



Diplodia (Sphaeropsis) Tip Blight on Pine

Austrian, Scots, ponderosa, mugo, red and other 2 and 3-needled pines are susceptible to the killing of shoot tips and branches by the fungus *Diplodia pinea* (formerly *Sphaeropsis sapinea*).

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Fruiting bodies on cone scales

Symptoms include the browning of needles on new shoots as the needles grow from the fascicle sheath. The shoots die. One of the first indications that a shoot is infected is the oozing of small drops of resin from the shoot buds as growth begins in early spring. Infected buds stop growing and do not reach normal size. New buds will grow to replace the dead bud but these

too become infected. As the disease continues, whole branches may be killed but the needles remain attached. Small black structures erupt through the surface of the infected needles, especially below the sheath at the base of the needles. Similar small black structures also develop on the scales of second-year cones. These structures are the spore-forming fruiting bodies of the fungus from which thousands of spores ooze during wet weather and are splashed throughout the tree. Lower branches on the tree are usually first to be infected.

Diplodia persists in the black fruiting structures in dead shoot tips and infected cones that remain on the tree. The holding of dead needles and the resin flow from shoots and branches are typical of tip blight. Although trees of all ages are

susceptible, disease severity increases as they reach 20-30 years of age. Trees weakened by drought, insects, or mechanical injury (hail, frost) are prone to attack. It has also been shown that high nitrogen fertilization predisposed trees to attack.

Management

- Promote tree vigor by protecting from environmental stresses, insect attack, and injuries.
- Do not use high nitrogen fertilizers on pines.
- Treat the entire crown of the tree but especially the lower branches with a fungicide as the buds begin to swell during bud break and again 2 weeks later. Sprays at other times are not effective.
- Do not plant healthy 2 or 3-needled pines near older infected pines.
- If infected branches are pruned out, disinfest the pruning tools between cuts. This helps to prevent spreading the fungus from branch to branch on the tools.

References

- Hudler, G. W. and W. A. Sinclair. 1978. Diplodia tip blight of pines. Cornell Tree Pest Leaflet A-7.4 pp.
- _____. 1978. Diplodia tip blight of pines. Pennsylvania Christmas Tree Growers' Assoc. Bulletin No. 157. p. 3.
- Nichols, L. P. 1978. Diplodia tip blight of pines. The Pennsylvania State University Ornamentals and Turf Newsletter 2(1):1-3.



Diplodia symptoms on tree and twig.

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