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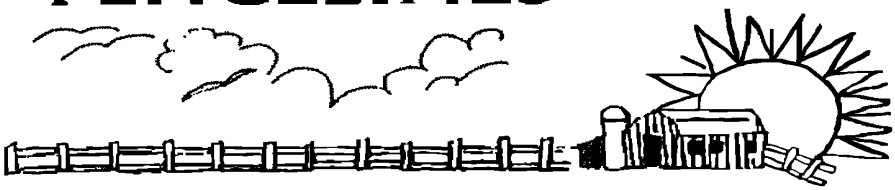
FENCELINES



January & February 2017

Inside This Issue

Important Information

Upcoming Events

- **January 24th Cape Fear Regional Cattle Conference Lumberton** call the Robeson County Office for more information (910) 671-3276.
- **February 1 -2 NC Pork Council Annual Meeting Raleigh**
- **February 1 - 3 Southern Farm Show in Raleigh**
- **February 24 - 25 NC Cattlemen's Association Meeting in Hickory**

Fencelines going Digital

Please call or email if you have an email address and would like to continue receiving Fencelines.

Soil Sample Fees

Soil samples submitted between December 1, 2016 and March 31, 2017 will cost $4 per sample.

Pesticide Information

- **January 18th,** from 9 am to 12 pm GAP Tobacco Meeting Wayne County 2 hrs X
- **February 15th**, from 9 am to 11 am Wayne Center 2 hrs X
- **February 20th** from 12 pm to 2 pm Regional Peanut Meeting at Brad & Craig West's shop 2 hrs X (lunch provided)

Please register by calling (919) 731-1527 for these pesticide classes.

2017 Commercial Poultry Grower Meetings

There are 5 meetings scheduled in NC by the NC State Extension Area Specialized Poultry Agents. The meetings are from 9:30am to 2:30 pm.

January 18: Union County Ag Center
January 26: Moore County Ag Center
February 8: Iredell County Ag Center
February 16: Nash County Ag Center
February 22: Duplin County Ag Center

Snow Dates: February 28 & March 2
Register online at https://goo.gl/forms/WRTLQGjB9mc8tJ9N2 or call (919) 545-8304. 3 hours animal waste credits available per meeting. There is no charge for the class. Lunch will be sponsored, so please register! Please RSVP by 5:00 pm the Monday before the meeting.

Regional Chicken Project for Youth

The project is an opportunity for youth in FFA and 4-H to learn more about poultry. Youth raise hens or broiler chicks and complete a project record book. In May, youth will participate in a show to demonstrate their knowledge. The laying hen sign-up has passed. The broiler deadline is February 8th. If you are interested, contact your Livestock or 4-H agent for more details.

For more information on material and events presented in this newsletter, contact your local Extension Agent at:

Stefani Garbacik at Stefani_Garbacik@ncsu.edu or (919) 731-1525

New Animal Waste Operators Class & Continuing Education Opportunities		
January 19th & 20th, 2017 10 am (10 hours) New Waste Operators Class	Bladen County Extension Office Elizabethtown Cost $35.00 for manual, $25.00 for exam fee	Call (910) 862-4591 or email becky_spearman@ncsu.edu to register by January 12th Snow date January 26th, 2017

Animal Waste Management Hot Topics for 2017

By: Eve Honeycutt, Livestock Extension Agent with N.C. Cooperative Extension in Lenior and Greene Counties

Recently, a workgroup was formed to assist Extension statewide with our educational efforts regarding animal waste management. Members of the group range from Extension Agents, NCSU Specialists, Division of Water Resources inspectors, a NC Pork Council representative, and an industry representative.

Among our varied discussion arose a list of hot topics that have been coming up regarding swine and poultry waste. Below is a list of those issues and how you can respond if any affect you.

Changing an irrigation system: If you have considered changing (or already have changed) to a different irrigation system, you must have the system approved by a professional that has been designated by the Soil and Water Conservation Commission. This is extremely important with regards to setbacks from other property lines, wells, and residences. Just because the irrigation company says the system will fit, doesn't mean it is approved for installation. Additionally, the waste utilization plan for the farm must be changed to reflect the new wettable acreage covered under the new system.

