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TRI-COUNTY LIVESTOCK NEWSLETTER

Serving residents of Anson, Stanly and Union County

IN THIS ISSUE

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Upcoming Events

Title: American Forage and Grassland Council 2021 Annual Hybrid Conference
Description: AFGC 2021 Annual Conference will take place in Savannah, GA at the Hyatt Regency and virtually. This conference brings together the academic community, producers, private industry, institutes, and foundations to promote and develop the forage industry.
Online registration
Dates: In-person- Jan 3-6, 2021
Virtual- Jan 11-12, 2021

Title: Exploring Careers in Livestock- 4-H Workshop
Description: This in-person workshop is for youth ages 14-18 who are interested in learning about careers in the livestock industry. There will be hands-on activities and guest speakers. Space is limited so sign up soon!
Registration
Date: Jan 16th 1:00pm-4:00pm at the Union Co Ag Center

Title: **NC Cattlemen's Association Annual Meeting**
Description: The NCCA Annual Meeting is currently planned to be held in person in Hickory, NC. For more information and updates visit nccattle.com
Date: Feb 26th-27th, 2021

For any meeting or program listed, persons with disabilities may request accommodations to participate by contacting the Extension Office where the meeting will be held by phone, email, or in person at least 7 days prior to the event.

NC COOPERATIVE EXTENSION N.C. A&T STATE UNIVERSITY NC STATE UNIVERSITY

Nitrate Poisoning in Cattle

by Kinsey Everhart

Photo Credits: John Lambeth

Cattlemen that are feeding potentially high nitrate forages such as forage sorghums, millets, grains, Sudan grass hybrids, and/or Johnsongrass need to be aware of the increased possibility of nitrate toxicity. During periods of low soil moisture or low humidity, nitrates can accumulate in plants heavily fertilized with nitrogen. Forages cut during or just after these conditions are susceptible to being high in nitrates especially if a substantial quantity of nitrogen was applied prior to hay harvest. Shading by other plant species, cloudy weather, and frost may also increase nitrate levels in plants. Some weeds may also accumulate toxic levels such as pigweed, smartweed, lambsquarters, nightshades, and bindweed. Nitrates in hay are stable and can cause deaths months after harvest. Nitrate levels usually decline somewhat when forage is ensiled.

The reason for the toxicity is that nitrates are reduced to nitrites in the digestive tract. In ruminant animals fed high levels of nitrate, the nitrate is converted to nitrite faster than nitrite is converted to ammonia. The accumulation occurs in the rumen and become toxic. This is why high nitrate levels are a bigger problem for ruminants than for horses or pigs or other animals with simple stomachs. Nitrites then oxidize the iron in blood hemoglobin and prevent adequate oxygen transport. When an animal dies of nitrate poisoning, it is due to a lack of oxygen. Symptoms are labored breathing, muscle tremors, and a staggered gait after which the animal collapses, gasps for breath, and dies. The membranes of the eyes and mouth are bluish, indicating a lack of oxygen. The blood is chocolate-brown, but turns a bright red when exposed to air.

Cattle can adapt to a limited amount of nitrate intake over time. Often, cattlemen feed the higher quality forage sorghum type hays during a stressful, cold, wet storm. Cows may be especially hungry because they didn't graze during the storm. The combination of stress and consumption of large amounts of the high nitrate feed makes the animal more vulnerable to nitrate toxicity.

While it is recommended to provide that higher quality forage during winter weather, if the forage that is provided has toxic levels, the producer maybe faced with even more problems. It's important to know the levels of nitrates in the hay before feeding. If the producer is sure the nitrate content is low, the hay should be safe. If the nitrate content is unknown, then precautions should be taken. Feeding small amounts of hay along with other grass hays during the fall and early winter days can help the cattle to 'adapt'. Feeding nontoxic hay or grain along with the toxic hay could reduce the risk through the dilution effect. These methods are not foolproof and cattle should be carefully watched for 8-12 hours after feeding.

