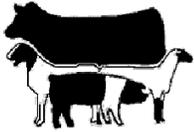


Livestock News



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North Carolina Cooperative Extension is a strategic partnership comprising NC State Extension, The Cooperative Extension Program at N.C. A&T State University, USDA-NIFA, and 101 local governments statewide. Extension professionals in all 100 counties and the Eastern Band of Cherokee translate research-based education and technology from our state's land-grant universities, NC State and N.C. A&T, into everyday solutions that enrich the lives, land and economy of North Carolinians. Extension specializes in agriculture, youth, communities, food, health and the environment by responding to local needs.

NC State Extension works in tandem with N.C. A&T State University, as well as federal, state and local governments, to form a strategic partnership known as N.C. Cooperative Extension.

Soil Sample Fees

Soil samples arriving at the lab between December 1 and March 31 will cost \$4 per sample. To avoid the fee, soil samples must be at the Agronomic Lab in Raleigh by 6 pm on November 30. The last day to bring samples for Bladen Extension to courier is Nov. 27th by 4pm.

Cape Fear Regional Cattle Conference

The ninth annual conference is Thursday, January 25th at the Southeastern N.C. Agricultural Events Center in Lumberton. The conference starts at 4:30 pm and costs \$5 - pay at the door. Dr. Wes Watson will discuss fly control in the beef herd and Dr. Harrison Dudley will discuss herd health calendars and calf care. The program includes a meal and time to visit the vendors. Call your office by January 19th to register.

Calendar November

- 3rd**—Montgomery Co. Livestock 4-H Club Meeting
- 14th**—Montgomery Co. Cattlemen's Meeting
- 16th**—Montgomery Co. Beekeepers Meeting
- 17th**—Deadline to pre-order Christmas Trees
- 20-21st**—Christmas Tree Pickup
- 23-24th**—Montgomery Co. Extension Office Closed for Thanksgiving

December

- 1st**—Montgomery Co. Livestock 4-H Club Meeting
- 25-27th**—Montgomery Co. Extension Office Closed for Christmas Holiday

NC State Fair Turkey Show

Six members of the Montgomery County 4-H Livestock Club traveled to Raleigh on Friday, October 13th to show the turkeys that they had been caring for since June. The NC State Fair Youth Market Turkey Show had 300 competitors registered this year and the competition was tough. Out of all the birds being shown, Montgomery County did well and brought home two 9th place finishes, one 10th, an 11th, a 12th place and one 14th place. Showmen this year were Elijah Farlow, Joel Farlow, Ethan Helms, Hunter Helms, Caroline Johnson and Bryson Johnson. These young people put a lot of hard work and dedication into raising their turkeys for this show. We appreciate how well they represented Montgomery County at the fair.



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: Amanda Hatcher, Livestock Extension Agent & County Director with N.C. Cooperative Extension in Duplin County

Initial 10-hour Animal Waste Operator Classes (OIC)

Bladen County Extension Office (Elizabethtown) - January 18 and 19 from 10 am - 4 pm. To register, call the Bladen Office at 910-862-4591 or go to <http://go.ncsu.edu/bladenoic2018> by January 11th. Cost is \$35 for a manual. *Exam date is March 8th.

**OIC
Continuing
Education
Class**



Date	Location	Time	To register:
November 21	Wilson County	6pm (2.5 hrs)	Dan Wells at 919-989-5380
November 29	Duplin County	9am - 4pm	Amanda Hatcher at 910-296-2143 registration required.
November 30	Bladen County	9 am - 4pm	910-862-4591 or http://go.ncsu.edu/bladen6hr2017
December 5	Greene County	9am - 4pm	252-521-1706 or eve_honeycutt@ncsu.edu
December 8	Lenoir County	9 am - 4pm	252-521-1706 or eve_honeycutt@ncsu.edu

End of the Year Reminders:

1) Your \$10 renewal fees are due December 31, 2017 in order to keep your animal waste certification valid. If you do not receive an invoice for your dues, you are still expected to pay them. Call DWR (formerly called DWQ) if you need to request an invoice at 919.807.6353. You can also send your \$10 fee with your name, address, phone number and Animal Waste Operator number to: WPCSOCC, 1618 Mail Service Center, Raleigh, NC 27699-1618. I advise farmers to send their fee certified mail or to pay online (see DWR website).

