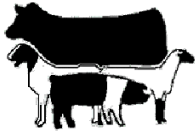


Wayne County Center



## Livestock News

January &  
February 2019

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Stefani Sykes  
Livestock & Forages

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NC State Extension works in tandem with N.C. A&T State University, as well as federal, state and local governments, to form a strategic partnership known as N.C. Cooperative Extension.

### Wayne County Cattlemen's Association

The Wayne County Cattlemen's Association will hold their annual meeting on Monday, January 21st at 6:30 pm at the extension office. Please RSVP at (919) 731-1520 for meal planning purposes. Our February meeting will be held on Monday, February 18th and we will cover spring planting options. Animal waste and pesticide credits will be offered.

### Cape Fear Regional Cattle Conference

The tenth annual conference is Tuesday, February 5th at the Southeastern N.C. Agricultural Events Center in Lumberton. The conference starts at 4:30 pm and costs \$5 - pay at the door. Topics and speakers include Bermudagrass Management by Dr. Dennis Hancock, Extension Specialist in Forage Crops, University of Georgia and Bermudagrass Variety Trial and Selection by Dr. Miguel Castillo, Assistant Professor, North Carolina State University and Becky Spearman, Bladen County Cooperative Extension. The program includes a meal and vendors. Call 910-875-3461 by January 31st to register.

### Piedmont Regional Beef Conference

The 7th Annual Piedmont Regional Beef Conference will be held on Thursday, March 7, 2019 at the North Carolina Cooperative Extension, Guilford County Center in Greensboro, NC. This year's conference will feature cattle handling expert, Dr. Ron Gill from Texas A&M AgriLife Extension and Dr. Deidre Harmon from NCSU Extension. Early registration is \$15 or registration at the door is \$20. Register Online or by Mail by 2/25 at <http://go.ncsu.edu/prbc2019>. Facebook Event Page: <https://www.facebook.com/events/211023683146155/>. Read more at: <https://alamance.ces.ncsu.edu/2018/12/2019-piedmont-regional-beef-conference/>.

### Upcoming Events:

- Pesticide Trainings: January 9th and 16th, call (919) 731-1520 to RSVP. X and V credits offered.
  - Tobacco GAP: January 29th, call (919) 731-1520 to RSVP.
- February 8th: Deadline to sign up for Jr Livestock Show and Sale. Call Stefani for more information.

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

Disclaimer - The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by North Carolina State University nor discrimination against similar products or services not mentioned.

## Animal Waste Management

### Initial 10-hour Animal Waste Operator Classes (OIC)

- **January 17 and 18th** at the Bladen County Extension Office from 10am to 4 pm for type A & B. Cost is \$35 for class and manual or \$5 for just the class. Call Bladen County office at 910-862-4591, email becky\_spearman@ncsu.edu, or go to <http://go.ncsu.edu/bladen10hour> to register by January 10th. Snow date is Jan 24th. \*Exam date is March 14th.\*
- **April 30th and May 1st** at the Wayne County Extension Office from 10 am to 4 pm. Call Stefani Sykes at (919) 731-1520 for more information. \*Exam date is June 13\*

### 6-hour Continuing Education Animal Waste Operator Classes

- **January 25th** at the Montgomery County Extension Office at 9 am at 203 W Main St., Troy, NC.

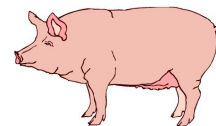
## Proposed Swine General Permit Changes

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

As many of you have heard, the swine general permit is up for renewal. Due to many issues in 2018, the permit renewal process was changed. The biggest issue was the Department of Environmental Quality was involved in a lawsuit with Environmental Justice. Their settlement agreement dictated some changes to the process, and also involved allowing Environmental Justice to have input into the draft of the permit.

Some of the proposed changes are minor, and some are much more involved. On November 27, there was a technical review session as well as a public input session. There was a lot of useful information exchanged, however the final draft of the permit is not available yet. Below are the significant proposed changes as they are currently written. Please note I have paraphrased the wording.

