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Powdery Mildew of Landscape Ornamentals

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Introduction

Powdery mildew is a fungus disease that is widespread on many landscape plants. This disease may be caused by up to seven large groups of fungi. These groups are distinguished from each other by the sexual fruiting stage of the fungus. Powdery mildew is perhaps the most common, conspicuous and easily recognizable plant disease.

Powdery mildew is most common in cool or warm and humid weather conditions, but may occur and cause severe damage in warm and dry climates. Temperatures between 70-80 degrees F and a relative humidity between 85%-100% favor infection.

While powdery mildews affect a diverse group of plants, they are most common on crapemyrtle, euonymus, dogwood, rose and oak in Arkansas. This disease does not affect evergreens such as pines, cedar and juniper.

Symptoms

The most recognizable symptom of powdery mildew is the presence of white, fuzzy "patches" that form on new leaves (Fig. 1). These patches may eventually cover large areas of the leaf.

Symptoms may often appear within one week of infection. The fungus can be seen growing on both sides of the leaf; however, it is most common on the underside of the leaf. Yellow or pale spots or blotches often develop on the opposite side of the leaf. Young shoots, stems, buds and flowers tend to be more susceptible than mature plant parts. When the fungus is abundant on the young leaves and twigs, it causes these structures to twist and become distorted (Fig. 2).

Very susceptible ornamentals such as euonymus can quickly become spotted over the entire plant (Fig. 3). The fungus grows primarily on the plants' surfaces, seldom invading the underlying tissues. The fungus gets its nutrition from the host plant by producing specialized absorbing structures, called haustoria, that grow into the upper layers of plant cells. High humidity is important for spore germination.

The powdery mildew fungi survive from season to season on infected tissues such as leaves and stems. Spores of the powdery mildew fungi are often carried on wind currents or splashing water.

Control Procedures

The best control for powdery mildew is to plant resistant varieties. Resistant varieties of crapemyrtle and dogwood have shown some promise for minimizing this disease. Infection can be minimized by reducing leaf wetness. Susceptible plants grown and maintained in well-spaced, sunny locations have a lower incidence of powdery mildew than those grown in

shady, humid conditions. Fallen leaves should be removed and destroyed during the fall or winter since they are important sources for infections in the spring.

For woody ornamental plantings that have a history of persistent powdery mildew, regular applications of a systemic fungicide may be necessary to manage the disease. If fungicides are considered as part of an overall control program, applications need to begin in the spring at the first evidence of the disease. Elemental sulfur is an effective fungicide on many plants. Other fungicide choices include materials that contain such active ingredients as triforine, propiconazole, triadimefon and myclobutanil. Consult Extension publication *MP154, Arkansas Plant Disease Control Products Guide*, for specific recommendations, available at www.uaex.uada.edu. Contact your local county Extension office for additional information.

Fig. 2. Powdery Mildew of Crapemyrtle

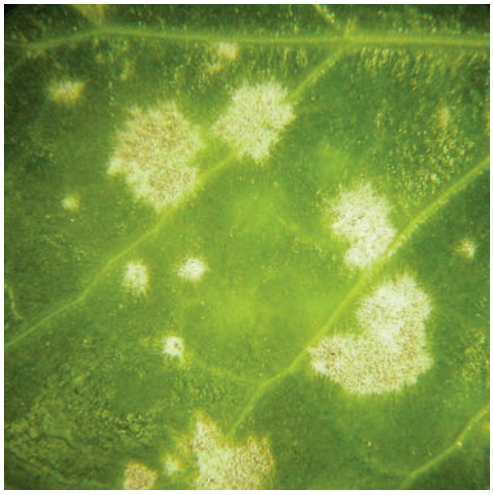

Fig. 1. Fungal Growth of Powdery Mildew on Leaf

Fig. 3. Powdery Mildew of Euonymus

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