

## **HOW TO COLLECT AND PACKAGE PLANT DISEASE SPECIMENS**

The accurate diagnosis of specific plant diseases depends upon several factors. The specimen must arrive at the laboratory in a fresh condition, but just as important, it must also be representative of the symptoms expressed in the field, lawn, or yard. Also, the complete description of the area, its history of cultural or chemical practices, and other facts pertinent to the disease occurrence must be supplied in order to facilitate complete diagnosis of the cause. When specimens arrive in a crushed, wilted condition, or if they are in advanced stages of decay, diagnosis is often difficult. If non-representative or incomplete specimens (roots, stems, and soil) are accompanied by insufficient information, accurate diagnosis becomes impossible.

### **Leaf Spots**

1. Collect leaves showing all stages of infection. Make sure compound leaves are collected with leaflets attached to petioles. Also include twig segments with leaf samples.
2. Use the plant press to transport from field to office. Once ready to ship (within 24 hours), place the leaves between heavy paper or thin cardboard and place them in an envelope. They will arrive in a pressed state making processing easier.

### **Galls or Cankers**

1. Select several galls along with small portions of twigs or limbs if possible. Include intact leaves if possible.
2. Make sure you include healthy portions of the plant.

### **Wilts**

1. Send whole plants when possible. Collect several plants showing all stages of the disease.
2. Dig the plants; do not pull them up. Include a small amount of soil with root system. Keep soil and above-ground plant parts separate by placing roots in a plastic bag and sealing. Do not add moisture to the root sample.

3. Send soil sample along with plant. Use Nematode Soil Sample bag (Form 591) to send a soil sample. Fill out the Nematode Soil Sample Form #448-A.

### **Fruits and Fleshy Organs**

1. Do not send specimens of advanced stages of fruit rot. Select plants showing early to intermediate symptoms.
2. Keep specimens cool until shipped. Wrap several sheets of dry paper towel around the fruit. Do not add moisture. Pack specimens so that they are not crushed during shipping.

### **Turfgrass Samples**

1. Turfgrass samples should be taken from the edge of the affected area and include both dying and healthy plants. Collect several 3" X 3" squares of sod with at least 1" of soil. Place these in sealed plastic bags.

### **Packaging and Mailing**

Samples submitted to the diagnostic lab should be accompanied by a check in the amount of \$6.00 and should be written to Extension Plant Pathology.

1. In mailing plant specimens for disease diagnosis, please wrap a dry paper towel around the specimen and place it in a zip lock plastic bag. The purpose of the paper towel is to absorb any moisture released from the plant tissue, thus avoiding bacterial soft rot prior to arriving in the laboratory.
2. Regular envelopes are cheaper to send and this can be considerable saving in postal fees so whenever possible try to use a mailing envelope.
3. Mail early in the week and be sure to mark the package First Class. That way we will get the sample as fast as possible and it's less likely to spend the weekend in the post office.
4. Please try to fill out the Plant Disease Diagnosis and Insect Identification Form 205 as completely as possible, or have the grower fill it out himself. The extra 5 or 10 minutes it might take to fill out the information could save us an hour or more of "barking up the wrong tree" when examining the specimen in the lab.
5. Make sure packages are wrapped in heavy paper. Mail specimen to:

Extension Plant Pathology Lab  
Room 9 Bost Extension Center  
Box 9655  
Mississippi State, MS 39762-9655

David M. Ingram  
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