

# Livestock News

Cumberland County Center

May 2016

## Inside This Issue

- 1 Important Information
- 2 Are Nutrients in Your Soil Plant Available?
- 3 Warm Season Grazing Options
- 4 Replacement Heifers
- 5 Toxic Plants in Horse Pastures
- 6 Sheep and Goat Parasite Control
- 7 Youth Livestock Judging
- 8 Completing Your Poultry Waste Plan

## Contact Us

NC Cooperative Extension  
Cumberland County Center  
301 East Mountain Drive  
Fayetteville, NC 28306  
(910) 321-6860 Phone  
[cumberland.ces.ncsu.edu](http://cumberland.ces.ncsu.edu)

Liz Lahti  
Extension Agent, Livestock  
[liz\\_lahti@ncsu.edu](mailto:liz_lahti@ncsu.edu)

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.

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.

## Upcoming Pesticide Classes in Hoke County

Classes at the Extension Office.

- ♦ **August 18**
  - 4-6 pm 2 hours of V credit
  - 6-8 pm 2 hours of X credit

## Regional Chicken Show

The Regional Chicken Project was an opportunity for youth in FFA and 4-H in the Cape Fear Region to learn more about chickens. Youth chose hen or broiler chicks to raise. They completed a project record book to record their care and knowledge learned about chickens. The youth attended a beginning care and a showmanship training to prepare their projects.

On May 10, the youth will participate in a Regional Chicken Show, where they will demonstrate to the judge their knowledge of the bird. At the end of the project the youth will have the opportunity to donate their broilers to process for local food pantries or keep for their own processing. The hens can be kept to lay eggs for a potential egg business or the hens could be sold for profit.

You can join us for the chicken show on Tuesday, May 10th at 5:30 pm at the Bladen County Parks Soccer Field located on Hwy 701 just south of Elizabethtown. For more information, call Becky at 862-4591.



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.

## Sire School

Join NC State Extension Specialists and Agents on Tuesday, August 9 from 4 –7 pm at the Duplin County Extension Office to learn more about bull buying strategies, bull nutrition and bull management. To register, call 910-296-2143.

## Got to Be NC Tag Program

The N.C. Department of Agriculture and Consumer Services has launched a tag program to promote livestock born and raised in North Carolina. The new Got to Be NC tag program uses special ear tags to identify N.C.-born-and-bred cattle, swine, sheep and goats. The voluntary program is a collaboration between the department's Got to Be NC marketing program, Livestock Marketing Section and Veterinary Division. To qualify for the program, ranchers must be North Carolina residents, and participating animals must be conceived and born in the state. Participating livestock must be identified with an official Got to Be NC tag purchased by the producer before they are sold. The tags cost \$5 apiece. Ranchers must complete a producer tag record and submit it to the department after tagging their animals. The new tag program will affect the current N.C. Born and Bred competitions at the N.C. State Fair and N.C. Mountain State Fair. N.C. Born and Bred champions are chosen in competitions for market cattle, swine, sheep and goats. Starting in 2016, the winning animals will be known as Got to Be NC champions. Ear tag order forms, membership applications and more information are available at [www.ncagr.gov/markets/livestock/NCtags.htm](http://www.ncagr.gov/markets/livestock/NCtags.htm). Additional questions should be directed to the NCDA&CS Livestock Marketing Section at 919-707-3151.

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

Empowering People • Providing Solutions

## Animal Waste Management News

### Initial 10-hour Animal Waste Operator Classes (OIC)

Lenoir County Extension Office (Kinston) - August 5 & 6 starting at 9:00 am both days. Call 252-521-1706 to register. \$30 for text book and \$25 for exam.