Soil test recommendations: There have been cases where growers have been to commodity meetings or other educational events and the speaker focuses on following soil test recommendations for fertilization. This can be a point of confusion if the grower has a permitted farm and a waste utilization plan. A farm with a waste utilization plan must follow soil test recommendations for all the nutrients except nitrogen. The total nitrogen allowed for that field is in the waste utilization plan. All other nutrients that are tested and reflected in the soil test analysis are very important and should be reviewed, especially if phosphorus, zinc, and copper levels are rising.

Lagoon markers: Several instances have been reported where the current lagoon marker does not match up with the lowest point on the lagoon dike. Settling of the dirt around the dike can cause changes in dike elevation. This can mean that the water level measurement can be much higher (or lower) than in reality. Many of the companies will send an engineer to the farm to re-survey the lagoon to find the lowest point and verify the marker is at the correct elevation. I personally know of a farm that the marker was 10 inches too low, which allowed the grower to raise the marker and gain an extra 10 inches of holding capacity in the lagoon. If you think your marker has settled over the years, you may want to check with your company to see if an engineer can check it for you.

Inspection preparedness: Since the number of annual inspections dropped from two to one, some growers have become lax in their recordkeeping. When it is time for the annual inspection, they are quickly overwhelmed. If you feel you need help preparing for an inspection, there are many individuals who offer free assistance.

Poultry Litter: Due to the increase in the number of poultry farms, the litter complaints called into Division of Water Resources and Division of Air Quality have risen. Litter piles that are greater than about 6 loads must be treated safely and legally, remaining uncovered for no longer than 14 days. Once litter leaves a poultry farm to be land applied or stored on another farm, the litter is no longer property of the poultry farm. The new owner of the litter is responsible for safe handling and application. Growers and users of poultry litter need to be aware of the consequences of mishandling this waste product.

If you have any questions about any of the above topics, contact your county Extension Agent or you can contact me at eve_honeycutt@ncsu.edu.

Winter Pasture and Hayfield Management

By: Taylor Chavis, Livestock Extension Agent with N.C. Cooperative Extension in Robeson County

Many pastures and hayfields are dormant during the winter months of the year, but that doesn't mean that they should be neglected. Winter makes an excellent time to assess pastures and hayfields to get a jumpstart on forage quality and the ability to survive hot, dry weather during the summer. Fertilizer and lime applications, soil compaction, weeds, and a quick note on overseeding are a few things to consider.

Winter is an excellent time to make fertilizer applications for a few key nutrients. Nitrogen and Potassium are both highly mobile in the soil and applications are best made when plants are actively growing during the spring or fall. Winter nitrogen applications are actually bad for summer plant (i.e. Bermudagrass) health as the nitrogen build-up will negate the plant from achieving full winter dormancy. Other nutrients however, like phosphorous & lime are not highly mobile and are best applied in winter months to give them time to break down and become available for the plants. Nutrients can then move into the root zone and be available in the spring when plants begin to resume growth. Winter is also a good time to apply lime because lime requires a series of reactions in the soil before soil pH is reduced. Limed soil improves the viability of the plant, less plant stress, and makes for healthier pastures or hayfields. Soil testing should be done to determine what nutrients are needed.

Winter months bring about wet weather with the potential for snow and rain. It is important to consider soil compaction. Tractors and other equipment used to make fertilizer and lime applications on saturated ground can result in soil compaction. Hoof pressure from animals in pastures can also cause soil compaction. Soil compaction can destroy roots and root growth and lead to reduced plant growth. Limiting pasture exposure and tractor and equipment movement on saturated ground will help alleviate soil compaction.

