Extension Gardener

NC STATE UNIVERSITY NORTH CAROLINA COOPERATIVE EXTENSION Summer 2014

Empowering gardeners. Providing garden solutions.

in this issue

Soil testing in preparation for planting

A key to growing healthy plants is having good soil. Soil preparation, however, is often overlooked when gardening. Taking time to prepare and amend the soil before planting will encourage healthier plants and reduce the potential for future problems.

One of the most important tools in determining how to improve your soil is the soil test. Between April and November, soil testing is provided by the North Carolina Department of Agriculture and Consumer Services (NCDA&CS) at no direct charge to North Carolina residents. During the department's peak season of December to March, soil testing costs $4 per sample. A few weeks after you submit a soil sample, you will receive a report providing lime and fertilizer recommendations based on your soil's characteristics and the plants you plan to grow.

Soil samples may be taken at any time of the year, but there are steps to take when collecting samples to ensure you get the best results. First, consider how many separate samples should be collected. Collect samples for each different group of plants you are growing. For example, you should submit separate samples for your vegetable garden, lawn and flowerbeds.

It is also recommended to collect separate samples for areas in which the soil type or drainage are noticeably different. When collecting a sample for your lawn, you may want to take separate samples for the front and back lawn. You should also collect separate samples for acid-loving plants like centipede grass, blueberries and azaleas.

When you collect soil for your sample, remove mulch and leaves from the soil surface. For a lawn, samples should be collected to 4 inches deep. For vegetable gardens and flower beds, take samples 6 to 8 inches deep. And for trees and shrubs, collect samples to a depth of 6 to 10 inches.

As you collect a sample, collect several "mini-samples" randomly within the area you wish to test. Mix the mini-samples in a bucket before filling the box in which the soil will be submitted for testing. This will provide a better representation of the entire area and lead to better results. It is best to use plastic or stainless steel tools and bucket when collecting samples. Avoid galvanized, brass or bronze tools because they may contaminate the sample and skew results.

Fertilizing and liming without knowing what is in your soil can lead to plant problems caused by adding too much or too little. A soil test is a reliable and accurate guide for preparing soil so your plants perform well. Contact your local Extension center for soil testing boxes, forms and information on how to collect a soil sample.

— Jessica Strickland

Boxes and forms for soil testing are available from your local Extension center. *©Jessica Strickland*

NC State University A&T State University COOPERATIVE EXTENSION Empowering People · Providing Solutions

Extension Showcase

Gaston County Extension Master Gardener Program

Gaston County added 11 eager new Extension Master Gardener interns to its volunteer program this year. The smaller-than-normal class size had its benefits, notably more interaction with one another, a heightened sense of excitement and full class participation during lessons.

As a result, we all learned more by having to spend time researching some of the answers. During breaks, trainees jubilantly shared with one another, discussing class topics and current challenges in their gardens, as well as volunteer opportunities they looked forward to.

During the classes, one of our Extension programs desperately needed volunteers. Healthy Harvest, a school gardening and nutrition program for third-graders, was bursting at the seams with additional schools anxious to get their students involved. Normally, we would wait until class completion before sending volunteers "into the field," but we decided to challenge this year's class to assist us by shadowing certified Extension Master Gardeners in the schools. The request was met with outstanding support.

If you love gardening and have a desire to give back to the community, consider joining the next Extension Master Gardener volunteer class in your county. Visit us to learn more: http://www.ncstategardening.org

— Julie Flowers

Smart Gardening — *Apple varieties*

There are many apple varieties available to the home gardener, including heirloom and modern selections. But which ones are right for your garden?

Heirloom varieties have been around for many years. The fact they have survived for so many years tells us that they have merit. The flavors of heirlooms can't be beat, and many have tolerance to extreme weather conditions. This is why they have lasted through the years. Sentimentality keeps them around also. We like growing the trees that our grandparents and great-grandparents grew. These old trees can bring back happy memories of fried apple pies and homemade jelly.

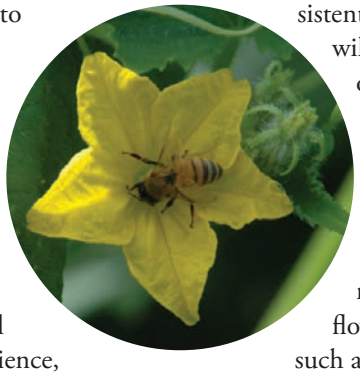
Some desirable attributes these old trees don't have are consistency and guaranteed harvest. They may not be attractive and may also lack disease tolerance. That's where the modern varieties come in. Modern apple varieties came about because something was lacking in the old trees. Many of the newer varieties have been bred for their resistance to diseases so that fewer pesticides are necessary. Modern rootstocks make it possible to choose the size of your tree, which is important because urban settings don't have the space required for a standard size tree.

