



# Extension Gardener

NC STATE UNIVERSITY

NORTH CAROLINA COOPERATIVE EXTENSION

Spring 2012

Empowering gardeners. Providing garden solutions.

*in this issue*

## MOUNTAINS AND FOOTHILLS NEWS

Raised Beds

Fruit Trees

Winter Annual Weeds

Bringing Nature Home

## STATE NEWS

Gardening Across the Carolinas

Carolina Jessamine

Potatoes

Herbicide Injury to Vegetables

## Gardening Across the Carolinas

North Carolina's 100 counties cover four USDA hardiness zones and span the coastal plain, sandhills, piedmont, foothills, and mountains. Although the exact borders of these areas are often vague, you probably know exactly which label applies to you and your garden. Although all the regions of North Carolina boast long growing seasons with ample time for producing many wonderful crops and plants, there are distinct regional differences in what can be grown and the methods used to grow them.

Soil challenges vary across the state from nutrient-poor, droughty sand in the east to heavy, poorly drained clay in the west. Climate and soil differences across the state impact which plants can be grown, making it important to choose varieties suited to your region, including lawn grasses. Cool-season grasses, including fescue and bluegrass, are grown in the mountains, foothills, and western piedmont. These grasses are best planted in the fall and should be fertilized in the fall and winter. Warm-season grasses like bermudagrass, zoysia, centipede, and St. Augustine are grown in the eastern half of the state. These varieties are planted and fertilized in spring and summer.

In addition to having different planting times, cool- and warm-season grasses are susceptible to different pests. The warm-season lawns of the eastern half of the state often struggle with ground pearl, nematodes, and large patch, while cool-season

lawns in the west may be plagued by white grubs and brown patch.

Many vegetable and fruit crops grow across the state, but crops grown in the east can be started earlier and experience a longer growing season than those in the west. While most tender crops must be harvested by mid-October in the west, gardens in eastern North Carolina can produce for a month or more, with later frost dates allowing more fall gardening time. Vegetable harvests in the eastern half of the state often experience a lull in the extreme heat of July and August, while crops in the slightly cooler western regions keep producing all summer.

Plant varieties must be adjusted for the part of the state in which they are being grown. For example, although blueberries can be grown all over North Carolina, mountain gardeners need hardy highbush varieties, while coastal plain gardeners will have better success with rabbiteye types. It definitely pays to research the best varieties for your region.

Christmas trees are another crop with distinct regional differences. Able to grow in the high elevations of western North Carolina, Fraser Fir is king, while pines are the Christmas tree crop of the east.

No matter where your home garden is located, issues exist. Consult your local Extension office to learn more about local gardening challenges and which plants will thrive in your regions.

— Donna Teasley



USDA Agricultural Research Service



J.C. Raulston Arboretum



J.C. Raulston Arboretum

## Extension Showcase

## Foothills Fresh

The Foothills Fresh program highlights the emergence of the western piedmont and foothills area of North Carolina as an important local-foods and agritourism region. What began as a four-county project now includes eight counties—Alexander, Burke, Caldwell, Catawba, Cleveland, Gaston, Iredell, and Lincoln. Extension agents in each of those counties work as a team to coordinate the effort.

The program's focus is its website, [www.foothillsfresh.com](http://www.foothillsfresh.com). Area residents can search the site by county, by commodity, or by category (example: farmers markets). The website also provides information on seasonal produce availability, food safety and preservation, and nutrition. A new feature this year is a map showing all the participating farms.

In addition to educating the public about local farms, Foothills Fresh also provides a growers school each year. This school is rotated to different counties, and topics are varied. The 2012 school is focusing on subjects ranging from pollinator conservation to managing stink bugs.

Foothills Fresh has helped farmers and Extension agents alike realize that everyone benefits when they work together to promote the entire region rather than just a single farm or county.

— Kevin Starr

## Smart Gardening — Benefits of raised beds

**R**aised beds are productive, easy to work, and can extend the growing season—meaning more fresh, homegrown goodness. The greatest benefit of raised beds is the increase in production per square foot. Traditional gardens with good management may yield 0.6 pounds of vegetables per square foot, but raised beds can average 1.24 pounds per square foot—twice as much.

