Important Information

Please be aware of the relatively new animal waste permit condition – II.22. This is the condition that requires land application of waste to stop within four hours of the time that a tropical storm or hurricane warning is issued or a flood watch associated with the storm is issued for the county in which the facility is located.

October 2-9 - Robeson Regional Agricultural Fair Animal Shows

- Saturday, October 2: Goat Show
- Monday, October 4: Rabbit Show
- Tuesday, October 5: Adult/Youth Hog Shows
- Wednesday, October 6: Poultry Show
- Saturday, October 9: Lamb, Heifer, and Steer Shows

For more information or to register, contact the Extension Center.

October 27 - Go Green with Extension – North Carolina Cooperative Extension (Robeson County Center), Robeson County Master Gardeners, and Robeson County Cattlemen’s Association will host this workshop at the O. P. Owens Agriculture Center. Come to the Extension Center and build long-lasting cattle mineral feeders and rain barrels from recycled materials. Times will be announced closer to the date.

November 2 - Integrated Pest Management Meeting – North Carolina Cooperative Extension (Robeson County Center) and Robeson County Cattlemen’s Association will host. This meeting will be geared towards beef cattle, goats, hogs, and horses. Location and time will be announced closer to the date.

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

Sincerely,

Michelle Shooter
Michelle M. Shooter
Extension Agent
Agriculture – Livestock

MMS/dh

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.
Initial Animal Waste Certification Training

There will be a 10 hour initial training class for type A license on September 16th and 17th from 9 am - 4 pm. The class will be held at Duplin County Extension Center in Kenansville. The class will prepare you for the exam -- the next exam is scheduled for November 10th. Cost to take the exam: $25. Cost of the manual is estimated at $30. To attend the class, contact Amanda Hatcher or Wanda Hargrove at 910-296-2143.

Calibration and Sludge Surveys

All farms are required to calibrate their irrigation equipment and perform a sludge survey. General Permit Farms are required to calibrate at least once every two years and perform a sludge survey every year (unless an extension from DWQ was granted). NPDES farms must complete both every year. The sludge survey forms changed in 2008. Call your 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 from June 15th through October 31st 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 your Extension or NRCS Office.

Hay Directories

There are two web site directories for people selling or buying hay. It is free to list your hay for sale.
1. 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. You can sign up to list your hay on-line.
2. The Southeastern NC Hay Directory is available at http://onslow.ces.ncsu.edu/files/library/67HayDirectory.pdf. Call your Extension Agent to learn how to include your farm on the list.

Forage Management Tips

**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.

**OCTOBER**

- Finish using summer grasses before grazing the cool-season ones.
- Watch for prussic acid poisoning when grazing sudan and sorghum-sudans after the first frost.
- Overseed warm-season grasses with winter annuals.
The winter feeding period represents one of the greatest costs in the cow-calf business. Dr. Matt Poore with the Animal Science Department at North Carolina State University pegs the cost of feeding cows hay at upwards of $1.50 per head per day for dry cows and over $2 per head for cows in milk. This can add up to somewhere around $200 to $300 or greater to feed one cow through the winter. By stockpiling grass and then allowing the animals to graze it, you are eliminating the costs of harvesting, storing and feeding that hay. Research has indicated that stockpiling can be accomplished at only 33 to 60% of the cost of making hay on the same field. This can greatly reduce the winter feed cost. Stockpiling forage requires some planning and management, but if you are considering it for this winter, the time to act is now.

Stockpiled Fescue
To stockpile tall fescue, Dr. Poore recommends clipping or grazing down to 3-4 inches and allowing the field to rest for a few weeks, then fertilizing at the proper time for fescue to begin its flush of fall growth. September 1-15 is the right time to fertilize fescue in the Piedmont and Coastal Plain. Apply 50-75 pounds of Nitrogen per acre and allow the grass to accumulate for a couple of months. With normal rainfall it is reasonable to expect accumulation of 2500 to 4000 pounds of forage per acre.

Tall fescue maintains its quality very well when stockpiled. In Dr. Poore’s research at 15 sites across the state last year stockpiled fescue averaged 15% Crude Protein and 70% Total Digestible Nutrient at the beginning of winter and was still 14% CP and 62% TDN in March.

Stockpiled Bermudagrass
The quality of stockpiled bermudagrass is not as high as fescue, but can still reach levels sufficient for dry cows in good body condition. Research at the University of Georgia and North Carolina State University indicates nutrient values of stockpiled bermudagrass in the range of 8-12% CP and 55-60% TDN. Dennis Hancock, Forage Specialist at the University of Georgia, says that producers wanting to stockpile bermudagrass should begin 6 to 7 weeks before the average first frost by clipping or grazing the field, then applying up to up to 60 pounds of Nitrogen. First frost in the lower Piedmont to Upper Coastal Plain ranges from Oct 20 to Nov 9, so early September is high time to be acting. In a research project in Goldsboro last year, cows were not turned onto stockpiled bermudagrass until November, and Dr. Poore feels this is too late, recommending beginning to graze it in October.

