

Inside This Issue

- 1 NCDA Soil Lab Update
- 1 Upcoming Events
- 2 Snake Season!!!
- 3 Lawn and Turfgrass: General Management
- 3 Plant Spotlight: Pink Muhly Grass
- 4 Edible Corner: Growing Your Best Tomato
- 5 Seasonal Tips and Tasks
- 6 Pest Alert: White Grubs
- 7 Sustainability Feature: Smart Water Manage

The Carolina Sandhills Gardener

NCDA Soil Lab Update

The North Carolina Department of Agriculture states that turnaround time for samples delivered June 1 is estimated to be 2 weeks. For more information you can visit <https://www.ncagr.gov/agronomi/pals/>.

If you cannot find results or reports for samples submitted considering the above, call our extension office at (910) 862-4591 and we can assist you. Soil samples are currently **FREE**. Bladen County Cooperative Extension Center has soil boxes and forms that are available to you.

Soil Sample Fees

Soil samples are currently **FREE**. NCDA & CS are taking routine soil samples now and estimates a turnaround time of 2 weeks.

Contact Us

NC Cooperative Extension
Bladen County Center
450 Smith Circle Drive
PO Box 249
Elizabethtown, NC 28337
(910) 862-4591 Phone
(910) 862-6939 Fax
bladen.ces.ncsu.edu

Jacob Barber,
Extension Agent, Horticulture
jacob_barber@ncsu.edu



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.

NC State University and N.C. A&T State University commit themselves to positive action to secure equal opportunity and prohibit discrimination and harassment regardless of age, color, disability, family and marital status, genetic information, national origin, political beliefs, race, religion, sexual identity (including pregnancy) and veteran status. NC State, N.C. A&T, U.S. Department of Agriculture, and local governments cooperating.

Upcoming Events

- **Small Farms Unit Demonstration Day:** On Wednesday, July 13th from 8:00 am – 2:00 pm, the Small Farm Unit in Goldsboro, NC will host a demonstration day. General admission is \$20. Lunch will be provided. You will learn about the Small Farm Unit’s work with specialty vegetable crops, high tunnels, integrated pest management, beekeeping projects and more. Experts will give equipment demonstrations geared towards improving the efficiency of small farms. For more information and to register visit <https://cefs.ncsu.edu/event/small-farm-unit-demonstration-day/>
- **Bladen Gardeners:** Bladen Gardeners are meeting on the first Thursday of every month at 6 pm. They host educational events, community service, fundraisers and occasionally, assist NC Cooperative Extension at Bladen County Center with some events throughout the year. Please contact Jacob Barber at jacob_barber@ncsu.edu or call our office at (910) 862-4591 if you are interested in joining or becoming a member.

N.C. 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.

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.

Snake Season!!!

Libby Blosser, Intern with N.C. Cooperative Extension, Bladen County

Summer is quickly approaching! The warm weather provides the perfect opportunity to get outside and do some gardening! It may bring some other visitors to your garden as well. With the peak of gardening season right around the corner, you may run into a snake or two. Here are some tips and information to help you better handle an encounter with a snake. Hopefully, this article will help dispel some common misconceptions about snakes and help people respect their role in North Carolina's ecosystems.

What Kind of Snakes are in NC?

Did you know that NC is home to 38 species of snakes? Snakes are important ecological players in North Carolina, serving as both predators and prey to help maintain our ecosystems. Of these 38 species, **only 6 are considered venomous snakes**. Some of North Carolina's nonvenomous snakes include the Black Racer, Corn Snake, Eastern Kingsnake, Banded Water Snake, and Green Snake. Venomous snakes are sometimes referred to as poisonous snakes. Their venom can actually be used for medicinal purposes. The 6 venomous snakes native to NC are the Eastern Coral Snake, Copperhead, Cottonmouth, Eastern Diamondback Rattlesnake, Timber Rattlesnake, and the Pigmy Rattlesnake.

