

## ROW SEEDING OF FOREST TREE SPECIES ON LIGNITE SPOILS IN EAST TEXAS

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Two study sites were delineated on freshly graded spoil material for row seeding trials. Spoil material was also moved to the greenhouse for pot experiments. One-half of each study site and one-half of the pots were mulched with hay which was mechanically tacked to the spoil.

Six tree species were chosen for seeding: Shumard oak, green ash, loblolly pine, shortleaf pine, sweetgum and autumn olive. All planting was done by hand.

Autumn olive did not emerge and was, therefore, disregarded in analysis. Loblolly pine, shortleaf pine and sweetgum seed were washed from the study areas in heavy spring rains. Thus, emergence of these species was minimal. Emergence of green ash was adequate, but herbaceous competition introduced in the hay mulch had detrimental effects on its survival and height growth. Shumard oak did well in all aspects: emergence and survival were high and vegetative competition did not adversely affect its development. This species alone appears, according to this study, to have potential for row seeding surface-mine spoil.

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