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Antibiotics for Livestock - Changes Coming in June 2023

In 2017 the Food and Drug Administration implemented the Veterinary Feed Directive (VFD) which focused on veterinary oversight of medically important antibiotics delivered to livestock through feed and/or water. This initial change did not include medically important antibiotics available over-the-counter by other dosage forms, such as via injection. Because of this, additional guidance will remove any remaining medically important antimicrobials to be obtained over-the-counter.

These product labels will now contain the prescription (Rx) statement, "Caution: Federal law restricts this drug to use by or on the order of a licensed veterinarian." With this new change, livestock producers will be legally required to obtain a prescription from a licensed veterinarian with which the producer has a valid veterinary client patient relationship (VCPR). A VCPR means that:

- (1) The veterinarian has assumed the responsibility for making clinical judgments regarding the health of the animal and the need for medical treatment, and the client has agreed to follow the veterinarian's instructions;
- (2) The veterinarian has sufficient knowledge of the animal to initiate at least a general or preliminary diagnosis of the medical condition of the animal. This means that the veterinarian has recently seen and is personally acquainted with the keeping and care of the animal by virtue of an examination of the animal or by medically appropriate and timely visits to the premises where the animal is kept; and
- (3) The veterinarian is readily available or has arranged for emergency coverage and for follow-up evaluation in the event of adverse reactions or the failure of the treatment regimen.

The following are some products that will be seeing label changes to prescription-only status:

- Oxytetracyclines: LA-200, BioMycin 200, Terramycin Scours Tablets, and others
- Penicillins: Dura-Pen, Pro-Pen G, Masti-Clear (intramammary tubes) and others
- Sulfa-based antibiotics: Di-Methox 40, Albon, Sustain boluses, and others
- Tylosin: Tylan 500, Tylan 200, and others
- Cepharin and cepharin benzathine: ToDAY and ToMORROW intramammary tubes
- Lincomycin: Lincomix 100 and 300, LincoMed 100 and 300
- Gentamicin: Garasol, and others

Hay Directory

North Carolina Department of Agriculture's Hay Alert is at <http://www.ncagr.gov/HayAlert/>. It lists people selling hay or looking for hay to buy. It is free to list your hay.

For any meeting 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.

Disclaimer - The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by North Carolina State University nor discrimination against similar products or services not mentioned.

Animal Waste Management

By: Taylor Chavis, Livestock Extension Agent with N.C. Cooperative Extension in Robeson County



OIC CONTINUING ED. CLASSES

****Please hold these
important dates in
November and
December****

**Initial OIC Certification
Duplin County- 10 hour
Nov 3 and 4**

**State Wide Zooms: 3 hours each
Wed, Nov 16 from 9am-12pm**

<https://go.ncsu.edu/2022oic1>

Thurs, Dec 1 from 1-4pm

<https://go.ncsu.edu/2022oic2>

In-person:

Mon, Dec 5 - Wayne 6 hour

Tues, Dec 6 - Bladen 6 hour

Fri, Dec 9 - Duplin 6 hour

Tues, Dec 13 - Sampson 6 hour

Wed Dec 14 - Greene 6 hour

Fri Dec 16- Lenoir 6 hour

General Reminders:

Be sure to maximize your bermudagrass PAN before the window closes. Plan to spray for cool season weeds in the Fall. Fall herbicide application will get much better control of the target weeds.

The National Oceanic and Atmospheric Administration has predicted that we will have an above average hurricane season so be extra diligent about your freeboard levels and pumping when feasible as advised by your waste plan.

Certification renewals are due 12/31/2022.

Culling Cows: Now is the Time!

By: Paul Gonzalez, Livestock Extension Agent with N.C. Cooperative Extension in Sampson County

With the increase in costs of feed and byproducts, the fact that hay has increased in price and is in short supply, and, too, the prices for cull cows are at higher than usual levels, now is the time to cull the herd deeply. Deciding which cows to cull and which cows to keep in the breeding herd impacts future herd performance and profitability. There are many factors to consider when choosing which cows to put on the cull list. The challenge in choosing cows to cull is in identifying the cows that are making the operation money and the cows that are costing the operation money.

Pregnancy Status

One of the greatest determinants of profitability in a cow-calf operation is reproductive rate. Open (non-pregnant) cows are a drain on resources. They consume feed, forage, and other resources without producing a marketable calf to contribute to expense payments. Cows that are open at the end of the breeding season should be at the top of the cull list. Cows that calve outside of a controlled calving season are also potential culls, particularly when feed and forage supplies are running short. Late calving cows should be scrutinized as well, because they have less opportunity to breed back to stay within a controlled breeding season.

