



November-December 2017



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Horticulture News

Signs of Southern Pine Beetle

While driving along the state highways in Swain and northern Jackson counties you may observe dead pine trees along the roads. The culprit is more than likely the Southern Pine Beetle (SPB).

In 2016, SPB activity was low throughout North Carolina but active spots were detected in Swain, Graham and Tyrell counties. In general, it is known that SPB activity is usually more apparent following drought conditions which of course we experienced last summer and fall. In a recent conversation with Forester Koontz, North Carolina Forest Service (NCF) Custom Ranger District 9, he shared in 2017, SPB damage has been observed by using a combination of ground observations and "bug flights." This year, detections were observed from Whittier to Sylva along highway 23/74, from Almond to Franklin along Hwy 28, and along the Needmore Game Land on both the Swain and Macon county sides. SPB levels are low throughout most of North Carolina.

The Southern Pine Beetle (*Dendroctonus frontalis*) is native to North Carolina and is considered one of pine's most destructive insect enemies in the Southern United States. SPB is especially damaging to stands of poor vigor and outbreaks are often triggered by soil-moisture stresses. SPB's usually attack trees that are at least 15 years old. The first sign of an infestation is usually browning of tree crowns. At first, needles turn yellowish, then brownish orange or light brown and in about 1-1/2 to 2 months are reddish-brown. Typically, pines are killed in groups ranging from a few trees to several hundred trees.

Southern pine beetles become active in the spring about the time redbuds and dogwoods bloom. The insects first attack weakened and damaged pine trees and then possibly spread over larger areas. In pairs, the beetles invade the tree's main stem. Each pair constructs an S-shaped tunnel one-foot-long between the bark and wood. The larvae, usually feeding in the inner and outer bark, can be seen when the bark surface is whittled away with a hatchet. After a few weeks, the larvae change to pupae, and new adults emerge in a few more weeks. The tunnels created from beetle activity crisscross to form an intricate pattern that girdles the tree. Eggs are deposited in niches along these tunnels. The entire life cycle, under favorable conditions, takes from 30 to 40 days producing three to five generations per year. The last brood of the season overwinters in various stages of development under or in the bark of infested tree. In addition to a dead crown further evidence includes egg and larvae galleries, pitch tubes and adult exit holes.

The NCF administers a cost-share program aimed at preventing outbreaks of the southern pine beetle, the most destructive forest insect in North Carolina. For more information, contact your local county Forest Ranger or go to: www.ncforestservice.gov/forest_health/fh_spbpp.htm

Soil Sampling for Success

Healthy soil is the foundation of successful gardening. There are many ideas, opinions and even philosophies on what exactly is "healthy soil." One tried and true method backed with years of science is to soil sample which creates a baseline of the soils pH and nutrient levels. This vital information can be used to improve your soil by tweaking the pH and adding the appropriate nutrients to increase your chance for success with healthy, vibrant and vigorous plants.

The first step to cultivating healthy soil is having your soil tested. Collecting soil samples only takes a few minutes and has many paybacks. These include saving money in your lawn, garden and landscape; creating healthier plants by revealing which nutrients are present in your soil and those that are lacking and finally, protecting water quality by preventing unnecessary fertilizer applications.

One of the most important things the soil test measures is soil pH. On average virgin soils in Western North Carolina range from 5.3 to 5.8 but can be lower (acidic 0-7) and or higher (7-14 basic). Most fruits, vegetables, some berries and lawns prefer to grow in soils where the pH is 6.0 to 6.5. Acid loving plants such as azaleas, rhododendrons, camellias, and blueberries prefer a soil pH between 5.0 and 5.5.

Soil testing is the only way to know if your soil is too acidic, if you need to add lime to raise pH, and if so, how much. Many people apply lime unnecessarily, which can raise soil pH too high, resulting in poor plant growth. In addition, soil test results will tell you which nutrients need to be applied for the type of plants you're testing for. Fertilizer types come in many forms as either natural (organic) or synthetic fertilizers e.g., 10-10-10.

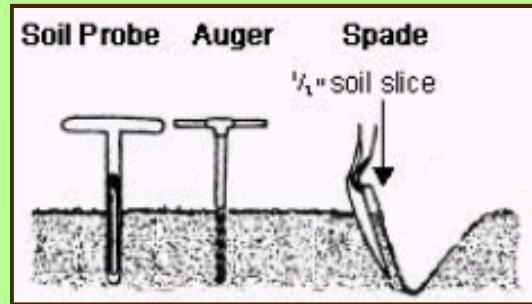


When to Soil Sample - Now is the perfect time to soil sample! The test is free from April 1st through the end of November and cost \$4/sample from December 1st through March 31st (**peak season**). Soil samples can be submitted for testing any time of the year. Results are usually ready within a few weeks and are posted online.