2) Sludge surveys must be done each year and calibrations on irrigation equipment must be done once every other year. Soil testing must be done on animal waste fields once every three years. Soil samples received December 1, 2017-March 31, 2018 through NCDA & CS will be considered peak season and will cost \$4/sample.

3) Animal Waste Management Operators must complete 6 hours of continuing education credits in a 3 year cycle. Please refer to your invoice from DWR or contact Extension if you have questions about your hours and/or deadline. You may also look it up on the web at: <https://deq.nc.gov/about/divisions/water-resources/operator-certification/animal-waste-operator-certification/aw-operator-certification-conedrenewal>

Animal waste portal developed by NC State Extension is at <https://animalwaste.ces.ncsu.edu/>

News from NC Department of Environmental Quality, Division of Water Resources:

The Division has been working for quite a long time on the Rules Review and Readoption process required by 2013 HB74 (S.L. 2013-413). The rules for both Animal Feeding Operations and Manure Hauler Operations are proposed for readoption. This is a public process and the division is seeking input from all interested parties. The rules for Animal Feeding Operations are found in 02T Section .1300 and the rules for Manure Hauler Operations are found in 02T Section .1400. Here is the link to the Proposed 15A NCAC 02T Rules.

The Public Comment Period is currently open for Subchapters 15A NCAC 02T and 02U. The Public Notice of the Proposed Action and the opening of the Public Comment Period was published in the NC Register on Friday, September 15, 2017, pages 524-606.

Comments may be submitted in writing either electronically to: 15ANCAC2T2URule_Comments@ncdenr.gov or by mail to: Department of Environmental Quality, Division of Water Resources, Attn: 2T 2U Rule Comments Water Planning Section, 1611 Mail Service Center, Raleigh, NC 27699-1611. The public comment period ends Wed, Nov 22. Written comments must be submitted by this date.

The Department has conducted three public hearings to receive public comments on the proposed rules in October but public comment in written form will be accepted through November 22.

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.

Interseeding Alfalfa into Bermudagrass

By: Brian Parrish, Agriculture Extension Agent with N.C. Cooperative Extension in Harnett County

Extension agents from Johnston, Harnett, Wake, and Sampson counties recently planted demonstration plots in each respective county to see if alfalfa can be successfully grown interseeded with bermuda in our area. Each of these counties already have producers who are successfully growing alfalfa in pure stands. It will be interesting to see what we will learn from these demonstration plots!

Possible benefits from interseeding alfalfa into bermudagrass

1. Alfalfa allows producers to grow their own nitrogen.
2. Alfalfa and bermudagrass results in forage that is 30 to 40 or more relative feed points higher than bermudagrass alone.
3. The Bermuda component should help the alfalfa dry faster, retain more leaves, and minimize ash content from soil contamination.
4. When the alfalfa plays out over several years the bermudagrass should still be there and able to reclaim its dominance.

Best management practices for establishing alfalfa into bermudagrass:

1. First select an appropriate site for planting. Make sure the alfalfa is being planted on a good well drained soil that is not too sandy. The soil pH needs to be 6.5 or greater or don't try it. Also alfalfa needs lots of (P) phosphorus and (k) potassium fertility in the soil. Also, make sure that there are no herbicide residuals, read the product labels of materials that have been used for guidance on when alfalfa can be planted safely
2. Test soil at the site; apply lime to ensure a pH of 6.5 or greater at the time of planting. Fertilize according to soil test recommendations and apply boron and molybdenum if needed.
3. Plant at the right time of the year. In the Coastal Plain the best dates for planting appear to be Sept 1- October 15. Be sure that soil moisture is good and insects are not prevalent before planting.



