



# Extension Gardener

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Empowering  
gardeners.  
Providing  
garden  
solutions.

*in this issue*

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## Why fall is a great time to plant

Cool weather and the changing colors of leaves are signs that it's time to plant trees and shrubs. Although many people plant in the spring, fall is a better time for planting most woody plants. Trees and shrubs that are planted in the fall have more time to get established before the stress of a hot, dry summer, giving them a better chance of survival.

Before you plant, be sure to select the right plant for the site. Choosing trees and shrubs based solely on their ornamental characteristics, without consideration of the site, is probably the most common mistake people make when planting. Putting time into proper plant selection now will ensure a low-maintenance planting and prevent disappointment and headaches down the road.

Choose a plant based on the conditions of the site where it will be planted. Is it sunny or shady? Dry or wet? A tree that is adapted to a particular site will have a better chance of thriving in that area.

A common pitfall is planting trees that grow too large for their location. When choosing a tree, consider its mature height and width, which are found on the sales tag. In 10 or 20 years, will it be too large for the spot where you want to plant it? Trees that grow too big for their location will require constant pruning, which will damage tree health. For help choosing trees and shrubs in North Carolina, visit [www.ncstate-plants.net](http://www.ncstate-plants.net).

Have soil tests performed to assess your soil's pH and nutrients prior to planting. Soil samples are easy to gather, and the North Carolina Department of Agriculture and Consumer services performs the test free of charge. Sampling supplies are available from your local Extension office. When you get your results back, amend the soil with lime and fertilizer in accordance with what the results tell you about your soil.



Planting a landscape is an investment, so make sure you do it right the first time. Here are some things to consider when planting trees and shrubs in your landscape:

- If installing a container-grown plant, remove the pot and check for circling roots.
- Don't plant deeper than the soil surface.
- Make sure the trunk flare (the place on the trunk where the roots spread out from the base of the tree) is visible.
- Remove all twine, wire, strings, and straps to prevent girdling.
- Do not plant tall trees under utility lines.
- Remove any broken, dead, or crossing branches.
- Mulch the base of the plant with a layer of wood mulch or pine needles 2 to 3 inches thick, keeping the material a couple of inches away from the trunk.
- Provide 1 inch of water per week during the growing season when rainfall is lacking.

For more information on tree planting, visit [www.cals.ncsu.edu/extgardener/tree.pdf](http://www.cals.ncsu.edu/extgardener/tree.pdf).

— Amanda Taylor

## Extension Showcase

## Smart Gardening — Cultural methods of insect management

## HELP is on the way

Interest in vegetable production for home use is growing, as is the need for local vegetable producers to meet the burgeoning demand for local foods. Unfortunately, many interested people have little exposure to gardening and need a place to learn. Lucky for them, there is HELP.

The Horticultural Entrepreneurial Leadership Project (HELP) was developed in 2005 to cultivate new produce growers for the Onslow County Farmers Market. HELP is a collaboration between the Onslow County Center of North Carolina Cooperative Extension and the Onslow County Farmer's Market. The project involves a combination of weekly classroom training and hands-on garden work. Participants complete a comprehensive curriculum including site preparation, crop scheduling, pest management, harvesting, and marketing. The course culminates with each class selling their produce at the farmers market.

To date, 130 participants have completed the HELP training, including several vendors that sell regularly at the market. As interest in food gardening has risen, so have HELP's class sizes. Much of the increase is due to home gardeners. This year the program expanded to include small fruits. HELP will continue to serve all interested individuals and will be a cornerstone of the new Incubator Farm project, designed to help transition new farmers into production.

— Lisa Rayburn

The old adage “An ounce of prevention is worth a pound of cure” is a good way to describe cultural gardening methods for insect management. “Cultural” refers to any methods used to grow and maintain plants, including how they are watered, planted, placed, and mulched.

Choose varieties resistant to pests that have occurred in your garden before. For example, in my own garden, I once planted three varieties of green beans. Mexican bean beetles skeletonized the leaves of two varieties, but not the third. The following year, I planted lots more of the bean-beetle resistant variety—problem solved! Also, use plants that deter insects, such as many culinary herbs. The oils that give herbs their robust flavors make them distasteful to plant-feeding insects. Interplant herbs among pest-susceptible plants and they'll serve double duty as both insurance policy and tasty ingredient.

Don't grow the same crops in the same spot year after year. Crop rotation is especially effective against soil-dwelling insects and diseases. Use plants from different families to confuse insects, making it harder for them to find food. To a tiny insect, a 10- or 15-foot journey without sustenance may be a death sentence.

Another cultural control is to time plantings to avoid pests. Try this for members of



the cabbage family (cole crops), which can be planted for either a spring or fall harvest. When planted in July for fall harvest, cabbages and their relatives typically see less damage from cabbage loopers and diamondback moths than when planted in spring. Placing row covers over plants when pests are most likely to be present can also help. Covers may impede pollinators, so use wisely. Remove covers for flowering crops that rely on insect pollination.

