# Livestock News

Cumberland County Center — May 2014

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For any meeting in this newsletter, persons with disabilities and persons with limited English proficiency 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 Centennial Celebration

This article was written by Dee Shore. In North Carolina and across the country, 2014 will mark the 100th anniversary of Cooperative Extension programs. Extension's centennial is linked to the signing of the federal Smith-Lever Act, which provided funds for life-changing educational programs.

Today, Cooperative Extension programs in North Carolina are based in all the state's 100 counties and on the Qualla Boundary of the Eastern Band of the Cherokee Indians. These programs draw on research-based knowledge from the state's land-grant universities — N.C. State University and N.C. Agricultural and Technical State University – to provide education to citizens.

N.C. Cooperative Extension's centennial website provides many resources that tell the 100-year history of this organization. Visit ncce100years.ces.ncsu.edu to see a timeline of Extension milestones, historic photos, examples of Extension programs "Then and Now," the history of the Smith-Lever Act and much more.

Throughout the past 100 years and earlier, the organization now called North Carolina Cooperative Extension has served the state well – helping farmers overcome pests like the boll weevil and learn ways to increase crop yields, educating rural families and helping bring electricity to the state, assisting during times of war and disaster, helping families to provide safe, healthy meals and encouraging youth to develop skills that made them better citizens.

**Centennial Homecoming Event – May 19th**

You are invited to attend the Statewide Centennial Homecoming Event on May 19th from 6-8 pm at the Expo Center at the NC State Fairgrounds in Raleigh. You can see more information for this event and register to attend at go.ncsu.edu/ces_centennial_celebration.

This 1919 photo from the NCSU Libraries Digital Program depicts wheat farm operations in Buncombe County. Wheat is being cut by cradle and bound by hand.



NC State University A&T State University COOPERATIVE EXTENSION
*Empowering People · Providing Solutions*

## Animal Waste Management News

*By: Amanda Hatcher, Livestock Extension Agent with N.C. Cooperative Extension in Duplin County*

State Permits

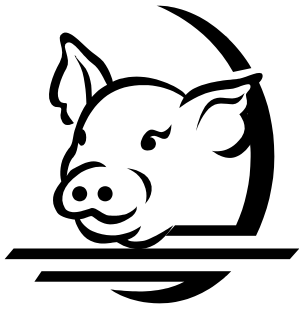
The deadline for the state permit renewal was April 1. NC Division of Water Resources (DWR) will shortly be reviewing the renewals they received and will be contacting farm owners if they need more information or if they did not receive a renewal on a farm. If you have questions for DWR, you can reach them at 919-807-6464.

Here are a few deadline reminders:

- Sludge surveys are to be done once a year, unless your lagoon has an extension granted by DWR. An extension letter would have been sent by DWR stating when the next survey is due.
- Calibrations of irrigation equipment are to be done once every other year.
- Soil tests on fields receiving animal waste are to be done once every three years. This includes fields that receive sludge and poultry litter, as well as swine effluent.
- Waste samples are required within 60 days before or after a waste application. Waste samples sent through the NCDA & CS lab are now $8 per sample.
- If you change ownership of your farm, change operator-in-charge, change your address or phone number, or if you change your integrator, notify DWR. See http://portal.ncdenr.org/web/wq/aps/afo/report for the forms for changes or you can call DWR at 919-807-6464.

Upcoming classes related to animal waste in our area:

- 10-Hour Animal Waste Operator Class – Clinton – May 6 & 7 – Contact Max Knowles or Patricia Burch at 910-592-7161 to sign up
- 2 hours animal waste continuing education credit – Kenansville – June 12 – 4-6:05pm – Topics include hay quality, weed control, weed identification, and records. Contact Amanda Hatcher or Wanda Hargrove at 910-296-2143 to sign up
- 10-Hour Animal Waste Operator Class – Kinston or Snow Hill – July 30 & 31 – Contact Eve Honeycutt at 252-527-2191 to sign up
- 10-Hour Animal Waste Operator Class – Kenansville – October 21 & 22 – Contact Amanda Hatcher or Wanda Hargrove at 910-296-2143 to sign up



## Hay Directory

North Carolina Department of Agriculture's Hay Alert is at http://www.agr.state.nc.us/hayalert/. Producers can call the Hay Alert at 1-866-506-6222. It lists people selling hay or looking for hay to buy. It is free to list your hay for sale on-line.

