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Contact Us

NC Cooperative Extension
Bladen County Center
450 Smith Circle Drive
PO Box 249
Elizabethtown, NC 28337

(910) 862-4591 Phone
bladen.ces.ncsu.edu

Bruce McLean
Extension Agent-Horticulture
bruce_mclean@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.

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Hot Topics for July & August

Mosquitoes: With all of the rain that we have received (recently), mosquito activity is definitely on the rise. Chemical treatments (on the adults), although effective, are relatively short-lived. The most effective way of combatting this outbreak is to modify or eliminate their breeding sites. Here are a number of things you can do:

- Tip & toss - Pour the water out of flower pots, tires, buckets, etc. Discard anything no longer useful. Store other items in a dry location.
- Cover rain barrels and cisterns with a fine mesh screen (to prevent access).
- Rinse out bird baths, or treat with “mosquito dunks” (*Bacillus thuringiensis israelensis* - a bacteria that kills mosquito larvae, but doesn’t harm fish, plants, birds or wildlife).
- Treat garden pools with “mosquito dunks”.
- Correct any drainage problems on your property. Remove debris (or report drainage problems) in drainage ditches and culverts along private or public roadways.

Weeds, Disease and Insects...Oh my: Due to the abundant rainfall (this year), weed and disease problems have been plentiful, with insects expected to take off, as well. Here is a way to keep a handle on them before they run over you. Periodically, walk (or paddle - if necessary) through your yard and/or garden and look for anything that looks abnormal: sparse patches in normally healthy lawns, weed growth, weakness in normally healthy plants, insect activity, dead and/or dying plants, etc. If possible, collect a sample and bring it to the Cooperative Extension Office. We would be happy to identify the problem and help you with a treatment plan.

Upcoming Events

- ◆ **Christmas in July**
July 12 @ 10 am, Powell-Melvin Bldg.
- Bazaar
- Salad Lunch
- ◆ **Master Gardener Meeting**
July 12 @ 8 am, Powell-Melvin Bldg.
- ◆ **Master Gardener Plant Sale**
July 12 @ 10 am Powell-Melvin Bldg.
- ◆ **4-H Summer Fun**
Now thru August 13 -
Call for activities and dates
- ◆ **Fall Vegetable Garden - Training Class**
July 30 @ 6 pm, Powell-Melvin Bldg.
- ◆ **Master Gardener Meeting**
Aug. 1 @ 6 pm, Powell-Melvin Bldg.

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.

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Soil Preparation for Planting Turfgrass

Proper soil preparation for planting turfgrass is an important step in establishing and maintaining a healthy lawn.

Turfgrass areas have many functions in a home landscape. Turfgrass areas facilitate playing, gathering, visiting, relaxing, and many other outdoor activities. An attractive lawn is valued by many homeowners.

Steps Involved in Creating Soil that Encourages Healthy Grass Growth:

- Conduct a soil test to determine nutrients, soil pH, and texture of existing soil.
- Clean dirt off large rocks, large roots/stumps and other debris.
- Grade the landscape to provide an even surface and

control water drainage.

- Rototilling soil improves drainage to allow for better root growth.
- Avoid cutting tree roots.
- Add between 6-8 inches of topsoil if needed and let it settle.
- Add additional fertilizers and other soil amendments as per soil test.
- Additional fertilizers may be necessary once the grass begins growing.
- Firm the soil with a roller before seeding, sodding, or plugging. Granules of soil should vary in size from 1/8th inch to 3/4th inch.

Once the soil has been prepared, be ready to plant. Turf can be planted using sod, seed, or plugs. Water immediately following planting and make sure soil is moist during establishment.

Watch out for those bees!

Bees, along with wasps, moths, butterflies and others, serve an important duty in nature. They act as pollinators for countless plants. This process is essential for the reproductive process of the plant, as well as, food production for animals - including humans. As much as one-third of the food we eat is directly attributed to this process. Without pollinators, our food supply would be greatly diminished.

