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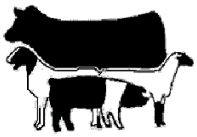
Livestock News

July 2020



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Coronavirus Food Assistance Program (CFAP)

CFAP provides financial assistance to producers of agricultural commodities who have suffered a five-percent or greater price decline or who had losses due to market supply chain disruptions due to COVID-19. Eligible commodities include:

- Non-specialty crops (malting barley, canola, corn, upland cotton, millet, oats, soybeans, sorghum, sunflowers, durum wheat, and hard red spring wheat)
- Wool
- Livestock (cattle, hogs, and sheep - lambs and yearlings)
- Dairy
- Specialty crops (fruits, vegetables, nuts, beans and mushrooms)

Applications are being accepted now until August 28, 2020. Producers should apply through their local Farm Service Agency office. More information about the program can be found at farmers.gov/cfap.

Economic Injury Disaster Loans (EIDL)

EIDL are for small businesses, including agricultural businesses, who have suffered substantial economic injury and is through the US Small Business Administration (SBA). The SBA is now accepting new loan applications. More information about the program can be found at https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/economic-injury-disaster-loan-emergency-advance.

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.

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.

Initial 10-hour Animal Waste Operator Classes (OIC)

There will be an initial Type A class on Friday, August 7th at the Lenoir County Extension Office.
Call 252-521-1706 to register.

Plan of Action (POA) for High Freeboard

With all the rain we have received, we wanted to remind growers about reporting high freeboard ("in the red") to your DEQ inspector and that you need a POA completed. Extension Agents, consultants, integrators and SWC/ NRCS may be able to help you complete these forms. The POA describes how much PAN needs to be pumped in within 30 days and that you have enough PAN left on your fields to get back in compliance. Information needed is your Waste Plan, IRR 2 forms and lagoon design. There is a 30 day plan and/or a 5 day.

Conducting Sludge Surveys

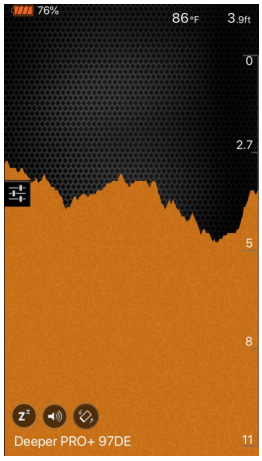
By: Rachel Bland & Sean Nunnery, Interns in Bladen County

The Basics of Sludge Surveys: In the process of planning and designing a lagoon, farmers must also consider sludge accumulation and create a plan for its measurement and potential removal. When sludge accumulation is considered excessive, farmers must plan to remove this sludge so the lagoon can continue operating at optimal efficiency. These surveys must be conducted annually in lagoons unless given an extension by Division of Water Resources (DWR).

Sludge is more dense than the liquid waste in the lagoons, so it settles on the bottom (sludge accumulation layer). Because this layer is on the bottom of the lagoon, it requires certain survey methods to measure the distance to the sludge layer as well as this layer's depth. There are a few different methods, but we will be discussing using a sonar bobber.

Using the Sonar Bobber: Compared to other methods, using a sonar bobber is more cost effective, requires less clean up, and - because less set up is required - can be the quickest method. Sonar bobbers are depth finders used by fishermen and boaters. To ensure accurate measurement, this method should be used by people familiar with these devices.

Sonar bobbers use sonar to measure the depth to the sludge layer and we make calculations to determine sludge depth. Sonar stands for sound navigation and ranging. If you've ever studied how a bat navigates a cave or how dolphins use clicking to navigate their way underwater, you've likely heard of echolocation. Echolocation is a type of sonar that these animals utilize instinctively. The sonar bobber is created to model a similar use of sound waves to determine distance. The bobber sends pulses of sound waves through the water, the sound bounces off of objects, and the device determines the distance based on the time between sending and receiving signals.



