

# Common Diseases of Florist Crops

## Powdery Mildew

Powdery mildew, one of the most easily recognized of all plant diseases, is characterized by the presence of a whitish, fungal growth on the surfaces of leaves, stems, and sometimes petals. The fungal threads and the spores (which develop on short, erect branches) are visible with a strong hand lens. Under some conditions, however, the threads are so sparse that the mildew can be detected only by examination under strong light with a good lens or dissecting microscope. In some cases, the mildew develops only in small areas in which the leaf cells are killed and turn black.



The mildew spores are easily detached and carried by air currents to surrounding plants where they initiate new infections. On some plants, such as grape ivy, rose, and delphinium, the young foliage and stems often become severely distorted in addition to being covered by the whitish mildew growth.

Seriously affected plants may be of little value as cut flowers or potted plants. Poinsettia crops are particularly vulnerable to their own, crop-specific, powdery mildew disease. While scouting for whiteflies on poinsettias, also watch for powdery mildew colonies on the upper or lower surface of older leaves. At times a yellow spot on the upper leaf surface may indicate a mildew colony growing on the undersurface. Pick off affected leaves and initiate fungicide treatment immediately. Be alert to powdery mildew on verbena – symptoms may begin as chlorotic or purple patches that become easily recognizable as powdery mildew only after the disease is well established.

## Bioenvironmental Control

Unlike the spores of nearly all other fungi, powdery mildew spores can germinate and initiate infections at humidity levels far below those commonly encountered in the greenhouse. Development of mildew following infection, however, may be more rapid and luxurious at higher humidities. As a deterrent to mildew in greenhouses, ventilation and heating should be adjusted to avoid high-humidity conditions. Irrigate plants early in the day. Heat at least one hour before sunset, and provide adequate ventilation. Horizontal airflow systems assist in management of powdery mildew.

## Chemical Control

Under some conditions, fungicides are essential for mildew control. Systemic and nonsystemic protectant

materials are available for spray application.