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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.

Johnston County Youth Livestock Show & Sale April 3-5

119 youth from across Johnston County are registered to participate in the annual Show & Sale. Entries consist of approximately 4 steers, 65 market goats, 25 market lambs, 21 heifers and 90 market hogs.

They Buyer's Meal will be served at 4:30 pm on April 5. The sale will begin that same night at 6 pm.

Those wishing to contribute to the sale may attend or may contact the Extension Office in advance to make those arrangements. Show times are:

April 3 Steer show at 5, followed by Heifer Show

April 4 Market Lamb Show at 9, Market Goat Show at 1 and Judging Contest at 5:30

April 5 Market Hog Show at 9

As in 2022, the Livestock Judging Contest will include an adult division as well as youth. Teams can consist of 3 or 4 members, and there will be individual prizes as well. Youth and adults are encouraged to participate, it should be a lot of fun!

For more information follow the Johnston County Youth Livestock Facebook page.

Interactive Pesticide Training

This is a two-hour pesticide training with multiple interactive demonstrations and workshops. The training offers two hours of pesticide credit in every category except V. The training will be held at the Livestock Arena, 520 County Home Rd, Smithfield from 10 to noon on **March 24**. No need to register, just bring your pesticide license!

Pesticide Exam

Exams are offered at the Johnston County Extension Office April 12 at 1 pm. You may register and attempt any NC Pesticide Exam category. Please arrive by 12:30 and bring a pencil and calculator. Pre-registration is required with the NC Pesticide Section at (919)733-3556.

Forage Tips

Apply pre-emergent herbicides to hayfields by mid March.

Control winter annual weeds in pastures before they flower and seed.

Watch for grass tetany in cattle grazing lush, rapidly-growing pasture.

Leave 3-4" of stubble height when grazing winter annuals

Hay Directory

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

For any meeting listed, persons with disabilities may request accommodations to participate by contacting the Extension Office where the meeting will be held by phone, email, or in person at least 7 days prior to the event.

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Rodent Control on Livestock Farms

By: Becky Spearman, Livestock Extension Agent with N.C. Cooperative Extension in Bladen County and Margaret Ross, Eastern Area Specialized Poultry Agent with N.C. Cooperative Extension

Rodents are a major issue on many hog and poultry farms in North Carolina. They can spread disease, cause feed losses and contamination, and cause structural damage to the barns, equipment and lagoon. From a waste management standpoint, they can tunnel under the foundations of houses and cause structural damage to lagoon banks. In the buildings, they destroy curtains, gnaw on electrical wiring and insulation, and destroy ventilation systems.

Rodents are prolific breeders and can reproduce at amazing rates. The three rodents of concern in our area are the House mouse, Norway rat and the Roof rat. They all have some differences in behavior which can be used in determining control methods.

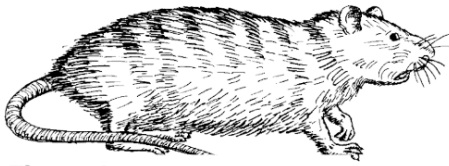


Figure 1.
Rattus norvegicus
Norway Rat or Common Rat



Figure 2.
Rattus rattus
Roof Rat



Figure 3.
Mus musculus House Mouse

Diagrams of Rodents from Oklahoma State University Extension

Characteristics of Rodents:

- Behavior - rodents have a home range they spend most of their time in. Mice live in smaller territories ranging 10-25 feet. Rats range around 100 feet and live in colonies.
- Eating Habits - Rats usually eat their entire meal for the day at one time, usually at night while mice eat small amounts of food several times during the day. Rats are more wary of new objects, so it may take longer for success with bait stations and traps to be effective. It may take at least 5 days for the rat to accept the new object while a mouse may accept it overnight. Rats are also pickier eaters and like fresh food while mice are more curious and more willing to try new foods.
- Reproduction rates - rats can produce 10-12 litters per year with an average size of 6-8 babies. A single rat pair can produce 15,000 descendants in only one year! The reproduction rate for mice is similar with 5-10 litters per year with 5-6 babies.
- Front incisor teeth on rats - grow on average 5 inches per year, so rodents gnaw constantly to keep them worn down.
- Rats can climb both horizontally and vertically. They jump vertically as much as 36" from a flat surface and 48" horizontally from a flat surface. They can swim as far as ½ mile in open water and travel against sewer lines in substantial water currents. And this surprised me - they can drop 50 feet without being killed or seriously injured!!

