Sequatchie Valley Master Gardeners

A Program of the University of Tennessee Extension Sequatchie and Bledsoe Counties

March 2025

Gardening News and Notes

Tennessee Tree Day

Saturday, March 15, 2025

You will be able to reserve trees later this month. Check out https://www.tectn.org/tennesseetreeday.html for more details.

Master Gardeners should have an email on February 1, with a list of trees available from our allotment, contact Ken Lee, with questions and your order.

2025 Tentative Dates

- March 14, 2025 – 4:00 PM CST bundling trees and Tree Day setup
- March 15, 2025, Tennessee Tree Day - Dunlap
- April 26, 2025 MG Meeting – Dunlap
- May 3-4, 2025 Valley Fest, Dunlap
- *July Tomato Tasting – Pikeville
- November 1, 2025 MG Meeting – Dunlap
- *Tentative date to be discussed

2025 Programs

Watch for emails with dates, times, and locations

- January 28 – April 29, 2025, Master Gardener Intern Class, 9:00 AM CST, Sequatchie County Fair Building
- March 18, 2025 – Growing Sweet Corn
- April 22, 2025 – Wildlife Damage Management for lawn, garden, and home
- April thru. May 2025 - Master Backyard Poultry

The Extension Master Gardener Program is a program of the University of Tennessee Extension

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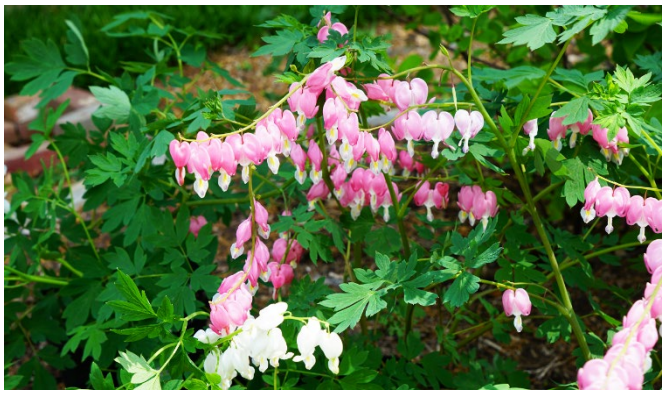
UT Gardens Plant of the Month

March

Native and Asian Bleeding Hearts Stand Out Through the Spring

Submitted by Camille Newsom, research coordinator, UT Gardens, Jackson



Bleeding hearts are spring ephemerals that last most of the season. Photo by T. Cronin, courtesy UTIA.

When winter melts away, loosening its cold grip on the garden, spring enters the scene with a burst of flowers called spring ephemerals. Ephemerals only last a short period of time. They take advantage of the sweet in-between moment, when the weather is cool but not freezing and before trees leaf out.

Our native bleeding heart (*Dicentra eximia*) is one of the staples of springtime that hang around with all the ephemeral beauties on the forest floor, particularly in the mountains of East Tennessee. Its showier cousin, the bleeding heart native to Asia, (*Lamprocapnos spectabilis,* formally *Dicentra spectabilis*), is an old-fashioned favorite. Unlike many true ephemerals that might only last a few days, bleeding hearts grace the garden for most of the spring season.

Both the native and Asian bleeding heart emerge in spring with fern-like, deeply cut, beautifully textured foliage, followed by stems adorned with cascading heart-shaped blooms that feature an elongated inner petal, protruding from the center and hanging from the bottom. This gives each delicate flower the appearance of a heart burst open with a droplet of blood dripping from the bottom.

These perennials thrive in partial to full shade and organically rich to average garden soil. Good drainage and a regular supply of organic matter will encourage the return and proliferation of these delicate beauties in the garden. Bleeding heart flowers are usually found in shades of pink, red and white. They are about an inch long and half as wide. Each flower stem usually carries around 10 pendulous blooms, with multiple flower stems on each plant. ‘Valentine’ is a favorite cultivar with bold cherry-red flowers. ‘Gold Heart’ is an exceptional choice, standing out with chartreuse foliage.

Bleeding heart pairs beautifully with other perennials like ferns, Virginia bluebells, trillium and lungwort and shrubs such as azaleas and hydrangeas in a woodland garden setting. The native *D. eximia* usually grows around 15 inches tall and carries smaller, less showy blooms than *L. spectabilis*, which grows 18 -24 inches tall and has more robust flower power. Both species are toxic to animals, making them deer and rabbit resistant. Both plants thrive in the spring when the temperatures are mild. As summer heats up their foliage will yellow and die back. Plants typically go dormant by mid-summer and do not emerge again until the following spring.

You can find bleeding hearts growing in UT Gardens locations in Jackson, Crossville and Knoxville. Adding one (or more) of these beauties to your garden will be easy this year as all three UT Gardens sites will have them available at their spring plant sales.

Gardening Tips

"Gardening requires lots of water - most of it in the form of perspiration."
Lou Erickson

April

April is the month when gardens and gardeners alike really spring to life. Buds and blooms invigorate the plants and their caretakers. The University of Tennessee Institute of Agriculture recommends that gardeners perform the following tasks to keep their landscapes looking their best.

