

The Landscape Alert

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Powdery Mildew in the Landscape

Adapted from an article by Holly Thornton, UGA Homeowner IPM Specialist

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Powdery mildew is a well-known disease in most landscapes. Generally, this disease causes little harm to the plants it infects and rarely causes death to plants. Powdery mildew may be on several different plants in a landscape at once (crape myrtles, oaks, roses, phlox, crape myrtle, fruit trees, oaks, chrysanthemums, dahlias, delphiniums, phlox, begonias, snapdragons, and zinnias etc.) but the fungi infecting these plants are all different. In other words, the disease generally does not spread from one type of plant to another. The fungus overwinters/survives in infected plant parts that remain on the plant and on fallen plant debris.

Symptoms of powdery mildew infection are the same regardless of the host plant. Superficial white or gray powdery fungal growth will appear over affected plant parts. The patches of white powdery growth can be on one or both sides of leaf surfaces. The fungus can infect various plant parts including: leaves, stems, fruits, and flowers.

Infected leaves may have yellow or purple spots at times when the fungus is not actively producing spores. Severe infections can result in dry, brown, shriveled up leaves and plant parts. Leaves may drop off the plant and fruit and flowers may become distorted.

Unlike most other fungal pathogens that require free moisture to germinate and infect plant tissues, infection for powdery mildew fungi is decreased in the presence of moisture on the plant surface. This disease tends to be more of a problem in drier weather and locations. When rainfall increases, the incidence of this disease decreases.

Moderate temperatures (60 to 80°F – warm days & cool nights), high humidity, and drier weather all promote the spread of this disease. Therefore, we generally do not see this disease during Georgia summers in the landscape. Overcrowding and shading will also encourage the incidence of powdery mildew infections. Expect the disease to be less common as we enter the hot summer weather or if we get rain.

Disease Management

Cultural Control is the best method:

- 1) Purchase resistant varieties if available! (#1 way to manage disease). For a list of resistant crape myrtle varieties see - www.pubs.caes.uga.edu/caespubs/pubcd/L331.htm
- 2) Prune out diseased tissues, remove dead tissues, and rake and remove any fallen plant tissues (leaves, woody tissue, etc.). (This is the source of survival for the fungus).
- 3) Maintain healthy plants – provide good air circulation around and within the plants, good soil drainage, proper watering practices (From midnight to 10 am, 8-12” deep, avoid wetting foliage - especially during times of drought).

Chemical control is usually not necessary, since this disease generally does not kill plants.

- 4) Begin sprays as soon as disease is detected.

- 5) Spray on a regular basis. Read and follow all label directions when using pesticides.
- 6) Preventative sprays work best.
- 7) Good coverage is important (both sides of the leaves & all leaves).
- 8) Chemicals for control (active ingredients) - Triadimefon, Myclobutanil, Thiophanate-methyl, sulfurs, and coppers.

References:

- 1) Agrios, G.N. 2005. 5th edition. Plant Pathology.
- 2) Ohio State Fact Sheet - <http://ohioline.osu.edu/hyg-fact/3000/3047.html>

For more information:

Common Landscape Diseases in Georgia (with photos) - <http://pubs.caes.uga.edu/caespubs/pubcd/B1238.htm>

Powdery mildew on ornamental plants: Facts and Control (English and Spanish) - <http://apps.caes.uga.edu/urbanag/Hispanic/PowderyMildews.pdf>

Pesticide recommendations - <http://www.ent.uga.edu/pmh/>