ANALYZING GROWTH AND OLEORESIN PRODUCTIVITY OF LOBLOLLY AND SLASH PINE PSEUDO-BACKCROSS HYBRIDS

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The University of Florida's Cooperative Forest Genetics Research Program and the Forest Biology Research Cooperative established a slash pine (*Pinus elliottii* Engelm Var. elliottii) and loblolly pine (*Pinus taeda* L.) backcross hybrid test. The study consisted of one open pollinated slash pine (E63xMix), one open pollinated loblolly pine (LobxOP), and three pseudo-backcrosses between a single loblolly by slash F1 hybrid with two elite slash and one elite loblolly pine parents. The test has a low and high fertilizer treatment. The objectives of this study are to assess the introgression of alleles and the efficiency and genetic control of various phenotypic growth and productivity traits of the backcrossed loblolly and slash pine families. This study will also compare the short-term oleoresin production of pseudo-backcross hybrids, loblolly and slash pine trees.

After three years of growth, the height, diameter at breast height (DBH), crown width along and across the planting bed, stem form, and disease and mortality status was measured for all trees in the study. In addition, the number of primary and secondary branches at two nodes were counted for all pseudo-backcross hybrids above 6 feet in height and a representative sample of the parent species. In spring of 2017, all trees with measured branch characteristics will be tapped for a 24-hour period to collect oleoresin. This will allow us to assess the difference of oleoresin productivity between both species as well as the different pseudo-backcross families.

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