

## CYTOSPORA CANCKER OF SPRUCE

*Cytospora kunzei*

In addition to spruce, particularly blue spruce, the fungus infests Norway spruce, hemlock, red cedar, fir and white pine.

**SYMPTOMS:** Infection by this fungal disease commonly starts on the lower limbs and gradually works up the tree, limb by limb. Needles turn a dull yellowish-green and then purple-brown. Soon needle drop occurs leaving bare ends on the branches. Normal water movement to the needles beyond the infection is restricted, therefore the branches dry out and turn brown.

**CAUSE:** The cause of the canker is the fungus *Cytospora kunzei*, considered to be a weak parasite because it primarily attacks trees that have been weakened by such conditions as drought, low fertility, mechanical injury, insect feeding (such as by the spruce mite), or poor soil conditions. Thus, cankers are generally found in trees that are over 15 years of age. Spores produced in the cankered area are most commonly spread by splashing rain, wind and insects.

**SOLUTIONS:** There is no known cure for *Cytospora* canker and therefore, fungicide treatments are not recommended. The most effective approach in managing this disease is to maintain the health and vitality of susceptible trees. Vigorous trees are less susceptible to *Cytospora* canker and if infected will slow the progress of the disease. Trees should be fertilized from the time they are transplanted in the landscape, rather than waiting until the disease is evident. Supplemental watering is also important for landscape trees, particularly during periods of drought. Infected branches should be removed, sterilizing pruning tools between cuts. Avoid pruning during wet weather to reduce spore spread.



*Disease spreads upward from lower branches, causing trees to become unsightly for many years before they die.*