

Livestock News

July/August/September 2013

Developing a Forage Program.....1

Heat Stress in Cattle.....2

Forage Management Tips & Water Tips for Traveling.....3

Decreasing Parasite Loads in Goats4

Youth Livestock & Hot Weather Mgmt. for Poultry.....5

Events.....6



Developing a Sound Forage Program

Part I: Soil Testing & Fertility

Source: *Southern Forages 4th Edition*

Don't Guess, Soil Test!

We are all guilty of not wanting to soil sample, not sampling enough, or guessing soil fertility. The majority of land producing forage in the South and other regions is not regularly soil tested. With that being said, on most livestock farms in the South, no single management practice will have more long-term influence on meat or milk production per acre than periodic soil testing. The only way to know if you need to fertilize or lime is by soil testing. There is no way around it and when you guess at it, you could be costing yourself money and time. For perennial pastures, you should soil test once every two to three years. Fields used for hay production, overseeded in the winter, or tilled and planted to annual forage crops should be tested every year. The biggest error made in soil testing is the sampling process. To get started, you need to obtain soil sample boxes and a soil sample sheet from your local Extension office. Next, you want to gather your soil sampling tools: soil probe (trowel or shovel can also be used) and a plastic bucket. It is also a good idea to make a map of the areas to be sampled with the sample ID that you gave to each area for records when the soil sample results come in. Ideally, you do not want to sample more than a 15 acre area that has a similar soil type. From that area, you want to take 15-



20 cores using a zigzag pattern for the best representation of the area. In any sampling, avoid small areas that differ markedly from the rest of the field—wet spots, severely eroded areas, old building sites, fence rows, spoil banks, burn row areas, old woodpile or fire sites and fertilizer application bands. Such samples can bias evaluations of a

field's nutrient-supplying capacity. For pastures, you want to take cores samples at a depth of 4-6 inches. After you have collected your core samples, mix them together in the plastic bucket and fill your soil sample box to the fill line. Do not place wet soil in the sample boxes. Let the soil dry out on a paper towel before you place it in the sample boxes. After you have mixed the cores and placed a sample in the box, clean the bucket out before starting to sample your next area for best results.

Continued on Page 2

NC Cooperative Extension

Alamance County Center

209-C N. Graham Hopedale Rd.

Burlington, NC 27217

(336)570-6740 Phone

(336)570-6689 Fax

alamance.ces.ncsu.edu

Orange County Center

306-E Revere Rd.

P.O. Box 8181

Hillsborough, NC 27278

(919)245-2050

(919)644-3067

orange.ces.ncsu.edu

Lauren B. Langley
Area Livestock Agent

lauren_langley@ncsu.edu



NC State University
A&T State University
**COOPERATIVE
EXTENSION**

Empowering People • Providing Solutions

Continued from Page 1

Depending on the time of the year you send your soil samples will depend on how soon the results come back. Once your results come back, you can work with your local Extension Agent on developing a forage management plan based off of your soil results.

Major Nutrients

In forage production, the major nutrients are nitrogen, phosphorous, and potassium. Each of these nutrients must be available in substantial quantities to obtain profitable, environmentally friendly forage production. Nitrogen is the nutrient that most forage grasses respond rapidly to. Nitrogen is usually required in fairly large quantities for forage grasses and leaches quickly so therefore it should be applied in two or more applications during the growing season. It is not necessary to apply nitrogen to legumes such as clover or alfalfa because they have the ability to fix atmospheric nitrogen. Also, if you have a grass-legume mixture it is generally recommended that you do not apply nitrogen if the legume covers at least 30 percent of the stand).

Phosphorus is important in helping plants manufacture food by using sunlight as a source of energy. It is needed for root growth, seed and fruit formation, and it increases the survival and growth of seedlings. Fortunately for us, phosphate does not usually leach from the soil and a single application can go a long way.

Potassium is needed by plants in relatively large amounts and in some forages more potassium than nitrogen is removed per unit of yield. With regards to leaching through the soil, potassium is in between nitrogen and phosphorus.

In addition to the major nutrients there are several other nutrients that are essential for plant growth but are required in smaller amounts and are less likely to limit crop growth. The secondary nutrients are calcium, magnesium, and sulfur. Another important part to soil fertility is soil acidity. Most forage crops do best at pH values between 5.8 and 6.5, although there are exceptions. Lime moves very slowly through the soil; therefore, if it is applicable, lime should be tilled into the soil. Keeping soil pH and fertility at satisfactory levels is important for a sound forage pro-

