

Helpful Disease Diagnostic Websites & References

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General:

Highplainsipm.org (crop disease, insects, weeds)

Missoula: <http://www.co.missoula.mt.us/extension/plantdata/>

Colorado State Extension: <http://www.ext.colostate.edu/>; fact sheets

<http://www.cerc.colostate.edu/factsheet.html>

University of Nebraska:

<http://www.ianrpubs.unl.edu/epublic/pages/index.jsp?giveNotFoundMessage=1&what=subjectAreasD&subjectAreasId=28>

North Dakota State University: <http://www.ag.ndsu.edu/pubs/plntdise.html>

Oregon State: <http://plant-disease.ippc.orst.edu/>

Good pictures: IPMimages.org, <http://www.bugwood.org/index.cfm>

Crop-specific books: APS compendia: <http://www.shopapspress.org/disease-diagnostic-series.html> (they also sell cool videos of pathogens infecting plants for teaching purposes – see clips online)

Turf:

Corwin, Tisserat and Fresenburg. Identification and Management of Turfgrass Diseases. <http://extension.missouri.edu/explore/agguides/pests/ipm1029.htm> (free pdf or order for \$3)

Cranshaw, W. 2004. Insect Management Recommendations for Turf and Ornamentals, \$15.95 <http://urc.colostate.edu/titles/XCM38.html>

Home use pesticide database (not necessarily current, unfortunately):

<http://wsprod.colostate.edu/cwis487/hup/>

Trees:

Colorado State University Cooperative Extension Service. 2000. Insects and Diseases of Woody Plants of the Central Rockies. Bulletin 506. 284 pp. W. R. Jacobi, Co editor.

[this is currently being revised] Order online, \$40

<http://urc.colostate.edu/titles/506A.html>

SDSU Tree Pest Alert: <http://www.state.sd.us/doa/Forestry/educational-information/Pest-Alert-Archives.htm>

Western Foliage Diseases (note: most conifer problems we see in the lab are not caused by a disease) <http://www.fs.fed.us/r6/nr/fid/widweb/wid-fold.shtml#fd-1>

Vegetables:

Cornell: <http://vegetablemdonline.ppath.cornell.edu/>

<http://diagnostics.montana.edu>

Submitting Plant Disease Specimens:

Extension Agents: please use the Plant Diagnostic Information System (PDIS), www.pdis.org, to submit specimen information and remember to send the specimen with a print out of the sample summary. Please read the directions (<http://diagnostics.montana.edu/electronic.pdf>) for PDIS submission and/or watch the video (<http://www.pdis.org/Video/PDIS%20Review/index.html>). If you have any questions about PDIS, please contact Kara Schile, kschile@montana.edu, (406) 994-5150.

1. Send in whole plants with roots whenever possible.
2. Collect samples with mild, moderate, and severe symptoms as well as a healthy comparison.
3. Keep some soil around the root ball; wrap this in plastic and secure with rubber band around the base of the plant. Loosely enclose the foliage in plastic or paper.
4. Try to package samples so that when they arrive in the Clinic, we could replot them and have the plants survive!
5. Try to keep sample as fresh as possible until you can get it to the county agent: refrigerate if possible.
6. Include photographs or videotapes illustrating the problem if possible.
7. **Mail to:** Schutter Diagnostic Lab, P.O. Box 173150, Bozeman, MT 59717-3150. Please mail a copy of the PDIS Summary with the sample.

Please include background information. Plant problems often are influenced by many different factors, so include as much information as possible:

- Plant and variety
- Irrigated or dryland
- Soil type
- Crop history
- Seeding date, rate, and row spacing
- Chemicals used with names, rates, and dates
- Rainfall, temperature extremes, heavy winds
- Pattern of symptoms in the field
- Previous problems in the field

Mushroom Diagnostics—Questions to ask clients:

Please be as accurate as possible in filling out Mushroom Specimen ID Form 212 (<http://diagnostics.montana.edu/Mushroom/Form212.pdf>) **parts 5 through 9**. For accurate identification, it is important to know the habitat in which the mushrooms are growing. For example: some mushroom species only grow near poplar trees-these may be in a lawn growing on the roots of poplar trees, some may grow in a lodgepole pine forest, others may grow in a pasture-far from any trees.

Please make sure you let us know your question. For example:

- Is it edible?
- Is it poisonous?
- How do I get rid of it?
- What is it (curiosity)?

Mushroom Submission:

1. Please send at least 2 specimens for identification.
2. Include the whole mushroom cap, stem and **MOST IMPORTANTLY** any underground structures.
3. Submit fresh, average-sized specimens, not the largest or smallest ones.
4. Wrap each specimen separately in wax paper or newspaper (newspaper has properties that reduce decay). Please **DO NOT** place specimens in plastic bags since this will hasten decay.
5. **DO NOT** wrap different specimens together!
6. Mail in a sturdy box. Please **DO NOT** mail in an envelope since this will squash the specimens.
7. Write: **Mushroom specimens-refrigerate immediately** in large letters on the box.
8. **Mail to:** Cathy Cripps, Dept. of Plant Sciences & Plant Pathology, P.O. Box 173150, Bozeman MT, 59717-3150. **Remember to mail the form with the specimen.**