What Should I Do When I Encounter a Snake?

Whether you're a pro snake handler or not a fan of snakes at all, it's important to remain calm when encountering a snake. Their reaction is often based on your reaction. Snakes rely on sight, hearing, and smell to detect prey and avoid predation or danger. Snakes sense vibrations stemming from sounds and movements through their bodies. Some pit vipers have special organs that allow them to sense heat signatures. Contrary to some beliefs, snakes only bite when they feel threatened or sometimes when accidentally stepped on. Snakes are attracted to covered areas such as pots, rocks, piles of wood, and other debris. If you don't want snakes around, it's important to minimize the presence of these structures.

If you encounter a snake, it's important to properly identify the species in order to assess the risk involved. If you can avoid disrupting the snake, it is best to leave it alone where it is at. However, if a snake finds its way in a building or restricted path, then removal may be necessary. Non-venomous snakes can often be swept away or removed by hand (although removal by hand does come with risk of being bitten). **You should never try to move a venomous snake by hand.** If you are uncertain whether the species is venomous or not, it is best to leave the snake alone or contact a wildlife professional if the snake does not leave.

How Do I Know if it's Venomous or Not?

There are several identifiable features that help us distinguish between a venomous and nonvenomous snake. If you are not familiar with snakes, you should be aware that scale patterns among certain species look similar and could lead to incorrect identification.

Often, venomous snakes will have **elliptical shaped pupils** compared to rounded pupils of nonvenomous snakes. Venomous snakes in the family Viperidae also have **pits located below their nostrils** and **triangular shaped heads**. This characteristic can be misleading sometimes because some nonvenomous snakes can make their heads appear wider and triangular shaped. The Eastern Coral Snake is the only NC native venomous snake in the Elapidae family. The best way to identify this snake is by its scale coloring, **which consists of red, yellow, and black bands**. The thick red and black bands are separated by narrow yellow bands. A common saying for identifying the coral snake is "Red touches black, you're ok Jack; Red touches yellow, you're a dead fellow!"

If possible, it is always best to leave a snake alone, whether venomous or not! Many venomous snakes in NC are endangered or a species of special concern. For more information, you can visit <https://content.ces.ncsu.edu/snakes>, which includes a complete list and pictures of snake species in North Carolina.

Lawn and Turfgrass: General Management

By: Jacob Barber, Consumer Horticulture Agent with N.C. Cooperative Extension, Bladen County

In the months of June to August, the main things that you will be focused on with your lawn and turf would be fertilization, establishment for direct seed or sod, and some integrated pest management (IPM) control. If needed this is also a great time for aerification and renovation of your lawn. As far as IPM, you should be on the look for some weeds, diseases and insects.

June and July is a great time to establish warm season grasses by seeding. Once August comes around, you can start seeding cool season grasses. Make sure to fertilize your warm season grasses from June to August. When fertilizing, it is always smart to fertilize your lawn adequately according to a soil sample recommendations for the NPK values.

Weed management for the months of June to August would include watching out for summer annual broadleaves and grasses. At this time you should be implementing post emergent herbicides to control these weeds. Late August to September will be a good time to start using preemergent herbicides to control winter annuals. Warm and cool season grasses will be susceptible to diseases such as rust and dollar spot (see picture above). Insects that you might find in your lawn during summer would include sod webworm, army worms and mole crickets. Chinch bugs will most likely be found in warm season grasses. There are pesticides that are recommended to use for weeds, insects and disease. For more information contact your local extension office or visit www.turffiles.ncsu.edu.



Plant Spotlight: Pink Muhly Grass

By: Jacob Barber, Consumer Horticulture Agent with N.C. Cooperative Extension, Bladen County

Pink Muhly Grass, *Muhlenbergia capillaris*, is a perennial ornamental grass that can be grown anywhere in NC from the mountains to the coast in plant hardiness zones 5-9. This grass has a couple of different varieties/cultivars of its own. However, the family that it is in, Poaceae, has thousands of different species. It is considered a great addition to any landscape for late season color. It is often found naturally in clayey or thin rocky soils. The flowers have a panicle inflorescence and have a glossy pink look in the landscape especially when planted in bulk. See picture on right.

