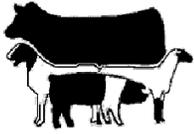


Livestock News



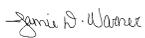
Inside This Issue

- 1 Important Information
- 2 Animal Waste Mgmt.
- 3 Bermudagrass Trial Plots
- 4 Grass Tetany in Beef
- 5 Algae in Horse Troughs
- 6 Importance of Selenium in Small Ruminants
- 7 Packing for a Livestock Show
- 8 Spring Cleaning Can Lead to Summer Savings

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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.

Pesticide Information

Classes at the Bladen Extension Office.

- March 20th at 4pm - 2 hrs. V credit
- March 20th at 6pm - 2 hrs. of X, A, B, D, G, H, K, L, M, N, and O credits
- August 14th at 5pm - 2 hrs. V credit
- August 14th 7pm - 2 hrs. of X, A, B, D, G, H, K, L, M, N, & O credits

Soil Sample Fees

Soil samples are \$4 per sample until March 31. After March 31, they are free.

Regional Youth Chicken Show

The show will be Thursday, April 26th at the White Lake FFA Camp in Bladen County and starts at 5:15pm. For a great time, come out and watch the kids show their chickens. There will be a concession stand with all proceeds going to Bladen County 4-H.

Horse Blog

The blog has articles on management, nutrition, health care, reproduction and other topics every week. The link is <http://nchorse.blogspot.com>.



Eli Farlow, Montgomery County 4-Her with his turkey at the 2017 NC State Fair.

Youth Market Turkey Show

The Youth Market Turkey Show is an opportunity for youth to raise and show market turkeys. The 2018 Youth Market Turkey

Show will be held during the NC State Fair, with turkey hen check-in on October 10 and the show on October 12. The competition is open to any NC youth between 5-18 who will be in grades k-12 on the day of the show. Montgomery County has several 4-Hers that will be participating this year. We can't wait to see how well they do.

Poultry Science Summer Institute

The summer institute is a five-day, four-night conference and workshop designed to broaden the high school student's understanding of the educational disciplines, scholarship opportunities, careers and industries related to poultry science. The cost is \$50 and includes lodging and all meals. The institute will be held on NC State University Campus. Applications are due 3/31/2018.

Montgomery Livestock Club Meeting

The Livestock Club will meet April 6, at 6pm. All youth between the ages of 5-18 are invited to attend. Jamie Warner, Livestock Agent, will be talking about Showing and raising poultry

Master Gardener Plant Sale & Hypertufa Workshop

The Plant Sale will be held April 28, 2018 from 9-12, with the Hypertufa workshop beginning at 10 am.

Master Gardener Seed Swap

The Seed Swap will be held at the Extension Office on March 28 from 6-8 pm. Myra Taylor, Montgomery Master Gardener will be speaking on the "How to Care for Roses" with the seed swap to follow.

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)

There will be an initial Type A class on April 26th and 27th at the Sampson County Extension Office. Class will be from 10am to 4 pm each day. Costs are \$35 for a manual and \$25 for exam fee. Registration is limited to the first 30 participants. Call Sampson County office, Patricia Burch at 910-592-7161 to register.

CERCLA Reporting

By: Amanda Hatcher, Livestock Extension Agent and County Director with N.C. Cooperative Extension in Duplin County

In November 2017, the Environmental Protection Agency (EPA) issued guidance regarding CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act). An additional law, EPCRA (Emergency Planning and Community Right-to-Know Act) is related to CERCLA but separate from its requirements. Both laws involve reporting requirements of releases of hazardous substances. At this time, EPA interprets EPCRA's statute to exclude farms that use substances in "routine agricultural operations" from reporting under EPCRA section 304.

Previously, farms had also been exempted from the reporting requirement of CERCLA, but a 2017 court decision had changed the exemption. A deadline for reporting compliance was set for November 15, 2017; however, recently it was decided that farms do not have to report until the Court issues its mandate, which is expected as early as May 1, 2018. Farms that are in compliance with their Animal Feeding Operation Air Compliance Agreement are not expected to report air releases of hazardous substances from animal wastes under CERCLA and EPCRA.

Reporting is required by CERCLA when substances released meet or exceed a certain threshold within a 24-hour period. For a complete list of these substances, go to: www.epa.gov/animalwaste. Ammonia and hydrogen sulfide are common hazardous substances emitted from animal waste that require reporting at 100 lbs of substance/24-hour period as the threshold. EPA has provided tools on estimating quantities; however, estimates can depend on a number of factors including geographic location, weather or environmental conditions, and others. Your local Extension Agent can help you use these esti-

mating tools as well.

