

Powdery Mildew on Watermelon

Anthony P. Keinath and Gabriel Rennberger

Powdery mildew consistently was among the most prevalent diseases of watermelon in a survey of foliar diseases done in 2015 and 2016, second only to gummy stem blight. As no resistant cultivars of watermelon are available, fungicides are necessary to manage the disease.



Symptoms and Signs

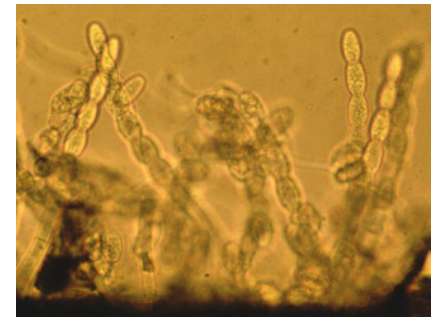
The typical symptoms of powdery mildew on watermelon are white colonies on the leaf surface consisting of mycelium and spores of the fungal pathogen (picture on bottom left). Symptoms are found on leaves and petioles. Fruits are rarely affected. On leaves it also causes yellow spots (picture on top left) that reduce photosynthesis. In severe cases the entire leaf surface can be covered with powdery mildew. This may lead to the death of leaves. The damage caused by powdery mildew is smaller fruit and more sunburned fruits as a result of a thinner leaf canopy. In greenhouses powdery mildew can be a serious problem on seedlings of hybrid squash and bottle gourd rootstocks and on watermelon seedlings before and after grafting.



How Powdery Mildew Spreads

Spores are produced in chains on the leaf surface (picture on the right) where they break off and are spread by wind. When they land on a leaf of a suitable

host like watermelon, the spores germinate and penetrate the leaf surface. After extracting nutrients and growing across the leaf surface, powdery mildew forms new spores, and the cycle repeats itself many times during the growing season. Under favorable conditions, powdery mildew can develop quickly, and symptoms can appear within three days of infection. Spores remain alive up to eight days. Dry conditions promote reproduction and spread of powdery mildew.



Fungicides Recommended to Manage Powdery Mildew

Powdery mildew reduces both the yield and quality of watermelon crops. The application of effective fungicides against powdery mildew is highly recommended. The resulting yield increase, up to 75%, compensates for the fungicide cost and generates extra profitability of the crop. Powdery mildew has a relatively high risk of becoming resistant to fungicides. Always use two different fungicides in rotation when spraying watermelon and other cucurbits for powdery mildew.

Fungicide	FRAC Group	Risk of Resistance
Quintec*	13	Medium
Luna Experience*	7 + 3	Medium to High
Torino**	U6	High
Procure	3	Medium
Switch*	9 + 12	Low to Medium
Vivando*	U8	Medium

*Apply no more than twice before alternating to fungicides with different active ingredients.

**Maximum of two applications per crop.

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