THE FREQUENCY OF LOBLOLLY— SHORTLEAF HYBRIDS IN SHORTLEAF PINE SEED ORCHARDS AND NURSERIES

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Recent research has shown that hybridization and introgression between shortleaf pine *(Pinus echinata*) and loblolly pine (*P. taeda*) in natural stands has increased dramatically from 1950 to present, and shortleaf pine may be at risk of extinction through introgression. Artificial regeneration of shortleaf pine is an important component of shortleaf pine restoration and forest management, so we are investigating the frequency of hybrids in state and federal seed orchards and in nursery seedlings using simple sequence repeat (SSR) molecular markers. Preliminary results have shown that the rates of hybridization in the seed orchards (5% to 29%) and nurseries (10% to 20%) is higher than the rate observed in trees grown from seeds collected in the 1950s (4%) but is lower than the rate observed in natural regeneration collected 5 to 10 years ago (47%). Our results will be used to suggest management strategies for seed orchard managers and forest managers.