Sanitation practices: minimize and clean up feed spills, mow around buildings/houses to decrease cover, throw away garbage frequently, and not stack lumber and other construction debris near buildings. Exclusion is a lot harder in hog or poultry houses themselves, but focus exclusion practices in offices, storage buildings and pump houses. Exclusion includes sealing cracks or openings in the building. Leave no holes larger than ¼ inch. Doors, windows and screens should fit tightly. Leave a three foot wide vegetation free buffer area covered with gravel around hog and poultry houses.

Rodent Control on Livestock Farms Continued from page 2

Population control: trapping can be an effective way to control rodents. Trapping rats may require more skill and labor. The advantages to trapping is that it doesn't rely on potentially hazardous rodenticides, success is visible, it allows disposal of carcasses, and can eliminate odors. There are several available traps which can be single trap or multiple-capture live traps.

Rodenticides (toxic baits): baits are formulated with an attractant and a rodenticide in them. Some baits may be restricted use pesticides (RUP) and require a pesticide license. There are anticoagulant and non-anticoagulant rodenticides. Each of the rodenticides work in different ways to kill the rodents. There are situations where each type may be a better choice.

Bait stations with rodenticides and placement is critical. Using a bait station targets the rodents and allows them to feel secure while eating the bait. Proper placement and maintenance is critical. Always wear gloves when putting out bait for your protection as well, as rodents will avoid the bait stations if they smell human scent on them.

Typically, the commercial baits that are already ready to use are preferred over the baits you have to mix yourself. Whichever your preferred method, you need to be familiar with the basics of rodenticides for them to be effective. Rodenticide formulations come as bar baits, concentrates, tracking powders, or pellets. The bar baits contain a rodenticide, a grain product, as well as a binder. The binder allows the bait to hold up during moisture events. These products are typically found as chunks or bars. Pellet rodenticide formulations include the poison mixed with grain and then the binder keeps the pellet together. This type of rodenticide can be found in bulk or individual packs. If you'd prefer to mix a rodenticide into your feed or water, concentrates may work best for your farm.

There are typically two types of classifications for rodenticides: multiple-feed poisons or single-feed poisons. Depending upon the active ingredient, the product may be used in different ways. It's extremely important to read and follow the label instructions because all types of rodenticides are poisonous and can put other animals at risk that are not the target animal of the rodenticide. Be sure to read the manufacturer information and warnings. The poultry industry usually prefers to use the single-feed poisons because rodents can potentially receive enough to kill them after only a couple feedings, whereas multiple-feed poisons take much longer.

Tracking powders (restricted use pesticides) are toxic dusts that contain high concentrations of either acute action or delayed action toxicants. The powders are placed in areas that rodents travel through and pick up the powder on their fur and feet and later ingest it while grooming.

To be effective in implementing a rodent control program, you must be monitoring and evaluating the program constantly. There are several reasons rodent programs may not be successful: not enough bait stations, the control area is too small, not enough exposure time to the bait, easy access to other food supplies, not stocking bait stations on a regular basis, choosing the wrong bait, moldy or old baits, and not rotating baits. It's very important to properly handle rodenticides. Keep in mind the home range of the mice and the rats so you'll ensure you have plenty of bait stations. Bait stations can be purchased or made on your own. If you have any questions about rodent control on your farm, contact your local Cooperative Extension office.

