We have been through several cool mornings now, and even seen frost on the ground. There are a few reminders to consider regarding pastures and forages affected by frost. If your pasture is bermudagrass, fescue, rye or ryegrass, don’t be alarmed. However, if you have planted sorghum or sorghum/sudangrass, or if there are wild cherry trees close by, you may want to beware. Many pastures still have Johnsongrass in them from the summer, which can also pose a problem. Anytime there is a frost on these plants and some others, there is a risk for prussic acid poisoning. Also called hydrocyanic acid, after these plants are affected by frost, the wilted leaves can carry the acid and potentially poison livestock. With the drought conditions we have been faced with lately, animals might be tempted to eat these plants when they might not have otherwise.

So, what should you do? If you recently planted a fall crop of sorghum or sudangrass or both, wait about two weeks after the freeze to graze. Harvesting the grass for hay is another option, which will cause the prussic acid to dissipate and make the forage safe to feed. If wild cherry trees are the concern, it would also be best to fence them out of the pasture, or better yet, remove the tree. Johnsongrass is not often planted as a complete pasture, but more often seen in patches as a weed. If these patches are small, it generally won’t be a problem because it won’t be a large part of the animal’s diet. If there are large patches, it may be best to keep animals out of these areas too for a couple of weeks. Hungry animals will be more at risk because they will be more interested in eating anything they can find.

What are the symptoms of prussic acid poisoning? Animals will have respiratory problems, gasping for breath, stagger, could have muscle tremors, and possibly convulsions and death from respiratory failure. Their mucous membranes will be blue. Animals with symptoms can be treated by a veterinarian with sodium thiosulfate, but generally will...
When the heavy frost hits it puts a damper on warm season forages, like bermudagrass, causing them to go dormant. Therefore, it’s getting closer to hay feeding time for most cattle producers. The feeding cost of cattle increase dramatically during the winter months for any cattle operation in the southeast area of North Carolina. Below I have included some tips to make hay last during the winter for the typical cattle operation.

First and foremost, always have diverse forages planted on your farm. If your operation is a bermudagrass based pasture system, then overseed the pasture with rye or ryegrass and take away some hay feeding time. Following this, a cattle producer needs to calculate how much hay his/her cattle will consume daily. This can be accomplished by doing a little math assuming a cow will utilize 3% of her body weight in hay, taking into consideration of need and wasted hay. For example, a 1200 pound cow will eat approximately 36 pounds a day. Multiply this across 165 days (the typical feeding period for the winter months is October 15 to April 1) and you get 5940 pounds or about 3 tons! Considering the typical 4’x5’ round bale weighs about 750 pounds, one cow will need roughly 8 bales for the winter. After this number is determined, as a producer, you will be able to plan affectively for the winter season.

Knowing how much one cow will eat in a day can help with feed savings. It is recommended to feed hay in small amounts as needed. This discourages cattle from wasting it, by trampling, laying, or excreting waste on it, therefore making it less desirable to eat.

Several methods may be utilized when feeding supplemental hay in a pasture, such as hay rings, wagons, racks, or simply unrolling the hay. When feeding with hay rings, wagons or racks it limits the number of cattle that can eat at a time. This allows more dominate cows to get the best hay while leaving the poorer quality hay behind for the less dominate cows. Additionally, it is highly recommended to move rings, racks and wagons daily when feeding hay as much as your situation will allow. The lack of doing this could create a wet, muddy, feeding area that in turn would kill the bermudagrass therefore wasting good summer grasses for the next year. When unrolling hay in pastures, change the area in which you feed daily. By unrolling only the needed amount of hay, a producer can help eliminate the concentration of waste in one central area like a ring. Spreading the waste from the cattle evenly in pastures will help reduce losses in the permanent pasture due to trampling and will help fertilize the fields evenly. Another benefit of unrolling hay will mean all the cattle in the pasture will have a better chance of getting high quality hay, which
Making Hay Last Continued...

means body condition of all cattle will be more consistent and ideal throughout the winter months.

