



Forest Health Protection, Southern Region

NEEDLE CASTS,

caused by *Hypoderma* sp. and *Lophodermium* sp.

Importance. - Needle cast fungi are common diseases of conifers throughout the South. Infected trees in forest stands normally recover. However, losses to nonforest conifers, such as Christmas trees and nursery seedlings, can be substantial. Eastern white, loblolly, slash, shortleaf, Virginia, and Scotch pines, as well as spruce and firs, are susceptible.

Identifying the Fungus. - There are over 25 needle cast fungi known in the South. They can be identified only after examining the spores microscopically.



Needle spots caused by a needle cast fungus.



Needle cast on slash and loblolly pine.

Identifying the Injury. - Depending on the identity of the infecting fungus, needles begin to turn yellow-brown by winter or early spring. Later, the browning progresses, and fungal fruiting bodies are produced. These small, black, fruiting bodies may be bordered by brown or yellow margins, or both. In the more advanced stages, the tree has a scorched appearance.

Biology. - Generally, new needles are infected in the spring or summer. The fungi colonize the needle tissue, turning it yellow and later brown. Fruiting bodies are formed in these brown areas, which produce spores that are spread during wet weather to reinfect new needles on other trees.

Control. - No controls are practical in forest stands. Fungicide sprays may be applied in Christmas tree plantings and nurseries.