Poor Performance

Poor calf performance is usually the result of inferior genetics, poor dam milk production, calf illness, or a combination of these factors. Cow passing on inferior genetics to their calves for economically important performance traits and cows with unacceptably low milk production are potential culls. If poor calf performance is due in large part to calf sickness and not associated with the dam, then the dam may still have a productive future in the herd.

While herd genetic improvement is largely dependent on sire selection, the dam contributes half of the genetics to the calf. Culling cows with EPD values that do not compare favorably with breed or herd averages for economically important traits contributes to herd genetic improvement. Many breed associations publish breed averages and percentile ranking tables for EPDs for active dams.

Age

The productive lifetime of a beef cow is variable. As long as teeth, udders, feet, and legs are sound, many older cows are often still able to perform well. Breed composition and production environment can play a role in longevity. Florida research on Brahman-influenced cows indicated that there was consistent rebreeding performance through about 8 years of age and a decline in reproductive performance after 10 years of age.

An even steeper drop in reproductive performance occurred in cows beyond 12 years of age. That is not to say that individual cows will not be productive through an advanced age though. Ideally, cows should be culled for advancing age prior to a sharp decline in reproductive or maternal performance. In addition, with an emphasis on herd genetic improvement, younger beef females are often genetically superior to older cows.

Mouth

Teeth wear with normal use over time. Gritty feeds and forages accelerate tooth wear. Soil type can affect how long teeth remain sound, with sandy soils typically being harder on teeth. Cows can eventually wear their teeth down to a stage where grazing effectiveness is severely impacted. This results in poor body condition despite adequate available nutrients. "Smooth-mouthed" cows have teeth worn down to the gums. Cows may also lose teeth at

any age from being knocked out by blunt force or from gum disease or infection resulting in a "broken-mouthed" condition. These cattle may dribble feed and have a hard time consuming adequate quantities of feed or forage. Lumpy jaw is another condition of the mouth that can negatively impact grazing ability. Annual inspection of the teeth and mouth during routine cattle working is recommended.

Udder

Udder soundness affects milk production, milk consumption, and ultimately calf weaning weights. Proper udder attachment in a beef female is important for a long, efficient, productive life. A sound udder should be firmly attached with a strong, level floor and four properly formed teats proportional to body size. Weak udder suspension results in pendulous udders that are difficult for a sucking calf to nurse. Balloon or funnel-shaped teats are also difficult to nurse and may hurt calf milk consumption and weaning weight. Balloon teats are also sometimes an indication of past mastitis (a bacterial infection of the mammary tissue). The udder should be healthy and free of mastitis in all four quarters for good milk production.

Structural Soundness

Structural soundness is important from the standpoint of functionality. Structural problems subject the joints to excessive wear and stress that can eventually hamper mobility. Cows that have difficulty moving around the pasture may be less active grazers. Cows need to be sound enough for effective grazing and successful pasture breeding. Condition and performance of structurally unsound or crippled cattle often goes downhill. Obvious structural defects can decrease the market appeal of an animal as well.

Lameness is a major reason for culling cattle. Lameness leads to decreased performance, decreased reproductive efficiency, weight loss, and increased treatment costs. A study of five large western feedlots showed that lameness accounted for approximately \$121 loss per lame animal. Many conditions can be the cause of lameness in cattle including foot rot, laminitis, joint injury, and fescue toxicosis.

Disposition

"High-headed" or "High Strung" cattle are dangerous and should be prime candidates for culling. Culling for unacceptable disposition reduces the risk of injury to both cattle and people. Mississippi State University animal scientist, Dr. Rhonda Vann, has conducted several studies indicating that excitable calves often sacrifice growth performance and Quality Grade compared to calmer calves. Colorado State University studies have also shown that excitable cattle are more likely to produce dark cutter carcasses, which are subject to severe discounts. Because calves inherit a genetic component of temperament and also pick up habits from their dams during the suckling phase, bad attitudes can be propagated within the herd without selection pressure **for acceptable disposition**.

Culling Decisions

Cow culling strategies impact both calf quantity and quality and, when planned and implemented effectively, can greatly enhance the profitability of a cow-calf operation. Making informed culling decisions helps maintain a high level of herd performance. Even favorite cows should be subject to a systematic culling process. "Ole Bessy" may be a sweetheart but ask yourself how much you are willing to pay to keep her. Contact your local county Extension office for more information on cow culling or related topics.