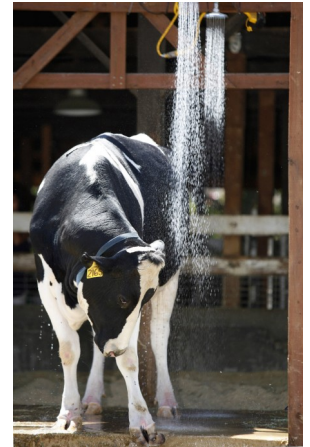
Understanding Heat Stress Conditions in Cattle

Source: Dr. Stephen B. Blezinger, Nutritional and Management Consultant, Cattle Today Article

Summer has indeed begun here in North Carolina and with that comes 90°F+ days, high humidity, and heat stress. Every year, once temperatures begin climbing over about 70° F, cattle begin showing signs of stress related to high temperatures, especially when being moved or handled. There are three primary elements that are critical in hot weather situations: intensity of heat, duration, and opportunity to cool down at night.

You need to be aware of the signs of heat stress in cattle:

- Reduced grazing activity during normal grazing periods (early in the morning or evenings).
- Crowding under shade or around stock tanks. Remember that crowding intensifies the problem.
- Panting and increased salivating.
- Rapid breathing. Use the following as a gauge: Moderate heat stress— 80-120 breaths per minute (bpm), Strong heat stress— 120-160 bpm, Severe heat stress— over 160 bpm
- Decreased or lack of normal movement.



Cattle do not perspire (sweat) well like humans do. They have to use the respiratory system to remove excess heat from their system. This is particularly true in heavily haired breeds or English/Continental European breeds versus Brahman (Zebu) cattle. Once you have identified heat stress signs in your cattle, now what? You need to develop a plan to have in place to help with weathering hot, humid periods and minimizing production losses.

Continued on Page 3

Continued from Page 2

Steps to Developing a Plan:

1. Identify those cattle which are high risk such as newly arrived cattle, recently weaned calves, dark-hided cattle, etc. and take precaution in helping reduce their heat load.
2. Provide fresh, clean drinking water at all times.
3. Make sure there is enough natural shade or provide shade structures.
4. **DO NOT** handle or process cattle in hot weather if at all possible. If you have to handle or process cattle, do it between midnight and 8am and never after 10am.
5. If cattle are confined, use a sprinkler system to help cool them.
6. Feed and supplement because often nutrient intakes will be depressed.



Water Tips for Traveling with Your Horse

Jennifer Johnson, DVM, University of Minnesota

When traveling for vacation or show, here are some tips to encourage your horse to drink:

- ◆ Take water with you from home.
- ◆ Add 20 ounces of clear soda to new water. (do not use soda that contains caffeine)
- ◆ Add electrolytes to new water .
- ◆ Carry electrolyte gel/paste and administer as needed.
- ◆ Add a small amount of salt to grain.
- ◆ Wash buckets with a little added Listerine; horses like the minty taste!

Forage Management Tips

From Production and Utilization of Pastures and Forages in North Carolina.

July

- ◆ Stick to a four to six week schedule of nitrogen applications on summer grasses. Do not delay applications because of dry weather unless it has not rained at all since previous application.
- ◆ Maintain harvesting frequency for quality hay.
- ◆ Hot, dry weather can result in nitrate and prussic acid poisoning of animals grazing stunted, highly fertilized summer annuals.
- ◆ Sample soils and apply lime on fields to be planted in the autumn.
- ◆ If cool-season forages are to be planted in the fall on a prepared seedbed of old sods, it is time to get the land prepared so clods and root mass have time to settle before planting.
- ◆ Get silage harvesting equipment ready (sharpen knives, purchase plastic for covering silo) so there will be no delays when the crop is ready.
- ◆ Decide which fescue pastures will be stockpiled for winter grazing. Nitrogen (60 to 80 pounds/acre) should be applied August 1 in the mountains and between August 7 and September 1 elsewhere.

August

- ◆ Prepare good seedbeds and plant one time– especially alfalfa and other legumes.
- ◆ If legumes are to be sod-seeded into grass pastures in the autumn, plan the grazing program so those pastures can be grazed close (1-2 in.) by planting time.

- ◆ Use good-quality inoculant and good methods to obtain the best legume seedling development.
- ◆ Apply limestone to pastures with pH below 5.8 to be overseeded next spring.
- ◆ Start harvesting corn silage in the hard dent stage and when the dry matter is in the range of 35 to 40%.
- ◆ Fertilize warm-season grasses.
- ◆ Fertilize fescue and keep cattle off of the pastures to be stockpiled for winter grazing.

