

Soil Sampling - Techniques for Meaningful Results

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Analytical results of soil samples are only as good as the method used to obtain the sample. It is important the sample taken is representative of the area you are planning to amend, fertilize, or diagnose. Some variables involved in taking samples include the sampling tools used, the knowledge of soil types present, and the number and depth of the sub-samples in the composite.

Use The Right Sampling Tools

Professional turf managers and horticulturists should use professional tools. A ½" soil tube will provide a clean core of soil. Stainless steel or nickel-chrome plated tubes are preferred because they reduce zinc and iron contamination in the sample. A 1" to 3" bucket auger will provide the least disruptive core in turf for deeper sub-soil samples.

Visit www.soilsamplers.com for more information about soil samplers. The Oakfield soil sample tube *Model B* is a reliable choice for professional and commercial purposes.

Know Your Soils

Thorough knowledge of the differences in your soils and how they have been managed is helpful in deciding how to sample an area. Differences in slope, soil type, plant species, and problem drainage areas are a few variables that can affect the sample. In general you will want to avoid unusual areas such as drainage channels, old manure or amendment sites, and limed line areas because they may not be representative of the entire field. To diagnose a problem area, it is helpful to sample a vigorous area and the area of concern to compare differences in the soils for modification of management practices.

Composite Your Samples

Because the sample taken is used to make decisions over a large area, the sample must be representative of the entire area. A minimum of 15 to 20 cores of soil should be taken using a ½" soil tube for post-plant salinity and nutrient evaluations. The depth of the sample will depend on the root depth of the turf species. Place all cores from the area tested in a zip-lock plastic bag. A minimum of 3 to 4 cups of soil is needed for a complete analysis.

Pre-plant samples are used to evaluate the status of the potential root zone. They can also be used to identify physical characteristics of deeper layers of soil, such as hardpans, clay layers, or high salt layers that can affect turf after planting.

Keeping careful records of earlier sample locations will help when analyzing samples taken after planting. If the samples were taken properly, your soil data can be a valuable tool in evaluating many management practices, such as fertilization, irrigation, and leaching.