References:

[Rodent Control in the Poultry House](#) - Oklahoma State University Extension

[Controlling Rats and Mice in Swine Facilities](#) - Pork Information Gateway

[Controlling Rodents on the Poultry Farm](#) - Mississippi State University Extension

Creep Grazing

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

There's a saying in the cattle business, if you want heavier weaning weights it's a lot easier to feed the calf and not the cow. While I am a firm believer in providing adequate nutrition to a lactating beef cow, there is a lot of truth to this old saying. There is no doubt that for the first 1-3 months of its life a calf is fully dependent on getting breakfast, lunch, and supper underneath its mother, but once it turns the corner and gets 4-6 months old it is ready for something other than milk. Supplemental feeding (creep feeding) beef calves prior to weaning results in heavier calves. This is not exactly a secret and hardly a profound statement. Everybody in the cattle business knows that if your genetics are remotely worth a darn and your calves are healthy, they will grow more with extra feed. Where the debate begins is creep feeding a concentrate cost effective? You could write an entire book on the pros and cons of creep feeding. Do you have the necessary equipment, how much are you paying for your feed, how long are you creep feeding, etc.... The list goes on.

One alternative to getting more groceries in your calves that does not involve feed trucks and vertical storage bins is to creep graze your calves in the Spring. Creep grazing is a grazing strategy that allows your calves access to an adjoining pasture or green lot while keeping the cows out. The calves go and graze when they feel like it and run back to mama when they are ready to nurse. While you're probably not going to get the weight gains on a forage like you would with a high protein concentrate, you certainly will not spend near as much either.

Getting started

Creep grazing is not very high tech. All you need is a fence opening that is big enough to allow your calves to go through but still small enough to keep the cows out. Most creep gates are 15"-18" wide and 36"-42" tall. These dimensions are not set in stone and can be adjusted based on your mature cow size. There can be individual situations where this can be a little tricky. First calf heifers that are not fully grown can be a little difficult to get the gate opening set, but for the most part a fully grown cow is not going to walk through a 15 X 36 opening. I have seen fancy creep gates that are made of heavy metal and I have seen gates where all they had were two old posts and a 2 X 4 across the top. Whatever works for you and keeps the cows on one side is all you need to make it work.

Timing

As stated above, calves that are only a couple of months old really will not graze enough to make a difference. Plus they will not leave their mothers for any length of time so they will not have the urge to go into another pasture. At 3-5 months this starts to change and calves will be much more prone to wander out and graze for a few hours.

For those of us with primarily Bermudagrass systems, our ability to creep graze will be limited to mainly Spring or summer grasses unless you have a dedicated field for annuals and have good luck getting an early fall forage up and growing before the winter. Small grain overseed (Rye, Oats, Triticale, etc...) is the most common creep grazed crop.

The goal is to give the calves primary choice of the grass and a head start on this lush forage. Once small grains start really growing in the spring it will get away from the calves and you will be forced to turn the cows out to clean it up, but even 2-3 weeks of extra grazing will benefit your calves.

For most farms, you have to manage around the logistics of your pastures and how you choose to rotate your grazing. There are two main ways people try to creep graze their calves. The first is have a dedicated pasture for your calves to graze on as early in the spring as possible. This is normally anywhere from the first of February through the middle of March. You want to get them out and grazing asap but you do not want to significantly over-graze the young small grain down before it has a chance to really start growing. The other strategy is to allow the calves to "graze in front" of the cows. Letting the calves have access to a fresh pasture 1-2 weeks before the cows are turned out on it. The calves are then given access to the next pasture you plan on moving your cows to next. This will both give the calves extra time on grass but also allow them first choice on the best grass or their choice. This method can be a little more difficult as it normally takes the calves a few days to find a new gate they can go through, but it can be done. Especially if you rotate through your pastures 2-3 times in the spring. The calves will be looking for these gates more and more as you rotate through.

Creep grazing is not for everyone. You have to have decent fencing and it can be aggravating at times dealing with bawling calves that suddenly cannot remember how to walk through a gate. But for getting additional growth on your calves in a cost-efficient way, it is tough to beat.

