

SPRING 2018

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Ask an Extension Master Gardener<sup>SM</sup> Volunteer

*Extension Gardener* provides timely, research-based horticultural information. We publish four issues per year. Send comments about *Extension Gardener* to:

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## Water Quality and Home Lawn Care

North Carolinians care for about 1 million acres of home lawn. When a lawn gets more fertilizer than is needed or when fertilizers and pesticides accidentally get onto paved surfaces, the excess is likely to run off into the nearest stream or seep through the soil into the groundwater. To care for your lawn in ways that prevent and reduce contamination of our water resources, rely on these tips:

### Establishing a Healthy Lawn

- Test the soil before you plant to find out the right amount of lime and fertilizer for your particular conditions.
- Cover seeded areas with mulch to aid establishment and reduce runoff and erosion.
- Water newly seeded areas lightly and frequently while the lawn is getting established. Do not water so much that runoff occurs.

### Watering

- Water the grass—not the pavement or the driveway. Position sprinklers and automatic irrigation systems so that the water falls only on the lawn and not on paved surfaces.
- Do not water too much. Conserve water by carefully managing automatic irrigation systems. Install rain or soil moisture sensors to override the timer when necessary.

### Fertilizing

- Apply the right amount of fertilizer at the right time of year to maintain a healthy lawn and reduce water pollution. See NC State Extension's **lawn maintenance calendars** for specific advice.
- Calibrate your spreader each time you use it to ensure a balanced pattern of coverage that applies the desired rate of fertilizer and lime.



Apply fertilizer and lime at the proper rate. ©NC State Communication Services. All rights reserved.

- Shut off the spreader when you cross paved surfaces or bare ground to avoid applying fertilizer to hard surfaces where stormwater will carry it away in the next rain. If fertilizer particles do land on a hard surface, sweep or blow them back onto the lawn.
- Leave clippings on the lawn to decompose and return their nutrients to the soil. This “grasscycling” can provide about 25 percent of the nutrients recommended for the lawn.

### Managing Pests

- Identify the true cause of any problems and decide if you really need to take any action. Treat only those areas that have pest problems.
- Plan to treat the pest when it is most susceptible and the lawn is most tolerant. Follow label directions to apply the pesticide at the correct rate and time.
- Pay attention to the weather forecast. Do not apply pesticides when heavy rain is likely.
- Calibrate your sprayer to deliver the correct amount of pesticide.
- Mix liquid solutions and fill sprayers on grassy surfaces so no liquid spills on pavements or bare areas.
- Mix granular materials and fill applicators on smooth, impenetrable surfaces so you can clean up any spills.



Position sprinklers so water falls only on the lawn. ©NC State Communication Services. All rights reserved.

This information is adapted from an NC State Extension publication, *Water Quality and Home Lawn Care* (AG-626), which is available online: [content.ces.ncsu.edu/water-quality-and-home-lawn-care](http://content.ces.ncsu.edu/water-quality-and-home-lawn-care).

## Extension Showcase

### Rutherford County Extension Master Gardener<sup>SM</sup> Volunteers Spring Garden School

The Rutherford County Spring Garden School symposium is coming soon! This year we will gather on March 10, 2018.

The theme for our symposium is "Gardening Smarter Not Harder," as we all need smart gardening reminders every now and again.

Our keynote speaker is Ms. Annie Martin, otherwise known as Mossin' Annie. She will be giving us a lesson on moss gardening.

Moss is a wonderful option for shady areas, which we have so much of in the western North Carolina mountains and foothills.

We will have sessions throughout the day, including speakers such as rosarian Steve Earnest, who will be teaching both a beginning and intermediate rose care session.

Dr. Nolan Newton, an expert entomologist, will be sharing bountiful information on beneficial organisms in the garden.

We will also be delving into topics such as cultivating medicinal herbs with Gabriel Noard of Pangaea Plants.

Then we will follow up with how to turn those herbs into powerful tinctures, salves, and other at-home remedies with April Novoa and Valerie Roscoe.