You can pick up the boxes and forms for sampling from your local Extension Centers. Mail samples to the N.C. Department of Agriculture's (NCDA) soil testing lab in Raleigh, whose address and directions on how to soil sample can be found on the soil sample box and submission form.

How to Soil Sample - Collect soil from different areas of your designated plot. Collect several samples randomly from each section e.g., in your garden. All samples collected from the garden should be mixed together and then placed in a soil box marked for your garden. Samples should be collected with a stainless steel trowel and need to be taken around 4"-6" deep. For each sample you submit (fruit trees, lawn, etc.,) collect a total of about a cup and a half of soil when the random samples are mixed together.

When mailing off your samples at the local post office make sure to include your contact information on the form. When complete, NCDA's Lab will e-mail you a message from AGRONOMIC LIMS with your results. For more information about soil sampling contact your local Extension office at 828 586 4009 or 828 488 3848.



November - December Horticulture

Lawns

- Depending on the weather, you may still need to mow a time or two before putting the mower away for winter.
- A mulching mower can do a good job of chopping those fallen leaves if there are not too many. Another option is to put on the bagging attachment to chop and collect the leaves. They make a good addition to the compost pile.
- Do not allow a heavy layer of leaves to smother ground covers, evergreen perennials or pansies.



Vegetables

- Remember to take advantage of the herb garden when preparing those holiday meals. In addition to flavoring, herbs can make lovely garnish or table decorations.
- Leafy greens can be harvested by pulling the whole plant, or by removing lower leaves and allowing the plant to continue to grow.
- Most of the winter vegetables, such as cabbage, broccoli and greens, do not need protection from cold temperatures until nights fall into the low 20s.
- Remove the dead ferns from the asparagus bed.
- Monitor greenhouses, cloches and cold frames daily. Temperatures heat up quickly on a sunny day

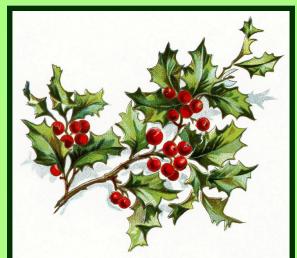
Fruits

- Finish fall cleanup, rake leaves and remove any fruit left in trees or on the ground.
- Do not prune fruit trees until March.
- Pull weeds in the strawberry bed, but do not cover the plants with straw yet.



Ornamentals

- When planting trees and shrubs, pay attention to correct planting depth. Water well and apply a 3 inch layer of mulch, being careful to pull the mulch a few inches away from the stem.
- Check landscape beds for winter annual weeds. Remove them now as they will only be larger in the spring.
- If you love to have daffodils, crocus, iris and grape hyacinth blooming next spring, then plant now! Bulbs need to be exposed to cool temperatures to bloom. Its best to get them planted before Thanksgiving.
- To enjoy the poinsettia as long as possible, give it very little direct sunlight, keep it away from heat vents and cold drafts, and water regularly.
- Keep good pruning practices in mind when cutting holiday greenery. Make clean cuts at branch angles or leaf nodes, and keep an eye on the shape of the plant.
- Inspect house plants, especially any that spent the summer outdoors. They often carry in small insects such as scale, mealybugs, whiteflies and spider mites.
- Before bringing a live Christmas tree indoors, give it a good shake and even a good cleaning with the garden hose to remove pollen and hitchhiking insects.



Other

- This is an excellent time to send in your soil tests. Results come back quickly this time of year, allowing plenty of time to start making adjustments for next season's garden.
- Drain rain barrels. Some people simply leave the tap open for the winter, others reinstall the down spout and store the barrel.
- Along with the holiday greetings, the garden catalogs will be arriving in the mail. Start flagging your wish list pages for spring orders.

What About Bulbs?

If you love to have daffodils, crocus, iris and grape hyacinth blooming next spring, then plant bulbs now! Bulbs need to be exposed to cool temperatures to bloom. Its best to get them planted before Thanksgiving.

Daffodils, crocus, squill, snowdrops and fritilaria will perennialize so you can enjoy more blooms in the coming years. However most tulips and hyacinth do not bloom more than a couple of years. Bulbs often do poorly in clay soils so work in plenty of organic soil amendments to improve drainage and try to plant at the appropriate depth. The larger the bulb the deeper it should be planted. 2-4 inches for crocus and 6-8 inches for large daffodils.



Page 4

Sincerely,

Christy Bredenkamp, Extension Agent
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