UConn Soil Nutrient Analysis Laboratory
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UCONN
COLLEGE OF AGRICULTURE, HEALTH AND NATURAL RESOURCES
EXTENSION & PLANT SCIENCE AND LANDSCAPE ARCHITECTURE

SOIL TESTING FOR LAWNS, GARDENS AND COMMERCIAL CROPS

Soil testing is an inexpensive, yet valuable, tool for assessing the fertility of lawn and garden areas. Test results indicate the soil's pH level, the amounts of available plant nutrients, and the existence of nutrient imbalances, excesses or deficiencies.

WHY SHOULD I HAVE MY SOIL TESTED?

Soil testing eliminates the guesswork many gardeners face when deciding the kinds and amounts of fertilizers or soil amendments they should purchase and apply. Each soil test report contains recommended amounts of limestone and/or fertilizer needed for optimum plant growth. Knowing how much to apply saves time and money. It is a smart decision to test the soil every few years. Furthermore, it is particularly important in new garden bed installations or in established plantings that are not performing as well as expected. Regardless of whether you garden organically or use synthetic fertilizers, you will find that plants grow best when their nutritional requirements are met. This is achieved not only by the addition of nutrients such as nitrogen, phosphorus and potassium but also by sometimes modifying the soil's pH through the incorporation of limestone or sulfur.

Soil pH is a measurement of the acidity of the soil. A pH of 7.0 is neutral, below 7.0 is acidic, and above 7.0 is alkaline .Native soils tend to be acidic. It may be necessary to raise the pH by adding limestone. Plant species vary in their soil pH preference. Blueberries and broad-leaved evergreens, such as rhododendrons, may develop iron deficiencies if the soil pH is too high. Lack of calcium from low soil pH may contribute to the physiological condition known as blossom end rot that affects tomatoes and summer squash.

Applying the proper amounts of limestone and fertilizer promotes healthy, productive plants. In addition, it minimizes the potential for water pollution from overapplication of nutrients, especially nitrogen and phosphorus.

WHAT CAN SOIL TESTS DETERMINE?

The standard nutrient analysis will provide the soil sample's pH and the available amounts of phosphorus, potassium, calcium, and magnesium. Site specific fertilizer recommendations are provided based on the soil test results. Recommendations for modifying the soil pH with limestone or sulfur are made if necessary.

Separate analyses offered by the lab include: percent organic matter, textural analysis (the relative amounts of sand, silt and clay), micronutrients, soilless media and soluble salts. Commercial agronomic or vegetable growers may be interested in our presidedress soil nitrate test.

WHAT CAN SOIL TESTS NOT DETERMINE?

The soil fertility test performed at the University of Connecticut cannot detect the presence of contaminants such as pesticides or petroleum products. A listing of state approved environmental laboratories which can perform these analyses is available at the Connecticut Department of Public Health's website: https://portal.ct.gov/DPH.

Our soil tests also cannot identify problems due to insects, diseases, poor or excessive drainage, environmental stresses such as drought or winter injury, or improper cultural techniques.

WHEN IS THE BEST TIME OF YEAR TO HAVE MY SOIL TESTED?

A soil sample can be collected any time the ground is not frozen. The lab performs soil analyses year round. Fall is an optimal time for sampling because added amendments can begin to react with the soil over the winter. When submitting samples in the springtime, try to send them in early enough to

give yourself time to prepare your beds before planting. Generally, the turnover time is 3 to 5 days in the lab but may be longer in April and May. A soil test every 3 to 5 years is adequate for most situations.
An exception to this would be sites requiring large nutrient additions or pH adjustments. In this case, it would be advisable to test one year after the recommendations for limestone and/or fertilizer were followed to monitor their effect. Whenever comparisons of results are desired, take samples at the same time of year.

How Do I Get My Soil Tested?

Directions for sample collection, fees and mailing directions are listed in our free soil testing brochure that is available at your local Cooperative Extension Center, at the UConn Home and Garden Education Center [toll-free (877) 486-6271], at some Connecticut garden centers or by calling the Soil Nutrient Analysis Laboratory at (860) 486-4274.You can also visit our web site: www.soiltesting.cahnr.uconn.edu.

Those preferring the convenience of our prepaid soil test collection kit, can contact the lab. Soils in the prepaid kits receive the standard nutrient analysis. Kits are prepaid for the soil test, not for mailing, which usually costs less than $4 per sample.

Where Can I GetAnswers to My Questions?

Specific plant-related questions or problems that are included with soil samples are submitted to the horticulturists at the **UConn Home and Garden Education Center** along with your soil test results. Questions regarding the results or recommendations can be directed to the **Soil Nutrient Analysis Laboratory**. Commercial growers should contact their Extension Specialist.

For additional information concerning soil testing contact:

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soiltest@uconn.edu

Soil test brochures and in some instances, soil kits may be offered by your Local Extension Center:
Hartford County Extension Center (860) 409-9053
Litchfield County Extension Center (860) 626-6240
Middlesex County Extension Center (860) 345-4511
New London County Extension Center (860) 887-1608
Tolland County Extension Center (860) 875-3331
Windham County Extension Center (860) 774-9600
Fairfield County Extension Center (203) 207-8440
New Haven County Extension Center (203) 407-3161
Master Gardeners at the Bartlett Arboretum (203) 322-6971

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