Winter weed control should also be taken into consideration. Weeds reduce forage yield by competing with the desired forage and weakening the stand of grass. Most winter weeds germinate and grow in the fall and early spring. Common winter weeds are Buttercup, Common Chickweed, Curly Dock, Henbit, Wild Garlic or Onion, White Clover, Wild Radish, Ryegrass, Wild Mustard, and Common Dandelion. Identification of the weeds growing in pastures and hayfields is the first step in controlling winter weeds. Proper timing will play a role in the control of weeds. October through December is the best time to control winter weeds, but since we have missed that time frame, now would be a good time to scout pastures or hayfields for problematic weeds. You can mark problem areas with a flag or make notes of heavy infestations and then during February through April time frame use proper herbicides to control winter weeds. Unfortunately you often will need to use heaver application rates of herbicides to control these weeds in the Spring. Winter weeds are beginning their final growth spurt and it is important that the weeds aren't allowed to seed. The important piece is not to wait too late!

It is important to mention overseeding pastures or hayfields. Overseeding occurs in the fall part of the year and allows the grazing season to be extended or waste to be pumped on. If pastures or hayfields are overseeded, it is important that it is removed in a timely manner. If winter annuals are left on too long, the perennial grass will be shaded when trying to re-emerge from winter dormancy and a significant decline in forage production will occur. Overseeded winter annual grasses should be harvested at the "boot " stage of growth.

If there are any questions regarding pasture and hayfield management, please contact your local livestock agent.

Curly Dock

Henbit

Cross-breeding for Profit

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

As I visit with Beef Cattle Farmers around the area, one management tool that I see a lot of commercial cow-calf farms fail to use is cross-breeding. Crossing two or more beef cattle breeds results in calves that have a genetic "boost" in a lot of performance areas over their purebred parents. This occurrence is known as Hybrid Vigor, or Heterosis. All breeds of cattle have some traits that are good, and some traits that are not so good. Purebred cattle (cattle that are genetically from a single breed- regardless if they have registration papers or not) are cattle that have been selected for countless generations for certain physical and genetic characteristics. That is why people tend to prefer a purebred bull from breed so and so. You have a pretty good idea of what the calves out of a bull from a certain breed will perform like. A calve sired from a purebred black angus bull will be black. A calf from a purebred Simmental bull will probably receive some pretty good milk production genes, etc. Purebred cattle breeds are the backbone of the cattle industry. But for the commercial cow-calf guy who makes his living running cattle on grass and selling feeder calves by the pound, purebred calves are rarely the best route to take. Crossbred calves (offspring born to parents of two different breeds) will normally combine the good aspects of their parent's genetics and leave a lot of the bad genes behind. This Hybrid Vigor advantage has been researched and documented for over 50 years.

What areas do cross-bred cattle offer advantages to? For starters, certain physical traits are very easily passed from one generation to the next. Examples of highly heritable traits that calves will get from their parents are growth rate, mothering ability, frame size and disposition. These are areas where you can accurately predict if a bull or a cow's calves will get when they are born. Purebred cattle breeders can accurately select and improve on these traits.
Traits that are not so easily passed from one generation to the next are referred to a poorly heritable. Three of the more notable traits in this category are reproductive ability, long term durability and general health. These traits are not usually improved on in the purebred breeding. In crossbred animals however, these traits are normally significantly increased thanks to Hybrid Vigor or Heterosis.

The genetic phenomenon that Heterosis provides to us in the cattle business is that most of the highly heritable traits we discussed will be passed down to the next generation, purebred or cross-bred. The poorly heritable traits however, which rarely will be passed down to an animals purebred offspring, will be significantly improved upon if that calf is a crossbred. In other words, if you cross a purebred angus cow to a purebred Gelbvieh bull, the ensuing calf will probably be more fertile, healthier and stay in the herd longer than if the calf had been born to two parents of the same breed. To what degree this advantage will be is impossible to predict, but it will be there. This is why in the commercial cattle industry, a cross-bred cow is generally more highly regarded than a purebred cow.

Cross-breeding systems
A plan for how to incorporate 2 or more breeds into your herd can be as simple or as complicated as you want it to be. Whatever route you choose to pursue, you need to have a long-term plan in mind. What you do not want to do is bring in so many breeds that your cows and calves get so crossed up that there is no clear direction on what bulls or breeds to go to next. Not only is there a point of diminishing returns on hybrid vigor, but your cows will be so mongrelized it will be all but impossible to produce a calf crop with any uniformity to it.

