Important Information

Drought Management for Livestock and Horse Owners - We are still under drought conditions. Robeson County was in the severe drought category on July 1 and is now in the moderate dry category. Rain has been scarce, and hay supplies are going to be short again this year. Livestock and horse owners need to plan on how to feed their animals.

Most farms are grazing bermudagrass and other warm-season pastures now. Plan to pull animals off pastures and place them in a sacrifice area when the bermuda height is 2-3 inches. Animals can be put back on the pastures when the grass height is between 4 and 6 inches. Overgrazing will cause the plant to take longer to grow back and could possibly lead to stand loss. Provide hay or supplemental feed when the animals are in the sacrifice area.

Evaluate hay and pastures for this winter. Inventory hay supplies and determine if you have enough on hand (now is the time to buy hay or plan on an alternative feed source). Also, protect the hay you do have by keeping it up off the ground and covered.

Hay is for sale in Robeson and surrounding counties. The NCDA&CS Hay Alert web site lists hay for sale at http://www.agr.state.nc.us/hayalert or call toll free at 1-866-506-6222. Contact the Extension Center for a list of local farmers with hay for sale.

September 23 - Clinton Feeder Calf Sale – The Clinton Calf Sale will be held on September 23 at 7 p.m. at the Sampson County Livestock Facility. Cattle should be brought to the facility for grading, penning, etc., on September 23 between 7 a.m. and 4 p.m. For more information or to request a consignment form, please call Paul Gonzalez at N.C. Cooperative Extension, Sampson County Center, at 910-592-7161.

If you are interested in learning more about any information in this newsletter, contact me at the Extension Center at 671-3276 or E-mail me at Michelle_Shooter@ncsu.edu. For accommodations for persons with disabilities, contact me no later than five business days before the event.

Sincerely,

Michelle M. Shooter
Michelle M. Shooter
Extension Agent
Agriculture - Livestock
Wildlife and Water Quality on N.C. Farms Workshop

A Wildlife and Water Quality Workshop will be held in Ammon, N.C., on September 11 from 9:30 a.m. to 4:30 p.m. Topics will include: quail management practices, native grasses and their management, riparian buffers, integrated pest management, Suggs Mill Pond Game Lands management, Farm Bill Programs, Longleaf Pine ecosystems, and Best Management Practices in the corporate agricultural landscape. Three hours of Continuing Education Credit will be offered. Lunch is provided by Murphy-Brown LLC. For more information or to sign up to attend, contact Benjy Strope at 910-866-4636 or E-mail cure_tour@yahoo.com with workshop in the subject line.

Calibration and Sludge Surveys

All farms are required to calibrate their irrigation equipment and perform a sludge survey. Your permit type determines how often you must complete these tasks. General Permit Farms are required to calibrate at least once every two years and perform a sludge survey every year. You can request an extension from DWQ to perform a sludge survey less often. Keep your forms with your records. Inspectors may ask to see them when they come to the farm. NPDES farms must complete both every year. Call your Livestock Extension Agent for more information.

Temporary Adjustments in Lagoon Stop Pump Level

The NRCS Technical Guidance Document allows an optional, temporary adjustment in the lagoon operating procedure. This adjustment in operating procedure allows the operator to pump into the top 8 inches of the treatment volume during the period of June 15 through October 31 to provide irrigation water during drought periods to establish or maintain vegetation in waste application areas and to allow additional temporary storage for excessive rainfall during the hurricane season and the following winter months. There are several restrictions to the rule. For more information, call the Extension Center or NRCS Office.

Forage Management Tips

From Production and Utilization of Pastures and Forages in North Carolina

August

- Apply lime to pastures with pH below 5.8 to be overseeded next spring.
- Start harvesting corn silage in the hard dent state and when the dry matter is between 35 to 40 percent.
- Fertilize warm-season grasses.
- Fertilize fescue and keep cattle off of the pastures to be stockpiled.

September

- Fertilize and lime cool-season grasses.
- Keep pressure on summer grasses and completely use them before grazing cool-season forages.
- Watch for fall insects (armyworms, grasshoppers, crickets) on forages.
- Overseed or no-till winter annuals into summer perennial grass.

Poisonous Plants

Producers should familiarize themselves with common poisonous plants found in this area. Under drought conditions, cattle will look for something to eat, and sometimes this introduces poisonous plants. If Internet is available, refer to Plants Poisonous to Livestock and Pets in N.C. at http://ceres.cals.ncsu.edu/wetland/poisonousplants/ for plant identification and signs of toxicity.
Few events can cause as much damage to hayfields or pastures as quickly as a fall armyworm outbreak. So far this summer, no armyworm outbreaks have been seen.

