How to Use the Soil-Test Results

Take the results you receive from your soil test to the University of Illinois Extension office in your county to get more information about the best treatment for your soil. Many times, this involves much more than just the fertilizer to use.

Some laboratories read and interpret the soil test results for you, but it may still be best to have someone familiar with local conditions to help recommend treatments. Many variables can affect soil fertility and plant growth, such as rainfall or irrigation, tillage practices, soil type, the slope of the land, as well as the past use of the soil.

Organic Matter and Humus in Garden Soils

A much-overlooked necessity in garden soils is the incorporation of organic matter. Humus is the end product of organic matter breakdown and is usually associated with the dark color in topsoils. Humus is needed to maintain a loose, well-drained soil that does not compact easily. Soil containing good qualities of humus will cultivate easily and will promote good root growth.

Humus is also useful in supplying nutrients to plants, particularly nitrogen. A very important point is that you must keep adding partially decomposed plant material to the garden each season in order to improve its tilth and fertility. Good materials to use include compost, decomposed manure, peat moss, and other composted organic materials, such as leaves and grass clippings.



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Taking Soil Samples in the Yard and Garden



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Soil Sampling Equipment

Use a clean plastic bucket or other suitable container in which to collect the soil samples and to mix them. The tool used to take the samples can be any of the following: a soil probe, a soil auger, a trowel, or a garden spade.

When to Collect Soil Samples

Proper sampling is vitally important in order to obtain accurate soil-test results. Soil samples can be taken any time during the warmer months, but late summer or fall are best. It is desirable to take them before soil temperatures drop below 50°F. If the soil is too wet to spade, rototill, or hoe, it is also too wet to sample.

Find information about the soil temperature in Illinois: <u>go.illinois.edu/SoilTempData</u>

Where to Sample

If your garden or test area has a uniform soil type, you should take several samples over the area, at randomly selected and evenly spaced intervals. If there is a variation of soil types or if there are disturbed areas where fill soil has been added, such as clay from a basement hole, each of these areas should be handled as individual sampling units, keeping their composite soil samples separate. These different areas may need special care or extra treatments.

How to Take a Soil Sample

- 1. Within an area selected for sampling, take a sample with a soil probe or auger. If you use a trowel or spade, dig a hole and then cut a thin slice down one side. When placing the sample in the container, do not include roots or debris. The depth to which the sample should be taken depends on what plants are growing there now, or what ones will be planted. For example, take samples in lawn areas 3 to 4 inches deep, for shrubs and trees, 12 inches; and for flower and vegetable crops, 6 to 8 inches.
- 2. Repeat this procedure in at least eight well-scattered spots within a garden or selected sampling area that is approximately 100 feet square, or the equivalent. Place each slice in a bucket, along with those taken previously.
- 3. Thoroughly mix the slices of soil you have placed in the bucket. The more samples taken within reason and mixed in the bucket, the better your soil test results will be. Do not include large pieces of organic matter such as roots, stalks and leaves.
- 4. Spread the composite sample thinly on clean paper and air dry at room temperature. Do not heat to dry, such as in an oven or over a radiator.
- 5. Send in only about a half-pint of soil from the total mix for testing.



Packing and Mailing the Sample

- 1. Pack the half-pint sample (thoroughly air-dried) in a plastic bag. Then place the sample in a strongbox, carton or can. Flimsy containers used for mailing the samples may break open, get lost, or draw moisture during shipment.
- 2. Label each sample with your name and address. If you are sending more than one, label each sample with a number to tell you from which areas they were taken. Also, mark each sample with the appropriate information, such as: flower garden, shrub border, vegetable garden, orchard, lawn, and so on.
- 3. Include information describing what was grown in the garden (lawn, special trouble area or place) last year and what has been done to the soil such as adding manure or other organic matter.
- 4. Also include information about the use you intend to make of the area from which the sample was taken (vegetables, flowers, shrubs, trees, grass).

Testing Laboratories:

Find locations for land-grant university testing facilities and commercial soil testing labs: <u>go.illinois.edu/SoilTesting</u>