

# Soil, Plant and Pest Center

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## Instructions for Collecting and Packing Turfgrass Samples for Diagnostic Lab

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The Soil, Plant and Pest Center's Plant Diagnostic Lab provides diagnosis of turf pest insects and diseases.

### Sample Submission

- Submit a completed submission form.
- Email several pictures of the lawn symptoms to [plant\\_pictures@tennessee.edu](mailto:plant_pictures@tennessee.edu). Pictures should include wide pictures of the entire lawn showing how the disease spreads in the landscape and close pictures of the diseased area from directly above showing the disease growth pattern (Figure 1).



*Figure 1. Wide and close pictures of the turf. Photos by Alan Windham.*

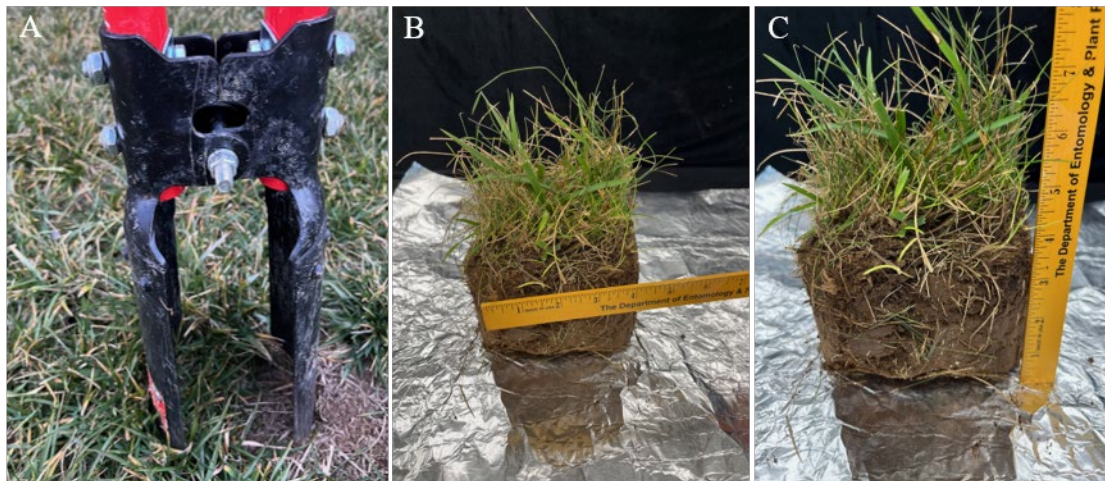
## Collect Turf Samples

Collect fresh material. Turfgrass samples should be collected from the meeting place of the unhealthy and healthy grass (Figure. 2). Dead plants are useless for diagnosis. Usually, dead tissue has secondary rotting organisms present that disguise the original problem.



*Figure 2. Red circle represents the transition area between unhealthy and healthy turfgrass, which should be collected.*

Collect a sample 4 inches in diameter and 4 inches deep from the edge of the infected area. Posthole diggers or sharp pointed shovels are adequate for this task (Figure 3A-C). Avoid collecting samples early in the morning. The high moisture content can contribute to the fast deterioration of the sample.



*Figure 3. Posthole digger collecting a turf plug sample from a transition zone of good to bad (A); 4-inch by 4-inch, cup-sized sample (B-C).*



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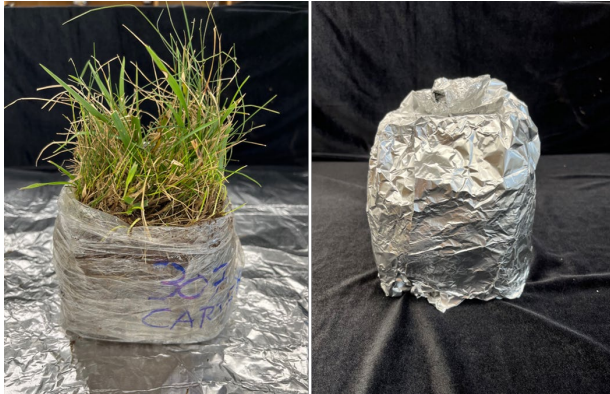
The turf core sample should be tightly wrapped in plastic and foil aluminum to preserve its intact structure through transport (Figure 4).

Prevent excess soil from contaminating the leaves, as it will make culturing difficult.

Do not sample following a recent fungicide application.

Do NOT add water to any sample.

Do NOT wash roots.



*Figure 4. Turfgrass core sample wrapped in plastic and foil. Take care to prevent soil from covering turf leaves.*

## Packing a Turfgrass Sample

The turfgrass plug sample should be packaged securely into a compact box. Fill excess space with packing paper, styrofoam or bubble wrap to avoid movement and damage during transportation (Figure 5).



*Figure 5. Turfgrass core sample wrapped in plastic and foil. Take care to prevent soil from covering turf leaves.*

## Mailing a Sample

Send the sample immediately after collecting. If holdover periods are encountered, keep specimens cold. Plants collected can be kept in a refrigerator or a cooler with ice. It is recommended that plant specimens be mailed using overnight shipping. Mail packages so they arrive on weekdays (Monday through Thursday) rather than weekends or holidays.

## Turfgrass Insects

Insect issues in turfgrass can be easily missed as several of them stay below ground and out of sight. Performing a drench test can be an easy method to search for potential insect issues.

- Mix 2-4 ounces of liquid dish soap in a gallon of water.
- Pour the mixture evenly over a square foot area of lawn.
- Within 10-15 minutes insects should be visible as they climb out of the thatch and soil.

The mixture may need to be applied twice if the soil is dry. The test may need to be repeated in multiple places to increase the probability of locating the responsible pest. Please see [Instructions for Collecting and Packing Insects for Identification](#) publication for insect mailing instructions.



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