A quick lesson on fall armyworms.

There are several species of armyworms that are all commonly referred to as fall armyworms. The true fall armyworm is the one that is the most commonly seen and is the one that most people are familiar with. This worm has the yellow inverted “Y” on its forehead. In addition to the true fall armyworm, it is also common to see beet armyworms and southern armyworms during an outbreak. Usually, what you will see is a large percentage of one species, plus a few from the others in the same field while you are scouting. There is not a big need to identify which species you have during an outbreak. The only thing to keep in mind is that the true fall armyworm is by far the easiest to kill, whereas, the beet and southern armyworms may be a little tougher to control and may require a stronger rate of insecticides.

When to look for fall armyworms?

Fall armyworms are usually seen in August or September. They also tend to be worse in dry years than in wet ones. Armyworms prefer to feed on young, tender grass rather than mature stands. They will usually emerge out of a tree line and work their way across the field in a wave. They also tend to be a bigger pest for bermudagrass than fescue or summer annuals, but in a bad year, all crops will be affected. When scouting for armyworms, sweep an area of grass back and forth a couple of times with your hand, then carefully look at the ground for curled-up armyworms. If you have a significant infestation, it will be pretty obvious they’re there.

What can be done once you see armyworms in a field?

The first step in managing an armyworm outbreak is constant scouting. Armyworms can be so devastating that even scouting once a week will often result in a loss of several fields. Once you know that armyworms have been sighted in your area, almost daily scouting is necessary to protect your crop.

The most economical solution is to cut the field for hay as quickly as possible. Once the field has been mowed, the worms will move on to a fresh source of food. This is certainly not always possible due to the number of fields infested, weather conditions, etc. That leaves us with selective spraying of insecticides. Fortunately, pesticide applications are very effective for controlling armyworms if caught in time. There are several insecticides that are effective in controlling armyworms.

Carbaryl is the most economical choice and is not a restricted-use product. Most brands have a 7-day harvest withdrawal. It is very effective on immature armyworms but will have varying success on mature worms. Carbaryl will cost $7 - $8/acre for most brands depending on the rate you are applying.

Lannate is a restricted-use product that is more expensive ($12 - $13/acre) but gives much better control for adult worms. Despite its toxicity, Lannate has a short withdrawal time (3 days hay, 7 days grazing). Please note: Lannate is very toxic! Take the necessary precautions when handling and applying this product.

Another product available to hay farmers is Tracer. Like Carbaryl, Tracer is not a restricted-use product. It costs around $11/acre to apply. Unlike Carbaryl and Lannate, Tracer is a very low-risk product for animals and beneficial insects. The grazing withdrawal only lasts until the product has dried on the grass, and it has a 3-day hay withdrawal.

Brand new on the forage market this year is Intrepid. Like Tracer, Intrepid has a low-toxicity level to humans and beneficial insects. It has no grazing withdrawal and also provides 14-day residual control. The cost for Intrepid is around $12/acre.

Recommendations for the use of agricultural chemicals are included in this newsletter as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services does not imply endorsement by North Carolina Cooperative Extension nor discrimination against similar products or services not mentioned. Individuals who use agricultural chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about usage regulations and examine a current product label before applying any chemical. For assistance, contact your county Cooperative Extension agent.
Preconditioning Calves

By: Michelle Shooter, from the article Preconditioning Programs for Beef Cattle by Jeremy Powell, DVM

Demand for preconditioned feeder calves continues to increase in the beef industry as value-based marketing and information flow expands. The goal of preconditioning programs is to add value to weaned calves. Preconditioning usually consists of weaning calves at least 45 days prior to sale, training calves to eat feed from a bunk and drink from a water trough, as well as following an appropriate vaccination program. Preconditioning should also include castrating bull calves and ensuring that horned cattle are dehorned.

If a particular preconditioned feeder calf sale is targeted, then it is important to know the program’s requirements to qualify calves for the sale. Documentation of preconditioning practices may be necessary and may include herd health products or veterinary invoices, calf-weaning records, and completed certification forms. The North Carolina Beef Quality Assurance Program includes producer certification and site source and age verification.

Calves should be weaned at least 45 days prior to sale or according to the requirements of the specific preconditioning program. A large amount of stress is associated with weaning. Techniques that minimize or lessen stress during this time may benefit calf health and growth performance. Preconditioning calves can minimize shrink and add additional sale weight.