Due to a couple of recent occurrences in Oregon, there has been a huge push for lawmakers to put forth efforts for pollinator protection. In (at least) one of these occurrences, a chemical known as Dinotefuran was used. Dinotefuran is a member of a family of chemicals known as neonicotinoids. This family of chemicals is known to be extremely toxic to bees, mainly due to its Extended Residual Toxicity (ERT) or longer term affects.

So next time before you spray, consider these few things:

- Use pesticides only when needed.
- Check for “Bee Hazard” warnings and pollinator precautions in the Environmental Hazards statement and in the directions for use on the label.
- Consider the toxicity to pollinators when selecting a pesticide and formulation when combining products.

- Guard against drift of pesticides from ground or aerial applications.
- Bloom is a key factor in pollinator exposure to pesticides. When crops or ground cover plants are in bloom:
 - * Apply non-ERT (“actively visiting”) pollinator-toxic pesticides in late evening to minimize exposure to pollinators.
 - * Do not apply ERT (“visiting”) pollinator-toxic pesticides.
- Avoid applying when lower temperatures will allow dew formation. Dew may re-wet pesticides and increase bee exposure.
- Avoid spraying areas where native pollinators live such as hedge rows and natural areas.
- Establish good relations and communication with commercial and local beekeepers.



David Cappaert, Michigan State University, Bugwood.org

In the Garden

Preen

LATE BREAKING NEWS - from Weed Specialist Joe Neal



A recent question about Preen prompted me to share this info with all.

Preen for Garden Weed Control -- Just what is in that stuff anyway?

Preen herbicide has long been used in home gardens for preemergence control of many annual weeds. The active ingredient, trifluralin, is labeled for use around many woody and herbaceous ornamental plants as well as many vegetable and fruit crops. Although not the most efficacious herbicide, Preen controlled many of our most common landscape weeds including henbit, chickweed, oxalis, crabgrass, and annual bluegrass, without injuring landscape plantings. This product is still widely available in garden centers throughout the country. However, look closely at the label. The Preen you purchase today may not be the same product you previously used.

Today the Preen name is used to identify a diverse product line that includes preemergence and postemergence herbicides. Several Preen products contain 2,4-D for broadleaf weed control in lawns; these products

should not be used in landscape beds. The active ingredient in Preen Weed Preventer for Southern Gardens is dithiopyr ñ the same ingredient found in the herbicide Dimension. This is safe on most ornamentals but should not be used around any food crops. There is Preen Mulch Plus Premium that contains isoxaben plus trifluralin (think Snapshot TG), not to be confused with Preen Plus Mulch Midnight Black that contains trifluralin (but no isoxaben). The isoxaben-containing mulch will damage pansies but the trifluralin-containing product will not. Confused yet? There is also Preen Brush Weed Killer that contains 2,4-DP + 2,4-D + dicamba; Preen Weed and Grass Killer that contains glyphosate (same ingredient as Roundup); and an organic product for vegetable gardens, Preen Vegetable Garden Weed Preventer, that contains corn gluten meal. Many different active ingredients, all sold under the Preen name, can lead to confusion.

So, if you go to the garden center to purchase Preen for weed control in your garden or lawn, READ THE LABEL. Make sure you purchase the right product for the right job.

Labels and material safety data sheets for the Preen products are available from the manufacturer's website at <http://www.preen.com/msds>.

Joseph C. Neal
Professor and Extension Specialist -- Weed Science
Department of Horticultural Science

Prepare for a fall vegetable garden by soil testing

If you are thinking about planting a fall vegetable garden in July or August, then you need to take the first step now. Soil test! The test is free, and sampling instructions are available online at www.ncagr.gov/agronomi/pdffiles/samhome.pdf. Sample boxes and sample information forms are available at all [county Cooperative Extension offices](#). Within two to three weeks, you should have all the information you need to apply lime and fertilizer for a productive garden.