## Forage Management Tips

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

May

* Plant summer annuals at two-week intervals to stagger the forage availability.
* Fertilize warm-season grasses with nitrogen after each cutting or every four to six weeks on pastures.
* Spray pasture weeds while they are small (3 inches) for most effective control.
* Do not apply nitrogen to fescue pastures from April until August.

June

* Soil sample fields to be overseeded or planted in the fall.
* Apply limestone as far in advance of planting as possible.
* Consider a late planting of summer annuals.
* Cross fence to help manage feed quality.
* Graze bermudagrass close (1 to 2 inch stubble) and harvest any growth not grazed every four-six weeks.
* Control summer weeds before they get too mature.

## Managing Green Grass is Harder than you Think!

*By: Tyrone Fisher, Extension Director and Livestock Extension Agent with N.C. Cooperative Extension in Harnett County*

Along with the warmer temperatures, changes occur to the condition of the pastures where grasses turn to a greener appearance and will contain healthy nutritional value for the grazing horse. It won't be long until the sound of lawnmowers will be abundant and farmers will be processing the first cutting of hay.

During the winter months and times of inclement weather, domestic horses are often confined in areas where they cannot access natural forage on a day to day basis. Most horse owners that have pastures for their horses tend to restrict the horse in winter from the pasture to protect the pasture from the damage a horse can inflict. Horses are destructive on wet pastures often ripping with their teeth the forage by the roots or causing extensive damage to the sod, by churning and forming rivets with their hoofs.

A horse owner who wishes to provide the supplement a pasture can provide to the horse's diet must take a concentrated effort in maintaining a healthy pasture year round. These owners often have sacrifice or dry-lot areas for the horse's daily exercise and turn out during inclement weather and long months of winter. Early in spring, grasses are striving to grow and must have two to three weeks to develop a length of stem that will assist growth in the following growing season. Horses should not grass on these early plants until the grass is at least four to six inches in height.

A problem can occur with the acclimation of horses to forage when spring arrives and the horses are introduced to a diet of green grasses. Horses are grazing/browsing animals, which prefer to supply the nutrients and fiber needed in their system by eating natural pasture forage. A good healthy well-maintained pasture might provide all the necessary forage a horse needs in its diet. The issue for the horse owner is the challenge of controlling the amount of consumption of the green grass when returning the horse to grazing. When the horse's metabolism is not accustomed to the lush forage dramatic side effects can occur.

The horse's digestive system does not adjust to changes rapidly or easily. Horses fed erratically in both amounts and types of digestible items tend to develop problems that can occur in the consequence of colic or founder. A horse not use to eating apples can develop colic if suddenly a bag of apples is consumed. Innocent people think they are giving the horse a treat when they feed them large amounts of carrots or throw the fresh lawn clippings over the fence for the horse to chomp on; when actually they could be causing a harmful chain reaction.

One method of gradually introducing the horse to grass is to begin with small controlled periods of grazing of 15 minutes a day for a few days. Increase in the following days an additional ten minutes each turn out until the horse has adjusted to a three or four hour period of grazing time. Then maintain this four hour period of grazing for a two week period before giving the horse total turn-out on the pasture. This will enable the horse's digestive system to accept the digestion of the fresh grass. Even with the most careful management of horse forage consumption, upset effects can occur.