One important underused tool in the cultural control arsenal is the garden journal. Without one, I would never have remembered which of the three varieties of bean was resistant to beetles or when I started seeing cabbage butterflies hovering over my broccoli. Use a garden journal to easily access pest history and guide decisions on how best to apply cultural controls.

— Nicole Sanchez

## Food Production — Broccoli

Many gardeners grow tomatoes, peppers, squash, cucumbers, okra, and eggplant in the summer. You might have even grown lettuce, spinach, garden peas, or onions in the spring. But I don't hear many people talking about growing broccoli. I didn't start growing it myself until a few years ago. I just never thought about it. Broccoli is a cool-season vegetable that is interesting because we eat the tender stem and flowers before they open.

In eastern North Carolina, broccoli can be planted from August through mid-September for late fall harvest or from mid-February through March for spring harvest. I've always grown it by planting small plants instead of seed, to get it going quickly. Plants should be spaced 12 to 18 inches apart. If you really like it, grow 15 plants per person. In my small garden I plant less due to space, but I always wish I had more.

Broccoli needs good drainage and a soil pH between 6.0 and 6.5 to grow well. You should submit a vegetable garden soil sample at least every two years to ensure proper fertility. If you do not have soil-test results, a good general fertilizer recommendation is to apply .5 pound of 5-10-10 or .25 pound of 10-20-20 per 10 square feet, and work it into the soil before planting. In absence of rainfall, broccoli should be watered to maintain good soil moisture.

Broccoli should be harvested before the flowers open by cutting the tender stalks. Several smaller flower heads will grow within a few weeks of the main harvest. There are several caterpillars and flea beetles that may feed on broccoli, so watch closely for them and contact your local Extension office for advice on management.

— Danny Lauderdale

## Pest Alert — Fire ants

Since they were accidentally imported into Mobile, Alabama, around 1930, fire ants have spread rapidly throughout the Southeastern states and can now be found in most of North Carolina. Fire ants are generally considered a pest of annoyance because they create unsightly mounds in the yard and have a highly irritating sting. However, for those who are allergic to their stings, fire ants can pose a serious health hazard.

The first step in controlling fire ants is to understand that we will never be able to eradicate fire ants from the landscape. Nevertheless, we can manage them. The best seasons to treat fire ants are late spring and early fall, but if you have an active mound



Charlotte Glen

in an inconvenient location, you can drench it on any warm day.

The most effective management program will combine a two-step process of direct mound treatment and application of baits. It's better to use baits first and follow up with a mound treatment a few days later. You may also drench the mound and follow with bait five to seven days later if there is still activity or if a satellite mound has sprung up. If you have too many mounds to treat individually, baiting is your best solution. Fire ant control will require continual monitoring and repeat treatments as necessary.

— Daniel Simpson

## Environmental Stewardship — The importance of insects

While many gardeners don't give much thought to insects until a pest such as the Japanese beetle begins to wreak havoc in their garden, there are a great many insects that actually serve critical beneficial functions that help our gardens shine. For instance, you probably know that honeybees play an important role in pollinating flowers; but did you know that many other bees, wasps, butterflies, moths, and even beetles also serve as important pollinators? You probably also know that ladybugs prey on aphids, but you may not be aware that many other insects act as predators of unwanted insect pests, such as the braconid wasp, which parasitizes tomato hornworms. Insects play other important roles, such as improving soil health, decomposing plant tissue, and providing food for birds.

As gardeners, we should embrace these beneficial insects. There are several things you can do to maximize the impact they have in your garden without sacrificing control of

unwanted insect pests. First, plant flowers such as yarrow, dill, fennel, butterfly weed, tansy, marigolds, and cosmos to provide food and shelter for beneficial insects. This will increase insect diversity in the garden. Use multiple pest-control methods, not just insecticide sprays. Alternative control options include hand removal of insect pests, removal of dead leaves and plant debris, use of slow-release fertilizers, and eliminating weeds.



Braconid wasp cocoons. R.J. Reynolds Tobacco Company Slide Set, R.J. Reynolds Tobacco Company, Bugwood.org

When you must spray, choose insecticides that have low toxicity to bees and other beneficial insects, and spray them only as needed and in accordance with label directions. Insecticidal soap will help control many common soft-bodied insect pests such as aphids and mealybugs without harming beneficial insects. Avoid spraying fruit and vegetable crops when they are in bloom so as not to harm pollinators. Following these steps will help create an environment where insects can help your garden thrive.