Prior to using the device, it's important to know the depth of the lagoon as well as the freeboard. Depending on the brand, the sonar bobber pairs with your smartphone or other device using either Bluetooth or WiFi connectivity. After connecting the bobber and device, you cast the bobber into the lagoon using a fishing rod. Once the sonar is in the water, wait a few seconds for the bobber to reorient based on its surroundings. Then, using the company's paired app, you can access data of the average depth of the water.

Other methods to measure depth of the sludge layer:
- **Remote Controlled Boat with a Fish Finder:** while more expensive, using a remote controlled boat with a fish finder provides electronically recorded information on both the physical location recorded by GPS as well as the depth to the top of the sludge layer. The sonar equipment used operates in a similar way to the sonar bobbers; the device uses GPS and does not need to be manually cast.
- **Boat and Disk-on-Rope:** this method is less expensive than the previous, but requires more time. A disk-on-rope detects the top of the sludge layer using a disk that sinks through the liquid and settles on the top of the sludge. This method is fairly accurate when done carefully. Disks made of PVC are generally used as they are heavy enough to sink through the liquid while still settling on top of the sludge layer. Choosing a material heavier than PVC could cause the disk to sink into the sludge layer and result in inaccurate data. As the name suggests, this method involves the disk being lowered into water and connected to a rope. To record data, the rope should be marked in increments of either inches or tenths of feet. Once the disk has settled, record the measurement based on the water level and the rope.

Each of these methods can be used to gather data. Prior to choosing a method, weigh the pros and cons of each method and compare its use with the user's needs. Cost, accuracy, time, and other factors should be considered. Practice the method and become familiar with how to record the data accurately.

Are You a Cattle Farmer or a Grass Farmer?

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

Recently I sat down with a producer about modifying his forage plan for the farm he manages. He wanted to reduce his need for hay and minimize the amount of supplementation he needed to provide. I made the comment that producers, whether they are cattle, horse, goat, or sheep, need to think about doing more with forage and less with feed. Now before some of you go and get too mad with me, let me explain what I mean.

I am in no way saying that we need to stop giving the cattle any feed at all. I will be the first to tell you we need to supplement our cowherds to meet their need. I also will tell you to feed you calves after you wean them to promote weight gain and to bunk break them. But I also want you to use the feed as a supplement to the pasture they are getting. Not the other way around. With input costs as high as they are and climbing every day, it will become increasingly important to put pounds on your calves and maintain your cows through the year as cheaply as possible. The best way to accomplish this is with forage.

I would like to see a change in the mindset of our county cattle producers. Instead of a cattle producer, start thinking of yourself as a forage grower. You simply use the cattle to harvest the forage for you. Give a little more attention to the pasture's needs. Am I taking good care of the pasture or abusing it? Is it the right pH for grass growth? Are there proper nutrients for grass growth? Is the grass growing at all? If we are dry the grass probably isn't growing. Unless you have designated the pasture as a sacrifice area, cattle should be removed. Leaving cattle on this pasture will have an impact for years to come.

Try getting a little more use out of the grass you already have. Continuous stocking of a pasture yields 40 to 50 percent utilization of the forage. By simply dividing the pasture into 3 to 5 paddocks and rotationally grazing, you up the utilization to about 60 percent. If you go intensive and rotate cattle every three days, you can bump utilization up to 80 percent or better. Rotational grazing is good for the forage because it gives the grass time to rest. You may be surprised at how it affects your herd too. I know it sounds daunting but rotational grazing is easier than it seems. Once the cattle learn they are going to fresh grass, moving them only takes a few minutes. And as I stated before, you can make it as simple or complicated as you want with the number of paddocks. I've heard of some intensive grazers who move their cattle every few hours! There is even a gadget now that you hook to a spring gate and can open it by timer or smart phone.

Speaking of getting the most out of what you already have, do you have too many cows anyway? I would venture to say that most of us are overstocked. General recommendation is two acres of good grass for each cow and her calf. And that is probably based on a 1,000 pound cow. What is your stocking rate? Many producers in the area probably have plenty of grass for the summer but fall far short during the winter. Perhaps we need to shift some acreage to a cool season grass. I can picture some eyes rolling right now. Even in this area, cool season forages have their place. The key is management. Cool season forages generally aren't as productive as warm season grasses. Most, well, all but endophyte infected fescue, can't take the abuse bermudagrass can either. All this needs to be taken into account. Also keep in mind that overseeding dormant bermudagrass pastures does extend the grazing season but very little of this is fall growth unless planted in late summer or early fall and fertilized well. And if you use ryegrass, there is even less chance of having much fall grazing.