To comply with the reporting requirement, the first step is to provide the National Response Center with an "initial continuous release notification" by email (farms@uscg.mil). The first step should only include the following information: name of farm, location of farm (city/state), and name of the hazardous substance released (ammonia and/or hydrogen sulfide). You will receive an email response with an identification number (CR-ERNS number) for your farm. Keep this number and a copy of the email for your records.

The second step is to provide written notification within 30 days of the email or phone call. Contact your Extension Agent for a copy of the continuous release reporting form and/or for assistance in completing the form. North Carolina producers should mail their form to: EPA Region 4; Attn: Victor Weeks, 9T25; Atlanta Federal Center; 61 Forsyth Street; Atlanta, GA 30303-3104. Keep verification of the mailing, with a copy of the letter.

The third step is to provide a follow-up written report to the address above at the one-year anniversary of the report. Keep verification of the mailing, with a copy of the letter.

For more information, contact your local Extension Agent, company representative, consultant, or go to www.epa.gov/animalwaste.



Hay Directory

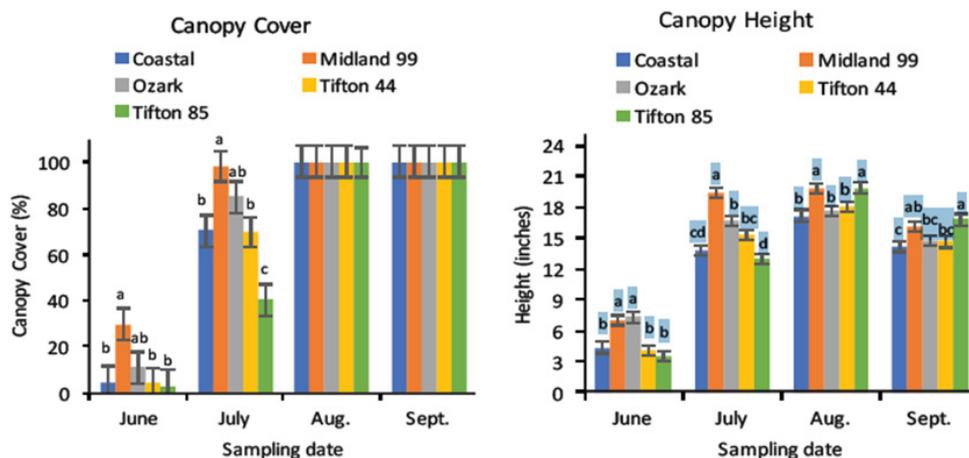
North Carolina Department of Agriculture's Hay Alert is at <http://www.agr.state.nc.us/hayalert/>. Producers can call the Hay Alert at 1-866-506-6222. It lists people selling hay or looking for hay to buy. It is free to list your hay.

Bermudagrass Trial Plots

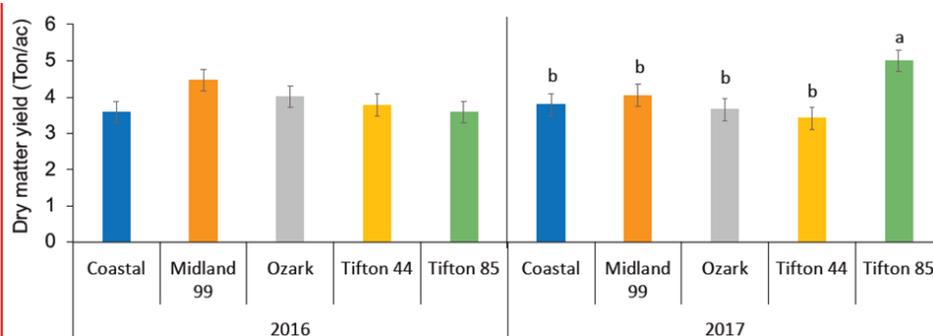
By: Becky Spearman, Livestock Extension Agent with N.C. Cooperative Extension in Bladen County

In April of 2016, Extension Agents from Bladen, Cumberland, Scotland and Robeson counties, established a sprigged bermudagrass variety trial in Bladen County. The goal is to evaluate ground cover, canopy height, dry matter (DM) yield, and susceptibility to Bermudagrass Stem maggot (BSM) damage of five bermudagrass cultivars. The cultivars are Coastal, Tifton 44, Tifton 85, Ozark and Midland 99. These were chosen because they are the most commonly sprigged in North Carolina. The plots were randomly selected and are 40 feet by 100 feet. They were established with a sprigger using 40 bushels/acre. Plots were harvested to ~3 inch stubble height four times (July, Aug. Sept. and Oct.) in both years during the growing season. The plots are in a lagoon sprayfield.

