



Small Grains

Canola and Mustard - Powdery Mildew

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Identification and Life Cycle

Powdery mildews of canola and mustard are caused by the fungi *Erysiphe polygoni* and *E. cruciferarum*. The disease cycle is initiated by windblown conidia, which infect its hosts over a range of humidity (50 to 95%) during moderate to warm (68 to 80°F) temperatures. The pathogens overwinter as cleistothecia (sexual fruiting structures) or mycelia in volunteer host plants.

Plant Response and Damage

Powdery white spots appear first on leaves, and eventually grow to cover entire leaves. Symptoms usually develop on the bottom surface of older leaves first, but all leaves become diseased as plants age. Infected leaves wither and die, leading to premature defoliation. Powdery mildew reduces yield by reducing the effective photosynthetic area, but powdery mildew is not generally considered a serious disease problem on canola or mustard.

Management Approaches

Biological Control

AQ10 biofungicide is a fungal hyperparasite (*Ampelomyces quisqualis*) of the powdery mildew fungus. AQ10 must be applied preventatively along with a mineral-oil or silicone surfactant early in the morning or later at night to be most effective. The use of conventional fungicides such strobilurins should not be applied when AQ10 is used for powdery mildew control.

Cultural Control

Resistant canola and mustard varieties are available and should be planted if suitable for your marketing and production needs. Eliminate volunteer host plants and crop debris.

Chemical Control

Chemical controls must be used in combination with cultural controls to be most effective. Resistance to

several fungicides has been reported in the powdery mildew fungi, so fungicides with different modes of action must be rotated or tank-mixed to prevent or delay resistance development. Thorough coverage is essential for effective disease control.>

Product List for Powdery Mildew:

Pesticide	Product per acre	Application Frequency (days)	Remarks
Azoxystrobin			
Quadris	6.2-15.4 fl oz	7-14 days	Maximum of 3 applications or 2.88 quarts per season; Do not make more than 1 application of Quadris before rotating to a fungicide with a different mode of action; 0 day PHI
Neem			
Trilogy	1% solution	7-14 days	Apply in 25 to 200 gallons

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