POWDERY MILDEW

Overview

Powdery Mildew (*Blumeria graminis*), is a common and relatively recognizable disease affecting a wide range of host trees. This disease infects plants during times of high humidity, most often in the spring. Symptoms are most commonly found on the upper side of leaves, but can also infect stems, buds, flowers, and fruit.

Powdery mildew can be prevented easily, but proactive action is required, most fungicide treatments do little benefit when applied after symptoms have formed. This disease occurs across the entire United States.

Diagnosis

- Reduced plant vigor throughout the year.
- Early leaf drop of infected leaves.
- Chlorotic (yellowing) patches surrounding lesions and grey mycelia growths.
- Infection is generally strongest on foliage closest to the soil.
- White powdery (mycelial) growth on leaves, stems, buds, or fruits are visible during the growing season.

What To Do

During high humidity conditions in the spring, host plants become infected. Spores are moved by rain, wind, or insects. Powdery mildew overwinters in leaf litter under plants.

Often times the use of cultural controls can keep powdery mildew symptoms at bay. However, during especially wet springs, a spray -applied fungicide can provide additional control. For severe infections preventative fungicide applications can be helpful in controlling symptoms. Although the disease is relatively easy to control, proper timing, before symptoms appear, is crucial to getting good control.

Typical powdery mildew symptoms on rose

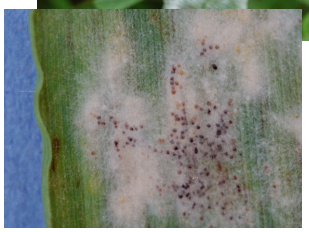

PHOTO: USDA-FS

close-up showing the mycelium and the black fruiting bodies

QUICK FACTS

- Powdery mildew is a fungal disease that often attacks many different species of trees and shrubs in the landscape.
- Management practices often focus on reducing the time the foliage remains wet by increasing air-flow around plants and avoiding irrigation that wets the leaves.
- While this disease is readily managed by cultural practices and fungicide sprays, the timing of applications in the spring is critical to success.

MANAGING POWDERY MILDEW

Early identification of powdery mildew can prevent major damage to individual plants and prevent the spread to nearby trees and shrubs. Protecting new growth as it emerges is very important. For best effectiveness, fungicides should be applied when the needles begin to emerge in spring. Heavily infected trees may require several years of fungicide applications.

The goal of management with powdery mildew is to protect the new leaves. Currently infected leaves cannot be cured.

Managing the Fungus

There are many different fungicide treatments your arborist may recommend based on the timing and severity of the current infection. The goal of fungicide sprays is to protect the newly emerging leaves from infection. Currently infected leaves cannot be cured.

Applications are typically made in the spring as the new leaves begin to emerge. Sprays will be applied 2-3 times at 10-14 day intervals during the infection period.

Other Treatment Practices

Cultural practices can be very beneficial in interrupting the life cycle of this pathogen.

- Promote air flow by reducing the density of plants around the pine trees
- Modify irrigation system to avoid wetting the leaves; prolonged leaf wetness favors fungal infection
- Install mulch ring around the base of the tree
- Provide low level nitrogen fertilization

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