### Are Nutrients in Your Soil Plant Available?

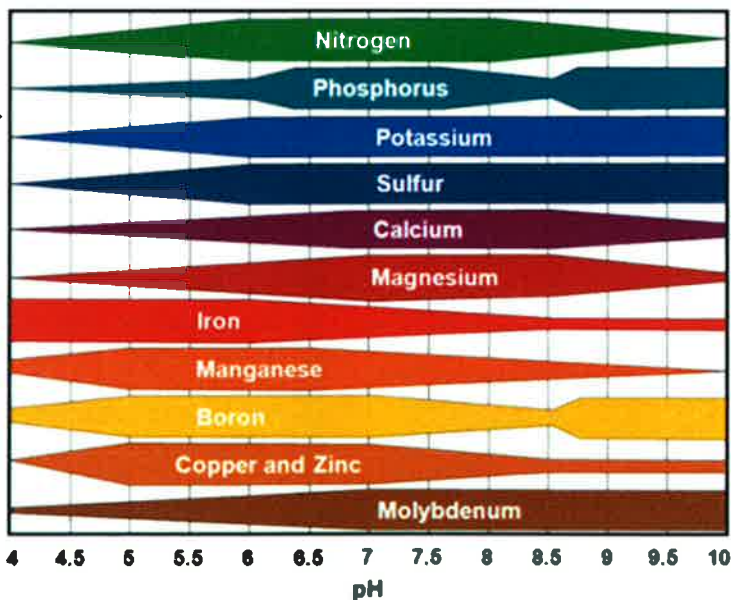
By: Zack Taylor, Agriculture Extension Agent with N.C. Cooperative Extension in Lee County

The whole concept of a waste management plan is to land apply waste at a rate which allows uptake of nutrients by a crop, so that those nutrients can either be recycled on the farm as feed, or shipped off the farm to a hay or grain buyer. When determining nutrient application rates, we often use nitrogen or phosphorus needs of the crop to determine the appropriate application rate. We know that not all of the nitrogen applied will be plant available. Nitrogen must undergo microbial mineralization before it can become plant available, and then some also will volatilize as a gas instead of being taken up by the plant. Did you know that soil pH is also an important factor in determining plant available nutrients?

Soil pH is an important consideration in all cropping systems, especially when nutrient removal is a priority. Optimum soil pH should be slightly acidic, around 6.5, for most crops and closer to neutral, 6.8-7.0, for forage legumes. This is because soils nutrients availability is closely tied to soil pH. The chart attached is used courtesy of Pioneer, and shows nutrient availability as affected by soil pH. Where the bars are widest, nutrients are most available, and narrowest, less available. Notice how phosphorus availability quickly drops off as pH levels fall below 6.5. This can be very important as high phosphorus loading can be a common problem on soils that receive repeated manure applications. While aluminum is not shown on this chart, aluminum becomes more available at low pH levels, and is one reason forage legumes should be grown in soils with a pH closer to 7.0 as they are very sensitive to aluminum toxicity.

Unlike conventional ammonia-based fertilizer which can cause soil to become more acidic, repeated manure applications can actually cause pH levels to rise. High pH levels can result in manganese or boron deficiencies. Copper and zinc also become less available when soil pH is higher. Both copper and zinc are metals of concern on spray fields, so ideally you want plants to be able to utilize those metals at optimum levels and remove them as efficiently as possible.

When making your next calculations to apply waste, be sure to not only look at nitrogen and phosphorus requirements, but also at your soils current pH. If nutrients are not accessible, your plan will not perform up to it's full potential. This can result in nutrient deficiencies, nutrient toxicity, environmental impacts, or nutrient loading in the soil. Talk to your extension agent about how to make the most of your soil nutrients by managing the pH of your soil.



### 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.



## Warm Season Grazing Options

By: Eve Honeycutt, Livestock Extension Agent with N.C. Cooperative Extension in Lenior and Greene Counties

For those of you who may be considering updating your pastures, there are many options to consider. We don't have many choices for cool season grasses in Eastern NC, but when it starts getting warmer, your options for summer grazing are numerous.

Before we get started, just remember that anything you plant from seed should be planted after the last frost into a well prepared seedbed. Ideally, you should have already taken soil samples to determine if the land needed any lime or micronutrients like phosphorus and potassium.

