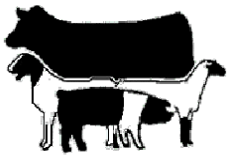

Livestock News

Cumberland County Center — January 2015

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For any meeting in this newsletter, persons with disabilities and persons with limited English proficiency 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.

Cape Fear Regional Cattle Conference

The 6th annual conference will be January 20th at the Southeastern N.C. Agricultural Events Center (1027 Hwy. 74 East) in Lumberton. The program includes a meal and time to visit with vendors. There will be a $5 charge - pay at the door. Call your Extension Office by January 13th to register. The conference starts at 4pm and speakers and topics include Dr. Matt Poore - Meeting Nutritional Needs Through Forages and Richard Melton - Making Genetics Work in Your Herd.

Regional Chicken Project for Youth

The Regional Chicken Project is an opportunity for youth in FFA and 4-H to learn more about the livestock industry. Through this project, youth will purchase and raise hens or broiler chicks and complete a project record book on their care. In May, the youth will participate in a show, where they will demonstrate to the judge their knowledge of the bird. Training for this will be provided through workshops. At the end of the project, the youth can donate their broilers to process for local food pantries or keep for their own processing. The hens can be kept for egg production or sold. Laying chick delivery will be mid February and broiler chicks delivery will be late March. Registration forms and money are due by January 9th. If you have kids or grandkids that may be interested, contact your Livestock agent for more details on prices and number of chicks.

2015 Sampson County Cattlemen's Classroom

There will be a series classes in Clinton on Tuesday nights from January 13 - Feb 10 from 5:30 - 9:00 pm and supper is provided each night. There is a $50 per person registration fee - pay the first night. Call the Sampson Office at 910-592-7161 and register by January 9th. Topics include: cattle weaning and feeding strategies for traditional and alternative markets; weaning nutrition affects on finishing; dealing with dystocia, orphans and calf sickness; external cattle parasite management; pasture and hay field insect management; calculating forage availability and allocating to animals; forage fertilization; fetal programming and nutritional imprinting; and meeting the needs of animals.

Agriculture and Forest Landowners Meeting

The meeting is Tuesday, January 27th from 11am - 2:30 pm at the Extension Office in Elizabethtown. Lunch is provided. Call the Extension office at 862-4591 to register by January 23. Agencies will discuss updates on Tax Reevaluation and Present Use Value, Farm Bill, Voluntary Agricultural District, Corporate CURE, What Wildlife Resources Commission Can Do For You, Cooperative Extension, Soil and Water Conservation, and Natural Resources Conservation Service.

NC Forages and Grasslands Council Winter Conferences

The same program will be at 3 locations on January 27 in Kenansville, January 28 in Statesville and January 29 in Canton. Program starts at 1pm and topics include Annual vs. Perennial Forages and Their Use in Forage Systems: A Production Perspective and Profitability Evaluation. Prices are $20-$30. Call your Extension Office for the flyer.

NC State University A&T State University COOPERATIVE EXTENSION
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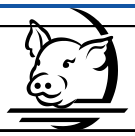
Animal Waste Management News

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



10-HOUR INITIAL ANIMAL WASTE OPERATOR CLASSES (OIC):

- January 22 and 23 at the Bladen Extension office in Elizabethtown. Costs are $35 for a manual and class or $5 for just the class. Registration deadline is January 16th. Call 910-862-4591 to sign up. Type A and B are offered.
- February 11 and 12 at the Anson County Extension office located at 501 Mclaurin St. Wadesboro, NC. Class qualifies participants to take the exam or for continuing education credits on an hour by hour basis. For more information or registration contact, Richard Goforth at 704-283-3801 or richard_goforth@ncsu.edu. Type A and B are offered.

CONTINUING EDUCATION CREDIT CLASS:

January 30th is a 6 hour class in Richmond County starting at 8:30 am. Call 910-977-8255 to register.

