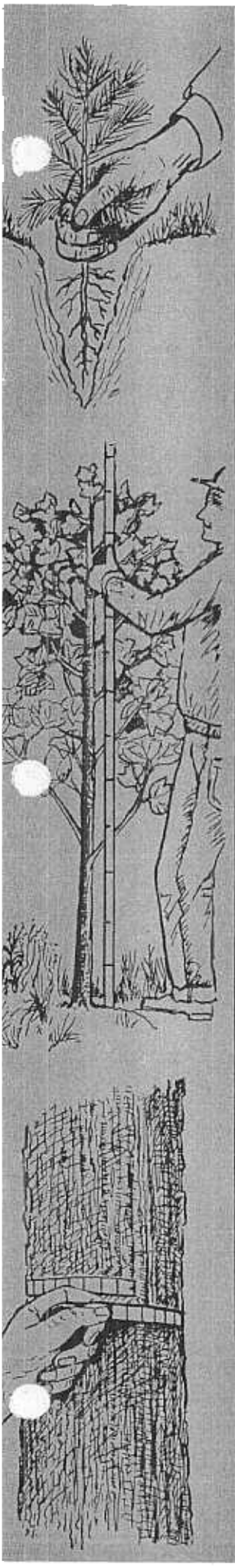
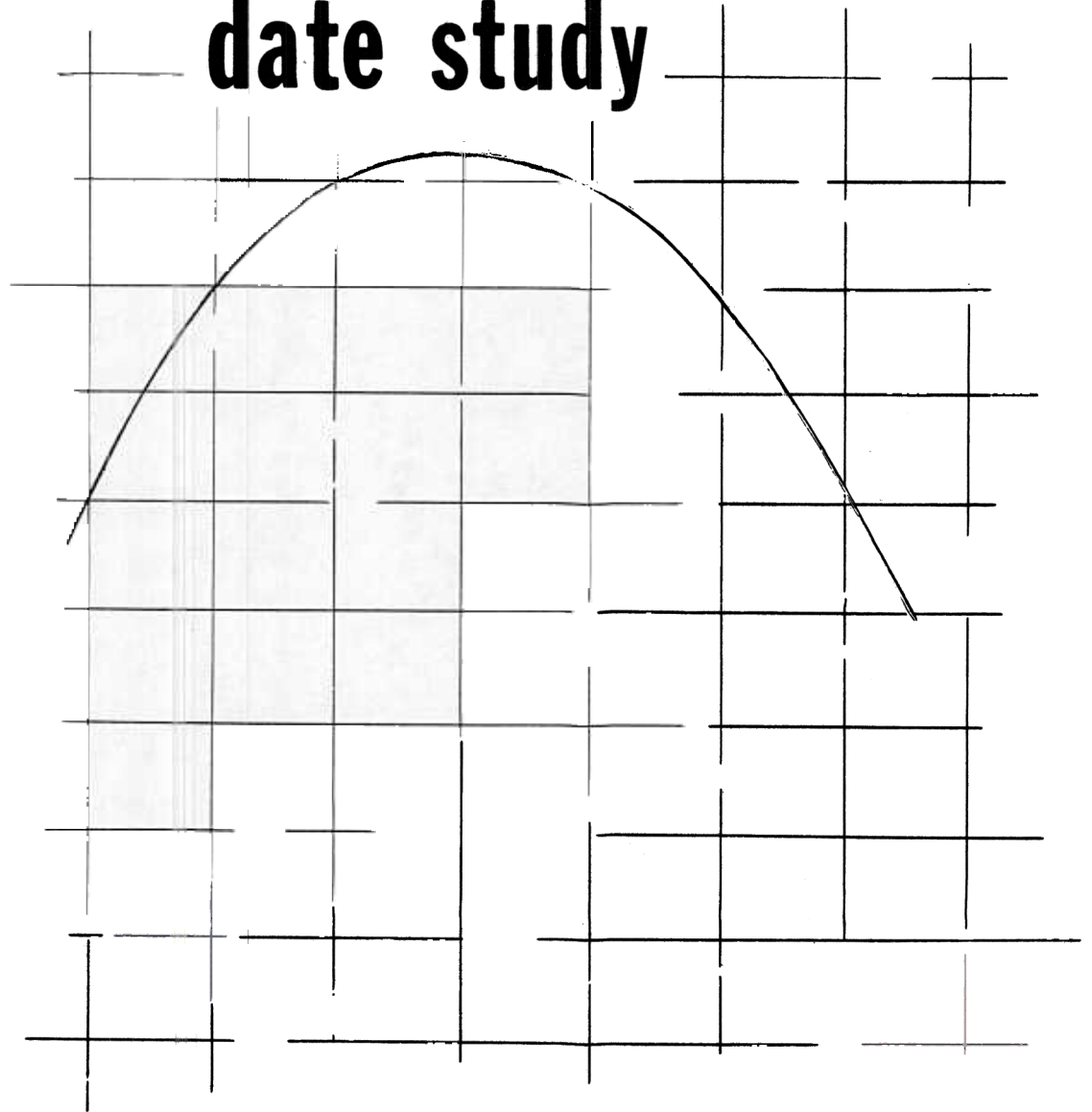