Getting started
Developing a cross-breeding system can be as simple as switching the breed of the bull you buy this year. If your cows are one breed, or a very high percentage one breed, than the ensuing calves (referred to as an F1 cross in breeding terms) will be 50/50 of each breed when you cross them to a bull of a different breed. A lot of farms will be happy with this one cross and will not look to incorporate any additional breeds into their herds.

Probably the most commonly used system in the US however is to then take that crossed heifer (50/50 of each parent breed) and breed her to a 3rd breed. The ensuing calf will have about the most hybrid vigor you can get from cross-breeding. Here is where a little planning must take place on your part.

1.) Make the 3rd cross to a breed where the ensuing heifer calves can be retained back into the herd for replacement females. Bulls and breeds can be rotated in and out of the herd every two to three years to keep this three breed cross going in the following generations. The advantage to this system is that you will have both cross-bred steers to market and cross-bred heifers to breed back. The problem is that you are limited to breeds that you feel will make good cows, not necessarily good feeder calves.
2.) Or, make the 3rd cross a terminal cross where all calves are sold and no heifers are retained. This system allows for maximum growth potential in your calves through your terminal herd bull selection. The drawback however is that you will need an outside source of replacement females to keep your cow numbers from eroding as no heifers are being retained.

There are currently 6-8 beef breeds in the country that are relatively easy to find bulls to use from. If you factor in the more obscure breeds, this number doubles. All of these breeds will have some advantages and some disadvantages to them. Do your research and speak to breeders and fellow cattlemen before you make a switch on your farm.

What to Expect When Your Mare is Expecting

By: Liz Lahti, Livestock Extension Agent with N.C. Cooperative Extension in Cumberland and Hoke Counties

As the new year begins, it signals the time is coming for mares to have their foals. Her body and behavior will start to change telling you the time is coming for her to foal. We will discuss the signs that your mare will display when she is getting ready to foal and the stages your mare will go through during foaling, along with the foal 1-2-3 rule.

Mares will generally foal after being pregnant for 11 months, but this time frame is highly variable. Studies have shown that the average pregnancy, or gestation, is 341 days, with a range of 315 to 387 days. This means that even if you know the approximate date your mare got pregnant, it is quite hard to predict when she will actually foal. Watching for physical signs as the date she should foal gets closer will help give a heads-up that the foal is coming soon. Most mares will display udder development beginning two to six weeks before foaling. Milk let down can usually be seen four to six days prior to foaling. As the udder begins to swell with milk some oozing of colostrum may occur, causing the ends of the teats to become covered over and the mare is said to be waxing. Waxing usually occurs one to two days before foaling. Another physical change to look for is the relaxation of the pelvic muscles seven to 14 days before foaling. A few days before foaling the vulva will also become relaxed and swollen. There are several commercial test kits available to help estimate foaling times by testing the milk for increased concentrations of calcium, which normally happens just prior to foaling. These kits can help estimate the time of foaling within 12 to 24 hours. The kits have been most useful in determining when a mare will not foal. If there is not a rise in calcium concentration from one day to the next, the mare will not likely foal within the next 24 hours and would not need to be watched as closely.

Once the mare actually enters into labor, also called parturition, she will go through three different stages. Most mares will foal at night and prefer privacy. The first stage of parturition is labor. During this stage the mare gets restless and will likely not eat or drink. Most mares will pace or walk in circles and look back at their belly and some will lie down and stand up repeatedly. This first stage of foaling is the longest, lasting 30 minutes to six hours. When the mare's water breaks or she starts expelling fluid, the first stage of parturition is over and the second stage has started.

The second stage of parturition is the expulsion of the fetus, or actual birth, and should take no longer than 30 minutes. If it is the mare's first time giving birth, this stage could last up to an hour. It is important to observe the mare closely during this stage without interference, unless absolutely necessary because some mares will delay parturition if disturbed. The mare will experience heavy abdominal contractions and will usually lie on her side. If a mare has had foals before and is in labor for more than 30 to 45 minutes, assistance may be needed. After the foal is born the mare usually rests, allowing the foal to receive several pints of blood from the umbilical cord. This is an important time to have patience and allow the mare to remain lying for as long as possible to prevent early umbilical cord rupture. This stage ends when the umbilical cord is broken.