Throughout the growing season, manage pasture growth by allowing grasses to reach at least a six inch height before allowing grazing. Sub-dividing pastures allows for rotational grazing with each pasture able to have a rest period. Remove horses from pastures when grass height is four inches or lower and move to a new pasture. Grasses need approximately 21 days to regain a height of six to eight inches. Since horses graze sporadically, often parts of the pasture may have higher grass heights. Mowing consistently, during the growing season, will assist in maintaining a desirable grass height and discourage weed growth and reproduction. Do not mow below six inches - set mower decks higher than in traditional lawn-type mowing levels.

# Preventing Nitrate Toxicity in Cattle

*By: Dan Wells, Livestock Extension Agent with N.C. Cooperative Extension in Johnston County*

The 2014 hay season will soon be upon us, and most beef producers have just come through a winter that required more hay and feed to sustain their cattle than has been seen in quite some time. Quality hay has been in short supply, and some producers have had to contend with quality issues and anti-quality factors in their hay supply. One of the greatest challenges is the potential for nitrate poisoning from forages. Nitrate is the form of nitrogen taken up by plants, including forages, and is a major plant nutrient. When nitrogen is supplied at appropriate agronomic rates, plants usually convert that nitrogen into protein. Any time the level of nitrate supplied to a forage exceeds the plant's needs or ability to convert the nitrogen to protein, the potential exists for nitrate to accumulate to toxic levels. This could be caused by a drought or extended cool, cloudy periods, or by the over-application of nitrogen in the form of fertilizer or through animal waste.

Nitrate converts to nitrite in the animal's rumen and is absorbed into the blood stream, where it interacts with hemoglobin, disrupting the ability of the blood to transport oxygen. Animals affected in this manner exhibit symptoms such as labored breathing, staggering, foaming at the mouth, frequent urination, diarrhea, and abortions in pregnant cattle. The blood of an animal suffering from acute nitrate toxicity will be a chocolate brown color. But the most common sign of acute nitrate toxicity, however, is the sudden death of animals that were healthy the last time they were checked.

Some plants are considered to be "nitrate accumulators." These plants can build toxic levels of Nitrate during drought conditions even when soil nitrogen levels are moderate. Known nitrate accumulators include Johnsongrass, Pearl Millet, Lambsquarters, Pigweed, Sorghum and Sorghum/Sudan hybrids. However, all forages can accumulate lethal levels of nitrate when high levels of nitrogen fertilizer or animal waste are applied.

The first step in preventing nitrate toxicity is knowing the levels of nitrate in your forages. The best way to do this is to sample every "lot" of hay bought or produced on the farm. Because nitrate levels can vary from field to field and from cutting to cutting within the same field, it is wise to sample every cutting from every field separately. This is best done with the use of a core sampling tool, taking cores from 12-20 bales in each cutting to make a representative sample of that lot. Many Extension offices have hay probes and can assist with collecting and submitting these samples. The NCDA&CS lab in Raleigh will analyze samples, and a Nitrate-only sample is free! A full analysis with protein, TDN, and mineral levels costs $10 per sample, and includes nitrate testing. It is wise to sample hay cuttings as they are made and stored. Otherwise, it is difficult to tell one cutting from another at the end of the season and the results could be inaccurate.

Once you know the nitrate levels in different cuttings of hay, you can formulate a plan for dealing with hay that may contain nitrate. Below is a table of recommendations for varying levels of nitrate in forage for cattle. Note that cattle can develop some adaptation to nitrate. Animals that have nitrate supplied in gradually increasing amounts over a period of months can increase the level of nitrate-degrading microbes in the rumen, and can be fed higher levels of nitrate than unadapted animals. There is also the option to feed higher nitrate hay to animals that are at lower risk of nitrate poisoning. These include open cows and growing calves. Blending high-nitrate hay with low-nitrate hay or feed is also an option, but is best accomplished when feeding mixed rations. In order to blend with round bales, it is best to unroll a low-nitrate bale and later unroll a high-nitrate bale so that animals get some of each.

