ohp Partners with solutions RECIPE for SUCCESS™

Downy Mildews

Conditions Favorable for Downy Mildews

Downy mildews can become active with cool to warm (not hot) temperatures, wet conditions and high humidity. Six continuous hours of wet leaves will provide an excellent environment for downy mildew to become established in a crop. **Downy mildews** are in the same pathogen class as Pythium and Phytophthora (water molds). Symptoms are not always easy to recognize and may appear as other plant problems. There may be microscopic sporangia (spore sacs) on the bottom of the leaf with a darker blotch on the upper surface. Some downy mildews are more aggressive than others. **Downy mildew** grows within the plant tissue and not on the surface and symptoms may not appear until conditions are perfect for spore formation, when they emerge on the underside of the leaf. On some plants, symptoms include distortion, stunting and curling of new leaves that appears much like damage from aphids.

Downy mildew on impatiens in landscape, M. Daughtrey

Downy mildew on upper leaf surface or snapdragon

Downy mildew sporulation on underside of snapdragon leaf

Downy Mildew Control Measures

To control downy mildews it is important to irrigate early in the day and have good air circulation to avoid wet leaves for long periods, especially overnight. Sometimes these best efforts might not be enough to avoid conditions favoring a downy mildew outbreak.

Control is difficult and most fungicides only offer protection and not eradication. When conditions are favorable for downy mildew it is very important to use a fungicide rotation program to manage these diseases as part of a fungicide resistance management program. Treatments under favorable conditions are generally applied on 7-day intervals.

ohp Partners with solutions RECIPE for SUCCESS™

Note: Downy mildews are host specific. The downy mildew that affects Impatiens is not the same downy mildew that attacks Snapdragons. This can be used as part of a planting rotation scheme if a bed has been lost to downy mildew. However, if conditions are favorable for development of one downy species the other species will also develop if spores or infected plants are introduced.

OHP products registered for control of Downy Mildews

OHP Products	Chemical Class	MOA Group	Residual	REI
Compass® O	Strobilurins	11	7 days	12
FenStop®	Imidazolinones	11	7 days	12
Aliette®	Ethyl Phosphonates	33	7 days	12
Disarm® O	Strobilurins	11	7 days	12

OHP Recipe for Success on Controlling Downy Mildews

Application	Rate per 100 gallons	Rate per gallon	Residual
1. FenStop®	7 fluid ounces	0.4 tsp or 2 ml	7 days
2. Aliette®	25 lbs	1.25 tsp or 6 grams	7 days
3. Disarm® O	4 fluid ounces	0.5 tsp or 3 ml	7 days
4. Stature® DM	6.4 ounces	0.5 tsp or 1.9 grams	10 - 14 days
5. Adorn + Mancozeb	4 fluid ounces	3 mL	7 days

Note: Mancozeb can be alternated with or tankmixed with products in this recipe to aid in control and disease management efforts.