Annual Grasses are plants that usually only survive one growing season. They are usually cheaper than perennial grasses for that reason. Perennial grasses are more expensive, but if given the right management, these will establish well and can potentially give you a lifetime of excellent grass production.

### Annuals:

**Pearl Millet:** Millet is a great choice for most grazing animals due to it's fast growth. It resembles the corn plant in its early and vegetative stages, but with much more leaves. Millet should be allowed to grow about 18 inches before grazing, and then don't allow animals to graze it lower than six inches. Grazing below this point will cause the plant to have poor re-growth and your stand will suffer. Planting rate: Broadcast: 20-25 lbs/ac; Drilled: 15-20 lbs/ac; depth of .5-1.5 inch; plant between April 20- June 20.

**Sorghum/Sorghum Sudans:** These grasses are very similar in look and growth to Millet. The same recommendations for grazing heights for Millet also apply to these. One big difference is that members of the Sorghum family contain dhurrin, a glucoside that breaks down to release hydrocyanic acid also known as prussic acid. This acid is released after the plant is stressed, such as in a drought or after a frost. Prussic acid can be deadly so care should be taken when grazing this type of forage. Planting rate: Broadcast: 35-40 lbs/ac;

Drilled: 20-30 lbs/ac; depth of .5-1 inch; plant between April 20- June 20.

### Perennials:

**Bahiagrass:** This common grass is frequently found along roadsides because of its fast growth. However, some good varieties do exist that are better for hay and pasture, such as TifQuick, Tifton 9, and Pensacola. After planting, bahiagrass should be allowed to grow 6-8 inches before grazing, and not grazed below 2-3 inches. Planting rate: Broadcast: 15-25 lbs/ac; Drilled: 10-20 lbs/ac; depth of .25-.5 inches; plant between Feb 1 and March 31.

**Crabgrass:** I know it sounds strange to plant crabgrass, but it is a highly nutritious forage that grows fast and is very tasty to livestock. Crabgrass also produces "runners" or stolons just like bermudagrass, so it will tolerate continuous grazing. Crabgrass seed is very inexpensive but usually has to be ordered over the phone or on the internet from seed companies in the mid-west. After planting, crabgrass should be allowed to grow 6-8 inches before grazing, and not grazed below 2-3 inches. Planting rate: 1-5 pounds per acre at shallow depth 0-.25 inches; plant after last frost through early May.

**Bermudagrass:** Probably the most common pasture grass in Eastern NC, bermudagrass has a lot of research behind it to help you choose a good variety. Seeded bermudagrass can be expensive because of it's popularity, but is overall a good choice for all livestock. It tolerates close, continuous grazing because it stores it's energy in the "runners" and rhizomes under the ground. After planting, bermudagrass should be allowed to grow 6-8 inches before grazing, and not grazed below 2-3 inches. Planting rate: Broadcast 6-8 lbs/ac; Drilled 10-20 lbs/ac; depth .25-.5 inches; plant by April 15- or through July if irrigated

These are a few options for warm season grazing. If you have any questions, please call your local Extension office.



## How Many Heifers Should I Keep Back for Replacements?

By: Randy Wood, Livestock Extension Agent with N.C. Cooperative Extension in Scotland County

The first question I ask a farmer in this discussion is what are your farm goals? Trying to keep a specific number of cows on your farm takes planning out 2-3 years in the future. It also means having to make a decision on how many heifers you need to bring into the herd each year.

Regardless of your farm goals and how pinched you are for cow numbers, you need to start by having a minimum selection process to only keep heifers back that have a fighting chance of making a decent brood cow one day. The reason for this process is that retaining a heifer at weaning (and thus not marketing her per your normal channels) with the goal of breeding her is an expensive undertaking. If she does not breed initially, or does not have the physical capacity to breed back after her first calf, you will lose money on her. How much money varies from farm to farm, but for most operations any red in the ledger sheet is too much.