- Calibration every year (instead of every other year)
- Install devices to automatically cut off irrigation system if it starts raining
- Disc in sludge after 24 hours (instead of 48)
- Keep records for 5 years (instead of 3)
- Fields with a Phosphorous Index of 400 or more must run PLAT to evaluate future phosphorous applications (all waste application)
- Any change to a waste plan must be sent to Raleigh
- Hay cut from the farm must be fed within the season. Extra hay must be removed from the farm after 2 years.
- Weekly stocking records (instead of monthly)
- Waste level gauge must be re-surveyed every 5 years
- Annual Certification Report
- Groundwater monitoring provisions
- Compliance with 15A NCAC 02D.1806- Control and Prohibition of Odorous Emissions
- Automated lagoon level detection devices installed with freeboard violations in two consecutive years



The important note for you to remember, is that this permit affects you and your farm. You need to make sure you attend public meetings that will be held, so that you can learn about the changes. Meeting dates and times will be announced as they are known.

You will receive information about your permit renewal sometime around the month of March. You must follow all instructions and submit your application by the deadline. Your Extension Agent will be available to answer questions as needed.

## Hay Directory

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

## Winter Weeds and Soil Compaction

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

With the tremendous amount of rain that we have had the last couple of weeks, some soybeans haven't been harvested, many winter annual forages were not able to be planted or if planted were killed after Hurricane Florence, farm equipment has been stuck in the field, not to mention all the MUD and the condition of crop fields, pastures, and hayfields! As we look ahead into 2019, there is never a better time to start making preparation for our warm season grasses that will break dormancy in the Spring of the year, particularly Bermudagrass.

Bermudagrass is one of the most commonly grown grasses and, by this time of year, has turned a light brown color. It is in a period of dormancy during the winter months and does not actively grow. With all the excessive amount of water, farmers may see weeds they haven't seen before. Water flowing across fields will bring weed seed, expose seed from the soil bank, and also remove potassium making weeds more competitive.

Weeds are any grass or broadleaf plant that grows in unwanted areas. They can cause unwanted competition for the desired forage, have a negative effect on animal performance, and some can be poisonous to livestock species.

Some of the most common winter weeds are Buttercup, Common Chickweed, Curly Dock, Henbit, Wild Garlic or Onion, Wild Radish, Wild Mustard, and Common Dandelion. Proper weed identification is the first step in controlling winter weeds. It is important that we identify weeds early for several reasons:

1. Gain control of the weeds before the desired forage becomes thinned out.
2. Younger plants require less herbicide application; in turn saving money.
3. Some herbicides won't kill the mature weed and the seed.

There are a number of herbicides that can be used to control winter weeds, but you should ALWAYS read the label and follow the directions, taking special notice for grazing and haying restrictions for livestock. Selecting the correct herbicide for the weed is important, because not all herbicides perform the same. An Agricultural Chemicals Manual is a useful tool in choosing the best herbicide.

The best time to apply herbicides to control winter weeds is October through December and February through April. October through December, winter weeds are usually young and actively growing. February through April, winter weeds are beginning their final growth spurt. It is important that the weeds aren't allowed to seed. December through February is normally not the best time to control weeds, but treatment can be applied to dormant Bermuda. Hog waste should not be pumped on dormant Bermudagrass, because nitrogen will not be utilized and there is potential for runoff in ditches and streams. Hog waste can be applied to cover crops, such as cereal grains and winter grasses that are actively growing.

It is also 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.

Remember, even though Bermudagrass is dormant and not actively growing, allowing winter weeds to accumulate will result in a poor stand of Bermudagrass. It is important that we remove winter weeds in a timely fashion to keep hayfields and pastures healthy.



## Artificial Insemination for Small Cattle Farms

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

In my career as an Extension agent, I have been asked many times what is the best way to improve a cattle herd? There are many ways you can answer this. Improve your reproductive efficiency, better herd health programs, better nutrition, etc.. But the biggest way most herds in our area can improve on is the genetics in their cows? Cattle that are born with the ability to grow faster, have better bone structure, and produce more milk will always be more productive and profitable cows than those that are born without these inherited abilities. Achieving this goal is pretty simple. Use a better bull and keep his daughters.

