

The Plant Doctor

Powdery Mildew on Crape Myrtle

The twisting, smooth textured, cream to cinnamon brown colored trunk of the crape myrtle makes it a pleasing plant in both the winter and summer garden. The red, pink, white, lavender, or purple flowers give great summer pleasure.

One of the few problems with the crape myrtle is its dark green leaves tend to turn white in the summer. This is because many crape myrtles are susceptible to infection by a particular white fungus.

The fungus grows in thin layers on the leaf surface. It produces many chains of spores that make a talcum powder-like appearance. This powdery-like appearance gives the fungus its name—powdery mildew.

On warm dry days, the air can carry these small, light spores to uninfected shoots, buds, leaves, and flowers. Nighttime cools the air, increasing the relative humidity. The spores, like plant seeds, absorb the moisture, germinate, and grow.

Powdery mildew grows best on young, actively growing tissue, such as new shoots and buds. The fungus may entirely cover new growth and affect it severely. Older leaves can become infected under severe conditions. An infection may take as few as 3 to 5 days from the time the spore lands on a leaf and it begins producing new spores.

Infected shoots may dry and shrivel, because the fungus sends specialized thread-like structures into the upper leaf cells to absorb water and nutrients. Buds may abort and fall to the ground. Badly infected leaves may curl and twist. They may then turn yellow and fall to the ground. Each infection produces many thousands of spores to continue the cycle.

In mild climates, such as coastal areas, powdery mildew may survive the winter as spores lodged in bud scales and bark and on the material that fell to the ground the previous season. The spores germinate on newly emerging tissue in the spring. In noncoastal areas of the state, another fungal stage, called the cleistothecia stage, survives the unfavorable winter period.

Cleistothecia are produced later in the summer and appear as small black structures, about the size of a small pepper grain, among the white powdery mildew. They overwinter in the soil near the base of the tree, where they fell while attached to plant parts. Spring rains cause them to produce a new type of spore that winds carry back to the tree. Thus, raking and disposing of fallen leaves and other plant parts will reduce next year's infection.

The best way to manage powdery mildew on crape myrtle is to plant resistant cultivars. You should plant them in

full sun and in open areas with good air circulation. A list of some powdery mildew resistant cultivars appears at the end of this information sheet.

If established crape myrtles are infected, prune them to increase air circulation.

Remove the small, twiggy growth below and within the canopy. This keeps the trunk clean, letting air into the canopy. Pruning crape myrtles is best done in the winter, when they are dormant.

Good air circulation reduces the chance of spores' settling on the plant and reduces the humidity level in the plant canopy. Also prune surrounding plants to encourage air circulation and the sun's getting to the crape myrtle.

Because high humidity and a susceptible host are all that is required for powdery mildew to thrive, there will be many situations in which fungicides will be needed. In general, you should apply fungicides when a powdery mildew infection starts. If the powdery mildew seems to be increasing, increase the frequency of fungicide application. Applications on 1- to 2-week intervals may be needed. Once you reduce the infection, decrease the frequency of fungicide application.

Many fungicides are labeled for use on crape myrtle. These may be sold to homeowners under many different names, so look for the following

active ingredients:

If you want "organic" fungicides, look for sulfur (but do not apply in temperatures of 90 °F or above), neem oil extract, potassium bicarbonates, or maybe even some copper formulations. Synthetic fungicides include active ingredients of propiconazole, myclobutanil, tebuconazole, thiophanate-methyl, triforine, triadimefon, and dodemorph. Rotate one active ingredient with another to help prevent resistance to fungicides. Read and follow all label directions carefully.

Cultural recommendations for crapemyrtle as well as a more detailed novelty selection guide are in *Crapemyrtle, Flower of the South*, Publication 2007.

Crape myrtle cultivars with good to excellent resistance to powdery mildew include Tonto, Acoma, Hope, Pecos, Apalache, Centennial Spirit, Comanche, Hopi, Lipan, Near East, Osage, Sioux, Yuma, Biloxi, Miami, Natchez, Tuscarora, Tuskegee, and Twilight.

Crape myrtles are beautiful trees that thrive in Mississippi. Proper selection and care will help you enjoy them to their fullest.



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