

POWDERY MILDEW

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Gardeners may notice a white coating on the leaves of their cucurbit plants, phlox, roses and lilacs. This is a common fungal disease that appears this time of year on several different hosts called powdery mildew. The whitish gray “powder” seen on both sides of leaves, stems, and flowers are the spores of the fungal pathogen. These spores are light weight and are carried on air currents to other susceptible crops throughout the growing season.

Although powdery mildew looks like it is spreading from crop to crop, the pathogen is very host-specific, so the powdery mildew pathogens attacking vine crops (*Podosphaera xanthii* and *Erysiphe cichoracearum*) are different genera and or species than the rose powdery mildew pathogen (*Podosphaera pannosa* var. *rosae*).



Whitish gray spores of the powdery mildew pathogen on rose. Jay W. Pscheidt

It looks like the disease is spreading from crop to crop because the powdery mildew group of pathogens all like the same conditions: warm weather with high humidity. Unlike many other fungal pathogens, powdery mildew pathogens do not require free moisture to grow.

The good news is the disease is rarely fatal to the plant but can reduce vigor. In dense plantings of vine crops, powdery mildew can spread rapidly and can result in loss of leaves and reduced yields. Although the pathogen does not attack the fruit, commercial pumpkin growers often use fungicides to control the disease because it can weaken the handles on carving pumpkins,

necessary for every good Halloween pumpkin! If weather conditions change to cooler temperatures with low humidity, the pathogen will not spread rapidly.



Powdery mildew on pumpkin. Kenny Seebold, UK

There are several good practices to help avoid the disease in the future. Start first with choosing powdery mildew resistant cultivars. There are several cultivars of pumpkins, phlox, roses and lilacs resistant to powdery mildew. Be sure to plant in sunny areas and use good plant spacing in the garden and landscape to provide lots of air circulation among plants. Woody ornamentals, like lilacs, can also be pruned to allow for good air flow through the plant. A final resort is the use of a fungicide to manage the disease. Fortunately, there are good organic options for gardeners including the use of horticultural oils like Neem oil and potassium bicarbonate-based fungicides. These fungicides would need to be applied at the first appearance of the disease and would need to be reapplied according to label directions. The products will not “cure” the disease that is already on the plant but will protect new growing tissues from the disease.

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