Grazing Stockpiled Forage
The key to making stockpiled forage last is to limit graze. This is best accomplished with using temporary fencing to give cattle daily strips of forage, forcing them to eat a higher percentage of the grass. A network of electrified perimeter fencing can supply power to a reel of polywire or polytape supported on step-in posts to fence off temporary paddocks. The most common method is to start at the end of the field where the water is and move the fence ahead every day to three days. A back fence to keep animals off of previously grazed portions is not necessary with stockpiled forages, since the grass is not trying to re-grow. This daily fence moving may sound like a lot of work, but producers who have tried it report that it takes usually less time than putting out hay would require, plus they are not having to drive tractors through wet fields or wade through mud around hay rings. Keeping an eye on the amount of grass wasted or trampled or how hungry the animals are when moving the fence will quickly give you a good idea of how far ahead to move the fence each time.

Other Considerations
Ammonium nitrate usually gives better response than more volatile forms of N for stockpiling. It is imperative that soil pH and fertility be good on a field for stockpiling, so careful soil sampling is critical. Careful sampling of stockpiled forage is also important so you can make informed decisions regarding the need to add some supplement, especially to thin cows or cows in milk. Your Extension Agent can assist you with getting samples and interpreting the results. For additional reading on this topic, look for an article in the September issue of the Carolina Cattle Connection by Dr. Poore, or www.caes.uga.edu/commodities/fieldcrops/forages/ for articles by Dennis Hancock of stockpiling.
In the southeastern part of North Carolina cattle are sometimes hindered by the subtropical climate; the heat and humidity that surrounds them during the spring, summer, and fall months can have detrimental effects on their appetite, mobility, and general health. Cattle with dark, thick, wooly coats are at an extreme disadvantage. Cattle seeking shade under trees or hanging out in a nearby pond are not eating and increasing their body condition score.

A joint research project, involving N.C. State and Mississippi State Universities, has identified some differences in hair coat shedding among Angus cattle and compared those effects on calf weaning weights and body condition scores of cows. Cows from ages 2-13 years old had their coats scored on a 1-5 scale with 1 being a slick coat and 5 being a full winter coat from March through July. Cows in the study were considered adapted to the subtropical climate when they had lost most of their winter coats by March, April, and May. The remaining cows were considered unadapted and undesirable.

Although there didn't appear to be a difference between the body condition scores of the brood cows in the adapted and unadapted groups, the calves did differ in weaning weights. Calves from cows that were considered adapted to the subtropical climate were 24 pounds heavier than the calves from cows that were considered unadapted. This would be a good test for your farm. While scoring the cattle every month might be labor intensive and costly, this study has shown that taking one score at a time when variances can be observed among cattle, most likely the end of May in our area, could predict calf-weaning performances.

Weaning weights are a very economically important trait, one that cattle producers have increased over the last 40 years. This study has shown that there is a high genetic correlation between weaning weight and hair coat shedding and that certain cows will produce better calves in hot and humid environments. More research will be done, including research in cooler climates.

Besides the better adaptation to the climate, another possible explanation between hair coat shedding and increased weaning weights is a difference in prolactin concentrations. Prolactin is a hormone that influences milk production and hair regression regulation. So hair coat shedding could be a way to determine prolactin levels in the cow. When cows are not shedding their coats, it indicates their prolactin levels are low and the amount of milk available to the calves is low as well. A cow with a slicker coat would have higher milk availability and a heavier calf at weaning.

Research will continue on this subject, but in the mean time, try it at your farm. Do you have a cow that year in and year out keeps her coat? Does she produce a smaller calf at weaning than another cow that has a slick coat earlier in the year? Producers can select for hair coat shedding earlier in the season, resulting in higher weaning weights and making the cow herd more productive. Score your cows in late May, and cows who have little or no shedding should be considered for culling. For more information or the research abstract, contact your local livestock agent.
Horses will often experience some level of fatigue during performance. The objective of a fitness program is to condition the horse in a way that delays the onset of acute fatigue, which is when injuries are more likely to occur. In order to design an effective and safe program, several factors need to be considered such as the age of the horse, its body condition, what previous conditioning has been done, and whether the horse is recovering from an injury or illness. Very young horses and horses that are very unfit or haven’t had much prior conditioning will most likely need 3 to 6 months of targeted fitness work, or more, depending on the type of event they are training for. The fitness program should begin with long, slow distance work that targets aerobic exercises. These exercises are categorized as aerobic because the heart rate will generally stay below about 150 beats per minute (bpm). The goal is to elevate the horse’s heart rate and keep it there for several minutes, while over-time, gradually increasing the distance the horse travels. Exercises will consist of walking and trotting intervals in the beginning, with increasing trotting and slow canter work. Two to three aerobic training sessions per week, alternated with specific skill training sessions, should be done for several weeks up to several months, before beginning advanced stages of fitness development. Spending enough time in early conditioning to properly prepare the horse for higher intensity work is critical, and the amount of time it takes will depend on the starting fitness level of each individual horse.