Stage three of parturition is the passage of the afterbirth or placenta. The placenta should be expelled within three to four hours after the foal is delivered. Once the placenta has been expelled it should be checked to determine if it is intact or if any portions were left in the mare. Retention of any part of the placenta can lead to uterine infections and/or laminitis. The placenta should not be pulled from the mare. The foal nursing will help stimulate uterine contractions, aiding with placental expulsion.

Once the mare has gone through the three stages of parturition, now the foal should also go through three stages, the foal 1-2-3 rule. The first three hours of the foal's life are critical to its success and linked to the health and well being of the foal and mare. Ideally, the foal should stand within one hour, nurse within two hours, and the mare should expel the placenta within three hours of foaling. Things may not happen exactly on time, but they should happen within reason. Knowing the signs to look for and the time frames they should happen in will hopefully help you during foaling season. If you are ever in doubt, however, call your veterinarian.

Housing and Facilities for Meat Goats

By: JM Luginbuhl, Retired NCSU Extension Specialist (Goats & Forage Systems) Crop and Soil Sciences

Shelter: Meat goats require minimum shelter in comparison to dairy goats. Goats will seek shelter from rain, preventing them from foraging. During warmer weather, rain may only cause mild discomfort, but in colder temperatures, goats in general should not remain cold and wet for long periods.

The goat ability to withstand adverse weather conditions is strongly related to body condition. Goats in good condition, that is goats that have a fat layer under the skin, can withstand rain and cold weather without much problem if they have access to good quality forage. For example, at the NC State goat farm, replacement does on a small grain grazing experiment have had no shelter since early March without any health problems. However, these animals were in very good body condition and had access to ample amounts of high quality forage. Young goats, on the other hand, are particularly vulnerable to respiratory infection and to hypothermia if they do not have access to shelter during rainy and cold weather. And it is not uncommon for a combination of cold wind and rain and the occasional snow and sleet to cause losses of young animals. Thus, the necessity for sheltering meat goats probably relates to the expected weather pattern in the area, the nutritional level and body condition of the herd, the physiological stage of the animals (newborn kids, dry does or does in early pregnancy, does in late pregnancy or lactating does) and the class of animals.

A sturdy shed, dry and open to the south side, can usually provide adequate protection. Rear eave heights of 4 to 6 feet and front eave heights of 6 to 8 feet are adequate. Eight to 10 square feet per goat is desirable for open housing. Other references suggest 5 ½ square feet per goat. Goats also like to be in or near a shed during the night hours. If the facility is part of the farmstead, so much the better because nearness to human activity plays a role in predator control. For feeding hay, grain or concentrate, 16 linear inches of feeder space is sufficient per doe, or 8 to 12 linear inches of feeder space if hay is self fed. For young stock, recommendations are 12 linear inches of feeder space per animal, or 2 to 4 linear inches if hay or grain is self-fed. Troughs need to be easy to clean, should prevent goats from urinating or defecating on the feed, and be accessible from both sides.

Besides housing goats in a well-ventilated shed or barn, it is also important to regularly remove bedding soiled by manure and urine to minimize the formation of excessive amounts of ammonia. Ammonia can cause respiratory infections and pneumonia. As the concentration of ammonia is higher closer to the ground because of its density, young animals are especially affected by high concentrations of ammonia in a poorly ventilated barn or shed.

In the tropics or wetter climates, the type of goat shelter commonly found is one with an elevated, slatted floor. This design protects goats from rain, allows air movement and reduces accumulation of urine and feces, which in turn, favors sanitation.

