MICROTERRA LABS

Soil Sample Collection Method

Tips For Success

- Have a clear sampling plan prior to sampling.
- Be consistent in all sampling procedures each time you sample.
- Avoid contamination by starting with clean equipment and thoroughly clean equipment between sampling locations.
- Taking notes and label samples as each sample is collected.

Materials Needed

- Clean spade shovel or soil corer
- Trowel
- Clean container for sub-samples
- Permanent ink marker
- Sample collection bags (1 gallon re-sealable plastic bags)
- Soil sampling forms
- Flagging (optional)
- Sampling map or diagram (recommended)

Planning and Organization

The first step is to determine the management unit that is of interest, i.e. to determine the areas that are going to be sampled. Examples of management units are home garden, annual crop field (of same variety), and an orchard. In this example there would be three separate management units, home garden, annual crop field, and orchard.

The next step is determining your goals.

— Nutrient management
    - For nutrient management assessment it is important that your samples are representative of the management unit of interest. This is best accomplished through randomized sampling in which multiple samples are taken to form a composite sample that will be sent in for analysis. Please see “Sampling design” for a detailed explanation.

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— Diagnosing a potential issue

- For diagnostics, comparative sampling is done in which sampling is performed at the location that present symptoms and at a location with no signs of symptoms.

Sampling Design

A zig-zag (figure 1.) sampling pattern is a good way to ensure that sub-samples are representative of the management unit.

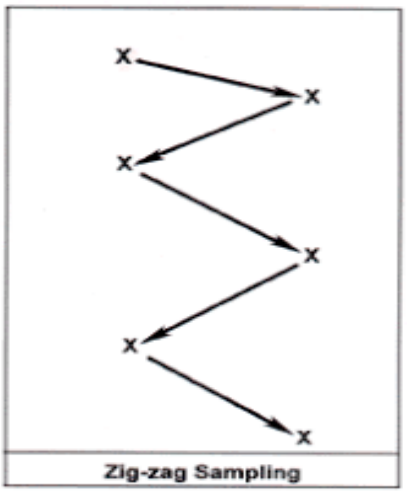

Figure 1. The sampler should avoid sampling atypical areas such as eroded knolls, depressions, saline areas, fence lines, old roadways and yards, water channels, manure piles, and field edges.

At each location:

1. Use a spade to dig a small hole about 8” deep
2. From the side of the hole take a vertical, rectangular slice of soil 6” deep and about 2” thick. Ensure that the sample is the same width at the top and bottom of the slice. It is important to collect the same amount of soil from all soil depths so the sample is not biased with more soil from the top compared to the bottom, especially since soil biological properties vary with depth.
3. Manually remove any extra soil to ensure an even, rectangular 6” deep x 2” thick slice of soil, the width of the shovel and remove any plant material.
4. Place into clean container.

Repeat steps 1–4 to collect the remainder of the subsamples from at least 10 representative locations in the sampling area. Mix thoroughly and place at least 4 full cups of soil into a clearly labeled one-gallon re-closable freezer bag.

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— **Established Container Sampling**

- For diagnostics, comparative sampling is done in which sampling is performed from a container that present symptoms and from a container with no signs of symptoms.
- For assessing nutrition, a minimum of ten samples from containers are taken and thoroughly mixed to form a composite sample.

Collect a representative sample of the media by combining 5 to 10 subsamples into a single sample bag.

Exclude the top 1/2-inch of media, but otherwise sample from the top to the bottom of the container.

— **Bulk potting media testing**

For assessment of nutrition of potting media prior to planting take a minimum of ten sub-samples thought the media and thoroughly mixed to form a composite sample.

Handling and shipping of samples

In warmer months, when samples will be expose for prolonged periods of heat in the field a cooler may be used to help keep samples from getting too hot and degrading the sample.

Samples should be kept refrigerated prior to shipping or being dropped off at the lab.

Samples should be shipped with non-leaking ice packs or dropped of at the lab to:

MicroTerra Analytical and Pathology Laboratories LLC
33979 Texas St SW
Albany Or, 97321