NC STATE

Extension Gardener

SUMMER 2018

Extension Gardener provides timely, research-based horticultural information. We publish four issues per year. Send comments about *Extension Gardener* to:

Content Editor and Team Leader
Lucy Bradley, Ph.D.
NC State University
Campus Box 7609
Raleigh, NC 27695-7609

Managing Editor
Ben Grandon

Regional Editor, Coastal
Matt Jones

Regional Editor, Piedmont
Brad Thompson

Regional Editor, Mountains
Hannah Bundy

Statewide Editor
Hanna Smith

extensiongardener.ncsu.edu

Conifers and Japanese Maples

The Henderson County Extension Teaching Garden is filled with thrilling plants that thrive in our area. While some of them can be difficult to find for sale, they are worth the search. Our garden features many conifers, including certain pines, cypresses, and hemlocks, as well as deciduous trees such as Japanese maples.

There are a wide variety of conifers, including dwarf conifers, gold-needled and blue-needled conifers, and conifers with different forms, such as pyramidal, upright, and columnar. Some of my favorite conifers are 'Gold Conda' cypress, which is a terrific gold-leaf Leyland cypress; "Gold Thread' Sawara cypress; 'Gold Dawn' dawn redwood, a gold leaf deciduous conifer; 'Golden Carpet', a creeping juniper; 'Nana' dwarf balsam fir; 'Nidiformis' bird's nest spruce; 'Mugo' Japanese black pine; 'Galuca Pendula' weeping blue atlas cedar; and 'Pendula' weeping dwarf Norway spruce.

I really like conifers, but I have to say that my favorite type of tree is the group called "Japanese maples." These Asian relatives of our native maples exhibit traits that have been selected for by Japanese gardeners and horticulturists for thousands of years. These are the most refined and most delicate of all the maple family.

There are two types of Japanese maples: the palmatum group and the dissectum group. The palmatum group has leaves reminiscent of our native maples, whereas the dissectum or cutleaf group has finely serrated, deeply lobed leaves. This delicate leaf structure is colored in shades of either green or red and is the most attractive feature of the cutleaf Japanese maples.

Specialty conifers come in different shapes and colors that offer year-round interest. ©Steve Pettis

Japanese maples add a refined and delicate quality to the landscape. ©Steve Pettis

Japanese maples in general are rounded trees with smooth bark and undulating branches. The cutleaf varieties are all very small, ranging from 3 feet to 9 feet high. Their small size makes them excellent specimen trees near patios, homes, and driveways. The tree can be used as an accent and even as a potted plant.

Japanese maples have specific site requirements, as do conifers. These trees prefer dappled shade, although I have seen them in full sun. Japanese maples in full sun tend to be stressed and pick up summer leaf spot diseases readily. Cutleaf Japanese maples require evenly moist, well-drained soil conditions for best performance. These trees should be protected from winds and winter cold by planting them near structures, large trees, or among a planting of other small trees and shrubs.

Some of my favorite Japanese maples are the big red-leafed 'Bloodgood' cultivar; the dwarf weeping 'Garnet'; the green-leafed 'Sango Kaku' that fades to yellow in the fall; the aptly named 'Glowing Embers' with leaves that fade from green to purple, fluorescent orange, or yellow; and the coral-barked 'Japanese Sunrise'.

Come by the teaching garden to see how these plants perform in the landscape, and select the ones that are just right for your yard.

—Steve Pettis

NC STATE

Coastal Extension Gardener

Extension Showcase

2018 NCEMGVA Conference

Pitt County has the pleasure of hosting the 2018 North Carolina Extension Master Gardener Volunteer Association (NCEMGVA) Conference, to be held June 7th through June 9th, 2018, at the Greenville Convention Center. The theme of the conference is "Gardening: A Prescription for Healthy Living."

An array of beginner and advanced topics focus on health and sustainability. The conference is open to the public, so you don't have to be a North Carolina Extension Master Gardener Volunteer[SM] to attend.

Twenty educational sessions taught by area professionals are available, including sustainable rose gardening, ability gardening, yoga and gardening, produce safety and preservation, making sense of pesticides, landscaping for water quality, and many other topics.