4. Clip or graze the bermudagrass short (1 – 2” inches) prior to planting.
5. Spray the field with a light rate of a non-selective herbicide to “Chemically Frost” the bermudagrass. This will help prevent bermuda from growing back and competing with the seedling alfalfa. (Paraquat at 1qt/acre or Roundup at 9oz/acre of 5.5 lb. a.i. formulation or 12oz/acre of 4 lb. a.i. formulation). Ok to burn off thatch after chemical burndown before planting.
6. Select alfalfa variety with a dormancy rating of 4-6 with disease resistance greater than or equal to MR for phytophthora root rot (PRR), anthracnose (An), bacterial wilt (Bw) and fusarium wilt (Fw) as well as an R rating to aphanomyces root rot (APH). Drill 22 to 25 pounds per acre if planting into 7 to 9 inch rows or 11 to 13 pounds per acre if planting into 15 inch rows. Seed depth should be a quarter to half inch deep.
7. After the alfalfa comes up spray with an inexpensive insecticide (such as one of the synthetic pyrethroids, ex. Karate or Mustang Max at highest labeled rates) to control insect pests. Irrigate if available and necessary.

Maintenance: Apply K as recommended, same rates as for bermudagrass. Also apply B and Mo as recommended (for nodulation). Tissue sample 1 week before second cutting each year. Be on the lookout for insect pests. During February and March scout and spray fields for alfalfa weevils and during summer for fall armyworms if needed. A good video on this subject, Why Interseed Alfalfa into Bermudagrass from the University of Georgia can be found at <https://www.youtube.com/watch?v=KycFVqClvOc>

References: Dennis Hancock Extension Specialist University of Georgia, Progressive Forage Grower June 2015, Why Interseed Alfalfa into Bermudagrass UGA Cooperative Extension.



Culling and Marketing Beef Cows

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

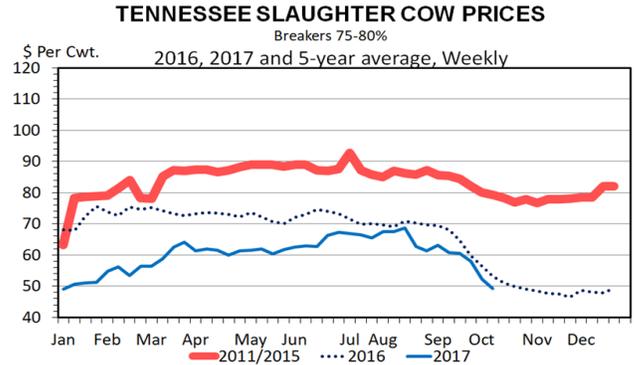
Culling management is a very important part of beef production. Cows who are not raising a calf every year are costing money to feed and manage them. Market cows or cull cows can account for 15-20% of the gross income for a cow-calf operation. That may make the difference in having a profitable year or having losses.

The first step in the culling process is to work the cows, evaluate each animal and write down that information. Records are needed to help decide who to cull. Records can be as simple such as a written on a notecard or a computer spreadsheet. Then you can make a prioritized list of who you will market. The following criteria should be considered for your culling priority list:

- **Pregnancy Status:** Is she open or pregnant? You have to pregnancy check all cows to know this. There are multiple ways to preg check and all have their advantages and disadvantages. Cows that are not pregnant will not make you money this year unless you sell them.
- **Major Defects:** These include very bad temperament (attitude), chronic lameness, eye problems (early signs of cancer eye), or severe udder problems. These cows should be at the top of the priority list too.
- **Age:** Inspect the teeth of cows, so you know the number of effective years each cow has left. Cows with broken teeth or badly worn teeth should be high on the culling list. If the teeth are somewhat worn, but have a few years left consider culling next year.
- **Poor production:** cows that produce calves with very low weaning weights.
- **Late calvers:** For farms with a calving season, consider selling any cows that will calve late or out of your window. These cows have a higher likelihood of being open or producing a light weight calf. Pregnant cows in this category would be marketed differently than open, defective, or old cows.
- **Poor doers:** cows that are always thin no matter what you do.
- **Extremes:** If you need to do a deep culling due to drought or other circumstances, consider selling any cows that are

extremes in terms of frame size or muscling in your herd. As you make culling decisions, it is important that you get the best price for your cows. Carrying a lot of cows to the sale barn is probably not the best approach. Talk to a marketing specialist and make an effective marketing plan.

