



College of Agricultural and Environmental Sciences
College of Family and Consumer Sciences

Thou Shalt Soil Test

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If there was such a thing as “The 10 Commandments of Land Management,” the first commandment would most likely be “Thou Shalt Soil Test.” The reasons for this are fairly simple. No matter the application, whether it’s for lawn, garden, pasture, row-crop, or flowerbed, soil sampling gives you an idea of what is happening belowground and how to maximize the production of the “crop” you’re growing.

Most soils in Georgia are more acidic than what is ideal for most plants and also are usually deficient in one of the three primary plant nutrients (nitrogen, phosphorus, or potassium). For soils in the Piedmont, and for nearly every soil sample I’ve seen come through the office last month, your soil likely has a pH hovering in the 5.0-5.5 range, well below the 6.0-6.5 range recommended. Your soil is likely not deficient in phosphorus, but potassium deficiencies have been common and can have great impact on plant growth. Having a soil sample tested will allow you to accurately apply the correct amounts fertilizer or lime to meet plant needs.

So the question I’ve been receiving frequently is “How do I soil sample?” The favorite Extension answer of “It depends” applies in this instance. For most applications, the equipment used to sample is relatively standard. A shovel or garden trowel can be used to collect soil for a sample, but these methods can leave an eyesore if you’re sampling a lawn. You can use a soil probe which will take a small-diameter core, but the cost of purchasing one of these probes could be prohibitive. We have probes for use at our office free of charge that will allow you to take samples. Given our lack of rainfall, it would be advisable to water the area you’re going to sample the day before to soften the soil enough to get a decent sample.

The second part of the question involves how to sample. In most instances, you should sample to a depth of 4-6 inches. This will provide a view of what nutrients are available at the root level. It will also be important to collect a proper sample. Obtaining a “composite” sample will involve taking several sub-samples (at least 10 per acre or per area being sampled) in a plastic bucket (not metal) and mixing them thoroughly for a single sample. It is also important to obtain a representative sample, meaning that you should make sure that the sample represents a similar area in the landscape or area of similar productivity. When taking samples, you should remove the top layer of plant material so that it doesn’t contaminate the sample results. You can come by the Extension office to pick up soil sample bags, or you could fill up a Ziploc sandwich bag and have plenty of soil for a sample. Make sure to label multiple samples so you’ll know how to interpret the results accurately. Try to schedule soil sampling around the same time of year and several months ahead of time to allow for fertilizer and lime to take effect. A routine soil test, which provides results on soil pH, major plant nutrients, and recommendations for

fertilization, will cost \$8 per sample. The cost and effort of proper soil sampling will pay greater dividends in plant health and efficient use of fertilizer over the long term.