

Helping
Carolinians
Increase Their
Knowledge of
Gardening,
Manage Their
Landscape
Investment &
Protect the
Environment

inside



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for Your
Children



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JC Raulston Arboretum Plant Focus

Clethra, A Sweet Native Shrub

Summersweet clethra, *Clethra alnifolia*, also known as coastal sweet pepperbush, grows naturally along streams in the eastern United States from Maine to Florida. This upright deciduous shrub has fragrant white flowers arranged in showy 3- to 5-inch racemes. It blooms in July and August, providing beauty to the late summer garden as well as food for bees and butterflies. The fruit, though not showy, is eaten by birds.

Clethra is a good plant for shady wet sites where it can grow to 8 feet tall and 6 feet wide. It forms a multi-stemmed shrub or even a colony. In partial shade or full sun it has dense, glossy green foliage that can turn yellow in mid-October. It likes acid soil and tolerates salt spray, but is not a plant for dry sites. Spider mites and dieback can be a problem in dry sites. When planted in the proper site it is insect and disease resistant.

'Sixteen Candles' is the top seller, though 'Hummingbird' is the best known cultivar. They are compact shrubs with white flowers. 'Rosea', 'Pink Spires' and 'Ruby Spice' are three pink-flowered cultivars. 'Ruby Spice' is the darkest pink. This pink color holds even in the coastal plains. 'Sherry Sue' is a relatively new introduction, sporting white flowers and bright red stems. Look for most of these cultivars in the collections of the JC Raulston Arboretum (JCRA). Additionally, 'September Beauty', noteworthy for flowering later in the season, can be found in the JCRA mixed border.

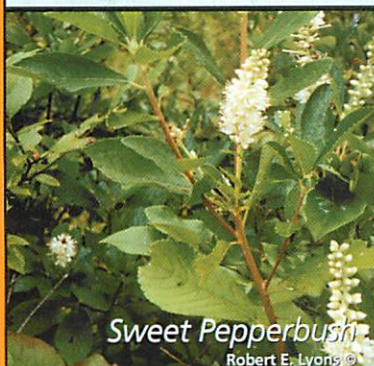
Another interesting species, *Clethra tomentosa*, showing pubescent foliage and very long racemes, also graces the Arboretum collections. Currently missing from the Arboretum collections, but worthy of inclusion in the landscape, is Japanese pepperbush, *Clethra barbinervis*, exhibiting beautiful cinnamon-colored exfoliating bark as it matures. Use clethra for summer flowers in wet, shady areas, particularly where the fragrance can be appreciated. Learn more at www.ncsu.edu/jcraulstonarboretum.

David Goforth



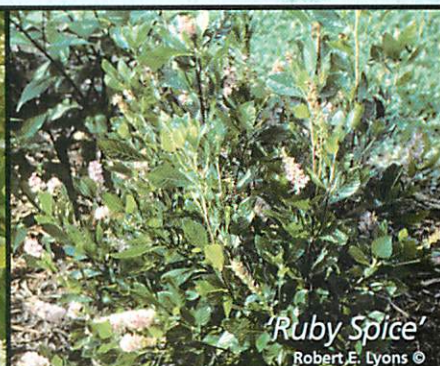
'Rosea'

Robert E. Lyons ©



Sweet Pepperbush

Robert E. Lyons ©



'Ruby Spice'

Robert E. Lyons ©



'Hummingbird'

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Plant the Seed: A+ Summertime Gardening Activities for Your Children

One of the most enjoyable experiences you can have is to garden with kids. The experience doesn't have to be large or elaborate to get big results, particularly when it comes to interest and enthusiasm on the part of children. When young gardeners plant seeds and watch plants grow they inevitably have lots of questions. These questions can lead to exploration and discovery. As children experience the joy of learning they realize that using their powers of observation and problem solving can be fun. They are learning that gardening is really a door to the world of science and this world is not scary or boring but fun, challenging and filled with wonder. Here are a few ideas to explore with your children.

Reading and Gardening Together

A child's trip to the library will not be complete without an introduction to the books *Plantzilla*; *Miss Rumphius*; *Brother Eagle, Sister Sky*; *The Gardener*; *Tops & Bottoms*; and *Westlandia*.

In the book *Tops & Bottoms*, for example, some edible vegetables grow below the soil surface and some on top. The following activity helps children visualize what's happening below the soil surface.