Breeding Management for Goats

By: Anthony Growe, Livestock and Row Crops Extension Agent with N.C. Cooperative Extension in Richmond County

With fall around the corner, love is in the air on a goat farm. When breeding goats, there are some management practices that can be done to increase breeding success, productivity and profitability in your herd.

Body Condition Scoring (BCS)

All does and even the buck should be assessed through a BCS around a month prior to breeding. This practice can be done relatively easy by the producer. Does that are too thin will often not cycle regularly which can lead to failed breeding. Thin bucks may not perform to their potential which will leave a producer with a significant number of open does. Having open does at the end of breeding season is a costly mistake. When there are no offspring to market, potential income is lost. To ensure acceptable breeding rates, goats should start of beginning of breeding season in a BCS of 3-3.5, on a scale of 1-5, which should be maintained through kidding.

Parasite Management and Flushing

If does are thin, then we need to get to underlying issue before breeding. Goats are usually thin due to a handful of reasons. Internal parasites, especially the Barberpole worm, play a large role in a goat's body condition and overall health. Checking the herd's parasite load can be done by FAMACHA scoring and through fecal egg counts. If high levels of internal parasites are detected, then deworming is warranted to reduce populations.

After employing internal parasite controls, does can be flushed. This is the practice of increasing the amount of feed and nutrition does receive 2-3 weeks before breeding for extra weight gain. Flushing allows for more greater ovulation and conception rates. It also contributes to a greater number of twins during a pregnancy. To increase nutrition, producers can supplement does with good quality hay, fresh pasture or grain. Research has shown that overly conditioned goats with a high BCS do not respond to flushing.

Breeding Season and Signs of Estrus

Since goats are short-day breeders, we typically consider fall the start of their breeding season which spans from September through January. Female goats do not exhibit periods of estrus, or heat, year-round like other livestock so it's important for producers to observe their does regularly for signs of heat for timely buck placement and breeding. Does in heat will usually display several signs that they are ready to breed. Does will bleat as if they are hungry or agitated. In most cases, you may see swelling of the vulva with some degree of discharge that can make the tail look wet. Does in heat will often lower their feed consumption. You may notice your does urinating more frequently as they try to let the buck know they are interested. Traditionally, producers allow 45 days for the breeding season. The buck is placed with a group of does and is removed at 45 days. This time period equals two estrous/heat cycles of roughly 21 days. This narrow window allows for easier management and more uniformity among the group of kids in the spring. A one-year-old buck can service around 10 does and the next season should have the ability to service between 20-25 does. By year three, a single buck can cover around 30 does. Once bred, the gestation period for goats is around 5 months so does bred in September and October will kid in February and March.

If you have any questions concerning livestock breeding or management please contact your local Extension office.

Bale Grazing

By: Tracy Blake, Livestock Extension Agent with N.C. Cooperative Extension in Montgomery County

As fall approaches, it's time to start considering your winter grazing plan. Chances are, unless you have a large stockpile of pasture forage, you'll be buying some hay to put out this winter. Prices are high this year due to a number of factors. From increased cost of fuel and fertilizer to poor growing conditions, it's been a rough year to be in the hay business. Considering the increased cost of each bale, you may be thinking about ways to reduce waste and maximize efficiency in your herd. Statistics show that 15-40% of hay is lost in waste when fed in the field. One method to consider that may reduce waste and increase the distribution of manure fertilizer throughout your pasture, is bale grazing.



What is bale grazing?

Originating in Canada, bale grazing is a system of rotational hay “grazing.” Round bales are placed out in the pasture in a grid pattern prior to the winter grazing season. Using a temporary fence, livestock are then allowed to access a few bales at a time before being rotated to the next batch of bales. The system works best with appropriate stocking rates and a stationary water source that can be rotated around.

Why should you bale graze?

Bale grazing reduces waste by confining livestock to a smaller area with less choices for forage consumption. Putting bales out in advance reduces workload and wear and tear on the pasture. Once the bales are set, no need to drive the tractor out again. One of the greatest benefits of bale grazing is the distribution of manure throughout the pasture, improving organic matter and soil quality.

What are the negatives of bale grazing?

Bale grazing does not improve pasture quality overnight. It can take years of consistent and properly done rotation to achieve the pastures you want. Damage to the pasture where hay was set out will require spot seeding in the spring to recover. Some hay loss due to weather exposure on each bale can be expected. Like any system, modifications to bale grazing must be made to suit individual operations unique needs and situations.

