



Extension Gardener

NC STATE UNIVERSITY

NORTH CAROLINA COOPERATIVE EXTENSION

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Empowering
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Fragrant Shrubs for All Seasons

Evergreen plants provide fill and great backdrops for interesting foliage and flower colors. Variegated foliage often brightens up dark areas of the garden. Nothing provides greater delight in the garden, however, than wonderful fragrance from flowers or foliage. Try to fit a few plants into your landscape that will brighten your day through fragrance.

Fragrance, according to *Webster's Dictionary*, is an agreeable sweet odor. No garden is complete without it. It is even better if you select plants to provide fragrance for each season of the year. Here are a few fragrant winners that are hardy throughout North Carolina. Use these or other fragrant plants to enhance your enjoyment of the garden.

Butterfly bush (*Buddleja davidii*) is a deciduous shrub available in slow- and fast-growing forms that reach up to 10 to 15 feet high and just as wide. Its deciduous leaves are often gray underneath. Lavender, white, yellow, purple and pink flowers grace the garden with their butterfly-attracting fragrance from June to September. Full sun and well-drained to moist soil provide the best growth.

Sweet shrub (*Calycanthus floridus*) is a traditional southern landscape plant that grows naturally from Virginia to Florida. This 6- to 9-foot-high by 6- to 12-foot-wide shrub is deciduous and grows best in partial shade and deep

moist soils. Its green leaves are often shiny with a quilted appearance due to vein patterns. Reddish-brown or maroon flowers with a fruity fragrance are prevalent in April and May. Purchase sweet shrub in flower to be sure it's fragrant.

Small anise-tree (*Illicium parviflorum*) is an evergreen shrub with olive-green leaves that are held upright on a plant that grows 8 to 12 feet high and just as wide. It is tolerant of sun or shade and moist or dry soil. The plant blooms in May and June with small yellow-green flowers hidden by the foliage. The flowers are not fragrant, but the leaves of this tough screening plant smell like licorice. Star-shaped fruit become noticeable in the fall.

Perhaps the toughest deciduous fragrant shrub is winter honeysuckle (*Lonicera fragrantissima*). The plant grows 10 to 15 feet high and as wide in sun to partial shade and moist to well-drained soil. Creamy-white lemon-scented flowers grace this shrub from January through March.

Tea olive (*Osmanthus heterophyllus*) is an evergreen shrub that looks like a holly and grows 12 to 15 feet high and 12 to 15 feet wide. Small white flowers have a long-distance fragrance that will get your nose's attention from across the yard during September to November. It grows best in light shade and moist, well-drained soil.

—Danny Lauderdale

in this issue

PIEDMONT NEWS

- Manure Cautions
- Rotating Vegetables
- Southern Spring Home and Garden Show
- Let's Go Native

STATE NEWS

- Fragrant Shrubs for All Seasons
- 'Crown Jewel' Gardenia
- Attracting Pollinators
- Asparagus Gypsy Moth

Lonicera fragrantissima



Buddleja davidii



Calycanthus floridus



Upcoming Events

Southern Ideal Home Show

April 9 – 11, State Fairgrounds, Raleigh

Visit Extension's Successful Gardener Learning Center staffed by Master GardenerSM volunteers; bring your plant questions and pick up soil testing kits.

• www.southernshows.com

Doris Duke Education Center, Sarah P. Duke Gardens, Durham

To register, call 919.668.1707

Attracting Bees and Butterflies to Your Garden

March 21, 2 – 4 PM

Chapel Hill Community Center, Chapel Hill

To register, go to www.chapelhillparks.org.

The Grass is Always Greener

March 11, 6 – 7:30 PM

Making Your Landscape Waterwise

March 18, 6 – 7:30 PM

The Edible Landscape

March 25, 6 – 7:30 PM

101 Great Landscape Plants,

April 1, 6 – 7:30 PM

Guilford County Cooperative Extension, Greensboro

To register, call 336.375.5876 (ask for Pam).