Perhaps we need to reduce our cattle numbers to a stocking rate closer to what we can support in the fall and winter. Consider weaning and grazing calves on the excess forage in the spring and summer to increase sale weights. The added income from heavier calves is always nice and calves can make decent gains with a little supplementation on bermudagrass. Or maybe you can create a lucrative market for the forage as high quality hay. Producers never seem to be able to find enough GOOD quality hay.

Think about some alternative feed resources. Fence in that cornfield after harvest for some fall grazing and let the rye grow. I was surprised that this wasn't happening when I moved here. I fenced in many acres of corn residue through high school and college. Admittedly, putting up and taking down fences can be a pain. You can fence in cotton fields and peanut fields too. You can even use soybean fields! Be sure to check herbicide restrictions for any products used on those crops before turning cattle on them. And remember that crop residue is best suited to cow herds and they will need some supplementation on most of them. Studies have indicated that one acre of corn stubble will feed one cow for 60 days. Granted she will eat the corn first, then the shucks and leaves, then what stalks she can. By the second month she is going to need some supplementation but you have a cheap source of feed here. Not to mention that it is cheaper to let her harvest the forage than it is to cut and bale and haul the grass to her. In our climate, there is no reason we couldn't graze our cows 10 months a year. Or at least, attempt it.

Developing Replacement Heifers

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

Early summer is when most fall born calves are weaned. With weaning comes a question that most cattle farmers ask themselves each year, how many heifers to keep and many to go ahead and sell? When it comes time to decide this topic, here are a few things to keep in mind.

Buying versus Raising Replacement Heifers
One long debated topic in the cow-calf business is if it is cheaper to buy a replacement heifer or raise one of your own. Most cattle farmers have their own opinions on this topic. Below are some of the points on either side of this debate that I have heard discussed around the cattle industry.

Raising your own replacements
This is the most common method for most farms. Just because it is the most common does not necessarily mean it is the best fit for you. Let's discuss the pros and cons of this.

Advantages
It requires the least out of pocket expenses. Keep in mind that this does not necessarily mean it's the cheapest method at the end of the day, but it will not require the all at once cash expense that buying heifers will bring. One big financial misconception that some farmers have is that their heifers are free when they keep them back to raise instead of selling them per their normal marketing methods. This is not true! Your business purchased the heifer for whatever she would have brought on the sale that day. This can be substantial. So, when you are calculating your cost involved in raising a replacement heifer, the first item you list should be your purchase price, even if you bought her from yourself.

When it's time to project the remaining expenses, they can be larger than you think.

Feed- I do not know of many, if any, beef farmers that can get a heifer up to breeding weight by 14-16 months of age without a substantial feeding program that involves something other than forage. Whether this is a home mix ration or a purchased feed, it's going to cost money to feed the heifer during the critical time between weaning and breeding.

Labor- While this is a difficult number to assess, you will have some of your time invested in caring for and feeding the heifer. You will also tie up another pasture during the time it takes to develop her.

Miscellaneous- vaccinations, de-wormers, fly control, etc., while these are usually a very small investment; it still must be considered.

Buying Replacement Females
Advantages
It's quick, easy and saves you time and trouble to get these heifers weaned and raised up to breeding size.

Disadvantages
There are some disadvantages to keep in mind if you want to buy your heifers

Price & Availability
There are situations where you can find a neighbor with some good heifers in the pasture and the two of you agree on a price and a number to purchase well ahead of time. Normally though, you will be standing at a sale ring having to make a decision in a big hurry on how much you're willing to spend. The issue with a bidding sale is that what you think they are worth may not be at all what the guy standing next to you thinks they're worth. Many times, you have to spend more than you wanted or come home with an empty trailer on sale day.