Why? Raised beds don't require the same space between rows, so vegetables are planted in beds at higher densities. Also, the improvement of soil conditions increases yields. By adding manure, soil conditioners, compost, and other amendments to existing soil (at least 1/3), you can make a superior soil. The gardener shares some benefits too, in the increased ease of timely planting and harvesting. No more working on your hands and knees with a kneeling pad! Also, when wet weather would normally keep you out of a traditional garden, you can still garden in raised beds. Pest control is easier too. If burrowing rodents are present, the bottom of the bed can be lined with poultry wire or hardware cloth. The narrow dimensions of beds make bird netting



suspended on flexible conduit frames practical and easy. Weed control with plastic mulch can be achieved affordably because the width of the bed can be spanned by one roll.

**Guidelines for raised bed construction:**

A bed shouldn't be wider than 4 feet, with the length being up to the gardener. A north-south orientation is best for low-growing crops, allowing direct sunlight to reach both sides of the bed. Beds that will contain taller crops might do better on an east-west axis. Avoid the use of creosote- or pentachlorophenol-treated lumber for framing. These chemicals can leach out and injure plants. Use pressure-treated lumber, redwood, cement block, or brick. Finally, because it warms up quicker than the ground, a bed can easily double as a cold frame by covering it with a lightweight clear plastic cover. Imagine being able to start plants early in beds with covers and never having to transplant them! Supports for poles, cages, and trellises can be mounted to the frame for longer life and ease of installation and removal.

— Elizabeth Ayers

## Food Production — Selecting the right fruit tree

**M**any gardeners' thoughts are turning to spring and the prospect of putting new plants in the ground. Fruit trees are becoming available at local retail outlets, or they can be ordered from numerous nurseries located across the country. Wherever you purchase your fruit trees, keep a few tips in mind to make sure you get maximum success.

Think about the site where you are going to plant the tree. Some locations are more prone to spring frosts and freezes than others, which means early blooming fruit trees like Japanese plums should be avoided. Apple trees may be a possibility in frost-prone sites because they bloom much later than most tree fruits.

The next thing to figure out is what type of fruit tree to plant. Some fruits have more problems than others, including insect pests and diseases. Pick a tree fruit that you will have time to properly care for.

Although many tree fruits are self-pollinating, some do require another variety to ensure good pollination. Apples and most cherries need at least two different varieties for proper pollination. If another variety is not nearby, most of the fruit will drop off and the remaining fruit will be small or misshapen.

Apple trees in particular offer a wide variety of rootstocks to choose from. These different rootstocks influence the size of the tree when it matures. An apple variety on a dwarfing rootstock will reach a height of 10 to 12 feet, a semi-dwarf tree will get to be around 15 feet tall, and a tree on a standard rootstock will reach heights of over 20 feet. There are advantages and disadvantages of different rootstocks. Contact your local Extension office to learn more about these and to get recommendations of fruit tree varieties for your county.

— Bill Hanlin



## Pest Alert — Winter annual weeds

An invasion of lawn weeds can usually be tracked back to management decisions that we are making for our lawns. Frequent and close mowing practices often yield more problems with weeds like annual bluegrass and chickweeds during the winter. These weeds germinate in the fall and continue to grow through the spring months, flowering and setting seed before dying back in late spring. The cycle will repeat next fall if conditions continue to be favorable for these winter annual weeds. Annual bluegrass (*Poa annua*) is a weedy, light-green grass that readily seeds. Common chickweed (*Stellaria media*) is a low-growing broadleaf weed that spreads outward

from a central clump, rooting along the stems.

Adjusting the mowing height of your lawn mower to achieve the proper height for your lawn is one of the easiest methods of weed prevention. Mowing at the proper height encourages a thicker, denser lawn that will be able to compete against most weeds.

Another practice that contributes to more annual bluegrass and chickweed is excess nitrogen levels due to over-fertilization. Soil testing and providing the correct fertility needed for the lawn to grow at its best will help limit these winter annual weeds.