Canopy cover and height: During the year-of establishment (2016), there were differences in canopy height among cultivars in the first two sampling events; however, by August canopy cover reached 100% for all cultivars. Differences in canopy height were present in all sampling events but height was greater than 12 inches starting in July.



Dry Matter Yield: In 2016, DM yield was not different among cultivars and averaged approximately 3.8 Ton/ac. In 2017, DM yield of Tifton 85 was greater (4.9 Ton/ac) compared to all other cultivars (approximately 3.7 Ton/ac).



Bermudagrass Stem Maggot (BSM): Stem maggot damage was first reported in Georgia in 2010. Since then it was spread to North Carolina. The stem maggot fly lays an egg on a bermudagrass leaf. The larva emerges and starts to eat at the top node causing yellowing and necrosis of the top leaves. Symptoms include a bronzing of the hay field that has a frosted appearance. Upon closer inspection, the top 2-3 leaves of the plant have died and can easily be pulled out. Damage and yield loss depend on when the maggots begin eating. If close to harvest, then there is usually lower yield loss. If damage occurs during early part of regrowth, then losses can be severe. Last year, there were more reported cases of damage in Bladen County.

More information can be found from Georgia Extension at <http://extension.uga.edu/publications/detail.html?number=B1484> or watch a video at <https://www.youtube.com/watch?v=fx03UMYJiVI>



Grass Tetany in Beef Cattle

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

Grass tetany commonly referred to as “grass staggers” is a metabolic disorder in beef cattle caused by low magnesium (Mg) levels in blood. It usually occurs in cows during early lactation, especially during cool weather in spring or fall when cool season forages come out of dormancy and grow rapidly. Wet soils that are low in oxygen can also prevent plants from taking up Mg regardless of the soil Mg level. These fast growing pastures generally have a high moisture content which can also dilute the nutrient content within the plants. Grass tetany occurs primarily when cows are in transition (being switched) from winter rations to grazing lush pastures. Although the highest risk is in spring, grass tetany can occur in the middle of winter or summer when unusual weather results in rapid forage growth on farms where fertility (especially nitrogen and potassium) is high.

Grass tetany usually results from a low level of magnesium in rapidly growing forages, but has also been associated with nutrients that interfere with the absorption of magnesium. Grass tetany is more likely to occur on soils high in nitrogen N and Potassium K but low in Phosphorus P. For this reason, cool season forages fertilized with high rates of poultry litter should be of concern. Often the first sign of grass tetany will be a dead cow that was apparently healthy the last time she was checked. During the early stages of the disease, the cow will appear nervous, with a stiff gate, stumbling and possible muscle tremors. The cow will then become dull in appearance, and finally will go down and may thrash violently before death occurs. Grass tetany can also afflict stocker cattle, especially when grazed on small grains.

Treatment should be given in the early stages of grass tetany. Animals that are down for more than 12 to 14 hours have a slim chance of survival. Treatment of grass tetany is primarily accomplished with an IV administration of a magnesium solution. Veterinary assistance is essential because rapid administration or excessive blood levels of Mg can cause the animal to have heart failure.

Prevention has been accomplished by feeding cattle supplemental hay or grain, liming pastures with dolomitic limestone which contains magnesium or providing a mineral mix or supplement containing magnesium oxide. Supplementing with magnesium oxide during moderate or high risk periods is most practical, and 1 oz/day will generally completely prevent or greatly reduce incidence of the disease. The magnesium oxide may be in a

commercial high-mag mineral (10-14% Mg) or when an outbreak occurs, it should be mixed at 6% of a grain mix and fed at one pound/head/day (increase to two pound/head/day if following an outbreak. If a high mag mineral is used it should be the only source of salt available in the pasture. Pastures containing legume forages will normally be less affected because legumes tend to be high in Mg. However, legume growth can be limited at times moving from winter to spring. Forage samples can be tested at NCDA forage lab in Raleigh. Typically, forage containing 0.2 percent Mg or more is unlikely to cause tetany.

Producers with low fertility pastures should start feeding a high-mag mineral one month before the cows start to calve, and should continue through the end of the lush grass season in early summer. Producers with high fertility pastures (especially when poultry litter is used as fertilizer) should feed a high-mag mineral year-round.



