

CHAPTER TWELVE

Larch Needle Cast

Robert L. James

This disease is caused by the fungus *Meria laricis*. The pathogen infects western larch seedlings in nurseries in northwestern North America. Outbreaks of the disease have been reported in bareroot nurseries in Washington and Idaho. Larch needle cast appears to be especially damaging to 2+0 bareroot stock at the beginning of the second growing season.

Larch needle cast may be confused with:
Frost damage
Gray mold
Pesticide damage

Symptoms appear as necrotic lesions on newly emerging needles formed shortly after bud break in the spring. The disease increases in severity as the season progresses, sometimes causing spectacular field symptoms (Figure 12-1). Severely infected needles are shed pre-

Larch needle cast symptoms appear:
2+0
Late spring through early fall

turely in the early summer (Figure 12-2). Although heavily infected seedlings may be killed, damage more commonly takes the form of

reduced height and stem caliper, which results in the culling of seedlings at lifting. Cool, wet weather in spring and early summer favors growth of the fungus.

The disease can be controlled in nurseries by application of chlorothalonil to the foliage of seedlings at 2-week intervals, beginning shortly after bud break and ending when warm, dry weather prevails. Damage may also be reduced by out-planting or transplanting seedlings after 1 year. This practice ensures that seedlings are not close to spore-producing needles that were shed during the first growing season.

Selected references

Cooley, S.J. 1984. *Meria laricis* on nursery seedlings of western larch in Washington. Plant Disease. 68:826.

James, R.L. 1985. *Meria* needle cast of western larch seedlings at the USDA Forest Service Nursery, Coeur d'Alene, Idaho. Report 85-20. U.S. Department of Agriculture, Forest Service, Northern Region. 6 p.

Peace, T.R. 1962. Pathology of trees and shrubs. Oxford: Oxford University Press. 753 p.



Figure 12-1. Damage to 2+0 western larch seedlings caused by larch needle cast. Green seedlings are non-host species.



Figure 12-2. A close view of damage to needles of 2+0 western larch seedlings. Note cast needles on ground.