Be Healthy; Grow What You Eat

March 11, 16, 18

Carolina Yards

March 12

An All Natural Easter

March 21, 23, 25

Fragrance Gardens

April 8, 13, 18

Wildlife Control for Homeowners

April 15, 20, 22

Insects, Diseases and Weeds

May 11, 13, 16

Poisonous Plants You Need to Know

May 18, 20, 27

Smart Gardening — Manure cautions

In 2009 Cooperative Extension announced that composted horse manure could be contaminated with the agricultural weed killer aminopyralid, which causes poor or distorted growth in many crops. Tomatoes seem to be the most highly susceptible crop. But many vegetables can be affected, including potatoes, peas, beans, carrots, lettuce and spinach. Products containing aminopyralid include herbicides with the names Forefront and Milestone.

Aminopyralid may be used on farms to control broadleaf weeds in pastures. It chemically binds to plant material in livestock diets and does not break down when it passes through an animal's digestive tract. Where the treated grass (or hay made from treated grass) has been eaten by livestock, their manure could contain residues of the weed killer. These herbicides will eventually break down through exposure to sunlight and soil microbes. However, this process is particularly slow in piles of manure and compost, which typically do not get that exposure.

Ask your supplier to confirm that the manure does not contain this active ingredient and what herbicides, if any, were used on the pasture or hay crop. Stable owners may or may not be able to offer this assurance, so be very cautious

if they are not sure. In 2009 some problems occurred that apparently were caused by 2- to 3-year-old manure, possibly due to hay brought in from out of state during the drought years.

If you have already used manure and suspect that it might contain aminopyralid, your best bet is to dig or rototill the manure thoroughly into the soil and leave it for several months to allow sun and soil bacteria to break it down. It can also be spread on grass fields to break down; grass plants are not affected by aminopyralid.

Composted animal manures are excellent sources of nutrients and organic matter. Soils mulched or amended with manure and compost become dark, fertile and active with earthworms and beneficial microorganisms. Gardeners should continue to use manure but must take the precautions noted above to abate potential damage.

More information, including instructions for a bioassay test to evaluate suspect manure, can be found in a Cooperative Extension publication about potential herbicide carryover: <http://www.ces.ncsu.edu/fletcher/programs/ncorganic/2009extension-article-herbicide-in-hay-manure-etc.pdf>

—Karen Neill

Food Production — Rotating vegetables

While planning your vegetable garden, remember to rotate vegetable families to prevent the buildup of insects and diseases that attack your plants. Tomatoes are especially susceptible to soil-borne diseases that can be managed simply by not growing this species in the same spot year after year.

Rotations are especially important in small garden areas. Because plant insects and diseases are not always obvious, they may not build up to a damaging level in a single season or year. You may get by with planting the same vegetable in the same sunny corner of the garden for years. But once a problem starts, it can be extremely difficult to stop.

Ideal rotations keep three to four seasons between plants in the same family in the same spot. If you have space to do so, rotate your entire garden area to another part of the yard. If space is at a premium, move the families from

corner to corner or side to side each season. Here is a list of vegetable families to keep in mind when rotating your garden:

Sunflower (composite) – endive, chicory, artichoke, lettuce, salsify, and sunflower; **Onion** (lily) – asparagus, chive, garlic, leek, onion and shallot; **Pea** (legume) – bean, peanut, pea and soybean; **Nightshade** – eggplant, Irish potato, pepper and tomato; **Mallow** – okra; **Grass** – popcorn, sweet corn and sorghum; **Gourd** – cantaloupe, cucumber, gourd, pumpkin, squash and watermelon; **Goosefoot** – beet, spinach and Swiss chard; **Carrot or parsley** – carrot, chervil, celery, coriander, dill, fennel, parsley and parsnip; **Mustard** (crucifer) – bok choy, broccoli, Brussels sprouts, cabbage, Chinese cabbage, cauliflower, collards, cress, horseradish, kale, kohlrabi, mustard greens, radish, rutabaga and turnip.