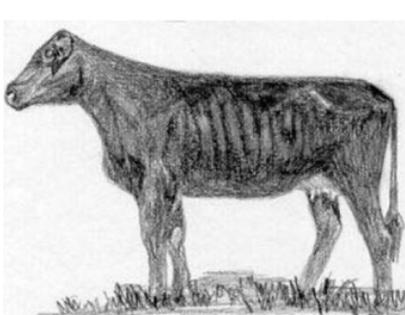
The decision to immediately market a cull cow is often made because the producer does not want to carry a cow through the winter and pay the winter feeding costs. Traditionally, the fall cull cow market is the lowest of the year. In the article, *Marketing Culls Cows this Fall* by Andrew Griffith, University of Tennessee Agricultural Economics, says using the last ten years of date, market cow prices have been 15-20% higher in May and June than from October to December. The price difference could result in a total revenue difference of \$120-\$240 per head for a 1,200 pound cow. Consider current prices, expected future prices and your resources when deciding when to cull.



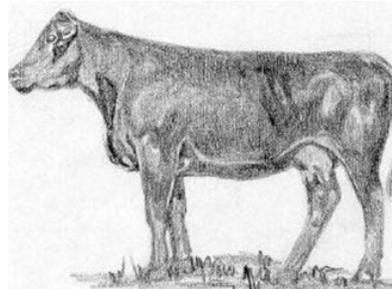
North Carolina usually has three Slaughter Cow categories: Breakers (70-80% lean), Boner (80-85% lean) and Lean (85-90%). See pictures below. For the week ending Oct. 20, 2017, average hundred weight prices were: 53.70 - 62.62 for breakers; 49.10-69.31 for boners; & 42.62-60.20 for lean.

Culling strategies based on sound facts and decision making will only benefit your farm in the long run. Gathering information on the cows and then deciding which to sell and when is key.

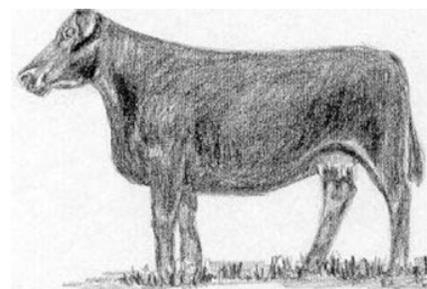
NCDA & CS Chart of Slaughter Cow Categories



Lean 85-90% lean
Ava Dressina % 43-47



Boner 80-85% lean
Avg Dressing % 47-51



Breaker 75-80% lean
Avg Dressing % 50-55

Dry Lots in Winter

By: Stefani Sykes, Livestock Extension Agent with N.C. Cooperative Extension in Wayne County

In this newsletter when the subject of horses comes up, we usually discuss behavior, feed or diseases. For this article, I'd like to discuss something a little different: pasture management and dry lot management in particular. The term "dry lot" refers to a space that has very little or no vegetation, a water source, and shelter. With fall and winter approaching, this is the perfect time to talk about dry lots and what they can do for your pastures.

In cattle operations, dry lots are commonly used for pasture preservation. Livestock producers can use these smaller paddock areas if their pastures need a rest or if they are waiting for new pasture growth to occur. In the winter, this can help prevent mud accumulation and compacted soil. For our horses, this is important. Less mud means less pulled shoes and less compacted soil means more pasture growth in the spring and summer. Compacted soil, especially in heavy-use areas, reduces aeration of the soil so any precipitation will sit on the surface; this causes the mud holes and non-vegetated areas we are used to using near gates and feeders.

During the winter, and wet fall, having a dry lot, can help prevent these problems in all of your pastures (since you are confining the mud and compaction to one area instead of all pastures) and can mean lusher pastures in the spring. While the idea sounds simple, it does require a bit of planning. You need to make sure the area can support the amount of horses

you want to put in it - 400 ft² per horse is the minimum amount of space required - and you want it to be relatively close to the barn - you will probably be moving horses in and out in some colder weather and you'll be feeding a lot of hay. Shelter is imperative, as with any pasture area. A three-sided shed or lean-to is sufficient in a dry lot and a 12X12 lean to should accommodate 1-2 horses easily. Of course, the more horses you have, the bigger the shelter needs to be!

