

DIPLODIA TIP BLIGHT

Overview

Diplodia tip blight (*Diplodia sapinea*), also known as Sphaeropsis tip blight, is a fungus that infects more than 20 pine species throughout the Central and Eastern United States, as well as California and Hawaii.

It is most often found on Austrian pine and can be quite severe on mature trees that are stressed. Diplodia tip blight kills current year's shoots, which means that infections year after year can weaken and eventually kill large trees.

Diplodia tip blight causes the most damage to trees that are old or weak.



Diagnosis

- Brown needles at the tip of the current year's growth are the first symptoms.
- Symptoms occur on lower branches first and work their way up the tree.
- Shoots do not develop to full maturity and needles turn brown in mid to late summer.
- Resin oozes from cankers at the base of new shoots in spring.

What To Do

Diplodia tip blight causes the most damage to trees that are old or weak. Keeping trees in good vigor with deep watering during droughts, nutrition with fertilization or compost and wood mulch, and control of insects can help decrease susceptibility to the disease. However, over-fertilization can make trees more susceptible.

Fungicides can partially control Diplodia tip blight, but it is very important to protect the new growth in the spring. Applications should start just prior to bud break and continue every 10 days until full candle extension.



PHOTO: USDA/FS

Typical diplodia symptoms



PHOTO: USDA/FS

symptoms are common on lower branches

QUICK FACTS

- Diplodia needle blight is a fungal disease that often attacks non-native pine trees in the urban forest.
- Over 20 pine species are infected by Diplodia, but it is most severe on 2 and 3 needled pines including Austrian (*Pinus nigra*), scots (*Pinus sylvestris*), ponderosa (*Pinus ponderosa*), and mugo (*Pinus mugo*).
- Fungicides can partially control Diplodia tip blight, but it is very important to protect the new growth in the spring.

MANAGING DIPLODIA TIP BLIGHT

Early identification of diplodia can prevent major damage to individual trees and prevent the spread to nearby trees. 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 diplodia tip blight is to protect the new needles. Currently infected needles cannot be cured.

The appearance of treated trees will begin to improve the season after the treatments were performed. Untreated trees will continue to lose needles each year and will die from this disease if the disease is not addressed.

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 needles from infection. Currently infected needles cannot be cured.

Applications are typically made in the spring as the new needles (known as 'candles') 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 needles; prolonged needle wetness favors fungal infection
- Install mulch ring around the base of the tree
- Provide low level nitrogen fertilization

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