### **After sorting through the ones that are good enough to consider keeping, how many do I need to keep?**

One of the most frustrating aspects of being in the cow-calf business is the time and attrition involved in taking a young heifer and then making her into a good cow that will hopefully be in your herd for years to come. Similar to the process that the military uses in training elite soldiers, you're not going to end up with the same number you start with. The old rule of thumb says that if you want 10 good cows in your pasture in a couple of years, you need to start off with at least 12-13 heifers. Where will you lose these heifers along the way?

**Post weaning.** This normally will not be a major area of loss, but if you keep a heifer that is right on the border for your selection criteria and she continues to fall further behind the group, you would be better off to take the loss up front and cull her now.

**At her initial breeding.** This is where you will take a pretty big loss on your heifers. Not all of them will breed. You can have a first-rate nutrition process, a good herd-health program, and do everything right the whole way through, but not all of them are going to get pregnant. Most farms will factor in 85%-90% on first breeding rates. This is just a reality of the cattle business. One word of caution in this area, unless there were outside factors involved (bull sterility, a disease/nutrition issue that affected fertility, etc) do not keep an

open heifer back in the hopes she will breed the next year. This is throwing good money after bad in the worst way. She is as fertile as she will ever be in her life at this stage, if she did not breed now, cut your loss and move on.

**At Calving.** You are probably going to have some issues with a group of virgin heifers when it comes time for them to calve. It is not unheard of for mother nature to go horribly wrong the first time she goes to calve and you end up losing her. Even if a major dystocia case does not involve death, it very often will result in her being open the next year.

**At Weaning time.** This is where most 2yr old cows will be given the benefit of the doubt. Heifers do not milk as well as a mature cow. Therefore, their calves will typically be on the bottom end of the calf crop. This is a pretty normal occurrence. What is not forgivable is a 1st calf heifer raising a calf that is way behind the herd average. These are the calves that look like they've never had a decent meal in their life. If a heifer performs this bad on her first calf, face reality and cull her. She will not improve than much the next calf.

**Not breeding back as a two-year-old.** This is the last major hurdle that a young cow will face. Heifers have a nasty and expensive habit of not breeding back the year after their first calf. The reason is that they go from their most fertile part of their lives (as a 15 month old) to their most infertile (2 year old). 1st calf heifers are still growing, they are raising a calf, plus they are expected to start cycling again to re-breed. Not every cow can do this. This results in some open two year olds. What do you do with these open cows? Most cattle farmers will tell you there is no decision to make, they get culled. Other farmers will argue that for the expense involved in getting them to this point, it is the lesser of two evils to consider keeping her around for the next year than restarting another 8 month-old heifer to replace her with. I see both sides of the argument, and both have a point.

If all the females on your farm could breed on time every year, farming cattle, or more specifically running a cattle business, would be a lot easier. The fact is they do not all breed every year. Keeping a consistent number of productive females on your farm every year is simply a difficult process.



## Toxic Plants in Horse Pastures

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

A weed is a plant that is growing somewhere it is not wanted. Good pasture management is one way to keep those pesky weeds out of your horse pastures. Identifying and treating weeds early is the key to keeping them from growing too big and causing issues. Some weeds contain toxic chemicals that can cause issues for horses. These are a few of the more common weeds found in horse pastures in North Carolina.

Black cherry trees are most often found along fence lines, but can also be in open woods and pastures. Black cherry trees are toxic to livestock when animals eat wilted leaves that have fallen to the ground. The bark and twigs can also be toxic. Symptoms of poisoning include difficulty breathing, staggering, and displaying anxious behavior. If a black cherry tree is identified in or around your horse pasture(s) they should be removed immediately.



Pokeberry is another common weed seen in horse pastures. The whole plant is toxic when eaten, especially the roots. These plants are most often found along fence lines and are easily identifiable. The stems and rootstock are large, smooth, and fleshy with a green to purplish color. The flowers can be white to purplish and the fruit is black. When the fruit

is smashed it produces a red juice. Animals that eat this plant will likely get gastroenteritis, with some cases being severe. If possible, these plants should also be removed immediately if found in your horse pasture.