It can be planted in a number of different locations in your landscape and play towards several themes such as a pollinator garden, woodland garden, or a recreational play area for children. It attracts pollinators such as butterflies and bees. It also attracts songbirds and small mammals. It is low maintenance and has resistance to challenges such as salt, erosion, poor soil



<https://plants.ces.ncsu.edu/plants/muhlenbergia-capillaris/>

conditions, drought and deer. When determining where to plant this ornamental grass, remember that the plant can grow up to 4 feet tall and needs around 3 to 6 foot of planting space and prefers full sun.



Native setting: <https://plants.ces.ncsu.edu/plants/muhlenbergia-capillaris/>

This plant will naturally reproduce by seed. However, if you would like to propagate the plant and would like to create for more plants for yourself you can do so by division of the roots.

For more information on this plant and all of its attributes, please visit <https://plants.ces.ncsu.edu/plants/muhlenbergia-capillaris/>.

Edible Corner: Growing Your Best Tomato

By: Mack Johnson, Extension Horticulture Agent with N.C. Cooperative Extension,
Robeson County

Most likely you already have your plants selected and planted by now. If not, they should be placed 2 to 3 feet apart. Tomatoes, being the exception to the rule, can be planted deeper than the original seedling's soil line. Tomatoes benefit from an extensive root system, and planting deep will encourage more root development along the buried stem. You can accomplish this by laying the plant sideways in a trench. Remove bottom leaves on a leggy plant and cover most of the lower stem, leaving the terminal leaf clusters above ground. If you have already planted, we can still provide good cultural practices to help you produce the best tomato possible.

Tomatoes love sun and lots of it, so growing them in an area with a minimum of 6 hours direct sunlight will benefit your plant, but more is better. Tomatoes thrive in a well-drained soil that will hold moisture. Amending your soil by working in 2 to 3 inches of compost into the top 6 to 8 inches will improve both moisture retention in sandy soils and drainage in clay soils. If you planted in the ground, I hope you have taken a soil test. This test will reveal your soil's pH - 6.0 to 6.2 is ideal. Adding lime will raise the pH if it is lower. This test will also give you accurate fertilizer recommendations to optimize your plants' potential. Don't worry – if you haven't taken a soil test, there are some general guidelines that will help.

A starter solution used at planting ensures appropriate fertilization during early stages of growth. You can mix 3 to 4 tablespoons of 8-8-8 per gallon of water to make the starter solution. Do not use more than one cup of starter solution per plant. Tomato plants need a continual supply of fertilizer which can be achieved by side dressing each plant with 2 to 3 tablespoons of 8-8-8 or 10-10-10 fertilizer soon after initial fruit set and every 4 to 6 weeks throughout the growing season. Place these 4 to 6 inches away from the main stem and working it gently into the soil surface helps prevent nutrient loss.

Water is definitely one of the most important elements to produce great tomatoes. Watering twice a week, providing 1 to 1.5 inches of water is the minimal requirement. Water the rootzone. Avoid wetting the foliage to prevent some diseases. Watering in the morning allows any wet foliage to dry before nightfall. Keeping the soil moisture consistent throughout the growing season helps to prevent blossom end rot, a physiological disorder encouraged by uneven watering or soil condition extremes (either too dry or too wet). A 3-inch layer of mulch on the plant's root system helps retain moisture, cools the rootzone, and aids in weed control. Many soil diseases are splashed onto the foliage by rain or watering. As the plants grow, continue to remove lower leaves, keeping a buffer between the top of the soil and the lowest leaves. Mulching also reduces soil splashing. Now just sit back (after you have made a trip to the grocery store for your condiments) and harvest when ripe. Enjoy!