IMPORTANT REMINDERS:

- **Peak-season Soil Testing Fee - $4** for all soil samples processed by the lab during December through March. NO fee from April through November.
- **Waste Analysis Fees are $8 per sample.**
- **Change in Soil Sampling Frequency for Swine Farms -** A change in legislation in 2013 states that the **soil testing frequency has been changed from annually to every three years.** Farms that soil tested in 2014 are good until 2017.

Good Neighbor Policy

Animal operations and waste management systems can create several potential nuisances including odors, flies, noise and others. Swine and poultry farmers need to be aware of these potential problems and negative situations that could arise with neighbors. There are a lot of best management practices that we use to minimize problems. Take a few minutes and think about areas that you could improve on. Your waste plan and general permits have specific guidelines to follow. It is always easier to prevent problems than correct them. Consider routine maintenance programs for buildings, equipment and grounds to reduce problems and think about possible safety hazards. Animal waste is a valuable resource, but must be managed. I am writing this reminder due to several phone calls I have had this week due to nuisance complainants. Even in rural counties, people moving in may not be familiar with ag practices, so think about what you can do to improve your farm's perception from your neighbors viewpoint.

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 for sale on-line.

Forage Management Tips

From Production and Utilization of Pastures and Forages in North Carolina

JANUARY

* If winter pasture is limited, feed hay in the pasture or allow cows to graze every other day. The priority for limited pasture is (1) calves by creep grazing, (2) stockers, (3) nursing cows, and (4) dry cows.
* Winter annual pastures that were planted on a prepared seedbed may be severely damaged if animals trample on them during wet periods. Allow calves first priority to these high-quality annual pastures.
* Sample hay and send to NCDA lab for analysis.
* Determine animal feed requirements for the year and out line a 12 month forage plan to meet animal's needs.

FEBRUARY

* Apply nitrogen to cool-season grasses to stimulate early spring growth.
* Lime fields that will be prepared for spring plants.
* Locate sources of hybrid bermudagrass sprigs for planting next month.
* Burn warm-season grass residues in late February or early March.
* Get herbicide sprayers ready to control weeds in dormant bermudagrass fields.

Winter Weed Control in Pastures and Hayfields

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

What is a Weed?
Weeds are any grass or broadleaf plant that grows in unwanted areas. If you are growing bermudagrass for hay production, anything in the field growing besides bermudagrass is considered a weed. Weeds can have negative effects on pastures and hayfields. They can reduce forage yield, decrease forage quality and can even be poisonous to livestock species.

Weeds reduce the forage yield by competing with the desired forage and weakening the stand of your grass. Ryegrass, a cool season grass, grows in winter and early spring. It poses a potential problem for bermudagrass fields. Ryegrass is still actively growing while bermudagrass is returning from dormancy and if allowed to continue growing, ryegrass will outcompete the bermudgrass and weaken or kill the stand.

Winter weeds germinate and grow in the fall and winter and through early spring. Some of the most common winter weeds are Buttercup, Common Chickweed, Curly Dock, Henbit, Wild Garlic or Onion, White Clover, Wild Radish, Ryegrass, Wild Mustard, and Common Dandelion.

Henbit

What should you do?
Proper weed identification is the first step in controlling winter weeds. Keeping records of the type of weed you have in your fields is a good idea to determine if your weed control program is working efficiently.
Some weeds may take years to control so it is important that we identify weeds early for several reasons:
1. Gain control of the weeds before the desired forage becomes thinned out.
2. Younger plants require less herbicide application; in turn saving money.
3. Some herbicides won't kill the mature weed and the seed.

What is the best method in controlling weeds?
Prevention is always the best method in controlling weeds. Weeds are spread by seeds. Hay, cattle, mowing equipment, grass seeds, wind, water and wildlife can then spread the seeds. Planting grass seeds that are contaminated with weed seeds can introduce weeds. It is recommended to purchase certified seeds.

What are other control practices?
Mechanical, chemical, biological, and culture control are methods to control weeds.
Mechanical control involves physical disruption of the weed. This can be achieved by mowing. However, mowing does have negative effects such as fuel costs, can spread seeds around promoting more weed growth and it may not help with large weeds.