Kidding Facilities: Kidding during cold months may require shelter for the does and kids to guarantee kid survival. Temporary kidding pens 4 feet x 5 feet have been used by goat producers with much success. The kidding pens should be located in an area free of cold wind. Does are placed in these jugs during kidding and for 3 to 5 days after kidding. This practice increases the bonding between the doe and the newborn, especially for the first-kidding does. In addition, it allows the producer to provide assistance if there are kidding complications. It also allows the producer to ensure that weak newborn kids get a sufficient amount of colostrum during the first 12 to 24 hours of life. After the kidding season, these pens can be taken apart and stored.

Working Facilities: A working facility will help operations like ear-tagging, vaccinations, medication (anthelmintics, etc.), counting, sorting, hoof trimming, etc.

A small pen with some means of herding the goats into it is usually sufficient for small operations. The pen should be sturdy, preferably solid-sided, and at least 5 to 6 feet tall. As goat numbers increase, the need for more elaborate working facilities arises. A basic working facility to handle larger numbers of goats is composed of a catch or crowding pen, a working chute, a “squeeze chute” or headgate, and a sorting (or cutting) arrangement of alleys, gates and pens to separate the goats. The crowding pen should be half as long as the working chute and up to 12 feet wide at the open end. The working chute should be about 10 feet long, 5 to 6 feet high, and 12 to 15 inches wide. Longer chutes tend to cause crowding and trampling at the forward end, and should be divided into sections with sliding gates. An adjustable chute will be advantageous to handle from small goats and kids to large bucks. Also, a series of canvas flaps suspended about halfway down into the chute keeps the goats’ heads down and eliminates riding. The sides of the chute should be smooth and solid. Ideally, for horned goats the chute should be tapered, with the top nearly twice the width of the bottom.

Goats should be handled quietly during working operations. Excess noise creates agitation, and may well cause goats to go over, under, or through whatever stands in the way, including the goats’ owner. Women generally are better than men in handling goats, and will perform the jobs at hand in a manner that creates less stress. Goats do not flow as smoothly as cattle, tending to rush toward an actual or expected opening. Goats readily drop to the ground under crowding pressure and are at greater risk from trampling and smothering.

New Year, New Club

By: Jamie Warner, Livestock Extension Agent with N.C. Cooperative Extension in Montgomery County

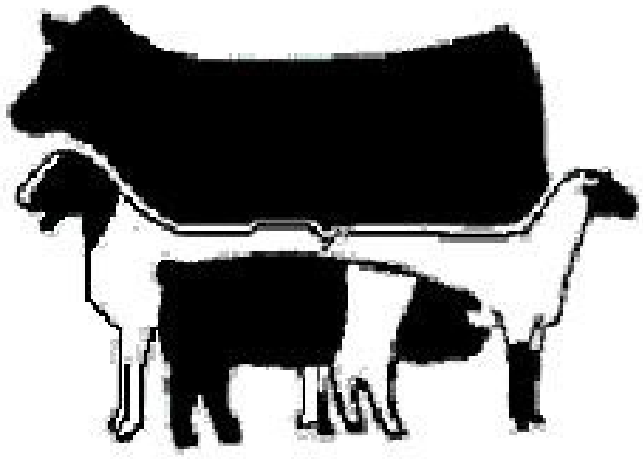
It has been shown that young people who show livestock increase many skills such as leadership and career development. They are exposed to opportunities that encourage higher education, they become animal agriculture's biggest advocates and often become hard working individuals committed to making a difference in their communities. With the start of a New Year, you may be interested in starting a new 4-H Livestock Club. If so, here are a few things to think about that will hopefully help you get started. With over 7 million participants in the United States, 4-H did not get as big as it is without a lot of help. Each state 4-H program is supported and run by a Land Grant University. In North Carolina, it is supported by both NC State and NC A&T State Universities, along with the Cooperative Extension Offices in all 100 counties and the Cherokee Reservation. No matter where you live, the first place to start would be your local Extension Office. Make an appointment with your 4-H Agent and ask if there has been any other interest in such a club. Your agent will be able to tell you if there has been and should be able to suggest other youth that might be interested.