Bull genetics are attained through two means; Purchasing a live bull (usually through an auction) or purchase semen from a bull and use him in an Artificial Insemination (AI) program. Purchasing a bull is obviously easier. You open the gate at the start of breeding season and let Mother Nature take over for the next 60-75 days. The obvious problem with buying a truly elite bull to advance your cow genetics from one year to the next is price. Buying a really good bull costs a lot of money. It's not uncommon for top end bulls to bring \$5000-\$7500 (at least) at bull sales. For most cattle herds in NC with 20-30 cows it is really difficult to spend that extra \$3000-\$5000 dollars for an elite bull versus an "average" bull which you can get for \$2000-\$2500. That brings us to the other option, Artificial Insemination.

Artificial Insemination of cattle has been used for over 50 years. While used extensively in the purebred industry, it has always had a somewhat limited role in commercial beef cattle. It is labor intensive and takes a skilled technician to perform. Even with estrus synchronization, it was still lots of work for the average commercial cow/calf farm to undertake. Advancements in estrus synchronization technology in the last few years however, have seen a resurgence in A.I. use in commercial beef farms.

Older synchronization programs (2-shot Lutalyse, Synchro-mate B, MGA feed additives) would do a fair job of getting cattle to cycle together within 48-72 hours. This still required near constant heat checking for 3 days and an A.I. technician to be on your farm 5-6 times during that time to get these cattle inseminated. This was obviously a lot of labor and expense and most small beef farms never embraced this technology.

Things changed several years ago with the approval of the CIDR implants in the US. CIDR's are vaginal progesterone implants that have led to huge improvements in estrus manipulation. There are numerous synchronization programs utilizing CIDR implants, with a majority of them allowing you to get 75%-90% of your cows or heifers in standing estrus within a few hours of each other. What this accomplishes is that no longer do you need to spend hours and hours of heat checking. Nor do you need to have a AI tech on call for days on end. These systems allow you to get by with almost no heat checking and a majority of your cows can be bred at one time, one after the other.

There are some drawbacks to these time breed systems, however. For one, they do require the cattle to be worked multiple times. Most systems will require a minimum of two trips

through the head gate to get the necessary hormones in them prior to insemination. The other drawback is cost. By the time you purchase the hormones, semen, and pay the technician fee you will have \$50-\$75 per cow invested plus your time and labor.

How many cows can I expect to conceive on these programs? There are a few variables that will affect your breeding rates. The genetic make-up of your cows, their body condition scores, and the skill level of the AI technician all play pretty big roles in your cows catching on a single AI. That being said, most cows will breed at around 50%-60% with virgin heifers being 60%-70%. Most farmers with experience in AI will tell you that the time breed programs will result in a slightly lower breeding % on a single time-bred service versus the traditional heat check and breed over 2-3 days. But when you factor in the time and labor of heat checking and catching cows up 5-6 times versus one time and getting all your cows bred in one morning it's a pretty good trade.

Do you still need a bull? The short answer is yes. A 60% conception rate means that 40% of your cows will still be open afterwards. But, what it does allow you to do is not break the bank at a bull sale because most of your replacement heifers can come from your AI sired calves. Most bull semen, even from exceptional bulls, will sale for \$20-\$30 per straw, and you only have to buy 5 straws at the time.

Good handling facilities are necessary. One thing you cannot get by without is a decent set of working pens and a chute. Getting your cows through quickly and without a lot of stress is critical in making a timed AI program work.

If you're trying to decide if incorporating a timed AI breed onto your farm will work for you, ask yourself these questions;

### Do I have adequate working facilities?

Are my cows calving close enough together that they will have a reasonably good chance of cycling post hormone injection (rule of thumb is a *minimum* 60-75 days post calving)

### Do I have time to get my cows through the chute 3 times in a 10 day window?

If you answered yes to the questions above, then you can make an AI program work for you, and you do not have to take a course on AI to make it happen. A lot of cattle veterinarians, genetic company representatives, or other cattle farmers do custom AI work for hire. The great thing about timed AI programs is they only have to come to your farm one time, and it's a time that both of you have agreed on and scheduled weeks in advance.