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

Biological control involves the use of living organisms such as plants, herbivores, insects, and nematodes to subdue the weed growth.

Cultural control involves the use of monitoring soil pH, fertility and management practices to increase the competitiveness of the desired forage.

When is the best time to control winter weeds?
The best time to control winter weeds is October through December because winter weeds are usually young, germinating and actively growing. Since we have already missed that time frame for this year, February through April is also a good time to control winter weeds. They are beginning their final growth spurt. It is important that the weeds aren't allowed to seed. Don't wait too late.

December through February is normally not the best time to control weeds, but treatment can be applied to dormant Bermuda. Hog waste should not be pumped on dormant Bermuda grass, because nitrogen will not be utilized and there is potential for runoff in ditches and streams. Hog waste can be applied to cover crops, such as cereal grains and winter grasses that are actively growing.

Embryonic Mortality (EEM) In Cattle

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

One of the biggest economic losses on a cow-calf operation is Early Embryonic Mortality, or EEM.

EEM is a term for when cows abort a pregnancy at a very early stage, namely before 42 days after conception. If we look at all the losses that occur during gestation in cattle, greater than 90% of these will be in the first 40 days. If we break this number down even further, at least 3/4 of these early abortions occur the first 17 days of pregnancy.

Just how big a problem is EEM?

It varies from herd to herd and in regions around the country, but numerous studies has shown that over 90% of first estrous breeding's, including AI services, will result in fertilization. Yet we see only about 70% of these results in a live birth. So across the industry we are loosing about 27% of our calves in the first 3-4 weeks after breeding.

Do you have a problem with EEM?

If you are like every other cattle herd in the US then yes, you do. What are some signs to look for? That is what makes seeing EEM so difficult. The biggest sign of a female that has had EEM is she is either open after the breeding season or she has moved herself "back" in the season by more that 3 -4 weeks from the previous year. Ideally, we would like all of our cows to calf either at or even a little before her calving date from the previous year. If you have a cow that suddenly goes from the front of the season to the end the following year, there is a good chance she experienced an EEM event. If there is a silver lining with EEM is that it occurs so quickly that often a cow will be able to cycle again and conceive a few weeks later into the breeding season. What goes unsaid when this happens is that you will loose 6-7 weeks growth (which could easily be more than $100) in this younger calf when it comes time to sell it. Also, you now have a cow that has worked herself to the end of the breeding season, so if she does have another EEM event in her life she will not have time to re-breed. This will leave you with a choice, sell her after you wean her calf or keep her around open for the next year.

What can you do to prevent EEM?

Unfortunately, very little can be done to prevent EEM. The biggest occurrence in EEM is when an embryo has a defect and is unable to grow past a certain point. This is simply Mother Nature's way of dealing with a problem. Chromosomal defects, weak embryo's or other fatal flaws in the embryo get 'weeded out" in a hurry. After these unavoidable flaws however, there are a few issues we as managers can address.

Nutritional problems

Cattle that are in thin condition or are steadily loosing weight at breeding are more susceptible to EEM. When cows are in poor nutrition, reproduction is one of the first body functions that shut down. Keeping your cows in a good body condition and feeding them adequately will help prevent this.

Another nutritional issue to avoid at any stage, but especially in early pregnancy, is high nitrate levels in your base forage. High nitrates can cause abortions at any stage, but the first few weeks of pregnancy is especially vulnerable to nitrate issues.

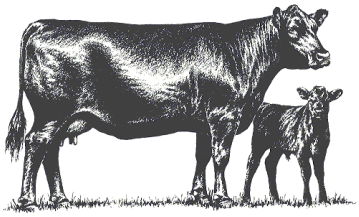
Heat Stress

One factor in EEM that is well documented is avoiding heat stress in early-bred cattle. This can especially be an issue with Spring or Summer bred cattle. While we cannot keep it from being hot, we can avoid doing things like handling cattle mid-day or transporting cattle for long periods in the dead of summer.

