EFFECTS OF SOIL FUNGI
ON TREE SEEDLING ESTABLISHMENT
IN A SOUTHEASTERN COASTAL PLAIN FOREST

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in
Biology

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Effects of fungi and overstory composition on tree seedling survival and growth were investigated in closed canopy upland forests in the coastal plain of South Carolina. Seedlings of *Quercus alba*, *Cornus florida* and *Pinus taeda* were planted in the understory of two forest types—naturally regenerated hardwood and planted pine. Fungal species composition and biomass were experimentally manipulated with a treatment of the fungicide captan.

In contrast with other studies conducted in different systems (sand dune, grassland, and old field), the effects of soil fungi were minor in a closed canopy forest. Only *Q. alba* showed a significant response to the fungicide ($p < 0.05$) treatment with increased growth.

Overstory composition had no significant effect on growth or survival for any of the species. Both of the commercially desirable species (*Q. alba* and *P. taeda*) had reasonable survival ($\approx 60\%$). Both also maintained positive, though modest, growth. This suggests that an advance regeneration pool could be established successfully by artificial regeneration.

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