Our keynote speakers include "Mossin' Annie" Martin, who will discuss how to incorporate mosses into gardens and landscapes. "The Reluctant Farmer," Reverend Richard Joyner, will detail how volunteers turned a rural North Carolina "food desert" into a successful food-sustainable community. The conference also features a silent auction, pass-along book and magazine sale, County Spotlight displays, raffle baskets, and award and grant presentations.

The 2018 NCEMGVA Conference highlights the best of what North Carolina has to offer to gardening enthusiasts. Registration forms, payment options and conference details can be found on the NCEMGVA website: **ncemgva.org**. For questions, send an email to ncemgva@gmail.com.

—Eric Derstine

Smart Gardening: Beat the water hog this summer

Looking for a low-maintenance alternative to resource-intensive gardening? Want to cut down on summer water bills and irrigation maintenance issues? Consider drought-tolerant landscaping.

*Ornamental grasses such as panic grass (*Panicum *spp.) are drought-tolerant and add texture to a landscape. ©Andrey Zharkikh, CC-by-4.0*

Start with the right plant. Perennial wildflowers like butterfly weed (*Asclepias tuberosa*) and threadleaf bluestar (*Amsonia hubrichtii*) are great for dry, full sun areas. Many salvia (*Salvia* spp.) are tolerant of dry soils once established and come in a variety of shapes and colors. Ornamental grasses are also remarkably drought-tolerant. Many of the native switchgrasses (*Panicum* spp.) are great for stabilizing soil and reducing stormwater runoff, in addition to being drought-tolerant. 'Dewey Blue' and 'Dallas Blues' are particularly interesting, offering some of the bluest foliage of any of the switchgrasses. Fountaingrass (*Pennesetum* spp.) is great for dry spots, and will grab any garden visitor's attention with soft "bottlebrush" plumes that move even in the lightest breeze. 'Foxtrot' is a larger cultivar that looks fantastic planted en masse.

Mulch is key. Bark mulch offers numerous benefits, but one of the most crucial in summer months is its ability to retain moisture. For optimal moisture conservation, apply a 2-inch to 3-inch layer to garden beds. A well-mulched bed can retain up to 50% of soil moisture, which keeps soil temperatures cooler and allows for more even root growth.

Hand-water as needed. Think about installing a rain barrel on one (or all) of the downspouts around your house. A single, 0.5-inch rainfall event can fill a 55-gallon rain barrel. Hand-water your plants as needed during the hottest times of the season when we receive less than an inch of rain per week.

—Sam Marshall

Food Production: Cucumbers

Cucumbers are among the easiest and most delicious additions to the vegetable garden. Once the heat of summer rolls around, my refrigerator is well-stocked with cold cucumbers. Great in a salad, on a sandwich, or for making your own homemade pickles, cucumbers are a true pleasure in a summer garden.

Cucumbers are a true pleasure in a summer garden. ©Karen and Brad Emerson, CC-by-2.0, Flickr..

As a warm-season plant, cucumbers ideally are planted when soil temperatures reach 75°F to 85°F. Water is critical during fruit set and development, so make sure your plants are not drying out during this time. Cucumbers typically reach maturity in 50 to 70 days, depending on the variety, and should be harvested when they are about 2 inches to 3 inches long. Waiting too long to harvest will result in oversized, yellow fruits that have a bitter flavor. Fruits can be pulled or cut away from the vine, but I find cutting is a faster and easier method of harvesting.

Choosing the right variety of cucumber depends on how you plan to use the cucumbers. If you like fresh slicing cucumbers, 'General Lee' is an excellent variety with tough flesh and superior disease resistance that matures in about 66 days. Another variety is 'Sweet Slice', a heavy producer with excellent disease resistance and great flavor. This variety is also "burpless" and is a little more compact than 'General Lee.' 'Olympian' matures in about 55 days and has good flavor and broad resistance to some foliar and root diseases. If you prefer to pickle your cucumbers, choose varieties such as 'Fancipak', 'Calypso', and 'Carolina'.