And finally, genetic potential. Are your heifers good enough to bring back? Every generation of heifers you bring into your herd should have at least the potential to be your best cows in a couple of years. If they do not have this potential, then you don't want to spend the money and time on developing them.

If you decide that retaining weaned heifers back on your farm is the thing to do, here are a few management tips to consider.

Weaning
Weaning is a tough time for a calf. Breaking the psychological bond with their mother as well as stopping them from nursing can be a difficult task. It takes a really good fence and 6-8 days for this to transition to happen. During this time, they will lose weight. It is unavoidable. Going ahead and supplementing their forage intake with a good balanced feed ration for 4-8 weeks however can help limit this weight loss. There have been numerous studies conducted on long-term heifer development that have shown where a good supplemental feeding program at and immediately after weaning (even if only for a few weeks) can have a significant impact on successful heifer development.

Deworming and Vaccinations
This is not the place to cut costs on your cows. A good deworming program at weaning and again later in the summer/early fall is always a good idea. The last thing you want is for your young heifers to be dealing with a parasite challenge while they are trying to grow. More and more research is showing that internal parasites are developing resistance to some dewormers. The key to slowing this down is to develop a good rotation of dewormers every year. Make sure you are switching between dewormer classes. The most common dewormers (Ivomec, Cydectin and Dectomax) are in the avermectin class. You should also incorporate a "white" dewormer, which refers to the products in the benzimidazole class (Safe Guard, and Valbazin) in your rotation at least once a year.

Finally, if you do not have a good herd vaccination program in place, I urge you start with your heifers. Contact your vet or your local Extension agent to help you identify what diseases you need to protect your cattle from in your area. The most expensive vaccine on the market is the cheapest investment you'll ever make in keeping your cattle healthy.

Preventing Heat Stress

By: Stefani Sykes, Livestock Extension Agent with N.C. Cooperative Extension in Wayne County

As I sit in my office and write this article, it's a cool 65 F and rainy. While it may not seem like we need to think about heat stress in our livestock, we all know that July and August brings hot temperatures and high humidity to our part of the world! This article will give you a few tips on managing and preventing heat stress in your sheep and goats.

Heat stress can impact the health and growth performance of our animals during the summer. Sheep and goats tend to be a little less susceptible to heat stress than our cattle, llamas, and pigs. This can also be breed dependent—hair sheep are less sensitive than wool sheep, loose skinned floppy eared goats are more heat tolerant than others. Dark colored animals of any species are going to be more susceptible than our light colored animals. Horned animals actually dissipate heat better than polled (or disbudded animals) according to the Maryland Small Ruminant Page. Females tend to tolerate heat better than males, and fat animals are going to suffer in the heat!

Sheep are most comfortable between 45 and 70 F, so once that temperature starts to increase and the humidity rises, the negative impacts can begin. Goats are usually a little more tolerant than sheep, due to the nature of their coats. Sheep with a one inch fleece are more comfortable most of the time than those with shorter fleeces, since the will fibers dissipate heat more rapidly. Spring shearing is ideal, because it allows time for the wool to have enough regrowth to be helpful, while not being extremely heavy and dense.

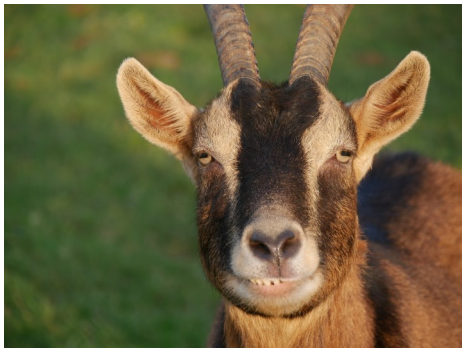
Water and hydration are key to preventing heat stress in any animals. Younger animals need to drink more water than adult animals, and during heat stress, the amount these animals drink can increase by 50-100%. On average, sheep and goats drink 1-2 gallons of water a day.

Shade and ventilation are extremely important to keep your animals comfortable in the high temperatures and humidity of our NC summers. Natural shade, like trees and bushes, or man made shade, like tarps or buildings, can help beat the heat. The shade does not need to be complicated or expensive, just enough to provide shade to your entire herd/flock.

