



## Powdery Mildew

Powdery mildew is a common fungal disease that affects many ornamental plants. Small white fuzzy patches appear on the upper leaf surface. Overtime, these patches spread and coalesce to cover the leaf. Heavily infected leaves may turn yellow and drop prematurely. Powdery mildew is most common on young leaves and shoots but can also infect flower buds and fruits. While powdery mildew primarily impacts the aesthetics of the host plant and is not a threat to the health of mature woody plants, an infection on any species can make a crop unsellable.

### Biology

There are many species of powdery mildew fungi. These fungi tend to be host-specific, meaning that they only infect certain species or genera of plants. Unlike many other foliar pathogens, powdery mildew does not require free moisture to infect leaves; in fact, long periods of leaf wetness can kill powdery mildew spores. These fungi thrive under conditions with high humidity and mild temperatures (60-80°F), making nursery and greenhouse settings ideal for infection, especially during transitional seasons like spring and fall when the drop in temperature from day to night can increase relative humidity.



Figure 1. Powdery mildew colonies on a rose. Photo credit: A. Hagan, Auburn University, Alabama Cooperative Extension

### Cultural Practices

IPM strategies are important tools for successful disease management. Emphasize good sanitation practices and consistent irrigation and fertilization to maintain optimal plant health. Powdery mildew is heavily dependent on conducive environmental conditions, so managing humidity through plant spacing, air flow and ventilation, and reducing excessive shading is important for disease prevention and maximizing the efficacy of any chemical control. Disease-resistant cultivars are available for many susceptible species and can help reduce the need for pesticides.

### Chemical Strategies

Even with strong cultural practices, fungicides play a critical role in managing powdery mildew, especially in high-value ornamental crops. Fungicides should be applied preventively, especially under conditions of high humidity and mild temperatures. Effective fungicide programs involve alternating products with different modes of action to prevent the development of resistance.

Atticus Products for Effective Management of Powdery Mildew				
Atticus Brand	Active Ingredient	REI (hours)	Activity	FRAC Group
Torrid™	Metconazole	12	Translaminar, systemic	3
Artavia™ 2 SC	Azoxystrobin	4	Translaminar, systemic	11
Talaris™ 4.5 F or Talaris™ 50 WSP	Thiophanate-methyl	12	Systemic	1