For additional information on bale grazing:

[UGA Bale Grazing 101](#)

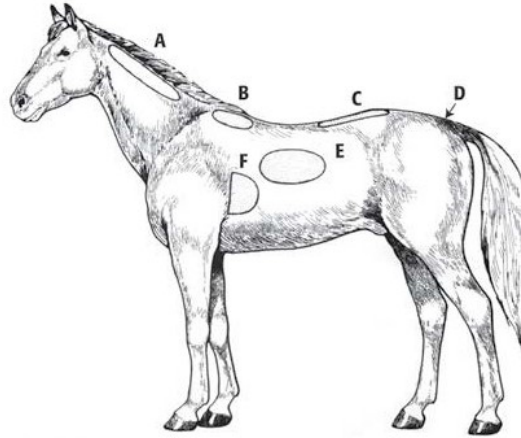
[Bale Grazing: Feeding Hay the Rotational Grazing Way, by Greg Halich, UKY](#)

Is Your Horse Getting What it Needs?

By: Liz Joseph, Livestock Extension Agent with N.C. Cooperative Extension in Cumberland and Hoke Counties

Are your horse's nutritional needs being met? How do you know? With the wide variety of hay and feed choices available, it is essential to understand what your horse needs nutritionally and that those needs are being met. This will help determine how much hay is needed throughout the year and if your horse needs grain to supplement the hay.

Your horse's body condition score (BCS) is one of the best indicators of its nutritional status. BCS is based on the degree of fat deposits in six areas of the body (neck, withers, the spinous processes-part of back vertebrae that project upwards and the transverse process-the portion of vertebrae that project outward, tail head, ribs, and behind the shoulder). Horses are visually and physically (palpation) assessed and scored on a scale of 1 (extremely emaciated) to 9 (extremely obese) with a score of 5-6 being ideal.



Your horse's nutritional requirements are based on their weight, age, workload, and metabolic efficiency. There are six essential nutrients: water, carbohydrates, protein, fat, vitamins, and minerals. Dietary requirements can be found in a variety of publications, such as the National Research Council's (NRC) Nutrient Requirements for Horses.

Most rations are balanced based on the amount of digestive energy (Mcal) and crude protein in the feed and are calculated on a dry matter (DM) basis and then converted to an as-fed basis. All feedstuffs contain some moisture which affects the nutrient content. By removing the moisture, we are able to compare with nutritive value of different feedstuffs. A horse will have a dry matter intake of 2 to 3 percent of its body weight.

We are going to determine how much bermudagrass hay we need to feed and if our hay is meeting the maintenance requirement of our 1,100-pound horse at rest. According to the NRC table, the horse needs 16.4 Mcal/day and 8% crude protein. The majority of the horse's diet should be made up of forage so we will say it will eat 2.5% of its body weight in dry matter. Our hay is 94% dry matter, has 0.90 Mcal/lb, and 13% crude protein.

1. First, determine the amount of dry matter intake the horse needs.
 - $1,100 \text{ lbs} \times 0.025 = 27.5$ pounds of dry matter
2. Now determine if the hay will meet the horse's energy needs.
 - $27.5 \text{ lbs DM/day} \times 0.90 \text{ Mcal/lb} = 24.75 \text{ Mcal/day}$
3. What about the crude protein needs?
 - According to the forage analysis report, the hay is 13% crude protein which meets the needs of most horses.
4. How much hay needs to be fed on a daily basis?
 - $27.5 \text{ lbs DM}/0.94 = 29$ pounds of hay needs to be fed each day

Based on our calculations, this hay will exceed your horse's nutritional requirements. Because of this, you may be able to feed less hay per day. Monitoring the horse's body condition score will help determine if you need to decrease the amount of hay you are feeding.

If you are interested in getting your hay tested for its nutritional value, contact your county's Livestock Extension agent.

