

## Soil Sampling Instructions for Turfgrass

Taking a soil sample is a critical step in the process of soil testing. Proper soil sampling protocol is necessary to assure the usefulness of analytical results and appropriate recommendations. Please follow the soil sampling instructions carefully for best results.

### Planning

- When differences in soil type are obvious or known, use distinct samples to represent the dissimilar soils.
- Sample separately the areas used for different types of plants (in cases other than turfgrass).
- Areas that have received different lime and/or fertilizer treatments in the recent past should be sampled separately, at least until soil tests show that they are similar in pH and nutrient levels.
- Do not sample areas that have been limed or fertilized within the past 6 weeks unless trouble is evident. Results will be skewed by the un-reacted fertilizer or lime in the sample.
- Where poor growth exists, separate samples should be taken from both bad areas and corresponding good areas, if possible, for comparison.
- Plan to collect multiple subsamples randomly within each defined area to obtain a representative sample. For a uniform sports field or fairway, 20 to 30 subsample locations may be needed, whereas a 12 to 15 subsamples may be adequate on a golf green or tee. Remember that accuracy of the soil test results is highly correlated to sampling density. Where more specific nutrient management plans are desired, use smaller areas (fewer subsamples) but greater number of samples to be submitted for testing.
- Each sample must be submitted with a corresponding soil test questionnaire.

### Sampling procedure -

*Hint: For ease of sampling, the soil should be moist, but not too wet. Moisten in advance if necessary; allow water to soak in or drain.*

- For best results and time efficiency, use a soil probe to pull a core from the surface to a depth of 6 to 7 inches for new seedings/sodding, or minimum 4 inches for established turfgrass. Repeat this procedure throughout the sampling area, placing the soil subsamples in a clean plastic bucket to obtain a composite sample.
- Break up subsample cores in the bucket, mixing all of the soil in the container thoroughly. The goal is to provide a soil sample that best represents the whole turf root zone of the area. Leaf tissue, thatch, stolons, rhizomes, roots, and stones can be removed at this point.
- If the soil is wet, you may allow it to air-dry by spreading it out on clean paper or plastic, but **do not heat** the soil. Dry samples reduce turnaround time at the laboratory as well as mailing costs.
- Place 1 pint (2 cups) of soil in a plastic bag (sandwich-size), press out excess air, and seal carefully. Mark the bag with the sample ID using permanent ink. Double bagging is encouraged to avoid breakage/spill. Excess soil can be returned to the sampling holes.

Repeat this process for any other areas that you wish to have tested. Remember to use sample IDs that will distinguish the samples from each other. Your sample ID will be printed on the soil test report.

## Submitting the sample(s)

Fill out a soil test questionnaire for each sample. The golf/sports turf questionnaire is available at [http://njaes.rutgers.edu/soiltestinglab/pdfs/sport/Golf\\_and\\_Sports\\_Turfgrass\\_-\\_Soil\\_Test\\_Questionnaire.pdf](http://njaes.rutgers.edu/soiltestinglab/pdfs/sport/Golf_and_Sports_Turfgrass_-_Soil_Test_Questionnaire.pdf)

- Please provide company and contact name, complete address, and phone number. Providing an email address will allow soil test results to be reported electronically for reduced turnaround time.  
*Hint: for multiple samples, fill out contact information on the questionnaire and then copy as needed.*
- Make sure to fill in the sample ID on the appropriate line of the questionnaire; use the same ID that is on the sample bag. The sample ID will be printed on the report for you to distinguish between samples. Keep a record of sample ID, areas sampled, and date mailed. *An exception to submitting a questionnaire for each sample: if test request and site/management information is the same for every sample, then one questionnaire with a vertical list of sample IDs is acceptable.*
- To obtain the most appropriate fertilizer and/or lime recommendations, provide the information requested on the soil test questionnaire.
- Payment must be included for the soil test fees. Enclose a check or provide the credit card information (Visa, Mastercard, or Discover) requested on the form. For multiple samples, one check is preferred or one submission of credit card information in the batch. Credit card information is **not** stored for future use. Invoicing is an option for companies and organizations with good payment history, but payment must be received before test results will be released.

Place the completed questionnaire(s), bagged sample(s), and payment in a sturdy envelope or box.

Mail or have delivered to:

Rutgers Soil Testing Laboratory  
ASB-II, G.H. Cook Campus  
57 US Highway 1 South  
New Brunswick, NJ 08901

Directions to this location are available at: <http://njaes.rutgers.edu/soiltestinglab/directions>

## Results

A soil test report will be emailed or mailed for each sample, typically in 5 to 7 working days of the lab receiving the sample for standard soil fertility analysis. Longer turn-around time should be expected during busy seasons: spring & fall. When special tests are requested, allow for 10+ working-day turn-around time.

In some cases, a copy of the Soil Test Report(s) will also be referred to the Rutgers Cooperative Extension office in your county. In those cases, the RCE county office phone number will be on your report. Consult the RCE agent in your county for assistance with the soil test report or soil/plant problems after you receive your report. Be prepared to discuss the types of plants, site conditions, and soil amendments used.

*In addition to guiding suitable limestone and nutrient amendments, soil tests aid in diagnosing only those troubles that result from a deficiency or an excess of lime and certain plant nutrients. Other factors may have an equal or greater influence on plant growth. These include soil drainage, rainfall, insects, diseases, and others. In the case of turfgrass, nitrogen fertilization and mowing height and frequency are very important to the health and appearance of the grass.*

Diagnosis of plant disease or insect damage is available for a fee by the Rutgers Plant Diagnostic Laboratory. Identification of plants, insects, or fungi/mold, and detection of nematodes are additional fee-based services. For more information: <http://njaes.rutgers.edu/plantdiagnosticlab>

For science-based information and education opportunities about turfgrass culture and management, visit the website for Rutgers' Center for Turfgrass Science at New Jersey Agricultural Experiment Station <http://turf.rutgers.edu> and sign up for updates from the Plant and Pest Advisory for Landscape/Nursery/Turf: <http://plant-pest-advisory.rutgers.edu/category/landscape-nursery-turf/>