During this time, pre-ride checks should be used to evaluate how the horse is responding to exercise. Taking a resting heart rate, observing the horse at the walk and trot, and checking specific areas for sensitivity will help you determine how to proceed with conditioning. A resting heart rate can be taken by using the fingers to palpate the facial artery under the skin in the area of the horse’s lower jaw. It is a good idea to determine what a normal resting heart rate is for your horse before beginning a new exercise program. An elevated resting heart rate is a signal that the horse is experiencing some level of discomfort due to pain, stress, or illness. Another part of the pre-ride check is observing the horse at the walk and trot to for stiffness or lameness. Check the back and loin for soreness by placing the thumb and forefinger on either side of the withers and, applying gentle pressure, move down the back, loin, and croup. Horses will express soreness by dropping down away from the pressure. It is normal for horses to exhibit loin soreness during a new conditioning program, but regular checks will help determine when a horse needs a rest and when and how to continue as the muscles get stronger. If the pre-ride check reveals that the horse is experiencing discomfort, exercise should be approached in moderation or the horse should be allowed a day-off with access to free exercise in a paddock.

Once the horse is responding positively to gradually increasing levels of aerobic exercise, the more demanding exercises can slowly introduced. Advanced fitness development introduces high-intensity, short duration work. These types of exercises will generally increase heart rate to well above 150 bpm and are considered to be anaerobic as the muscles are now working too hard or too fast to rely solely on oxygen in the process of burning fuel. During this time, horses are more at risk for energy depletion and fatigue, and thus injury. The most effective anaerobic conditioning programs are those that are specific and are increased in a gradual overload fashion, which is also called interval training. Interval training consists of multiple bouts of high-intensity work (galloping, cutting and hard-turning a cow, jumping a course, stopping and rope work) interspersed with relief intervals during which at least partial recovery of heart rate and respiration rate is allowed. This method of anaerobic conditioning allows more work to be done while bringing on fatigue gradually and in a controlled manner; however, this type of training should be done sparingly, and one to two days per week is sufficient. A high-intensity exercise is done for several minutes followed by walking until heart rate and respiratory rate return to close to baseline levels. Then the high-intensity activity is repeated, followed again by a recovery period. It will be important to monitor how quickly heart rate and respiration rate recover as well as how low the heart rate falls during a specific recovery time. If the heart rate has not returned below 100 bpm after 5 minutes of recovery, it is time to quit for the day. As the horse becomes more fit, the high-intensity exercise can gradually be done for longer periods of time, and/or the number of repetitions can be increased until the end goal is achieved. During advanced fitness development, it will also be important to continue with some long, slow distance work training days, making sure to offer one or two days of free paddock exercise per week as well.

Conditioning of performance horses is influenced by a variety of factors, and individuals will differ in their ability, behavior, and strength. Allowing ample time to achieve fitness development and closely monitoring horses during a fitness program will be critical to success.
Moxidectin (Cydectin) is not an FDA approved drug for use in goats; therefore, there are no established withdrawal times for meat and milk. The Food Animal Residue Avoidance and Depletion Program (FARAD), a national, USDA-sponsored cooperative project, with a primary mission to prevent or mitigate illegal residues of drugs, pesticides and other chemicals in foods of animal origin, makes recommendations for extra-label drug use in food animals and these recommendations serve as the withdrawal time guidelines that should be followed.

Recently, FARAD came out with a 120-130 day recommended withdrawal for meat animals following use of injectable moxidectin. However, without any data specifically demonstrating that the injectable Moxidectin provides superior control of parasites, it was decided that it was best to withdraw this previous recommendation for injectable moxidectin. Although limited research data indicates injectable administration may be the preferred route, how well it actually works depends on the amount of drug getting into the worm. It makes sense that high exposure levels could effectively control the main small ruminant worm, Haemonchus contortus, (Barber pole worm), because this particular worm feeds on blood. However, it is also possible that with oral dosing, effective levels of the dewormer may also get into the worm through direct contact in the stomach.

A study was planned this summer at the University of Georgia to compare the effectiveness of the oral and injectable routes on large goat farms in Georgia. Unfortunately, the farms that were tested did not have worms that moxidectin was effective on (all six farms tested were found to be highly resistant). Only large (>100 goats) farms were targeted for this trial because of the volume of goats needed to do the study. While the situation may be somewhat better on smaller farms, greater than half of all meat goat farms tested in Georgia from 2007-2009 had moxidectin resistance to some degree. Regardless of how you interpret the findings, moxidectin appears to be on its last legs (for meat goats) in the southeastern US.

Without clinical proof, FARAD believes it is better to stick with the oral treatment (provided moxidectin is still effective on your farm) because this treatment route has a reasonable withdrawal time of 23 days. Also, since moxidectin is available as an oral sheep drench, FARAD recommends using this product over the pour-on or injectable formulations that are given orally (due to extra-label drug use law).