



Extension Gardener

NC STATE UNIVERSITY

NORTH CAROLINA COOPERATIVE EXTENSION

Fall 2013

Empowering
gardeners.
Providing
garden
solutions.

in this issue

PIEDMONT NEWS

Mulch Benefits
Planning a
Fall Garden
Yellow
Jackets
Lawn Aeration

STATE NEWS

Plant Diversity
'Shoal Creek'
Chastetree
Going Native
Drying Herbs
Organic Weed
Control

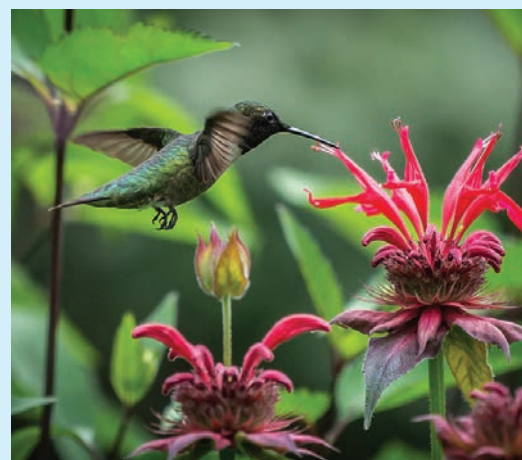
Increase plant diversity to enhance wildlife

Want to encourage more beneficial insects, songbirds, and other types of wildlife to live in your yard? The answer is simple: Increase plant diversity in your yard! North Carolina is home to 3,068 native plant species, which help to support an even greater diversity of native wildlife. Native plants are ideal for supporting wildlife and are well adapted to North Carolina's climate.

Plants sustain life and help support a complex food system. From pollinating insects to songbirds and small mammals, all wildlife depend on plants to provide food, shelter, and nesting sites. Not all wildlife feed on the same plants at the same time. Having a well-designed landscape composed of a diversity of herbaceous and woody plants will provide food and shelter to sustain wildlife throughout the year.

If you want to increase plant diversity in your yard, the best place to start is with the ground layer. Diverse mixtures of perennial ground covers—such as species of *Phlox*, *Viola*, *Oxalis*, and *Geranium*—are good choices because they have tiny flowers that only small insects like beneficial parasitic wasps can feed upon. Another choice for a ground cover is clover, which is favored by important pollinators such as honeybees and bumblebees. Clover also improves soil quality and increases nitrogen levels in the soil.

Annual and perennial border plantings in your garden beds will encourage other types of wildlife. For instance, coneflowers (*Rudbeckia* and *Echinacea* species) and *Coreopsis* species are favored by songbirds such as the American goldfinch because their seeds provide a winter food source. Other plants are critical for butterfly reproduction and survival. For example, caterpillars of the monarch butterfly can only survive on species of milkweed (*Asclepias*). Plants such as species of goldenrod (*Solidago*), ironweed (*Verno-*



nia), and joe-pye weed (*Eutrochium*) are favored nectar sources for many butterfly species and also provide beautiful flowers.

Plant a mix of evergreen and deciduous shrubs to provide food and refuge for songbirds throughout the year. Deciduous shrubs such as New Jersey tea (*Ceanothus americanus*) and buttonbush (*Cephalanthus occidentalis*) can be grown throughout North Carolina and provide nectar for insects and hummingbirds in the summer. Mountain laurel (*Kalmia latifolia*) and doghobble (*Leucothoe* species) provide shelter for small mammals and overwintering birds during the winter months.

Small trees such as flowering dogwood and redbud provide early spring color and also serve as a nectar resource for butterflies, while wax myrtle and American holly are evergreens that can serve as shelter for wildlife during the winter. Larger trees—including oak, elm, and pine—provide wildlife habitat and food throughout the year. Check with your local Extension center or visit www.ncsu.edu/goingnative/ for more plant recommendations suited to your area.

— Sam Marshall

Extension Showcase

Wake County Extension Master Gardener Volunteers Therapeutic Horticulture Program

Therapeutic horticulture focuses on the use of plants and gardening to nurture health and rehabilitate those with physical and mental challenges. In 2005, Wake County Extension Master Gardener Volunteers (EMGVs) created a therapeutic horticulture program that has grown to include groups of EMGV's visiting each of seven assisted living facilities around the county each month. A total of 20 EMGVs have committed to this program in 2013, and the response to their therapeutic horticulture activities has been inspiring!

Many of the residents in the participating facilities were gardeners at some time in their life, so planting, harvesting and eating from their gardens brings back positive memories that they freely share during classes. Those confined to wheelchairs can garden in raised beds or large containers. Other related activities have included attracting birds and butterflies, composting, making flower necklaces, and food preservation. A favorite class was making herb butters. During this class residents were able to harvest the herbs; wash, cut and mix them with the butter; and the best part, to spread them on bread and taste!

The Wake County EMGV Therapeutic Horticulture Program will continue to engage challenged populations, providing them with healthy opportunities and memorable experiences.