Disease Issues

Finally, make sure your herd health plan is adequate to provide protection to reproductive disease. BVD, IBR & Vibriosis are just three of the common reproductive disease that will cause abortions in cattle. Make sure your herd is adequately vaccinated for these types of reproductive diseases. If you are not sure if your vaccination program is adequate then speak to a large animal vet or your county extension agent.

If you have a cow-calf farm, than you will have some EEM issues to deal with. Just make sure you are doing what you can to keep this problem as small as possible.



Caring for the Aging Horse

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

Horses, like humans, age at different rates and in different ways. Understanding how a horse's body changes as it ages is the key to caring for them. Areas of importance to pay attention to when caring for older horses include nutrition, nutrient absorption, dental care, metabolic disorders, and lameness.

When a young horse first develops teeth, only a small portion of the tooth is visible above the gum line, with the rest of the tooth staying beneath the gum's surface in the dental cavity. The teeth are made up of a soft material that wears away as the horse chews. They will continue to push up to replace what has been worn away. The circular motion the horse chews in naturally wears the teeth and creates sharp edges on the outside of the top teeth and the inside of the lower teeth. If these sharp edges are not taken care of the horse could develop sores in its mouth, making it less likely to want to eat. To prevent sharp points, a veterinarian or horse dentist must file the teeth, or float them, regularly (one to two times per year). By time a horse is in its late 20s, early 30s, most of the teeth may be worn down to the roots, leaving it with little ability to chew and digest food. If chewing becomes difficult, changing the way you feed the horse will greatly help. Many commercial feed companies make senior feeds with a softer texture to make it easier to chew. Wetting pelleted feed down is also an option. Forage can be provided in hay cubes and pellets that can also be wetted down. Soaked feeds can easily ferment in the summer and freeze in the winter, so should only be fed in amounts the horse will eat in a single meal. This may require that the horse get fed three or more times a day to meet its nutritional needs.

When it comes to nutrition, some older horses may never need drastic diet changes, where others will require a special diet to help them maintain good health and body condition. As a horse ages it becomes more difficult for them to absorb all the nutrients they need from their feed along with having a lower ability to digest fiber and decreased gastrointestinal movement. Poor nutrient absorption may be due to intestinal damage caused by parasites if the horse was not on a regular parasite control program throughout its life. If a horse is having a hard time keeping its body condition, supplementing with highly digestible, high energy feeds may be necessary. Selecting commercial feeds with grains that have been processed (crimped, cracked, rolled, or steam flaked) is a way to increase digestibility because the seed coat is no longer a barrier for the digestive system. Adding fat to the diet is a way to increase energy. This can be done by purchasing commercial feed with a higher fat content or top dressing feed with a fat supplement, such as vegetable oil. Before making any major nutrition changes, consult a veterinarian to ensure that all nutritional needs are being met. When making dietary changes, do it slowly by gradually introducing new feeds or supplements over the course of four or five days.

Lameness and arthritis can begin at any stage of the horses life but years of stress, injuries, and general wear and tear can worsen the pain in older horses. There are numerous feed supplements marketed for improving joint function. Some horses respond favorably to supplementation while others do not respond at all. Injecting directly into a bothersome joint with steroids and/or hyaluronic acid creates direct, immediate relief that can last for months to years before having to be repeated. Lameness can also be caused by problems related improper hoof care, laminitis, and lack of adequate hoof growth due to the decreased ability to get key nutrients from feeds. Poor hoof quality and imbalanced hooves can worsen arthritic conditions as well as lead to soft tissue injuries. Consult a veterinarian and farrier to decide the best way to care for the horse. A horse that does have arthritis should not be kept in a stall unless absolutely necessary. Allowing the horse space to walk will decrease discomfort caused by stiffness.

As a horse ages, the development of metabolic disorders can happen. One of the most common metabolic diseases in older horses is Cushing's disease which causes a horse to produce too much cortisol which leads to a long, wavy hair coat that does not shed in the spring, laminitis, loss of body muscle, lethargy, and increased water consumption. This disease can be controlled with medication along with routine hoof care and a specialized diet of feed with a low starch content.

