

Be on the lookout for downy mildew this fall

Charles Krasnow, UConn Extension Sept. 19, 2026

Downy mildew is a significant concern to the greenhouse industry and affects many ornamental crops, causing leaves to fall off and eventually plant death. The pathogen spreads rapidly causing significant losses in a short time. Downy mildew is difficult to control once established. Most of the downy mildew species are specific to a given crop and infect only closely related plants. The pathogen causing downy mildew is an obligate parasite that needs a living host to grow and reproduce. The downy mildew pathogen is referred to as a water mold (oomycete) and not a true fungi.

Some ornamentals prone to infection include snapdragon, salvia, alyssum, rose, osteospermum, coleus, statice, impatiens, basil, and cleome. Herbaceous perennials such as aster, agastache, buddleia, coreopsis, digitalis, geum, hardy geranium, lamium, papaver, rudbeckia, and veronica are also susceptible to downy mildew. Symptoms vary depending upon the specific downy mildew pathogen, the crop, and environmental conditions. Some of the more common symptoms of downy mildew include yellow or brown patches on the leaves that may be bound by leaf veins. With downy mildew infections, a fuzzy layer of “downy” sporulation is often seen on the leaf underside, especially during humid conditions.

Downy mildew develops during cool (50-75° F), wet conditions with high relative humidity above 85%. Prolonged periods of leaf wetness favor downy mildew sporulation, spread and infection. Look on the underside of leaves, early in the day, to try and observe the downy sporulation. Downy mildews must be managed preventively with different classes of fungicides. Do not carry over plants from one season to the next because they may be carrying the disease without showing obvious symptoms. Choosing less susceptible varieties is an important management tool.

Management

- Inspect incoming plugs or plants carefully for signs of downy mildew upon arrival.
- Select less susceptible cultivars, if available.
- Monitor susceptible plants at least once a week.
- Promptly remove diseased plants and debris.
- Reduce humidity levels in the greenhouse by using proper plant spacing.
- In the greenhouse, proper environmental management with the use of computerized controls, HAF fans, heating and venting to reduce humidity levels is necessary
- Water early in the day and avoid overhead irrigation or use drip irrigation where possible.

Preventive fungicide programs should be applied for highly susceptible crops. Top available fungicides listed below:

Segovis (oxathiapiprolin, 49), Subdue MAXX (mefenoxam, 4), Fenstop (fenamidone , 11), Micora (mandipropamid, 40), Orvego (ametoctradin/ dimethomorph, 45/40), Stature SC (dimethomorph, 40).

Fungicides providing suppression: Alude (phosphorous acid salts, 33), Adorn (fluopicolide, 43), Heritage (azoxystrobin, 11), Segway (cyazofamid, 21)

2026 UCONN Sentinel Plots

This year there were sentinel plots at the UConn Research Farm in Storrs. These are plots planted to monitor for local downy mildew outbreaks as a way to monitor and alert growers when downy mildew is observed. Sentinel plots are planted in many states. **Note** that this is only representative of local infection sources.

The crops planted in the 2026 sentinel plots: Basil ‘Genovese’, Coleus ‘Wizard Golden’, Impatiens ‘Accent White’, Rudbeckia ‘Goldsturm’, Salvia ‘Fairy Queen’, Agastache foeniculum ‘Anise’, and Cucumber ‘Speedway’.

Downy mildew confirmations in Sentinel plots and other locations in Connecticut

Crop	Location
Coleus Wizard Golden	Storrs
Impatiens Accent White	Storrs
Cucumber Speedway	Storrs
Rudbeckia Goldsturm	Commercial greenhouse
Salvia Fairy Queen	Commercial greenhouse
Salvia Golden Sage	Commercial nursery
Basil Genovese	Commercial cut flower field
Agastache foeniculum	Commercial nursery
Coleus, multiple cultivars	Commercial greenhouse
Rose	Commercial nursery
Coreopsis	ND ¹
Flowering nicotiana	ND
Hellebore	ND

¹ ND=not detected

² Confirmation of downy mildew made by symptom observation, hand lens to observe sporulation, and microscopic examination when necessary.