Adequate nutrition is important for animals at all times of the year, including the summer. Quality forage, fresh water, electrolytes, minerals, etc. are important to have on hand. More nutrient dense diets are recommended in periods of high heat and/or humidity.

It's important to recognize the signs of heat stress in your sheep and goats. The most common signs are: continuous panting, rapid breathing, weakness, inability to stand, and elevated rectal temp. If you suspect your animals are heat stressed, you should move them to a cool, shaded area with circulation. Do not rinse your wool sheep off with water, it actually has the opposite effect than what you would think. Cool sheep with rubbing alcohol applied to the area between rear legs. Spraying water on goats can help reduce the body temperature and reduce the heat stress impact. Be sure to offer water and encourage them to drink small amounts at a time.

While heat stress is obviously stressful at the time, it can also have some lasting effects on your herd/flock. These effects include reproduction, immunity, and growth performance. Be sure to watch your animals carefully during the heat and humidity. Contact your local veterinarian or livestock agent with any further questions or if you suspect your animals are heat stressed!



Biting Midges in Horses

By: Brian Parrish, Agriculture Extension Agent with N.C. Cooperative Extension in Harnett County

Culicoides can also be commonly referred to as no-see-ums and punkies, but are commonly called biting midges. These flies are associated with wet, low lying, and marshy aquatic habitats. It is estimated there are over 1,000 different species found worldwide with roughly 48 species in the Southeastern US known to feed on horses. It is the adult females that bite and feed on blood. Biting midges are 1 to 3 mm in size. Even though they are small flies their bites can be very painful to both humans and horses. Biting Midges slash open the skin, cut capillaries, and pool the blood before sucking it up.

Biting Midges are a small fly and thus go through 4 life stages that includes; egg, larvae, pupa, and adult. Biting midges generally overwinter as larvae and pupate in spring. The adults deposit eggs on mud or on sand and about one week later larvae emerge. The larvae are found in mud, salt marshes and intertidal sand. If removed from the substrate, each of the four larval instars is large enough to be seen by the unaided eye. After feeding and developing for 6 months to a year, larvae pupate and adults soon emerge. Adult biting midges live about a month. Females take several blood meals and lay several batches of eggs. The female uses the blood meals to provide protein for her eggs. The males feed on plant juices. Along the North Carolina coast and around inland breeding sites, flies are usually present throughout most of the warm weather seasons.

Biting midges usually bite horses along the mane, tail head, belly and chest. Roughly one or two horses out of twenty may develop allergic reactions to the bites. These reactions cause the affected horses to develop a profound itch (pruritus itch) These horses tend to loose hair in the areas they are constantly itching. The itching can lead to secondary infections and thickening of the skin.

Management- Because biting midges usually feed at dawn and dusk it may be helpful to stall horses during these times. Biting midges are poor flyers so strong fans in the stable can be effective in keeping them away. Face masks and fly blankets may also be helpful. Because biting midges breed in standing water, eliminating standing water around stable and pasture areas may help reduce fly numbers. Quality fly sprays can also be helpful especially when applied daily. Use insecticides with a minimum of 2% permethrin. Higher concentrations are available for livestock use, but care should be taken when using on the sensitive skin of a horse with insect bite hypersensitivity. Your veterinarian may provide additional options. There are also prescription medications that may also be helpful.

Sources: Dr. Phillip Kaufman Veterinary Entomologist University of Florida
Dr. Martha Mallicote Equine Veterinarian University of Florida
Insect Bite Sensitivity in Horses- LSU Ag Center

