

Extension Gardener

WINTER 2019

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

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Holiday Cacti: Beautiful, but now what?

Thanksgiving cactus (*Schlumbergera truncata*) and Christmas cactus (*Schlumbergera bridgesii*) are popular houseplant mainstays in stores during the holidays because their beautiful blooms are show stoppers during the cold, dark months of winter. Native to Brazil, these plants come in a wide range of colors, including red, pink, purple, lavender, peach, orange, cream, and white. They are short-day plants, meaning that they initiate flower bud development when the nights get longer. When these plants are grown under normal light conditions, the Thanksgiving cactus blooms around late November and the Christmas cactus blooms around late December—hence their common names.

How do you tell the difference between a Thanksgiving and a Christmas cactus? First, take a look at the leaves, which are more properly termed “phyllodes.” The “leaves” are actually flattened stem segments. On a Thanksgiving cactus, the phyllodes will have two to four saw-toothed projections along the margins that will be more pointed than those on a Christmas cactus, which has more rounded projections.

You can also look at the color of the anthers in the flowers. On a Thanksgiving cactus the anthers will be yellow, and on a Christmas cactus they will be purplish-brown.

Maybe you picked up a holiday cacti while shopping one day, or maybe someone gifted one to you. And now that the show of flowers is over, you’re wondering just how to care for your new plant. The key factors are providing the right amount of sunlight, the perfect growing media,



Notice the pointed tips of the phyllodes on this Thanksgiving cactus. ©Maja Dumat, CC BY 2.0, flickr.com



Christmas cactus phyllodes have rounded tips.
 ©loulrc, CC BY 2.0, flickr.com

and some water and fertilizer, and you’ll have your holiday cactus around for several years to come.

For both Thanksgiving and Christmas cacti, light shade is ideal. Full sun is beneficial for a magnificent flowering display when flower buds are forming and during flowering, but full sun during the summer can cause the leaves to look dull and yellow. These plants actually like to be a little pot-bound, so repotting should be done only once every three years or so and should occur in the spring after flowering. Good drainage and soil aeration are also critical, so aim for a mix that contains about 60 to 80 percent potting soil with about 20 to 40 percent perlite.

Holiday cacti tolerate dry, slightly underwatered conditions, especially during the spring and summer. A good rule of thumb is to water when the growing medium feels dry to the touch but not fully dry throughout. A balanced 20-10-20 or 10-10-10 fertilizer can be applied at one-half strength once monthly from late winter through the summer. During the late summer, stop fertilization for greater flower bud production.

—Hanna Smith

Extension Showcase

Demonstration farm provides hands-on experience in Richmond County

The Sandhills AG Innovation Center (SAIC) is a produce aggregation and light processing facility located in northern Richmond County. The purpose of the SAIC is to help farmers in the region develop new markets through aggregation or value-added light processing, such as washing, chopping, and bagging locally grown produce. The facility is also developing a demonstration farm, with support from a North Carolina A&T Innovation Grant. The demo farm will have a high tunnel, blueberries, blackberries, and muscadine grapes, as well as fruit trees. The farm will serve as a hands-on teaching resource for local farmers, 4-H clubs, and others interested in the production of fruits and vegetables in an intensive, sustainable system.

On October 6, 2018, the farm held its first event: a high tunnel construction workshop led by Carolina Farm Stewardship Association, with additional support from Carolina Farm Credit. Approximately 30 people from counties across the region, with varying backgrounds, interests, and skill levels, came together for a modern take on an old-time barn raising. More work days will be held to build end walls and install plastic to complete the project. For more information or to be added to the contact list for future events, email paige_burns@ncsu.edu.