As a horse starts to age, it is the responsibility of the caretaker to make the necessary changes to keep the horse comfortable. Although the horse may not be as productive and useful as it once was it is still important to provide them with the necessary veterinary, dental, and hoof care along with proper nutrition and parasite control.

Forages for Goats and Sheep

Written By: Tiffanee Conrad, Livestock Extension Agent with N.C. Cooperative Extension in Richmond County
Information and photo provided by: Heather Glennon, Research Specialist in Crop Science at NC State University

I know we are dealing with cold temperatures now and it's hard to think about springtime, but it will be here before we know it. Now is the time to start planning for a good forage system for our goats and sheep. Maximizing your pasture potential is the most economical way to feed goats and sheep in North Carolina. While you may not be able to purchase more land for grazing, the pasture that you already own can be improved upon to make sure it is producing as much as it can for your animals.

If you have not already done so, you'll need to take a soil sample of your pastures. It's good to test your soil at least 6 months before establishment so that you have time to apply lime and it has time to break down to where your soil can use it. You can borrow a soil probe from your local Extension office and get the boxes and paperwork to go with it. Some Extension offices will even mail them to the laboratory for you. The cost is only $4 now and will be free again starting in April. Once you get the results back, you'll know exactly how much lime and fertilizer that you will need to apply. This saves valuable time and money by only putting out what is needed. Nitrogen should be applied to pasture at the correct time for optimal growth. You can also add legumes such as clover to reduce the need for nitrogen application since legumes make their own nitrogen.

Planning ahead will help you to avoid many of the establishment failures that we see time and time again. A few things to avoid are: poor seedbed preparation, incorrect seed placement, improper planting date, pests such as weeds, insects, and diseases, soil plant incompatibility, stress factors such as drought, herbicide carryover, and improper seeding rate. The Planting Guide for Forage Crops in North Carolina publication can help you to avoid many of these issues such as planting depth and dates. You can find it on-line at: http://efotg.sc.egov.usda.gov/references/public/NC/forageplantguideNC.pdf or ask your Extension Agent for one.

It's important to realize the difference in eating habits of sheep and goats. Sheep prefer grass, whereas goats prefer a buffet of different things. They prefer to eat browse (leaves of trees and shrubs), but they also like forbes (weeds), as well as grass. If you have access to a wooded area, you may want to fence it in to let the goats eat the browse. If you would like to kill the browse, then you can put many goats on it per acre, but remember that browse does not regrow as quickly as grass does, so you don't want to put as many goats on the browse for extended periods of time if you want to use it for your goats in the future.

If you would like to provide warm season plants for your sheep and goats, you have many choices depending on your soil type. Many of them have planting dates starting around March or April depending on what you would like to plant. You can plant bermudagrass, gama grass, crabgrass, millet, sorghum sudan, lespedeza, cowpea, soybeans, and even sunn hemp. North Carolina State University is currently doing research on sunn hemp and Ray's Crazy Mixes for goats. You can also extend the grazing season to reduce the amount of purchased feed. Overseeding your pasture is a good way to do this. You can overseed with rye, ryegrass, oats, wheat, or triticale in the fall.

Hay can be expensive to feed, but in most forage systems, it is necessary to feed hay at least some of the time. Hay should be tested to determine the nutritive content. You can borrow a hay probe from your local Extension Office and mail a sample for $10. This simple test easily pays for itself because you can fine-tune your feed ration by using the results. This saves you money because you only supplement the grain that is needed. The best hay should always be fed to growing kids and lactating does, since they have the highest nutritional requirements.

If you need help planning a forage system for your goats or sheep, please call your local Extension Agent for assistance.

Getting Started With a Livestock Project

By: Justin Whitley, Livestock Extension Agent with N.C. Cooperative Extension in Duplin County

Participating in a livestock project is arguably one of the best hobbies that a child could have. Not only will they learn responsibility, patience, work ethic, humility, and valuable animal husbandry skills, but they will also have fun along the way and make great lifelong friends. A livestock project, however, is not something that most kids will be able to do strictly on their own. It takes a strong support system and parents that are willing to spend the time to make it work. One of the first questions we, as livestock agents, usually get asked is "How do we get started?" I've put together a list of steps that I think is a good way to get started.

