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Powdery Mildew on Petunia

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Recently a grower called asking about petunia rooted cuttings and recently transplanted petunias with lower leaf discoloration and necrosis. After close inspection, it was determined that the symptoms were a result of powdery mildew. The typical and usually obvious symptoms of dusty white-colored fungal growth were difficult to find and were subtle when present.

Watch for lower leaves that are mottled or chlorotic that eventually turn brown and die. Occasionally, small dark spots or speckles can be observed on the chlorotic leaves. If you see symptoms of discolored and necrotic lower leaves, carefully inspect leaves for signs of powdery mildew. Symptoms and signs are usually first observed on lower or interior leaves. To help identify powdery mildew, you can place a plant or a few chlorotic leaves in a clean plastic bag with a moist (not sopping wet) paper towel. Inspect in a day or so and look for the telltale white fuzz of the powdery mildew fungal growth.

Chlorotic lower leaves on petunia, an early symptom of powdery mildew infection. Photo: Margery Daughtrey, Cornell University

You can always contact your local extension specialist or diagnostic lab for assistance.

Petunias are known to be susceptible to a few species of powdery mildew, including *Podosphaera xanthii*, *Oidium longipes, Golvinomyces cichoracearum,* and *Golvinomyces orontii*, though *Podosphaera xanthii* is most common in greenhouse production. *P. xanthii* also infects calibrachoa, verbena, cucurbits, and calendula; if you spot powdery mildew on any one of these crops, keep a close eye on the others.

Practices to help manage powdery mildew include providing good air movement with proper plant spacing, fans, and ventilation and managing relative humidity. Where possible, eliminate poten-

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Discolored petunia leaf infected with powdery mildew. Note small areas of fungal growth.
Photo: Nora Catlin

tial carryover of the pathogen between crops – remove and discard any weeds, volunteer plants, and unsold host plants. Numerous fungicides are labeled for powdery mildew management on ornamentals in greenhouses. Use different modes of action in rotation and make sure to read the pesticide label and follow all instructions and precautions.

For more information on identifying powdery mildew in the greenhouse, watch the following podcast: *How to Spot Powdery Mildew on Petunias*, http://www.greenhousegrower.com/video/c:93/disease-control/576/.

Necrotic lower leaves on petunia, a result of powdery mildew infection.
Photo: Margery Daughtrey, Cornell University

In cooperation with our local and state greenhouse organizations