Finally, two other helpful tips will help cut feeding costs. One is getting hay analyzed to tell you the real nutritional value it is providing to the cattle. This costs only $10 and some of your time for a full analysis. Second, is to store the hay in a dry place, preferably off the ground and covered, but if you do nothing else, cover the hay until you need it. These tips will help save feed costs for the cattle operation and if further assistance is needed please contact your local Livestock Agent.

Irrigation Equipment Maintenance and Storage
By: Margaret A. Bell, Craven & Jones Counties
Compiled from Ron Sheffield’s “Maintenance and Off-Season Storage of Irrigation Equipment”

There are many advantages to properly caring for your irrigation equipment. Maintenance ensures longevity of the equipment, lowers unexpected downtime, and reduces risk of discharges of waste, which could possibly have fines and/or environmental damage. Equipment you should take good care of during the off-season include: pumps, diesel engines, sprinklers, big guns, hard hose travelers, and electric motors. Below you will find a checklist of good maintenance practices for your equipment during the off-season.

**Hard Hose Travelers:**
- Ensure pressure gauges are properly operating.
- Check the liquid level of the gauges and refill with hydraulic fluid or glycerin if needed.
- Since filters have a short life, consider using 1/4 turn ball valve.
- Lubricate your travelers. Always heed the manufacturer's recommendations.
- Inspect rings and nozzles for wear and tear. Measure rings by using calipers.
- Inspect intake lines for wear and tear and for holes.
- Store travelers under a roof and keep them clean and dry.
- Use an air “blow out” cap to blow water from hose before storing.

**Engine Drive Travelers:**
- Check engine oil level daily.

**Turbine Drive Travelers:**
- Remove drain plug before storing.
- If solids are greater than 2%, use strainer in intake line.
- Keep chains lubricated and inspect belts for wear and tear.
- Properly grease the turbine.

**Diesel Engine Pumps:**
- Make sure all gauges are properly operating.
- Follow the accurate procedures for servicing air-filtering systems.
- Before servicing turbocharger, check with your service dealer.
- Adjust gland nuts evenly – most packing seals need to drip approximately 40 – 45 drips per minute.
- Check chain connections before each irrigation.
- Check connections and seals to make sure there are no leaks. Replace worn seals.
- Insure pressure and air relief valves are debris-free. Watch for bees and spiders here.

**Pivots and Linears:**
- Insure power is turned off before performing any service checks or maintenance on your equipment.
- Drain and refill wheel oil annually or every 1,000 of operation.
- Manually check emergency-stop or auto reverse devices or switches after validating rotation speed.
- Periodically drain sand traps. Monitor traps for excess accumulation and nozzle wear and tear.
- Check couplings, flanges, and seals for leaks.
- On your splash plates and wobbler heads, look for sprinkler wear. Remove hair or other debris.

As you can see from the above list, maintenance of irrigation equipment during the off-season is very important. Ensuring you have properly followed this checklist will help you minimize problems in the future with your equipment. If you have questions about properly caring for your irrigation equipment, please contact your local Cooperative Extension Office.
A Beginner’s Guide to Goat Breeding
Submitted by: Eve H, Honeycutt, Lenoir & Greene Counties
Adapted from an article by Leslie Applegate, Wellington CO; and resources compiled by University of Maryland Extension

How Do I Tell When To Breed My Goat?
Unless you have wether goats, or keep your goats strictly for pets, your goal is to get your female goats bred on a regular basis to maximize production. This is much easier to do if you observe a few simple basic management practices. A healthy doe of breeding age should cycle on a consistent time frame, breed easily, carry kids with no problems, kid normally, and come into production with a minimum of fuss. This sounds like a large order, but is not all that difficult to accomplish with good management and healthy sound goats.

The goat is classified as seasonally polyestrous. This is a fancy way of saying that she comes in heat several times in the fall. Most goats start coming in heat when the days begin getting shorter in the fall. They will usually behave differently than normal - bleating or calling constantly, flagging or wagging the tail off and on or when you run your hand down her rump and mounting other goats. Milk production may be down and she may not eat the same as usual. If there is a buck nearby, she might plant herself at the part of the fence nearest the buck and won't want to leave. Of course there is the exception to this rule. Some does never show any signs of heat. This is called a "silent heat" and can be very frustrating. Most does with silent heats will show signs of interest when teased with the buck, but not always. If you don't have a buck, get a "buck rag". This is a rag that is rubbed on the buck until it is nice and smelly and kept in an airtight jar. The doe gets to smell it every day twice a day until she shows interest.

