

FALL 2015

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STATE NEWS

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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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Creating Wildlife Habitat

If you love plants, birds, and other wildlife, you probably have already created a wildlife habitat in your yard whether you realize it or not. For wildlife to be happy in your yard, they need food, water, cover, and a place to raise their young. Give them these four things, and they will come.

How can you provide these things? Let’s start with food. Many insects need nectar from flowers as a food source. Providing an array of plants that flower throughout the year makes the backyard a haven for the gardener, as well as for many insects that are needed for pollination. If the right flowers are used, hummingbirds will visit. Flowers produce fruits, berries, and seeds that provide food for animals and birds.

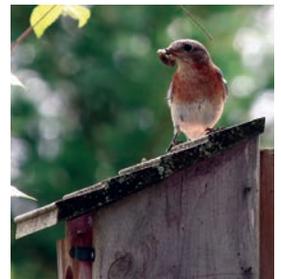
Water is next on the list. Most of us don’t have a big enough yard to create a large water feature—complete with a waterfall or fountain, but most of us can provide water in the form of a birdbath or a saucer on the ground. With birdbaths and saucers, remember to dump them and add fresh water every two to three days. Keep the water fresh, and the birds will visit more often.

Creating cover can be as simple as building a brush pile so wildlife will have a place to hide. Insects such as solitary bees and most butterflies and moths need a place to take shelter from the wind. Thick evergreen shrubs can provide the shelter they seek. Other animals may take shelter under these shrubs as well, while birds will prefer to shelter in trees. Trees of different sizes are needed for different kinds of birds.

Every creature needs a place to rear their young. Some birds build nests in the branches of trees, while others prefer the shelter of a birdhouse. Insects also need a place to raise their young. With insects, mom and dad might not stick around, but the young still need something to eat. For butterflies, these food plants are called host plants. Some species have a very short list of plants they can use as host plants, while others may have a long list of plants to choose from.

In most cases, if you have been living in a house for more than a couple of years, the yard is probably teeming with life, from birds to bees and the squirrels in the trees to the opossums, snakes, and other insects. For more information on building a backyard wildlife habitat, visit ncsu.edu/goingnative.

—Shawn Banks



Goldfinch (top) and butterflies
 ©Sharon Denning

Bluebird (top) and female cardinal
 ©Sharon Denning

Extension Showcase

Extension Master Gardener Volunteer Program

As the growing season begins to wind down, many gardeners reflect on their garden projects and realize that their outcomes could have been better. Sure, there are always issues out of our control. But there are also lots of things that we could have done to produce better results.

How does one learn to be a better gardener? There are many paths to take: the Internet, books, television shows, and other ways of learning.

What about the Extension Master Gardener Volunteer (EMGV) program? There is probably an EMGV group in your county, and anyone in the group would be happy to explain the process to you.

Extension Master Gardener Volunteers are trained gardeners who receive in-depth horticultural training in return for volunteering with the Extension center in their county. Classes start at different times in each county.

A phone call to your county Extension center will give you all the information you need to start your journey towards becoming an Extension Master Gardener Volunteer.

Keep in mind that you would be meeting a dynamic group of folks who have the same interests as you. The volunteer opportunities are varied and plentiful, and you'll find yourself eager to show off your newfound knowledge. For more information see ncemgv.org.

—Donna Teasley

Smart Gardening: Cover crops

Improving soil health and workability should be at the top of every gardener's to-do list. This is an on-going process and can improve every growing season. It requires some effort, but soil health has a tremendous impact on garden productivity.



Crimson clover
©Bob Bjork, USDA—Agricultural Research Service

Crimson clover is an excellent winter annual that has good cold tolerance and good nitrogen fixing ability, and it will tolerate moderate drought once established. It needs to be seeded at least 40 days before the first killing frost. Usually the first frost occurs in early to mid October for the NC mountains and foothills. The seeding rate is approximately 0.5 pound per 1,000 square feet of garden area.

As a legume, crimson clover is able to fix atmospheric nitrogen, which will be available to the vegetables planted later. Crimson clover establishes quickly and will continue to grow through the winter months. The ideal time to turn it under is when it begins flowering in the spring. Other winter annual cover crops include annual ryegrass, hairy vetch, winter rye, and barley.

—Jan McGuinns

Food Production: Rapid radishes

Radishes add a spicy crunch to vegetable trays and salads. But we often forget these root crops when it comes to planting a fall garden. Radishes easily provide variety in harvest and offer an almost immediate reward. Most often we wait months for flowers or fruit to appear, whereas a radish matures from seed in just three to six weeks! Planting in the NC mountains and foothills can happen anywhere from mid-August through September. 'Early Belle' and 'Scarlet Globe' are two red varieties that do well here.