—Craig Mauney

Garden Spot — Southern Spring Home and Garden Shows

The Southern Spring Home and Garden Show, one of the Southeast's largest gardening expositions, runs from March 3–7 in Charlotte. It's the show's 50th Anniversary. In Raleigh, the Southern Ideal Home Show runs from April 9–11. You can visit dream gardens and plant displays at both shows. The Charlotte show includes bonsai plants, orchids and examples of ikebana—the Japanese art of flower arranging.

Stop by the *Extension Gardener Learning Center* at both shows to get gardening questions answered by Extension Master GardenerSM volunteers and horticulture agents. Sound advice, soil testing information and educational materials are available during these events.

Learn about the 2010 Showstopper Plants—promising new cultivars and iron-clad favorites that thrive in North Carolina. The new showstoppers have their debut at the Charlotte show, right beside the *Extension Gardener Learning Center*.

The Garden Stage at both events offers opportunities for hands-on learning about your favorite plants. The stage is set daily for workshops and lectures on a broad range of topics.



Friday, March 5, is Master Gardener Day in Charlotte with special Extension presentations by local agents and statewide specialists. The Raleigh show will feature experts from the area's top plant organizations, local public gardens and arboretums to tell you how their gardens grow. Find them on the Garden Stage in Dorton Arena throughout the entire weekend.

Group discounts are available. For hours and ticket information, call 1.800.849.0248, or visit the Southern Shows Web site: www.southernshows.com

—Stephen Greer

Environmental Stewardship — Let's go native

Ever since the colonists first arrived in North America, people have been importing plants from other countries. George Washington noted in 1786 that he had planted several European plants that were a gift from the French botanist André Michaux. In more current times, as transportation has enabled fast global travel and trade, we have witnessed another upsurge of plant importation, both intentional and unintentional. What has been the cost?

In a speech in 2003, U.S. Forest Service Chief Dale Bosworth called invasive species “the second greatest threat to American forests.” He stated that “nationwide, invasive plants now cover an area the size of the Northeast from Pennsylvania to Maine. ... Each year invasive plants gobble up an area larger than the state of Delaware. All invasives combined cost Americans about \$138 billion per year in total economic damages and associated control costs.”

What about those imported plants that aren't invasive? At least one on-going study suggests that our native insects derive little, if any, food from alien species. Most gardeners would consider this a benefit of using alien species. However, many animals depend on insects, either partially or entirely, as their primary source of energy. Approximately 96% of all terrestrial bird species depend on insects and arthropods to feed their young. So what happens if the insects can't find food? Their populations decline, along with those of animals that depend on them for food.

What can gardeners do? Ask your nursery for native species when you decide to replace a tree or shrub or plant a bed of flowers. You'll get plants that are acclimated to your area, you'll help support biodiversity, and you *won't* help spread potentially invasive species.

—Jim Burke

Tips & Tasks

Spring Chores

- Wait to fertilize spring-flowering shrubs and trees until after they have finished blooming. Early fertilization will promote green growth that hides blooms.
- Aucuba, holly, yew and barberry are planted for their colorful berries. If you are not seeing berries, make sure you have both male and female plants. Male plants have staminate flowers producing pollen, and female plants produce pistillate (fruiting) flowers. In planning for colorful fruits of these plants, make sure to have a majority of true-pistillate female plants with the assurance that some pollen-bearing male plants are nearby. The flowers are often inconspicuous, so you really have to pay attention when the flowers bloom. After the blooms emerge, take a close look at the flower structures. You might need a magnifying glass to spy the parts. Refer to pictures in reference manuals or online sources. This is the only way to ensure a colorful fruit display.
- Daffodils and other spring bulbs need their foliage to produce energy for next year. Resist the urge to remove the foliage before it starts turning yellow. Some gardeners tie the foliage into a bundle for neatness. This also cuts down on the energy the bulb can collect for the next year, although it isn't as bad as cutting the foliage away entirely.
- While bulbs are in bloom, you can also check to see if they are getting shaded or crowded. Remember this when it comes time to dig bulbs later in the year.