Sam Marshall

Coastal Extension Gardener

NC STATE

Pest Alert: Japanese beetles

Adult Japanese beetles are shiny, metallic-green insects with copper-colored wings that will soon emerge and begin to feed on landscape plants, fruits, and vegetable foliage. During this feeding frenzy, the beetles mate and the females lay eggs in small burrows in the soil near their food source. This behavior will continue for up to 60 days, after which the adult beetles die. Eggs will begin to hatch within a few weeks of incubation, and small grubs will start to feed on grass rootlets until soil temperatures drop, when grubs move deeper into the soil profile. As soil temperature warms in the spring, the grubs will move up in the soil to feed on grass roots until pupation in late spring. Adults emerge in late June or early July.

*Japanese beetle (*Popillia japonica*).*
©David Cappaert, Bugwood.org, CC-by-3.0.

Because grubs and adults cause plant damage, treatment strategies should target both of these life stages. There are chemical and biological control options for Japanese beetle grubs. Timing is critical for these control measures to be effective, and controls should be applied when grubs are near the surface feeding on grass rootlets. In the spring, the best time to treat your lawn and garden is April through June. For the fall, the window for treatment is August through September. If you prefer not to apply chemical pesticides, you can use a biological control of milky spore bacteria. These spores work best when applied in late September through early October. Milky spore treatments are slow to take effect but are long-lasting. Begin treatment for adult Japanese beetles when damage or beetles are first observed. Contact insecticides offer immediate knockdown and should be sprayed thoroughly onto the foliage. Repeated applications may be necessary due to the short residual effect of the pesticides. As with all pesticides, read the label thoroughly before use, apply at recommended rates and times, do not apply on windy days, and do not apply when bees are actively foraging or present.

— Brad Hardinson

Lawns: Ensure a thriving lawn

The warm weather is upon us, and our warm-season turfgrass could not be happier. A cool spring has delayed green-up and, therefore, postemergent herbicide applications should also be delayed. Remember, our goal is to create the best possible conditions for our warm-season turf to thrive. Adequate sunlight, water, nutrients, and good aeration are all elements that should be in place to grow a healthy lawn this season. Here are a few tips to ensure that your lawn is thriving:

Water responsibly. Supplement rainfall to ensure your lawn receives approximately 1 inch of water per week during the growing season. Irrigation should be applied just before the sun comes up to shorten the period of time the leaf is wet.

Optimize soil fertility. Apply fertilizer based on the results of your soil test. NC State Extension recommends 1 pound of nitrogen per 1,000 square feet for centipede lawns and 4 to 6 pounds of nitrogen per 1,000 square feet for other warm-season lawns (including bermuda, St. Augustine, and zoysia) in a growing season. Use a broadcast spreader and fertilize in two different directions to avoid streaks in the lawn.

Control weeds. A dense lawn is the greatest defense against weeds. In areas that are compacted, shaded, or thin, however, weeds can become established and can outcompete the turf. If you wish to use an herbicide, be sure you have properly identified the weed(s) you are trying to control. Also, be sure that the product you choose is safe for your turf type, and read the product label thoroughly. Chemical application is not the only means of dealing with weeds. If there are only a few weeds in your lawn, it may be better to remove these weeds by hand. Contact your county Extension center to be sure you are using a product that will provide good to excellent weed control without injuring your turf. For more information, visit **www.turffiles.ncsu.edu**.

—Jason Weathington

Tips & Tasks

Are my plants alive?

We had an unusually cold winter, which caused cold damage and death to some plants.

Cold damage symptoms include brown foliage and dead shoot tips. Now is the time to get in the garden to determine if these plants have survived.

First, check for spring growth. On otherwise healthy plants, there is usually a lot of new growth, so it is easy to see what is alive and what is dead.

If new growth is not present, then carefully bend questionable branches. If they are flexible, then wait to prune. If you bend the stems and they break, then that part of the stem is probably dead.

Dead stems are usually darker brown. If the stem is alive, you will see green in the interior of the branch. Prune dead stems back to the healthy portion of the limb.

If you don't find live wood, then remove the plant. Winter and cold injury is extremely common on plants this time of year. But with a little care, woody plants can recover to their former glory.

—Cyndi Lauderdale

Cold injury can affect a plant's surface or its woody structure. ©John Ruter, University of Georgia, Bugwood.org, CC-by-3.0.

