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Contact Us

NC Cooperative Extension
 Johnston County Center
 2736 NC Highway 210 STE A
 Smithfield, N.C. 27577-9556

(919) 989-5380 Phone
 johnston.ces.ncsu.edu

Dan Wells
 Extension Agent, Livestock
 dgwells@ncsu.edu

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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.

Interactive Pesticide Training March 15

The North Carolina Cooperative Extension Service in Johnston County is inviting all commercial and private applicators, dealers, consultants and public ground operators to attend an Interactive Pesticide Training class. This two-hour class will be held at the Johnston County Livestock Arena on Friday, March 15, 2019. The arena is located at 520 County Home Road, Smithfield, N.C. 27577. The class will begin at 10:00 am. Please bring your Pesticide Credit Report Card with the bar code to this class. Please call Tim Britton at (919) 989-5380 for more information about the credits to be offered.

Pesticide and Household Hazardous Waste Disposal April 27

Need to clean out the barn, the chemical storage building, pantry, or underneath the sink. On Saturday, April 27, 2019, North Carolina Cooperative Extension in Partnership with Johnston County Solid Waste and NCDA will hold a Pesticide and Household Hazardous Waste Disposal Day. The event will take place at the Johnston County Livestock Arena at 520 County Home Road in Smithfield, N.C. 27577 from 8:00 am to 1:00 pm.

Youth Livestock Show & Sale April 22-24

The Show & Sale will be April 22-24 at the Livestock Arena, 520 County Home Road, Smithfield, N.C. 27577. Steers and heifers will show April 22 beginning at 5:30 pm. On April 23, Lambs will show at 1 pm and goats at 4 pm. The hog show will be April 24 at 9 am and the sale will begin at 6 pm that evening. One hundred-fifteen youth from across Johnston County will be participating. For more information, contact the Extension Office at (919) 989-5380 or visit johnston.ces.ncsu.edu or search @jcyouthlivestock on Facebook.

Soil Sample Fees

Routine soil samples submitted to NCDA&CS Lab are \$4 per box through March 31. Routine soil samples are free to N.C. Residents April to November.

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.

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Animal Waste Management

Initial 10-hour Animal Waste Operator Classes (OIC)

- **April 30 and May 1** at the Wayne County Extension Office (3114 B Wayne Memorial Dr, Goldsboro NC 27534) from 10am to 4 pm with registration at 9:30am on the 30th. Cost is \$35 for the manual made out to "County of Wayne." \$25 check for test, made out to "WPCSOCC". Call (919) 731-1520 to register!

6-hour Continuing Education Animal Waste Operator Classes

- Monday, March 4 at 3pm (1 hour) - Lenoir Extension Office. Call Eve at 252-521-1706 to register.
- Thursday, March 7 at 3pm (1 hour) - Wood Alpha Building in Greene County. Call Eve at 252-521-1706 to register.

Poultry Litter Spreader Calibration Demonstrations

Duplin County on March 27 (rain date April 29) at 10 am. 3 hours of Animal waste credit. There is no charge for the class. Please dress appropriately for the weather and wear close-toed shoes or boots. Please remember proper biosecurity Protocols and be sure to wear different clothes and shoes before working on your farm.

Lunch will be sponsored, so please register by calling 252.448.9621 or on-line at <https://goo.gl/forms/WYPsDh1FjdWbvRUi2>

Notes from DEQ Inspectors

By: Becky Spearman, Livestock Extension Agent with N.C. Cooperative Extension in Bladen County

I recently asked inspectors from DEQ-DWR Fayetteville, Wilmington and Washington Regions about issues they see. Below is their responses.

