



Extension Gardener

NC STATE UNIVERSITY

NORTH CAROLINA COOPERATIVE EXTENSION

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Empowering
gardeners.
Providing
garden
solutions.

in this issue

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STATE NEWS

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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 yaupon, 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 varieties, 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



Extension Showcase

Extension Gardener Helps Gardeners Put Knowledge to Work

Gardeners in North Carolina face difficult climate and soil challenges when attempting to cultivate attractive, environmentally sustainable landscapes and bountiful food gardens. To assist new and seasoned residents with their gardening efforts, Extension horticulture agents from across North Carolina work together to produce four editions of *Extension Gardener* each year. Each edition includes three regional issues featuring specially focused content for each of North Carolina's three geographic regions.

Extension Gardener delivers timely, research-based information to North Carolina residents on plant selection, sustainable landscape and turf management practices, and home food production. In a recent survey of *Extension Gardener* readers, 80 percent of survey participants said they found *Extension Gardener* to be useful, reliable, timely, and easy to understand; 99 percent reported they have learned about and implemented at least one new gardening practice as a result of reading the newsletter. When asked what value readers place on the benefits provided by *Extension Gardener*, answers ranged from \$15 to \$500, with an average value of \$173 placed on the benefits received from this Extension resource.

Current and past issues of *Extension Gardener* are available online at <http://www.cals.ncsu.edu/extgardener/index.htm>.

— Charlotte Glen

Smart Gardening — Create a pollinator paradise

Most pollinators are beneficial insects, such as bees, flies, beetles, wasps, and butterflies. A small percentage of pollinators are vertebrates such as hummingbirds. Bees are critical to our food supply because they are responsible for pollinating about one-third of the foods we enjoy. Bees and other pollinators are also essential components of the habitats and ecosystems that many wild animals rely on for food and shelter. As natural areas are cleared for development, pollinator habitat is destroyed or fragmented, resulting in the loss of foraging and nesting sites. This can lead to a decline in pollinator populations.

You can help pollinators survive and thrive by planting forage habitat that provides nectar and pollen. The main goal of pollinator forage habitat is to have plants flowering throughout the growing season, from early spring through late fall, with overlapping bloom periods. Choose flowers with a diversity of bloom color, size, and shape to attract the greatest diversity of pollinators. Some pollinators have short tongues and can only feed from small, open flowers with easily

accessible nectar. Other pollinators have long tongues and prefer tubular blooms.

To provide the most benefits, emphasize native plants in your pollinator garden, such as wild indigo, spiderwort, and beard tongue in the spring; butterfly weed, mountain mint, Joe-pye weed, coneflower, blanketflower, and St. John's wort in the summer; and goldenrod, aster, spotted horsemint, and obedient plant in the fall. Herbs such as lavender, thyme, oregano, basil, catmint, and rosemary also provide great nectar resources for bees.

To learn more, visit Cooperative Extension's Pollinator Paradise Garden at Chatham Mills in Pittsboro. This garden includes more than 140 different kinds of plants, 85 percent of which are native to the piedmont of North Carolina. The garden's website includes a plant list, photos of what's blooming every week, a schedule of free garden tours, and more. Just go to www.protectpollinators.org and click on the Pollinator Paradise Garden link.

— Debbie Roos

Food Production — Blueberries

Blueberries are among the most popular fruits grown in the piedmont. They are great when used in pies, muffins, and pancakes, and they can be eaten fresh right off the bush in your backyard. They can be grown all across North Carolina if care is taken when preparing the soil and choosing the variety.

Blueberries require a lower pH than most crops, so start with a soil test. The desired pH for blueberries is around 4.8. If your soil pH is higher than this, adding elemental sulfur will be required for best plant growth. Blueberries also appreciate a well-drained soil. Incorporating organic matter into the soil will help ensure that your plants are giving you their best production levels.

Of the two major classifications of blueberries — high bush and rabbiteye — rabbiteye varieties are the best choice for the piedmont. Rabbiteye varieties are more drought- and heat-resistant and will tolerate a wider range of soil conditions than highbush varieties. The

best rabbiteye varieties include Climax, Premier, Columbus, Powderblue, and Centurion.