A water source is key, again in any pasture. If you spread these areas out, food in one place, shelter in another, you can somewhat control the movement of your horses. This can help decrease the total compaction of the soil or hopefully prevent huge mud holes from forming. Directing the rain water away from high-traffic areas is important to prevent the mud problem. Stone or gravel may be required in these areas to reduce erosion as well. Crush and run covered by screenings, ground limestone or gravel can provide some footing help and eliminates some of the mud.

Manure and old hay should be removed as needed, ideally every 1-3 days. Be sure your horses have enough hay since there is little to no vegetation in the dry lot, especially in the fall and winter. By using this one area, a sacrifice area, you should see improvement in your pastures. It may not look pretty, and it will take some extra work, but in the end your pastures (and your horses) will thank you for it!



NCSU Equine Grazing and Pasture Management School

Presented by NC Forage and Grasslands Council, Amazing Grazing and NC State Extension
on December 2, 2017 from 8:30 AM - 5:00 PM.

NCSU Beef Educational Unit, 3720 Lake Wheeler Rd., Raleigh NC 27603

Registration cost is \$20. Use the link below to register.

<https://www.nccattle.com/nc-forage-grasslands-council/events/equine-grazing-workshop-registration>

Topics

- Learn to improve horse health through sound grazing management
- Learn the latest principles and practices of pasture management/renovation
- Live demonstrations and multiple opportunities for hands-on-training

One-half day of lecture + one-half day of hands-on-training

Diagnostic Testing for Goats

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

It's an unfortunate fact of life; animals can become exposed to toxins, parasites and diseases and sometimes die despite our best efforts to prevent and treat illness. I frequently caution aspiring goat producers to steel their nerves for the eventuality of losing an animal. The old saying is "if you haven't lost one, you haven't been raising them very long." Of course, there are other reasons why we would want to have some type of diagnostic testing performed, such as pregnancy testing, blood testing for diseases like Caprine arthritis encephalitis (CAE), or fecal egg counts. While I'll focus on tests specific to goats, many of the tests or principles apply to other livestock too.

Remember that a test simply provides data that is only one piece of the puzzle in determining *why* this condition came to be. That data can provide part of the picture, such as the type of organ damage, identity of foreign bodies, or the type and number of parasites.

Unfortunately, necropsy is usually the first diagnostic testing we think of, and the type that leaves the most painful memory. If the rare unexplained death occurs, it's common to just bury the animal and keep an eye on the rest. If another death occurs, the thought usually follows "I wish I'd had that first one tested!" Necropsy is a frequently under-utilized tool that can help reduce the length or severity of a disease outbreak. Many veterinarians offer this service to clients, and having a veterinarian's trained eye on the animal, in the place where the death occurred, can help provide more clues to the problem.

The NC Dept. of Agriculture operates four Veterinary Diagnostic Labs in the state, located in Raleigh, Monroe, Elkin and Fletcher. www.ncagr.gov/vet/ncvdl These labs offer a wide variety of tests at very reasonable fees, including necropsy. Specimens may be submitted by veterinarians or owners. Carcasses should be submitted for necropsy as soon as possible after death, and if possible, should be cooled prior to and during transport. Deterioration of the organs and tissues begins immediately after death, and can make diagnosis impossible beyond a certain point. Specimens that are beyond diagnosis can and will be refused by the lab. In general, if an animal has been dead more than 12-24 hours, it may be too late for a necropsy. Cold weather conditions may lengthen this time frame, but only to a point. Conversely, hot weather can speed up biological activity and shorten the time frame. The Raleigh Diagnostic Lab (Rollins Laboratory) has on-call weekend technicians for true emergencies (multiple animal deaths.) The Rollins lab also has a cooler for after-hours drop-off of carcasses less than 150 pounds. The other labs operate with less staff and have different facility capabilities, so get their number and call to see what their service options are. Anyone in the state can submit samples to any lab; there is no requirement to use the lab closest to you.