Buttercups are common in pastures that are allowed to be overgrazed. The toxicity is higher in the flowering plant than in the younger plant and is concentrated in the stem and leaves. Symptoms include oral irritation, salivation, decreased appetite, colic, and diarrhea. This plant is easily controlled with good grazing management, pasture management, and chemicals. It is best to identify the plant when it is young, before the flowering stage, for the best results if using chemical herbicides.



The good news is all of these weeds can be removed from the pasture. Other good news is that horses prefer good quality forage, like fresh pasture and hay, and will only eat these and other weeds if there is little good quality forage. Contact your local Extension Agent if you are concerned about toxic plants in your horse pastures.

## Sheep and Goat Parasite Control

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

With the onset of spring weather, producers should be thinking about worm populations and control methods in their sheep flocks and goat herds.

*Haemonchus Contortus*, or Barberpole worm, is an internal parasite that live in the stomach of the animal. The barber pole worm can cause economic and production losses to both sheep and goat producers. The Barberpole worm is a blood-sucking worm that can remove large quantities of blood, which results in anemia. Anemic animals are characterized by paleness of the gums and the linings of the eyelids. Sheep and goats infected with the barber pole worm may become ill and even die, don't gain weight well or lose weight, become lethargic, and may have diarrhea.

Adult Barberpole worms live in the stomach of the animal and lay eggs in huge numbers that are then passed in the manure. The eggs develop into larvae and are ingested by sheep and goats. Once ingested, larvae go through a three-week development period to become an adult and produce eggs. At the start of the grazing season, with lush grass growing, grazing animals may pick up larvae. Larvae develop and survive best under warm, wet conditions. If conditions are hot and dry, larvae numbers will decline as larvae are killed due to heat. If conditions remain suitable for the larvae to develop, large numbers can accumulate on the pasture.

To avoid economic and production losses, producers should have control programs in place to reduce the worm population. The most effective control programs require the use of dewormers as well as other management techniques, such as, grazing management and utilizing the FAMACHA system.

### Grazing Management

As the worm eggs are passed in the manure, it is wise to make smart decisions about grazing. Below are some recommendations to follow:

- Graze pastures with multi-species, like cattle or horses can reduce parasite loads as these animals are not impacted by the Barberpole worm.
- Plant tannin-rich forages. Tannin-rich forages like *Sericea Lespedeza* will provide some resistance to parasites.

### Deworming and FAMACHA

Producers should be trained on how to use the FAMACHA system. FAMACHA system is where you compare a color chart to the inner lower eye membrane of each goat or sheep. A white color indicates anemia from a high parasite load. Dewormer resistance is prevented and you save money, because you are only treating the animals that really need it. It's always a good idea to weigh the goats or sheep, so you know how much dewormer to give them. They need to always be given orally. The pour-on cattle products do not work on goats and sheep if you put it on their back because they have different hair follicles than cattle. It is important to work with a Veterinarian about deworming products as some may require extra-label use. If you are interested in becoming FAMACHA certified, please contact your local extension agent.

If you have any questions, please contact your local livestock agent.



Barber pole worm

Image source: Hair sheep Workshop - University of Maryland Extension.



Strongyle eggs

Image source: Hair sheep Workshop - University of Maryland Extension.



## Youth Livestock Judging

*By: Kelly McCaskill, Livestock Extension Agent with N.C. Cooperative Extension in Moore County*

Livestock judging is something that lots of parents and kids only see from the view of having their animal judged in the showmanship ring, but learning the skill of livestock judging can be just as important in developing life skills as showing the animals themselves.

Livestock judging contests consist of market and breeding animals, including beef cattle, meat goats, sheep, and swine. Participants rank the animals in the classes, answer questions on chosen classes, and deliver sets of oral reasons from memory. The questions can be anything from general questions about the frame of the animals or muscle and fat cover to very specific questions about the brisket or hock. This requires the child to have an analytical eye when examining the animals and to mentally rank them based upon traits and qualities that they have learned to look for.

