she was promptly treated for Listeriosis and recovered quickly. Recognizing neurological symptoms early is KEY!

#2 LaMancha Doe with the **Clinical Signs:**

- One-sided Facial Swelling
- Facial Nerve deficits
- Decreased Tongue Control

The owner's description of facial swelling initially sounded like a bite, sting, or injury. However, after a farm call and exam, her symptoms lead to Listeriosis treatment. Some mild signs returned after the completion of the treatment protocol. Thankfully, she fully recovered after a prolonged Listeriosis treatment was administered.

#3 Nigerian Doeling with the **Clinical Signs:**

- Incoordination
- No appetite
- Severe turn of the neck and head
- Drooling
- Inability to stand without assistance

Unfortunately, due to the poor chance of recovery after losing the ability to swallow, she was euthanized. Additionally, the sudden onset of severe neurologic symptoms made Rabies a potential diagnosis and she was sent for testing. Fortunately for every animal and human that had interacted with her, she was negative.

Overall, the success of treatment is increased by early intervention and intensity of symptoms. Pay close attention to your animals, especially at feeding time to check for strange or unusual behaviors. Use the senses that God gave you to get your animal help early because we can't help you once they have three feet in the grave!

GRANT UPDATE

We have reached the end of the first year of our Rural Practice Enhancement Grant and wanted to recap for you what we have accomplished this year. As a reminder, this grant allows us to purchase equipment and provide education to our veterinary staff to help provide service in the underserved areas of Louisa, Albemarle, Fluvanna, and Nelson counties. This same equipment and training also allows us to better serve all our clients in whatever county they reside.

Most of you have seen Dr. Katie driving our new, more fuel-efficient vet truck. We have also been able to acquire a remote monitor for our ultrasound so you can see what the vet sees during a pregnancy check. We updated Dr. McCall's computer and added some new computer programming to allow us to better prepare presentations for our producer meetings. Dr. Katie has been able to attend the Recent Grad conference put on by the AABP (American Association of Bovine Practioners), a camelid (alpacas and llamas) training for veterinarians and take more advanced training in poultry.

We have hosted 4 Cattlemen/Producer meetings, and spoken to 2 women's Farm Bureau groups on agricultural education. We assisted with 2 BQA training sessions on proper injection techniques and the judicious use of antibiotics. We have presented talks to the 11th and 12th graders in 3 counties and helped train the Louisa County Veterinary Science class for FFA competition. We have offered hands-on demonstrations for 4-H groups. We have also talked to younger students in 4 different schools about careers in agriculture. Dr. Katie presented a Zoom talk on winter poultry care. We have continued to mentor veterinary students with an interest in food animal practice and were happy to host 2 interns this summer.

Going forward, we are looking to expand on our involvement with the FFA and 4-H groups. We are going to continue with our producer meetings and hope to add Zoom capability to them for those unable to attend in person. We will continue to mentor veterinary students and plan for 2 more interns next year.