

Agricultural Experiment Station AUBURN UNIVERSITY

R. Dennis Rouse, Director
Auburn, Alabama

Growth of Four Pine Species in Wilcox County, Alabama

W. J. WATSON, G. I. GARIN, and W. B. DEVALL*

LANDOWNER INTEREST in planting pine trees in Wilcox County, Alabama, led to establishment in 1955 of a species performance test on the Lower Coastal Plain Substation. Four blocks of Substation land adjacent to a well-traveled highway near Camden were selected for the study. Within each block, four square plots measuring 90 x 90 feet were established. One plot in each block was planted to longleaf pine, one to shortleaf, one to slash, and one to loblolly pine. A 6 x 6 spacing, which equals 1,210 seedlings per acre, was used.

Survival and height growth in 1959, after four growing seasons, were as follows:

Species	Survival, per cent	Av. height, feet
Loblolly.....	96	11.6
Shortleaf.....	91	8.5
Slash.....	75	11.1
Longleaf.....	29	3.6

The four species retained about the same relative position regarding survival and height growth when measured again in 1962 after seven growing seasons:

Species	Survival, per cent	Av. height, feet
Loblolly.....	87	25.9
Shortleaf.....	88	21.3
Slash.....	70	27.3
Longleaf.....	26	18.8

* Assistant Superintendent, Lower Coastal Plain Substation; Professor Emeritus, Department of Forestry; and Head, Department of Forestry.

Because of damage from the southern pine beetle and heavy infestation of fusiform rust, the test was ended with final measurements taken in February 1973. Three blocks were clearcut for salvage purposes at that time, after 18 years of growth. Average diameter growth 4½ feet above ground and volume per acre for the four species are given below:

Species	Average DBH, inches	Volume per acre, cords
Loblolly.....	7.0	45.1
Shortleaf.....	6.3	37.3
Slash.....	7.5	38.4
Longleaf.....	7.2	14.7

Longleaf trees made good diameter growth, but poor initial survival (29 per cent) resulted in low volume growth.

Although pine plantations are not normally harvested at age 18, results from this period on these plots indicate the potential annual growth that can be expected on average agricultural land in the Camden area of Wilcox County. Highest yield was produced by loblolly pine, 2.5 cords per acre per year average, but all species exceeded the State average of 0.5 cord per acre per year.

Many people traveling the road by the pine plots may miss the beauty of these stands. However, a stand dying from insect and disease attacks would be even less attractive than appearance following the clearcutting operation.

Poor survival and height growth of longleaf pine (center) contrasts with loblolly (left) and slash (right) in this 1960 photo.