—Paige Burns

Volunteers working on the construction of a high tunnel at SAIC in Ellerbe. ©Paige Burns



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Smart Gardening: Protecting tender shrubs in winter



Organic mulches can be an important tool for frost protection. ©Andrew Koeser, International Society of Arboriculture, Bugwood.org

Mulch helps to retain soil moisture and to protect roots from direct sunlight while inhibiting weed germination. In winter, attractive mulch again becomes a tool to insulate vulnerable plants. While not every plant needs protection from low or fluctuating temperatures, tender perennials, newly planted shrubs, and non-natives may benefit from the added layer of protection, particularly during the coldest month of January when temperatures can dip into the low teens. Start by adding 2 to 4 inches of straw, pine needles, hay, compost, leaves, bark chips, or other organic mulch evenly around the base of plants. Keep the material 2 to 3 inches away from the base so it does not hold moisture around the stem or attract small rodents that may seek cover or gnaw at the trunk. Mulches will protect only what they cover. When a freeze is predicted, consider piling pine straw or leaves over low-growing plants to a depth of 4 inches. If the weather warms, be sure to uncover after three days. Similarly, boxes can be used to protect small plants. Other treasured shrubs, like gardenias, Indian hawthorns, or a small fig bush, can be protected with two layers of bedsheets that drape to the ground to trap heat. It is best if a frame can be arranged so the shrub is not in contact with the sheets. Some gardeners stuff straw inside and around the plant. Any plastic covers should be avoided. After the freeze, remove the cloth covers and pull back mulch from around low plants. Delay hard pruning on woody landscape plants until new growth appears in spring. It's easier to tell what survived and what died. And finally, don't be quick to dig up and remove plants that appear dead. On occasion, they may eventually resprout from the roots in April.

—Aimee Colf

Food Production: Goji berries

Much of south central North Carolina has a USDA Hardiness zone of 7a through 8a, which gives us a great opportunity to grow a wide variety of fruits. Such fruits include strawberries, muscadine grapes, blackberries, and blueberries, all of which grow easily in our climate and are well-respected standards. For the gardener looking for something a bit more unusual and willing to work hard to reap an abundant reward, the goji berry awaits! Goji berries (*Lycium barbarum*) grow on drought-tolerant shrubs that thrive in full sun and well-draining soils.

Goji is intolerant of heavy, poorly draining soils. Shrubs prefer soils with a pH of 6.5 to 7.5 and are perfectly content to grow without fertilizer.



Goji berries grow on drought-tolerant shrubs. ©Siamakasabet, commons.wikimedia.org, CC BY-4.0

Goji shrubs are self-pollinating but produce more fruit of a higher quality when paired with a second. You should plan for 5-foot spacing and irrigating the first year. Shrubs begin producing their second year after planting, will peak at year five, and continue for many more. When given perfect growing conditions, a single shrub can produce 7 pounds of berries in one season. Eat fresh berries as soon as they are collected but they also do very well when frozen, dried, or used for jams. While these shrubs can handle difficult conditions, they do require more maintenance than other shrubs. If left to their own devices, goji shrubs will easily reach 7 feet or higher, and branches will begin to cross each other and become dense. Pruning during the dormant and growing seasons by removing diseased or crossing branches. You can also grow goji from rooted softwood cuttings taken in summer. These rooted cuttings are truer to their parents than growing seeds. So if you don't mind yearly pruning, get your hands dirty and give goji berry a try!

—Selena McKoy

Pest Alert: Crapemyrtle bark scale

Crapemyrtle bark scale (CBS) has recently shown up in the Charlotte area. It is a bark or felt scale with a waxy coating. The insects look very similar to mealybugs. This invasive insect came to the U.S. from Asia and first appeared in Texas in 2004. It has since spread north to Oklahoma and south and east to Arkansas, Louisiana, Tennessee, Mississippi, Georgia, North Carolina, and Virginia. A scale is a sucking insect that attaches itself to twigs, branches, and trunks to feed on the phloem layer of the plant. Because the phloem layer carries sugar and starches, the insect produces large amounts of honeydew, resulting in sooty mold that will turn leaves, branches, and trunks black. Males are winged and fly to the nonwinged female to mate. The female lays 60 to 250 eggs that are protected in the ovisac she produces. Hatching occurs in mid-April to May, with a second generation appearing in late summer.