# loblolly pine planting date study



Virginia Division of Forestry

Department of Conservation and Economic Development



# LOBLOLLY PINE SEEDLING SURVIVAL AND GROWTH STUDY FOR DIFFERENT PLANTING DATES

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## ABSTRACT

*Freshly lifted loblolly pine seedlings were planted monthly from December through June. Survival for January, February, March and April plantings ranged from 85 to 92 percent. Survival for December and May was 72 and 69, respectively; and for the June planting the survival was 51 percent. There were considerable differences in average 3-year height growth also, and these differences corresponded with survival.*

## THE STUDY

Loblolly pine seedlings were lifted and planted near the middle of each month from December, 1968, through June, 1969. All seedlings were selected from a section of a uniform nursery bed at the New Kent Forestry Center. Seedlings were lifted, clay dipped,<sup>1/</sup> and packed in 1,000-seedling packages, one package for each plot. Seedlings planted from December through March were dormant, but those planted in April, May, and June were actively growing when lifted and planted. The seedlings were shipped to the various plot locations and planted within 2 days following lifting.

The seedlings were planted in the Farmville District, which comprises the southern Piedmont region of Virginia. All plots were on well-drained, upland sites that were prepared by prescribed burning alone or drum chopping followed by prescribed burning. Each of the 7 plots were located in a different county. The seedlings were planted by foresters and, with one exception, all plantings made on a plot were made by the same individual.

Each plot consisted of a total of 7 rows, each containing 20 seedlings, with one row planted on each of the planting dates. On each planting date the forester opened the 1,000 seedling package on the tract and randomly removed 20 seedlings which were planted immediately.

## RESULTS

Survival and total height after three growing seasons are shown in Tables 1 and 2 and Figures 1 and 2.<sup>2/</sup>

Table 1. Average Survival At Age 3.		Table 2. Average Total Height At Age 3.	
Month of Planting	Survival (percent)	Month of Planting	Height (feet)
February	92.1	March	4.72
March	90.0	February	4.57
January	88.6	January	4.36
April	85.7	April	4.27
December	72.0	December	3.99
May	68.6	May	3.59
June	51.4	June	3.16

<sup>1/</sup> This is a slurry of kaolin clay suspension in water.

<sup>2/</sup> Analyses of variance were made of arc sin percent survival and mean total height. Differences between treatments were tested using Duncan's New Multiple Range Test. Treatments not bracketed in Table 1 and Table 2 were different at the .05 percent level of significance.

