



CMG GardenNotes #330

Plant Pathology References and Review Material

Reading/Reference Materials

CSU GardenNotes

- <https://cmg.extension.colostate.edu/volunteer-information/cmg-gardennotes-class-handouts/>.
- #331, *Plant Pathology*.

CSU Extension Fact Sheets

- <https://extension.colostate.edu/topic-areas/yard-garden/>.
- #2.800, *Backyard Orchard: Apples and Pears* [pest management].
- #2.804, *Backyard Orchard: Stone Fruits* [pest management].
- #2.900, *Necrotic Ring Spot of Kentucky Bluegrass*.
- #2.902, *Powdery Mildew*.
- #2.903, *Non-Chemical Disease Control*.
- #2.904, *Juniper-Hawthorn Rust*.
- #2.907-1, *Fire Blight in Fruit Trees*.
- #2.907-2, *Fireblight in Ornamental Trees and Shrubs*.
- #2.910, *Bacterial Wetwood*.
- #2.920, *Aspen and Poplar Leaf Spots*.
- #2.925, *Mistletoes in Colorado Conifers*.
- #2.930, *Sycamore Anthracnose*.
- #2.931, *Strawberry Diseases*.
- #2.937, *Cytospora Canker*.
- #2.939, *Honeylocust Diseases*.
- #2.946, *Diseases of Roses in Colorado*.
- #2.947, *Greenhouse Plant Viruses (TSWV-INSV)*.
- #2.948, *Pinyon Pine Insects and Diseases*.

Planttalk Colorado™

- <https://planttalk.colostate.edu/>.
- #1400-21, *Fairy Rings*.
- #1411, *Fireblight*.
- #1423, *Dutch Elm Disease*.
- #1433, *Rose Diseases*.
- #1450, *Juniper-hawthorn Rust*.

- #1522, *Dollar Spot Disease of Turfgrass*.
- #1524, *Leaf Spot and Melting Out*.

Other

- *Insects and Diseases of Woody Plants of The Central Rockies* – Extension Bulletin 506A.
- *A Systematic Approach to Diagnosing Plant Damage*, Green, Malloy, Capizzi, Oregon State University, 1990,
<https://agsci.oregonstate.edu/sites/agscid7/files/horticulture/osu-nursery-greenhouse-and-christmas-trees/onn130601.pdf>.
- *The 20 Questions of Plant Problem Diagnostics*,
<https://ohioline.osu.edu/factsheet/plpath-gen-3>.
- *Abiotic Disorders of Landscape Plants*, Costello, Perry, Matheny, Henry, Geisel, University of California Agriculture and Natural Resources Publication 3420, 2003. ISBN-13: 978-1-879906-58-7.
- *Diseases of Annuals and Perennials – A Ball Guide: Identification and Control*, Chase, Daughtrey, Simone, APS Publishing, 1995.
- *Diseases of Trees and Shrubs*, 2nd edition, Sinclair, Lyon and Johnson, Comstock Publishing Associates, 2005. ISBN-13: 978-0801443718.
- *Diseases of Woody Ornamentals and Trees in Nurseries*, Jones and Benson, American Phytopathological Society (APS) Press, 2001.
- *Essential Plant Pathology*, 2nd edition, Gail Schuman and Cleora J. D'Arcy, APS Press, 2009.
- *Landscape Plant Problems*, Byther, Foss, Antonelli, Maleike, Bobbitt, and Glass. Washington State University Extension, MISC0194. 2006.
- *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. Available at <https://my.apsnet.org/APSSStore/>.

Learning Objectives

At the end of this training, the student will be able to:

- Define disease as it relates to plants.
- Describe the difference between a sign and a symptom.
- Identify the four 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 Integrated Pest Management techniques.
- Describe and use the plant diagnostic process.

Review Questions

1. Define a plant disease.
2. What four components must be present for biotic disease development?
3. What is another name for a living cause of disease?
4. What is another name for a non-living cause of disease?
5. How do fungal pathogens spread? Bacteria? Phytoplasmas? Viruses?
6. Define the following terms:
 - Chlorosis.
 - Canker.
 - Mycelium.
 - 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. List three characteristics of healthy roots.
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.