

Plant Diagnostic Center

Instructions for Collecting, Packaging and Shipping Plant Samples

Accurate and rapid diagnoses depend on the quality and quantity of the sample submitted. No one method of preparation for shipping plant materials will guarantee their satisfactory arrival in the laboratory, but following the suggestions given below generally will ensure specimens will be received in good condition.

Specimens completely desiccated or in advanced states of decay, and those that arrive without supporting information and diagnostic fees will have to be discarded. This represents time and labor wasted for the sender and personnel at the LSU AgCenter. **Note:** Findings reported are based on examination of the material submitted. Some diagnoses require intensive studies. Because the time devoted to individual specimens must be limited, reports, while reflecting considered opinion and best judgment, may not always be statements of complete facts.

To get the best possible results, follow these instructions:

General Guidelines for Submitting Plant Samples for Routine Diagnosis

Please consult the following guidelines before collecting, packing and submitting the samples.

- ✓ Plan to collect and submit samples early in the week.
- ✓ Pack samples properly (see "Sample Packaging and Mailing" below).
- ✓ Collect specimens representing a range of symptoms.
- ✓ Collect all parts of the plant that show symptoms.
- ✓ Collect specimens before applying any chemicals.
- ✓ Submit a generous amount of plant material.
- ✓ Samples must be accompanied with a completed "Sample Submission Form." Samples without this form will not be diagnosed. Place Sample Submission Form in a plastic bag when sample contains roots, soil or perishable tissue.
- ✓ Samples must be accompanied by the diagnostic fee. (Samples without diagnostic fee may not be diagnosed).
- ✓ Write correct mailing address on the package.
- ✓ Specimens from different plant species should be packed separately.
- ✓ Out-of-state samples must be accompanied by the PPQ 526 permit for interstate movement of the plant/plant material. (Contact Dr. Raj Singh at rsingh@agcenter.lsu.edu or 225-578-4562 for the permit.)

For Plant Disease Diagnostics

Plants showing wilting, yellowing or general decline

1. Send whole plants including roots, if practical. Be sure to send plants showing early stages of disease.
2. Dig up carefully (Don't pull up!).
3. Send sample of soil and feeder roots in plastic bag. Seal to avoid loss of moisture. Don't add any excess water to the sample.

Cankers

1. Select specimens from recent infestations. Send entire cankered portion, if possible, with some of the healthy wood above and below the canker.
2. Branches and twigs that have been dead for several months are useless for identification.

Leaf spots/blights/scorch

1. Collect several (15-20) leaves showing early and late stages of infestation.
2. For scorch symptoms, send in the affected twig/branch with leaves attached. Cut several foot-long twigs showing leaf scorch symptoms, wrap these in dry paper towel(s) and pack in plastic bag.
3. For spots or blight, wrap leaves in dry paper towel(s) and pack those in plastic bags.
4. It usually is not possible to diagnose marginal burning or other injury symptoms on leaves.

Fleshy organs

1. Rots of fleshy fruits and vegetables need special attention. Do not send those in advanced stages of decay.
2. Select fresh specimens showing early symptoms.
3. Place specimens in a plastic bag with dry paper towel(s). Do not add extra moisture. Fleshy vegetables and fruit specimens should be wrapped separately. Keep cool until shipped.

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Homeowner turfgrass samples

1. Collect turf samples with early and advanced stages of disease development. Completely dead turfgrass seldom generates an accurate diagnosis.
2. Collect turf sample from transition zone between healthy and diseased turfgrass so it contains both healthy and affected turf.
3. Collect a 6-inch-by-6-inch section of affected turf with soil intact.
4. Wrap the sample in newspaper or aluminum foil.
5. Place sample in a sturdy cardboard box and pack securely.
6. Do not add water to the sample.
7. Place the completed Sample Submission Form and diagnostic fee in a plastic bag and send it with the sample.
8. Ship turf samples to the Plant Diagnostic Center immediately after collection.

