

Can You Top This Loblolly Pine Growth?

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Is an average tree height of 47 feet for loblolly pine at 10 years a record? We think it may be. For the record, let us tell you about our "wonder" plot trees which made this phenomenal growth in their first 10 years.

The planting was a part of a nursery seedling selection study initiated in 1953. The largest loblolly pine seedlings were selected from beds of the Manchester State Forest Nursery at Wedgefield, S. C., at a selection intensity of one out of 10,000. Average-sized seedlings were selected at the same time from the same beds. Two plots, each consisting of 12 "select" and 12 "average" seedlings, were planted with replication in December 1957 on the Santee Experimental Forest. Plot size was 1/100-acre, and tree spacing was 6x6 feet. The soil was Lakeland loamy sand (more recently classified as a Goldsboro

loamy sand). The original stand on this site was predominantly longleaf pine, with a few loblolly intermixed. At time of planting the site was considered below average for loblolly, but apparently this was an erroneous assessment.

Figure 1 shows the mean dominant height attained by these "select" and "average" seedlings after 10 years of growth. Our "wonder" plot is comprised of the "select" seedlings in replication 1. Height of dominants and codominants in this plot was 47 feet, or nine feet taller than "average" seedlings in the same replication. A similar relationship was evident in replication 2, but the respective heights were about 10 feet shorter. These results indicate that the nursery bed selection was effective in picking out fast growers. The difference in height between replications was evidence of possible differences in localized sites.

The "wonder" plot (fig. 2) at 10 years had trees ranging from 43 to 50 feet tall and from 5.0 to 8.9 inches in diameter. The largest tree, with an estimated merchantable volume of 6.92 cubic feet, was 8.9 inches in diameter and 49 feet tall. Total merchantable volume on this plot was estimated at 40 cubic feet—equivalent to about 50 cords per acre. This truly remarkable growth for loblolly pine at this early age is almost unbelievable. In fact, we could hardly believe it so went back and remeasured the trees. The original measurements held up.

How does this growth compare with published height growth curves? Average tree height on the "wonder" plot was 17 feet taller at 10 years than indicated by a 120-foot site index curve for loblolly, and nine feet taller than a 100-foot site

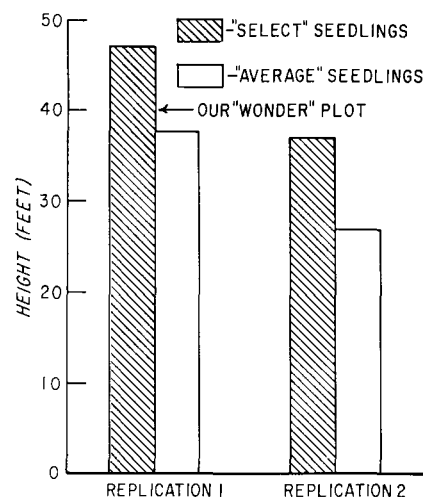


FIGURE 1.—Mean dominant height of "select" and "average" seedlings 10 years after planting.



FIGURE 2.—The "wonder" plot of loblolly pine on the Santee Experimental Forest 10 years after planting. Note the quality of these fast-growing trees.

index curve for slash pine. However, height growth for cottonwood on its best site (140-foot site index) was double that of loblolly on our "wonder" plot. Although we cannot claim our "wonder" plot trees have unsurpassed height growth, we are setting them up as the best recorded for 10-year-old loblolly pine, and perhaps better than any other pine. Can any of you readers top this loblolly pine growth?

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