The profitability of a preconditioning program can hinge on calf weight gains during the preconditioning period. Calves exposed to eating from a feed bunk and drinking from a water trough prior to weaning may go on feed faster after weaning. Calves should have access to clean water and adequate mineral supplement at all times. An effective nutritional program provides a desirable level of growth performance during the preconditioning period.

Castration reduces behavioral problems and prevents unwanted pregnancies. If weaned bull calves are sold, then the cow-calf producer is paying the next owner to castrate the calves through discounted bull prices. Castration becomes increasingly stressful as bulls get older. Younger bulls experience less bleeding, infection, and weight gain depression than older bulls. An ideal time to castrate bull calves is during the first 36 hours of life but should be done no later than 3 months of age.

Research shows that preconditioned calves have a reduced incidence of health problems post-weaning. Certain buyers are willing to pay premiums for preconditioned calves, because the extra cost of a preconditioned calf may be offset by reduced sickness, lower medicine costs, decreased labor requirements, improved performance, and enhanced beef product quality.

Vaccine schedules can differ, but two basic strategies are preferred. The first is to vaccinate calves 2-4 weeks prior to weaning and administer booster injections at weaning. The second schedule allows producers to give the first vaccine at weaning. Then a booster is administered 2-4 weeks following the initial injection. Vaccination requirements are usually:

1. IBR, BVD, PI3, BRSV (a 4- or 5-way viral vaccine)
2. 7-way clostridial vaccine (Blackleg)
3. Pasteurella haemolytica (recently renamed Mannheimia haemolytica)
4. Pasteurella multocida
5. Haemophilus somnus

Calves should also be treated with a deworming product. It is ideal to treat for internal and external parasites simultaneously. Many pour-on and injectable products will treat for internal parasites as well as lice, mange mites, and horn flies.

Nitrate Toxicity

By Michelle Shooter

Hay cut under stressful situations, like a drought, is more prone to high nitrate levels. This is especially true of poor wheat and corn crops not harvested but left and converted to livestock feed. Nitrate poisoning occurs when nitrates lower oxygen levels in the blood. Signs of nitrate poisoning include: rapid heartbeat, tremors, weakness, anxiety, and frequent urination. Often animals appear to be healthy one day and the next day they are dead. There are a few treatment options, but none of them are very successful. The best way to treat nitrate poisoning is to avoid it. Some local producers did lose cattle last year to nitrate poisoning. The North Carolina Department of Agriculture and Consumer Services will test any feed sample for nitrates free of charge.
Donkeys and mules are gaining in popularity in North Carolina. They are used for pleasure riding, pack animals, and guard animals. Donkeys are in the same genus as horses but are a different species. Mules are a cross between a male donkey and a female horse. Hinnies are a cross between a male horse and a female donkey. Horses have 64 chromosomes, donkeys have 62, and mules have 63. Usually, mules and hinnies are considered sterile, but there are a few documented cases of a female mule giving birth.

There are many similarities between the four, but there are several differences that need to be managed.

- Donkeys and mules are considered stoic animals. They are slower to show pain, so careful observation for subtle differences is needed to tell when an animal is sick. Donkeys are considered stubborn, which is a natural response to new experiences.
- Donkeys originated as desert animals and are adapted to warm climates. They can survive on coarser pastures than horses. Free-grazing donkeys can lead to obesity, founder (laminitis), and excess fat in the blood.
- Hoof confirmation is different. The donkey has a more upright hoof that is tougher and more elastic. The frog of the donkey hoof is not meant to be weight-bearing. A mule’s hoof can resemble either a donkey or a horse. Hoof care is required every 6 - 8 weeks.
- Most donkey and many mule withers cannot hold a saddle well; special riding equipment may be needed.
- Check with your vet for specific protocols on vaccinating and deworming your donkey or mule.
- Keep feeds with Rumensin, Bovatec, and urea away from any equine species. These products can be poisonous.

Some tips when using a donkey as a guard animal for goats, sheep, and cattle.

- Donkeys naturally hate dogs and coyotes and are not afraid of them. They will bray, bare their teeth, chase, and try to bite and kick at an intruder. Donkeys are most effective in smaller, open pastures.
- Select a medium- to large-sized donkey. Use one female or gelded male per pasture. Intact males may be aggressive and two or more animals might stay together instead of with the animals they are guarding. Raise guard donkeys away from dogs and test a new donkey’s response by challenging it with a dog in a small pasture.
- The bonding period is usually from 4 – 6 weeks. Raise donkeys from birth or weaning with livestock. Feed the donkey with the herd or flock. Watch donkeys during the birthing season, because some become aggressive and possessive of the newborn animals.