Algae in Horse Troughs

By: Tiffanee Conrad, Livestock Extension Agent with N.C. Cooperative Extension in Richmond County

Since temperatures are starting to rise, you'll start to see an increase in algae growing in your horse tank. Algae needs three things to be successful. They are water, sunlight, and a nutrient source. The nutrient source could be from any organic material that has blown or gets dropped into the trough such as manure or horse saliva.

While most algae don't pose a direct health concern, certain types of blue-green algae release toxins that can lead to colic and scours. Large amounts of algae might make the water less palatable to your horse which could lead to reduced water intake. Keeping algal blooms to a minimum in your troughs is always a good idea. Some solutions to your algal problem could be shade, chemicals, barley straw, biological control, or scrubbing.



Placing a shade structure over troughs can help reduce sun exposure, therefore slowing algae growth. However, this incurs a cost and time and might not work in all trough locations. For chemical control, unscented chlorine bleach can be added to troughs at a rate of 2 to 3 ounces per 100 gallons of water. Chlorine burns off gradually in the heat, so you will need to repeat this weekly. You can also add copper sulfate to reduce algae growth. It comes as a blue crystal and often needs to be dissolved in warm water before being added to the trough. For a 300-gallon trough, dissolve half a teaspoon in 1.5 ounces of warm water, and then pour the solution into the trough. You'll want to mix it up really well just like with chlorine before the horses are allowed to drink it. If your horses share their water trough with other animals, you want to remember that copper is very toxic to sheep! Do not use copper sulfate if your horses share their water source with sheep. Zinc sulfate is another option. You can dissolve 1 cup in 1 gallon of warm water before adding to a 100-gallon trough. There are other commercial additives to kill algae in troughs.

Many include copper sulfate as an ingredient. Always follow the label on any chemical, not only because the label is the law, but also to keep your animals safe.

Although not fully understood, when submerged in water and exposed to sun, barley straw emits a chemical that slows algae growth. It won't kill existing algae, but will prevent new growth. How quickly it works depends on the water's temperature, with it taking several weeks at 50° Fahrenheit but only one to two weeks when water temperatures rise to about 70 ° Fahrenheit. University Researchers recommend using about 10-25 grams of barley straw per meter of surface area. Don't add more straw than this if fish live in the trough, because it can deoxygenate the water, and will kill your fish. Place the straw in netting and anchor it at the bottom of the trough. Premade balls are available for purchase from most pond supply stores.

Adding gold fish to your troughs can help reduce algae, although in areas with abundant bloom the fish might not be able to keep up. Regular gold fish are fairly cheap and work well. Some people like to use plecostomus, which are known algae eaters. If you're using fish, keep in mind that oxygen availability in a trough is often low and might not support very many fish. Troughs need to be deep enough so the water does not become too hot, and ice will need to be broken daily in the winter. You will need to check your trough often for dead fish that might release toxins into the water. Don't forget about them when you turn your trough over to clean it by hand. They are also sensitive to the chlorine found in county water. You will need to put them in another container and let the chlorine dissipate from the fresh water for several days before returning the fish back to the trough, so that you don't kill them.

Emptying and scrubbing troughs is very effective, although time consuming. Use a scrubbing brush or old stiff grooming brush for best results, and rinse out before refilling. This is my personal choice for algae removal on my farm, because it is cheap. Whatever method you decide is best for your situation, working to maintain algae-free water will help keep your horse drinking this spring and summer as the temperatures continue to rise. If you have any questions about algae, please call your local Livestock Agent.

Importance of Selenium in Small Ruminants

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

For optimal reproductive and growth performance, it is important for your sheep and goats to receive the proper nutrients. We often focus on the right grass and/or hay that will provide what our animals need and sometimes we forget that vitamins and minerals are just as necessary.

Sheep and goats require several minerals and vitamins to perform and grow properly. One of those minerals that may be lacking, especially in the soils of North Carolina, is selenium. Selenium functions most commonly as an antioxidant and helping to combat disease. It can also impact reproduction and growth if provided in improper amounts. But how much is too little? What is selenium toxicity? What happens when something goes wrong with selenium intake?

