



# Extension Gardener

NC STATE UNIVERSITY

NORTH CAROLINA COOPERATIVE EXTENSION

Spring 2014

Empowering  
gardeners.  
Providing  
garden  
solutions.

*in this issue*

## MOUNTAINS AND FOOTHILLS NEWS

All-America  
Selections

Intensive  
Gardening

Rose Rosette  
Disease

Weed-free Lawns

## STATE NEWS

Native Flowers  
for Pollinators

Double Take™  
Quinces

Helping You Grow:  
[plants.ces.ncsu.edu](http://plants.ces.ncsu.edu)

An Oxymoron:  
'Pink Lemonade'  
Blueberry

Vegetables for  
Limited Space

## Plant native flowers for pollinators

**N**eed a reason to plant more flowers? How do supporting local agriculture, ensuring the availability of healthy fruits and vegetables, and protecting thousands of plant and animal species sound? By planting flowers that sustain pollinators, you are accomplishing all of this, as well as making your yard more attractive. Pollinators, which include bees, butterflies, moths, wasps, hummingbirds, and bats, make reproduction possible for more than three-fourths of the flowering plants on earth, including many of the fruits and vegetables we eat every day.

Of all the pollinators in the world, bees are the best. While almost everyone is familiar with European honey bees, fewer people are aware of the vast variety of native bees found in North America. These include bumble bees, sweat bees, miner bees, and mason bees, all of which are valuable pollinators of crops as well as native flowering plants. Alarming, populations of both honey bees and native bees are in decline.

Reasons for bee decline include disease and parasite infection, habitat loss, and stress caused by pesticide exposure and malnutrition. As gardeners, we have a critical role to play in reversing this alarming trend. One of the most important things we can do to preserve and support pollinators is to plant flowers. Bees gather nectar and pollen from flowers to feed themselves and their offspring. To stay strong and maintain healthy colonies, bees need a season-long supply of flowers that have not been contaminated with pesticides.

Many of our native bees specialize in feeding on native plants. Including native plants in your

landscape will support the widest range of pollinators. When planting flowers to support pollinators, aim to have at least three different types of flowers in bloom during each season, from early spring through late fall.

Flowering perennials are among the best nectar sources for bees. Recommended perennials native to the Southeast that are available from most garden centers include spring bloomers such as wild verbena (*Glandularia canadensis*), spiderwort (*Tradescantia virginiana*), *Coreopsis* species and varieties, wild indigo (*Baptisia* species), beard-tongue (*Penstemon* species), and bluestar (*Amsonia* species).

Some of the best native summer-blooming perennials for pollinators include coneflowers (*Rudbeckia* and *Echinacea* species), phlox, butterflyweed and milkweed (*Asclepias* species), Stoke's aster (*Stokesia laevis*), gaillardia, bee balm (*Monarda* species), liatris, and mountain mint (*Pycnanthemum* species).

To provide late-season nectar sources, plant a variety of native asters (*Symphyotrichum* species), goldenrods (*Solidago* species), joe pye weed (*Eutrochium* species), ironweeds (*Vernonia* species), and perennial sunflowers (*Helianthus* species). To see images of hundreds of pollinator friendly plants, visit [www.protectpollinators.org](http://www.protectpollinators.org) and click on the Pollinator Paradise Garden link. Check with your local Extension center or visit [www.ncsu.edu/goingnative/](http://www.ncsu.edu/goingnative/) for more plant recommendations suited to your area.

— Charlotte Glen



Honey bee feeding on late blooming native aster. ©Charlotte Glen

## Extension Showcase

### Western North Carolina EMGV Symposium

The 2013 Western North Carolina Extension Master Gardener Volunteer Symposium was a great success. The event, held on October 17 at the DoubleTree hotel and conference center in Asheville, NC, was attended by more than 130 people.

Each year, the goal of the symposium is to provide continuing education to people in the western part of North Carolina at a reasonable cost. The 2013 event was a true work of heart with great leadership and committee involvement. As the keynote speaker, Felder Rushing was a hit!

The 2014 symposium committee is already meeting and planning for this year's event, so mark Thursday, October 9, 2014, on your calendars and be ready to head to the DoubleTree in Asheville for some great gardening tidbits.

To find out about upcoming Extension workshops, classes, and events in your area, visit <http://gardening.ces.ncsu.edu/> or contact your local Extension center.

— Kerrie Roach

## Smart Gardening — All-America Selections®

Each new gardening year, deciding what will be grown is the one of the most difficult tasks. As seed catalogs arrive, there are many new possibilities from which to choose.

Each year the All-America Selections® (AAS) varieties are great choices. These winning flower and vegetable varieties have been tested in trials across the United States and have been found to grow well under all types of growing conditions. Varieties with superior garden performance and taste are granted the honor of an AAS Award.