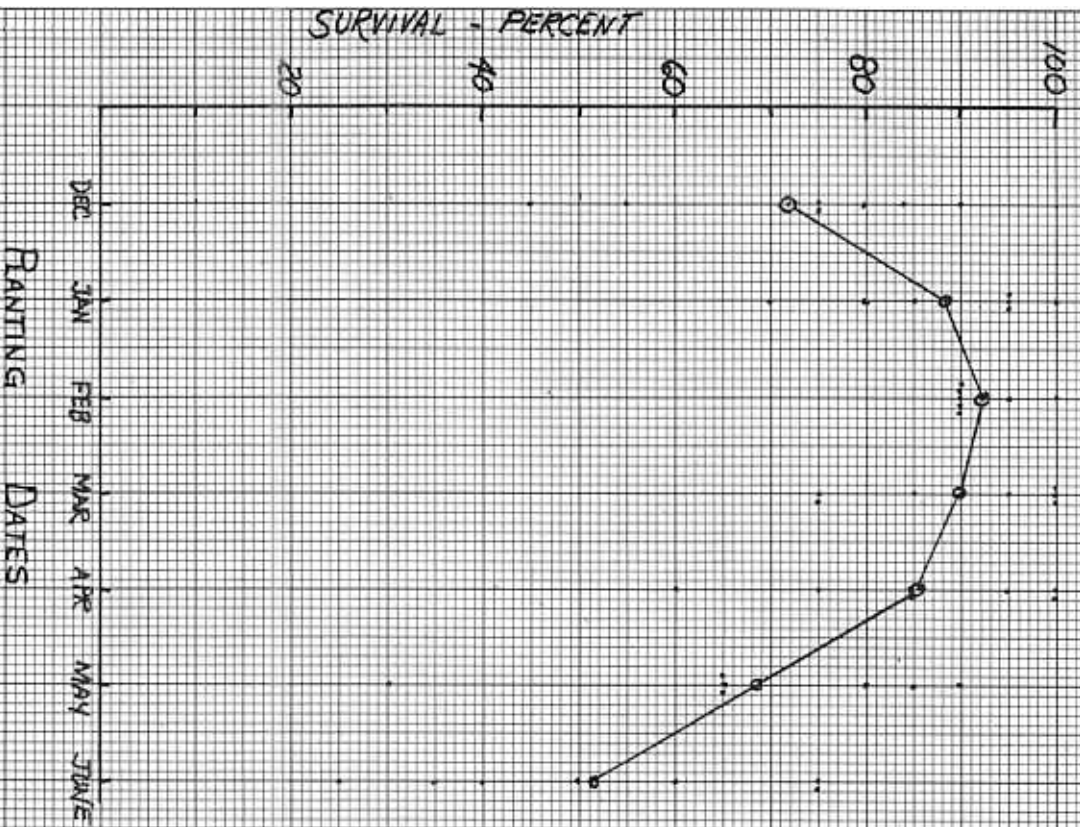


FIGURE 1: MEAN SURVIVAL (%) BY PLANTING DATES

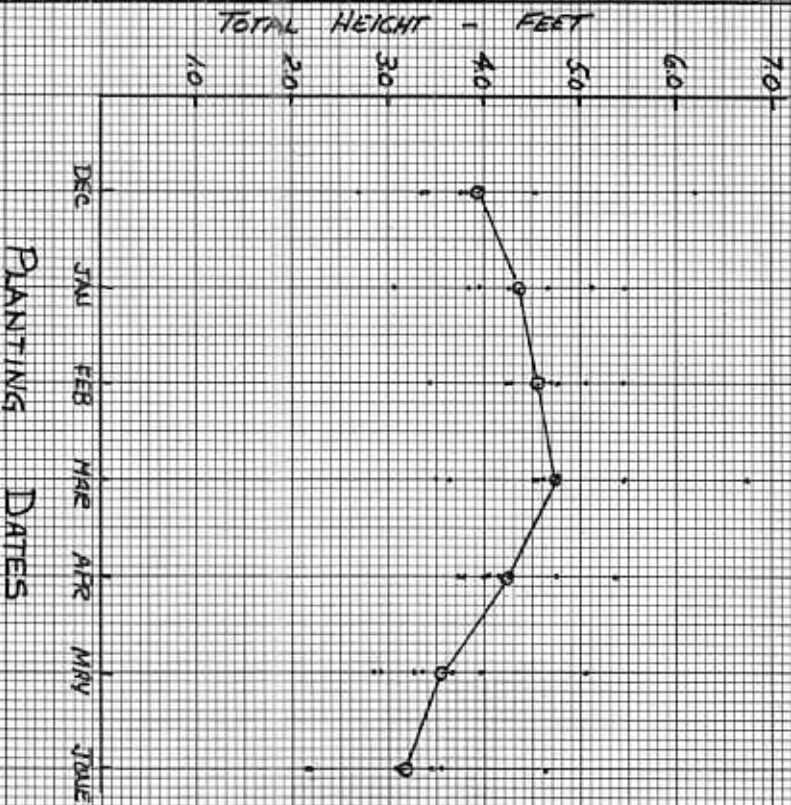


FIGURE 2: MEAN TOTAL HEIGHT (FT) BY PLANTING DATES