Blueberries can be purchased as potted plants at garden centers throughout the year. Blueberries can be easily damaged by excess fertilizer, so be sure to follow the recommendation on

the soil test report. Keeping plants watered is especially important for the first season. Irrigation encourages good root growth and helps plants become established more quickly. In addition to irrigation and a good fertilization program, blueberries benefit from annual pruning.

Blueberries are pruned differently from many other plants because heading cuts are seldom used. To prune blueberries, remove older canes all the way down to the ground. Begin this process after four to five years, and only remove the oldest cane each year. This will ensure a good supply of new productive shoots that develop from the base.

— Randy Fulk



Pest Alert — Kudzu bug

Here's a question for you: what's camouflaged, stinky, and swarming all over bean plants in North Carolina? The answer is kudzu bugs, an insect that was first identified in the United States in 2009. Since then they have made their way into nearly all of North Carolina's 100 counties. Kudzu bugs are similar in shape to lady bugs but are olive green in color and covered in tiny brown specks.

Kudzu bugs love legumes, which includes wisteria, kudzu, soybeans, and beans. The bugs use their piercing-sucking mouthparts to feed on plant sap and are most often found on plant stems. When high numbers of kudzu bugs feed on bean plants, yields can be significantly decreased. To rid bean crops of kudzu bugs, home gardeners can spray "pyrethroid" insecticides labeled for vegetables.



Charlotte Glen

Look for a pesticide whose active ingredient ends in "-thrin." Common examples include permethrin, cyfluthrin, or bifenthrin. Be sure to read and follow all label directions before applying.

Kudzu bugs like to overwinter in homes, attics, and inside walls. Once temperatures begin to warm in spring, large masses of kudzu bugs are sometimes seen on siding, causing a flurry of concern. Kudzu bugs also can congregate on nonhost plants such as peach trees, figs, and grapes. So far there has been no recorded kudzu bug damage to nonhost plants.

For more information on kudzu bugs, visit <http://www.ces.ncsu.edu/depts/ent/notes/Urban/kudzubug.htm> or <http://growingsmallfarms.ces.ncsu.edu/growingsmallfarms-kudzubug>.

— Danielle Cutting

Carolina Lawns — Proper mowing

The first lawn-care question any homeowner needs to answer is: what type of grass are you trying to grow? Next you need to determine the height at which to cut your grass and how frequently to cut it.

Mowing height and frequency are important factors in maintaining a healthy, vigorous lawn. Mowing height is important because different turf species grow best at different mowing heights. Recommended mowing heights for piedmont lawns are:

- Bermudagrass, ¾ to 1 inch
- Zoysiagrass, 1½ inches
- Centipedegrass, 1 inch
- St. Augustinegrass, 2½ inches
- Tall fescue, 3 inches

Each turf variety will grow and outcompete weeds best when maintained at its recommended height.

Mowing frequency is a trickier question. A general rule of thumb when mowing the lawn

is to remove no more than one-third of the leaf blade each time you mow. If too much of the leaf surface is removed, the grass will go into a stress or shock period from which it must recover before it can resume growing and spreading.

To determine how often to mow your lawn, measure its height. For example, I want to mow my Bermudagrass lawn to a cut height of 1 inch. In order to only remove one-third of the blade when I mow, then I should mow when the lawn reaches a height of 1½ inches. The grass may grow faster some times of the year and may need to be mowed more often. If the grass gets taller than 1½ inches before mowing can be done, raise the mower deck so that only one-third of the blade is removed. Gradually lower the deck the next couple of times you mow to reestablish the recommended mowing height.

For more information about caring for your lawn, visit www.TurfFiles.ncsu.edu.

— Shawn Banks

Tips & Tasks

Lawns

- Fertilize warm-season grasses, but do not fertilize tall fescue and bluegrass until fall.
- Take soil samples from your lawn and garden areas for testing. Soil testing materials are available from your county Extension center.
- Remember to change direction when mowing your lawn to prevent wear patterns and other problems. Travel north to south on one mowing and east to west on the next.
- In late August, prepare the lawn for seeding or renovation of tall fescue and bluegrass lawns.