In the Yard

Deer-resistant Plants

One of the simplest ways to minimize deer damage in your yard is to landscape with plants that deer prefer not to eat. While no plant is deer-proof, there are many good landscape plants that deer find less palatable. This does not mean deer will not eat them if it comes to a choice between eating something they don't like and starving to death. But most of the time these are plants that deer will pass over in favor of others.



Like goats, deer are browsers who feed on a variety of plants, including trees and shrubs. Once mature, large trees tend to be spared simply because deer are too short to reach any but the lowest branches, leaving small trees and shrubs to bear the brunt of the damage. Small to medium-size trees that have proven deer-resistant over the years and can be grown in most of the Carolinas include river birch, crape myrtle, sweetbay magnolia, and chaste tree (*Vitex*).

Because they provide a food source in winter, evergreen shrubs are particularly prone to deer attack. Evergreen shrubs for sunny areas that deer prefer not to eat include yau-pon, Chinese juniper, wax myrtle, oleander, rosemary, gardenia, nandina, and Chinese holly. In shady sites try Japanese plum yew, available in both low-growing and upright varie-

ties, or needle palm, a shrub-forming palm hardy to at least zone 7.

Although flowers are deer favorites, there are several perennials they find less tasty and are less likely to damage. These include drought-tolerant, sun-loving perennials such as the silver-leaved 'Powis Castle' artemisia, colorful and hardy 'Miss Huff' lantana, and Arkansas blue star (*Amsonia hubrichtii*), a Southeast native. Other perennials that deer avoid include false indigo (*Baptisia*), purple coneflower, gaura, and perennial salvias such as Mexican bush sage (*Salvia leucantha*), Texas sage (*Salvia greggii*), and 'Black and Blue' anise sage (*Salvia guaranitica*).

On the whole, deer avoid eating ornamental grasses, which is great for gardeners because this group includes many tough, attractive, low-maintenance options. Some of the most dependable varieties for North Carolina include pink muhly grass, panic grass (*Panicum virgatum*), and hardy fountain grass (*Pennisetum alopecuroides*). Another group of plants that deer dislike is ferns, which are great for moist, shady sites. Reliable perennial ferns for our state include Japanese painted fern, lady fern, and cinnamon fern, all of which go dormant in the winter. Evergreen ferns that can be grown in most areas include autumn fern, Christmas fern, holly fern, and southern shield fern. Check with your local Extension office for more recommendations of hardy, deer-resistant plants for your region.

Charlotte Glen
Pender Co. Extension Agent, Agriculture - Horticulture
Managing Editor of "Extension Gardener"



Tips for a healthy Summer lawn

- Fertilize
- Bahia - 1/2 lb. N (July)
- Bermuda - 1 lb. N (July & August)
- St. Augustine - 1 lb. N (July) & 1/2lb (August)
- Zoysia - 1/2 lb. N (August)
- Fertilization of Carpetgrass and Centipede is typically not recommended, except for coastal areas (and then - 1/2 lb. N August).
- Lawns need approximately 1" of water a week (1 1/2" during periods of extreme heat and tempera-

tures). During dry spells, irrigation is recommended. Thorough soaking is preferred over frequent light watering.

- Monitor weeds. Spray only if weeds are present. Exercise caution when applying herbicides to all turfgrass species when temperatures exceed 85° F. When temperatures are in excess of 90° F., do not apply postemergence herbicides.
- Monitor insect and disease activity. Should a problem arise, bring a sample (disease and/or insect) to the Cooperative Extension office, and have it identified.
- Mow at appropriate height.