- Don't wait to pump - pump all summer.
- Due to the storms, have a cell phone contact for your inspector or an inspector in your region, so you can report high freeboard faster. You must report to DEQ high freeboard - not just your integrator.
- Consider using cover crops as an alternative area to pump if needed.
- Buffer fields and manage those buffers will help ensure no nutrients are leaving spray fields and entering waterways.
- Check your irrigation systems to ensure you are still set properly and abiding by your WUP/wettable acres and that they are operating correctly.
- Communicate with staff on your farm to ensure they are operating correctly and doing the 2 hour checks. Things break, change or are not communicated well or just break down over time, we all make mistakes too. However, it's the OIC and Permittees responsibility to ensure compliance with the permit/rules/laws.
- Repair eroded areas in fields and contact Soil and Water or NC Department of Agriculture for technical assistance, Best Management Practices (BMPs), cost share assistance etc. to help manage stormwater runoff from houses, around lagoon and especially fields. After this Hurricane, many people should see what areas are problematic and should try and prevent that in the future. There are ways of managing the erosion to keep soil and nutrients from leaving. This is best for farmer and water quality as well. Sam Edwards, NCDA SWC can provide technical assistance to farmers all over the state on erosion control, checking lagoon markers, etc. His number is 910-770-2168.
- Replacing soil and reseed on lagoon walls is important. Bahia grass is great for low moisture and nutrient areas. On top of lagoon walls, it is very difficult to get things to grow there once they have started eroding or were "scalped" by a mower. If you can replace soil and establish Bahia grass or any good grass cover, don't mow it so close as you would your yard. Let it grow and establish, but keep it mowed enough to see your pipes, wires and snakes when working around lagoon. Most people don't like to hear Bahia because its hard on the mower but you don't have to mow it that much, if at all. This is a great grass for lagoons to stop erosion.
- Please be sure stormwater is managed around houses and especially between houses and lagoon, so that stormwater doesn't runoff into lagoon and add more pumping for you or cause a violation overnight. This can cost a lot more when you have to irrigate extra rainwater, which I think most in SE North Carolina are recently aware. Be careful that any leakage around the houses or pipes is stopped because it can discharge quickly through these stormwater pathways if not managed properly.
- Stockpile litter/compost must be covered within 15 days, buffered from streams/surface waters etc. Please sign up as a manure hauler and follow buffer rules that apply when land applying and stockpiling.

Soil Building Using Annual Forages

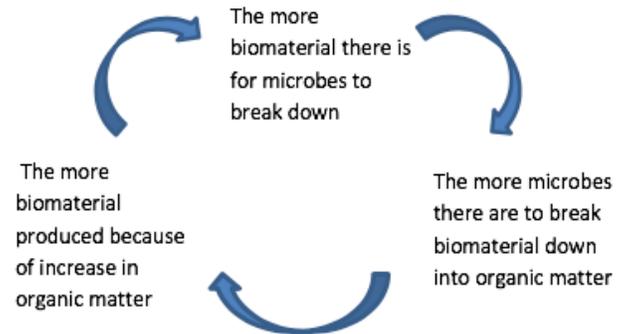
By: Kelly McCaskill, Livestock Extension Agent with N.C. Cooperative Extension in Moore County

Lots of farmers incorporate annuals into their forage mix at some point, but it is usually from a cover crop standpoint; something to hold the soil and possibly be grazed or made into hay until their perennial grass comes back into season. However, with the ever increasing selection of annuals available, you might want to consider adding annuals into your regular forage rotation from the aspect of soil building.

Soil building is all about increasing the overall health and growth capacity of your soil. Soil is a complex system of minerals, microorganisms and organic matter. Every soil type has a different composition of these “ingredients” but the “recipe” is basically the same. However, the amount of each does greatly affect how well plants are able to exchange nutrients, therefore grow, and the more organic matter and microorganisms, the more readily that nutrient exchange occurs. There are multiple aspects to soil building. We will cover increasing organic matter and decreasing compaction, both of which can be accomplished with annual forages.

Increasing organic matter: Depending on where you are located in the state, increasing your organic matter may be the most important thing you can do to amend your soil. Organic matter consists of living organisms (soil microbes) and partially decomposed plant tissue and animal waste, which can be broken down further into humic matter and non-humic matter (but we won't go into that). Organic matter is important to plant growth and soil health for several reasons. Not the least of which is the humic matter allows for greater moisture retention in the soil. Which obviously is key for plant water and nutrient absorption, but also decreases the amount of erosion, because instead of running right through or off the top of the soil, it allows for heavy rainfall to be absorbed like a sponge. The other important aspect of organic matter is the microorganisms. The organisms are composed of bacteria and mycorrhizae both of which help to decompose plant matter and animal waste into items usable by plants. You can add organic matter by incorporating compost, which is a great practice, but if you have more than a few acres to manage, this can get expensive very quickly. Annual forages give you the benefit of increasing your soils organic matter, while still giving your livestock something to munch, at a much cheaper price. Annuals increase your organic matter by incorporating trampled leaf matter and animal waste into the top couple of inches of soil. As the soil microbes break down the products, they not only increase their own population because of the increase in availability of food, but they also move the broken down material several inches further into the soil profile. It is an amaz-

ing positive feedback system!