Ornamentals

- Watch for bagworms and Japanese beetles. Ask for control recommendations when you visit your county Extension center.
- Summer is a good time to see if and where your home can use some additional shade trees.
- Spray programs are available for roses, fruit trees, and more from your county Extension center.

Edibles

- Renovate your strawberry bed.
- Prune raspberry and blackberry canes at ground level after harvest.
- Begin your fall vegetable garden by planting beans, carrots, Brussels sprouts, and tomatoes in July. Wait for August to plant lettuce, winter squash, and other late-season favorites.
- Blossom-end rot may be seen on tomatoes and peppers. This disease is often caused by inconsistent water and insufficient calcium, so water frequently and follow your soil test results.

— Mark Blevins



J.C. Raulston Arboretum

Showstopper — ‘Fireball’ hibiscus

What has showy, fire-red, 10-inch-wide flowers from June through August? The ‘Fireball’ hibiscus, a hardy herbaceous perennial that has dazzled gardeners since its introduction in 2001.

An attractive addition to any landscape, ‘Fireball’ hibiscus reaches a mature height of four feet. This plant displays a special ability to thrive in heat and humidity. Grow this tough perennial in full sun with evenly moist soil. In addition to its heat tolerance, this perennial hibiscus is cold hardy from zone 5 to zone 9. In other words, ‘Fireball’ can be grown anywhere in North Carolina.

This plant’s impressive red flowers and attractive, deeply cut green foliage with distinctive purple veins will impart a unique charm to any sunny garden. Keep the soil from drying out, and you’ll learn why this plant is a true showstopper!

— John Vining

Helping You Grow

Plant Disease and Insect Clinic

NC State University’s Plant Disease and Insect Clinic (PDIC) is a great resource for home gardeners, landscapers, and commercial growers. The PDIC can identify problems such as plant diseases and injuries or unfamiliar insects. PDIC experts also give control recommendations.

Gardeners can submit digital pictures of insects or plants at no charge. Physical samples are evaluated for \$20 when submitted through an Extension office or \$30 if sent directly to the PDIC. For more information, including instructions for how to take and submit a sample, visit www.cals.ncsu.edu/plantpath/extension/clinic.

— Shawn Banks

Edibles —

Malabar spinach

If you want to create a lush, tropical look in your garden this summer, try planting Malabar spinach (*Basella alba*), a beautiful, delicious leafy climber. The leaves and purple stems are valued in many cuisines across India, Africa, and Asia. This vigorous vine can be grown outdoors across our state. Our long, hot summers also provide a growing season long enough to allow you to gather seeds for future years. Although plants may be slow to start, if planted in full sun they will cover whatever structure you build for them. Malabar spinach tolerates dry weather, but it will produce succulent green leaves most abundantly if you provide a little compost and plenty of water throughout the season.

Prepare to be amazed by this plant!

— Jeana Myers

Sustainability — Drip irrigation

Recent droughts and water restrictions have led to an increased awareness of how precious and limited our water resources are. As a result, gardeners are showing more interest in microirrigation, also known as drip irrigation. This method of watering uses a network of plastic pipes or hoses to deliver water under low pressure to garden plants. Drip irrigation applies water very slowly and is more efficient than sprinkler irrigation. Additionally, drip irrigation is usually exempt from watering restrictions.

Drip irrigation has traditionally been limited to commercial vegetable, nursery,

and greenhouse operations. As drip irrigation systems become more readily available and designs are developed specifically for home gardeners, they are popping up in home landscapes and gardens all over. Drip irrigation is much more efficient than sprinkler systems because it delivers water only to the targeted areas that need it. These flexible systems can be expanded or redirected as the gardener’s needs change, and they are even suitable for watering container plants. Drip irrigation systems can also easily be automated for gardeners whose busy schedules make hand watering difficult.

Drip irrigation systems are available online and in many garden centers. Most systems can be installed by the average gardener, and kits are available to help first-time users with the initial setup. These systems can be customized for specific plants needs down to the size of the emitter, which delivers the amount of water that an individual plant needs.

As we become more conscious of the need to conserve our natural resources, drip irrigation is a great tool in water conservation efforts.

— Donna Teasley

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