How much is too little? Selenium is necessary in the diet of many livestock species, including cattle and sheep. If soil contains less than 0.5 mg Se/kg of soil, it is considered deficient. For cattle, the FDA recommended amount is 0.1 mg/kg of diet. In sheep and goats, this number is 0.1-0.2 mg/kg; in hogs, 0.15-0.3 mg/kg; and in horses, 0.1 mg/kg. Poultry also require Se in their diet, with amounts ranging from 0.05-0.15 deemed acceptable (depending on stage of production/life).

What is selenium toxicity? Se toxicity is a common problem in the Western U.S. In acute cases, commonly referred to as “blind staggers,” the animal often staggers around, exhibits abnormal breathing, diarrhea, ataxia (no muscle coordination), or possible death. Chronic cases of toxicity are depicted by lameness, anorexia, loss of vitality, sore feet, and several other problems.

What happens with a Selenium deficiency?

- Immune Function: decreased neutrophil numbers, inhibited IgG response, more susceptible to disease
- Reproduction: silent heats, decreased testosterone, cystic ovaries, early embryonic deaths, retained placentas, mastitis, poor conception, abnormal semen characteristics
- General: reduced growth rates, white muscle disease, increased risk of cardiomyopathy or pneumonia, liver degeneration, inflammation

In selenium or vitamin E deficient sheep and goats, we often see what’s known as “white muscle disease.” This disease exhibits itself by degenerative muscles; the muscles effected are most commonly those of the skeletal and cardiac systems. There may be mild stiffness, inability to stand, difficulty breathing and many more. It is believe that goat kids are more susceptible than lambs to white muscle disease.

There are several techniques utilized to supply Se to livestock. A mix added to feed as a top-dressing is the most common method, with injections and oral drenching following close behind in popularity. In sheep, the FDA regulates the amount fed to 0.7 mg/head/day of Se. It is important to know the selenium content of your feed to prevent selenium toxicity. There is a fine line between enough supplementation and over supplementation.

In order to make sure your animals are provided sufficient nutrition, use a balanced ration and feed when possible. Sheep and goats require micro minerals and macro minerals, this article just touched on one of those. There are several choices out there for small ruminant minerals, just make sure between the supplements, the forage and whatever other feedstuffs you may use, that they meet the necessary nutritional requirements of your animals! Please contact your local vet or extension offices for any questions.



Example of white muscle disease

<http://ag.ansc.purdue.edu/sheep/ansc442/Semprojs/whitemus/whitemus.htm>

Packing for a Livestock Show

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

Jackpot season is upon us, and spring 4-H shows aren't far off. The animals have been purchased, fed, trained, groomed, clipped, washed, etc. for weeks, and now is the time to hit the road and the show ring to see how all that hard work and investment will pay off. One of the worst things that can happen is to get to a show and realize you've left some important piece of equipment or a convenience item at home or at the barn. Adding that kind of stress to the show ring jitters can really create an unpleasant experience, so here are some thoughts on packing for the show and some things to consider bringing (you may want to create a checklist, even if just on a smartphone notebook app; it can really help in the days leading up to a show!)

First of all, make sure the animals are prepared. Washing and clipping before a show can be a big help, and really reduce the amount of work involved on show day. This isn't to say there won't be some touch-up needed on show day, but you definitely can't pull an animal off pasture the morning of the show and expect it to look good in the showmanship drive. Have your clippers, clipper oil, towels, blower, and extension cords ready to go into the trailer. Also, if you have a generator, you might consider bringing it to the show, also. A lot of show barns have limited electrical outlets, and circuits can quickly become overloaded with fans and blowers. Having your own hose and nozzle is a good idea, too, as these are usually not made available at show barns.

Make sure you are washed and clipped, too! Have your show clothes washed and ready. Remember your show boots, belt, jeans, extra socks and a nice shirt. Having a holder for your exhibitor number is nice, too. Ladies might want to pack some extra hair ties.

It's wise to check your show ring equipment before heading out. Make sure you have all your halters, collars, show sticks, combs and brushes. And your animals still have to eat, so be prepared with extra feed and water buckets, and a supply of feed. You may want to have two sets of buckets; one for the barn, and one for the show box. Bringing your fly spray is a good idea, also, along with some supplies for treating wounds or scratches that might occur on the road or in the barn. Remember that water is the most important part of an animal's diet, and the show barn water might be distasteful to

your animal. So bringing along some electrolyte or sports drink mix to flavor the water might help your stock keep up their water intake.

