

Plantation Survival of Nursery Grown Seedlings in Georgia - Second Year Progress

by

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Abstract.--Second year data from a study of tree survival in plantations in Georgia indicate that poor handling after seedlings are shipped from nurseries and poor planting techniques are the primary causes of excessive seedling mortality.

In continuation of a study first reported at the Kentucky Nursery Conference in 1980, first and second year data are presented. The third year's plantings are established, and growth and survival data will be collected in the fall and winter of 1982. These data will be published soon as a Georgia Forestry Research Council Report and, consequently, data presented in Savannah will not be published in these proceedings.

Methods used in this study were previously explained, (Proceedings 1980 Southern Nursery Conference Tech. Pub. SA-TP 17, Nov. 1981:31-33). Results indicate that poor handling after seedlings are shipped from nurseries and poor planting techniques are the primary causes of excessive seedling mortality. Survival among properly planted trees, however, is significantly affected by top/root ratio, root/tree ratio, weight of roots ≥ 4 mm long, and weight of roots ≥ 5.6 mm long. Thus, root biomass is a most significant attribute of seedlings and one that deserves more attention and care than nurserymen or forest managers traditionally give. It should be noted, however, that the smaller feeder roots (2 mm and less) or those roots that usually are mycorrhizal were not significantly correlated with first year survival.