As for which annuals do the best job of increasing organic matter, the answer is: they all do! Especially when planted as a mix of grasses or small grains, legumes, and brassicas. Grasses such as millet, sorghum-sudan, or crabgrass give you tons of biomass. Legumes such as cowpea, vetch, or clover will give a good bit of biomass as well with the added bonus of nitrogen fixation. Brassicas such as daikon radish, purple top turnip, or tillage radishes provide a lot of biomass above the ground to be grazed, a tasty tuber treat under the ground if the animals happened to pull it up, but also lots and lots of biomaterial that will breakdown if the tubers are left in the ground to decompose.

Decreasing compaction: soil compaction is an issue in almost all soil types in traditionally farmed systems. Years of tillage, heavy equipment usage, or minimally maintained perennial grasses all can contribute to compacted soil. Compaction restricts the amount of root growth in a plant, which will in-turn reduce forage yields and can slow forage establishment. Since forage establishment is stunted, compaction can also open the door for pasture weeds to take hold. Most annual mixes can be planted with a no-till drill, which itself will help reduce compaction, but the plants themselves are really what does the brunt of the work. As previously mentioned, brassicas added to a forage mix give a delicious and nutritious grazing option above the ground, but under the ground these terrific tubers are pushing their way through the most compact of soils, allowing for water and subsequently nutrients and microbes to go where they could not have otherwise gone. Forage radishes have a taproot (the tuber portion of the plant) that can reach 8-14" in length!

Soil building is like making a long term investment in your soil health. If you would like to implement some soil building practices into your grazing systems contact your local extension agent to find out what options will work best for your farm.

Anaplasmosis- What Now?

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

An old saying goes “lettin’ the cat outta the bag is a whole lot easier than puttin’ it back in”. This is one of those words of wisdom from years gone by, but it’s quite appropriate when we start talking about anaplasmosis, that nasty little infectious disease that we haven’t heard from on a regular basis for quite some time. Granted, anaplasmosis has been like an old high school classmate that pops his head up once in a while just to ask for a bit of money for a “no way to lose investment”. We have seen some clinical issues of anaplasmosis in recent years, but for the most part we have been able to keep it mostly abated. However, since Hurricane Florence, and a bit before, we have seen that high school classmate come barging back in with a renewed sense of entitlement. So what caused it and how do we get that cat back in the bag?

Let’s start with some good old fashioned economics. According to research done in Texas and California, the clinical costs of anaplasmosis in a cow herd is over \$400 per animal. That’s a pretty significant charge when we factor in that CattleFax tells us that it takes somewhere between \$450-500 to carry a cow for a year just on grass, hay, and feed. Already at the start, a cow with a clinical case of anaplasmosis is going to cost us \$900 – if she lives a whole year. Take that \$900 and subtract it from the price of a 550 lb. steer calf, which at the time I’m writing this would be about \$810 according to the NC weighted summary. What? We’re already losing \$90 and the cow gave us a calf? Alright, now let’s get a little deeper in the hole. That same research says that our calf crop will be reduced by 3.6%, our cull rate will rise by 30%, and that 30% of adult cows showing symptoms will die. If that doesn’t make you cringe a little, you must not have a very sound economic handle on your cattle herd. So, what changed?