That takes care of the animals, now what about the people? A cooler is a great idea, with plenty of water, drinks and snacks. These are available at many shows, but can be more expensive and less convenient than bringing your own. You probably want to bring some camp chairs, bug repellent, sunscreen, and medicine for a headache or indigestion (think fair food!) It's important to have some tools, such as screwdrivers, pliers, scissors, a knife, flashlight, hole punch and a hammer and nails. Be prepared for the weather, which could mean packing raincoats, sweaters and jackets, or shorts and sunglasses. Towels, gloves, and a first aid kit can also be quite handy.

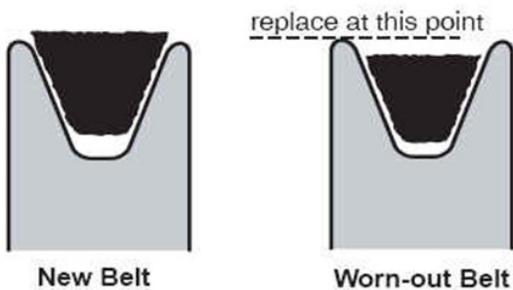
Since you've worked so hard for this experience, be prepared to remember it. Bring along your camera or video recorder, and make sure you have extra batteries, charger, memory cards, etc. Also remember your health papers, if required. There's nothing worse than traveling to a show and being turned away. It's also wise to bring a copy of the rules and schedule for the show, so you don't have to keep running to the show desk or asking someone about a particular aspect of the show.

But the most important thing anyone can bring to the show, by far, is a positive attitude and good showmanship. This is supposed to be fun, and having the wrong attitude can really make that impossible. Be prepared to help someone who is less experienced; remember you were in their place at one time, too. Remember that many of the folks working at a show are volunteering their time and labor to make the event happen, so a word of encouragement or thanks really means a lot! Be sure to thank the judge, too, even if you didn't do well in the show. Keep in mind that the winning animal or exhibitor is one person's opinion on one day, and not everyone can be in the winner's circle. The judge knows this, and odds are he or she was in your place not too long ago. Try to learn from every show ring experience, and you will find that you will get better and better!

Spring Cleaning Can Lead to Summer Savings

The unusually warm weather lately has most folks thinking of an early spring and just like our homes that are due for a good cleaning after being sealed up tight for winter, poultry houses can benefit from a good thorough cleaning and maintenance to prepare for summer's heat. It might even save you some money on your electric bill. Now is the time to make sure you clean and prep your barns for summer weather between your next flock cycle as it will be mid-April or later by the time those that are between flocks now have their next break.

Not only does cleaning help reduce the bacteria and potential pathogen load for the subsequent flocks, it also can reduce energy usage and prolong the life of the structure and equipment. Cleaning dust and cobwebs from ceilings reduces friction and increases air speed. Clean light fixtures will provide more light and may be dimmed further to produce the same foot candles as a dirty fixture; it also reduces heat buildup, especially important to prolong the life of CFLs and LED bulbs that hopefully you are already using over incandescent ones. Clean fan shutters and blades increase air flow which reduces the need for additional fans and longer run times. Make sure to properly adjust and replace fan belts as needed, while you clean those fans; worn and slipping belts waste energy by reducing blade speed. Make sure shutter and fan louvers are in proper working order and open fully when fans are operating. Broken shutters will increase back pressure reducing air flow, heating up motors and wasting energy.



Don't forget the air inlets and pay special attention to cool cells as they may need descaling if you have hard water or mineral buildup that reduces air flow and evaporation. Be sure to check that cool cell drip openings and returns are free of debris and allow the entire pad to be properly wetted. Clogged drip openings or spray nozzles reduce effective cooling area which means warmer temps that increase fan run times that wastes power. Properly cleaned and maintained cool cell pads will last much longer and retain evaporation rates much better. When pad openings become heavily clogged, static pressure will increase and hot air will be drawn through other cracks and openings without passing through the cool cell and your ability to cool your birds will suffer and drive up energy use by fans.

This is also a great time of year to clean up around the outside of the poultry barns and the entire farm. Make sure to remove old equipment and debris and get a head start on grass and weed issues that may have gotten out of hand last season. Keeping vegetation short near barns reduces rodents and back pressure issues on fans if it is allowed to grow too tall and thick near fan exhausts.

Spring is also the time when most growers are likely to clean out litter and spread on crop fields. Please make sure you and your clean out crews are not overfilling trucks and keep them covered and tires clean when on the roads. Be sure to keep up with your records for litter movement and spreading as required by statutes. I would also like to remind you that if you need help calibrating spreading equipment, contact your Area Poultry Agent for assistance or to borrow calibration kits. They can also help you with Nutrient Management planning needs and questions.