Tube Feeding Kids and Lambs

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

Adapted from: *Tube Feeding Neonatal Small Ruminants* by Dr. Susan Kerr, Washington State University

Tube feeding a weak or chilled kid or lamb is an essential skill for sheep and goat breeders. A newborn may be too weak to nurse, or the dam may not be producing milk or rejecting the newborn, or a case of scours may deem drenching with electrolytes necessary. The first milk produced by a mammal after childbirth is called colostrum, and it is very important because it contains large proteins called immunoglobulins which can transfer passive immunity to disease from the dam to the newborn. When a kid or lamb is first born, the pores in the digestive tract are open, allowing these immunoglobulins to be absorbed. After 12 to 24 hours of life, the pores begin to close, and immunoglobulins will then be broken down and digested, without transferring passive immunity. Most producers will find that getting colostrum to a newborn is the most common reason to decide to tube feed a lamb or kid. I will focus this article on colostrum feeding.

Once you have decided that tube feeding is necessary, make sure that the lamb or kid is warm. If you stick your finger in the animal's mouth and it seems cool, then you need to get the animal indoors and near a source of warmth to warm it before tube feeding. Warm the fluid to about 104°F. Assemble the sanitized equipment listed in the table below. Place the tube along the animal's body from the last rib along the neck to the mouth (picture.) Mark the length needed to reach the last rib. You could also pass the tube *without any fluid in it* down the esophagus until it stops, mark it, and then place it along the animal's body to see if it reaches the last rib. The animal's lungs are closer to its shoulders than the stomach, so a tube that goes in only that far may be in the lungs. *Drenching into the lungs will most likely kill the animal.*

From a sitting position, hold the animal facing away from you by the shoulders between your knees (picture.) Hold the head in a normal position and gently advance the tube toward the back of the animal's mouth. Be watching for the mark you previously made on the tube to reach the mouth. One way to check the placement of the tube is to attach the empty syringe and try to pull back the plunger. If it is in the stomach it will be very difficult to pull back, but if in the lungs there will be little resistance. A healthy animal will usually react violently if the tube enters the windpipe, and will gag or cough, but will not be able to bleat or cry. If it has swallowed the tube it should be able to make these noises.

Once you are sure the animal has swallowed the tube, attach the empty syringe and allow the fluid to drain into the stomach. Forcing the fluid in with the plunger could actually rupture the stomach or cause fluid to spill into the lungs. Once the fluid has drained and the animal is fed, crimp the end of the tube. This will prevent fluid from dribbling or draining out as the tube is withdrawn, which could allow the animal to inhale fluid into the lungs.

Animals should receive ten percent of their body weight in colostrum in the first 24 hours of life. For a ten-pound animal, this equals 16 ounces of colostrum. It is better to give two or three ounces every few hours rather than huge feedings.

For more information on tube feeding, I highly recommend the article "*Tube Feeding Neonatal Small Ruminants*" by Dr. Susan Kerr. The article can be found at this website <http://cru.cahe.wsu.edu/CEPublications/eb1998/eb1998.pdf>



Positioning the tube for marking.



Holding a kid for tubing.

Spring Pastures

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

It's almost spring and while our weather is still experiencing some highs and lows, our pastures are starting to do some serious growing. Pastures are important for any livestock producers, regardless of species. When the pastures start turning green and growing, we know it's time to stop feeding hay and using the grass we are producing.

Spring is a time to really start thinking about what you have growing, how many animals you will be putting on those pastures, and what sort of management style you will employ. Rotational grazing is a topic that will be covered in future articles but it is basically using the pastures to your advantage. Breaking up larger pastures into smaller lots allows the animals to use the grass efficiently and lets it have time to regrow, so you get the highest quality grazing possible.

Soil testing is important when determining the amount of fertilizer you will need for this year. As your grass is actively growing, it is time to take note on your problem areas and see where you can make some improvements. Soil tests can be very useful and are free starting in April! Come by your Extension office for your soil sampling kit and instructions.