In years past, we have been able to mitigate the effects of anaplasmosis in our cattle herds for the most part due to medicated minerals (chlorotetracycline). With the creation of the veterinary feed directive (VFD) and its implementation in January 2017, we lost our ability to utilize this tool freely. Now, that’s not saying that there aren’t ways to still use that tool, there are just a few more steps that have to be taken. With a veterinarian consult (yes, that means they have to come to your farm and see your animals at least 1-2 times per year) a VFD agreement can be written allowing you to purchase medicated minerals. A VFD can be written to supply CTC at a rate of 6000 g/ton in a free-choice mineral which will be available for up to 6 months at your regular mineral supplier. However, some distributors have decided to not deal in VFD products due to rigors of paperwork and governmental compliance, so please check availability before heading out to get your product. As with any free-choice mineral, one cannot guarantee that every cow will consume the right amount of mineral daily, so some disease break-through can still occur while providing CTC product. Bottom line is it’s not a magic bullet, rather, it is a complimentary tool in the toolbox. It will not replace good husbandry and proper nutrition. Most vets will recommend (1) using the product in the spring and summer to control spread of disease in a known infected area or (2) feeding during periods of stress in infected herds to keep clinical disease losses as low as possible. A strong working relationship with your herd veterinarian is important to identify the best ways to use these products.

Hope for the future isn’t completely out of reach. Within the past few months, we have been able to secure a permit to obtain a conditionally licensed anaplasmosis vaccine that was developed at Louisiana State University. It is a prescription vaccine, so working with a veterinarian is still mandatory. Since the medicated mineral is not wholly protective against disease break-through, the vaccine offers herd owners a different avenue for protecting their herds from disease. The vaccine should not be used on weak or stressed animals. It should also be noted that the timing of vaccine delivery is important. It should be given and boosted BEFORE the insects get crawling to ensure protective levels of antibodies are circulating before challenge occurs. Vaccination is a much more labor intensive management tool, but a much more complete protection than free-choice mineral provision. Your veterinarian can advise you on costs associated with both control methods to properly inform your decision making process.

Taking all this into consideration, we do have management strategies to mitigate the effects of anaplasmosis. While it’s not as easy as it once was, there’s still another way to skin that cat. If you have further questions, I can be reached at the Duplin County Extension office, or by email at adam_ross@ncsu.edu. Dr. Dudley is a practicing veterinarian with Livestock Vet Services out of Kinston and can be reached at their office or at hdudley@livestockvet.com. I would like to thank him for his contributions to this article.

A Few Horse Forage and Hay Considerations

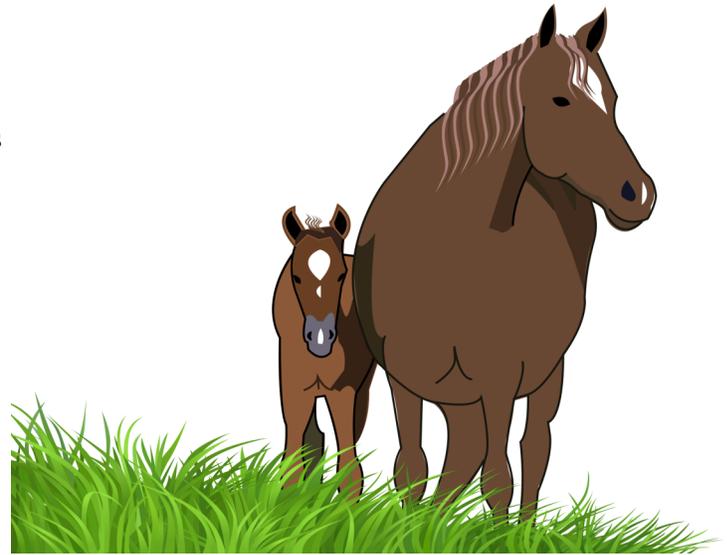
By: Brian Parrish, Agriculture Extension Agent with N.C. Cooperative Extension in Harnett County

Coastal and Crabgrass Mixed hay– Many coastal bermuda hay producers work hard and spend a good deal of money trying to keep crabgrass out of their bermuda horse hay. The problem for the hay producers is that the crabgrass component takes longer to dry and increases the chance for the hay to get rained on. Many horse owners will refuse beautiful coastal and crabgrass mixed hay that dried properly. From my experience, the horses like the crabgrass coastal mixed hay better and it can easily be a better quality hay when there is a little crabgrass mixed in.

