Department of Horticulture
FACT SHEET
THE CONSUMER HORTICULTURE CENTER

Don't Guess... Soil Test

Proper soil fertility is the foundation for plant health. Turfgrass, woody landscape plants, fruits, vegetables, and annual flowers all have specific nutritional requirements. Soil pH and nutrient levels vary greatly from site to site, so guessing about nutritional needs often misses the mark. However, a $9.00 investment in a Penn State soil test will ensure that you are applying the proper amounts of fertilizer. Soil tests often reveal that adequate quantities of soil nutrients are present, thus preventing unnecessary or harmful fertilizer applications.

The Penn State soil test measures the levels of several essential plant nutrients and recommends proper amounts of lime and fertilizer. The test will measure soil pH, the levels of phosphorus, potassium, calcium, and magnesium and will also make a nitrogen recommendation. For an additional fee, you may request a test for organic matter, soluble salts, and several micronutrients. Special tests for several potentially harmful elements, such as arsenic and lead, are also available. Penn State does not check for pesticide residues, gas, oil or unknown pollutants. A complete list of tests that the lab will perform can be found at http://www.aasl.psu.edu/. For most situations, the standard $9.00 test is sufficient.

Here's the procedure for using the Penn State soil testing service

1. Purchase a soil test mailing kit ($9.00) for each area you plan to sample. The "kit" consists of a pre-addressed envelope, instructions, and a soil sample bag. The kit price includes the testing fee. Each area (lawn, flower garden, vegetable garden, etc.) requires a different test kit. The kits are available from all Penn State Cooperative Extension offices. You may also get soil sample submission forms from the lab Web site, http://www.aasl.psu.edu/, and send payment to the lab along with your soil sample.

2. Define the area to be tested. It may be a flowerbed, pasture, small orchard, or community athletic field. In any event, zigzag your way throughout the area and collect soil from 12 to 15 locations. Put subsamples all together into a clean container. The goal is to get a composite sample that represents the entire site. Paper lunch bags or a clean bucket will work well. Sample 3–4 inches deep for turf and pastures, and 6–10 inches deep other plants. Avoid sampling odd spots in any site. Throw out stones, sod, and thatch.

3. A garden trowel is a good tool for sampling in tilled or mulched soil, but a soil sampling probe or auger is faster, especially when sampling through existing sod. Regardless of the tool used, be sure to sample to the proper

depth and get a representative sample by collecting at least 12 subsamples from the area. Mix the sub samples into one composite sample. Spread the sample on clean newspaper and allow it to dry overnight. Do not heat the sample.

4. Complete the questionnaire that comes with the soil test kit. The directions are self-explanatory. Follow them carefully. Be sure to indicate what "crop" you are growing. Add 1/3 pint of soil to the soil pouch. Take it to the post office to determine the appropriate postage and send it off using the pre-addressed envelope. Results will return from the Penn State lab in about 2 weeks. A copy of your results is made available to your county extension office as well. If you have questions about interpreting the results, contact your county extension educator.

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