—Carl Matyac



Plant Haven Inc.

Showstopper — 'Crown Jewel' gardenia

If you see a 'Crown Jewel' gardenia (*xGardenia augusta*, patent no. 19896), you might just think you have died and gone to heaven. This new dwarf hybrid gardenia is compact, cold hardy and absolutely gorgeous. The product of a formal plant breeding project in Siler City, NC, 'Crown Jewel' combines the best traits from its parents: 'Kleim's Hardy' and 'Chuck Hayes'. It has the dwarf size and prolific flowering of 'Kleim's Hardy' along with the cold hardiness and double blooms of 'Chuck Hayes'.

'Crown Jewel' gardenia has attractive dark-green evergreen foliage on a plant that will grow to only 2 feet high and 5 feet wide. It has a mounding habit with white, intensely sweet, fragrant flowers in summer. Use 'Crown Jewel' as a low hedge, foundation plant or in a group planting in a sunny, well-drained area. It is suitable for planting in zones 7 – 10.

—John Vining

Sustainability

Attracting Pollinators

Pollinators are important parts of a well-balanced garden ecosystem and essential to vegetable production. The best known pollinator is the European honeybee, but other animals—such as native bees, wasps, flies, hummingbirds, butterflies, moths and bats—also play a role in pollination. Help pollinators thrive by developing pesticide-free habitats. Provide a variety of plants with different colors and shapes that bloom at different times. Plant native plants to attract and conserve native pollinators. Incorporate different plant heights to provide protection against predators. A planting guide with specific recommendations can be downloaded from <http://www.pollinator.org>. Plant tender annual flowers right after the last frost in time to celebrate National Pollinator Week (June 21-27).

—Karen Blaedow

Incredible Edibles

Home-grown asparagus is a delicacy. Growing asparagus is different from growing most vegetables because it is a perennial, meaning it comes back from the same roots every year. Many other vegetables are annuals that must be planted each year. To establish an asparagus patch, purchase dormant plants in late winter. 'Jersey' varieties are recommended. Plant asparagus in a well-drained soil in full sun. Mix in plenty of compost, and soil-test to see what nutrients to add. Plant asparagus crowns by digging a trench 6 – 8 inches deep. Space plants 18 inches apart, and cover with 2 inches of soil. As plants grow, add soil until the trench is completely filled. Do not harvest spears the first year. Light harvests can be made in the second and third years, and 6 to 8 weeks of harvest can begin in the fourth year and beyond. —Charlotte Glen

Pest Alert — Gypsy moth

The gypsy moth (*Lymantria dispar*) is a pest of many hardwood tree species. This non-native insect was introduced to the U.S. in 1869. The N.C. Department of Agriculture has been conducting surveys statewide since 1982. Occasionally, local infestations are found, and the NCDA initiates treatment programs to eradicate populations before they spread. Currituck and parts of Dare County are quarantined for gypsy moths.

The destructive stage of the gypsy moth is the caterpillar, which can consume up to a square foot of leaves during its lifetime. Repeated defoliations can reduce plant vigor and eventually result in tree mortality. At maturity, caterpillars are 3 inches long and can easily be identified by the 5 pairs of blue dots followed by 6 pairs of red dots on their backs.

The vigorous reproduction of the gypsy moth contributes to population explosions and defoliation severity. After mating, each female moth lays several hundred eggs in a hairy, tan, oval-shaped mass about the size of a quarter. Egg masses are present from August through April and can be found attached to various surfaces, such as trees, buildings, cars and firewood. Female gypsy moths cannot fly, so this insect's spread depends on people. All firewood and other objects moving from infested areas should be checked for hitchhiking gypsy moths, caterpillars, and egg masses. Suspected gypsy moth infestations need to be reported to the NCDA's Plant Protection Division: <http://www.agr.state.nc.us/plantindustry/plant/entomology/GM.htm>

—Karen Blaedow

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Gypsy moth caterpillars impair tree health by eating foliage
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