



# *Diplodia Tip Blight*

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Diplodia tip blight is a devastating disease of **two- and three-needle pines**. It is caused by the fungus Sphaeropsis sapinea (syn. Diplodia pinea), thus is also called Sphaeropsis tip blight.

The disease starts with needle infections, which spread into branch tips. The fungus weakens the tree so that secondary insects and diseases attack and cause mortality.

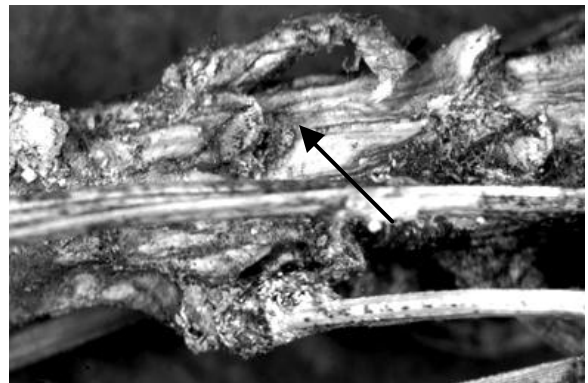
Diplodia tip blight occurs in all areas of the United States north of Georgia. Most pines and spruces are susceptible, especially when planted outside their natural ranges. **Austrian, ponderosa, mugo, red and Scots pine** are most seriously affected.

## **SYMPTOMS**

The first obvious symptom is a yellowing then browning of young needles in the spring, usually on the lower portions of the crown. Branch tip and buds are quickly killed and become soaked with resin. This resin may drip from needles and also makes the dead tip somewhat flexible.

Another pest, which causes dead tips on pine, is the pine tip moth. To distinguish

tip blight from tip moths, bend the dead tip; if it breaks and is hollow it is probably the moth, if flexible it is probably tip blight. In the late summer fungal fruiting structures (pycnidia) form on dead needles. They appear as small black dots, first under the fascicle sheath, then up the needle (Figure 1).



*Figure 1. Needles infected with Sphaeropsis sapinea Arrow points to the fungal fruiting structures (pycnidia).*

## **MANAGEMENT**

Diplodia tip blight more readily infects, and causes more damage on, stressed trees. Therefore, to reduce potential problems it is best to maintain a vigorous tree. To keep the tree vigorous, it should be mulched, watered, fertilized and pruned. Mulch should be

applied from the trunk to the drip line at a depth of 2-4 inches. Avoid mulching directly against the trunk. Wood chips are one of the best mulch materials. Other materials, which can be used, include bark, pine needles and leaf compost.

Trees should be irrigated during dry periods in the spring and summer. Avoid sprinklers, which wet the needles. Instead use a soaker hose, drip or microsprinkler system. If the tree is nutrient deficient, fertilization will improve tree vitality and reduce

susceptibility to disease. Once the tree is infected, all of the above recommendations should be followed as well as pruning and applying fungicides. Pruning will not provide effective control of the disease. However, dead tips may be pruned to improve the appearance of the tree. If pruning is the only management method used, cones should also be removed since they are a major source of inoculum. Fungicide applications should begin at budbreak and be repeated two or three times at 14-day intervals.