

# Forest Disease Management Notes

United States  
Department of  
Agriculture

Forest Service  
Pacific Northwest  
Region



## Phomopsis Canker of Douglas-Fir

Phomopsis canker of Douglas-fir is caused by the fungus *Diaporthe (Phomopsis) lokoyae*. This disease appears periodically in the Pacific Northwest, typically 1 or 2 years after droughts. Damage is usually not serious. Infection can result in cankers, top-killing, and tree killing of small trees.

**Hosts:** Douglas-fir.

**Recognition:** Infection causes distinct roundish or oval sunken cankers with brown bark. Bark sloughs in the following growing season. Some resin flow may occur following infection. Small dead branchlets are frequently in the center of cankers. Bark on dead growing tips has a blackish-brown scorched appearance. Fruit bodies appear as fine black pimples on dead bark.

**Disease Spread:** Fungus spreads by spores produced in fruit bodies; wind-borne spores are forcibly ejected from sexual fruit bodies (perithecia); rain-disseminated spores ooze out of asexual fruiting bodies (pycnidia); spores infect small shoots and mycelium. spreads to the main stem; the fungus is endemic on suppressed trees and branches and becomes locally epidemic during droughts.

**Management:** Avoid poor planting sites and overcrowding; in nurseries watering during dry periods will prevent weakening and predisposition to the disease; pruning off affected branches will help control the disease on ornamental trees.

**May be Confused With:** Sunscald, wounds, animal damage.



Phomopsis canker on young Douglas-fir



Top-kill by  
Phomopsis canker