The take-home message from all of this should be to test hay for nitrates. Assistance is available through your Extension office, and the test and effort required are much less expensive than losing animals. Contact your local livestock agent for assistance and advice.

| Nitrate Ion % of Dry Matter | Unadapted Animals | Adapted Animals * |
|---|---|---|
| 0.0-0.25 | **Safe:** Generally considered safe for all animals. | **Safe** |
| 0.26-.050 | **Slight Risk:** Should not make up more than 50% of total intake for pregnant animals. | **Safe** |
| 0.051-1.00 | **Moderate Risk:** Do not feed to pregnant animals. Limit to less than 50% total intake for all other animals. | **Slight Risk** |
| 1.01-1.50 | **High Risk:** Exercise extreme caution when feeding. Limit to 33% of the ration. | **Moderate Risk** |
| 1.51-2.00 | **Severe Risk:** Do not feed to any animals free choice. If using in a mixed ration, limit to 25% of the ration. | **High Risk** |
| 2.01-2.50 | **Extreme Risk:** Do not feed at all. | **Severe Risk** |
| 2.51 and up | **Extreme Risk:** Do not feed at all. | **Extreme Risk** |

**Use the same feeding precautions given for the risk category for unadapted animals.*

# Fecal Egg Counts for Goats and Sheep

*By: Tiffanee Conrad, Livestock Extension Agent with N.C. Cooperative Extension in Richmond County*

Fecal egg counts can be performed on any species, but they are especially important for goats and sheep. Parasite resistance to dewormers has become a huge problem in goats and sheep. You can learn how to do the process yourself at any Extension clinic. If there aren't any scheduled in your area, you can schedule with your local Extension Agent for a personal training.

Most people use fecal egg counts to figure out if their dewormer is still working on their farm. They will perform a count, deworm the animals that need it, and then two weeks later, do another count. If the worm egg load has not decreased by 90%, then the dewormer you are using is starting to lose its effectiveness. You have severe resistance issues when your egg counts show less than a 60% reduction. There are three classes of dewormers and in this case, you would have to switch. You cannot just switch to another brand name of dewormer because it could be in the same class, you must look at the active ingredient when switching dewomer classes.

When counting, you are checking for barber pole worm in goats and sheep, because it is the parasite that causes most of the problems. However, there have been a few cases when other parasites are the real culprit such as liver flukes or coccidia. They require different treatments, so it's important to first figure out what you are dealing with. You may have some animals on your farm that have problems, but when you check the fecal eggs in the microscope, they may not have a heavy worm load. This is important to find out as you are trouble shooting, because you can eliminate parasite pressure as being a possibility. The animals may have a disease that you will need to treat.

When checking fecal egg counts, you may discover a few animals in your herd that always have high worm loads. This is why keeping good records is really important. At that point, you may decide to cull those high worm load animals off your farm. Parasite resistance is moderately heritable, so it's a good idea to sell those animals instead of breeding them since they can pass on the problem to their kids and lambs.

Fecal egg counts can work hand in hand with the FAMACHA system. FAMACHA is a system in which a farmer can get certified to use an eyelid anemia chart to figure out if a goat or sheep is suffering from anemia. Anemia indicates a high worm load. There have been a few animals recently that have had naturally pale eyes, but have shiny silky hair coats. These animals were fat and eating well. When running a fecal sample, the farmer realized that there was no worm problem and that those goats just had pale eyes.

Several farmers have gotten serious about the process after getting trained and have bought their own microscope and supplies to do their own counts on the farm. If an animal is doing poorly, that is often the first step they take towards troubleshooting the problem. Some farmers chose to only run samples every once in awhile and in that case will bring their samples to the Extension office to run them. Some farmers will bring their samples to a local Veterinarian to analyze. Which ever way you decide to go, fecal egg counts can be very beneficial to your farming management plan.