Foxtail Millet– Horse owners should check hay for foxtail millet before feeding to their animals. Mouth ulcers known as hay blisters can occur when horses eat foxtail millet seed heads. Foxtail seed heads resemble a bottle brush or a fox tail. The seed heads have tiny barbs that can not only injure a horse's mouth but can also cause irritation to the intestinal tract. This forage is also not recommended for horse hay because it contains a glucoside toxin that can cause kidney and joint problems in horses.

Pearl Millet (This is the good one for Horses!)– Pearl Millet is a summer annual that makes a great temporary forage for horses. It can be broadcast planted at 25 pounds per acre or can be drilled at 20 lbs. per acre at a planting depth of ½ inch to 1 ½ inch in depth. The best planting dates for the Coastal Plain of NC is May 1 through May 15. Dwarf or semi dwarf varieties are recommended for grazing.

Sorghum, Sudangrass, and Sorghum-Sudan hybrids– These forages along with Johnsongrass are not recommended for horse pastures. These species have been implicated in cases of cystitis (urinary bladder infection) and abortion. Mares affected by cystitis may have urethral irritation. A yellowish sticky granular fluid accumulates in the bladder and death can result from subsequent kidney infections. These plants may also develop high levels of prussic acid when chopped, trampled, chewed, and frozen. At high levels, prussic acid can be toxic to livestock.



White Clovers– Ladino clovers will produce the most forage in a pasture, but are also the least grazing tolerant. There are a few white clover varieties with improved grazing tolerance that have been developed over the years that are a better fit for horse pastures. These grazing tolerant white clover produce an abundance of stolons, which helps the plant tolerate close continual grazing. If you would like to add white clover to a pasture, it is a good idea to get the grass well established and weed-free before adding the clover component. Most pasture herbicides will not only kill weeds, but will also kill clover.

Red Clover– Horses grazing red clover occasionally salivate excessively, a condition commonly known as slobbers. The condition is caused by a fungus and is normally aesthetic, but pregnant mares have reportedly aborted after eating infected red clover for extended periods of time. The slobbers generally occur when more than half of the forage dry matter is red clover. Horses seem to like eating white clover better than red clover. Some horses will not eat red clover. White clover and grass mixes make better hay than red clover grass mixes because red clover tends to contribute to a dustier hay.

Fescue– Toxic endophyte fescue can cause reproductive problems in mares and reduced growth rates in young horses. The most common problems seen in broodmares grazing toxic tall fescue include; no milk production, abortions, retained placentas, weak foals, stillbirths, and prolonged gestations. Broodmares grazing on toxic tall fescue should be removed from the pasture 30-45 days prior to foaling.

Parasite Control: More than Dewormers

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

If you raise small ruminants (sheep or goats), you are very familiar with the importance of parasite control. Although this topic is covered in various workshops and newsletters, the timing is perfect to discuss it in this article as well! Spring is on its way. With that we get sunnier days (hopefully) and our animals are turned out on greener pastures. As we turn them out, we have to be concerned with the increased risk of parasites.

Wet and warm environments are ideal for parasite development. Parasite larvae remain close to the ground where there is enough moisture. They also like to use the dew to go up and down the grass blades. When animals graze early in the morning and in the evening, the dew is present and often contains larvae.

The barber pole worm is a blood sucker that attaches to the abomasum and can cause severe anemia. The animals are less efficient because the worms are attached to the stomach and taking up those needed nutrients. Young animals are often more susceptible to parasite problems. The easiest way to deal with these parasites used to be anthelmintics (dewormers) but as resistance builds up, researchers are trying to find new ways to combat these problems.

Grazing and forage management is one of the most effective ways to control parasite problems. A three-day rotational cycle can help keep the numbers low and keep more healthy animals on your farm. The total life cycle for the barber pole worm is about 22 days; the animal consumes infected larvae, larvae attaches to abomasum and becomes reproductively mature at about 18 days. The females will lay their eggs (5,000-10,000 eggs A DAY) and these eggs are excreted by the animal onto the pasture and the cycle repeats itself. Oftentimes, they mature from egg to infective larvae in about 4 days. If you keep your animals on a 3 day rotational grazing schedule, then they leave that area before the eggs can become infective. Eggs can overwinter on pasture but need a hot, humid climate to emerge. This is why the spring is a significant time to worry about parasites.