— Jan McGuinn

## Environmental Stewardship — Bringing nature home

North Carolina gardeners often express concern that they are seeing fewer butterflies and song birds. It may not occur to them that their choices of landscape plants may be to blame. In his popular book *Bringing Nature Home*, Douglas Tallamy, an entomology professor at the University of Delaware, offers explanations and at least partial solutions to these population declines.

Insects are a primary food source for birds and many other animals. Almost all birds rely on the high protein content of insects to feed their babies.

Birds evolved to eat native insect species, which in turn evolved to eat specific native plants. One reason many non-native plant species have become popular is because they are touted as “pest free.” Nice for the gardener, but not so nice for the insects, birds, and other insect-eaters looking for a meal.

Studies have confirmed that when native plant species are replaced over large areas with non-native species, including non-native lawn grass, there are fewer birds. While you may not be ready to pull out all of your non-native landscape plants, you should consider adding more

natives to the mix. Just replacing a portion of the lawn, which is nearly sterile as far as native insect species are concerned, with a border of native flowers and shrubs could host a large variety of insect species, including adult butterflies and their caterpillars.



J.C. Raulston Arboretum

Examples of widely available native plants include milkweed, black-eyed Susan, Virginia sweetspire, and Joe-Pye weed. Learn much more about adding native plants to your yard to support wildlife from NC Cooperative Extension's interactive website, *Going Native: urban landscaping for wildlife with native plants*: <http://www.ncsu.edu/goingnative/>

— Linda Blue

# Tips & Tasks

## Lawns

- Apply crabgrass preventer on cool-season lawns in late winter before crabgrass starts to germinate.
- Fertilize cool-season lawns with a slow-release lawn fertilizer.
- Spray wild onion and garlic with a product containing 2,4-D.
- Sharpen lawn mower blades before using in the spring.

## Ornamentals

- Prune fruit trees and grape vines for optimum fruit production.
- Prune established blueberries by taking out one-third of the oldest canes at ground level.
- Prune summer-flowering shrubs such as crape myrtle, rose of Sharon, and butterfly bush.
- Prune roses before bud break.
- Deadhead pansies to prolong flowering.

## Edibles

- Plant asparagus crowns when the soil is dry enough to work.
- Plant early-season vegetables such as English peas, onions, Irish potatoes, and spinach.
- Order garden seeds such as beans, corn, and okra.
- Make sure all debris is cleared out of the vegetable garden.
- Draw your garden plan to include crop rotation of sensitive vegetables such as tomatoes.

— Donna Teasley



JC Raulston Arboretum

## Helping You Grow

### Extension Gardener Now on Social Media

You can now receive timely information from *Extension Gardener* throughout the year by following us on our blog or on Twitter and being our friend on Facebook. We have statewide sites where you can find information relevant to all North Carolina gardeners. We've also developed regional sites with information specific to the region of the state where you live. Visit our blog at <http://ncextensiongardener.blogspot.com>, where you'll find links to the regional blogs. Follow us on Twitter at @NCExt-Gardener, and be our friend on Facebook at NC Extension Gardener. From the statewide Twitter and Facebook sites, you can find links to the regional pages. Join us on the Web!

— Kelly Groves

## Showstopper — Carolina jessamine

**B**orn in the South, Carolina jessamine is a terrific native vine for Carolina landscapes. Admired for its sweetly scented, canary-yellow flowers, this vine really puts on a show from February to April. The golden, trumpet-shaped, 1½-inch-long blooms are borne in small but prolific clusters throughout its narrow, glossy, evergreen foliage. Carolina jessamine can be trained to climb up arbors or trellises and is often found in wooded areas growing on tree trunks. This moderately vigorous vine generally takes three to four growing seasons to cover an average-sized arbor, and it can climb to 20 feet. Occasionally, older jessamine vines become top heavy or sparse near the bottom. This can be remedied by pruning the vines back hard soon after they finish flowering. Carolina jessamine is the state flower of South Carolina and is winter hardy from zones 7 to 9.