Sometimes, the only way to get a doe bred is to run her with the buck. Do this for a minimum of three weeks after the first breeding, just in case it didn't take and she comes back in heat. Kids are hard to catch in heat, so pen breed them. Use a gentle buck or a buck kid close to the doelings ages. A large aggressive buck could easily injure your kids. Keep accurate records – when the buck was put in with the kids, note all heat cycles that you observe. Check rear ends twice a day at least for messy tails which may indicate that they were bred. Write down all observations. It is handy to have a collar with a number tag on each doeling for easy identification on your note sheets where you may not have room to write her name out. Use large tags that can’t be easily swallowed and are brightly colored and easy to find if lost, on a collar with a weak link.

Conditioning Your Goat for Breeding Season
Goats should come into breeding season in good flesh, but not fat. Fat goats have a harder time conceiving and more problems kidding than does in good shape. A common practice is “flushing” a doe before breeding season. This means the doe is on a rising plane of nutrition coming into breeding season. Flushing helps a doe to ovulate more eggs and conceive more kids. Obviously, this is not a good idea if the doe is fat to begin with.

What About a Buck?
If you don’t own a buck, you need to make prior arrangements with the breeder who has a buck you want to use. Find out the health requirements from them. You may need to blood test your doe for CAE or have a current health certificate. This varies from breeder to breeder. Some will only give your goat a visual inspection. Most buck owners will refuse to breed an obviously sick goat to their buck. Some breeders will not allow goats with horns in with their buck.

She’s Bred... – isn’t she?
Watch your doe carefully to see if she comes back into heat after breeding. There are several ways to make sure she is bred. One is the “wait and see” method. If she kids about 5 months later, she was bred! Other methods include ultrasound and blood tests. Ultrasound is fairly accurate after 45 days. Wait until all of the does bred in that group are over 45 days, and then have the vet out to check all of them at once. Have a list of when they were bred available for the vet.

For more information about breeding or kidding management, call your local Extension office.
Animal Waste Management Opportunities

Initial Animal Waste Operators Certification Class

- **January 26th & 27th, 2012** - Initial certification training for Animal Waste Operators, Sampson County, to preregister call Lynn Stillwell at (910) 592-7161

Continuing Education Opportunities

- **Nov. 17th, 9 am - Southeast Regional Pork Conference** (6 hours) $5.00 registration fee with lunch, Lenoir County Center, Eve Honeycutt (910) 259-1235
- **Nov. 22nd, 5:30 pm - Wilson Pork Conference** (3 hours), Walter Earle (252) 237-0111
- **Dec. 6th, 8:30 am - Eastern Carolina Cattle Conference** Sampson County Agri. Expo Center $25.00 registration fee (1.5 hours), NC Cattlemen’s Association (919) 552-9111
- **Dec. 8th, 9 am - Bladen County Cooperative Extension Office** (6 hours), to preregister call Becky Spearman at (910) 862-4591

Forage Management Tips

**November**

- To improve feeding efficiency, test forages before winter feeding begins.
- As winter feeding begins, separate the herd into lactating and dry cows so the best quality pastures and hay can be fed to the cows with nursing calves.
- Do not graze fall-planted perennial pastures, such as tall fescue/ladino clover, until growth reaches 6 to 8 inches.
- Winter annual pastures that were planted early (September) may be responsive to an additional application of nitrogen (30 to 50 lbs per acre).
- Bermudagrass should have 3 to 4 inches of growth to serve as insulation against winter damage.

**December**

- Avoid overgrazing by feeding hay on pasture or restricting acres available to animals.
- Feed hay stored outside before using hay that is stored inside.

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585 copies of this public document were printed at a cost of $.02 per page.