Species diversity can aid in the reduction of parasite numbers on your pastures as well. If you graze cattle after your sheep leave the paddock, they break up that parasite life cycle. It may also be effective to plant different forage species in your pasture. Sericea lespedeza, chicory and mimosa contain tannins which often have a detrimental effect on parasites. Browse offered to goats, their preferred forage anyway, can keep their head up and away from the infected larvae on the short grass blades.

There are several breeds that may have more parasite resistance than others. Cross breeding with some of them may be useful on your own farm. They become infected, but their immune system takes over and rids them of the parasite before they become too much of an issue. St. Croix and Katahdin sheep are two such breed examples.

Parasite control is important for all species, but often our eastern NC sheep and goats are very susceptible. Dewormers may help but adjusting other management practices may be just as effective, if not more!

Feeding for Success with Livestock Projects

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

Feeding 4-H livestock projects successfully requires thought, planning, evaluation, and work! It is necessary to have a good plan, follow that plan, and carefully evaluate and make course corrections to that plan. In this article, we'll discuss some concepts and information to guide feeding practices.

First off, consistency is key. You should be consistent in when, what, and how the animal is fed. There are a variety of reasons why this is so important, but it's easy to understand that consistent intake leads to consistent, predictable performance. From a scientific perspective, ruminant animals like cattle, sheep, and goats especially need consistent feeding times two or three times per day because of how they digest nutrients. These animals do not have a simple stomach like humans or pigs. Instead, they have a four-compartment stomach that relies on microbes (bacteria, fungi, and protozoa) in the rumen to break down feeds into nutrient particles that can be absorbed by the animal's body. The type and number of these microbes varies depending on the animal's diet. If a new ingredient is introduced into the diet, then a population of microbes that can digest that ingredient has to develop, and this takes a few days to accomplish. This is why you never want to make abrupt changes in the type or amount of feed a ruminant animal is receiving, especially if the diet is high in grains and low in roughages. Also, the pH of the rumen fluctuates with feed intake. After eating, the pH drops (becomes more acidic) with the process of digestion. As digestion slows, the pH begins to increase back to near-neutral levels. If feeding occurs too frequently, this can cause the pH to stay acidic, leading to digestive problems such as acidosis.

Of course, animals are creatures of habit and respond well to a routine. Inconsistency in feeding times and other activities can cause stress to an animal, which can trigger a host of other problems. Just like most humans do not like change, I believe animals aren't that keen on it either! Most experts agree it is best to feed animals two or three times per day, with the majority being fed twice.

So, how much do we feed twice per day? Intake is best predicted as a percentage of the animal's body weight, which is why it is very important to weigh your show animals regularly as they grow. The table below lists a range of feed amounts as a percentage of body weight in the second column, then some examples of daily intakes in further columns. Keep in mind this intake includes the dry weight of *all* feeds, including any hay. Generally, animals tend to eat a lower percentage of their body weight as they grow, but because body weight is increasing, the daily intake increases as well.

Species	Amount/day (% of body wt.)	Example weight/ intake	Example weight/ intake	Example weight/ intake
Steer	2 - 3	600/15	900/20	1200/23
Hog	3 - 7	80/4.7	120/6.3	200/8.3
Lamb	3 - 5	75/3.75	100/4.5	125/5.25
Goat	2.5 - 4	50/1.75	75/2.45	100/2.5

So, in addition to weighing your animal, you should weigh your feed! Don't feed based on volumes, especially random volumes such as "a scoop" or "a bucket." I recommend selecting a particular cup, scoop or bucket and weighing the feed in that container with a good set of kitchen scales, marking incremental weights on the container so you can adjust as the animal grows or portion feed for different animals without constantly having to re-weigh. You should do this for any new feed or ingredient. Don't assume that every pelleted feed weighs the same by volume, they can actually vary significantly.