One concern with this spring weather and spring green-up is grass tetany. The extreme change from mostly hay to lush, green pasture can cause a problem in some of our livestock species. Grass tetany has occurred with animals grazing orchardgrass, timothy, tall fescue, and annual ryegrass just to name a few. A deficiency of magnesium (Mg) causes animals to "stagger" around, have twitching skin, and act very nervous. Often these symptoms go undetected and the animal dies before you know what is going on. Older cows are more susceptible than their younger counterparts. Please call the office if you have any questions about grass tetany.

Bloat is another concern for cattlemen in our state. Turning animals out on lush pastures may make them more prone to bloat and it seems to occur more readily with immature legume pastures. However, bloat can occur on any pasture that is low in fiber and highly digestible; animals that are hungry when turned out are also more prone to bloat. Often the animals will just bloat mildly, stop eating, and eventually the discomfort will ease but severe cases may result in death. Please check your cattle regularly for any signs that something is wrong.

Contact your Extension office if you have any questions or concerns about anything mentioned in this article or about livestock and forages.

Form AD-1 (2020)

SOIL SAMPLE SUBMISSION FORM - NC Soil Only

ROUTINE / PREDICTIVE SAMPLES

April - Thanksgiving: NO FEE
December-March: \$4.00 / sample
Check online for exact dates


NCD&CS Agronomic Division Soil Testing Section
 Mailing Address: 1040 Mail Service Center, Raleigh NC 27699-1040
 Physical Address (UPS/FedEx/DHS): 4300 Reedy Creek Rd, Raleigh NC 27607
 Phone: (919) 733-2655 **For lab results go to: www.ncagr.gov/agronomi/pals**

OFFICE USE ONLY

REPORT # _____

DATE REC'D _____

INITIAL _____



SAMPLE INFORMATION		PAYMENT	GROWER INFORMATION (please print legibly)			AGENT OR ADVISOR	
FARM ID (optional)	FEE TOTAL \$	AMT PAID \$	LAST NAME	FIRST NAME	LAST NAME	FIRST NAME	
SAMPLING DATE (optional)	METHOD OF PAYMENT: <input type="checkbox"/> CASH / CHECK <input type="checkbox"/> INVOICE		ADDRESS			ADDRESS	
SAMPLE METHOD <input type="checkbox"/> GPS Grid <input type="checkbox"/> Management Zone	<input type="checkbox"/> Grower <input type="checkbox"/> Advisor / Consultant		CITY	STATE	ZIP	CITY STATE ZIP	
COUNTY (WHERE COLLECTED)	ESCROW ACCOUNT: (provide Account Name or Number)		EMAIL ADDRESS (REQUIRED)			EMAIL ADDRESS	
NUMBER OF SAMPLES	"Reports will appear as "Pay Now" until Payment is applied"		PHONE	PALS # (if known)	PHONE	PALS # (if known)	

By submitting this form to the NCD&CS Agronomic Division, I attest that the accompanying samples were collected in North Carolina.
 Samples cannot be received without necessary paperwork. Use NCD&CS sample boxes only. Bags from other labs are not accepted.

LAB NUMBER (LEAVE BLANK)	SAMPLE ID required	LIME APPLIED WITHIN PAST 12 MONTHS			FIRST CROP	CROP CODE (see side 2)	SECOND CROP	CROP CODE (see side 2)
		Tons/Acre	Month	Year				
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Thank you for using agronomic services to manage nutrients and safeguard environmental quality. — Steve Troxler, Commissioner of Agriculture

Winter Hay Management for Horses

By: Tom Shea, Livestock Extension Agent with N.C. Cooperative Extension in Moore County

Although we have had some warm days, winter is still upon us, and our warm-season grasses are still dormant, so we still have to feed hay. No matter if you feed square bales or round bales, it is essential to manage how you feed your hay.

During the cold winter months, warm-season grasses go dormant. These dormant grasses need to be protected by minimizing traffic on the pasture. This can include keeping the horses in a sacrifice area that removes the horses from the pasture until it is ready to graze in the spring. A sacrifice area can be a dry lot or a paddock that you are ok with producing less forage. Often your least productive paddock is the easy choice for this area. If this is not an option, consider where and how you feed hay and your water source.

