

PLANT PATHOGENIC MICROORGANISM MAY BE REDUCING CONE
PRODUCTION IN SEED ORCHARDS

Thomas Miller and D. L. Bramlett

Female flowers of both slash (Pinus elliotii var. elliotii Engelm) and loblolly (P. taeda L.) often die during the period from just before the flowers become receptive to about three weeks after pollination. We think there is a strong possibility that pathogenic microorganisms, especially fungi, may be involved, and we are studying the situation.

This year we have collected flowers and conelets of different damage classes from both slash and loblolly pines in the Arrowhead Seed Orchard. We isolated a variety of fungi from these dead or damaged strobili which we are identifying and maintaining in culture for future inoculation experiments. Flowers and conelets with different symptoms have been collected and are being examined histologically. Pollen is also being examined for contaminating microorganisms.

In some preliminary experiments this year, we have produced damage symptoms on loblolly flowers by inoculating with fungi isolated from damaged flowers of slash pine.

A full-scale study will be required to estimate the impact of microorganisms in seed orchards. We are planning such a study for next year.

-Southeastern Forest Experiment Station, Fusiform Rust Research and Development Program, Athens, Georgia, and Breeding Southern Pines Project, Macon, Georgia.