

Soil Testing for Home Lawns and Gardens

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Soil testing can provide information about how to enhance the beauty and productivity of a lawn, landscape planting, or vegetable garden. Whether your goal is a plush, green lawn or a large harvest of vegetables, soil fertility testing is the place to start. It helps by determining a soil's need for lime and fertilizer. Regular soil tests are also a part of a sound environmental management plan for your home and garden. Proper soil and fertility management will reduce the potential for water contamination from fertilizers. By knowing the plant nutrition needs of your lawn and gardens, you can prevent the overapplication of fertilizers, which may result in excess nutrients reaching streams or groundwater.

When to Sample

The best time to take a soil sample is after harvest in the fall or before spring fertilization. Do not sample shortly after a lime, fertilizer, or manure application or when the soil is excessively wet. For lawns, late summer sampling will prepare you for fall fertilization. Soil testing should be repeated every 2–3 years.

Where can I get a soil test kit?

Soil test sampling kits are available for a fee from most of Rutgers Cooperative Extension's county offices, which are listed in the blue pages of your telephone book under county government. Kits are also available from the Rutgers Soils Laboratory, located at the Cook College Campus in New Brunswick. Separate soil samples will need to be

taken from areas used to grow different types of plants. For example, separate soil test kits should be used for lawn areas and vegetable garden areas. Samples from rhododendron, azalea, and other broadleaf evergreen areas should be kept separate from other shrub areas. Also sample separately areas that have previously received different lime or fertilizer treatments and areas that are noticeably different in plant or soil quality. For further information, visit our web site, www.rce.rutgers.edu/soiltestinglab.

How to take a soil sample

The Rutgers Soils Laboratory uses state-of-the-art instruments and methods of soil analysis. The soil test, however, can only be as good as the soil sample collected, so it is very important to use proper sampling techniques. The objective of sampling is to collect a random sample that will best represent the average fertility of the sample area. Depending on the size of the area to be sampled, collect about 10 to 15 cores or slices of soil while walking in a random pattern over the area to be tested.



Although a soil sampling probe is the most convenient tool to use, a garden trowel or spade also works well.



Insert the trowel or spade to a depth of 6 inches, remove some soil and set it aside.



Insert the trowel again ½ inch from the first cut and just as deep. Collect a thin slice of soil and place it in a clean bucket.



Repeat this procedure at each of the 10 to 15 sampling locations.

Break up any clumps of soil that were collected and thoroughly mix the soil. Place 2 cups or about ½ pint of soil in the plastic bag that comes with the kit. Fill out the soil sample questionnaire, making sure to note any special situations or problems in your lawn or garden. Keep your own record of the areas sampled and date mailed to the laboratory.

Results

In a few weeks you will receive back a soil test report which will list the levels of phosphorus, potassium, calcium, magnesium, copper, manganese, and zinc in your soil, as well as the soil pH. In most cases, the soil test report will provide recommendations for fertilizer and lime applications, if any is needed.

A copy of the soil test report is sent to the county Rutgers Cooperative Extension (RCE) office. Questions about your report should be referred to your RCE Agricultural agent or Horticultural consultant.

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