Giving oral reasons for their choices is the area where the most personal development happens. It may seem like a simple requirement but when the reasons are expected to be concise, in the correct terminology and presented confidently, it is clear that this is anything but a simple task. An example of oral reason in a market steer class would be: "I grant that 1 showed the most volume and dimension through his lower quarter. He was a wider based steer who was mellower handling. But after this, he was a shorter, courser fronted calf who was wastier through his lower 1/3, so he is second." I would be impressed to hear anyone give such a sound, reason based explanation, but to hear it from the mouth of a teenager or young adult is that much more impressive. In a world where most teenagers type, text and speak in acronyms it is nice to know that the art of formal spoken communication is not dead.

Livestock judging requires several things from the youth participating. The first is to make decisions based on sound reasoning. This means that the child must choose based on a learned set of reasons, why they do or do not like each animal. Making the right decision at the right time is a skill that is crucial to a successful future in school, agriculture or in any other field. Secondly, livestock judging requires a commitment to learn. As seen from the above quote, oral reasons are not something that someone with no practice or training would succeed in. It requires that the participant put in many hours learning the terminology, what it means and viewing examples of it in order to trans-

late it to the animals in front of them. The child must be familiar with the basic structure of each animal and know exactly where to look for the critical points. Lastly, the participant learns to look for both the strong points and weak points in each animal. This is a skill that can be transferred to every aspect of life. You cannot put a value on being able to look at all sides of a problem.

Mastering any skill is important to the development of our youth and participating in any 4-H or FFA activity or competition gives the participants confidence and life skills needed to be successful later in life; but if you are looking for something challenging, full of invaluable life skills and a little different you should give livestock judging a try!

Schuessler, C. (n.d.). Sample Sets of Oral Reasons for Livestock Judging Contests. Retrieved from <http://texas4-h.tamu.edu/wp-content/uploads/2015/09/beef-sample-reasons.pdf>



## Completing Your Poultry Waste Plan

By: Margaret Ross, Eastern Area Specialized Poultry Agent with N.C. Cooperative Extension

The poultry industry is growing in North Carolina and poultry producers are needing waste plans completed. As the new area specialized poultry agent for the eastern 40 counties, I am here to help with this task. For producers in need of a waste plan, here is the information I will need to complete the cover sheet of your plan: name of farm, land owner's name, mailing address, county, phone number, type of poultry, integrator name, and the one-time placement number of birds.

If you are using a 3rd party applicator to remove your litter, there is a form both the farm owner and the 3rd party applicator will need to agree upon, sign and date. If you are applying the waste yourself, please bring the maps provided by the county Farm Service Agency office of where you plan to apply the litter. These maps need to show field location, crop acreage, and be labeled to identify crops and spreading rates for each field. Nitrogen requirements will also be needed from the North Carolina Nutrient Management Program, where RYE (Realistic Yield Expectation) data is found online. I will determine the dominant soil type of each field and be able to complete the plan with this information.

