

CHAPTER SIXTEEN

Phomopsis Canker

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Phomopsis lokoyae, also known as *Diaporthe*, is one of several fungi that cause stem cankers on Douglas-fir seedlings. The diseases are most readily distinguished from one another by the ages of the seedlings they infect. *Phomopsis lokoyae* attacks seedlings in the 2+0 year, causing cankers at the base of new growth (Figure 16-1). This fungus is also occasionally associated with cankers on 1+0 seedlings.

Phomopsis canker is sporadic in most years in most nurseries, and

Phomopsis canker may be confused with:
Frost damage
Pesticide damage
Upper stem canker

damage is usually negligible. Occasionally—most often following a long rainy spell at bud burst—the disease causes significant damage, with many seedlings in a nursery affected. The new shoot on an infected seedling is girdled and killed, but

Phomopsis canker symptoms appear:
2+0
Late spring through summer

since the fungus does not grow downward, lateral buds quickly replace the lost leader. Recent



Figure 16-1. Diseased Douglas-fir seedling. Canker begins at or near bud scars, eventually girdling the stem and killing the top.

research suggests that multiple-topped seedlings, whether caused by top pruning or Phomopsis canker, grow into trees of normal form in the field. Phomopsis canker is usually so sporadic that control is not warranted. When necessary, regular applications of fungicides (benomyl and chlorothalonil) reduce the incidence of Phomopsis canker.

Selected references

- Bega, R.V. 1978. *Phomopsis lokoyae* outbreak in a California forest nursery. *Plant Disease Reporter*. 62:567-569.
- Funk, A. 1981. Parasitic microfungi of western trees. BC-X-222. Victoria: Pacific Forest Research Centre, Canadian Forestry Service. 190 p.