

## RHIZOCTONIA BLIGHT OF LONGLEAF PINE IN A FLORIDA TREE NURSERY

J. T. English and E. L. Barnard  
Biologist and Forest Pathologist  
Divisions of Forestry & Plant Industry (FDACS)  
P. O. Box 1269, Gainesville, FL 32602

Rhizoctonia blight of longleaf pine (Pinus palustris), caused by Rhizoctonia solani, is a current problem in some Florida tree nurseries. It is a potential problem throughout the Southeastern United States wherever longleaf pine is grown as a bareroot crop. Disease symptoms appear initially as chlorosis or water soaking of needle bases. Distal portions of needles appear healthy but gradually turn yellow and brown. With time needle bases darken and decay. Eventually infection progresses into the terminal bud and upper tap root. Death of the seedling usually follows. Within seedbeds, blighted seedlings occur in patches of variable size. These "infection centers" consist of dead seedlings surrounded by symptomatic seedlings varying in discoloration from yellow to brown.

Although R. solani has been associated with this disease for many years, pathogenicity was not verified until 1979 (Barnard and English, unpublished). Data concerning regional impact of this disease is lacking. However, one loss estimate has recently been completed. In one Florida nursery, severely blighted seedlings were rogued early in the growing season in an attempt to minimize spread within seedbeds. A systematic inventory of seedling canopy gaps resulting from this sanitation effort and additional disease related mortality revealed an overall loss of 8% (120,000 seedlings). Disease incidence was found to be positively correlated with period of seed storage prior to planting. The source of inoculum in the nursery is uncertain. To date, attempts to isolate the pathogen from two different seed lots (stored 10 and 0.5 years) have been unsuccessful.