Collecting and Submitting Plant Disease Samples for Diagnosis to the Schutter Diagnostic Laboratory

Plant diagnosticians at Montana State University in the Schutter Diagnostic Laboratory are available to identify any problems that affect plants in the landscape. Accurate identification of plant disorders and pests are the foundation for integrated pest management. A good quality sample and as much information as you can provide on the history of the problem is important for accurate, fast diagnosis and appropriate recommendations. To expedite identification and recommendations, please follow the following guidelines. Submission instructions, forms, and more information can be found at our website, http://diagnostics.montana.edu/. You can drop samples off with your local county extension agent or submit them to the lab directly. Your county agent is a good place to start – they are familiar with many of the plant disorders in the community, and may be able to identify your problem right away.

Plant Disease Specimens

**Send sufficient plant material.** Examine the entire plant for symptoms and collect samples that show various stages of the problem. Include a healthy plant or plant part for comparison. Send enough plant material so that an identification can be made. Whenever it is practical, include roots or the entire plant or clump of plants. If that is not possible, include a branch or send a twig. Detached leaves or parts of leaves are seldom useful.

**Avoid sending dead plants or plant parts** since they are not useful for accurate diagnosis. Keep samples as fresh as possible until you can ship them. Avoid exposing the sample to direct sunlight and refrigerate if possible.

**Keep some soil around the root ball and off foliage.** Wrap the plant sample in plastic and secure with a rubber band around the base of the plant (Figure 1). This prevents the soil from damaging the leaves during shipping. Loosely enclose the foliage in plastic or paper. Do not add water. Send a sample so that we could plant it when it arrived and it would survive.

**Package samples in crush-proof containers.** Never send leaves in a flat paper envelope – the post office machinery causes extensive damage, and the tissue rots or dries out in shipping.

**Include photographs** illustrating the problem if possible. Make sure photos are in focus, and include your name and contact information with

Figure 1: Example of a well packaged sample (left) and an insufficient packaged sample (right).
sample submissions. Email the photographs to diagnostics@montana.edu.

**Always include background information.** Plant problems are often influenced by many different factors, so include as much information as possible: **plant and variety, location** (greenhouse, field, windbreak, home garden, etc.), **irrigation** practices (type of system, frequency, amount applied), **history** (age, size, amendments, fertilizer, etc.), **pesticides** used with names, rates, and dates, weather conditions, **pattern of symptoms** on the plant and surrounding plants, **previous problems** in this location. In-depth background information will help the diagnostician to identify the problem and is essential for timely management recommendations.

**Do not ship on Fridays.** Samples can rot, bake or freeze over the weekend.

**Include a submission form,** which can be found at http://diagnostics.montana.edu/PlantDisease/PDFs/Disease%20ID%20Form.pdf or at your county extension office.

If you have any questions about submitting a plant disease sample, please contact Eva Grimme, eva.grimme@montana.edu, (406) 994-5150.

**Mailing address for all plant samples:**

**Schutter Diagnostic Lab,** 119 Plant BioScience Facility, P.O. Box 173150, Bozeman, MT 59717-3150. Please mail a copy of the PDIS summary or other form with the sample.