

DIFFERENCES IN SEED PROPERTIES AMONG RECIPROCAL CROSSES OF  
LOBLOLLY PINE  
(A preliminary report)

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ABSTRACT

In order to determine the relative effects of seed and pollen parents on seed properties and initial germination and growth of loblolly pine seedlings, selected reciprocal crosses among 14 loblolly pine clones were made. Measurements of the total seed weights, seed coat and gametophyte weights, and the percent of filled seeds are reported in this display.

Both the seed parent and the pollen parent affected the weight of the seed. Statistical analyses indicated that the seed parent accounted for 66% of the variation in total seed weight and the pollen parent accounted for an additional 15%. Some clones were particularly poor seed parents while they functioned well as pollen parents.

Planned germination studies and progeny tests will determine the differences in progeny performance among reciprocal crosses. In the meanwhile, tree improvement workers should be aware that there are large and significant differences in the quality of seeds between a cross of A x B and its reciprocal B x A.