— Jeana Myers

Smart Gardening — Mulch benefits

Wouldn't it be nice to use one material to improve the aesthetics of your landscape, prevent weeds from sprouting, conserve soil moisture, prevent erosion, maintain a more uniform soil temperature, and improve the tilth of your soil? You can do all of this by maintaining a 3- to 4-inch layer of organic mulch throughout your landscape, including those shady spots where grass has difficulty growing.



Don't be mistaken: Mulch cannot eliminate established perennial weeds such as nutgrasses or bermudagrass in flower beds. But by applying and maintaining a 3- to 4-inch layer of mulch over relatively weed-free areas, you can eliminate a lot of back-breaking weeding and use of herbicides, and improve the appearance of your yard.

You can choose from a variety of organic mulches. Which is right for you depends on your preference and the area to be mulched. Organic mulches should be of a stable nature, such as pine needles, pine bark nuggets, or shredded hardwood mulch. Organic materials such as leaves, grass clippings, and ground wood chips can also be used for mulching but should first be well composted. Likewise, manures and backyard compost can be used as mulch, but only after they have been through a thorough composting. Sheets of newspaper or shredded paper can be applied as mulch by moistening them and covering them with another mulch to keep them in place.

Inorganic mulches include gravel of differing sizes, crushed rock, and small lava rocks. Broken brick pieces can also be used, but you don't get all the benefits you do from organic mulch. These materials work well in walkways or as fillers around steps in the garden.

— Karen Neill

Food Production — Planning a fall vegetable garden

Now that many summer vegetable plants are nearing the end of their production cycle, it is time to plan for fall crops. Getting a fix on approximately how much of the growing season remains is vitally important to a fall vegetable gardener's success.

The average first frost date for the NC piedmont is October 24, with a standard deviation of 12 days. This means first frost could occur as early as October 12 and as late as November 5. A good method for determining what and when to plant is to first read the backs of seed packets to find out the number of days required for a crop to reach maturity. Then, work backwards from that date to determine if you have a reasonable chance of producing that crop before first frost.



NC Cooperative Extension also offers a "Fall Planting Guide" for vegetable growers. You can pick up a copy at your local Cooperative Extension center or view the guide online. Once you have selected your crops, turn your attention to preparing the garden site.

First decide what to do with the remains of the summer garden. Remove spent plant material from the site rather than plowing it into the soil. Pests and diseases can survive in garden debris and come back to haunt you. Remove the debris as far as possible from the site or burn the debris.

Nutrition and water are also important for a successful fall garden. If the summer garden was not fertilized heavily, apply a slow release or organic fertilizer. Irrigation is important in a fall garden because warm temperatures persist, yet rainfall is often low in autumn months. One inch of water per week is a good rule to remember.

— Randy Fulk

Pest Alert — *Yellow jackets*

Homeowners may find yellow jackets to be a pest, but in reality they are beneficial, hunting caterpillars and other garden pests. Yellow jackets build nests in vacant soil cavities, stumps, and sometimes in attics and walls. It is only when disturbed or searching for food that they are likely to sting.

Yellow jackets are attracted to sodas, sweets, and juices, but will also search for protein foods such as insects, meats, and fish. To reduce in-



stances of being stung, keep lids on drinks and bring out food only when it is time to consume it. When finished, place trash in trash cans and close with a lid.

Because yellow jackets typically live in ground nesting sites, it can be difficult to find them. If the nest is found, pesticides labeled for wasps and hornets can be used for control. Be sure to read the label and purchase products that spray at least 10 – 12 feet. Spray in the evening when most of the yellow jackets will be in the nest. Apply the pesticide to the nest opening; if some yellow jackets start to escape, leave the area and check later to determine if the nest needs to be treated again. Another option is simply to be patient and wait for cooler weather; yellow jackets die in the winter and most nests are not re-used. For more information, visit this website: <http://www.ces.ncsu.edu/depts/ent/notes/Urban/horn-yj.htm>

— Danelle M. Cutting

Carolina Lawns — *Lawn aeration*

Lawn aeration helps open the soil, allowing air and water to move in and promoting root growth. Although the procedure can help your lawn become thicker and more drought-tolerant, it should be performed only in certain circumstances.

Aeration is helpful when the soil in your lawn has become compacted. This may occur when there is heavy foot traffic, such as from pets or playing children. Compaction is more likely in clay soils as opposed to sandy or loamy soils.

Keep in mind, however, that aeration is not a cure-all. If your lawn has developed large areas of thinning turf and heavy weed pressure, or severe compaction has occurred from vehicle or equipment traffic, a complete renovation may be needed.

While aeration can be beneficial, the process is stressful to the turf in the short term. Thus, it should be performed when your lawn is in an active stage of growth, to allow for quick

recovery. For a cool-season grass such as tall fescue, that active growth occurs in the spring and fall. For warm-season species, such as centipede, bermuda and zoysia, late spring to early summer is the preferred time.

Aeration is most effective when performed by a machine that pulls cores out of the soil and leaves them on the lawn. The cores should then be broken apart. Whether you decide to hire someone or do it yourself, it's critical to wait for the proper soil moisture conditions. If the soil is dry, it will be impossible for the machine to penetrate deeply.