What about self-feeding, or putting an animal on full feed? It certainly simplifies matters to fill up a feeder every few days or so and just let the animals have all they want. This is very commonly done with pigs, but the ration would need to be carefully balanced to avoid digestive upsets in ruminants, and those animals still would ideally be hand-fed to adjust to a full feed intake before allowed to go on self-feed. Still, there are some compelling reasons to hand-feed daily, even for pigs. Hand-feeding can reduce waste of feed. It is difficult or impossible to accurately feed a top-dress or other supplements if animals are self-fed, and these ingredients often become distasteful after a day or so out of storage, leading to refusal. Hand-feeding on a routine also can actually increase intake of many animals if they feel they are having to compete with pen mates for feed, whereas some self-fed animals may not eat as aggressively. Finally, hand-feeding helps create a routine for the animal, and more importantly, a routine that involves you! This consistent positive interaction helps gentle the animal and helps it to learn your voice and mannerisms and bond with you.

Besides the advantage to the livestock, this consistency is good for young people involved in livestock projects as well. There are scores of articles online about the benefits of regular activities and chores for kids, including things like learning responsibility and delayed gratification, building determination and self-esteem, among others. There are a lot of activities that can build these character traits in young people, but it's great to have them learning and growing while involved in livestock. Have fun feeding and building good memories in the show barn!

Is a Pellet Furnace a Good Fit for Your Farm?

By: Richard Goforth, South Central Area Specialized Poultry Agent with N.C. Cooperative Extension

Growers are often looking for ways to reduce energy cost without hurting bird performance. One alternative that may be worth considering is using a wood pellet furnace to heat your poultry house. These units have been field tested in other parts of the country and NC and shown to be effective in reducing fuel cost when the grower is located within an economical distance from a pellet mill. In addition to producing a fuel savings because these unit's combustion occurs outside the house, they do not add water to the house, keeping the litter drier and reducing minimum ventilation fan run times. They have shown to reduce mortality and in some larger studies have produced better feed conversion and better paw scores. Carolina Land and Lakes has grants available to help install one of these furnaces on several farms in the South-central area of NC. Below are some bullet points that outline some key points of the program.

- Wood pellet furnaces to heat poultry houses, rather than propane or natural gas, have been in practice in Northern Alabama for more than a decade.
- Studies conducted by Auburn University have documented that dry heat, compared to wet heat from fossil fuels yields a lower mortality and higher bird weight.
- Supported by NC Department of Agriculture, Carolina Land and Lakes (CLL) has an ongoing project to validate for poultry production in NC.
- Currently CLL has placed 12 furnaces with 7 growers in the foothills region of western NC.
- NC data is consistent with the Auburn study.
- In the CLL study, the wood pellet poultry house has an identical house heated with propane (Must have at least 2 houses the same age and design).
- Department of Agriculture grants cover all furnace and installation costs except a 30 amp/240-volt service and a communication cable.
- The grower is required to complete and submit a flock report sheet, which CLL provides, in addition to mortality, and average bird weight, if available; the grower must measure and report biweekly data for CO₂, NH₃, and humidity.
- CLL provides the two instruments needed to measure these parameters.
- The Auburn study showed an enhanced feed conversion for the wood pellet houses, CLL has not been able to measure this, but we hope to do so as our smaller growers (4 houses) become 100% heated with wood.
- Although it is expected that the drier wood pellet heated houses produce more usable paws, we have not documented, but wish to in the coming year.
- Our better growers have seen significant fuel cost savings for pellets versus propane, even in this time of lower propane costs. This occurs as they manage the exhaust fan intervals. The typical fan run time for a propane house compared to a wood heated house is 3:1.
- CLL will transfer the ownership of the wood pellet furnace to the farmer for a very nominal fee at the end of the 3 to 5 -year study period. Data will only be collected for the first three years.
- CLL asks that integrators assist with choosing farmers that are best suited for this project (most have consented, but check with your company first).
- Wood Pellets will be available from a pellet plant in Laurinburg and it is essential that your farm be located within a 50-mile radius.

If you are interested in learning more, meet the requirements, and are willing to collect and share the data, please contact your Area Specialized Poultry Agent or Melissa Patton at Carolina Land and Lakes www.carolinalandlakes.org or 828-244-8722.

