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## Cucumber, Pumpkin, Squash: Powdery mildew

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

### ***Biology***

Powdery mildew is a common fungal disease of squash. Upper and lower leaf surfaces and stems are typically affected. Small, white spots quickly enlarge into patches of characteristic powdery-white fungal growth. Older leaves, shaded leaves, and leaf undersides are favored locations for powdery mildew development, although it can quickly spread to involve large portions of the plant. Tiny, speck-like, black fungal structures may be present in the white mats. Severely affected leaves may yellow and die prematurely. Occasional fruit infections occur on cucumber, although most commercially-grown varieties are resistant. Disease development is favored by humid weather, cool nights, and cloudy days. Dense plantings are more likely to be affected.

### ***Management Options***

#### **Non-Chemical Management**

- ~ Plant resistant varieties when available. Resistant cucumber varieties include 'Calypso', 'Cherokee', 'Cross Country', 'Dasher II', 'Flurry', 'Marketmore', 'Pioneer', 'Quest', 'Regal', 'Royal', and 'Turbo', among others.
- ~ Rotate crops. Do not plant cucumbers and related species in the same locations for at least two years.
- ~ Space plantings to provide good air circulation.
- ~ Remove plant debris from the garden. Destroy or discard (do not compost) diseased materials.

*Select non-chemical management options as your first choice!*

#### **Chemical Management**

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

Usually the disease does not warrant fungicide applications. Do not use spray oils if temperature is below 50 F, above 90 F or when plants are under heat or moisture stress. Do not apply when foliage is wet. Good coverage is essential.

**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
- ~ Monterey Horticultural Oil [Organic]
  - active ingredient: mineral oil/pet distillate light
  - EPA reg no: 48813-1-54705
- ~ Safer Brand Garden Defense Multi-Purpose Spray Conc [Organic]
  - active ingredient: clarified hydrophobic extract of neem oil
  - EPA reg no: 70051-2-42697
- ~ This list may not include all products registered for this use.

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*Images*



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



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*~ Caption: Powdery mildew on squash  
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