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## ***Beet, Chard: Downy mildew***

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

### ***Biology***

Downy mildew can infect any aboveground portion of beets and Swiss chard. The fungus can infect young cotyledon leaves, causing them to appear yellow, mildewed, and to curl downward. Larger leaves develop pale green to yellow spots on the upper surface, with corresponding white to grayish mildewed spots on the lower surface. These spots may later turn brown and die. The fungus can survive in infected seed and roots. Downy mildew is favored by cool temperatures and high humidity.

### ***Management Options***

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

- ~ Rotate crops yearly.
- ~ Plant resistant varieties. The beet variety 'F.M. Detroit Dark Red' is reported to be resistant.
- ~ Plant in well-drained soils and avoid overhead watering.
- ~ Space plantings to provide good air circulation.
- ~ Remove and destroy or discard (do not compost) infected plants and plant parts. Do not leave diseased debris in the garden.

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

#### **Chemical Management**

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

Although fungicide applications do not protect perfectly, they are useful when conditions are severe.

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

- ~ Bonide Liquid Copper Fungicide Conc/Organic Gardening
  - active ingredient: copper octanoate
  - EPA reg no: 67702-2-4
- ~ Soap-Shield Flowable Liquid Copper Fungicide [Organic]
  - active ingredient: copper octanoate
  - EPA reg no: 67702-2-56872
- ~ This list may not include all products registered for this use.

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*Images*



*~ Caption: Downy mildew on beet  
~ Photo by: OSU slide library*