For vegetable gardeners with limited space, many of this year's vegetable winners will work well in container plantings as well as garden sites. 'Mascotte', a dwarf French green bean, is a compact bush type plant that produces within 50 days of planting. 'Pick A Bushel' pickling cucumber is a heat-tolerant, semibush type plant with wonderful yields. A new Italian pepper, 'Mama Mia Giallo', produces sweet, yellow, long tapered fruits.



'Mama Mia Giallo' pepper  
©All-America Selections

Tomato lovers will not be disappointed with the three winning tomato types, which include a grape, beefsteak, and slicer type for a well-rounded garden. 'Chef's Choice Orange' has an heirloom quality with its 12 oz to 1 lb fruits. An indeterminate variety, it will need room to grow and trellis support. 'Fantastico' is an early-maturing grape tomato with late-blight resistance and can be used in containers or hanging baskets. 'Mountain Merit' rounds out the trio, as a slicing, beefsteak-type fruit on a compact plant with great disease resistance—Fusarium sp. (races 1, 2, 3), verticillium, tomato spotted wilt virus, and late blight.

There's also a new pumpkin variety to try, 'Cinderella's Carriage', a bright red-orange pumpkin with powdery mildew resistance that grows to 25 – 35 pounds and is great for baking or decorating. As you begin to plan for this year's garden, consider including one or more of these selections!

—Jan McGuinn

## Food Production — Intensive gardening

How can you get more vegetables from a small garden? Intensive gardening is one proven method. The goal of intensive gardening is to harvest the most vegetables possible from a given space. Here are some planting techniques to get more vegetables when you have limited space.

Wide row planting is one way to make more use of your available space. Traditional gardens consist of long, single rows, with quite a bit of space between rows. Intensive gardens make use of this wasted space. For example, seed packet instructions tell you to plant bush beans 4 inches apart in rows 20 inches apart. In a wide row, you place the seeds 4 inches apart in a solid block. This gives you five times as many plants per square foot.

Wide row planting has other advantages, including less watering and weeding because the soil is shaded by more foliage; easier harvesting

because everything is closer together; a longer harvest period because some crowded plants will grow more slowly than others; and better use of fertilizer because all of the soil you feed is covered with plants.

Going vertical will increase garden space as well. Use trellises, nets, strings, cages, or poles to keep plants off the ground. Some plants will grow vertically naturally; others will need to be tied to the support. Leaves of plants growing vertically dry off faster, so you may have fewer problems with fungal diseases. But the plants will likely require more water and fertilizer.

Succession planting puts garden space to its most efficient use. Always be ready to plant something new in spots just vacated by harvested or dying plants, never leaving an unplanted area in the garden.

— Tim Mathews

## Pest Alert — *Rose rosette disease*

**R**ose rosette disease has been identified in the South since the 1940s. Although it can kill wild and cultivated roses, it has been relatively benign in its damaging effects until about three years ago. Only roses are affected, and until recently, the most damage has been seen in the wild rose (*Rosa multiflora*).

Rose rosette has been diagnosed as a virus and is transmitted primarily by eriophyid mites. There is also talk of possible spread by root-to-root contact. It is showing up more frequently on cultivated roses, most likely due to infected graft buds.

In the last few years, however, a greatly increased incidence of rose rosette has been found in ornamental cultivars, especially the wildly popular Knockout® rose. The high numbers of Knockout® roses that have been planted in mass across the United States have contributed to the high numbers of infected plants, as the virus moves quickly through plantings.

Consumers should be vigilant by watching for symptoms and then quickly removing all parts of the infected

plants. Symptoms include all or some of the following: excessive thorniness, leaf stunting and deformation, thickening of stems, red coloration of shoots, and appearance of odd growths called “witches’ brooms.” Infected plants should be bagged before digging and removed from the landscape. Nearby multiflora roses should also be removed

— Donna Teasley



©D. D. O'Brien, Cornell Univ., Bugwood.org

## Carolina Lawns — *Weed-free lawns*

**A**s the weather warms in spring, tall fescue and bluegrass lawns wake up and begin to grow. And so do weeds. Keeping a lawn empty of weeds is a constant battle. Correct herbicide selection and timing of applications are essential to keep weeds in check. Herbicides can be divided into two categories based on when they kill plants. Post-emergent herbicides kill weeds that are visible. Pre-emergent herbicides kill weeds that have not yet emerged from the soil.

Pre-emergent herbicides do not prevent weed seeds from germinating, as the name implies. Instead, when the seed germinates and the seedling grows through the herbicide treated soil, the seedling absorbs the chemical and is killed. Timing of pre-emergent herbicide applications is critical in controlling weeds. Weeds that are already visible in the lawn will not

be affected by pre-emergent herbicides. These products must be applied before weeds emerge.

