



CHICAGO BOTANIC GARDEN  
JOSEPH REGENSTEIN, JR. SCHOOL

**Course:** Soil Basics

**Required text:**

*Secrets to Great Soil* by Elizabeth Stell

**Resources:**

[www.amazon.com](http://www.amazon.com)

[www.Barnesandnoble.com](http://www.Barnesandnoble.com)

**Required Materials:**

- 3 ring binder
- Materials for taking notes
- Soil Sample, *required for the first session*

**Soil Sample:**

All students will need to bring a soil sample to the first class session. Detailed instructions on how to collect your sample and the information to include is below.

**Please remember:**

- Sample must be in a Ziploc or sealable plastic baggie clearly labeled with your information on the outside of the bag.
- Plastic containers or glass is unacceptable.
- Any samples brought in that do not meet these specifications will not be submitted.
- No soil-less mixes or potting soil will be accepted.

**Additional Information:**

If you want to use your own soil for some of the experiments that occur in class, please bring another Ziploc bag with a 2 cup scoop of soil in it (not broken up or sub-sampled). Label the outside of the bag with your name, so it can be saved and used in all the sessions.



## Soil Sampling and Testing Instructions

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Equipment: Use a clean 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 or a soil auger is best but a trowel or a garden spade can also be used. With a shovel or trowel cut a one-inch slice down one side of the hole. It is also important to have an equal slice from top to bottom.

### *Where to Sample*

Lime and fertilizer recommendations can be no better than the sample submitted. Be sure the sample is representative of the area to be treated. The teaspoon of soil finally used for analysis weighs a few ounces in comparison to about 50,000 pounds of soil per 1000 square feet to a six-inch depth. Make a simple map of your yard or farm. Before sampling the landscape, look for differences. If areas have been managed differently, they should be sampled separately. Soils with different characteristics, such as color, texture and drainage should be separate samples. Identify on the map the different areas where you will take a composite sample.

### *Taking the Soil Sample*

- 1) Within the area selected for a sample (i.e. Vegetable garden or rose garden or lawn, etc), dig a hole. The depth depends on what you are trying to grow.  
Sample depth should be:
  - lawn - 3 or 4 inches deep
  - shrubs and trees - 12 inches
  - flower and vegetable crops - 6 to 8 inches
- 2) Take a probe of soil or a slice of soil from the edge of the hole. Place this subsample in a pail or pan. Remove roots, stones, earthworms, etc. Fill in the subsample hole.
- 3) Repeat this procedure in at least three to eight well-scattered spots within the chosen area. The larger the area the more subsamples you need for a good composite soil sample. Place each slice in the pail with those previously taken.
- 4) Break up clods and mix soil thoroughly with the hands. Place **1 – 2 cups** of the mixed soil into a labeled sample bag. Discard the remainder of the soil. Label the sample bag with your name, address, crop to be grown, sample ID from your map, and anything else requested by the lab. Providing complete information about samples allows for better fertilizer recommendations.

## Packaging the Sample

1. Samples should be sent immediately to the lab. *Regenstein School will be submitting for the class.*
2. Pack the sample (thoroughly air-dried) **in a sealed plastic bag**. Label the sample with your name. Also, mark each sample with the following information: “flower garden,” “vegetable garden,” “shrub border,” “orchard,” “lawn,” and so on.
3. On a separate sheet of paper: Include information describing the history of the sampling area such as 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 what you intend to use the area for such as vegetables, flowers, shrubs, trees, and grass.

SOURCE: Ellen Phillips, Crop Systems Educator, Countryside Extension Center, 6438 Joliet Road, Countryside, IL; 708-352-0109, [ephillips@illinois.edu](mailto:ephillips@illinois.edu), (modified from Cook Co. Soil Sampling)

Register early at <https://register.chicagobotanic.org/default.asp>

Program sizes are limited to ensure quality.

We recommend that students purchase required materials no sooner than two weeks prior to the start date, as programs may be cancelled due to insufficient enrollment.

For further information please visit links below:

Garden classroom maps <http://www.chicagobotanic.org/school/map>

Registration information [www.chicagobotanic.org/school/registration\\_methods](http://www.chicagobotanic.org/school/registration_methods)

Certificate programs policies <http://www.chicagobotanic.org/school/certificate/policies>

*Or call the registrar's office 847-835-8261*