

## WHAT IS POWDERY MILDEW?

All along the west coast from Mexico to Canada, powdery mildew is one of the most common summer plant diseases. There are many different species of powdery mildew, and each one infects a different plant.

Powdery mildew commonly looks as if baby powder has been sprinkled or smeared on leaves and sometimes stems. Oldest leaves are the first to show damage, and while it may not kill the plant, it will affect plant growth and decrease the yield of certain vegetable crops.

Moderate temperatures and shade promote the development of powdery mildew, while extreme heat and direct sun inhibit spore development and growth. Hence we see powdery mildew more on the coast than further inland.

Many plants rarely, if ever, get powdery mildew, while other plants are notoriously susceptible to it, e.g. shrubs like Roses and Nandina; annuals and perennials like Zinnias, Cosmos, Delphinium, Dahlias, and Verbena. Many vegetable gardeners are very familiar with powdery mildew on crops like cucumbers, squash, and tomatoes.

One of the common misconceptions about powdery mildew relates to the difference between why a plant *contracts* the disease versus what *spreads* the disease.

Most often we hear that a plant “gets” powdery mildew from overhead watering, water on the foliage, or the “marine layer.” Water on foliage does spread spores of powdery mildew.

However, a plant that is *lacking water* is more likely to *contract* the disease. Spores of all types of powdery mildew will germinate and grow in the *absence of water*. One evidence of this is that on the coast powdery mildew is more prevalent during the drier summer months than in winter.

A simple demonstration illustrates this point. Plant a cucumber or squash in one pot and plant another in a second pot, but place a saucer filled with water under the second pot. Once vigorous growth begins and the plants require more water, the first one without the water-filled saucer will be far more likely to get powdery mildew. *A plant lacking water or that has wilted between waterings is far more likely to become infected with powdery mildew.*

### **Preventing powdery mildew**

First off, be sure your plants are well watered. During summer, vigorously growing squash and tomatoes may require *daily waterings*, especially when grown in containers or shallow raised beds.

Water the soil not the plant. Keep water off the foliage and avoid overhead waterings. On the coast, water in the morning instead of evening so that splashed water does not remain on the foliage overnight.

Provide good air movement for your plants. Many tomatoes get powdery mildew simply because they were planted too close together. Many fungal diseases are promoted by damp, still air. Give your plants as much sun as they will tolerate; again, damp shade can promote development of mildew spores.

Remove severely infected leaves, especially on vegetable crops and roses. Also be sure to remove plant debris on the ground under your plants.

Use organic, slow-release fertilizers. In addition, beneficial microbes help plant roots access water and nutrients in the soil creating a healthier, more disease resistant plant.

There are controls for powdery mildew. Neem Oil works great for controlling powdery mildew on vegetable crops like tomatoes and cucumbers. Be sure to read the *entire label* before application. You will be instructed to apply it in early morning or evening, i.e. *not in direct sun*.

If you think you have powdery mildew on your plant and would like more assistance, take a sample of your plant to an independent garden nursery. They will help you find the right remedy, so that you are successful in all your gardening endeavors.