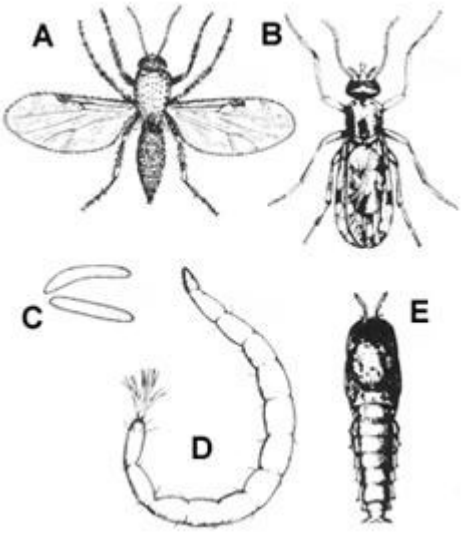


Figure 1. Biting

Understanding Breeds of Swine for Livestock Competitions

By: Dan Wells, Livestock Extension Agent with N.C. Cooperative Extension in Johnston County

Having a good base knowledge of swine breeds is important for youth involved in livestock competitions. Market hogs and breeding swine are very common classes in judging contests, and will very commonly include reasons or questions about the class. It's important to know and understand about where these breeds come from, a bit about their breed character, and where they fit into the picture of the modern swine industry. Oklahoma State University has an excellent webpage with information about many breeds of livestock at afs.okstate.edu/breeds/ This website lists over sixty breeds of swine from around the world. However, the National Pork Producers Council lists eight breeds of swine common in the US.

The Yorkshire breed traces its origins to north-central England, where hardy pigs roamed the hardwood forests being fattened on acorns for winter time processing. The first Yorkshires in the US were imported to Minnesota from Canada, with the first Yorkshire herdbook published in 1901. Today they are the most recorded breed of swine in North America. Yorks are white with erect ears. They have gained prominence as a breed noted for soundness and durability. This breed has become even more important as the commercial swine industry placed greater selection emphasis on white skin color.

Hampshires, the "belted pig," were first imported to the US from Hampshire County, England around 1830. They are very recognizable by their black hide with a white "belt" around the body at the shoulders, including all of the front legs, as well as erect set ears. The US development of this breed was centered in Kentucky, where a herdbook was established in 1893, although they were not officially named "Hampshire" until 1904. Hamps are known for great carcass quality, with large loin eyes and low backfat. They are the fourth most recorded breed in the US.

The Berkshire breed has the distinction of the first swine registry in the world, which began in 1825 in Illinois. The origins of the breed, however, go back to Berkshire in England, as the name implies. For a time, Berkshire pigs were even kept on the grounds at Windsor Castle! The breed is known to be prolific and fast-growing, while also noted for meat flavor. Berkshires have erect ears and are black with white points; white feet, white tail and a strip to splash of white on the face.

One little tip I'll share at this point; the three breeds I've mentioned so far are all of British origin, all have "shire" in their names, and all have erect ears. The other five breeds I'll cover have forward-set or floppy ears. So, in most cases in the US, if you're looking at a pig with erect ears, it's one of the three breeds that have "shire" in the name.

The US Dept. of Agriculture imported twenty-four Danish Land race hogs in 1934. For fifteen years the offspring of these individuals were systematically compared and infused with other blood, leading to the formation of the American Landrace Association in 1950 and resulting promotion and sales of breeding stock. The American Landrace is prized as a maternal breed, being prolific with good mothering instincts. Landrace are long-bodied, having sixteen or seventeen pairs of ribs. They are white with forward-drooped ears.

The Poland China breed developed in Ohio from various types of hogs (not necessarily breeds) in the early 1800's. Today the breed is standardized as being black with six white points; face, feet and tail. An occasional white splash on the body is permissible and they can have no more than one solid black leg. They have drooped ears and are known for being excellent feed converters with quiet dispositions.

Spotted Swine, or Spots, trace their ancestry to the Poland China breed. In fact, the breed registry was known as the National Spotted Poland China Record until 1960, when it became the National Spotted Swine Record. Spots developed in Indiana from stock purchased in Ohio, which were the ancestors of Poland China swine. As the name implies, they are known for their large black and white spots, having drooped ears and body type similar to the Poland China. Spots are known to produce efficient, fast-growing offspring and docile, long-lasting dams.

