

## EVERGREEN DISEASES TO CONTROL SOON

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Bagworms are not the only issue we are seeing in evergreens. While insecticides for bagworms should not be applied until June, April and May are the months to apply fungicides for control of the following diseases of pine and spruce.

Most fungal diseases require moisture on leaves or needles to cause an infection. Since we've had a few years of good moisture, there is an increase in conifer diseases. Now is the time to get up close and personal with your trees and look for symptoms to determine if fungicide use is justified.

On spruce, if two year old and older needles on the lower half of the tree have turned reddish brown, this could be *Rhizosphaera* needle cast. To confirm, fungal structures may be seen on affected needles with a hand lens as rows of black specks.

Needle cast is most commonly seen on Colorado blue spruce since this species is overplanted. Needles are infected in spring but symptoms do not become evident until a year later when needles turn reddish brown. Fungicides labeled for spruce are effective if damage is not already too severe.

Fungicides must be applied during the spring infection period to work. Make the first application when new growth is between one-half and two inches long, usually in May, and a second application three to four weeks later. Treatment for two to three consecutive years may be needed.

*Stigmina* needle cast is a new disease of spruce readily mistaken for *Rhizosphaera*. It too effects inner and lower needles and causes rows of black fungal structures on needles. Microscopic observation in a lab is required to distinguish between the two diseases.

Due to the recent emergence of this fungus, fungicides labeled for *Stigmina* are rare; however fungicides may still be used if registered for use on spruce in the state the tree is located. While more is to be learned about this disease, use the same timing recommended for *Rhizosphaera*. Treatment for four to five consecutive years may be needed.

Chlorothalonil is commonly recommended for spruce diseases, but certain formulations have label restrictions that advise DO NOT use on blue spruce. If using a chlorothalonil based product, read the label to make sure it is registered for the type of spruce being sprayed.

Fungicides containing azoxystrobin, mancozeb, copper salts of fatty and resin acids, and copper hydroxide are also effective for controlling spruce disease. Cultural controls that improve airflow through the canopy in conjunction with fungicides will help provide the best control.

There are two blights common on pines, mainly Austrian and ponderosa. *Dothistroma* needle blight begins as reddish-purple spots or bands on previous years needles. Infected needles turn brown from the tip back to the lesion. Lower branches are most heavily infected. To control, make the first fungicide application in mid-May to protect existing needles and a second application about mid-June to protect new growth.

*Sphaeropsis* tip blight infects established pines causing new growth to be stunted, black pycnidia (specks) to develop on bottoms of pine cones and entire branches to die with needles turning brown and often hanging straight down. It is helpful to pick up and discard pine cones to reduce overwintering fungi.

To control with fungicides, the first application is made at bud break (typically around the third week of April), a second just before needles emerge (early May), and a third 7 to 14 days later. The active ingredients of Thiophanate-methyl, Propiconazole, Copper Salts of Fatty & Rosin Acids, or Bordeaux mixture are recommended.