



**CORNELL
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ONEIDA COUNTY**

HOME GROWN FACTS

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Taking a Soil Sample for pH testing of the Home Garden The pH Factor and How it Influences Plant Growth

By Judith DeZalia, Master Gardener

We're always inundated with seed catalogs that seductively promise, through pictures and optimistically written plant descriptions, that we can have Eden recreated in our own backyard. Many things influence plant growth. The soil must contain the necessary nutrients and the plants must be able to utilize them. I like to think of this as a comfortable environment. One of the factors determining this is the pH of the soil.

Strictly speaking, pH (the potential of Hydrogen) is a measuring system in chemistry for determining the acidity or alkalinity of a solution. The neutral point is 7.0; any figure lower than that would indicate acidity, above 7.0, alkalinity.

Probably there is a best pH value for each plant species, but most plants will grow best in a mildly acidic soil with a pH of 6.0-6.8. Of course, there are exceptions; for instance, the acid conditions that blueberries thrive in would be terrible for beans.

Why some plants grow poorly in acid soils is not completely understood, but some of the reasons will have to do with how accessible soil nutrients are to the plant at a lower pH level. Phosphates tend to "lock-up" and potassium and magnesium leach more easily from acid soil. This can be dealt with by adding lime to your garden.

Fortunately, we don't have major problems with alkaline soils here in the East because it is much more difficult to lower pH in the soil. Sulfur can be used to acidify the soil.

However, before doing any of these things indiscriminately, get your soil tested. This can be done at the Oneida County Extension Office. The Horticulture Hotline is available Wednesday and Friday from 9 to 12 noon. You can drop samples off during regular office hours and the lab will get back to you by mail. (cost \$2.00)

Fall is considered the best time to do soil testing since more normal conditions exist and if treatment is necessary, it will have the winter to act. Nevertheless, when spring does finally make its appearance, get your soil tested and this will not only help you determine what soil additives to use but with what plants you may have the best growing results

Helping You Put Knowledge to Work

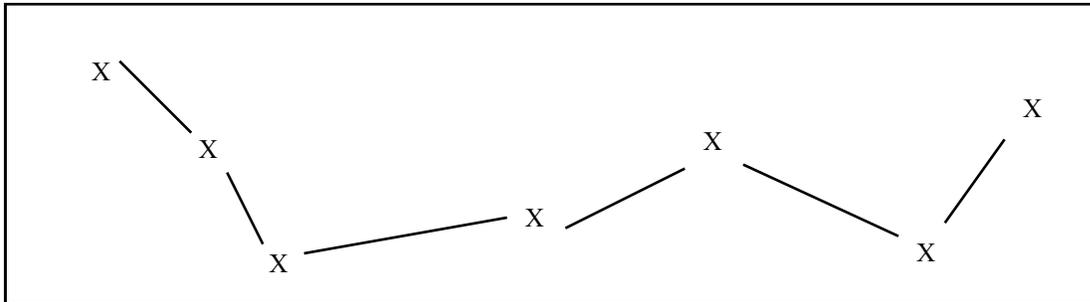
TAKING A SOIL SAMPLE FROM THE HOME GARDEN

Use The Right Tools

You'll need a spade or a shovel, a plastic pail (not metal), and a small, clean plastic bag or container to keep the soil in until you get it tested.

Take a Composite Sample

Take a sample of soil at various locations in your garden in a random pattern as illustrated below. Scrape away surface debris before sampling. Try not to sample when the soil is wet, as you will cause soil compaction when walking around your garden.



Sample Depth

Digging down six to seven inches is deep enough.

Remove Soil Ribbon From Center of Slice

First dig a V-shaped hole six to seven inches deep and remove a half-inch thick slice of soil from one side of the hole. Then trim off from each side of the spade all but a thin ribbon of soil down the center of the spade or shovel. Place this in a clean bucket.

Mix well in a Clean Pail

All soil ribbons should be mixed thoroughly in the plastic pail. After mixing the soil, put about one cup in your plastic bag or container. Discard remaining soil.

If Soil Is Wet

Spread the soil out on a paper plate or a piece of plastic and let it dry before bringing it in for lime testing. **DO NOT HEAT IT** on a stove or put it in an oven to dry it.

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