While AI programs are not for everyone, they do offer a quick and affordable option in advancing your genetics if you're willing to do the work.



## Winter Management for Horses

*By: Ashley Robbins, Livestock Extension Agent with N.C. Cooperative Extension in Chatham County*

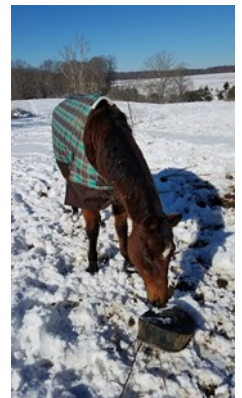
Horses always need access to the basic needs; food, water and shelter. During the winter months, those basic needs are critical to maintaining a healthy horse. In the winter, horses need to be provided the necessary nutrients to maintain their body weight and be comfortable during the cold weather. Water intake also needs to be maintained in the winter. “You can lead a horse to water, but you can’t make them drink” is so very true in the winter because some horses won’t drink the necessary amount of water which can lead to digestive issues and dehydration. Lastly, some sort of shelter is important when the temperatures drop, wind picks up or severe weather comes in.

Forage should be the foundation of every horse’s diet. The quality of that forage and the delivery method are very important. A horse in maintenance should consume 1.5% - 2% of their body weight of hay or forage per day. Low temperatures, high winds and precipitation will increase the amount of energy a horse needs per day. Horses also need to be continuously eating some type of forage so that their GI tract is constantly moving. Keep in mind though that obesity can lead to health problems as well, so your horse doesn’t need to be eating high quality hay all day. Feeding a hay lower in nutritional value will allow your horse free access to forage without becoming overweight. A good rule of thumb is to match hay type to horse type; an early maturity hay is good for growing horses and lactating mares, where a mid to late maturity hay would be suitable for horses with lower energy requirements which will allow them to eat more of it without getting fat.

When determining the quality of hay, you need to look at the stage of maturity at which it was harvested and if it is free of foreign materials (weeds/trash/dirt). Hay that is cut when the forage is at the early blooming stage tends to be higher in nutrients and therefore higher quality. As forages mature, they increase in fiber and decrease in other nutrients. To know the true quality of the hay you intend to buy, you will need to send off a sample for analysis. You can use that analysis to determine how much to feed your horse to meet their energy requirements. Subsequently, you can determine how much hay you will need to buy to get through the winter (get a little extra to account for loss or extreme weather conditions). Hay not only provides calories for your horse but it also increases the internal temperature of your horse as the hay is being digested. Hay increases metabolic temperature more than grain does but sometimes supplemental grain is necessary to boost calories in the winter. A few more important factors to remember when feeding hay are, you want to decrease the amount that will be lost or wasted, decrease dustiness of the hay, and decrease your horse’s exposure to parasites. To accomplish all of these things, hay must be fed in a rack or hay net. When hay is fed on the ground, it not only increases forage loss but increases intestinal parasites due to its close proximity to the ground and manure. Hay fed on the ground also increases dustiness of the hay which could lead to respiratory issues. When storing hay, remember that yield loss is greatest where there is high moisture and low airflow. That being said, store hay out of the weather in a barn or shed, under tarps and store hay off the ground, in a hay loft, on pallets, or even large sized gravel.

On average, a horse needs to drink about 10-12 gallons of water each day. This is always important and people tend to assume that their horses will naturally drink water year round. In the winter months, their water troughs may freeze and need to be busted open so that they can drink out of them. Some horses won’t drink water if it is too cold, so you can buy a tank heater or haul hot water to them throughout the day. An easy trick to get them to drink more water throughout the day is to add a little salt to their feed.

When temperatures drop and the wind picks up, horses need some sort of shelter. Even if it is just to serve as a wind block, it can be as simple as trees, a run-in shed, or even a barn to put them up in at night. Low temperatures and high winds are what will cause your horse to get extremely cold. Blankets can be useful in extreme conditions but don’t forget to take it off of your horse when it warms up. If your horse sweats in the blanket then temperatures drop again it will cause the horse to get very cold and can cause sickness. Horses that have a good winter coat should not need a blanket unless temperatures are extremely low and wind chill is a factor, horses that have been clipped for the winter show season will almost always need a blanket if it gets below freezing.



