PENNSTATE College of Agricultural Sciences

HortReport

Cooperative Extension — Capital Region

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This information sheet has been prepared by Penn State Cooperative Extension as an aid to you, our clientele, as you seek to identify and possibly treat a plant or insect problem. Good samples often lead to accurate diagnosis of a problem.

What makes a good plant or insect sample?

Insect or spider identification:

1) Please bring in live insects or spiders. Place them in an airtight container. Insects that are running and flying about our office are tough to identify.

2) If you must kill the bug(s) in order to bring them in, try to select samples that are not mangled and squished. Live insects dumped into alcohol preserve well and often make good samples. Freezing for several days is also a good method to preserve specimens.

3) Extra specimens can be helpful. Often an insect's antennae or a spider's legs are important in a complete identification. Insect and spider parts break off easily, so extra samples can be important.

4) Do not use sticky tape to collect the insects. Imagine almost anything stuck at weird angles and you get some idea as to why this sampling method does not work for identification.

5) Try to remember where you found it and how many (approximately) were there. Have you seen this pest before?

6) Sometimes we must send the sample to University Park to the Penn State Entomology Dept. for complete identification. Please be patient as they receive many samples from across PA. There may be a fee for this service.

7) Remember, most insects and spiders are beneficial and all are food for some other insect / spider / animal in the food chain**.**

Weed or plant identification:

1) Fresh plants with intact parts are best. Do not bring in dead or dried up plants. They are very difficult to work from and seldom yield results that we can be confident about.

2) Be sure to bring in flowers (if present) and dig the plant up so we have a sample of the roots. Keep soil to a minimum and be sure to place the plant in a suitable container.

3) Never bring in a single leaf or small piece of stem. They are simply not sufficient to work from. Whole plants are best and the fresher the better. At a minimum, bring a branch showing leaf arrangement.

"Example of good plant sample."

4) Note where the plant is growing (sun /shade, wet / dry, alone or in a clump, etc.)

5) Never place the plant in a plastic bag unless you can keep it in a cooler. Plastic bags help to grow gray mold and will destroy your sample. Paper bags are best. Samples that are fresh and kept cool yield better results.

6) Be sure to clearly write your name, address and telephone number on the bag.

7) Do not store the sample in your hot car all day and expect us to identify your plant accurately from a cooked sample.

Plant problem identification:

1) Bring in a living sample or at least a sample with live tissue. Dead plant pieces seldom give any information aside from our confirmation of its death. The best samples show the problem progressing. That is, they show green tissue that is being affected. Please do not bring in a handful of dead leaves and expect a diagnosis.

2) Freshness means everything in diagnosing a problem. Keep your sample in good condition. Storing it in a cooler in a paper bag works well. We will transfer it to a refrigerator if no one is around to immediately look at your sample. Never use plastic bags as they promote rapid mold growth.

3) Size is important. Short pieces of plant stem or single leaves are seldom useful samples. The whole plant including well washed roots is best. Try to find a reasonable balance between whole logs and tiny fragments. If you are not sure of how much plant is necessary to provide an accurate diagnosis, contact your county Cooperative Extension office before collecting the sample.

4) Past history of the plant's location is often helpful. What was growing there before? Have you seen this problem before? Have other plants died in this location? Does this area drain quickly or does water lie there for longer than 24 hours? How did the problem begin? Is the whole plant involved?

Turfgrass problem identification:

1) Collect two or three squares (approximately 3" x 3"), with at least one inch of attached soil and roots from the edge of the affected area. This sample should include both dying and apparently healthy plants.

"Good turf sample"

2) Wrap each sample in one thickness of slightly dampened newspaper or paper towel, then in dry newspaper.

3) Turfgrass problems are sometimes very difficult to diagnose accurately, so include as much information about the problem as possible (see #4 under plant problem identification). Photographs and digital images of the lawn from different angles are very helpful.

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