September

- ◆ Fertilize and lime cool-season grasses.
- ◆ Plant cool-season legumes such as ladino, sod clover, and alfalfa into tall fescue sods. Use insecticide.
- ◆ Keep the grazing pressure on the summer grasses and completely use them before grazing cool-season forages.
- ◆ Watch for fall insects (armyworms, grasshoppers, crickets) on established and seedling stands of forages.
- ◆ Plant winter annuals on prepared seedbed for earliest fall grazing. No-till planting can be successful, but will not usually be ready to graze as soon after planting as on prepared seedbed.
- ◆ Overseed or no-till winter annual legumes or grasses onto summer perennial grass after they have been closely grazed. Planting early may require that herbicides be used to suppress the existing grass growth.
- ◆ Make a winter feed supply inventory so deficiencies can be avoided now (hay or winter pastures).

Low Cost, Easy “Fixes” to Decrease Gastrointestinal Parasite Loads

Source: Jean-Marie Luginbuhl, North Carolina State University



Decreasing parasite loads has been and continues to be every producer's challenge. There are several low-cost, easy “fixes” that you can do around your farm that are described below.

Repair Water Trough Leaks

This is very important because the concentration of feces is likely to be high around water troughs where animals gather. In addition, forage will grow well due to additional moisture. The combination of moisture and a high concentration of feces will lead to an area highly contaminated by gastrointestinal tract larvae waiting in the lush forage to be consumed by the goats or sheep.

Fence Off Moist Areas

Low-lying wet areas, marshes, and stream banks will favor the growth of lush forage and the survival of gastrointestinal tract larvae which will highly contaminate those areas.

Avoid Grassy Pens

You must be thinking—wait a minute, aren't the pens suppose to be grassy? This particular “fix” is talking about sorting pens, holding pens, night pens, etc. not actual paddock grazing areas. When animals are penned, they are looking for any grass around to consume which can potentially be highly contaminated due to the concentrated feces found in holding pens. You may have to spray pens to keep grass from growing.

Separate Animals into Groups

Different classes of animals vary in their nutritional requirements and their susceptibility to gastrointestinal parasites and their effects. Therefore, goats or sheep should be separated into distinct groups to be managed separately according to their specific nutritional requirements and susceptibility to gastrointestinal parasites. Usually, the animals with the highest nutritional requirements are more susceptible to gastrointestinal tract parasites such as the young, weanlings, and late pregnant and lactating animals.

Subdivide Your Pastures

Divide pastures into sub-paddocks using temporary fencing and always move animals before forage becomes shorter than 3 inches (parasite larvae is located in the last 3 inches of the forage). In a pasture system that contains only one pasture for grazing, the animals are constantly re-infected with parasites. There is no opportunity to “break” the parasite cycle. Ideally, you want enough pastures to rotate that you do not get back to the first pasture until 21-30 days. That allows the parasite cycle to break.



Decrease Stocking Rate

The primary cause of internal parasites is overstocking; therefore it is important to match animal numbers to pasture size and forage quality.

Graze Multiple Species of Livestock

Using cattle or horses to graze pastures after grazing goats or sheep will result in three benefits: horses/cattle will ingest harmful parasites to goats or sheep but will not effect the horses/cattle, goats or sheep will be able to select the highest quality forage to meet their nutritional requirements, and goats, sheep, horses, and cattle differ in the type of forage they prefer, thus leading to a better pasture utilization.

Keep Recently Purchased Goats or Sheep Off Pasture

You need to quarantine recently purchased sheep or goats in case they are infected with parasites. This will give you time to deworm aggressively using multiple dewormers before being grazed with the rest of the herd or flock.

Keep Good Records and Cull Aggressively

Record the health status of animals by using the FAMA-CHA© scores and deworming frequency will allow producers to readily find out which animals are re-infesting their pastures and, therefore the rest of their herd or flock. As a general rule, 20% of animals will shed approximately 80% of gastrointestinal parasite eggs. Culling those worm-susceptible animals is the most important factor that can be used to increase herd or flock resistance and reduce pasture contamination. ♦

Hot Weather Management of Poultry

Source: Kenneth E. Anderson, Thomas A. Carter, North Carolina State University



As the summer quickly approaches, so do the 90 degree days in North Carolina. Here are some techniques used to effectively manage heat stress in poultry:

A grass cover on the grounds surrounding the poultry house will reduce the reflection of sunlight into the house. Vegetation should be kept trimmed to avoid blocking air movement and to help reduce rodent problems. Shade trees should be located where they do not restrict air movement.

Fans should be routinely maintained. Maintenance should include cleaning the fan and keeping pulleys and belts in good condition and properly adjusted. Poultry netting on sidewalls or air inlets often will pick up enough dust to restrict air movement and should be cleaned regularly.

Keeping a reliable, clean, cool source of water available to poultry is essential to help the birds cope with high temperatures. Because the birds excrete electrolytes during periods of heat stress, electrolytes can be added to the drinking water to replace those that are lost and to stimulate water consumption. Avoid placing water pipes near the ceiling where the water will gain extra heat. Lines in which the water has become warm can be drained to allow cooler water to reach the waterers. A second well or access to an emergency source of water should be available in case the primary water source fails.



