



Cornell University  
Cooperative Extension  
Otsego County

# Directions for Taking Soil Samples

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## A Good Sample Means Accurate Results

**Establish A Regular Sampling Time:** For most home gardens and lawns the soil should be sampled every 2-3 years. If you add organic matter (i.e. compost, manure) every year it may be a good idea to have your soil tested every year. Sampling can be done any time during the year. You should wait one year to sample after applying limestone so that you give the limestone time to react with your soil.

**Use Proper Sampling Materials:** You will need a clean plastic pail (avoid metal containers, i.e. galvanized metal), a clean plastic zip-lock bag or container and a marker. To take the sample you need a garden trowel or shovel, a bulb planter or a special soil sampling probe or auger. There are two important requirements. First, that a uniform sample be taken to the desired depth and, second, the same depth and volume of soil be taken from each spot sampled. A soil probe or auger is best, but a garden trowel or bulb planter will work fine. The technique for using a trowel or shovel is to dig a small hole to the sampling depth, cut a 1/2 inch slice from the face of the hole, remove the slice and trim both vertical sides of the slice so as to obtain a strip of soil about 1 inch wide from top to bottom. This is referred to as a core of soil. If using a bulb planter or soil probe you only need to insert this to the desired depth and remove the core of soil.

### Sample To The Proper Depth:

**Areas which will be rototilled/turned under.** If the area to be sampled will be rototilled or turned under before planting you want to take a soil sample from the tillage depth. This depth is usually 6-8 inches but could be greater. The tillage depth is important because this is the depth that you will be able to mix in the needed limestone before planting/seeding.

**Established lawns.** A sample from the top 2-4 inches of soil is satisfactory. Thatch, grass, and other debris should **not** be included with the soil sample. ***Please remove this debris before placing soil in the zip-lock bag or container.***

**Established Tree/Small Fruits, Landscape Trees/Shrubs, Annual, Perennial and Bulb Gardens.** A surface soil sample from the top 8 inches is satisfactory. For deep-rooted trees, shrubs and fruit crops a sub-soil sample taken from the 8-24 inch depth is often taken in addition to the surface sample. Deep-rooted plants depend on soil at these depths for nutrients.

**Compost, potting mixtures, topsoil piles.** Each batch of soil/compost should be sampled separately. Be sure compost, potting mixtures or soil has been thoroughly mixed.

**Obtain A Representative Sample:** Each soil sample should be a representative sample consisting of the soil from cores taken randomly at several places across the garden, lawn, etc. This should minimize any spot in the area, which is non-uniform to the overall area. Walk diagonally across the area to be sampled and take a core from 10-15 random locations spaced evenly apart over the entire area. Each core taken from the area to be sampled is placed into the clean plastic pail. When all cores are obtained mix them thoroughly then remove **two 8-ounce cupfuls of soil** and place **both of these in a single clean plastic bag/container** and identify it with a marker (i.e. #1, letter A, etc.). Allow soil to dry before submitting.

**How Many Samples Are Needed:** In most cases only one sample is needed for a single lawn, garden, etc. This holds true as long as the soil texture and previous limestone and fertilizer applications have been the same. A separate sample should be taken from areas where this is not true, where problems exist, soil types are different or where plants with different pH requirements are growing or will be grown

**Submitting Samples:**

Soil pH testing is done at CCE in Cooperstown for a fee of \$3.00 for the first sample and \$1.00 for each additional sample brought in at the same time. Bring samples to CCE, 123 Lake Street, Cooperstown or 31 Maple Street (Francis Rowe House), Oneonta.

Soil for nutrient analysis is sent to Cornell and must be mailed in pre-paid soil nutrient test mailing packets that are obtainable from CCE. Cost is \$15.00 if you mail the sample; \$20.00 if CCE mails it for you.