- Get a large plastic jar or bottle such as a Gatorade container.
- Help your child remove the top part down to where the sides will be straight. Make 3 to 4 holes in the bottom for drainage.
- Fill with soil.
- Around the sides plant some seeds of root vegetable crops, such as radishes, carrots, beets, turnips. You could use some onion sets or a clove of garlic.
- Water gently at planting and as needed.
- Wrap the outside of the container with dark paper or a cloth.
- Every few days take a peak to see what's happening. Be sure to put the cover back. Eat and enjoy when the vegetables are mature.

Kitchen Garbage Plants

What do you do with the parts of the fruits and vegetables that you don't eat? Plant them and discover wonderful plant treasures!

Seeds

- Fill available containers with potting soil and plant orange, grapefruit, lemon, papaya and mango seeds. Do not mix different kinds of seeds in the same container. Label each so you'll know what the plants are.

- Water and place in a north-facing window.
- It may take a few weeks for the seeds to germinate. Keep the soil moist.
- Once seeds have germinated you can move the container to a sunny location.
- Continue to watch your plants as they mature and notice the characteristics of each.

Roots

- Fill a shallow container with small stones or soil.
- Cut off 2 inches from the large end of 3 carrots, beets or turnips.
- Place in the container with the cut side down.
- Place in a sunny spot and water when needed.
- Observe what happens to the tops.

Garden Hideaway

Children love hiding spots and a garden hideaway is irresistible. One easy idea is to involve your children in building a garden tepee.

- Get 7 pieces of bamboo about 7- to 8-feet tall.
- Select a sunny area, preferably in the garden.
- Begin by staking the bamboo poles into the ground, creating a circular pattern about 5' wide. Leave a section open for an entrance.
- Pull the tops of the poles together in the center and tie sufficiently to support the tepee and the bean plants.
- Plant pole beans on the outside of the tepee and water in.
- Water as needed.
- As beans germinate and begin twining, gently coil the vines around the poles.
- Place an old mat or rug on the ground inside so children can enjoy the comfort of their outdoor home.

4-H Gardening Projects

Check with your county Cooperative Extension Center about youth horticulture activities to engage children and teens in the world of plants and nature. A Cooperative Extension agent might use some of the traditional 4-H projects, sponsor a National Junior Horticulture

Association project or use a lesson plan from the Junior Master Gardeners or Down to Earth, or an *Extension's Successful Gardener Kids* activity.

Carol Norden and Carl Matyac



Gardentalk

"There are no seven wonders of the world in the eyes of a child. There are seven million."

Walt Streightiff



Q&A

What is water-wise gardening?

Water-wise gardening at its best is when landscapes are properly designed, installed and maintained so that relatively small amounts of water will be required. When water is used, it is done in an efficient and effective manner to make every drop count.

Water-wise gardening requires watering according to plants' needs. Established plants or lawns do not need to be watered every day. A deep, thorough, slow watering is better than frequent, light watering. Deep, thorough watering encourages deep root systems, while light, frequent watering

encourages shallow root systems. The general rule of thumb is one inch of water once a week, including water from both rain and irrigation.

Use a 2- to 3-inch layer of mulch around trees, shrubs, flowers and vegetables to hold in moisture. When water is scarce, avoid unnecessary plant stress and do not prune, fertilize or use pesticides.

Water only the landscape, not the sidewalk, driveway, street or house. Make sure all sprinklers, hoses and irrigation systems are working properly.

Remember, plants don't waste water, people do.

Emily Revels

Dealing with Drought

Wise plant selection is a way to prevent problems associated with drought. NC State University provides lists of drought-tolerant plants at www.ncstate-plants.net to help homeowners and landscapers. Many woody plants are relatively drought tolerant once established, but even drought-tolerant plants need water until they are established. Tall fescue, Bermuda grass and zoysia grass are considered drought tolerant.

Preparing soil according to soil test recommendations, planting at the appropriate times (to allow for establishment), watering deeply and infrequently, and mowing turf at the correct height encourage good rooting which results in better drought tolerance. Recently fertilized plants may be more drought-susceptible than others.

Moisture stress is indicated by wilting. In actively growing turf, bluish-gray discoloration, curled leaves and persistent footprints are a telltale sign. Leaves on some trees may become discolored. When moisture stress appears, water deeply and continue watering periodically for the rest of the drought period. If grass is dormant during a summer drought, water once every three weeks.

Early morning is the best time to water, since less water is lost to evaporation than during midday and leaves have time to dry before nighttime.

