

Fact sheet

Sunflower downy mildew

What is Sunflower downy mildew?

Downy mildew of sunflower (*Plasmopara halstedii*) is a foliar pathogen that affects sunflowers and related species in the Asteraceae (daisy) plant family.

This pathogen was first discovered in the in the United States in the 1920s but has since been found in most sunflower producing countries; except for Australia. The pathogen causes leaf symptoms and stunting and is capable of causing yield losses of up to 39% overseas.

What does it look like?

Downy mildew of sunflower causes infected plants to become stunted. The upper surfaces of infected leaves develop light coloured areas that typically start along the veins and spread outwards. The undersides of infected leaves can become covered with a fluffy white coloured fungal growth.

What can it be confused with?

Sunflower downy mildew could potentially be confused with the endemic Sunflower powdery mildew (*Golovinomyces cichoracearum*).

Sunflower powdery mildew causes the upper surfaces of leaves to become covered with a white fungal growth, whereas the upper surfaces of Sunflower downy mildew infected leaves become discoloured and white fungal material only forms on the underside of infected leaves.

What should I look for?

Look for symptoms of Sunflower downy mildew such as stunted plants, and leaf symptoms.

If you see any unusual symptoms in your crop please contact the Exotic Plant Pest Hotline on 1800 084 881.



Stunting symptoms caused by Sunflower downy mildew

Ferenc Vitanvi, Godollo University of Agricultural Sciences, Bugwood.org



Infected sunflower plant. Note white spores developing on underside of leaf (arrow)

Howard F. Schwartz, Colorado State University, Bugwood.org



Upper leaf surface of infected plant. Note discolouration

RPV, Ile de France Archive, Les Services Régionaux de la Protection des Végétaux, Bugwood.org



Howard F. Schwartz, Colorado State University, Bugwood.org

Symptoms of Sunflower downy mildew on the underside of infected leaf



Elizabeth Bush, Virginia Polytechnic Institute and State University, Bugwood.org

Sunflower powdery mildew causes white fungal growth on the upper surfaces or leaves



Howard F. Schwartz, Colorado State University, Bugwood.org

Infected sunflower plant

How does it spread?

Spores can be dispersed in soil, crop debris or carried on seed. Spores can also be dispersed by the wind onto the leaves of nearby hosts.

Where is it now?

The pathogen was first reported affecting sunflowers in the United States. Since then it has been reported on all sunflower producing continents other than Australia.

How can I protect my farm from Sunflower downy mildew?

You can protect your farm from Sunflower downy mildew by checking your property frequently for the presence of new pests and by closely examining poorly performing plants for signs of stunting or leaf discoloration.

Make sure you are familiar with the symptoms of common pests so you can tell if you see something different.

If you see anything unusual, call the Exotic Plant Pest Hotline on 1800 084 881



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