Seasonal Tips and Tasks

By: Mack Johnson, Extension Horticulture Agent with N.C. Cooperative Extension,
Robeson County

- Watering plants during the coming summer months is important. Watering early morning enables the foliage to dry before nightfall, reducing the risk of fungal infections. A three-inch layer of mulch also helps to conserve soil moisture. Water during dry spells to minimize moisture extremes and stress for the plant. Remember, clay pots are more porous than plastic and will dry out quicker, requiring more frequent watering.
- Bird feeders (liquid and seed) should be cleaned regularly to reduce mold and fungal growth. Hummingbird feeders need cleaning every week and most seed feeders benefit from being cleaned every two weeks. Use a mild dish detergent and soft bristle brush or even a toothbrush to remove those stubborn residues. Steel or metal abrasive sponges may scratch the feeder, creating more hiding places for bacteria. Discard any old or molded seeds. Rake any hulls and spilled seeds up often to prevent attracting any unwanted visitors such as squirrels, mice, or field rats. Don't sprinkle old seed on the ground. You may unknowingly introduce weeds to your property. It's also a good idea to wear disposable gloves when handling and cleaning a bird feeder.
- Don't forget some of your summer vegetables may need additional fertilizer. You can side dress tomatoes at fruit set with a couple of tablespoons of a complete fertilizer like 8-8-8 or 10-10-10, and every six weeks after that going through the end of season. Place this amendment four-six inches away from the main stem and work gently into the topsoil to prevent nutrient loss.
- Remember, now that you are spending more time outside you should protect your skin. Look for sunscreen with a Sun Protection Factor (SPF) of at least 30. Apply sunscreen BEFORE going outside. Wear a wide brim hat to help shade your neck and ears. Don't forget your eyes! Yes, they can sunburn also. Select the proper sunglasses that will provide protection for your eyes. Look for UV protection, anti-reflective coating, and polarized lenses for the best protection.
- Keep your lawn mower blades sharpened or replace regularly! It gives a nice clean cut and well-groomed appearance.
- Prune any damaged or broken limbs due to inclement weather as soon as possible. A clean cut can heal much sooner than a jagged broken or torn limb.

I realize it's only June but the next newsletter won't arrive until September. So, for your planned fall crops, you can start those seeds as early as mid-July to early August so you will have transplants ready for your fall garden.

Pest Alert: White Grubs in Your Lawn

By: Robby Brockman, Horticulture Extension Area Agent with N.C. Cooperative Extension, Hoke and Scotland County

Does your lawn look sparse? Does it have short stubby roots that can't effectively take up water or nutrients? If so, you may have a problem with white grubs in your lawn's roots. White grubs are the larvae stage of beetles in the Scarab family. Some of the most common white grub species in our area include Japanese beetles, green June beetles, masked chafers, and May-June beetles. With the exception of green June beetles, these grubs are herbivores that love to munch on the roots of our grass.



Green June Beetle Grub - Jim Baker, North Carolina State University, Bugwood.org

early fall. Locate a sparse area of your lawn, dig up a square foot flap of soil, and look for grubs in the top four inches among your lawn's roots. If, after doing this several times throughout your lawn, you find an average of 4 or more grubs, it is likely time for a treatment. These grubs have an annual life cycle and are smallest in the fall. As they grow, they cause more extensive damage to your lawn and are also more difficult to control.

There are two biological controls for white grubs. The first biological control treatment is the milky spore bacteria which only infect the most damaging white grub, Japanese beetles. While this biological control is effective in many locations, it prefers soils with a pH between 6 and 7, higher than many soils here in the Sandhills. The second biological control is *Bacillus thuringiensis subsp. galleria* which goes by the trade name grubGoneG. While *Bacillus thuringiensis subsp. galleria* affects all beetles, it is unknown how effective it is in the Sandhills region. Other natural killers of white grubs include birds and skunks, both of which destroy your lawn as they hunt for food.

