

## Using a Plant Diagnostic Lab

The best way to identify insects, plants and plant diseases, or diagnose plant and pest problems, is to send a sample to a diagnostic laboratory. The National Plant Diagnostic Network website ([www.npdn.org](http://www.npdn.org)) lists diagnostic laboratories by state and region. Contact individual laboratories for specific submission and fee information (see page 15).

To ensure an accurate diagnosis, it's important to collect and ship your specimens properly. Here are a few guidelines for collecting and shipping specimens to a diagnostic lab.

1. Collect fresh specimens. Send a generous amount of material, if available.
2. Ship specimens in a crush-proof container immediately after collecting. If holdover periods are encountered, keep specimen cool. Mail packages to arrive on weekdays.
3. Incomplete information or poorly selected specimens may result in an inaccurate diagnosis or inappropriate control recommendations. Badly damaged specimens are often unidentifiable and additional sample requests can cause delays.

## Submitting Plant Specimens for Disease/Injury Diagnosis

**Herbaceous Plants.** For generally declining, wilting, or dying plants, send several whole plants showing a range of symptoms (early through more advanced) with roots and adjacent soil intact. Dig up the plants carefully. Place roots and surrounding soil in a plastic bag and fasten it to the base of stem with a twist tie or string. *Do not* add water. Soil and attached roots may also be secured in a double layer of heavy-duty aluminum foil. Wrap the plants in dry newspaper and place in a crush-proof container for shipment.

**Leaves/fruit/tubers.** When localized infections (such as leaf spots or fruit rots) are suspected, send specimens representing early and moderate stages of disease. Press leaves flat between newspaper and cardboard and wrap fruits or tubers in dry newspaper. Place in a crush-proof container for shipment.

## Submitting Insect Specimens

Package insects carefully so they aren't damaged when they arrive at the lab. Separate and label the specimens if you send more than one type in the same package. Provide the appropriate information for each specimen.

**Tiny or Soft-bodied Specimens.** Submit such specimens (aphids, mites, thrips, caterpillars, grubs, spiders) in a small, leak-proof bottle or vial of 70

percent alcohol. Rubbing alcohol (isopropyl) is suitable and readily available. *Do not* submit insects in water, formaldehyde, or without alcohol or they will ferment and decompose.

**Hard-bodied Specimens.** Submit such specimens (flies, grasshoppers, cockroaches, wasps, butterflies, beetles) dry in a crush-proof container. *Do not* tape insects to paper or place them loose in envelopes.

## Submitting Samples for Nematode Analysis

If you suspect a nematode problem, contact clinics for state-specific submission information (see page 15).

In general nematode identification requires collection of at least one quart of soil from the root zone of affected plants. Include roots if the plants are actively growing.

Place the entire sample in a plastic bag. *Do not* add water or allow it to dry out. Protect the sample from extreme heat (for example, don't leave samples inside a parked vehicle in direct sunlight). It is often helpful to collect a second, similar sample from a nearby area where plant growth appears normal.

Attach a label, note, or tag identifying the sample to the outside of each bag or package.



*The root system of this plant has been bagged so diagnosticians can examine the roots as well as its foliage upon arrival at the diagnostic laboratory. When submitting samples to a lab, remember to attach a label, note, or tag identifying the sample to the outside of each bag or package.*

## Selected University Diagnostic Labs

### Illinois

Univeristy of Illinois Plant Clinic  
S-417 Turner Hall  
1102 S. Goodwin Avenue  
University of Illinois  
Urbana, Illinois 61801

(217) 333-0519  
web.extension.illinois.edu/plantclinic  
www.facebook.com/UofIPlantClinic

Contacts:  
Stephanie Porter  
satterle@illinois.edu  
(217) 244-3254

Suzanne Bissonnette  
sbissonn@illinois.edu  
(217) 333-2478

### Indiana

Plant and Pest Diagnostic Laboratory  
Purdue University  
LSPS 101  
915 W. State Street  
West Lafayette, IN 47907-2054

(765) 494-7071  
Fax: (765) 494-3958  
www.ppdl.purdue.edu

Contacts:  
Tom Creswell  
creswell@purdue.edu

Gail Ruhl  
ruhlg@purdue.edu

### Iowa

Iowa State University Plant and Insect Diagnostic Clinic  
327 Bessey Hall  
Iowa State University  
Ames, IA 50011

(515) 294-0581  
Fax: (515) 294-9420  
www.plantpath.iastate.edu/pdc

Contact: Laura Jesse  
sickplant@iastate.edu

### Kansas

Plant Disease Diagnostic Lab  
Extension Plant Pathology  
4032 Throckmorton Hall  
Kansas State University  
Manhattan, KS 66506-5504

(785) 532-5810  
Fax: (785) 532-5692  
www.plantpath.ksu.edu/DesktopDefault.aspx?tabid=49

Contact: Judith O'Mara  
jomara@ksu.edu

### Minnesota

Plant Disease Clinic  
Department of Plant Pathology  
495 Borlaug Hall  
1991 Upper Buford Circle  
University of Minnesota  
St. Paul, MN 55108

(612) 625-1275  
Fax: (612) 625-9728  
pdc.umn.edu

Contact: Dimitre Mollov  
dmollov@umn.edu