## **Be Prepared for Lambing and Kidding Season**

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

Ewes and does should be getting close to ending their five month pregnancy which means kidding and lambing season will be upon us in no time. Take time before your first dam is set to give birth to get prepared so you can expect the best possible outcome. With proper planning problems can be kept to a minimum.

Preparing for lambing and kidding should start about four to six weeks prior to the start of when the first dam is due to give birth. During this time ewes, does, and any males should be vaccinated for clostridial disease and tetanus (CDT). For animals whose vaccination status is unknown, they will need two vaccines at least two weeks apart. Vaccinated females will pass their antibodies in their colostrum to their newborns. This is also a good time to deworm to help the dams expel the worms and reduce the exposure of the newborn lambs and kids to worm larvae. It will further help reduce the worm load on the dams when they are turned out onto pasture in the spring. Valbazen should not be given to ewes or does during the first trimester of pregnancy.

The last four to six weeks of pregnancy is when 70% of fetal growth and udder development occurs, so it is important to increase the nutrition the dams are getting. Energy is most likely to be deficient in the diet during late gestation. Feed intake by the dams should be monitored and a concentrate should be added to their diet to meet the increased energy needs. Both underfeeding and overfeeding pregnant females can lead to difficulties. Pregnancy toxemia or ketosis, milk fever, small and weak lambs/kids, reduced colostrum quality and quantity and poor milk yield can happen if there is inadequate nutrition. Females that are too fat are more prone to pregnancy toxemia and dystocia is more likely to occur. Providing the correct nutrition is important to have strong, healthy offspring of moderate body weight. Body weight is correlated with lamb and kid survival with low and high body weight offspring usually experiencing the highest mortality. In addition to providing the appropriate nutrition, providing adequate feed bunk space is also important. There should be enough space for everyone to eat at once to allow the small, young, old, and timid animals to get enough to eat. If possible, pregnant ewe lambs and doe kids should be fed separately from mature females due to their higher nutritional requirements, because they are still growing in addition to being pregnant.

This is also a good time to begin to get your lambing and kidding areas ready. This area should be dry and have easy access for observations and intervening, if needed. If possible, ewes and does should have access to a well bedded, dry, draught-free area with plenty of replacement bedding, especially if lambing and kidding occurs during a cold, wet time of year. Ideally, there will be individual pens available for up to three days after the dam gives birth, so she and her offspring can have time to bond, specifically, if you have first time mothers or females in poor health. Often times the areas closest to the barn are where animals stay during the winter and by spring are contaminated with manure and internal parasites. Many internal parasites can overwinter outside, like the brown stomach worm. The barber pole worm or *haemonchus contortus* hibernates as immature larvae inside sheep and goats and break dormancy in March and livestock begin to shed eggs in their feces shortly after that. Because of this, it is a good idea to keep animals off the intended birthing area until shortly before your first animals are due.

A week or two before lambing and kidding, start checking your lambing and kidding kit supplies. Make sure equipment is clean and in good working order and replace any expendable supplies. This is a list of suggested supplies that should be in your kit: stainless steel bucket for easy cleaning, towels to dry off lambs/kids, beta-dine scrub for disinfecting yourself before assisting, OB lubricant and gloves, kid/lamb puller, OB chains, karo syrup or molasses to help a struggling lamb/kid or dam, iodine for dipping navels, large syringe and stomach tube, frozen colostrum or replacer, milk replacer, bottles and nipples, ear tags and tagger, and bands and bander.

Preparing for kidding and lambing season may be costly in terms of time and labor, but the outcome of a successful season with healthy lambs/kids and dams will be worth the effort. If you have any questions about how to prepare for your upcoming lambing or kidding season, contact your local Extension agent.