For tall fescue lawns in need of aeration, it may also be desirable to over-seed at the same time. The aeration process will promote good soil to seed contact, which is needed for seed germination. Visit www.turffiles.ncsu.edu to download a lawn maintenance calendar for more lawn care tips

— Paul McKenzie

Tips & Tasks

Coping With a Wet Year

The 2013 growing season will be remembered for extreme rainfall. Here are a few of the most common problems in fruits and vegetables brought on by excessive amounts of moisture.

- For fruit trees the main threat of excessive rain is fruit rot. Almost all tree fruits are susceptible to a wide variety of rots and fungal diseases that are exacerbated by cloudy, humid, and rainy weather. Watch for spotting or yellowing of leaves and black or brown spots on fruit. Fungicides are best used as protectants, meaning they need to be applied ahead of an infection period. In late summer and early fall, they will not be effective.
- Many vegetable crops are susceptible to fungal diseases during wet conditions. Soil that is not well-drained serves as a breeding ground for a variety of root rot pathogens. Watch for areas in the garden that harbor standing water and open up drainage ditches to move the excess water out of the garden.
- You may want to consider adopting an idea from the Midwest, the raised bed. Raising the planting area allows it to dry quickly after rainfall.

— Randy Fulk





J.C. Raulston Arboretum

Showstopper — 'Shoal Creek' chastetree

If you are looking for a plant that doesn't need any tender loving care, you won't find a better choice than *Vitex agnus-castus* 'Shoal Creek'. Native to southern Europe and western Asia, 'Shoal Creek' chastetree is hardy from zones 6 to 9 and grows into a multi-trunked large shrub or small tree ranging from 10 to 15 feet high with a broad, spreading growth habit. 'Shoal Creek' is an improved variety that possesses larger spikes of violet-blue flowers. This vigorous small tree thrives in full sun and will tolerate most soil conditions as long as the soil is well drained. Once established, it is very low-maintenance and extremely drought tolerant. In addition to its attractive violet-blue flowers, 'Shoal Creek' has interesting star-shaped, aromatic foliage that is grayish green on top with gray underneath.

'Shoal Creek' flowers attract both hummingbirds and butterflies, giving this Showstopper Plant an added bonus.

— John Vining

Helping You Grow

Going Native

Going Native is a great Extension website for those interested in learning about native plants and how to provide habitat for many different wildlife species. On the site you can learn about habitats for many interesting wildlife species, how to prevent introducing invasive plant species, and how to use natives as a low-maintenance part of your landscape. This great resource also provides guidance on how to develop a native landscape plan for your yard, native plants for your area, and where you can find the plants for your natural landscape. Visit the Going Native website to learn more about adding natives to your landscape: <http://www.ncsu.edu/goingnative/index.html>

— Della King

Edibles — Drying herbs

Drying herbs could be your first step to food preservation obsession! The drying process is simple, and herbs are easy to grow—making them a great crop for beginning gardeners. For more information, visit this website: <http://www.ces.ncsu.edu/hil/hil-8111.html>

Herbs can be dried in a dehydrator, air-dried, oven dried, or even dried in a microwave. Many of our grandmothers set herbs out in the sun on an old sheet.

Although it makes a pretty picture, sun drying is not recommended because the herbs can lose flavor and color. No matter which method you use, your herbs need to be dried until they are crispy and easily crumple between your fingers. You can leave the leaves

whole or crush them, then store in an airtight container. Place the container in a dry, cool, dark place until the leaves are ready to use!

— Kerrie Roach

Sustainability — Organic weed control

Controlling weeds without chemicals begins with knowing your weeds. Annual weeds such as chickweed and crabgrass grow from seed each year. Annuals are generally easy to control by hand-pulling and tilling. Perennial weeds such as dandelion and Johnson grass grow from roots that live year-round. Perennial weeds are harder to control than annuals and usually need to be dug out, taking care to remove the entire root system.

To keep weeds from multiplying, remove them before they bloom and spread

seeds. Cover the soil with mulch to prevent annual weeds from coming up. Bark, newspaper, pine needles, cardboard, landscape fabric, burlap, and seed-free straw are all effective. You can also plant a cover crop as a living mulch. Mow the cover crop prior to planting. The cover crop acts like a mulch, and you can plant into it without tilling the soil.

In the vegetable garden, control weeds when they are small with daily tilling, hoeing and hand-pulling. When amending the soil, use only fully finished compost.

Incomplete composting may contain weed seeds. Water only the desirable plants. Weeds will grow anywhere the soil is moist.

A few organic herbicides are available. Most contain plant oils or concentrated vinegar and are effective only when sprayed on small, young weeds. Organic herbicides are not selective, so take care when applying. Another option for controlling young weeds is a flame weeder. These devices use propane gas to burn off the tops of weeds.

— Sarah McClellan-Welch



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: **Shawn Banks**
Regional Editor, Piedmont: **Randy Fulk**
Regional Editor, Mountains and Foothills: **Donna Teasley**
Production Editor and Designer:
Viki Balkcum

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."

14-CALS-3971—9/13

<http://extensiongardener.ncsu.edu>