Spring Bulbs

As spring-flowering bulbs finish blooming, remove the spent flowers and any developing seed pods. This will permit the flower to spend its resources on making bigger, more plentiful flowers next year. Do not twist, braid, or cut off the foliage. The leaves are gathering energy to store in the bulb for next year's growth. If you must remove the foliage, wait until it is mostly brown or yellow, then cut it off cleanly at the ground. Bulbs will appreciate a sprinkling of bulb-formulated fertilizer applied just as flowering is complete.

Summer Bulbs

Summer-flowering bulbs can be planted in mid to late April in East Tennessee and somewhat earlier in Middle and West Tennessee. Dahlia, gladiolus, tuberose, fancy-leaf caladium, elephant ear, amaryllis, and canna will add color, fragrance, and texture to the summer garden. Caladiums and elephant ears thrive in shade, while all the others need full sun (or at least half a day) to bloom well. Since these bulbs need to grow quickly to provide summer interest, prepare the planting bed by deeply tilling, incorporating organic matter, and adding bulb fertilizer. Crush any clods, remove rocks and debris, and then rake the bed smooth and level. Crowning the bed (making the center slightly higher than the edges) improves drainage. Follow the directions on the bulb package to determine the correct planting depth and spacing.

Lawns

Cool-season grasses such as fescue, bluegrass, and perennial ryegrass should receive their second fertilizer application of the year in April. Turf experts advise applying half to one pound of nitrogen in March and again in April. Cool-season grasses should not be fertilized until September.

Warm-season grasses such as Bermudagrass, zoysia, and centipede should be fertilized just as the grass begins to green up. Apply one pound of nitrogen per 1000 square feet. Repeat this application in May and June. If you need help choosing or applying a lawn fertilizer, ask your county Extension agent or a master gardener.

You can do much to reduce weeds and improve the appearance of your lawn by mowing at the correct height for the type of grass you have and mow frequently with a sharp blade.

Turfgrass experts recommend these mowing heights:

- Kentucky Bluegrass - 1.5 to 2.5 inches
- Turf-type Tall Fescue - 2 to 3 inches
- Fine Fescue - 1.5 to 2.5 inches
- Perennial Ryegrass - 1.5 to 25 inches
- Common Bermuda - 0.75 to 1.5 inches

- Hybrid Bermuda - 0.5 to 1.5 inches
- Zoysia - 0.75 to 1.5 inches
- Centipede - 1 to 2 inches

Shrubs

Azalea, forsythia, lilac, weigela, flowering quince, spring-flowering spireas, and other shrubs that flower very early in the year can be pruned as soon as flowering is over. Do not delay because these shrubs make next year's flower buds during the summer. No fertilizer may be needed, but these shrubs can be fertilized before or soon after flowering. Shrubs and trees are more often over-fertilized than under-fertilized. Putting out fertilizer when none is needed tends to make trees and shrubs more susceptible to insects, disease, and drought.

If you have not pruned your butterfly bush (*Buddleia davidii*) by now, do it this month. The common butterfly bush should be cut down each year to within six or 12 inches off the ground just before or soon after new growth begins. Butterfly bushes are rapid growers and only produce flowers on new growth each spring. In addition, the annual cut-back will produce larger flowers and maintain a manageable shrub size. A mature bush can be cut completely down and still grow back to its full height within three to four months and flower profusely.

Azalea Lace Bug

Inspect evergreen Azaleas for lacebug damage. This common Azalea pest feeds on the underside of leaves and gives a whitish, pale, or stippled appearance to the top side of the leaf. The bugs are tiny and hard to see, but they leave dark brown dots or flecks on the underside of the leaf. If left uncontrolled, lacebugs will cause the plant to be unattractive, decline, and perhaps die. Begin by evaluating the growing conditions of your Azaleas since a well-grown plant is significantly less troubled by these insects.

A safe and effective way to destroy these insects is to spray the underside of the leaves with a horticultural oil or an insecticidal soap. Thorough coverage is necessary and must be repeated at least once (within ten days to two weeks).

Fruit Trees

While fruit trees are blooming, refrain from spraying insecticides to spare the bees pollinating the flowers. Within a week after the flower petals fall, resume your regular fruit-tree-spray program. Peach, plum, and cherry trees may be sprayed shortly after petal fall to control fungal diseases like brown rot, rust and leaf spots. Ask an informed salesperson at your local garden center to recommend a fungicidal product or contact your local county Extension agent or a master gardener:

Vegetable Gardens

You can still plant cool-weather vegetables this month. Onions may be planted directly in the garden from sets, small onion bulbs, purchased from the garden center. Push the onion set into soft, fertile garden soil until the top is just below the soil surface. Onions do not compete effectively against weeds, so be prepared to hand weed your onions. Broccoli, cabbage and cauliflower plants should still be available. Sow seeds of lettuce, leafy greens, beets, carrots, and radishes directly into well-prepared soil. Set out spinach plants or grow your own from seed. Beans and com can also be planted. If you grow the "supersweet" varieties of com, wait until May 1 to sow the seed, or until the soil is warm

where you live. Warm-weather-lovers like tomatoes and peppers should not be set out until the last expected frost date is well past and the soil is getting warm (May 1-15 in East Tennessee).