NC STATE

Extension Gardener

Helping You Grow

Vegetable Varieties for Gardeners

A gardener's choice of vegetable varieties (cultivars) can make the difference between a thriving, productive crop and one that fails to yield a harvest. Gardeners want varieties that grow and produce well in their region, resist diseases, and have good eating quality. Extension publications, seed catalogs, and local variety trials all have good information on varieties. Gardeners also look to the experiences of other gardeners in their region for recommendations on well-adapted (and tasty) varieties! Vegetable Varieties for Gardeners (VVfG) is a web-based "citizen science" project that helps gardeners share information about how well different varieties perform in their gardens. Gardeners can enter information about their climate, soil, and sun exposure, and then rate and review vegetable varieties. There is also an 'Explore Varieties' feature, where gardeners can search for reviews of specific crops and varieties from other gardens in their state, or those with a similar climate. To learn more about VVfG, visit **gardening.cals.cornell.edu/citizen-science**. To create an account, review varieties, and read reviews, visit **vegvariety.cce.cornell.edu**. Then, spread the word to your fellow gardeners! As more gardeners become citizen scientists and report the health and productivity of different crop varieties, all gardeners will be able to make more informed decisions about successful varieties for their gardens.

—Megan Gregory

Plant Watch: St. John's wort (*Hypericum calycinum*)

St. John's wort performs best in shade. ©Lauren Hill

St. John's wort is a beautiful pollinator-attracting plant for any garden in need of a showy display of yellow flowers from late spring through summer. St. John's wort is part of the Hypericaceae family and is a perennial that likes wet areas. It performs best in partially shaded locations but can tolerate full sun. This bush has an upright habit that can reach a height of 5 feet when planted in its ideal location of moist soil and partial sun. Pollinators are attracted to this plant because of its 25 to 100 large showy flowers per stem that contain many stamens. The showy flowers and nectar source attract leaf cutter bees, bumble bees, beetles, and flies. With its ability to be propagated by seed, divisions, or cuttings, St. John's wort is an excellent addition to a pollinator restoration habitat. *—Lauren Hill*

Incredible Edibles: Squash blossoms

Squash blossoms add subtle flavor to salads and other dishes. ©Travis Birdsell

When talking about "squash blossoms," we are referring to the edible flowers of almost every member of the genus *Cucurbita*. Plants produce both male and female flowers, and it is easy to tell the difference. There is a baby squash attached to the female flowers. Squash blossoms are very short-lived. Open flowers should be picked in the early morning and ideally used the same day. They can be easily stored on a paper-towel-lined baking sheet covered with plastic wrap. The flowers have a delicate flavor reminiscent of a young zucchini. They can be eaten raw or cooked, sliced, or whole. Try them on top of homemade pizzas, or cut them up in salads. Use them in quesadillas or frittatas, baked, roasted, stuffed, fried, layered in lasagna, or grilled with baby squash attached. The flowers are a good source of fiber, vitamins A and C, and folate. Put squash blossoms on your menu!

—Travis Birdsell

Biodiversity creates places of refuge. ©Meghan Baker

Sustainability: The beauty of biodiversity

The floral displays, textures, fragrances, and flavors that the botanical world offers keep us inspired. We can also enjoy the diversity of other organisms that plants invite. Outside, I see robins hunting earthworms, bluebirds watching over their babies, and a variety of insects visiting blueberry blossoms. When we create new beds, renovate landscapes, or design large-scale projects, we have an opportunity to enhance biodiversity. Blending native and non-native plants, trees, shrubs, grasses, and herbaceous plant layers ensures a resilient, complex habitat that amplifies benefits beyond aesthetic appeal. In developing my backyard habitat, I've invited native bees to nest in my joe-pye weed stems, monarch caterpillars to feed on swamp milkweed, and ruby-throated hummingbirds to spread the pollen of cardinal flower. My raised garden beds rotate between cover crops and vegetables that nurture microbes and insects, some of which inevitably share in the harvest. More is happening than our eyes can see. Ecosystem services like pollination, erosion control, water infiltration, carbon sequestration, and pest control are cycling throughout the landscape. Plants are swapping genetic materials as they are pollinated, and both plants and insects feed the next generation of birds, amphibians, and reptiles that create a healthy ecosystem. As the growing season continues, make an effort to notice these layers of activity that our diverse landscapes support as they help connect fragmented natural areas and stitch together spaces of refuge. *—Meghan Baker*