CHANGE TO QUICK TREES

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The increasing number of southern mills that rely on cottonwood (Populus deltoides) for raw material threatens to put this species in short supply. Fortunately, however, this tree is capable of growing rapidly and can restore to productivity thousands of acres now supporting only brush or low-grade trees.

Some landowners and foresters still are unaware of the growth potential of this tree when it is given a good start on a good site. An example of what it can do is now growing on a river island near Greenville, Miss. Here, an experimental plantation has attained an average height of 25 feet, and 4 inches d.b.h., in only 27 months. Sounds like a tall tale? Let's see how it was done.

To begin with, a well-drained silt loam soil with plenty of moisture was picked for the planting. Ground cover, consisting of a tangle of vines, weeds, and scrub trees, was scoured off with a bulldozer in late summer, and the soil smoothed by disking. Planting. was done in the following February, with unrooted cuttings taken from stems and branches of young cottonwoods of better-than-average form and growth rate. Spacing was 10 by 10 feet.

When they are just getting started, young cottonwoods almost always need cultivation. Otherwise weeds and vines will overtop and smother them. This plantation was cultivated three times, once with a, straddle-the-row machine and twice by cross-disking between the rows--all in the first year. It was also protected against fire and grazing.

The results have more than fulfilled expectations. In 6 months, a man could stand in the shade of the trees. After 2 years, many of the trees were 25 feet high. During the first 3 months of their third year the fast growth has continued and averages 6 to 7 feet in height and slightly over an inch in d.b.h.

This test plantation also demonstrated that an insecticide called Thimet can protect the trees against insects for 1 year. Before being planted, some of the cuttings were dipped in a carbon dust containing this systemic poison. At the end of the first growing season, treated trees averaged 4 feet taller than untreated ones, and had much better stem form.

This big step toward insect control is only one example of what research might accomplish in growing cottonwood. Investigations in irrigation, fertilization, and the use of super planting stock may yield even more remarkable results. Tests are in progress on plantings from individual trees that grow much faster than the average. Genetics research will undoubtedly produce trees of improved growth and form and superior wood quality. It may also be possible to develop planting stock that is inherently resistant to disease.

But even under present-day possibilities the planting of cottonwood is definitely warranted, and wood-using industries are taking advantage of what is now known about raising it. Plantations in the Mississippi Valley have advanced well past the stage of experimental plots. Chapman and Dewey Lumber Company of Memphis, Tenn., has a 5-year-old plantation with trees up to 8 1/2 inches in diameter and 45 feet tall. Other companies are establishing nurseries to produce their own cuttings, and plantings will run to thousands of acres each year. Small landowners are becomming increasingly

interested in putting their unproductive acres into profitable cottonwood, and successful plantings of 10 to 100 acres are becoming common in the Delta bottom lands.

U.S. Forest Service hardwood specialists at the Stoneville Research Center, recognizing the intense interest in recent developments, have summarized their findings and recommendations; in two recent publications. Occasional Paper 178, Field Guide for Evaluating Cottonwood Sites, is an aid to the selection of planting areas. Occasional Paper 179, Cottonwood Plantations for Southern Bottom Lands, contains information on plantation establishment. Both booklets are available from Southern Forest Experiment Station, T10210 Federal Building, 701 Loyola Avenue, New Orleans 12, La.

This 28-month-old cottonwood plantation, started from cuttings, now averages 25 feet in height. Trees w e r e pruned to assure good stem quality, but natural pruning seems to be equally effective.