The American Duroc-Jersey Association was established in 1883, and Durocs had their first show at the Chicago World's Fair ten years later. It is difficult to identify the exact origins of the Duroc breed, as breeders from New York to Nebraska were breeding red hogs whose descendants made their way into the registry. However, they have become the second most recorded breed in the country. Durocs are solid red with drooped ears. They are known for excellent muscling and lean carcass quality.

Chester Whites swine owe their name to Chester County, PA. It was there that, in 1848, two breeders exhibited their white hogs, which the judge chose to call "Chester County Whites." Several breed associations began in the late 1800's which were eventually consolidated into the Chester White Swine Record in 1930. They are known for durability, soundness and mothering ability. As the name implies, these pigs are solid white and have drooped ears. This makes it somewhat difficult to distinguish Chester Whites from American Landrace, but keep in mind the difference in body type. Landrace are long-sided with extra vertebrae, and have somewhat larger ears than Chester Whites.

Photos: Pork Checkoff

Berkshire boar

Spot boar

Hampshire boar

Troubleshooting Electric Fence...From a Distance

By: Adam Ross, Livestock Extension Agent with N.C. Cooperative Extension in Duplin County

Summertime is hay season and mosquito weather, but it's also one of the hardest times of year to keep voltage on your fence. Due to the (normally) dry weather and heat, ground systems aren't as effective as in wetter weather, and you may have bovine escapees more frequently (especially if you've just weaned calves). Here are some tips and tricks to containment:

Is the energizer the culprit? – To keep it very basic, you will need a digital volt meter (not fault finder or light tester). Unhook your fence from the charger (turn it off FIRST!) and test the box itself from post to post. If you get a reading of less than 7kV, you may have a faulty energizer. At this point, contact the store you bought it from, or the manufacturer to get further instructions.

Grounding – check your grounds if you don't have adequate voltage on the line. A very large part of the time, we can trace problems back to inadequate grounding. For a fence to have "adequate" ground there needs to be 200 volts or less on the ground system. Here is a simple test for your grounding system that should be done at least once a year, preferably in **dry conditions**:

Short the fence out at least 330ft from the energizer (lay t-posts on it, hook wire to it and stick the bare end in the ground, anything you can short the fence with) until the voltage drops below 2,000 volts (2kV).

Test the farthest ground rod in your series from the box (if you have 3 rods, test the one that is farthest away) with a digital volt meter – this should have a digital readout and be in kilovolts (kV). The "light up" type testers aren't sensitive enough to perform this. A word of caution – fault finding devices don't work as well for this procedure. You should get a reading of 0, or a blank screen. If you get 200 volts (0.2kV) that is acceptable. However, anything higher than 0.2kV and you will need to install additional ground rods to your system until the reading on the ground drops below 0.2kV.

Fence construction – there's more than one way to skin a cat, and there's a million more ways to build a fence. First off, this test needs to be performed while walking. ATVs, pickup trucks, and golf carts may interfere with you hearing your fence properly. Most times if you have a drop in voltage, you will be able to find the short just by walking around and listening for the "pop". Check all lead outs to your fence for tight connections, look at each post for insulators breaking down or otherwise missing. One other tip for checking is to occasionally test wood posts for voltage – you would be surprised at how many wood posts I've found with voltage from poor insulators allowing it to bleed through into the wood.

Fence wire – if you recently patched or added fence to your system and notice a drop in your voltage, make sure you're using the proper wire and that your existing wire isn't rusty. Rust equals resistance, and resistance will drop your voltage. Fencing wire needs to be 12.5 gauge galvanized high tensile for pasture applications. This allows for a greater flow of electrons and also provides exceptional longevity for the fence. If you have added smaller wire (14 or 17 gauge) to your system, you will notice a drop in the voltage just from the difference in wire size. The only difference in electric fences and water pipes is that water flows on the inside of the pipe and electrons flow on the outside of wire – my point here is that you get more water out of a 3 inch pipe than a 1 inch pipe, therefore you'll get more power out of 12.5 gauge wire than you will 14 or 17 gauge.

This was a very basic troubleshooting guide, because every pasture system is different, and was constructed by different people for different applications. The one thing to remember is that we have to have functioning fences to successfully contain and control our livestock.