Another factor that affects heat gain of a house is the condition of the roof. A shiny surface can reflect twice as much solar radiation as a rusty or dark metal roof. Roofs should be kept free of dust and rust. Roof reflectivity can be increased by cleaning and painting the surface with a metallic zinc paint or by installing an aluminum roof. These practices are particularly effective for buildings that are underinsulated. ♦

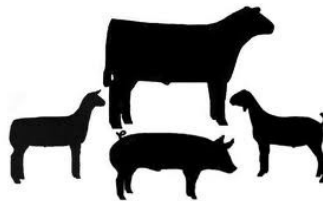
Youth Livestock Corner

Upcoming Shows

Upcoming Events

July 27: Central North Carolina Showmanship Clinic in Greensboro, NC, FMI Contact: Brent Jennings: brent_jennings@ncsu.edu or 919-515-4467

August 4-7: NC Youth Beef Industry Tour
Youth must currently be enrolled in High School (Grade 9-12, Age 14-19) or College (Age up to 21). This event is designed to help empower youth involved with the cattle industry to become advocates for the industry. The tour will allow youth to get a better understanding of the entire scope of the cattle industry in North Carolina. Additionally, youth will visit multiple farms, feed mills, and the State Legislature. This event is totally free to youth that are accepted and is funded through the NC Cattle Industry assessment.



July 30-31: Guilford County and Greensboro District Junior Dairy Shows @ Greensboro Extension Office Dairy Barn, FMI Contact Marti Day at marti_day@ncsu.edu or 919-691-3062

August 10: 1st Annual Guilford County Junior Livestock Show (Steer, Heifer, Sheep & Goats) at the Guilford County Agricultural Center. This show is part of the 20 county Farm Credit Showmanship Circuit.

The Guilford County Junior Livestock Show is open to youth 5-19 years old and enrolled in 4H Club or FFA program in their school. Any students or parents with questions pertaining to the livestock show should contact Ben Chase, Extension Livestock Agent in Guilford & Rockingham Counties at 800-666-3625, ben_chase@ncsu.edu or Livestock Show Committee Chair, Rhonda Ingram at 978-5897.

UPCOMING EVENTS

2013 Norwood Area: Value-Added BQA, Preconditioned Feeder Cattle Sales

Sales Dates: July 18th and September 5th– *For sale and health requirements, please contact Lauren Langley for an informational flyer.*



Summer Poultry Workshop– TBA

Be on the lookout for an upcoming announcement with the date, time, location, and educational topic for our summer poultry workshop to be held later in July or in August.



If you would like to have input on the workshop topic(s) please contact Lauren Langley.

Summer Annuals Workshop– August 27, 2013

Come learn about how summer annuals can fit into your grazing system. Workshop will be held at Rogers Cattle Company located at 945 Woodsdale Rd. Roxboro, NC 27574 and will begin at 5:30pm. RSVP to Lauren Langley one week prior to workshop. **Details subject to change**

2013 Livestock Survey

Link to fill out survey online: <http://harvest.cals.ncsu.edu/surveybuilder/form.cfm?testID=16802>

Please contact Lauren Langley at 336-266-0702 if you need a hard-copy mailed to you.

Cattlemen's Association Meetings

Alamance County

No meetings until September, then regular meetings on the 2nd Tuesday of the month from September-March:

♦ **September 10– Grading Feeder Calves**

*This is an RSVP dinner/program that will be held at the ACCA Facility in Snow Camp, NC. There will be a meal charge of \$5 and you must **RSVP** to Lauren Langley by **September 3rd at 5:00pm**. Producers from surrounding counties are invited to attend. Meeting will begin promptly at 6:00pm*Note time change.*

♦ **October 8**

♦ **November 12**

♦ **December 10**

Meetings begin at 6:30pm at Occasions in Burlington, unless otherwise announced.

Orange-Durham Counties

No meetings until October:

♦ **October 7– Calving Difficulties**

♦ **December 2**

Meeting begins at 6:30pm at Schley Grange in Hillsborough.

For more information regarding upcoming events and/or cattlemen's association meetings, please contact Lauren Langley at lauren_langley@ncsu.edu or 336-266-0702.

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.

If you no longer wish to receive this newsletter or if you would rather receive an electronic copy via e-mail, please call the Extension office in your county to let us know.

Distributed in furtherance of the acts of Congress of May 8 and June 30, 1914. North Carolina State University and North Carolina A&T State University commit themselves to positive action to secure equal opportunity regardless of race, color, creed, national origin, religion, sex, age, veteran status or disability. In addition, the two Universities welcome all persons without regard to sexual orientation. North Carolina State University, North Carolina A&T State University, U.S. Department of Agriculture, and local governments cooperating.