



Collecting and Submitting Turf Samples for Disease Identification¹

Carol M. Stiles, Monica L. Elliott, Richard E. Cullen, and Gary W. Simone²

Introduction

After a turf sample is submitted to the Florida Extension Plant Disease Clinic, several observations and tests will be carried out to determine which turf pathogens may be present in the sample. Accurate and efficient diagnosis of turf diseases therefore requires adequate sample material in good condition.

Collection

Follow these steps, in order, to collect a turf sample for disease identification.

1. Sample problematic turf areas *before* the application of pesticides--especially fungicides.
2. Sample each symptomatically distinct turf area separately. Do not mix these samples together.
3. Take samples from any turf areas expressing symptoms of wilt, poor color, slow thinning or melting-out. Remove material from the margin of the affected area so that the sample contains both healthy and affected tissue. If nematodes are suspected, a soil sample also should be collected and submitted according to instructions listed for the Nematode Assay Laboratory.
4. The appropriate sample for plant disease identification is several 3- to 4-inch plugs of turfgrass which are dug, not pulled, from the turf area. It is important to include generous amounts of roots in this sample. For lawn grasses such as St. Augustinegrass, a gallon-size bag of tissue, including roots, is adequate.
5. Always sample from the marginal area of symptomatic turfgrass, not from the central dead zone. The marginal area is more likely to allow the isolation, identification, and interpretation of the causal organism(s). Each sample should have both living and dead (affected and unaffected) portions.
6. Plant disease identification procedures do not utilize soil. Excessive soil can be hand shaken from each plug but leave enough soil on the plug to keep the roots moist. (Separate soil samples should be submitted to the Nematode Assay Laboratory, if desired).
7. Do not add any additional moisture to the sample. All samples should be submitted at field moisture levels.

1. This document is SS-PLP-02, a series of the Plant Pathology Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. This information is included in the Florida Lawn Handbook, SP-45. For a copy of this handbook, request information on its purchase at your county extension office. First published: May 1991. Revised: October 2002

2. Carol M. Stiles, assistant professor, Monica L. Elliott, professor, Richard E. Cullen, senior biological scientists, and Gary W. Simone, professor emeritus, Plant Pathology Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.

8. Before leaving the sampling site, note the distribution and pattern of symptoms (patches, along mowing patterns, in low or high areas, in shady or sunlit areas, or near other items in the area, such as driveways, etc.), the size of patches, color of affected tissue, and so on. Submitting photos of the symptoms in the field is particularly helpful for turfgrass problems. Find out when the problem began to develop, and note the recent pesticide history (3 to 4 weeks and other relevant information such as fertility, irrigation, mowing practices, and so on).
9. After collecting good samples, keep at cool temperatures until they can be submitted, and ship them as soon as possible, and preferably early in the week.
6. Remember to note the recent pesticide history on the Specimen Data form with the sample.
7. Mail the completed Plant Disease Diagnostic Form *along with* the turf sample *but separate from the soil and plant material*. This will keep the form dry, clean, and readable.
8. Plant disease diagnosis is a charge service only. Current cost is \$20.00. The Florida Extension Plant Disease Clinic is open from 8:00 am to 5:00 pm Monday through Friday at the following address:

Submission

Follow these steps, in order, to submit a turf sample for disease identification.

1. Samples arriving from sites in Florida that are 2 days or less mailing time from Gainesville, can be sealed in plastic bags for shipping. *Do not* add moisture to the sample.
2. Samples from distances greater than 2 days mailing time from Gainesville should be packed tightly in a box with dry paper. Do not seal in plastic because samples could deteriorate during the mailing period. *Do not* add moisture.
3. Mail samples early in the week to avoid a weekend layover at the post office.
4. For emergency samples, use overnight courier services to deliver samples to the Plant Disease Clinic. Be sure to include "Bldg. 78, Mowry Rd., " as the physical address for the clinic in Gainesville (see full address below).
5. All samples must be accompanied with a completed **Plant Disease Diagnostic Form** (IFAS Form # 2901). Click on "Printer-friendly version" for pdf file that can be printed. Additional forms are available at all county Extension offices.

Florida Extension Plant Disease Clinic
University of Florida
Bldg. 78, Mowry Road
P O Box 110830
Gainesville, Florida 32611-0830
Telephone: (904) 392-1795
FAX: (904) 392-3438
E-mail: pd@mail.ifas.ufl.edu

For further information about the Florida Extension Plant Disease Clinic Network, please see EDIS publication RF-SR007.