A few insecticides that are effective against white grubs include chlorantraniliprole (Acelepryn), clothianidin (Arena), imidacloprid (Merit), thiamethoxam (Meridian), trichlorfon (Dylox, Proxol), and dinotefuran (Zylam). For rates and all other information, check the label on your insecticide. When applying insecticides, remember that you will get the best control by applying your insecticide in the fall while grubs are still small.

While green June beetle grubs don't feed on roots, they can be quite damaging and are a very unique beetle. Green June beetle grubs feed on decaying vegetation underground and damage grass root systems in the process. Green June beetles, unlike other white grubs, have the nasty habit of crawling to the soil surface to die after insecticide treatments. While all other white grubs crawl on their stomach using their legs, green June beetle grubs will crawl on their back with their legs in the air. This activity can help distinguish them from other species so that you do not spray at an inopportune time and have large numbers of grubs on your lawn.

If you suspect that you have a problem with white grubs in your lawn, it is important to determine their population size in



Japanese Beetle Grub - Jim Baker, North Carolina State University, Bugwood.org

Sustainability Feature: Smart Water Management

By: Robby Brockman, Horticulture Extension Area Agent with N.C. Cooperative Extension, Hoke and Scotland County

Sustainability Feature: Smart Water Management

Rainfall, the biggest source of our most precious natural resource, has been anything but consistent so far this year. Many years in recent history have ended with close to average rainfall, but the timing and intensity of that rainfall has been sporadic. Our gardens and landscapes have a hard time adjusting to the unreliable rainfall patterns where we may not see any water for weeks before a storm catches us back up. To help our plants out, many of us have already started watering lawns and our gardens. But how sustainable is this? Keeping our landscapes consistently watered is difficult on our budgets, the environment, and can be demanding with our busy schedules. Fortunately, there are a number of things that can be done to make our landscapes more resistant to fluctuating rainfall and temperatures.

The first and most important step in smart water management is designing our landscape to tolerate both droughts and downpours. Think about your landscape and try to determine if there are areas that typically stay wet for longer periods or perhaps dry out before the surrounding landscape. Make sure that you have plants in appropriate areas. Plants that like moist soils and plenty of shade are going to be set up for failure if they are planted in sunny, sandy, upland areas of your yard. Once you know what areas of your landscape have a tendency to hold or quickly shed water, you can separate your landscape into zones. Native plants for drier zones include wild indigo, sandhills st. john's wort, bergamot, black eyed susan, and Spanish bayonet. Native plants for wetter zones include swamp milkweed, buttonbush, white turtlehead, hibiscus, and savanna iris.

After you have the right plant for the right place, it is important to keep moisture in your soil. Soil can be formed into berms that temporarily hold runoff water and allow it to sink into the soil. A layer of mulch around your plants can be incredibly effective at both controlling weeds and preventing water from evaporating from your soil. Any water that we give to our landscape should only hit the soil. Spraying water everywhere can lead to a tremendous loss of water through mist being blown away, water hitting the wrong areas such as pavement, and water evaporating off of plant surfaces. The most efficient irrigation is drip irrigation or soaker hoses that give the plants water right where they need it. This irrigation can even be covered with mulch for better aesthetics and greater efficiency.

Once you have planted the right plant in the right location, set up proper irrigation systems, and mulched your gardens, you can help yourself further by harvesting what rainwater you can. Much of the rainfall that fall on our home's roofs typically leaves our property quickly and is wasted. Additionally, this fast-moving water is often damaging to our landscape and sometimes even our house. One way of solving these issues and making your landscape more sustainable is to use a rain barrel to harvest water coming off your roof. Depending on your house and landscape's size, you may be able to get all of the water you need just from your roof!



Rain Barrel – Robby Brockman, North Carolina Cooperative Extension Service