

CHAPTER THIRTEEN

Lophodermium Needle Cast of Scotch Pine

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Lophodermium needle cast of Scotch pine (*Pinus sylvestris*) is caused by one or more fungi of the genus *Lophodermium*, including *L. seditiosum*, *L. staleyii*, and *L. pinastri*. Of these, *L. seditiosum* is the most damaging to seedlings. Infected needles show light green to

Lophodermium needle cast may be confused with:
Frost damage
Nutrient problems
Pesticide damage

brown spots or bands in late spring or summer, then turn brown and drop from the seedling the following winter or spring (Figure 13-1). Shiny black fruiting bodies can be found on the brown needles (Figure 13-2). The disease can cause needle loss on large numbers of seedlings and may continue to affect trees after out-planting.

Lophodermium needle cast symptoms appear:
2+0
Spring through fall

The disease can be prevented by sowing seed from seedlots free of cone scales and debris and by taking care not to move infected stock between nurseries. Pine trees adjacent to the nursery can provide a



Figure 13-1. Beds of susceptible Scotch pine showing typical browning of needles. An unaffected bed of ponderosa pine is on the left.

source of *Lophodermium* spores. The fungicides maneb, chlorothalonil, and benomyl can effectively reduce damage from the disease, but because spore release periods differ among *Lophodermium* species, it may be necessary to apply fungicides monthly throughout the year.



Figure 13-2. Infected *Pinus contorta* needle showing dark fruiting bodies of *Lophodermium seditiosum*.

Selected references

- Minter, D. W.; Millar, C.S. 1980. Ecology and biology of three *Lophodermium* species on secondary needles of *Pinus sylvestris*. *European Journal of Forest Pathology*. 10: 169-181.
- Staley, J.; Raymond, G.; Harvey, G.; Eskins, R.; Davison, A.; Russell, K. 1981. Control of *Lophodermium* needle cast in Pacific Northwest scotch pine. *Northwest Lookout*. May 1981:36-40.