

What is a Soil Test?

A **soil test** is a process by which elements (phosphorus, potassium, calcium, magnesium, sodium, sulfur, manganese, copper and zinc) are chemically removed from the soil and measured for their "plant available" content within the sample. The quantity of available nutrients in the sample determines the amount of fertilizer that is recommended. A soil test also measures soil pH, humic matter and exchangeable acidity. These analyses indicate whether lime is needed and, if so, how much to apply.

Why Do You Need A Soil Test?

Encourages plant growth by providing the best lime and fertilizer recommendations.

When growers guess about the need for lime or fertilizers, too little or too much is likely to be applied. By using a soil test report, the grower does not need to guess.

For Example: When applying too much lime, soil pH may rise above the needed level, which causes nutrients such as iron, manganese, boron, copper and zinc to become less available to plants. It is also common to see homeowners purchase one bag of lime when they purchase one bag of fertilizer. Based on an average lawn size of 5000 square feet, one bag of fertilizer may be enough. Applying one bag of lime over 5000 square feet, however, will have little effect on soil pH.

Diagnoses whether there is too little or too much of a nutrient.

Promotes environmental quality.

When gardeners apply only as much fertilizer as is necessary, nutrient runoff into surface or ground water is minimized and natural resources are conserved.

Saves money that might otherwise be spent on unneeded lime and fertilizer.

For example, growers of flue-cured tobacco often routinely apply phosphorus. In areas where soil levels are high in phosphorus, a soil test could save these farmers up to \$60 per acre.

Taking a Good Sample

A soil sample must be taken at the right time and in the right way. The tools used, the area sampled, the depth and the correct mix of the sample, the information provided, and packaging all influence quality of the sample.

Time it right.

Take a soil sample a few months before starting any new landscaping-whether your laying sod, starting a vegetable garden, putting in a flower bed, or planting perennials. If the soil test report recommends lime, you will have enough time to apply it and have it adjust the soil pH before you plant.

Sample established areas-lawns, trees, shrubbery, and other perennials-once every three or four years. You can sample at any time of year; however, mid-August through mid-September is an ideal time to take samples for cool-season grasses, such as fescue, bluegrass, and ryegrass. By sampling at this time, you can be ready to apply lime in the fall.

For areas recently limed or fertilized, delay sampling at least six to eight weeks.

Use clean sampling equipment.

Use a soil probe, spade, hand garden trowel, or shovel to collect samples. Do not use brass, bronze, or galvanized tools because they will contaminate samples with copper and/or zinc.

Mix samples in a clean, plastic bucket. If the bucket has been used to hold fertilizer or other chemicals, wash it thoroughly before using it for soil samples.

Sample each unique area separately.

Each sample should represent only one soil type or area-for example, a lawn, vegetable garden or perennial landscaped area. For each unique area, take at least six to eight subsamples and combine them to make one sample. Sample healthy and unhealthy areas separately even if both are lawn grasses or vegetable and flower gardens, etc.