Other services offered by the Veterinary Diagnostic Lab (VDL) system include McMasters Quantitative Fecal Analysis (fecal egg count,) Bacteriology such as Ruminant Mastitis Culture, Immunodiagnosics such as CAE, and more. Producers are strongly encouraged to work with local vets to collect and submit samples, because they can help decide which animals to sample, how many, and how to handle and package samples. Ship samples via UPS or Fed-Ex, as regular postal mail is not always delivered to the facilities and isn't always tracked.

One item of particular concern to sheep and goat producers is urinary calculi. The Minnesota Urolith Center analyzes all types of urinary stones (except from primates and humans) at no cost, thanks to donations from pet food companies and individuals. In the event of urinary calculi, if a stone can be recovered from the animal's urinary tract, this analysis can be very revealing as to the type of stone and potential causes. The center is able to analyze very small stones, but has specific requirements for packaging and shipping. Generally, if a stone is big enough to be seen without a magnifying glass, it is big enough to analyze. If more than one stone is recovered, it is generally advised to submit the largest stone. Private vets or diagnosticians from the NC VDL system can submit samples to the MN Urolith Center. Clients are usually responsible for shipping costs to the lab.

Fecal Analysis is a very useful tool for producers. Some producers I know have bought their own microscopes and testing kits, and some Extension Offices have fecal egg count kits available to producers. This procedure is a great compliment to FAMACHA scoring small ruminants because it gives an estimate of the type and number of parasites infesting the animal. It is also highly recommended to perform a true Fecal Egg Count Reduction (FECR) test. This involves performing fecal egg count on the day of deworming, and again 10-14 days later to determine the reduction (if any) in parasite load from the dewormer. It should be mentioned that fecal egg counts provide only an estimate of the number of parasites in an animal. Using this information also requires knowing a lot more about the animal, such as any other symptoms of parasitism, age, stage of production, etc. Still, it is a very valuable piece of data to have about an individual or group of animals.

Pregnancy testing in goats is not as frequently performed as in cattle, but can be very beneficial depending on your goals and breeding strategies. Private veterinarians may be able to perform transabdominal ultrasound, and may even be able to determine the number of fetuses. In recent years, an ELISA test for pregnancy-specific ruminant proteins has become available through Bio-PRYN ("Pregnant Ruminant-Yes/No") and its affiliate labs across the country. www.biopryn.com This test analyzes a small (2 mL) of blood for the pregnancy-specific proteins and return a Yes or No answer. The producer or vet collects a vacutainer of blood from the jugular vein of the doe, which is then shipped to a Bio-PRYN lab. Results are emailed back to the owner. Several mail-order livestock supply companies have begun offering blood collection kits which include enough supplies for testing five does, and also include vouchers for five lab tests, for around \$40.

There are some precautions to blood testing for pregnancy. In order to prevent false positives, does must not have been exposed to a buck for at least 28 days, and must have kidded more than 60 days prior to collecting blood for pregnancy test. Keep in mind that this is a yes/no test and cannot estimate due dates or the number of fetuses.

There's much more to diagnostic testing than could be mentioned here. I encourage you to have a conversation with your local Extension agent and veterinarian about diagnostic tests for your flock, and take steps to keep your animals healthy!

4-H Farm Credit Showmanship Circuit Winners

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

Results for The 4-H Farm Credit Showmanship Circuit will be announced at the banquet in Hoke County. These youth accumulated points for their placings in showmanship at a series of shows in the South Central District in North Carolina this fall. If you know any of these young people, please congratulate them for all their hard work and accomplishments. Any youth from any county may now participate. If you have a child, grandchild, or neighbor who may be interested in competing in our Circuit, please call your local Livestock or 4-H Agent for help.