Under the direction of the N.C. General Assembly, the Agricultural Advancement Consortium has been charged with conducting a statewide economic impact analysis of North Carolina’s equine industry. This study will assess the industry’s statewide economic influence and identify opportunities for growth. This study seeks to be all-inclusive, taking in all breeds, the three large horsing sectors (showing, racing, and recreation), and all associated activities. The study will include a survey of people involved in all types of equine activities, analysis of the economic impact of the equine industry, and an action plan to maximize the industry’s contributions to the N.C. economy. For maximum benefit, we need the participation of all members of the horse community – from horse owners and stable operators to feed and equipment suppliers. The outcome of this survey is critical for us all. To ensure that your voice is heard, join in the process now. After submitting this survey, you will be entered in a drawing to win a practice saddle - the style of your choice! The 2008 N.C. Equine Survey is at the following link - http://survey.ecu.edu/perseus/se.ashx?s=0B87A6562862A907

Your response is voluntary and not required by law. Responses to this survey will not be shared with anyone outside the research team, which includes members from East Carolina University, N.C. State University, Western Carolina University, and the Sanford Holshouser Business Development Group. Please take the time to complete this survey that will establish the statistical basis for influencing policy decisions at the state level for equine industry.
Many producers wonder if artificial insemination or AI is a viable management option for their goat enterprise. AI can eliminate or reduce the cost of maintaining bucks, increase the rate of genetic improvement, increase the number of does to which a buck can be bred, and reduce the transmission of diseases and parasites. The time of breeding can be more carefully regulated, and the owner knows exactly when the doe was bred.

AI encourages good recordkeeping of dates of heat, breeding, and pedigrees. This aids in herd improvements and enables the owner to make better culling decisions. Through the use of estrous synchronization, AI allows several does to be bred the same day. AI results in satisfactory conception rates in goats only when the sperm is deposited deep into or through the cervix. This is difficult in the goat because of the small animal size and the complex anatomy of the cervical canal. Therefore, insemination into the uterus with the aid of a laparoscope has been necessary to achieve high fertility. Because of the difficulty of insemination, general management, and low value per animal, AI, particularly of goats, is not widespread. The success of an AI program depends on many factors such as whether fresh or frozen semen is used, the number of times the doe is inseminated during the heat, the time of insemination, the method and location of insemination, the amount and quality of semen, how semen is handled, and animal management.

AI can have many benefits for producers, particularly those raising show animals who have a focus on genetics. However, it is important that producers have realistic expectations from the results of AI programs. Many have expectations that are well beyond what is normally achieved. Frozen semen conception rates when placed in the vagina is only 10 percent and 65 percent with the laparoscopic procedure. AI in goats involves the usage of pessaries (known as CIDRS in cattle), hormone injection, and correct timing. Cost benefit needs to be considered.

AI involves semen being collected, usually with an electroejaculator. The sample is "extended" with products that increase the volume so that more animals can be inseminated. The extender also provides an energy source to keep it alive longer and buffers that protect it from cooling damage. Large doses of the extended fresh semen (300+ million sperm) can be simply deposited into the vagina or the uterus. The doe stands up when semen is placed into the vagina. However, the doe is positioned on her back on an insemination chair when semen is placed in the uterus.

The process of freezing and thawing semen damages many of the sperm cells, which causes reduced fertility. Frozen semen rarely produces fertility as good as fresh semen. To get best pregnancy rates, frozen semen must be deposited into the uterus. Laparoscopic AI uses a laparoscopic-surgical approach to inject the semen through punctures made in the abdomen directly into the uterus. Animals are given a sedative and undergo preparation as required for any minor surgery. Results are good, but the procedure is difficult and costs are relatively high. You may have to pay $200 for a veterinarian farm call fee and a $65 - $70 fee per doe.

**Equipment Needed to Inseminate Does with Frozen Semen**

1. Liquid nitrogen tank
2. Speculum (25 x 175 mm for young does or 25 x 200 mm for mature does)
3. AI light
4. Straw tweezers
5. Sterile lubricant (non-spermicidal)
6. Insemination gun (for straws)
7. Breeding lubricant
8. Thaw box
9. Paper towels
10. Straw cutter
11. Thermometer

These supplies can be obtained from several livestock supply companies. The liquid nitrogen tank will be the largest single expense and will cost close to $600.

Even though AI may be a viable option for some show goat or hobby farmers, many veterinarians recommend that the commercial producer stick with natural breeding using a buck with a 20 - 30 doe ratio. If you need help getting your herd ready for the breeding season, please call your local Extension Agent.