After you have made a list of at least 5 possible members, work with your agent to set the date of an "Interest Meeting". This meeting should be marketed a minimum of one full month before the date. Use the local newspaper, fliers, word-of-mouth, Facebook and other social media to market your public interest meeting. The night of the meeting, the 4-H agent should briefly discuss what the organization is and what is expected of clubs in your county. Interested young people and parents should take this time to discuss things such as when and how often the club wants to meet, where the meetings should take place and educational topics/speakers that would be interesting to the group. Go ahead and identify another adult that can serve as "co-leader", as this will help prevent volunteer burnout further down the road. This is also a good time to set the date for your first club meeting. Don't forget to have everyone sign in and provide their contact information so that they can be contacted and reminded about the first meeting.

At the club's first meeting, begin with introductions then take 30-45 minutes to conduct some business: discuss and choose a name for the club, plan your calendar for the year by identifying topics that the group is interested in and assigning them to a month and talk about who might be interested in running for an office. It is often suggested to wait 2-3 meetings before actually voting on officers to account for all the people that might come after the initial club meeting. For parents, the first meeting is a great time to fill out the enrollment forms that will be due each fall and contain emergency contact information, insurance coverage and other important information for each child.

After the initial meeting, a club's agenda should contain 15-30 minutes of business, 30-60 minutes of educational material and 15-30 minutes of fun. Be sure to keep your 4-H and Agriculture agents up-to-date on what is going on and ask them for help if needed. Plan to meet a minimum of 10 times a year, even though most clubs meet more frequently for special events, tours, shows and fairs.

Starting a new club, although hard work, is a rewarding experience and can be fun so contact your local county agent for more information. County agents are listed on county extension websites and can be accessed by putting your county name followed by .ces.ncsu.edu. For example, Montgomery County agents are listed at montgomery.ces.ncsu.edu. Once there, click the "Meet Our Staff" link to find agents by specialty. Extension is there to support you in this venture so go ahead, make that call and get ready "To Make the Best, Better" in your community.



Are My Animals Getting the Nutrients They Need?

By: Zack Taylor, Agriculture Extension Agent with N.C. Cooperative Extension in Lee County

We are often reminded this time of the year as temperatures drop how important it is to provide a warm shelter for our pets. That may be easy to do with a dog or cat, but what about livestock? Have you ever wondered how livestock survives these cold harsh winter days and nights? The answer is a quality supply of food. Food provides energy, and energy is required to produce body heat. Therefore, all animals, including chickens, horses, goats, cows, ducks, alpacas, and more, rely on food to meet their energy requirements. The tricky part is that energy requirements vary greatly by species, and even within species depending on the animal's stage of development. Let's take a look at some things to consider by using beef cattle as an example, although these same principles could be applied to other livestock species.

It has been estimated that nutrition related cost make up 60% of the total variable cost associated with raising a weaned calf. Of those cost, 50% are incurred during the winter. Because of this, one of the best ways to maintain your bottom line is through increasing feed efficiency. You've likely read in our newsletter before that the most cost efficient way to feed your herd is through forage, but despite our best efforts, it may still be necessary to provide supplemental feed at some point during the winter.

As I mentioned, there is a great deal of variability in the nutritional needs of cattle depending on their stage of development. For example, a weanling heifer will require different amounts of protein and total digestible nutrients (TDN) than a mature cow or a pregnant heifer would. Therefore, it may make sense to break your herd up into different management groups during the winter, so that you can better meet the nutritional needs of each group. In general, you can break your herd up into the following groups based on nutritional requirements: dry mature cows, cows nursing calves, weanling replacement heifers, pregnant replacement heifers, background steers and heifers, and herd bulls. You may have the need for an additional group if you have cows that need to gain body condition. You may not have all of these groups on your farm, but you likely have at least 2-3 of these groups at any given time.

When choosing the right feed for your herd, there are a lot of options, but before making a decision you must determine the needs of your animal. Publications are available online from NCSU or at your local extension office which can help you determine the nutritional needs of each group. If you are using online resources to determine nutritional needs of your herd, make sure they are from a trusted source, preferably NC State or another university. If you are not meeting the basic needs of your animals, then as a producer, how can you expect your animals to produce for you and contribute positively to your bottom line?