1. Attend a livestock show. I think this is an important and maybe overlooked step. Give your kids a chance to see what a livestock show looks like and what the end game is that they're working towards. This also gives you an opportunity to talk to some other kids and parents to get some advice and maybe learn from some of their mistakes when they got started. The vast majority of people in the livestock show world will be more than happy to help!

2. Pick a species. Cattle, pigs, sheep or goats? You have to match the child with what they want to do and what they're capable of doing. Each species has its challenges, pros, and cons, so do some research and figure out which one fits your situation.

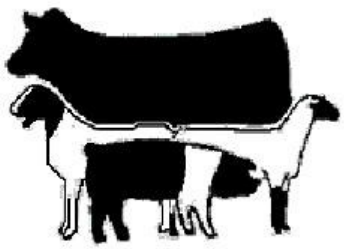
3. Create a budget. How much are you willing to spend to purchase an animal? What is it going to cost to build a proper housing facility? How much is it going to cost you to feed and house that animal for the duration of the project? Do you have all the necessary show equipment for your desired species? All of these things cost money and need to be evaluated prior to starting what could become an expensive project.

4. Prepare your facilities. Once you've decided on a species and you're ready to purchase an animal, now you need a place to house it. Get some input from your local livestock agent (or some of the new friends you made at the livestock show you attended) before you get started. There are little things that we'd probably all do a little differently after building an animal facility, so try to get some advice and avoid those mistakes that other people may have already made.

5. Decide which show(s) you want your child to show in. This is important to decide when you need to get the animal and what size it needs to be when you buy it. Is the show terminal or will you be bringing it back home? If it's going to be a terminal market show, you need to know what your target weight is and how much time you have to put on weight before you figure out what size animal you need to purchase.

6. Find an animal to purchase. Finally, you can go buy an animal! Work with your local livestock agent to find a good reputable breeder. Keep your budget in mind and know that you don't have to win the first show you go to. As long as your child has fun and learns a lot in the process, the project is a success! Also keep in mind that most animals will be more content and will perform better when paired with a buddy. So regardless of species, try to avoid housing an animal alone. There may also be a situation where you can save on the purchase price by working with a breeder to borrow a breeding animal long enough to show and then return it at the end of the project.

That's the very bare bones basics of how to get started with a youth livestock project. All the species obviously have differences between them, however, these six steps should be the same for the four main ones. It may seem like a lot of work and can sometimes get expensive, but think about how much work and money it takes to put your child through dance class or travel around with a baseball team. If a youth livestock project is something that they're interested in and committed to, your money will be well invested in your child's future. It's often said "If they're busy with their animals all the time, it's pretty hard for them to get into any trouble!"



