# Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

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# Cucumber downy mildew (143)

Photo 1. Yellow spots of downy mildew, *Pseudoperonospora cubensis*, on the upper surface of a leaf; they are often angular and restricted by the leaf veins.

Photo 4. Yellow irregular patches caused by downy mildew, *Pseudoperonospora cubensis*, on the upper surface of a melon leaf.

Photo 5. Downy mildew, *Pseudoperonospora cubensis*, on the lower surface of a melon leaf showing irregular brown patches where spores are produced.


Photo 3. Underside of a zucchini leaf showing brown patches where downy mildew is forming spores. The white patches are powdery mildew (**see Fact Sheet no. 63**).

Photo 1. Drying and loss of leaf canopy in a crop of cucumber caused by downy mildew, *Pseudoperonospora cubensis.* Note the exposure of the fruit could cause sunscald.

## Summary

- Worldwide distribution. On members of the cucumber family (cucurbits): important on cucumber, rockmelon and zucchini, but also on gourd, melon, pumpkin, squash, watermelon, zucchini.

- Not a fungus, a water mould, or oomycete. Spots yellow, then brown, merge; leaves dry and die.
- Spread is by wind and water splash, and long distance in air currents when humidity is high. Survival is on volunteer plants and weeds.
- Cultural control: avoid overhead irrigation; space plants to allow air movement; avoid planting in warm and wet times of the year; tolerant varieties available (melon, cucumber, watermelon); weed.
- Chemical control: copper, chlorothalonil, mancozeb (protectants); metalaxyl, phosphorus acid (systemics).

## Common Name

Cucumber downy mildew

## Scientific Name

*Pseudoperonospora cubensis*

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Information from Gerlach WWP (1988) *Plant diseases of Western Samoa*. Samoan German Crop Protection Project, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) Gmbh, Germany; and information (and Photos 1&5) from *Diseases of vegetable crops in Australia* (2010). Editors, Denis Persley, Tony Cooke, Susan House. CSIRO Publishing. Photos 2&3 Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org. Photo 4 Jacquie (Wright) Kami, formerly Plant Pathologist, Secretariat of the Pacific Community, Suva, Fiji.

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