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A Quick Review of Poinsettia Powdery Mildew

Powdery mildew can spread rapidly once the conditions are favorable and an epidemic can be devastating to a poinsettia crop. The key is finding it early and staying on top of management.

After a long while of not seeing powdery mildew on poinsettia, several cases were seen last season. Perhaps that was a fluke and we won't see it again – let's hope that is the case. But let's use the mildew seen last year as a reminder and take the opportunity to review this disease.

What to look for:

Typically you see the white dusty or powdery fungal growth on the surfaces of leaves, however the early symptoms on poinsettia are pale and subtle yellow or chlorotic spots on the leaf surface with white/light gray fungal growth on the leaf undersides. As the disease progresses you can see the fungal growth develop on the leaf surfaces and even the bracts.



An advanced case of powdery mildew on poinsettia (Photo courtesy of Dr. Margery Daughtrey)

When to look for symptoms and signs:

You should be scouting for symptoms and signs of the disease throughout the whole crop cycle. However, be particularly watchful early in the season. Finding and identifying the earlier in the crop means easier and effective management. Waiting for the epidemic to build means it will be

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much more challenging to get the disease under control, plus your fungicide options are more limited later in the season. Realize that some labels warn against applying to bracts and residue close to sale is another consideration.

Conditions for powdery mildew:

Epidemics can very quickly develop in greenhouses once conditions are favorable. The disease can be slowed or halted with high temperatures. Temperatures under 86F and relative humidity of 85% or higher will favor the disease and will cause rapid development.

Management tips:

- Scout regularly and carefully, starting early and continuing through the season, and paying especially close attention in the fall when temperatures become cooler (68-86F) and ideal for disease development.
- Seek the assistance of a diagnostic lab or your local extension specialist when needed.
- Keep humidity under 85%.
- Timely applications of effective fungicides is key to management. Don't wait for this disease to explode before trying to get it under control; you'll want to ensure good management prior to bracts. Repeat applications at regular intervals as per label instructions and be sure to rotate between products with different modes of action. Pay attention to notes on plant safety. If using a product new to you for poinsettias test on a small number of plants prior to treating the entire crop; realize that some products may not cause injury on leaves but may injure bracts. Active ingredients that have shown good efficacy in published trials with poinsettia powdery mildew include strobilurins (trifloxystrobin, azoxystrobin, pyraclostrobin), triflumizole, myclobutanil, triadimefon, and piperalin; many other products are labeled and can be useful in your fungicide rotation programs.



Early symptoms of powdery mildew on poinsettia. If you see chlorotic spots, check the leaf undersides for signs of the white, diffuse growth of the powdery mildew fungus. (Photo courtesy of Margery Daughtrey)



Top: Yellow or chlorotic spots on the upper leaf surface, indicating corresponding fungal growth on the leaf undersides, a few colonies of powdery mildew are also visible. *Bottom:* colonies of powdery mildew on the undersides of the leaf. (Photos courtesy of Margery Daughtrey)



Powdery mildew colonies on poinsettia bracts in color. (Photo courtesy of Margery Daughtrey)

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