Nitrates present in forages may be reported by laboratories as nitrate, nitrate-nitrogen, or potassium nitrate. Hay containing up to 2,500 ppm nitrate is usually safe to feed. At levels of 2,500 to 5,000 ppm caution is suggested. Levels of 5,000 to 15,000 are considered dangerous and require feeding restrictions. Levels over 15,000 are considered toxic to most classes of livestock and should not be fed free choice. The danger does not decrease with time. Toxic hay can be ground and mixed with other materials if the nitrate-containing hay is no more than 15% by weight of the total ration. Non-protein nitrogen sources such as liquid feeds containing urea should not be fed with hay containing high levels of nitrates. When in doubt get your hay tested.

Are You Helping Your Hay?

by Katelyn Stegall

We're headed for the colder winter months now, so chances are your animals are getting the majority of their nutrients from hay. The cutting and baling has been done, and now its time for storing. Once all of the initial work is done, the storage of hay is the last step that has a huge impact on hay quality. While some can not control they maturity of the hay when it was cut, or the moisture levels before baling, every producer does have a chance to control how their hay is stored, and storage loss of the hay. Are you helping your hay by making sure that it is stored properly?

Ideally, hay should be stored inside (hay barn, shelter, etc), out of the weather and not subject to the elements. Realistically, this is not possible for everyone. However, there are some steps that you can take even when storing hay outside that minimize lost and wastage.

First, make sure that you are not storing hay directly on the ground if you can help it. Hay stored directly on the ground can lose up to 60% of its dry matter which results in significant economic losses for the farmer. Something as simple as wooden pallets, or rock that drains well can elevate the hay off of the ground, and cut down on the amount of moisture getting to the hay in that way. If even this is not possible, at the absolute least, make sure the hay is stored in a well drained area to keep the moisture getting into the hay as low as possible given the conditions. Store the hay on top of hills and not at the bottom where water will run straight into them, especially if it is directly on the ground.

Hay should also be covered. If hay is stored uncovered, it can cause sry matter losses of nearly 30 percent. Again, while indoor storage is not always a possibility for every producer there are ways to cover your hay even when stored outside. Tarps can be used to cover hay to keep it out of the weather.

If under a shelter is not an option, it is best to have hay that is elevated off the ground, and covered with a tarp. This will result in less storage loss, and maintained quality of hay, resulting in healthier animals. So again, are you helping your hay?

Winter Shelter for Sheep and Goats

by Rachel Owens

Photo Credits: John Lambeth

As winter weather finally arrives in North Carolina, we need to be thinking about how this impacts our livestock. Sheep and goats are typically able to handle cold temperatures fairly well as long as it is dry and they have the ability to get out of the wind. There are several things to consider when deciding on how to provide shelter for your small ruminants.

Shelters do not have to be completely enclosed and/or insulated to provide protection from the elements. A simple three-sided shelter can be sufficient in most instances. Face the open side to the south to take advantage of the winter sun and block the cold northern winds. Make sure the shelter has good drainage, as mud can easily build up in such a high traffic area. In addition, check the shelter regularly to make sure the ventilation is good and that there isn't a build up of ammonia or fecal odor. This can lead to respiratory issues, which sheep and goats are prone to anyways.

Providing some bedding can also help animals conserve warmth and keep dry. There are several different options for bedding such as straw, wood chips, or even shredded newspaper. Just consider how removal of dirtied bedding will work. You will want to remove wet soiled bedding to keep the shelter area dry and free of odors.

Even when it is cold outside, you may see your animals outside in the open rather than inside the shelter. Animals know when to seek shelter and may be enjoying the heat from the sun. They often prefer to be outside as long as it's dry and not too windy. There is no need to try and force them to go in the shelter.

When providing shelter, it is important to make sure there is enough space. Adults will need about 8 sq ft of space while lambs and kids only need about 6 sq ft of space. Animals will often huddle for warmth, so don't be alarmed if you see all your animals piled up and not using the entire shelter.

If you are going to have any lambing or kidding happening over the winter, make sure you have a sheltered place to bring the mothers and babies. Lambs and kids do not have the ability to withstand extreme cold temperatures yet. When the young are first born, they will be covered with amniotic fluid which makes them more prone to hypothermia. In addition, be careful with heat lamps. Make sure the lamps and cords are out of reach of animals to prevent burns or electrical issues.

There are many ways to construct shelters and many different materials can be used. Shelters don't have to be expensive and can often be made out of things already present on the farm. Get creative with shelter options for your animals.

This winter, make sure you keep these things in mind when considering how to provide shelter for your small ruminants.