The first step in determining the animal's needs is to start with your forage, whether that is a standing crop, a stored material, or both. That is your baseline, and until you know what the nutritive potential is there, you cannot make a decision on what supplement to use, or if you even need to supplement at all. A forage test can be analyzed by NCDA for a $10 fee. If you have never taken a forage test before, contact your extension agent for assistance. Once your forage analysis has been determined, you can then see where additional feed supplementation is needed. If using a commercial feed, guaranteed analysis will be printed on the bag to help you determine what is needed to meet your needs. If you are using a non-commercial source, such as corn, soy hulls, or cotton seed, you can have these feeds analyzed by NCDA as well to determine their nutritional contents. If these materials have been sourced from different farms, samples should be analyzed separately, as analysis will vary depending on factors such as the production soils, growing season, or other variables. Don't assume all corn, soy, or cottonseed is the same. Again, if you need assistance sampling, need additional sampling bags or forms, or need assistance reading your reports, please contact your local extension agent.

Once you have determined your animal's nutritional requirements, and the nutrient values of the food source you plan to feed them, then you are all set for ensuring that your animals will stay warm throughout these cold months of the year. Remember, animals require a steady diet of high quality food to produce energy so that they may stay warm, maintain body composition, and continue growing to produce for you throughout the winter. If you need assistance determining the needs of your animals, please contact your local extension agent and they will be happy to assist you.

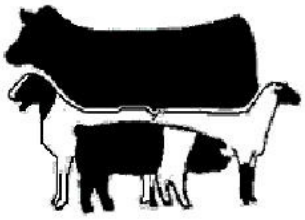
Jr. Livestock Show & Sale Information
April 19th & 20th, 2017

Youth between the ages of 5 to 18 who live in Wayne County and/or participate in Wayne County 4-H or FFA are eligible to participate in this annual event, showing meat goats, heifer calves, beef calves or market hogs. Exhibitors will attend a series of workshops to learn skills beneficial for success with their project. Participants learn many valuable life skills, make new friends and have fun.

Want more information? Check out the Wayne County Cooperative Extension Web page **https://wayne.ces.ncsu.edu**/ then click on **Animal Agriculture**, scroll to the bottom of the page to **Jr. Livestock Show & Sale,** then click on **Wayne County Jr. Livestock Show & Sale**. Here you will find all the information you need to register your youth for the Show and Sale

- Letter to Participants
- Entry form due **January 25th,**
- **Must have animal by February 3rd,**
- Rules
- Workshop opportunities
- Monthly Calendar

Questions? Feel free to contact our office at (919) 731-1525 or by email Stefani.garbacik@waynegov.com Or summer.young@waynegov.com



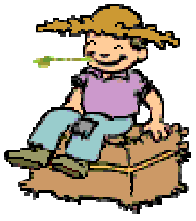
Forage Management Tips

January

- If winter pasture is limited, feed hay in the pasture or allow cows to graze every other day. The priority for limiting pasture is (1) calves by creep grazing, (2) stockers, (3) nursing cows, and (4) dry cows.
- Keep animals off newly planted winter annuals during wet periods to prevent damage. Allow calves first priority to graze.
- Sample hay bales which are stored outside that will be fed during the next four to eight weeks.
- Decide which fields will be re-seeded or overseeded during late winter and early spring; obtain soil test and supplies for planting.
- Lime may be applied during this off season.
- Keep a record of winter weed problems so that control measures can be taken next fall. This is the latest month that some herbicides may be used on legumes.
- Determine animal feed requirements for the year (about 6 tons of hay equivalent/cow-calf pair) and outline a 12 month forage production and use plan to meet the needs.

February

- Apply nitrogen to cool-season grasses to stimulate early spring growth.
- Overseed legumes, such as ladino clover, into well-grazed (2 inches or less) grass pastures.
- Lime fields for spring plantings.
- Divide pastures to improve the quality and persistence of pasture plants.
- Locate sources of hybrid bermudagrass sprigs for planting.
- Burn warm-season grass residues in late February.
- Get herbicide sprayers ready to control weeds in dormant bermudagrass fields.



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