— John Vining

## Edibles — Potatoes

**P**otatoes are one of the most consumed vegetables in the U.S. They taste great, but they can be boring to look at. If you are tired of the same old white brown-skinned or light yellow-fleshed potatoes, then consider adding more color to your potato palette by growing different kinds. Potato varieties with skin and flesh colors in shades of blue, gold, pink, purple, red, and yellow are available. Plant potatoes between February 1 and April 15 in North Carolina. For each one-inch seed piece, prepare a loose planting hill. Make sure each seed contains at least one eye. Plant five inches deep and ten inches apart when soil is at least 400F, water well, and watch for Colorado potato beetles, which can be handpicked and destroyed. Potatoes will be ready to dig and enjoy in 100 to 120 days from planting.

— Danny Lauderdale

## Sustainability — Herbicide injury to vegetables

**S**ome gardeners have recently experienced damage to their vegetable plants from residual herbicides in manure, straw, or hay. The herbicides of concern contain picloram, aminopyralid, or clopyralid as an active ingredient. These herbicides are used on pastures, hay, some other crops, and lawns to kill broadleaf weeds. They're useful for their intended purpose but are unusually persistent in hay and manure.

These herbicides can enter gardens when a gardener amends the soil with fresh or composted manure from an animal that has eaten grass or hay treated with one of these herbicides. Alternatively, someone

may use treated hay or straw as mulch or may try to grow vegetables on land where one of the herbicides has been applied. Treated grass clippings from non-residential properties could cause problems as well. Symptoms of injury to vegetables and other broadleaf plants include curling of plant leaves and stems—and death in highly sensitive crops such as beans and tomatoes.

If you're using fresh or composted manure as a soil amendment, ask what was applied to the hay or pasture grass that the animals have eaten. Likewise, if you're a gardener using hay or straw as mulch, ask the supplier what herbicides were used on

the crop. Do not use hay or manure from animals that have eaten hay that was treated with herbicides containing picloram, aminopyralid, and clopyralid. Trade names for these products include Confront, Curtail, ForeFront, Grazon, GrazonNext, Lontrel, Milestone, Millennium Ultra 2, Redeem, Surmount, and Stinger.

More information can be found in the publication "Herbicide Carryover in Hay, Manure, Compost, and Grass Clippings" available online at [http://www.ces.ncsu.edu/fletcher/programs/ncorganic/special-pubs/herbicide\\_carryover.pdf](http://www.ces.ncsu.edu/fletcher/programs/ncorganic/special-pubs/herbicide_carryover.pdf).

— Mary Helen Ferguson



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

Editor and Team Leader  
**Lucy Bradley**, Ph.D., Extension Specialist,  
Urban Horticulture  
Box 7609, NC State University  
Raleigh, NC 27695-7609

Managing Editor: **Charlotte Glen**  
Content Editor: **David Goforth**  
Regional Editors, Coastal Plain and  
Sandhills: **Bob Filbrun**, **Shawn Banks**  
Regional Editor, Piedmont: **Mary Helen  
Ferguson**  
Regional Editor, Mountains and Foothills:  
**Donna Teasley**  
Production Editor: **Viki Balkcum**  
Designer: **Brent Winter**

*The use of brand names does not imply endorsement by N.C. Cooperative Extension nor discrimination against similar products or services not mentioned.*

Distributed in furtherance of the acts of Congress of May 8 and June 30, 1914. North Carolina State University and North Carolina A&T State University commit themselves to positive action to secure equal opportunity regardless of race, color, creed, national origin, religion, sex, age, veteran status, or disability. In addition, the two Universities welcome all persons without regard to sexual orientation. North Carolina State University, North Carolina A&T State University, U.S. Department of Agriculture, and local governments cooperating.

©North Carolina Cooperative Extension. *Extension Gardener* may not be reproduced without written permission. Any news media using sections of the newsletter should credit "Extension Gardener, North Carolina Cooperative Extension."

12-CALS-3045—3/12

<http://extensiongardener.ncsu.edu>