— Matt Stevens

# Tips & Tasks

## Winterizing Warm-Season Turf

Here are three things that can be done to increase cold hardiness in warm-season turf (bermudagrass, centipedegrass, St. Augustinegrass, and zoysiagrass):

1. Keep leaves raked during the fall to increase photosynthesis and carbohydrate production.
2. Raise the mower deck by 1 inch going into the fall, to increase rooting depth.
3. Apply a fertilizer containing a large amount of potassium, such as 5-10-30. Potassium is the third number in the fertilizer analysis.

Potassium is used in many plant functions; one of them is increasing cold hardiness. Apply a high-potassium fertilizer containing little to no nitrogen at the rate of 1 pound of potassium per 1,000 square feet of lawn area in September. To find out how much of a given fertilizer you must apply per 1,000 square feet to provide 1 pound of potassium, divide the last number of the fertilizer analysis into 100. For example, if you're using 5-10-30,  $100 / 30 = 3.3$ ; thus, it would take 3.3 pounds of 5-10-30 per 1,000 square feet to provide 1 pound of potassium. However, if you've been fertilizing throughout the summer with fertilizers containing 8% potassium or higher, there's really no need to add extra potassium.

— Shawn Banks

## Showstopper — 'Miss Ruby' butterfly bush

Thanks to the plant breeding efforts of Dr. Dennis Werner, NC State University has released a series of new and improved butterfly bushes, including this year's "showstopper," Buddleja 'Miss Ruby.' 'Miss Ruby' was selected for its compact habit and remarkably vivid, rich pink flowers, which some observers say are more vibrant than any other Buddleja variety available. In 2008 the United Kingdom's Royal Horticultural Society plant popularity poll ranked 'Miss Ruby' as its number one butterfly bush cultivar out of 97 varieties.

Hardy in zones 5 to 10, 'Miss Ruby' has an upright, globe-shaped habit with many lateral branches. It can be grown as a specimen plant in the landscape or in mixed borders. Although compact in habit, this new cultivar will reach a height of 5 feet, so give it plenty of space to grow. Like all butterfly bushes, 'Miss Ruby' requires full sun and good drainage to thrive, and it attracts butterflies in abundance.

— John Vining

## Helping You Grow

### Pesticide Disposal Days

Do you have old containers of pesticide that you are unsure how to dispose of? The North Carolina Department of Agriculture & Consumer Services (NCDA&CS) Pesticide Disposal Assistance Program offers free assistance to help homeowners and growers dispose of outdated or unwanted pesticides in an environmentally safe manner.

Since this program was implemented in 1980, NCDA&CS has collected more than 2.4 million pounds of pesticides throughout the state. Contact your local Cooperative Extension office to find out collection dates, times, and locations near you.

— Della King

## Edibles — Persimmons

When you think of persimmons, puckering up may be the first thing that comes to mind—not to kiss, but because unripe persimmons are so astringent on the palate.

To enjoy the sweet flavor of native persimmons (*Diospyros virginiana*), wait to harvest fruits until they are fully ripe. You can also grow a nonastringent variety of Oriental persimmon (*Diospyros kaki*), such as 'Fuyu,' 'Hanagoshu,' or 'Jiro.' The flavor of these easy-to-grow fruits is exceptional, the fruits are larger, and best of all, no puckering!

Native persimmons can be grown throughout the state, but Oriental varieties are less cold hardy and are better suited to the coastal plain and piedmont. Plant persimmons in full sun and well-drained soil with a pH of 6.0 to 6.5, with trees spaced 20 feet apart.

— Jan R. McGuinn

## Sustainability — GreenScaping

Do you want to have a greener, healthier yard while helping the environment and saving both money and time? It almost sounds too good to be true, but GreenScaping can achieve all these things.

Here's how to create a GreenScape:

**1. Build and maintain healthy soils with composting and mulching.** Contact your local Extension office to learn more about free soil testing, the first step to knowing what your soil needs. If your soil needs nutrients, feed it with compost you made in your backyard with your yard

waste clippings. Mulching is another strategy that greatly improves the production of flowers and vegetables.

**2. Plant right for your site.** In addition to selecting plants that are appropriate for your growing climate and that are resistant to pests in your area, choose plants that attract beneficial wildlife to the garden.

**3. Practice smart watering.** Water conservation is a must for all gardeners. Smart watering starts with rain gardens, rain barrels, and making every drop count.

**4. Adopt a holistic approach to pest**

**management, starting with prevention.** Recognizing beneficial insects and accepting some imperfections can go a long way toward reducing pesticide use.

**5. Practice natural lawn care.** Leave grass clippings on the lawn, and mow regularly at the correct height to have a healthier lawn. Natural fertilizers, watering, and overseeding are a few more practices to consider.

Learn more about GreenScaping at [www.epa.gov/GreenScapes](http://www.epa.gov/GreenScapes).

— Cyndi Lauderdale

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