

POWDERY MILDEW

Damage symptoms

Usually seen on the upper leaf surfaces although some powdery mildews may infect lower surfaces. Older leaves may be more symptomatic than younger ones. The fungus typically grows on the surface of the leaf where it produces whitish spores in abundance. This gives the leaf a powdery appearance as the name implies.

Host plants

Most floral and foliage plants found in greenhouses are susceptible to attack.

Disease characteristics

Spores and mycelium are produced on leaf surfaces. Spores are released into the air for short-range dispersal when temperatures are moderate, air is moving or there is a rapid drop in relative humidity coupled with drying. Each of these factors renders the plant surfaces, where the pathogen grows, unfavorable for its survival. Airborne spores landing on host plant tissue germinate, penetrate the plant tissue, and grow internally. Eventually the fungus will proliferate on the surface of the leaf and again produce conidia for dispersal within the greenhouse.

Management

The severity of powdery mildew infections depends upon several environmental factors in the greenhouse. If these factors can be either eliminated or altered, the pathogen can be managed.

Consider the following factors:

- ✓ Infection often starts at doors or cracks in the greenhouse. Eliminate drafts in your greenhouse.
- ✓ Adjust temperatures. In general host plants can tolerate higher temperatures than powdery mildew. Temperatures above 86°F will kill or retard growth of most powdery mildews.
- ✓ Although some powdery mildews germinate in dry conditions, most germinate best in a saturated or near saturated, humid environment. Adjust the level of moisture in your greenhouse to limit relative humidity.
- ✓ Strong sunlight accompanied by high temperatures promote dry leaves. Dry leaves are not favorable for powdery mildew development.
- ✓ Fungicides are available for use.



Phlox seedlings damaged by powdery mildew.



Close-up of a kalanchoe leaf heavily infected with powdery mildew.