## **Many Benefits of Youth Livestock Judging, Skillathon, and Quiz Bowl**

*Written by: Justin Whitley, Previous Livestock Agent*

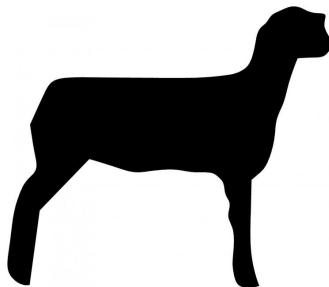
*Submitted By: Paul Gonzalez, Livestock Extension Agent with N.C. Cooperative Extension in Sampson County*

As we get ready to enter into a new year in youth livestock shows and activities, I think it's important to take a step back and look at what these kids are getting out of these programs to benefit them now and in the future. A well rounded kid who is involved in showing, judging, skillathon, quiz bowls, and other livestock projects will be prepared for a successful future. First of all, judging teaches kids how to evaluate livestock, which is a skill that they will need if they plan to have a future in livestock production. Livestock judging also teaches these youth decision-making skills that are difficult to replicate. They are presented with four animals that they have to evaluate and rank in a matter of 12-15 minutes and then take notes and prepare a set of reasons to defend that ranking. This requires a great deal of time management and organization in a short period of time and is really impressive for a young kid when you stop and think about it. Giving oral reasons is one of the best ways to develop public speaking skills at a young age. Having to develop a roughly 2 minute "speech" in a short amount of time and then present it to an, often times, total stranger provides more public speaking experience than most Public Speaking classes in college!

Skillathon and Quiz Bowl give youth an opportunity to develop a very extensive knowledge of animal husbandry. They have to learn about tools and equipment, feed ingredients, meat cuts, and many other areas of livestock production. Both of these contests force kids to be quick thinkers to be successful. They also develop teamwork skills by working with their team members to practice and study the vast amount of information they are required to know. The information that these kids learn for these contests will prepare them for any animal science classes they may take in the future and will put them way ahead of their classmates!

All of these programs help youth to build confidence in themselves and their abilities. They will one day look back on their participation in livestock judging as the reason they're able to hold a conversation with a stranger or why they were able to sell themselves in an interview. They will fondly remember all the fun times they had at practices or on trips to contests with their teammates who will inevitably become some of their best friends. If they are successful enough in livestock judging, they could even earn a full-ride scholarship to be on a collegiate judging team. The possibilities and the benefits are endless!

There are some local upcoming Livestock Judging, Skillathon, and Quiz Bowl opportunities. If you have youth that are interested in participating, contact your local extension office.



## Understanding Seed Labels

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

As a livestock producer, you always have to think ahead in order to stay ahead. Even though we are in the winter months now, spring is right around the corner which means you should be thinking about spring pastures and possibly pasture renovations. Here are a few helpful hints to make sure that you are getting the best seed for your money.

There is a “Seed Law”. This law requires seed being sold to adhere to a minimum set of guidelines and standards which should be listed on a suitable label. Not all bags of seeds are created equal, even if they follow the seed law. There is a large amount of variation in seed quality. Adherence to the seed law only guarantees that the bag of seed you are purchasing meets the claim on the bag so it is important to shop around and compare labels.

So what has to be on the label? What does this information mean? (Information from “A Simplified Guide to Understanding Seed Labels”)

- Variety and Kind – Cultivar/release name, species and common name
- Lot number – A series of letters or numbers assigned by the grower for tracking purposes
- Origin – Where the seed was grown
- Net weight – How much material is in the container
- Percent pure seed (purity) – How much of the material is actually the desired seed
- Percent inert matter – How much of the material in the bag is plant debris or other materials that are not seed
- Percent other crop seeds – Other non-weed seeds
- Percent weed seeds – Seeds considered weed species
- Name of restricted noxious seed (with number per pound of seed). Noxious weed species vary by state. There are 2 types of noxious weeds – restricted and prohibited. Restricted weeds are listed as number of seeds per pound of material in the bag. There should be NO prohibited weeds.
- Percent germination (germ) – An average percentage of seed that will germinate readily
- Hard seed – Seed which does not germinate readily because of a hard seed coat
- Dormant seed – Seed which does not germinate readily because it requires a pre-treatment or weathering in the soil. (Some suppliers may combine hard and dormant seed on the label).
- Germination test date – Date should be within 12 months of the planned date for using the seed
- Name and address of the company responsible for analysis (seller or grower)

