



SOIL TESTING

is Better Than Guessing

Extension Solutions for Homes and Gardens by Paul J. Pugliese

Developing and maintaining healthy landscapes and gardens begins with soil testing. Soils tests provide information on the soil's actual nutrient and pH status. Test results are also used to determine the exact amount and kinds of nutrients (if any) that should be added for proper growth of lawns, gardens, and other types of plants. Without testing you are probably just guessing, which can waste time and money on fertilizers that may not actually be needed and may end up polluting our local water resources.

With the cost of fertilizers these days, a soil test submitted through your local Cooperative Extension office (only \$8 for Cherokee County residents) should more than pay for itself by allowing you to put out exactly what nutrients your landscape plants, lawns, or vegetable gardens need. Putting out too much or too little fertilizer can cause nutritional problems for plants and increase their susceptibility to diseases and insects. Guessing how much to apply also will increase the chances of these products leaching into ground water or running off into streams, rivers, and lakes. When these nutrients end up in our waterways, they can cause serious problems for fish and other aquatic wildlife. Cherokee County is in the heart of the Etowah River Basin, which is one of the most unique and biologically diverse watersheds in the U.S. The Etowah watershed contains 76 native fish species—several that are protected by the federal Endangered Species Act and found nowhere else on earth! So you can help protect these precious natural resources in your own back yard by testing your soil and using fertilizers only when needed and at the proper rates.

Recommendations about when and how to apply nutrients are only as good as the soil sample submitted. To obtain a representative soil sample, the following steps are useful: identify sampling locations (zones), determine the sampling depths, use the right sampling tools, sample at the right time, and handle the samples accordingly.

Often, one soil sample can represent an entire landscape for the average homeowner if taken properly. However, individual samples should be submitted for areas that have obvious differences in plant performance (trouble-shooting), soil types, and drainage. Areas that have been treated differently in the past should be sampled separately. Be sure to mark and identify where the samples were taken if submitting more than one sample. For a sample to be accurate and representative of an entire lawn or garden area, it needs to be collected from 8-10

random spots within the area being sampled and then thoroughly mixed in a clean plastic bucket. For trees and shrubs, collect and mix soil from 6-8 random spots around the drip-line of the plants. Remember, thoroughly mixing the individual sample is the most important step! From this mixture, a pint of soil is needed to send to the lab for testing.

The depth of sampling depends on the type of plants being grown. For lawns, *sample to a depth of 4 inches*. For gardens, ornamentals, mixed fruit trees, and wildlife plots, *sample to a depth of 6 inches*. Use clean sampling tools and containers to avoid contaminating the soil sample. Never use tools or containers that have been used for applying fertilizer or lime! Clear the ground surface of grass thatch or mulch and push your chosen tool to the desired depth making a uniform, vertical slice into the soil.

Soils can be tested any time during the year. However, be sure to sample well in advance of planting or spring green-up. This is particularly important on areas where lime is likely to be needed. Lime reacts slowly and, if possible, it should be mixed with the soil two to three months before planting. Generally, fall is the most desirable time to sample because landscapes and gardens are usually dry and easily accessible. If wet samples are collected, they should be air dried before being placed in the soil sample bag. You may submit the sample in a sealed plastic bag if you don't have a soil sample bag from the Cooperative Extension office.

In general, it takes 7 to 10 days from the time we receive the samples to the time you get your test reports back. The Soil Test Report provides an interpretation of all soil tests done by the Soil Testing Lab and is accompanied by appropriate fertilizer and lime recommendations based on the plant types being grown. Once adequate fertility levels are established, lawns and ornamental areas will only need to be sampled every two to three years. Vegetable gardens should be sampled every one to two years.

For more information on soil sampling, please visit <http://www.caes.uga.edu/publications/>. Paul Pugliese is the Agriculture & Natural Resources Extension Agent for the Cherokee County Cooperative Extension Service, a partnership of The University of Georgia, The U.S. Department of Agriculture, and Cherokee County. (770) 479-0418 <http://cescherokee.org/>