So, as a gardener, it is up to you to decide which is more important: that special taste you can get only from an old fashioned variety or the reliability of a modern variety. Is the taste and the sweet memory worth the quirks of growing 'Summer Banana' or 'Keener's Seedling'? To many gardeners, the answer is "yes." But if you need the predictability of a modern apple such as 'Fuji', 'Liberty' or 'Virginia Gold', you're also in luck. Modern apples have their own unique flavors and traits that will give them longevity in the garden world. It's all a matter of taste.

—Donna Teasley

Food Production — *Poor fruit set on vegetables*

It is not unusual for gardeners to experience poor fruit set on vegetables at some point during the season. In some instances, poor fruit occurs when plants fail to flower. In other instances, plants may bloom but fail to set fruit. In almost every instance, failure to set fruit is caused by environmental conditions and, with a little patience, the plant will begin bearing over time.



©Joseph LaForest, University of Georgia, Bugwood.org

One call I often get is from gardeners who say their plants are nice and green but are not setting any blooms. Lush, dark-green plants are an indicator that too much nitrogen has been applied and the plants are putting their energy into producing leaves, not blooms. Eventually the plant will begin producing fruit if no additional nitrogen is applied.

Temperature plays a major role in fruit set of certain vegetables. Tomato plants need daytime temperatures between 70° to 85°F. Consistent temperatures outside this range will cause flowers to drop. When this occurs, there is nothing for the home gardener to do except wait for more ideal temperatures.

Squash and cucumbers produce male and female flowers. For pollination to occur, pollen must be transferred from male flowers to female flowers by insects such as honeybees. Early in the season, only male flowers may be produced, which means no fruit set. The problem is reverse for hybrid varieties that typically produce only female flowers early in the season. Again this problem will correct itself as the plant begins to produce both male and female flowers.

Finally, plant your garden in a sunny location. Many vegetable plants will have few if any fruit if they are grown in an area that receives too little sunlight. Most summer crops require at least 6 to 7 hours of direct sunlight in order to be productive.

— Bill Hanlin

Pest Alert — *Azalea lace bugs*

Azaleas are an old Southern tradition and are generally easy to grow, but they do have one major insect pest, the azalea lace bug (*Stephanitis pyrioides*). Azalea lace bugs overwinter as eggs in azalea leaves and begin hatching in the spring. These small insects are difficult to spot because they blend in with the woody parts of the plant and spent most of their time on the undersides of leaves. Their damage, however, is easily detected. Leaves on plants infested with azalea lace bug turn a mottled light brown on the upper side with dark dots on the underside of the leaf.

Lace bug damage is considered cosmetic and not a serious threat to plant health. Treatment is usually deemed necessary only for plants in highly visible locations. If control is needed, it is best accomplished early in the season when nymphs are present. This is because nymphs are easier to kill than adults, and if you kill nymphs before they mature and lay eggs, you have a better chance of clearing up the infestation. There are many insecticides available to control azalea lace bugs. Some are contact chemicals, while others are systemic. The systemic chemicals generally work better but can be more expensive. For specific recommendations, contact your local Extension center.

©Jim Baker, NC State University, Bugwood.org

— Daniel Shires

Carolina Lawns — *Plan now to sow a lawn*

Summer is firmly established, and there isn't much to be done in cool-season lawns at this point. Fall is coming, however, and for the gardener who plans to sow a new lawn or to over-seed an existing lawn late this year, summer is the time to start planning this project. Cool-season lawns are best established in the late summer in western North Carolina, and August 15 is the target date you should be working toward.

First, check for weeds in your lawn and have them properly identified to determine which herbicide will control them. Become familiar with the product by reading the label directions before it is time to apply it to the lawn. Check for temperature limitations to determine the best application time. When not used properly, herbicide results are often less than satisfying.

There may also be a waiting period before grass seed can be planted. The waiting period depends on the product that you are using, so be sure to read the label before you purchase a weed killer. Waiting times vary greatly, anywhere from a week to three months, so it is important to plan ahead when killing weeds if you plan to sow or over-seed your lawn.

Before reseeding, it is important to resolve the issues that might have been the cause of grass failure in the first place. Possibilities include poor drainage, lack of sun, low pH or even the wrong choice of grass seed. A soil test is always a good idea, but the results don't come overnight. Be sure to sample well ahead of planting time.

If you have questions on sowing or over seeding your lawn, contact your local Extension center. But, don't wait! Start preparing now for a successful lawn.

— Donna Teasley

Tips & Tasks

Lawns

- Mowing heights are important for all grasses. Tall fescue should be cut at 2-½ to 3 inches high. Zoysia, centipede and Bermuda grass lawns should be mowed to 1 inch in height.
- Fertilize warm-season grasses like Bermuda grass, centipede and zoysia during summer.

