



Plant Pathology



Reading / Reference Materials

CMG GardenNotes

- References and Review Questions: Plant Pathology, #330
- Plant Pathology, #331
- Homework: Plant Pathology, #332

CSU Extension Fact Sheets

- Aspen and poplar leaf spots – #2.920
- Backyard orchard: apples and pears [pest management] – #2.800
- Backyard orchard: stone fruits [pest management] – #2.804
- Bacterial wetwood – #2.910
- Cytospora canker – #2.937
- Diseases of roses in Colorado – #2.946
- Dollar spot disease of turfgrass – #2.933
- Dutch elm disease – #5.506
- Dwarf mistletoe management – #2.925
- Fairy ring in turfgrass – #2.908
- Fire blight – #2.907
- Forest fire – Insects and diseases associated with forest fires – #6.309
- Friendly pesticides for home gardens – #2.945
- Greenhouse plant viruses (TSWV-INSV) – #2.947
- Honeylocust diseases – #2.939
- Juniper-hawthorn rust – #2.904
- Juniper-hawthorn rust – #2.904
- Leaf spot and melting out diseases – #2.909
- Necrotic ring spot in turfgrass – #2.900
- Non-chemical disease control – #2.903
- Pesticides – Friendly pesticides for home gardens – #2.945
- Pinyon pine insects and diseases – #2.948
- Powdery mildew – #2.902
- Roses – Diseases of roses in Colorado – #2.946
- Russian olive decline and gummosis – #2.942
- Strawberry diseases – #2.931
- Sycamore anthracnose – #2.930

CSU Extension Publications

- Insects and diseases of woody plants of the central Rockies – 506A

Curriculum developed by **Mary Small**, CSU Extension, Jefferson County

- Colorado State University, U.S. Department of Agriculture and Colorado counties cooperating.
- CSU Extension programs are available to all without discrimination.
- No endorsement of products named is intended, nor is criticism implied of products not mentioned.

Revised November 2008



Books

- *Abiotic Disorders of Landscape Plants*, Costello, Perry, Matheny, Henry, Geisel, University of California Agriculture and Natural Resources Publication 3420, 2003
- *Diseases of Annuals and Perennials*, Chase, Daughtrey, Simone, Ball Publishing, 1995
- *Diseases of Trees and Shrubs*, Sinclair, Lyon and Johnson, Comstock Publishing Associates, a division of Cornell University Press, 1987
- *Diseases of Woody Ornamentals and Trees in Nurseries*, Jones and Benson, American Phytopathological Society (APS) Press, 2001
- *Essential Plant Pathology*, Gail Schuman and Cleora J. D'Arcy, APS Press, 2006
- *Landscape Plant Problems*, Byther, Foss, Antonelli, Maleike, Bobbitt, Washington State University Puyallup, 1996
- **The Disease Compendia series**, APS Press. Booklets covering diseases of various crops including apple/pear, conifers, corn, cucurbits, foliage plants, peppers, potatoes, potted plants, raspberry, rose, stone fruits, strawberries, tomatoes and turf.
- *Tropical Foliage Disorders*, Griffith, Ball Publishing Co., 2002

Web Based

- *A Systematic Approach to Diagnosing Plant Damage*, Green, Malloy, Capizzi, Oregon State University, 1990 <http://oregonstate.edu/dept/nurserystartup/onnpdf/onn130601.pdf>
- *The 20 Questions of Plant Problem Diagnostics*, <http://ohioline.osu.edu/sc195/030.html>

Learning Objectives

At the end of the training, students will be able to:

- Define disease as it relates to plants.
- Describe the difference between a sign and a symptom.
- Identify the 4 components of the plant disease pyramid.
- Identify examples of biotic and abiotic causes of disease.
- Describe how to manage common leaf spot and canker diseases using IPM techniques.
- Describe and utilize the plant diagnostic process.

Review Questions

1. Define a plant disease.
2. What four components must be present for biotic disease development?
3. Another name for a living cause of disease is_____.
4. Another name for a non-living cause of disease is_____.
5. How are fungi dispersed? Bacteria? Phytoplasmas? Viruses?
6. Define the following terms:
 - a. Chlorosis
 - b. Canker
 - c. Mycelium
 - d. Ooze
7. List four ways to manage foliar diseases.
8. A client brings you a foot long branch of a chokecherry tree. The leaves on the branch tips are dark brown and wilted. The branch tip is bending over. Could this be fireblight? Why or why not?
9. What is the recommended pruning procedure for removal of fireblight infected branches?
10. List two management techniques for tomato spotted wilt virus.
11. List two management techniques for canker diseases.
12. How are leaf scorch and winter desiccation similar?
13. Three characteristics of healthy roots are:
14. When diagnosing plant problems, why is it important to know what a “normal” plant looks like?
15. Random patterns of injury point to a/an_____ problem; uniform patterns of injury point to a/an _____problem.