The Spring Garden School will have local vendors and exhibitors as well.

Registration is \$30; registration forms and further information can be found at [rutherford.ces.ncsu.edu](http://rutherford.ces.ncsu.edu).

—Hannah Bundy

## Smart Gardening: Flowers benefit your vegetable garden



Flowering plants appeal to pollinators.  
©Sarah Scott

We know that it takes a population of pollinating insects to produce a healthy harvest from our vegetable gardens. But how can we ensure that population is present? Interplanting marigolds and nasturtiums into our vegetable beds may not be enough. Insects need food, water, and shelter to survive and thrive, much like humans. The best way to increase your population of pollinating insects is to plant a swath or large patch of flowering plants near your vegetables to attract the pollinators. Bees, especially, will return to an area that has plenty of foraging opportunity. Daisy-like flowers are appealing to pollinators because of the ease of access to the nectar. Coneflowers, sunflowers, and asters work well for this. Another factor to think about is bloom time. Dandelions and clover bloom earlier than many perennial flowers and can act as early food sources to foraging insects.

By planting a larger area of flowering plants, you are also providing a space for insects to take shelter. Ornamental grasses can also be planted in these areas to act as a "beetle bank." What's a beetle bank? Simply an area of perennial plantings that is left undisturbed so that beneficial insects can seek shelter, live, and hibernate there. Another project that kids can enjoy is building insect hotels. Gather recycled materials like old logs, leaves, straw, pine cones, and sticks and create a space for insects to feel at home in your garden. Don't use wood from pallets that may have been treated with pesticides. Another important thing to think about when creating a welcoming habitat for pollinators is the use of pesticides. Many pesticides are nonselective, meaning they will harm or kill any insects that come in contact with them. Use cultural and mechanical control methods to rid your garden of harmful insects when possible, and always choose a chemical control as a last resort.

Sarah Scott

## Food Production: Give rhubarb a chance

Rhubarb (*Rheum rhabarbarum*) is an herbaceous plant with edible red-green petioles. Its heart-shaped leaves are lush and showy, but they are toxic to humans and livestock. Rhubarb is perennial in northern climates and can be a reliable perennial in the NC mountains. The petioles (commonly referred to as stalks) are delicious in pies, preserves, sodas, and even meat dishes. Plant rhubarb crowns in early spring in the NC mountains. Start crowns from seed or obtain them from a seed company or neighbor who is dividing rhubarb. Do not harvest in the first year, and harvest lightly in the second year. When harvesting from established plants, leave 10 to 12 of stalks at a time as rhubarb loses vigor with overharvesting. A healthy rhubarb plant benefits from crown division every four to eight years. Cultivars vary in chilling hours required to produce new buds. At lower elevations, seek lower chilling requirements. Or consider growing rhubarb as an annual by planting in early fall and harvesting in April to May. Cool temperatures promote the desirable red color in the petiole, and cultivars vary in redness. Cultivars with greener petioles are equal in quality and flavor. Rhubarb prefers a slightly acidic soil (pH 6.2 to 6.8) and benefits from organic matter. It can be vigorous in many soils but requires adequate nutrition and good drainage. Rhubarb does best in full sun but can tolerate partial shade. Mow the leaves off before the first frost to reduce foliar disease. Remove nearby curly dock (*Rumex crispus*) as it is a secondary host for the rhubarb curculio. If you're looking for a perennial to add to your collection of edibles, don't overlook this old favorite. For more details on growing rhubarb, see [pubs.ext.vt.edu/438/438-110/438-110.html](http://pubs.ext.vt.edu/438/438-110/438-110.html)



Rhubarb is edible and ornamental.  
©Elina Snyder

—Eli Snyder



## Pest Alert: Pesky wild onion and garlic solutions



Managing wild onions and garlic requires vigilance and persistence. ©Leslie J. Mehrhoff, Bugwood.org

pretty good job. But digging is only practical when you don't have large amounts of the weeds present. As always, read the product label and follow the directions exactly for best results.

