

DOWNY MILDEW

Peronospora spp., *Plasmopara* spp., *Albugo*, and others

Downy mildews are distinguished by masses of downy spores usually appearing on the undersides of leaves. These masses may be white, yellow or purplish depending on the host plant, the downy mildew species, and the stage of disease. They may produce reddish-purple leaf splotches on the upper leaf surface. Leaf drop may occur, especially with infected roses. Some crops, such as *Antirrhinum* (snapdragons), can be completely lost due to this disease.



Downy Mildew of *Antirrhinum*

Life Cycle

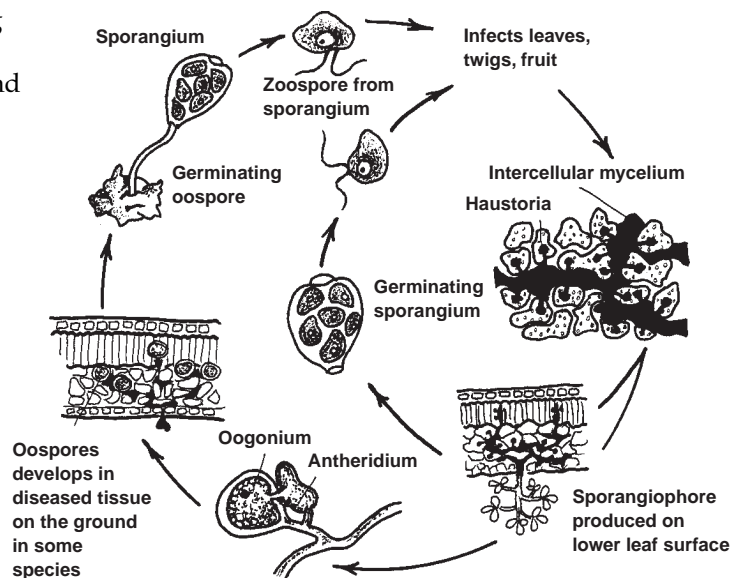
Plants may be infected by downy mildew during periods of cool temperatures and high humidity. These protist organisms are related to *Pythium* and *Phytophthora*, and grow inside the plant tissues. When humidity levels are high, a mauve-grey, felt-like mat appears, usually on under leaf surfaces. Many spores are present in the mat and can be spread from plant to plant via air movement. The organism carries over to new crops on dead plant material and may also persist in the soil.

Look for velvety fungal growth on the undersides of leaves.

Common hosts include:

Allium (onion family)
Antirrhinum (snapdragon)
Corydalis
Cynoglossum
Dimorphotheca
Godetia
Mecanopsis
Papaver
Rosa
Senecio (cineraria)
Teucrium

Downy Mildew Disease Life Cycle



Antirrhinum (*Peronospora antirrhini*)

Infected plants are stunted. Dead or dying spots or areas appear on infected leaves. Upper leaves show yellowish discoloration. A light grey-brown, felt-like growth can be observed on the undersides of infected leaves. The growing points eventually die.

Downy Mildew of *Antirrhinum****Rosa*** (*Peronospora sparsa*)

Purplish-red to dark brown spots form on leaves. Leaflets turn yellow with islands of green spots remaining. Greyish masses of spores may develop on undersides of leaves in humid conditions. Leaves may drop prematurely and plants may be stunted.

Downy Mildew of *Rosa*Downy Mildew of *Rosa*