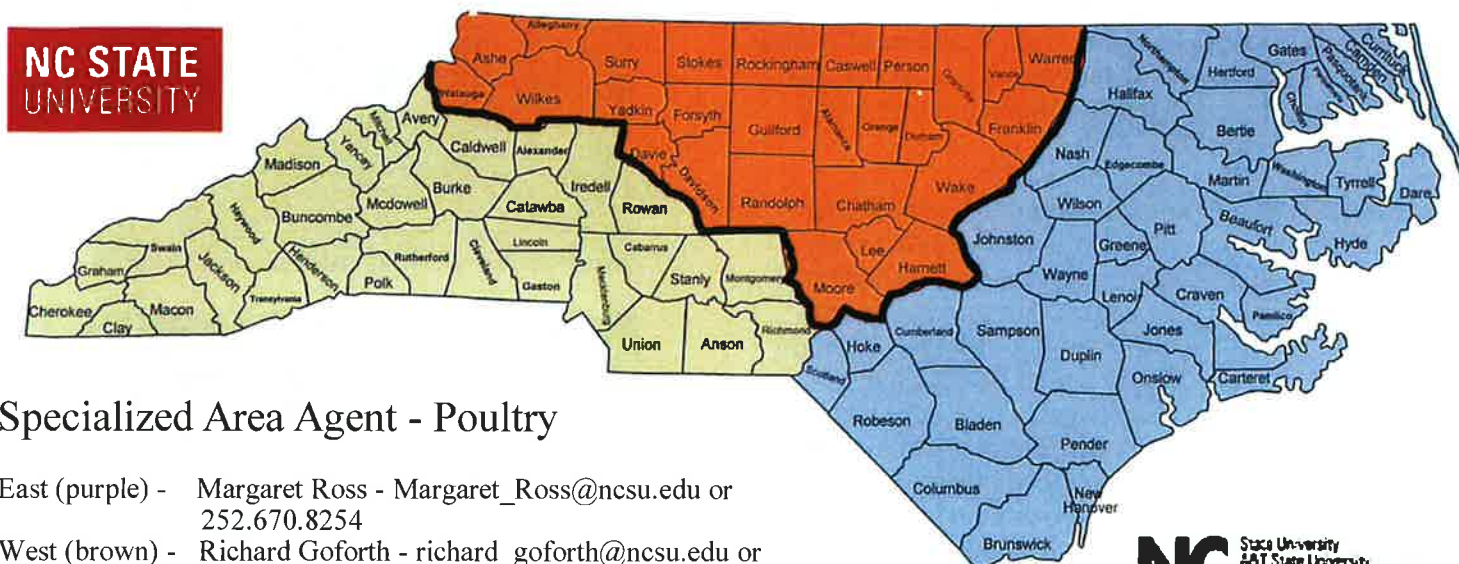
Soil samples are currently required every three years from all fields that receive litter and must be processed by an approved lab, but you are welcome to test more often than this. You can have your samples processed in Raleigh at the North Carolina Department of Agriculture agronomic division laboratory. These records must be kept for three years, or if you are participating in a funding program with NRCS (National Resources Conservation Service) you must keep your records for five years. There are fees associated with soil testing during peak seasons for the laboratory, so be sure to check the rates before sending your samples.

Waste analyses are required within 60 days before or after a litter application (120-day window) and must also be kept three years or five years if participating in funding from NRCS. The maximum spread rate and nitrogen balance can be determined by using the PAN (Plant Available Nitrogen) numbers. Both the soil test results and the waste analysis results are now only available online unless you request a hard copy.

The last part of the plan are the spreading records forms (Dry 1, 2, and 3). These forms can be found at your local Cooperative Extension office, or you can request an electronic copy. There is also an Excel computer spreadsheet version that will do calculations automatically to ensure no errors. You will need the following information to complete these forms: date and amount of litter removed, date and location of spreading, date, fields and amount spread, as well as the nitrogen balance. Make sure you keep these forms updated on a regular basis and that everyone who applies the litter is filling out the correct forms.

What does your waste plan do for you and your farm? It gives you the necessary information to properly apply litter at agronomic rates on your fields. This way you are sure you are not over applying nutrients and the plants are able to completely use the litter as fertilizer. Making sure your waste plan is complete and accurate is the first step in making sure you are properly spreading litter from your poultry operation.

If you need a waste plan completed, you can contact your county Livestock Agent or the Specialized Area Poultry Agent for your county (see map below).



### Specialized Area Agent - Poultry

East (purple) - Margaret Ross - Margaret\_Ross@ncsu.edu or 252.670.8254

West (brown) - Richard Goforth - richard\_goforth@ncsu.edu or 704.283.3743

North (orange) - Dan Campeau - dan\_campeau@ncsu.edu or 919.542.8202