Wild onions and garlic are particularly pesky when it comes to ridding the lawn and garden of their presence. Managing them is tricky, but well-timed control can be successful.

Two applications of a 2,4-D product have to be made, once in March and again in the fall, around October. The first application will knock the weeds down, but it doesn't kill them. They will lie dormant during the hot months only to pop up again when temperatures cool down. The second application of 2,4-D will finish them off. But remember to be vigilant in scouting the lawn for newcomers each year.

Another tip for good control is to mow the lawn the day before applying the herbicide and then refrain from mowing for about a week. The fresh cuts on the tips of the stems insure better absorption of the chemical. If chemical control is not desirable, digging with a sharp trowel as stems appear can also do a

— Donna Teasley

## Lawns: Please READ THE LABEL

Last summer a lady called asking me to stop her from possibly doing bodily harm to her husband. It seems her spouse had killed the turfgrass in their front yard with an herbicide. He had used crabgrass killer on their fescue when the temperatures were above 85°F, and the fescue promptly turned bright yellow and died. As a highly trained agricultural, horticultural, arboricultural, (and marital?) consultant, I knew I had better act fast if I were going to save their marriage and possibly the husband's life. I explained to her that this sort of thing happens frequently. Someone uses a chemical incorrectly doing more harm than good. She asked me if the information was on the bottle. I told her that it was, but it was deep inside that long inherently confusing document known as the "pesticide label." I mistakenly mentioned that chemical users are required by law to read the label on a pesticide before using it. She slammed the phone down. ... I hope her husband is all right.

A chemical label is a federal document attached to every pesticide container. Pesticides are regulated by the Environmental Protection Agency (EPA) through labeling—making the label on a pesticide a regulation. The EPA requires that agricultural chemical manufacturers attach this document to each container of pesticide they manufacture. The label should identify the ingredients in the product, the personal protective equipment necessary to use the chemical safely, when, where and how the chemical may be applied, how much to use, to which crops it may be applied, and which pests are controlled. To apply a pesticide in a manner inconsistent with its labeling is against federal regulations. Avoid misapplications of pesticides that could hurt your plants, pets, family, or the environment.

—Steve Pettis



## Tips & Tasks

### Lawns

- Fertilize cool-season turf, such as Kentucky bluegrass, using ¼-pound to 1 pound of nitrogen per 1,000 square feet.
- Aerate and reseed any warm-season grasses.
- Apply preemergent broadleaf weed herbicides before emergence on a calm warm day (above 55°F) in February
- Hand-pull winter weeds like henbit and chickweed to prevent them from going to seed

### Ornamentals

- Prune and shape trees and shrubs that flower in the summer or on new growth by late February or early March. Prune no more than a third of the plant at a time, and focus pruning on older growth, broken limbs, or limbs that are rubbing together
- Fertilize spring bulbs with a complete fertilizer, such as 10-10-10.
- Plant any bare-root materials and transplants in early March.
- Cut back ornamental grasses such as pampas grass to 6 to 12 inches high and shorter grasses to 4 to 6 inches high.
- Hand remove any bagworm cocoons in nests in tree limbs.
- Fertilize shade trees in March.

### Edibles

- Prune all edible trees, such as apple trees, and prune mature grapevines.
- Prepare vegetable beds and plant all transplants in mid-March.
- Sow seeds such as lettuce, carrots, peas, mustard, radishes, and spinach in mid-March.
- Remove mulch from strawberries and give them a fertilizer boost.
- Plant new small fruit trees and bushes before bud break.
- Start summer annual transplants such as eggplant and peppers in seedling trays in the greenhouse.
- Make any needed soil amendments based on your soil sample results from your fall sample.

