

CUTT

Winter 1991 • Volume One • Number Four • A Publication of Cornell Cooperative Extension

Getting The Most Out Of A Soil Testing Program

Soil testing is one of the most basic turfgrass management tools. It is the only means of learning the nutrient status of your soil. It can be most helpful as you develop your fertilizer program for the coming year.

A soil test is of little value unless the sample sent to the lab is representative of the area. Since the sample usually represents a large area, you should carefully follow sampling instructions. ■

Soil Sampling

Fertilizer applied to an established turf tends to accumulate in the surface inch or two of soil. The nutrients are not evenly distributed through the rootzone. It is therefore important that you always sample to the same depth. Failure to do so can cause inconsistent results. Mark your sampling tube with a piece of tape to make sure samples are taken from the same depth.

Keep careful records of how and where you obtained your samples. If you stick to a regular sampling plan, you will be able to accurately document changes in fertility through time.

The Soil Test

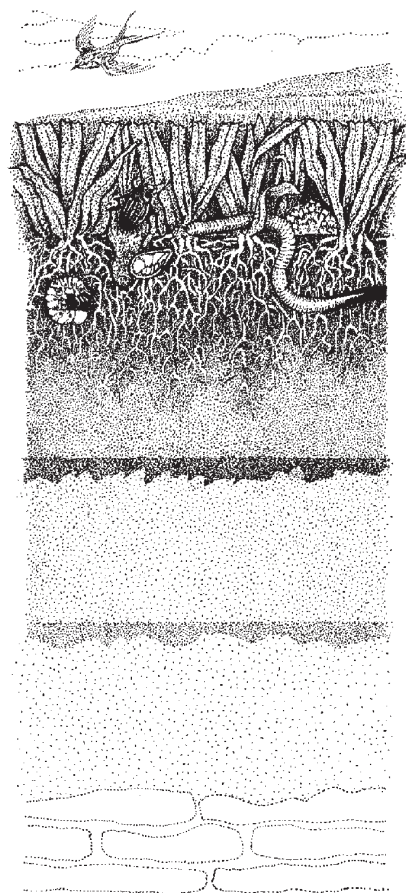
A soil test is a chemical method of estimating the nutrient supplying power of the soil. The means of coming up with this "estimate" may vary from lab to lab because there are several ways to extract nutrients from soils. This explains why results from different labs do not always agree. Some methods only remove those nutrients that

are in the soil solution. Other methods try to predict availability of reserve nutrients by extracting those on cation exchange sites.

More important than the soil test method used, is how the results are interpreted. The following questions must be addressed by the lab making recommendations: What do the measured levels mean? Will additions of nutrients at this soil test level produce a desirable response? If so, how much of the nutrient should be added until a benefit is no longer obtained?

These are not easy questions to answer. Soil test results must be calibrated against a plant response to applications of the nutrient in question.

Soil test calibration studies conducted at Penn State have helped refine recommendations for the methods we use. Much more work is needed, however, to improve our ability to interpret results for the methods used on different soil



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