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Apple: Powdery mildew

Use *Integrated Pest Management (IPM)* for successful plant problem management.

Biology

Powdery mildew of apple is a fungal disease found on twigs, leaves, blossoms, and fruit. New growth is particularly susceptible, since the fungus overwinters in buds. The entire terminal may become covered with powdery mildew. Leaves typically develop a characteristic gray-white powdery growth, often on the underside. Infected young leaves may be curled and distorted. Infected foliage is brittle and may be killed. Dark brown fungal fruiting bodies may be seen by midsummer, when the white fungal mats turn brown. Affected fruits typically show a net-like pattern of russetting in the infected areas. Powdery mildew is favored by humid nights and warm days. Find "Recommended Fruit Trees for the Puget Sound" at <http://nwfruit.org>.

Management Options

Non-Chemical Management

- ~ Plant varieties that are suitable for western Washington climates.
- ~ Prune out and destroy severely infected shoots as they appear. It is important to remove the early-spring infected shoots.
- ~ Succulent new growth is often particularly susceptible to powdery mildew infection. Provide proper culture to prevent heavy flushes of new growth.

Select non-chemical management options as your first choice!

Chemical Management

IMPORTANT: Visit *Home and Garden Fact Sheets* for more information on using pesticides

Apply fungicides when leaves are separating, just exposing bud cluster. When in blossom, wait until 3/4 of petals have fallen before spraying. Repeat at 7-day intervals for 3 or more applications when conditions favor disease. Monitor for new infections. Serenade has shown variable efficacy in tests in western Oregon. Necrotic foliage may result if horticultural oils are applied within 10 days of any sulfur application. Do not use oils during freezing temperatures, above 90 degrees F, or when plants are under heat or moisture stress. Do not apply oils when foliage is wet because good coverage is essential. Homeowners should not make foliar applications to trees over 10 ft tall. Consult a commercial pesticide applicator for treatment of trees and shrubs over 10 ft. tall.

Listed below are examples of pesticides that are legal in Washington. Always read and follow all label directions.

- ~ Bayer Advanced Natria Neem Oil Conc [Organic]
 - active ingredient: clarified hydrophobic extract of neem oil
 - EPA reg no: 70051-2-72155
- ~ Bi-Carb Old-Fashioned Fungicide [Organic]
 - active ingredient: potassium bicarbonate
 - EPA reg no: 54705-10
- ~ ferti-lome Horticultural Oil Spray RTSpray
 - active ingredient: oil/pet distillate
 - EPA reg no: 48813-1-7401
- ~ Hi-Yield Snake Eyes Dusting Wettable Sulfur
 - active ingredient: sulfur
 - EPA reg no: 7401-188-34911
- ~ Hi-Yield Snake Eyes Dusting Wettable Sulfur
 - active ingredient: sulfur
 - EPA reg no: 7401-188-34911
- ~ Lilly Miller Sulfur Dust Fungicide/Insecticide Dust or Spray

- *active ingredient: sulfur*
- *EPA reg no: 802-16*
- ~ Monterey Horticultural Oil [Organic]
 - *active ingredient: mineral oil/pet distillate light*
 - *EPA reg no: 48813-1-54705*
- ~ Safer Brand Garden Fungicide/Flowers, Fruit & Vegetables Conc
 - *active ingredient: sulfur*
 - *EPA reg no: 42697-37*
- ~ Spectracide IMMUNOX Multi-Purpose Fungicide Spray Conc
 - *active ingredient: myclobutanil*
 - *EPA reg no: 9688-123-8845*
- ~ This list may not include all products registered for this use.

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Images



*~ Caption: Powdery mildew on apple foliage
~ Photo by: M. Bush*



*~ Caption: Powdery mildew on leaves
~ Photo by: R.S. Byther*



*~ Caption: Russeting from powdery mildew on fruit
~ Photo by: G.G. Grove*