In the Orchard

Pest Alert

Pecan Weevils

Pecan weevils are one of our most troublesome pecan pests. If you have ever opened a pecan to find a small white grub inside, you have seen the larva of the pecan weevil. The adult pecan weevil is a light brown or grayish beetle with a long beak. Adult weevils emerge from the soil from August through September, often after rains of an inch or more. Adult pecan weevils feed on green nuts, causing some to drop prematurely. Female pecan weevils cause more serious damage by laying their eggs in nuts. The resulting larvae feed inside the shells, eating the kernels. After the pecans fall to the ground, the larvae chew their way out and burrow into the soil, where they pupate for one or two years before emerging as adults. Because the life cycle of pecan weevils can span three years, control requires consistent treatment. First, consider spraying the root zone and trunk of the tree with an insecticide, such as liquid Carbaryl, when the adult beetles are emerging from the soil and moving into the tree canopy. Start



monitoring around the end of July, and spray whenever you find adult weevils. Continue to monitor and treat as needed through September. Monitor weevil populations by tying layers of burlap cloth around the trunks of the trees. Check the burlap each day for any adult weevils. When mature nuts fall, pick them up daily and remove them from the orchard.

Lisa Rayburn
Onslow Co. Extension Agent, Agriculture-Horticulture



Tissue test now to plan for blackberry fertilization next season.

Collect a plant tissue sample about 10–14 days after harvest. Each sample should include 25–30 most recent mature leaves from the primocane, the first year non-bearing canes. Sampling the floricanes, the second year fruit bearing canes, is not recommended unless it is specifically to diagnose a problem. If you have different varieties, submit separate samples for each one. Now is also an appropriate time to submit a corresponding soil sample.



Featured Plants

From NC State Plant Fact Sheets

Palmetto; Cabbage Palm - *Sabal palmetto*

- ◆ Hardiness Zones: 8-10
- ◆ Habit: Evergreen, Broadleaf
- ◆ Growth Rate: Moderate
- ◆ Site Requirements: Sun to partial shade; range of soil types (wet, dry)
- ◆ Texture: Medium to coarse
- ◆ Form: Palm; columnar
- ◆ Height: 20' to 60' +
- ◆ Width: 10' to 15'
- ◆ Leaf: Palmate, fan shaped 5' leaves on 2' to 7' stems
- ◆ Flower/Fruit: White, fragrant, 2' flower cluster in June; black fruit
- ◆ Comments: Native; not hardy in piedmont or mountains; tolerates salt spray; fruit eaten by birds
- ◆ Maintenance: Low
- ◆ Special Attributes: No significant insect or disease problem; good food sources for birds; tolerant of various conditions; state tree of South Carolina and Florida; native from NC southward, including the Bahamas & Cuba



Laurustinus Viburnum - *Viburnum tinus*

- ◆ Hardiness Zones: 7b to 10
- ◆ Habit: Evergreen; Broadleaf
- ◆ Growth Rate: Moderate
- ◆ Site Requirements: Sun to partial shade; prefers moist, well-drained soil
- ◆ Height: 6' to 12'
- ◆ Width: 6' to 10'
- ◆ Texture: Medium
- ◆ Form: Upright rounded, dense
- ◆ Flower/Fruit: Pink buds; 2" to 4" waxy, flattened white flowers in late winter to early spring; fragrant; metallic blue-black to black fruit; persists into spring
- ◆ Foliage: Opposite, simple, lustrous dark green leaves; 1 1/2" to 4" long
- ◆ Comments: Tolerates coastal conditions; drought tolerant
- ◆ Maintenance: Low
- ◆ Special Attributes: No significant insect or disease problems; perfect as stand alone specimen, or as hedge or privacy screening; attracts hummingbirds and bees; very fragrant
- ◆ Cultivars:
 - ◇ 'Bewley's Variegated' - creamy yellow variegation
 - ◇ 'Clyne Castle' - large, glossy leaves
 - ◇ 'French White' - larger plants, large white flower heads
 - ◇ 'Pink Prelude' - white flowers that age to pink
 - ◇ 'Eve Price' - compact, attractive buds, pink-tinged flowers
 - ◇ 'Compactum' & 'Spring Bouquet' - (poss. the same cultivar) compact plant, dark red buds and white flowers