You can work with your Veterinarian on threshold limits, so that you know when deworming is needed. Just a few worm eggs in every sample is normal. Parasites like warm, wet weather, so you may need to do fecal egg counts more frequently during this time, but you can check them all year. Some supplies that you will need are a microscope that is able to magnetize 100 times, a measuring vial or scale, a McMaster slide (preferably with green lines for more visibility, cups, fecasol, a strainer, popsicle sticks, a timer, gloves, and an eye dropper.

If you need help with deworming information or would like to learn how to do your own fecal egg counts, please call your local Livestock Agent.

# Disaster Assistance Programs

*By: Becky Spearman, Livestock Extension Agent with N.C. Cooperative Extension in Bladen County*

The following information was provided by Chris Tatum of Bladen Farm Services Agency from program flyers.

As a livestock producer,
have you suffered grazing losses or feed losses?
have you suffered excessive livestock death losses?
have you incurred costs for transporting water?
have you incurred costs for cattle tick fever?

If you answered, "yes" to any of these questions, you may be eligible for federal assistance through FSA's Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish Program (ELAP), Livestock Forage Disaster Program (LFP) or Livestock Indemnity Program (LIP).

The signup for Farm Service Agency (FSA) Disaster Assistance programs began on April 15, 2014. You can go online at www.fsa.usda.gov or contact your local FSA office to signup (see phone numbers at the end of this article). IMPORTANT: To save time and ensure efficient service, please call your local FSA Office for an appointment and to discuss records you may need to have with you when you apply for disaster assistance.

**Definitions for each program:**

• **Livestock Forage Disaster Program (LFP)** provides compensation to eligible livestock producers that have suffered grazing losses due to drought or fire on publicly managed land. An eligible livestock producer must own, cash lease, or be a contract grower of eligible livestock during the 60 calendar days before the beginning date of the qualifying drought or fire in a county that is rated by the U.S. Drought Monitor as D2, D3, or D4.

• **Livestock Indemnity Program (LIP)** provides compensation to eligible livestock producers that have suffered livestock death losses in excess of normal mortality due to adverse weather. Eligible livestock includes beef cattle, dairy cattle, bison, poultry, sheep, swine, horses, and other livestock as determined by the Secretary.

• **Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish Program (ELAP)** provides emergency assistance to eligible producers of livestock, honeybees and farm-raised fish that have losses due to disease, adverse weather, or other conditions, such as blizzards and wildfires, as determined by the Secretary of Agriculture.

**Producers should record all pertinent information regarding livestock losses due to eligible adverse weather or loss condition, including:**

- Documentation of the number, kind, type, and weight range of livestock that have died, supplemented if possible by photographs or video records of ownership and losses
- Dates of death supported by birth recordings or purchase receipts
- Documentation from Animal Plant Health Inspection Service, Department of Natural Resources, or other sources to substantiate eligible deaths loss due to attacks by animals or avian predators
- Costs of transporting livestock feed to eligible livestock, such as receipts for equipment rental fees for hay lifts and snow removal
- Feed purchase receipts if feed supplies or grazing pastures are destroyed
- Documentation that livestock were removed from grazing pastures due to an eligible adverse weather or loss condition
- Crop records, including seed and fertilizer purchases, planting and production records
- The number of gallons of water transported to livestock due to water shortages
- The number of livestock treated for cattle tick fever

**Local offices:**

| | |
|---|---|
| Bladen County | 910-862-3179 ext. 2 |
| Cumberland County | 910-484-2138 |
| Duplin County | 910-296-2193 |
| Harnett County | 910-893-5101 ext. 2 |
| Hoke County | 910-875-8111 ext. 2 |
| Johnston County | 919-934-7156 ext. 2 |
| Moore County | 919-775-3407 |
| Richmond County | 910-895-3950 ext. 2 |
| Robeson County | 910-739-3349 ext. 2 |
| Scotland County | 910-739-3349 ext. 2 |