"Give It What It Needs"

Soil Sampling

The success or failure of your sports turf maintenance program begins and ends with the soil. You cannot develop an effective management program without gathering some basic information on your soil.

Soil testing at this initial stage gives the sports turf manager data to work with in adjusting the levels of acidity, salts and nutrients to create conditions which match plant needs as closely as possible. Test results produce quantitative figures that can be compared to acceptable standards set for the particular kind of soil being tested. On established fields, annual soil testing done late in the growing season is generally sufficient to provide necessary data. However, when difficulties arise in turfgrass growth, more frequent testing may be necessary. (Dr. Henry Indyk, Putting Tissue Tests to Work, 1998)

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There are two types of basic soil tests. One type is a chemical soil analysis, which should include soil acidity (Ph), nutrient levels (P, K, Mg, Ca) in lbs./Acre and salt concentration measured as EC (electrical conductivity). This test should also give you the organic content of the soil as a percentage. Be aware that more complete tests are available and a plethora (*always wanted to use that word*) of information may be obtained. In general however, additional information only serves to increase the cost of the test and is typically not necessary unless specific problems cannot be diagnosed utilizing the existing information.

The results of the chemical analysis will give you lime recommendations which may be needed to adjust soil Ph, and also fertilizer recommendations, which may be needed to adjust Phosphorous and Potassium deficiencies along with giving a recommendation for Nitrogen.

The other type of basic soil test is a physical soil analysis. The results of this test will give you the percentages of sand, silt and clay in your soil.

The information provided by these two tests, when used in conjunction with constant monitoring of environmental conditions such as rain, drought, compaction etc. w ill supply the information needed to provide a better understanding and ability to evaluate problems, which arise.

The results of these two tests are an important prerequisite when seeking the advice or services of a professional. They are also an invaluable resource when used in determining a compatible topsoil or other topdressing material to use on your fields. Most reputable dealers will be happy to supply a soil test upon request. In addition to having a test supplied by your dealer, have your topdressing and topsoil products independently tested to insure that they continue to conform to your requirements, and don't hesitate to question your dealer if inconsistencies arise.

When taking a soil sample, it is important to keep in mind that the sample needs to be representative of the entire area being tested. A minimum of 10-12 individual samples should be taken from points equally distributed throughout the field. The samples should be taken to a depth of six inches. This is sometimes easier said than done.
The samples should be collected in a clean plastic bucket and thoroughly mixed before they are submitted as a single sample. Inaccurate soil test results can occur if samples are taken sooner than four weeks after a lime or fertilizer application. Avoid taking samples using containers or equipment that may be contaminated.

When locating and using a soil test lab be certain to use a lab that is familiar with the soils in your area. Try to use the same lab. Results can vary slightly from one lab to another. Soil testing is available through a number of commercial test laboratories as well as the Rutgers Soil Testing Laboratory (P.O. Box 902, Milltown, NJ 08850. Telephone: 732/932-9295)