Ensure you have a well-prepared bed, as rocky or clay soil can lead to radishes not forming well. Boron deficiency will cause holes within the radishes. Seeds should be planted 1 to 2 inches apart at a ½-inch depth, with rows about 9 inches apart. Radish seeds are very tiny, so a heavy-handed seeding will need to be thinned soon after the seedlings emerge. Plant new rows every seven to 10 days throughout the growing season to provide a continuous supply. Water is critical to the development of the radish, and water stress can cause the radish to be pithy or woody. In general, the cooler the temperatures the milder the flavor of the radish, so start early if you like them spicy. Radishes are relatively pest-free, but be on the lookout for flea beetles, aphids, and the occasional cutworm.

With only 10 calories in a half-cup serving, radishes offer a great healthy snack for those looking for something different. Check out your favorite seed catalogue for some of the new and unique varieties, and plant your "rapid" radishes today!



©Donna Teasley

Pest Alert: White grubs

It's all about timing when it comes to gardening. You can do everything correctly. But if you do it at the wrong time, all of your hard work is wasted! Insect control in the garden is a great example. Most pests have a time period when they are the most susceptible to chemical control. Knowing these times will improve your chances for success.

Fall is the perfect time to control grubs. Whether they are Japanese beetle grubs or June beetle grubs, they can be controlled only at certain times in their life cycle. Grubs hatch in late summer and feed just beneath the soil surface. They are young and tender, and insecticides can penetrate their skin easily in late summer.

Products that contain the chemical trichlorfon, such as Dylox or Bayer Advanced 24-Hour Grub Control, provide excellent grub control when applied August 15 through October 31. These products must be applied before grubs begin to burrow deep in the soil to overwinter.

White grubs are not a new pest. But they can cause a gardener much aggravation when they aren't controlled. Just remember to time your pesticide applications properly and encourage your neighbors to treat their lawns also.

— Donna Teasley



White grub
©Steven Katovich, USDA Forest Service, Bugwood.org

Lawns: Fall chores

As the summer heat starts to fade and we head into fall, our cool-season grasses tend to perk up. Fall is an important time for fescue and blue grass because certain chores need to be undertaken for the lawn to thrive. Many of these chores need to be carried out at specific times to be successful. If your lawn had a hard time this summer due to dry conditions or turf diseases, then fall is the time to reseed. To get a good stand of grass, applications of fertilizer and lime should be made prior to seeding. Be sure seeds make good contact with the soil.

A light fertilizer application of 1 pound of actual nitrogen per 1,000 square feet should be applied to cool season lawns in August and October. Do NOT apply more as that will encourage weed growth, promote turfgrass diseases, and potentially contribute runoff into storm drains, polluting streams and rivers. Fall is also the time to control winter weeds. Some gardeners use a preemergent herbicide to prevent weeds from germinating, while others apply a postemergent weed killer on the seedlings. Check the herbicide label if you want to control weeds in a newly seeded lawn because some herbicides may damage seedling grasses.

If you are concerned that you might have a June or Japanese beetle problem, cut a 1-foot flap of sod and roll it back. Examine the soil and roots in the top 3 to 4 inches and count the number of grubs you find. Repeat this in several locations. If there are more than five grubs per square foot, you may want to consider applying a granular insecticide to control green June beetle and Japanese beetle grubs. Insecticide applications must be made prior to cold weather because the grubs will go deeper as the soil gets colder. Doing fall chores in a timely manner will help ensure that you have a healthy lawn next spring.

—Bill Hanlin

Tips & Tasks

Ornamentals

- Plant spring-flowering bulbs, such as daffodils, crocus, and snowdrops.
- Force flowering bulbs indoors for winter displays.
- Plant pansies in early fall.
- Fall is the best time to plant most trees, shrubs, and perennials. Be sure to provide water if rain isn't sufficient.
- Dig and lift tender plants like dahlias and caladiums. Store in a dark, dry place until spring.
- Mulch tender perennials heavily to protect from cold weather.
- Run mowers, tillers, and other gas-powered equipment out of fuel before storing for the winter.

Lawns

- Fertilize tall fescue lawns in October for the last time this year. In the absence of a soil test, apply ½ to 1 pound nitrogen per 1000 square feet of lawn.
- Chop up fallen leaves using a mower equipped with a mulching blade and leave them on the lawn to help build soil.

Edibles

- Collect and send soil samples for analysis. Testing is free for samples submitted from April through November.
- Fall is the best time to apply lime if soil pH is below optimum. Soil test results will provide the recommended rate.
- Remove diseased plants from the garden to reduce the amount of inoculum for next year.
- Plant garlic in early fall. Bulbs will be ready to harvest in July.