Mary Helen Ferguson

ENVIRO-TIP Preserving Coastal Dunes

The dune system along North Carolina's coast provides many valuable benefits. It provides habitat for the animals and birds that inhabit or migrate along the coast. Coastal plants, uniquely adapted to the harsh growing conditions found in this environment, provide food and protection for birds and animals. The vegetation adds beauty to the coastal environment and plays an important role in building and stabilizing the sand that forms the dune system.

Waves deposit sand on the shore and winds blow the sand landward. Plants and other obstacles, such as driftwood or a sand fence, reduce wind speed causing the sand to accumulate around the obstacles.

Coastal plants offer the unique advantage over other obstacles in that, as the sand accumulates, the plants grow with the newly formed dunes. Over time, the dunes and vegetation grow in concert

with each other and individual hummocks of sand coalesce into a nexus of dunes.

The beautiful dunes, enhanced by sea oats and other native vegetation, also act as the first line of defense against storms. Buildings, roads, utility lines and other infrastructure may be protected from storm surges and wave action associated with hurricanes and other coastal storms by the reservoir of sand in the dune system. Dunes are not hardened structures, rather they are flexible barriers that are often eroded away during storms.

Preserving the plants that form and stabilize the dunes is critical for dune preservation. Since 2002, hundreds of volunteers under the direction of North Carolina Cooperative Extension have planted thousands of sea oats to build and stabilize dunes. Projects include 18,000 sea oats planted at Shell Island in Wrightsville Beach, and more than 30,000 sea oats planted at the Ft. Fisher State Recreational Area.

David L. Nash, Coastal Management Agent, N.C. Cooperative Extension



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Gardening in June and July

Lawns

- Fertilize warm-season grasses and continue planting sod.
- Irrigate lawns at the rate of one inch of water per week.
- Mow tall fescue lawns using a higher blade setting. Vary mowing direction.
- Do not fertilize cool-season grasses.
- Apply grub control products containing imidacloprid in June.

Ornamentals

- Use mulch to form wide tree rings around tree trunks. This prevents mower injury to young trees. Avoid creating mulch volcanoes (mulch piled higher than 2 or 3 inches around the tree).
- Continue to prune spring-blooming shrubs such as roses, hydrangeas and rhododendrons.
- Many perennials and annual flowers re-bloom after early summer shearing.
 - Fertilize flowerbeds and irrigate routinely.
 - Apply summer oil or insecticidal soaps to control aphids on flowers and crape myrtles.
 - Remove bagworm "bags" from infested evergreens.
 - Prune hazardous or dead wood from canopy trees.
 - Apply horticultural oil to the undersides of foliage on plants infested with scale insects.
 - Cut herbs for culinary use before flower buds form.
 - Eliminate aphids with jet sprays of water to dislodge them.
 - Avoid applying insecticidal soaps when temperatures exceed 86 degrees F.
- Continue fungicide spray applications for fruit trees.
 - Keep an eye on tomato foliage for blights; plant tomatoes for fall.
 - Take soil samples in gardens and apply nutrients per report.
 - Routinely water and fertilize edibles.
 - Irrigate gardens in the early morning hours to conserve water.
- Continue to plant vegetables for a fall garden. **Toby Bost**

Edibles

- Remove suckers from the base of fruit trees.
- Prune away old fruit canes from raspberry and blackberry plantings.
- Continue fungicide spray applications for fruit trees.

▪ Keep an eye on tomato foliage for blights; plant tomatoes for fall.

▪ Take soil samples in gardens and apply nutrients per report.

▪ Routinely water and fertilize edibles.

▪ Irrigate gardens in the early morning hours to conserve water.

▪ Continue to plant vegetables for a fall garden. **Toby Bost**

Garden Spot

The JC Raulston

Arboretum (JCRA) at NC State University in Raleigh, in cooperation with the NC Flower Growers Association, will present the Landscape Color Field Day on July 11, 2007, at the JCRA. Various stations will provide information on all aspects of bringing color to the landscape. A spectacular palette of hundreds of different annuals will be on display in the open section of the JCRA adjacent to the perennial border. There will be a \$35 charge for the event. Labels on all plant material will be left in place for the remainder of the summer for the public to view free of charge. To learn more, visit www.ncsu.edu/jcraulstonarboretum.

Carl Matyac

TOP AWARDS RECEIVED FROM:

- ▶ North Carolina State Grange/Extension Foundation
- ▶ Garden Writers Association
- ▶ International Association of Business Communicators
- ▶ N.C. & National Associations of County Agricultural Agents
- ▶ Southern Extension Forest Resource Specialists
- ▶ Mecklenburg County Priority Awards

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