Dealing with Aquatic Weeds in Farm Ponds

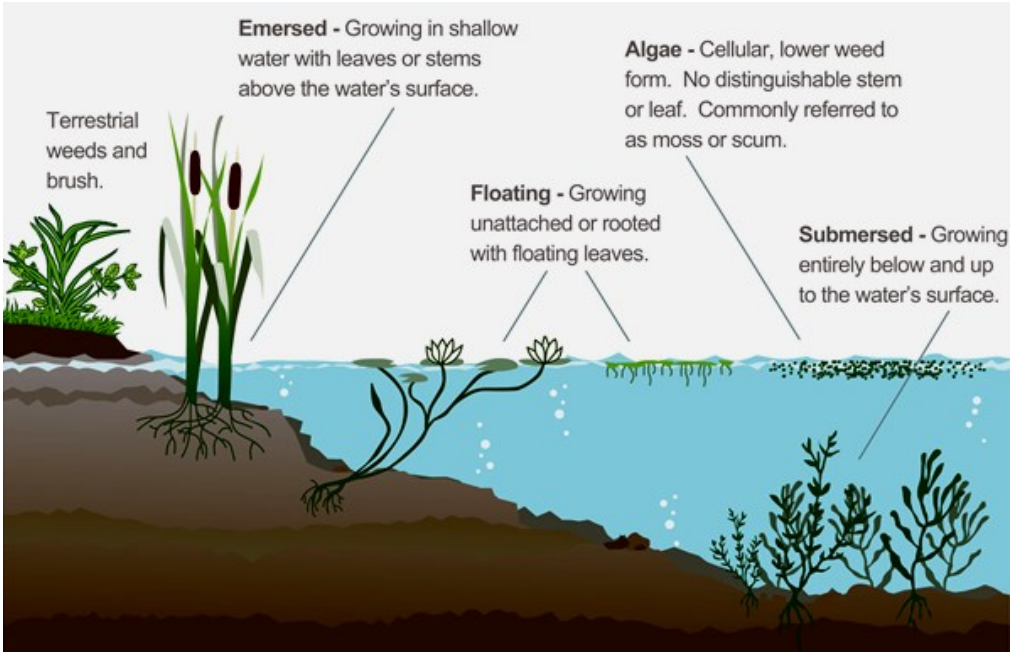
Submitted by Tyrone Fisher on behalf of Brian Parrish, Agriculture Agent with N.C. Cooperative Extension in Harnett County

Everyone wants a pasture with a nice lush grass with a beautiful pond or lake in the center, picturesque! Aquatic weeds often stops that vision and causes serious problems in ponds, interfering with watering livestock, fishing, boating, swimming, and irrigation. Extremely dense growths of filamentous algae and submerged weeds may also cause fish kills as a result of nighttime oxygen depletion. When excessive aquatic vegetation grows in a pond, try and determine why weeds are there in the first place. If you do not remedy the cause, the weeds usually come back. Healthy ponds have an algae bloom that allows you to see only 18 inches into the pond thus shading the bottom. Well constructed ponds have sides that slope quickly to 36 inches deep and then average six to eight feet deep with a max depth not greater than 10 to 12 feet.

Positively identifying the weeds present is extremely important. While some weeds may look similar they may require different methods to control. Preparing samples for ID is simple, just wrap the sample of weeds in a damp (not wet), absorbent paper towel, place it into a sealed plastic bag, and deliver to your county Cooperative Extension office. An agriculture agent will identify the weeds and recommend an appropriate management strategy.

Methods of aquatic weed control include; cultural, mechanical, biological, or chemical. Cultural control methods modify the environment to make conditions less suitable for weed growth. They include drawdowns (usually done in winter so weeds around edges can be killed by drying and freezing), bottom screens (can be very expensive), fertilization (should be done only if you plan to harvest fish regularly or stunting of fish may occur), and Nontoxic pond dyes (can be effective for up to six months to a year). Mechanical control refers to physically removing the weeds, for example raking them out with a yard rake. Biological control usually refers to the use of grass carp. Grass carp are a vigorous, fast growing, reproductively sterile fish that eat some types of aquatic weeds. Grass Carp stocking rates are generally 10 to 15 fish per acre and fish should be 8 to 10 inches long to help reduce losses to bass and wading birds. Also Grass Carp like to explore upstream or downstream so you may want to screen inflow and outflow areas to keep them in the pond. Chemical control refers to using herbicides labeled for aquatic use. When using herbicides read and follow all label instructions. Make sure that what you are putting out is right for your situation. Find out if it is ok for fishing, swimming, irrigation, and livestock drinking water and know what legal waiting periods or restrictions apply.

Grass Carp *Ctenopharyngodon idella*
adult



Spring is the best time to control aquatic weeds in your pond because they have just gone through the stress of winter and are just entering into the active growing season, making them more susceptible to herbicides. So, if you had issues with your farm pond in 2014, now is the time to plan you treatment for Spring 2015. There are many good references on farm pond management and aquatic weed control that can be found on the internet. North Carolina State University Fisheries and Pond Management Extension website is a great place to find the information you are looking for and can be found at http:www.ces.ncsu.edu/nreos/wild/fisheries/index.html.