

Whatever the weather that occurs each year, there are insects, mites and diseases which are active under these specific conditions. Effective treatment requires accurate identification. But sometimes, the problem may be new, the symptoms may not appear typical or appear at the usual time of the year, or a combination of problems may exist which further complicate identification.

In many cases, taking a sample and sending it to a diagnostic laboratory is appropriate. The reasons for and the costs of the test can be explained to the client. In some cases, the lab will be able to make a visual identification, especially if they have been seeing a lot of that problem. However, the lab may need to carry out tests to identify a specific disease.

Sending a good sample is important for identifying a pest or disease. In some cases, a specific part of the plant is required. In other cases the actual pest or sign of the disease are necessary.

Proper packaging is necessary so that your sample gets to the lab in identifiable condition. Crushed, dried, mushy or just plain unidentifiable samples are useless, and so are dead plants.

Most labs have a form to send with any sample. Information includes: location and species, plants affected (one species or many), amount of plant affected, symptoms, plant parts affected, and date noted. Shipping should be swift and should not allow samples to sit over a weekend upon delivery. If a shipping delay must occur keep plant samples refrigerated

The basic points are:

Woody plants:

- ▶ roots and soil or leaves and soil for systemic or nutrient problems (check with the specific lab);
- ▶ send entire plant when possible;

- ▶ for cankers, dieback, swellings etc. be sure to cut to include any possible transition areas into unaffected areas;

- ▶ do not send wet samples or add water, including wet paper towels;

Herbaceous plants:

- ▶ send complete plants with roots intact (and for some labs, soil);

Mushrooms and conks:

- ▶ do not use plastic bags or jars; place in paper bag or wrap in newspaper

Turf:

- ▶ a sample with both healthy and diseased turf and the disease margin between the two;
- ▶ sample size may vary by lab, but should include the soil layer
- ▶ wrap in newspaper or aluminum foil to keep intact;

Insects:

- ▶ check with the lab for the legalities of shipping live samples
- ▶ most insects - in alcohol - not ethyl acetate, water or formaldehyde
- ▶ butterflies and moths - dry and uncrushed (tissue paper in a box)
- ▶ grubs - alive in some soil;
- ▶ caterpillars - alive on a portion of the host plant;
- ▶ mites, scales aphids, thrips - alive on affected foliage/stems
- ▶ include sample of affected plant material and multiple pests

Final hints:

- ▶ have the correct phone number and address as well as the name of any appropriate lab staff;
- ▶ find out how the lab wants samples sent, the type of packaging and their fees and the forms to include;
- ▶ keep this information where you can find it; a couple of places in your filing system might help (a file under "Insects" and/or "Diseases" or under "Lab Tests" or even in your file on suppliers).
- ▶ keep copies of the info you send so you remember what you sent and why. **LM**

Agree/Disagree? Comments/Questions? Column Suggestions? Let Nancy Stairs know at 440/891-2623. Fax: 440/891-2675. E-Mail: nstairs@advanstar.com.

Diagnostic labs a valuable resource



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