2022 State Fair Livestock Shows

By: Kaelyn Mohrfeld, Livestock Extension Agent with N.C. Cooperative Extension in Greene and Lenoir Counties

Don't forget some important dates coming up for the 2022 NC State Fair

August 1st - Online Entries for all NC State Fair Livestock Shows open-completing the nomination process does not enter you in the NC State Fair, you must enter all entries by September 15th

September 15th - Deadline to register for the Fair Link available on August 1st at

<https://www.ncstatefair.org/2022/Competitions/Entering/LivestockCompetition s.html>

2022 NC State Fair Livestock Schedule

Wednesday, Oct 12th

Open Beef Cattle Check-In

Thursday, Oct 13th

Goat Check-In

Open Beef Cattle Show – Graham 2 rings

Goat Showmanship – Expo

Friday, Oct 14th

Jr Comm Does Show – Expo

Open Beef Cattle Show – Graham 2 rings

Open Wether Dams Show – Expo

Jr Meat Goats Show – Expo

Saturday, Oct 15th

12 pm Jr Beef Cattle Check-In

12 pm Hog Check-In – Kelley

5 pm Hog Showmanship

Sunday, Oct 16th

Jr Breeding Gilts Show – Expo

Beef Showmanship – Graham 2 rings

Open Breeding Gilts Show - Expo

Feeder Calves Show – Graham Ring 1

Jr Beef Heifers Show – Graham Ring 2

Jr Market Barrows Show – Expo

Monday, Oct 17th

Jr Market Steers Show – Graham Ring 1

Jr Beef Heifers Show – Graham 2 rings

Tuesday, Oct 18th

Sheep Check-In – Kelley

Sheep Showmanship – Expo

Wednesday, Oct 19th

Dairy Cattle Check-In

Jr Ewe Show – Expo

Open Commercial Ewe – Expo

Jr Market Lamb Show – Expo

Thursday, Oct 20th

Wool Breeds Check-In

Dairy Cattle Show – Graham

Friday, Oct 21st

Dairy Cattle Show – Graham

Wool Breeds Showmanship – Expo

Jr Wool Breeds Show – Expo

Open Wool Breeds Show – Expo

Saturday, Oct 22nd

Dairy Goat Check-In

Dairy Cattle Show – Graham

Dairy Goat Showmanship – Expo

Sunday, Oct 23rd

Dairy Goat Show – Expo

Sale of Champions (2pm)- Graham

Highly Pathogenic Avian Influenza Update

By: Richard Goforth, South Central Area Specialized Poultry Agent with N.C. Cooperative Extension

You may have heard the good news that NC was officially declare HPAI free recently on August 11th by the World Organization for Animal Health. In order to achieve this status, the state has to have eliminated all disease on infected farms and have no new cases for at least 28 days. This officially reopens all of NC poultry products to be eligible for international trade. That served as a final step in wrapping up the HPAI outbreak beginning with the first positive farm on March 27th in NC that forced the depopulation of nine farms. While this is great news for our largest agriculture industry it should remind poultry producers to remain vigilante with their biosecurity protocols.

Unlike the 2015 HPAI event in North America this year's outbreak is still producing infected flocks late into the summer with the last confirmed case in a small/backyard flock occurring on August 19th in Washington state. The most recent commercial flock infections detected in the US was in commercial turkeys in Utah on July 26th and in North America in Quebec on August 1st. In addition to the cases in the US and our continent Europe is still being ravaged by HPAI and many fear that the disease is going to become endemic there. The other big concern is that wild bird populations and other mammals such as seals in Maine have tested positive for the H5N1 Eurasian strain of avian Influenza this year and continue to show up as well.

I point this out not to be Debbie Downer or a Negative Nelly but just to say the virus is still circulating and we are only six to eight weeks from the beginning of south ward migration. Hopefully it will be like 2015 where we were in a heightened alert and being vigilante with biosecurity and there were no outbreaks that fall or winter but the fact that HPAI is still popping up in late August should set off a warning signal and realization that the threat is much greater for this year's southward migration season. NC was probably a little lucky to have kept the outbreak to only 9 farms given the size of our poultry production but I like to believe we have done a lot in NC to make our own luck. The NCDA&CS has worked with the industry, and NC State Extension to train, plan and mobilize resources for disease and disaster events the last decade. The experience we gained has made us a leader in the US when it comes to these responses. Having responded to HPAI outbreaks in 5 different states this year I have seen firsthand the difference that makes in quickly handling the challenges these events bring.

I would encourage our poultry growers, and workers to continue to follow the biosecurity protocols that protect your flocks. If you have not done a close inspection of your houses, please make that a priority paying special attention to openings, vents and overhangs of buildings. These are the places wild birds can find entry into the house or where they are likely to build nest or seek shelter and are typically the closest points of contact with your flock. If you have any questions about biosecurity on your farm talk with your service person or contact your Area Specialized Agent for poultry [ASA poultry Map](#).

If you would like to see where and when the latest reported cases of HPAI have occurred in the US you can check out this link <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/avian-influenza/hpai-2022/2022-hpai-commercial-backyard-flocks>