Damage to the plant is mostly aesthetic, with a reduction in plant vigor, less flowering, and reduced size of flower clusters. Also, plants that have infestations of this pest may leaf out later than those not infested. As with any pest, keeping the plants healthy and vigorous will help to discourage infestation. Plant crapemyrtles in full sun, and use proper cultural techniques such as mulching, fertilization, and irrigation. Several other plants that are commonly planted in gardens can be infested by the CBS, including persimmon, fig, boxwood, pomegranate, raspberry, American beautyberry, cleyera, and privet.

(continues at the bottom of Tips & Tasks)



Crapemyrtle bark scale can completely cover branches and trunks. ©Jim Robbins, University of Arkansas CES, Bugwood.org

Lawns: Winter lawn care for tall fescue

Have you aerated, re-seeded, fertilized and established a healthy tall fescue lawn this season? If not, it is best to wait until next fall to establish a tall fescue lawn by seed. A spring seeding typically cannot make it through the summer months. You may also consider installing tall fescue sod or exploring other turfgrasses for your home lawn.

To keep your tall fescue lawn healthy, continue care through the winter months as this cool-season grass is actively growing. Tall fescue requires a mowing height of 2½ to 3 inches. It is best to leave clippings on the lawn for additional nitrogen.

Tall fescue needs 1 inch to 1¼ inches of water every week, ideally all at once. Water to a depth of 4 to 6 inches to adequately wet the soil. Typically clay soils will have runoff from irrigation because they absorb water slowly. Allow water to absorb, then begin irrigating again until reaching the desired amount of water. Always irrigate in the morning hours to reduce incidence of disease.

Tall fescue grass should only be fertilized in the fall and winter months when it is actively growing. Do not fertilize after March 15th. Ideally, a soil test will indicate the type and amount of fertilizer needed. If you choose not to test, use a complete nitrogen-phosphorus-potassium turf-grade fertilizer, such as 12-4-8 or 16-4-8 fertilizer and apply 1 pound of actual nitrogen in November and again in February.

While not a problem for most turfs, regular leaf removal is essential in keeping tall fescue alive. Leaf accumulation on top of a new tall fescue lawn will kill the young grass. Applying these practices will ensure a healthy and beautiful lawn for the upcoming months.

For more information, see NC State Extension's ***Carolina Lawns (AG-69)*** and the "Lawns" chapter in the ***Extension Gardener Handbook***.

Tips & Tasks

Fraser fir Christmas tree care

Consumers of Fraser firs know that keeping the tree fresh through the holidays is the primary goal. By completing these simple tasks, one can keep a Fraser fir tree fresh and full of needles until after Christmas.

- First, obtain a fresh tree. Pick out a tree that has not been cut for more than two to three weeks. Ask a sales associate at a retail store or a retail grower lot when the tree was cut.
- After obtaining a tree, a key factor is keeping it watered.
- Make sure that once a fresh cut has been established, the tree is placed in a stand that can hold at least a gallon of water.
- There is no need to add any additives to the water as additives have not been found to significantly prolong the freshness of the tree.
- Keep the tree away from any heat source or sunny window as heat or light will contribute to the tree drying out quickly.

—Brad Thompson

Crapemyrtle bark scale (continued)

Mechanical control can be implemented by simply using a sharp spray of water to wash the insects off of trunks or even a brush to rub them off. Predators such as lady beetles and mealybug destroyers will also help control the CBS naturally. Contact insecticidal sprays can be timed to correspond to crawler hatching times. Systemic insecticides applied as a soil drench have also been proven to be effective. For specific pesticide recommendations, please consult the latest ***North Carolina Agricultural Chemicals Manual***.