Spring Cleaning in Orchards and Vineyards

With the approach of spring, fruit growers should do several things to produce a quality crop, says Professor David Lockwood of the University of Tennessee Plant Sciences Department.

Many diseases of fruit crops will overwinter in fruit left hanging on trees or vines throughout the winter months, Lockwood says. These remaining fruits serve as sources of reinfection during the upcoming growing season. Before the growing season begins, remove all old fruits from the plant. While the leftover fruit remaining on trees and vines are greater threat than fruit left on the ground, fruit found on the ground should be removed from the site as well.

Fruit growers should plan to make pruning an annual process. Pruning offers many important benefits for the plant. Dead or diseased wood should be removed and the prunings should be removed from the site to lessen the potential for reinfection. Pruning opens the canopy of the plant for sunlight and air movement, which will help lessen the possibility of disease. The faster fruits and foliage dry off following rain or fog during the growing season, the less likely certain diseases to develop. Pruning also enables better spray coverage, lessening the potential for insect and disease problems, according to Lockwood. Pruning is also valuable for maintaining the fruitfulness of a tree or vine. By pruning unproductive or marginally productive wood in the canopy of the plant, new growth is encouraged to develop. This new growth is the site of the best fruit wood for future years.

Trees and vines, particularly newly planted crops, compete with weeds and grasses for water and nutrients. In trials where weeds and grasses were not controlled, growth of young trees was up to 35 percent less than in situations where weed and grass growth was controlled. In dry years, this growth reduction may be even more severe. As the tree or vine becomes established, weeds and grasses may not be as detrimental to growth and fruiting as in the earlier years.

However, it is still recommended that an 18- to 24-inch area extending from the base of the plant be kept free of vegetation. The vegetation-free area lessens problems with voles, enables the application of trunk sprays, and lessens the temptation to use a string trimmer around the base of the tree and possibly cause problems. Coupled with close mowing of grass between plants and around the planting, the improved air circulation may result in fewer diseases.

Fruit Tree Resources

- Apples https://www.familyplotgarden.com/apple-trees-how-to-and-information.html
- Peaches https://www.familyplotgarden.com/peach-trees-how-to-and-information.html
- Disease and Insect Control in Home Fruit Plantings PB 1622 https://utia.tennessee.edu/publications/wp-content/uploads/sites/269/2023/10/PB1622.pdf
- UT Hort Fruit page like to several publications and other resources https://uthort.tennessee.edu/fruits/

Scientists Decode the DNA of One of America's Most Iconic Trees

New Research Describes the Genome of the Highly Valued White Oak

Figure 1 White oaks are among the target species for the UT Tree Improvement Program, which has been working for decades to improve tree genetics. Scott Schlarbaum, UTIA distinguished professor of forestry, leads the UT Tree Improvement Program and is among the co-authors of the paper describing the white oak genome and how local adaptations may have implications for the species to heat and drought stress. Photo by A. Mains, courtesy UTIA.

Highly valued economically, ecologically and culturally, the white oak (*Quercus alba*) is a keystone forest species and is one of the most abundant trees across much of eastern North America. It also faces declining seedling recruitment in many parts of its range.

In a paper published in *New Phytologist,* researchers representing the University of Tennessee Institute of Agriculture, Indiana University, the University of Kentucky, the U.S. Forest Service and several more institutions describe for the first time the species' complex genome, providing insights into fundamental questions about plant evolution, tree breeding and genetic improvement efforts that could help forest managers plan for and address future forest resources.

Lead authors of the paper Meg Staton, associate professor of bioinformatics and computational genomics in the UT Department of Entomology and Plant Pathology, and Drew Larson, National Science Foundation postdoctoral fellow at Indiana University, coordinated with colleagues across the nation in academia, the U.S. Forest Service, state forests and industry to obtain genetic sequence data representative of the species.

Also central to the effort were Seth DeBolt, professor of horticulture and director of the James B. Beam Institute for Kentucky Spirits at the University of Kentucky, and Dana Nelson of the U.S. Forest Service Southern Research Station and director of the Forest Health Research and Education Center at the University of Kentucky.

Says Staton and her co-authors in the paper, "The white oak genome represents a major new resource for studying genome diversity and evolution in *Quercus*. Also, unbiased gene annotation is key to accurately assessing R [disease resistance] gene evolution in *Quercus*."

The paper addresses the extent of the genetic diversity and population differentiation in *Q. alba*, and how gene content and disease resistance genes appear to have evolved during the history of *Quercus* and related taxa. The authors also discuss phylogenetic hypotheses – how oak species are evolutionarily related – as supported by whole genome data.