Ornamentals

- Prune hybrid rhododendron after they finish flowering.
- Trim hedges that have outgrown their shape.
- If needed, trim narrow leaf evergreens such as juniper and arborvitae in late June.
- Spring-blooming shrubs such as hydrangea and weigelia can be trimmed back after the flowers fade.

Edibles

- Monitor for insect and disease problems by checking vegetable plants at least once a week. Hand-remove problem insects and destroy.
- For continual supplies of beans and sweet corn, plant a new row every two to three weeks up until midsummer.
- Vegetables will need a uniform moisture supply through the summer. It may be necessary to supplement rainfall amounts with irrigation. Mulching can also aid in limiting soil moisture loss.
- Harvest vegetables and herbs in the coolest part of the day — early morning. Process them as soon as possible to preserve freshness.

— Jan McGuinn

Extension Gardener

Around the State

Showstopper — *'Glowing Embers' hydrangea*

I fell in love with *Hydrangea macrophylla* 'Glowing Embers' many years ago when I read about its vivid red flowers. This plant was first introduced on the market as 'Alpengluhen'. With a hard to pronounce name, it was even harder to find at a garden center. Thanks in part to a name change, 'Glowing Embers', one of the finest mophead hydrangeas, is now easily acquired. It's a vigorous grower, with a mature height and spread of 3 to 6 feet. The 8-inch flowers appear midsummer, start out pink and slowly deepen to red. Grow this plant in moist, well-drained soil amended with compost. Full morning sun with afternoon shade is preferred to prevent wilting. 'Glowing Embers' blooms on old wood so wait to prune after flowering. For a stunning display, mass plant 'Glowing Embers' with evergreen shrubs.

— Cyndi Lauderdale

Helping You Grow

Community Garden Portal

Interested in community gardening? This website connects you with others involved in community gardens: **http://nccommunitygardens.ces.ncsu.edu/** Search for gardens near you, and join others at one of the 126 registered gardens. Explore how to start a community garden, including funding opportunities. Find resources and suggestions for your garden's policies and ground rules. The NC Community Gardens website supplies facts on when and how to harvest and store vegetables, tips for making gardens accessible and organizing your garden, and resources for reducing food safety risks. Visit today to discover what a resource it is for growing communities through gardens.

— Peg Godwin

Edibles — *Fruit trees*

Maintenance needs of fruit trees vary from one type to another, but all require regular care to be productive. Begin by selecting the right cultivar for your area. Most fruit trees should be planted in full sun and well-drained soil and require regular pest control, fertilizing, thinning and pruning. Control weeds by mulching around trees or through targeted herbicide use. Avoid mechanical weed control near tree trunks. Home gardeners can use multipurpose home orchard pesticide sprays for insect and disease control. Sanitation, which includes removing, burning or burying fallen fruit and debris, is also helpful. Fertilizer applications should be based on soil test results. Thinning and pruning is crucial to fruit development. Thin to one fruit every 4 to 6 inches when fruit is the size of a nickel. Pruning is species specific; contact your local Extension center for advice and recommendations.

— Katy Shook

NC State University A&T State University COOPERATIVE EXTENSION
Empowering People · Providing Solutions
www.ces.ncsu.edu

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: **Sam Marshall**
Regional Editor, Piedmont: **Randy Fulk**
Regional Editor, Mountains and Foothills: **Donna Teasley**
Statewide Editor: **Shawn Banks**

CALS COMMUNICATIONS — 05/14

http://extensiongardener.ncsu.edu

Sustainability — *The benefits of mulch*

Mulch is one of the most important and inexpensive tools available to gardeners. Once established, an even layer of mulch helps control weeds, retains soil moisture, moderates soil temperatures, prevents the establishment of a soil crust, reduces soil compaction and reduces injury from lawn equipment.

Maintain a 3- to 4-inch-thick layer of mulch around trees and shrubs. Extend mulch to the drip-line of trees and large shrubs, never allowing it to touch the trunk or base of any plant. Mulch can be applied right over top of perennial bulbs, but be careful not to smother annual and perennial flowers by applying mulch too thickly around plant crowns.

Mulch comes in many different textures, colors and substances. Mulches available from your local garden supplier that are made from organic materials include pine straw, pine bark, hardwood bark, cedar chips and dyed wood chips. Organic mulches break down into a humus-like material that slowly works its way into the soil, helping to improve soil over time.

Which mulch is best for your landscape? It depends on your aesthetic preferences and site conditions. Pine straw is readily available in many parts of the state, and once settled, it will not move. Hardwood mulches decompose more quickly than others causing thin areas. Chunky mulches, such as pine bark nuggets, tend to wash out with heavy rains and will need refreshing more frequently.

— Kerrie Roach