The Natural Resources Conservation Service’s Plant Materials Program recommends using seed labels to help you shop around for the best value that will meet your needs. They suggest that you always check the purity/germination and if it is very low, you might not want that variety or mix. If noxious weeds are listed on the tag, take into account that they could most likely become a problem in your pasture by becoming hard to control and outcompeting your desirable grass. NRCS also suggests that you purchase seed based on the Pure Live Seed (PLS) which you will use to calculate the amount of seed you will need for planting. Their calculations are as follows:

**You need to determine viability first.**

*Viability = germination + hard seed + dormant seed*

**The second step is to calculate the amount of Pure Life Seed (PLS).**

$$PLS = \frac{\%purity \times \%viability}{100}$$

**Finally, to calculate the amount of seed needed for planting. . .**

$$Bulk\ seed/acre = \frac{lbs.\ of\ PLS\ recommended\ per\ acre}{Percent\ PLS}$$



Seed inspectors visit dealers regularly to spot check seeds. During checks, inspectors take random samples of bags to have them analyzed for accuracy by the North Carolina Department of Agriculture & Consumer Services Seed Lab. If there is a discrepancy in the sample versus its label, a “stop-sale” notice is issued until the seed is brought back within standard and meets the label claims. Inspectors and dealers usually work together to make sure that consumers are being supplied the best seed possible.

Now that you hopefully have a better understanding of seed tags, go ahead and start shopping around for your spring pasture needs. For more information, please contact your local Agriculture Extension Agent.



# Prescribed Grazing Benefits

By: Katie Stevens-Clarkson

Prescribed grazing can be very beneficial for any farmer that manages a cattle operation. Grazing management improves the health and vigor of forage plants, increasing the quality and quantity of feed harvested by livestock, which results in a reduction of energy related inputs by farmer and ranchers. Prescribed Grazing involves managing the intensity, frequency, duration, timing, and number of grazing animals on pastureland in accordance with site production limitations, rate of plant growth, physiological needs of forage plants for production and persistence, and nutritional needs of the grazing animals. The goal of this practice is to reduce accelerated soil erosion and compaction, to improve or maintain riparian and watershed function, to maintain surface and/or subsurface water quality and quantity, to improve nutrient distribution, and to improve or maintain desired species composition and vigor of plant communities. Productive pastures maintain wildlife habitat and permeable green space.

It takes 40 pounds of nitrogen and about 1.35 gallons of diesel fuel to raise, harvest, store, and feed a ton of grass hay. At today's costs of \$0.40 per pound of nitrogen and \$2.41 per gallon of fuel, there are direct energy savings of \$10.70 per month per cow for each month cows remain on pasture. Most cost savings arise from using less fuel to harvest hay, store it, and transport it to feeding locations. In dairy operations, leaving cows on pasture also reduces the need for electricity to moderate the climate of free stall barns, and decreases labor costs associated with feeding cattle in confinement and associated manure handling, storage, and spreading.

In addition to energy savings, prescribed grazing has been shown to improve the profitability of cattle operations. In Missouri, beef cattle raised and finished on high quality pasture that is thick and lush have been shown to have a rapid average daily gain of two or more pounds and reach a marketable weight within just 20 months at a cost of \$27 per hundred-weight of gain, versus \$60 in confinement. By applying grazing management, dairies in New York and Wisconsin found that pastured lactating dairy cows consistently show a higher net farm income from operations over a 4-year period when compared to confined cows, whether measured per cow or per hundred-weight of milk.

If you are interested in starting a grazing management plan please contact the Wayne County Soil and Water Conservation office. If qualified applicants are approved they can receive up to \$15,000 in cost share incentive payments. Approved cooperators must consistently manage fertility, stocking rates, and stop/start grazing heights to minimize the potential for cost shared fields to be overgrazed and to ensure that a good stand of annual or perennial pasture vegetation is maintained.

Resources: NCDA&CS, NC Soil and Water Conservation, NRCS

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