—Amanda Taylor

Helping You Grow

Photography

Photography is a vital tool for gardeners. Having a good picture of an unknown plant, weed, or insect to share with your Extension agent, or to compare to a good identification book, can help you obtain accurate answers quickly.

Photography can also bring a lot of pleasure. One of the important basic skills is understanding how to do macrophotography, which is simply getting an up-close picture (great for insects, weeds and flowers).

You might think that having a powerful zoom lens would be the ticket, but in many cases you would do much better by using your feet.

Use those feet to move closer to your subject! Most modern cameras and even smartphone cameras allow you to hold the lens only 1 or 2 inches from the subject (with some, you need to click on a tulip shaped icon to put it in macro mode).

Also be certain you aren't shading the subject with your hand or the camera. Unless doing so would scare off your subject, get a better picture by moving closer!

—Paul McKenzie



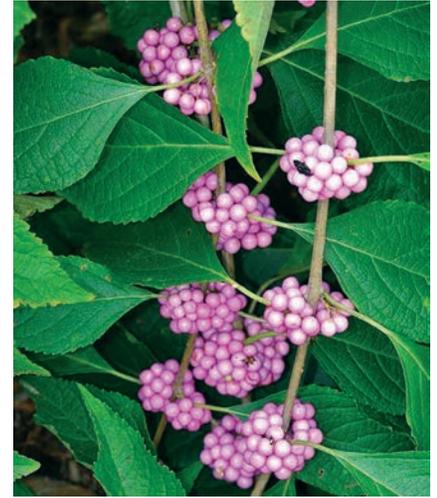
Bee on monarda ©Shawn Banks

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New from NC State: 'Welch's Pink' American beautyberry

Pink colors in the fall landscape are rare. Pink fruit was almost unheard of until now with the JC Raulston introduction of *Callicarpa americana* 'Welch's Pink'. Think cotton candy or gobs of bubblegum along green stems. You may be familiar with the native *Callicarpa americana* with purple or sometimes white berries. 'Welch's Pink' grows smaller, approximately 6 feet tall in Zones 5 – 9. It has small pink flowers throughout the summer that attract bees and butterflies, followed by pastel pink fruits from September until the birds eat them. Pink American beautyberry will grow in shade to sun and tolerates both dry and wet soils. Fruiting is best in a bright location, but afternoon shade reduces berry fading. 'Welch's Pink' is easy to grow in most landscapes, making it a welcome addition to wildlife gardens, native gardens, and anywhere late-season color is desired.

—Cyndi Lauderdale



©Bob Hauver, JC Raulston Arboretum

Incredible Edibles: Green bunch onions

Whether you're short on space, time, or patience, green bunch onions, also known as scallions, make an ideal fast growing alternative to their full-sized onion counterparts. To grow green onions at home, select a full sun site with fertile, well-drained soil, preferably high in organic matter.

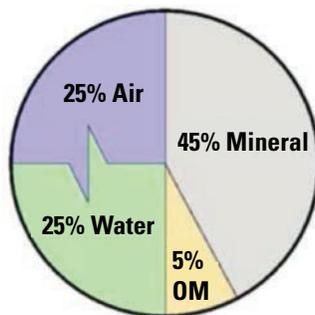
Green onions can be grown from seed planted directly in the garden. For a fall crop, seeds can be planted in August and September and should be spaced 1 to 2 inches apart. Onions are heavy feeders and prefer soil pH to range from 6.0 to 6.5. Have the soil tested before planting to determine nutrient and lime needs. Pests are seldom a problem, but it is important to keep the area well weeded. Harvest when the tops reach 6 to 8 inches tall.

—Katy Shook

Sustainability: Improving soil with organic matter

Before talking about how to improve soil, we first have to define what soil is. The Soil Science Society of America's definition of soil is "A mixture of minerals, organic matter, water, and air, which forms on the land surface. Can support the growth of plants." An ideal soil is roughly half solids and half pore space. Pores contain a mix of water and air, the proportion of which changes with rain events and dry periods.

Solid particles include sand, silt, clay, and organic matter. The best way to improve soil is to add organic matter such as compost. Two terms associated with soil improvement are tilth and humus. *Tilth* refers to the soil's suitability to support root growth. Soil with good tilth is friable (easily crumbled), allowing deep root penetration. Compacted soil results in poor root growth.



Humus is the dark, rich, crumbly organic material produced when twigs, leaves, and other animal and vegetable matter decompose. Humus is very beneficial to soils. It contains compounds that act as soil glue, improving tilth and creating aggregates. And it binds plant nutrients, so they remain available to plants and don't leach away. Finally, humus has a high water-holding capacity, helping protect plants from drought.

To amend soil, add a 2-inch layer of compost (humus). Work this into the soil to a depth of about 8 inches.

—Diana Rashash