For Nematode Diagnosis/Identification

1. Late summer and fall are the best times to take nematode samples.
2. Nematode samples require at least one pint of soil from approximately 20 random soil probes. Mix soil together and mail in plastic bag.
3. A Nematode Assay Form with required information must accompany samples.
4. Protect sample from heat and light.

For Insect Pests or Mite Diagnosis/Identification

1. Collect damaged plant parts, such as leaves or twigs, wrap these in dry paper towel(s) and place the wrapped tissue in plastic bags.
2. If root samples are submitted, pack the damaged roots, with soil intact, in plastic bags.
3. Submit insect specimens in glass vials containing ethanol. Label the vials with the collection information, including the site, host, date and collector's name.
4. Complete the Sample Submission Form for each sample/vial submitted for diagnosis.

For Weed Identification

1. Send the entire plant for identification. Leaves alone may not be sufficient for an accurate identification.
2. Dig up carefully. (Don't pull up!)
3. Wrap roots in plastic bag and rest of the plant in dry paper towel(s) and pack the entire plant in a plastic bag.
4. High-quality images of the plant where it was growing may aid in identification.

Sample Packaging and Mailing

1. Do not add water to samples.
2. Wrap plant tissue such as leaves or twigs in dry paper towel(s) and place in plastic bags.
3. Pack foliage and roots collected from same plant in separate plastic bags.
4. Wrap fruit samples in dry paper towel(s).
5. Pack samples in a sturdy cardboard box. Wrap package in heavy paper. Attach envelope containing Sample Submission Form to outside of package.
6. Identify package with both outside and inside labels and protect inside label from moisture.
7. Address package to: **Plant Diagnostic Center, 302 Life Sciences Building, 110 LSU Union Square, Baton Rouge, LA 70803.**
8. Mail packages to arrive on weekdays (Monday through Friday) rather than on the weekend.

Remember, the better the specimen, the more accurate the diagnosis!

Diagnostic Fee Schedule

Diagnostic Service	Diagnostic Fee for In-state samples	Diagnostic Fee for Out-of-state samples
Routine diagnostics	\$20	\$40
Serological and biochemical tests	\$30	\$60
Molecular diagnostics	\$100	\$150
Rapid turfgrass diagnostics	\$75	\$100

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Rapid Turfgrass Diagnostics

The rapid turfgrass diagnostics service is intended for commercial golf courses, athletic fields and landscapes. It always is preferred to check with the diagnostician before collecting and submitting turfgrass samples for rapid turfgrass diagnosis.

Turfgrass Sample Collection

1. Collect turf samples with early and advanced stages of disease development.
2. Collect turf samples from transition zone between healthy and diseased turfgrass so samples contain both healthy and affected turf.
3. Collect two samples from each problem area. Samples can be either “cup cutter” samples or a sample at least 6 inches by 6 inches.
4. Completely dead turfgrass seldom generates an accurate diagnosis.

Turfgrass Sample Packaging

1. Wrap samples in newspaper or aluminum foil.
2. Place samples in a sturdy cardboard box and pack securely.
3. Do not add water to samples.
4. Ship samples to the Plant Diagnostic Center immediately after collection.
5. Do not forget to include the completed Rapid Turfgrass Sample Submission Form with the samples.
6. Samples without the appropriate Sample Submission Form(s) and diagnostic fee(s) will not be processed.
7. The rapid turfgrass diagnostic service is provided for a charge of \$75 for in-state and \$100 for out-of-state samples.
8. Make check payable to **LSU AgCenter PDC**.

Turfgrass Sample Submission

1. Ship samples to correct mailing address.
2. Ship samples early in the week.
3. Samples should be delivered overnight (preferably via courier services).
4. Samples will not be received on Saturdays, Sundays and other LSU AgCenter holidays.

Sample Submission Address

**Plant Diagnostic Center
302 Life Sciences Building
Baton Rouge, LA 70803**

Contact Information

Dr. Raj Singh
Email: rsingh@agcenter.lsu.edu
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www.lsuagcenter.com/PlantDiagnostics