—Debbie D. Dillon

Helping You Grow

Choosing native plants

Native plants make an excellent addition to any garden. Planting natives attracts pollinators, birds, and butterflies to your yard. This diversity can improve vegetable harvests and offer fun opportunities to observe the natural world in your own backyard. Plus native plants are well-adapted to your local climate, allowing them to thrive in the garden.

As you plan your garden for the upcoming season, consider adding more native plants to your landscape. One great place to start is the "Native Plants" chapter in the ***NC Extension Gardener Handbook***. This chapter is accessible at content.ces.ncsu.edu/12-native-plants.

You can also search for native plants that will thrive in your zip code on the Audubon Society's website: www.audubon.org/native-plants. The site will help to create a list of plants for you, and you can get additional tips on creating a bird-friendly habitat.

If you're looking for even more information about native plants, visit gardening.ces.ncsu.edu/native-plant-resources.

—Leslie Peck

Joe-pye weed. ©Leslie Peck



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Plant Watch: American holly (*Ilex opaca*)



American holly has spiny leaves and red berries. ©BlueRidgeKitties, CC BY-NC-SA 2.0, flickr.com

The American holly is a beautiful native evergreen tree. In home landscapes, with limited area for growth, trees typically reach up to 30 feet high. Hollies are dioecious, meaning male and female flowers are on separate trees. Both trees are needed to have fruit on the female. Often American holly is used as greenery for Christmas decorations, as in "Deck the Halls with Boughs of Holly." American holly prefers well-drained, slightly acidic soil, but will not tolerate consistently wet soils. If the soil pH is too high, chlorosis will occur, with some leaf drop associated with this problem. The American holly is the only native holly with spiny leaves and red berries. The tree's appearance is improved by letting limbs grow all the way to the ground, allowing this holly to be used for privacy screens and specimen plantings.

—Shannon Newton

Incredible Edibles: Pansies aren't just for looks

Most vegetable gardens are laid to rest for the winter. But never fear, you probably have something tasty planted right outside your front door! Pansies are winter annuals that are edible and have a slightly sweet, floral flavor. Although their flavor is mild, pansies are great for candying or eating whole on crackers with cream cheese. And pansies are a great way to add beautiful color to salads and desserts such as cakes and pastries. To harvest, pick flowers in the morning, after dew has evaporated, and keep them cool after harvest to maintain freshness. Before eating any flowers, make sure you have properly identified them, and only eat flowers that you know haven't been treated with pesticides. You can learn more about edible flowers and how to use them from this NC State Extension publication: *Choosing and Using Edible Flowers* (AG-790).

—Hanna Smith



Pansies have a sweet floral flavor. ©Heather Acton, CC BY-NC-ND 2.0

Sustainability: Keep it real!

Labor Day rolls around, and plastic Christmas tree-shaped decorations begin to appear in stores. Many consumers are tempted to purchase these plastic objects instead of a "real Christmas tree." Some might not want a real tree because it has to be cut each year, which doesn't seem sustainable. There is no need to worry. When a Christmas tree is harvested, the grower replants a tree to take its place. During the many years a tree grows to become the centerpiece of holiday celebrations, it is also serving as habitat for deer, bear, rabbits, and birds, including grouse and wild turkeys. The fake plastic tree is manufactured in an Asian country from nonrenewable petroleum. Meanwhile, the real Christmas trees are growing on American-owned family farms across North Carolina. Growing Christmas trees as a crop ensures that land owned by many families for generations will remain family farms, providing jobs and bringing income into the local economy.

Now that you feel good about purchasing a real tree, the next thing that might concern you is disposing of it after Christmas. Never fear. There are many free opportunities to have your real tree recycled. Most trees are chipped up into mulch, which will break down and help another plant grow. The fake tree will lose its ornamental value quickly, then be tossed into a landfill where it will remain for eternity. Make the sustainable choice this year by "keeping it real."

—Paige Patterson