When applied correctly, pre-emergent herbicides can prevent annual weeds such as crabgrass, henbit, and chickweed. They have no effect on perennial weeds that are already established. Use pre-emergent herbicides with caution. Some products can damage new lawns that are less than a year old, including those that were seeded the previous fall. To be effective, these products also need to be watered into the soil. Be sure to read the label of the product you're applying.

If you're not sure about the kind of weeds in your yard, visit NC State University's Turf-files website, <http://www.turf-files.ncsu.edu/>, or contact your local Extension center.

— Amanda Taylor

## Tips & Tasks

### Lawns

- Apply crabgrass preventer on cool-season lawns in late winter.
- Fertilize cool-season lawns with a slow-release lawn fertilizer.
- Spray wild onion and garlic with a herbicide containing 2,4-D.
- Sharpen lawn mower blades before using your mower 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—in late winter.
- 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 a garden plan to include crop rotation of disease-sensitive vegetables such as tomatoes.

— Donna Teasley





## 'Scarlet Storm'

©MCI Lab, NC State University

## New from NCSU — Double Take™ quinces

If thoughts of old-fashioned flowering quince (*Chaenomeles speciosa*) do not excite you, it is time to think again. The Double Take™ series of flowering quinces developed at NC State are thornless, fruitless, and have double flowers that resemble miniature roses. The variety 'Scarlet Storm' (PP20,951) has deep-red flowers borne all the way out to the tips of the branches. 'Pink Storm' (PP20,920) bears salmon-pink flowers that resemble sweetheart roses, while 'Orange Storm' (PP20,950) bears bright-orange camellia-shaped flowers. All three varieties mature to around 6 feet in height, bloom from February through April, and are hardy in USDA plant hardiness zones 5 – 8. Plant these deciduous shrubs in part to full sun and well-drained soil to add an exciting splash of early spring color to your landscape.

— Shawn Banks

## Helping You Grow

plants.ces.ncsu.edu

NC Cooperative Extension has a new way for gardeners to get information about landscape plants: plants.ces.ncsu.edu. Type this URL in your browser's address or search box, and be whisked away to a searchable database of almost 2,800 plants. On the main page you can select from 20 different categories from annuals to wildflowers, including an "all plants" option. Once the first selection has been made, browse by scientific name (for self-proclaimed plant geeks) or common name, or narrow your search based on height, light requirement, wildlife attraction, flower color, or leaf color. As you add plant features to search, the list will narrow to the exact plant or plants you seek.

— Danny Lauderdale

## Edibles — An oxymoron

Webster's Dictionary cites the definition of "oxymoron" as "contradictory words that appear side by side." A perfect example of this is the blueberry variety 'Pink Lemonade' (*Vaccinium* 'Pink Lemonade') that is popping up in catalogs this spring. A true rabbiteye blueberry, 'Pink Lemonade' has bright pink berries that ripen from late July into August on plants that grow to 5 feet high. It makes an attractive shrub for the landscape with colorful fall foliage and brightly hued stems. Developed in the 1990s, 'Pink Lemonade' was not well received by growers because of the unorthodox berry color. But, with today's trend towards edible landscapes, 'Pink Lemonade' has a chance to become a popular dual-use addition to the garden. Although 'Pink Lemonade' is self-pollinating, it will produce more berries if it is planted with other blueberry varieties.

— Donna Teasley

## Sustainability — Vegetables for limited space

When talking about vegetable gardening, I often hear people say, "I can't grow vegetables. I live in an apartment with nothing more than a balcony."

Many vegetables, however, can be grown in containers. As long as the balcony receives 8 or more hours of direct sunlight during the day, almost any vegetable can be grown. Choose the correct size container for the crop, and it won't be long until harvest. For green onions, radishes, onions, chard, lettuce, peppers, dwarf

tomatoes or cucumbers, basil, and many other herbs, all that's needed is a 1- to 3-gallon container. For larger plants—such as eggplant, beans, peas, cabbage, broccoli, collard, or full size tomato or cucumber varieties, a 4- to 5-gallon container will be needed. Crops with a shallow root system, like lettuce, radish, and other salad greens, are well suited for pots that are 4 to 6 inches deep. Most other crops will need 8 to 12 inches of soil to accommodate their root systems.

Water will be a major concern in any container. Containers don't have a large water reservoir to draw from and will need to be watered more frequently as the plants grow. Drip irrigation of some type, even as simple as a bottle with a few holes punched in the bottom, will be needed to maintain soil moisture. Mixing compost in with the potting mix will add weight to the container to prevent plants from tipping over. The compost is also a good source of nutrients.

— Shawn Banks

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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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03/14

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