Moving where you feed and water is not always an easy feat. Water sources are often fixed or limited to where your hydrant is located. While moving your water can have a huge impact on your pasture damage, it is often not practical. That leaves us with moving hay. Simply put, putting out hay is a pain. If you are feeding round bales it involves starting up a tractor, opening gates, cutting off the net, fighting off your horses, and hoping you got the angle right so you don't tip or crush the hay ring. Feeding square bales can be just as big as a pain. Opening gates one-handed, fighting off the horses and walking across the pasture, or throwing it over the fence. I am guilty of throwing it over the fence in the same place every day and eventually that spot and about 50 feet around it was dirt with no chance of grass growing.

The area that we feed and water horses is high traffic and where horses will spend most of their time. This high traffic is what causes pasture damage. Feeding hay in a different spot daily or weekly will reduce the damage with the added benefit of spreading organic matter and nutrients back into the soil in different spots. Where you feed is the location where your horses will spend most of their time, meaning that where they are most likely to release manure and urine. This takes the nutrients that the horses cannot use from the hay and puts it into your soil. The left over hay will also act as mulch and be additional organic to improve your soil and pasture health.

If you are interested in learning more about hay management, rotational grazing, and how they can help improve your pasture health join us on May 5th from 1:00 -4:00 pm at the Carolina Horse Park for a hands on field day. Register at <https://go.ncsu.edu/horsepastures>

Check out the articles below for more information.

<https://equine.ca.uky.edu/content/equine-new-year%E2%80%99s-resolution-better-pasture-management>

<https://extension.psu.edu/how-to-make-rotational-grazing-work-on-your-horse-farm>



Youth Livestock Projects and the Impact They Create

By: Brooke Zeleny, Livestock Extension Agent with N.C. Cooperative Extension in Craven, Jones, and Pamlico Counties

Imagine a girl growing up 25 miles outside of Houston Texas in a suburban area with no agricultural ties and no connection to livestock. How does someone with that background end up working for Extension in rural North Carolina? The answer lies in the opportunity provided to a 9th grader, to show a lamb in the local Independent School District livestock show. Figuring out how to initiate the process of showing livestock can be difficult for parents or teachers with no livestock experience. The starting line can always be crossed with the help of the county livestock extension agent or county 4-H extension agent. Once the decision is made to get involved in youth livestock projects the discovered benefits can be life-changing.

For youth involved in livestock projects the life skills that are learned can range from time management to raising their own animal. Responsibility practice, not only for the youth but the parent or teacher. Learning to allow that child to figure things out on their own, make mistakes, and keep moving forward when they do not get grand champion. All these characteristics are put to the test. Not only are life skills learned while participating in livestock projects, but interest in agriculture may be enriched. New career opportunities can be introduced to youth. Sparking new ideas and passions like the girl from Houston. Someone who went from no agriculture background to earning a Master of Agriculture degree from Auburn University. There are so many branches of agriculture that someone can get involved in, and it may all start with one livestock show. The biggest step is the decision to get involved. If finances

are a concern, talk about it with your local extension agents. Sponsorships, grants, and scholarships are all options. Extension is here to help youth pursue their passions and achieve their goals.

The livestock journey of one girl took her from never touching a livestock animal, to getting involved in her local shows, then working for a state extension specialist, to obtaining an animal science and agriculture degree and now, teaching others about livestock and the value this industry adds to youth development. Below is a list of some NC Extension livestock events to start the journey:

Event:	Date:
Livestock Skillathon & Judging Clinics	June 27, 2023
State 4-H Livestock Contest	July 26 - July 28, 2023
NC Junior Beef Round-Up	Aug. 11 - Aug. 12, 2023

There are so many more opportunities to get involved. Please contact your local Livestock Agent by going to the NCSU Extension Website. Find your County under the County Centers tab at the top of the page. Next, go to Meet the Staff!

[NC State Extension](#)