Susceptibility of Loblolly x Slash Pine Interspecific F1 Hybrids to Tip Moth Infestation and Fusiform Rust Infection in a South Mississippi Planting

M.T. Highsmith[1], L.H. Lott[2], and C.D. Nelson[3]

Tip moth damage and fusiform rust incidence among families of three loblolly pine (*Pinus taeda*) parent trees from Mississippi, Louisiana, and Texas that were selected for southern pine bark beetle resistance and three slash pines (*Pinus elliotti* var. *elliotti*) selected for different levels of fusiform rust resistance, and five of their interspecific F1 hybrids were assessed in a south Mississippi planting. After two years in the field, the rust resistant slash pine interspecific F1 hybrid had the least amount of tip moth damage (caused by Nantucket pine tip moth, *Rhyacionia frustrana*), and the lowest incidence of fusiform rust disease (caused by *Cronartium quercuum* f. sp. *fusiforme*). The highest incidence of fusiform rust occurred on interspecific F1 hybrids between a Texas loblolly pine parent crossed with a rust susceptible slash pine from south Mississippi and one from Georgia. The loblolly pine open-pollinated families had the most height growth compared to their interspecific F1 hybrids.

[1]Associate Professor, Department of Natural Science and Mathematics, Shaw University, Raleigh, NC and Department of Forestry & Environmental Resources, NC State University, Raleigh, NC
[2]Biological Sciences Technician, Southern Institute of Forest Genetics, USDA Forest Service, Saucier, MS
[3]Research Geneticist and Project Leader,Southern Institute of Forest Genetics, USDA Forest Service, Saucier, MS