The 4-H Farm Credit Showmanship Circuit is for youth showing lambs, heifers, and goats. There are three age divisions for all species. First place in each division will win a belt buckle and a banner ribbon, second place will win a banner ribbon, and third place through fifth place will win a tri-fold ribbon. Cape Fear Farm Credit and Carolina Farm Credit proudly sponsor the Circuit, providing the funding to operate it. Each youth participant receives a Circuit tee shirt. Final point rankings for the Circuit are below:

Lamb Showmanship Winners

Junior	Intermediate	Senior
Addison Farris	Noah Beeson*	McKenzie Beeson
Susanna Dean	Lydia Dean	Katherine Eastep
		Coley Whitley
		Cheyenne Edwards
		John Faatz II



Heifer Showmanship Winners

Junior	Intermediate	Senior
Caroline Scarlett	Salem Sifford	Thomas Smith
Matthew Boles	Hayden Allen	Mattie Harward
	Madison Boles	Madison Sifford*
		Marcie Harward
		Matthew White



Meat Goat Showmanship Winners

Junior	Intermediate	Senior
Laura Jessup	Savannah Shepard	Coleman Berry
Alby Pulaski	Fallon Cain	Kali Mabe
Addison Farris	Emmy Gantt*	Paison Cain
Caroline Scarlett	Emily Carson	Rylee Schofield
Natalee Jonas	Eve Agee*	Nikki Miller



*=Also won the Most Improved Award for their species.

Biosecurity on Commercial Poultry Farms

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

Information in article provided by resources from University of Maryland Extension and UGA Extension.

Keeping disease out of your commercial poultry flock is very important. Biosecurity is the best way to greatly reduce your risk of disease. Below, we will discuss the definition of biosecurity and how you can ramp yours up to keep your birds safe of disease.

What is biosecurity? According to the University of Maryland Extension, biosecurity refers to procedures used to prevent the introduction and spread of disease-causing organisms in poultry flocks.

How does disease enter our flocks? Disease is spread through contact or close proximity to a host or vector. Vectors are any organisms that transfer pathogens from one host to another. Usually, people are the most common vectors and this usually happens by mechanical transfer. The most common examples of mechanical transfer are clothing, shoes, vehicles, equipment, rodents, insects, and migratory waterfowl.

What biosecurity measures can you implement on your farm? There are many practices, procedures, and equipment you can put into place on your farm to reduce your disease risk. These include wearing disposable coveralls and boots, wearing hair nets and disposable gloves, using foot baths (very important to keep the material changed, clean, and out of the elements), installing car washing stations, and disinfecting equipment and houses between flocks. Also, it is important for essential personnel to sign in and out of your farm, so in case of a disease outbreak, you will be able to hopefully trace the origin. Putting signs at the front of your farm that say this is a biosecurity area and visitors do not need to enter the property without approval is another measure you can put in place to increase your biosecurity.

UGA has a publication on biosecurity and suggests these methods for lowering disease risk:

- limiting visitations to other poultry farms – do this only when necessary and be sure to shower in and out and change clothing before returning to your farm

- keep all animals out of poultry houses - this includes wild birds, dogs and cats
- practice sound rodent and pest control programs - rodents carry disease
- keep visitors to a minimum – only allow essential personnel
- avoid contact with non-commercial poultry or wild birds – migratory waterfowl and hunting
- inspect flocks daily – properly and quickly dispose of mortality and report health concerns right away
- maximize the flock's environment – good ventilation and dry litter keeps disease risk low
- keep areas around the houses and feed bins clean - remove trash and keep grass cut
- and most important – recognize disease symptoms.

Recognizing disease symptoms early may be one of your best defenses against the spread of disease. Be aware of these symptoms in your flock: lack of energy and appetite, decreased egg production; soft-shelled eggs or misshapen eggs, swelling of the head, eyes, comb, wattles and hocks, purple discoloration of the wattles, combs and legs, nasal discharge, coughing, wheezing and sneezing, lack of coordination in mobility; diarrhea, sudden or excessive mortality without clinical signs. Be sure to report symptoms immediately.

Be sure not to stress about biosecurity because you will never be able to do every single thing 100% of the time. Biosecurity is about lowering and managing your disease risk as much as possible. Not all of the above suggestions may be feasible for your farm. If you would like to discuss what biosecurity measures you could implement on your farm and how you can lower your flock's disease risk, contact your local Cooperative Extension Office.