—Hannah Bundy

## Helping You Grow

**For Gardening Help, Ask an Extension Master Gardener<sup>SM</sup> Volunteer**

**Extension Master Gardener<sup>SM</sup> Volunteers (EMGVs)** are local citizens who volunteer their time and expertise to support their county Extension centers. EMGVs receive intensive training on a wide range of gardening topics and are prepared to answer your gardening questions with research-based, nonbiased information from the land-grant university system.

There is an NC State Extension Master Gardener<sup>SM</sup> program in almost every NC county. Contact your local NC Cooperative Extension center to talk to an EMGV and get advice on such gardening problems and questions as these:

- What is wrong with my plants, and what can I do about it?
- When should I plant?
- What is this weed?
- What is this insect that I found on my plant?
- When should I prune?

When you contact your county Extension center, be prepared to provide enough information for an EMGV to help you. For example, if you have an insect, plant, or weed that needs to be identified, bring a sample to the Extension center or email several clear, focused, and close-up pictures.

To talk with an EMGV in your county, visit [ces.ncsu.edu/lo-cal-county-center](http://ces.ncsu.edu/lo-cal-county-center) and find your county Extension center.

—Charlotte Glen

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## Plant Watch: Carolina Sweetheart<sup>TM</sup> redbud



©Mountain Horticultural Crops Research & Extension Center, NC State University

Bring in the spring with this new redbud (*Cercis canadensis* 'NCCC1' PPAF). This recent release is like "nothing else on the planet," says Professor Tom Ranney of NC State, who developed the cultivar in cooperation with the NC Nursery & Landscape Association. Blooming in early to midspring with bright pink blooms, the foliage emerges in a carnival of colors—starting off purple and developing into variegations of white, green, and hot pink. As spring gives way to summer, the leaves turn fully green. Bean-like pods are on display in the fall. When mature, this redbud will reach 20 to 30 feet tall and have a 25-to-30-foot umbrella-like spread. It does best in zones 6 to 9 with full sun to part shade.

Looking for a WOW factor for your landscape? The Carolina Sweetheart<sup>TM</sup> redbud will provide it.

—Kira Chaloupka

## Incredible Edibles: Florence fennel

Florence fennel (*Foeniculum vulgare* var. *azoricum*) is a great multi-use plant that is both a vegetable and an herb. The thickened, bulb-like base can be boiled, roasted, used raw, or sautéed like a vegetable, and the foliage can be used like an herb. Both parts have a distinct anise-like flavor and aroma. Florence fennel does well in most parts of North Carolina, with spring planting dates for the NC piedmont and coastal plain between March and April and a late summer planting in July and August. In the NC mountains, plant in the spring between April and May. This warm-season annual does best from seed and shouldn't be confused with fennel (*Foeniculum vulgare*), which is a perennial herb that is often used as an ornamental and pollinator plant.

—Hanna Smith



Florence fennel. ©Quinn Dombrowski, CC BY-SA 2.0



Beneficial insects feed on pest organisms. ©John Flannery, CC BY-ND 2.0

## Sustainability: Beneficial insects

Often when we see an insect, especially if it's on one of our plants, we automatically assume that it is going to eat our entire plant and we will be left with little or nothing to show for all our hard work. Although there are some "bad" bugs out there, most insects (about 99 percent) are either harmless or are actually beneficial. These good guys, such as lady beetles, assassin bugs, and wasps,

are considered natural enemies to pest insects. By feeding on pests, these natural enemies can provide a natural approach to pest control. If we create environments that encourage populations of these beneficial insects, then we have a leg up on the bad guys. This practice reduces the amount of insecticides that we must use to keep our plants healthy and is one step in **integrated pest management (IPM)**. Along with other techniques that are part of IPM, we can use beneficials to manage pests in an economically viable and environmentally sound way. Chemicals from insecticides can leak into and pollute water resources, especially when not applied properly. Insecticides can be costly as well. Another part of IPM is knowing the "economic threshold," the amount of damage or insects present that you can tolerate before preventive measures must be taken, such as using chemicals. Encouraging beneficial insects in your garden can help keep pests in check and keep them below the economic threshold.

—Hanna Smith