

Southern Forestry Notes



FOREST SERVICE, U. S. DEPARTMENT OF AGRICULTURE

Southern Forest Experiment Station, New Orleans, La.

No. 116

July 1958

MISSISSIPPI SURVEY COMPLETED

Mississippi forests are now growing more pine but less hardwood than is being cut, according to a new survey of the State's forest resources. But because many timber stands are not fully stocked, growth is only about half the potential.

Net annual growth of sawtimber is 1.3 billion board feet of softwood and 0.8 billion of hardwood. In 1956, when the latest cutting statistics were compiled, logging removed 0.7 billion board feet of softwood and 1.0 billion of hardwood.

Forests cover 17 million acres of the State's total land area of 30 million acres, the survey found. This is 4% more forest land than there was in 1948, when the previous inventory was completed.

Mississippi's timber supply in sound, well-formed trees at least 5 inches in diameter totals 7.6 billion cubic feet. Softwood volume has increased 8%. Hardwood has declined 21%.

The volume of sawtimber is 25.5 billion board feet. In these sizes, softwood volume has increased 9% while hardwood has dropped 29%.

The increase in softwood appears to be attributable mainly to stepped-up management programs on the lands held by forest industries and on the public forests. Land clearing, excessive cutting, and heavy drought-induced mortality contributed to the decline of hardwoods in bottomland areas such as the Delta region. In the uplands, timber stand improvement operations helped reduce hardwood volume on areas better suited to pine.

A full report of the survey is available upon request. --H. S. Sternitzke.

CLIP OR DEEP-PLANT CYPRESS?

Early survival and growth of baldcypress seedlings planted in the Mississippi Delta were not improved by treatments designed to reduce transpiration and thus help the trees endure drought.

About 900 one-year-old seedlings were planted in 1955 on a heavy clay site that was frequently flooded in spring and too dry in summer. Seedlings were planted in four ways: (1) With root collar at groundline but stem clipped to 6 inches, (2) With root collar at groundline but 1/3 of the stem clipped off, (3) With root collar 6 inches below groundline and 1/3 of the above-ground stem clipped off, (4) With root collar at groundline and no top clipping. Trees were set 6 feet apart in rows 10 feet apart. The plantation was cultivated to keep down weeds.

After three full growing seasons, average survival ranged from 60% to 68% and average heights from 3.9 to 4.1 feet, but differences between planting methods were not significant. --R. L. Johnson.

PLANNING FARM-AND-FOREST MANAGEMENT

Labor requirements for various forestry operations, timber yields expected under two levels of management, and how forestry can fit into improved farming systems--these are subjects of DATA FOR PLANNING WOODLAND OPPORTUNITIES ON WEST TENNESSEE FARMS, a new bulletin of the Tennessee Agricultural Experiment Station.

The data, which are from the Ames Plantation, near Grand Junction, Tennessee, include labor needs for harvesting pine and hardwood sawlogs and pulpwood with chain and cross-cut saws; skidding logs with tractors and mules; deadening cull hardwoods with mechanical girdler, ax, and sprayer; planting pines by hand and by machine; and fencing.

Nine varying stands were projected for 20 to 50 years, to the stage of stable production. Results indicated that under intensive management eventual sawtimber stumpage returns would be \$10 to \$16 per acre annually; with extensive management the same stands would net less than \$1. Under intensive management additional income for labor could be obtained by marketing cut products.

An actual farm was budgeted for a few alternative farm-and-forest enterprises and levels of management to determine the combination best suited to raise investment profitability and the farm family's level of living. Farmers and their forestry advisors will find the procedures readily applicable elsewhere. --Alfred Pleasonton.

RECENT PUBLICATIONS

- *Andrews, L.A., and Broadfoot, W.M. *The San Dimas soil core sampler*. Soil Science, June 1958, pp. 297-301.
- *Barraclough, S. L., and Pleasonton, A. *Data for planning woodland opportunities on west Tennessee farms*. Tennessee Agricultural Experiment Station Bulletin 276, 64 pp.
- *Broadfoot, W. M. *Study effects of impounded water on trees*. Mississippi Farm Research, June 1958, pp. 1-2.
- *Bruce, R. R., Raney, W. A., Broadfoot, W. M., and Vanderford, H.B. *Physical, chemical, and mineralogical characteristics of important Mississippi soils*. Mississippi Agricultural Experiment Station Technical Bulletin 45, 36 pp.
- *Chellman, C. W. *Miscellaneous insect enemies of southern pines*. Southern Forest Pest Reporter 21, 14 pp.
- Davis, J. R. *Basal spray with 2,4,5-T for winter hardwood control in east Texas*. Journal of Forestry, May 1958, p. 349.
- *Derr, H. J. *Direct seeding: a fast, reliable method of regenerating longleaf pine*. Tree Planters' Notes 32, April 1958, pp. 15-20.
- *Duncan, D.A., and Whitaker, L.B. *A new look at the possibilities of forest ranges and range cattle in Louisiana*. Forests and People, Second Quarter 1958, pp. 26-28, 48-49.
- *Ferguson, E.R. *Age of rough (ground cover) affects shortleaf pine establishment and survival*. Journal of Forestry, June 1958, pp. 422-423.
- *Ferguson, E.R. *Prescribed burning as an aid in regenerating difficult areas*. Proceedings of the 1958 annual meeting, Gulf States Section, Society of American Foresters, pp. 35-41.
- *Guttenberg, S. *Cost control, at low cost*. Pulp and Paper, July 1958, pp. 99-101.
- *Guttenberg, S. *The economics of type conversion*. Proceedings of the 1958 annual meeting, Gulf States Section, Society of American Foresters, pp. 9-14.
- *Hesseltine, C. W., and Snyder, E. B. *Attempts to freeze-dry pine pollen for prolonged storage*. Bulletin of the Torrey Botanical Club, March 1958, pp. 134-135.
- *Mann, W.F., Jr., and Derr, H.J. *Regeneration of understocked longleaf stands...skill not luck!* Forests and People, Second Quarter 1958, pp. 20-21, 53.
- *Morris, R.C. *Insect pests of cottonwood*. Mississippi Farm Research, May 1958, p. 8.
- *Nelson, R.M., and Bruce, D. *Forest fire research needs in the South*. Journal of Forestry, June 1958, pp. 399-403.
- *Shoulders, E. *Scalping--a practical method of increasing plantation survival*. Forest Farmer, June 1958, pp. 10-11.
- *Snyder, E.B., and Rossoll, H. *Climbing southern pines safely*. Occasional Paper 159, 17 pp.
- *Southern Forest Experiment Station. *Mississippi forests*. Forest Survey Release 81, 52 pp.
- *Stoekeler, J. H., and Thames, J. L. *The Lake States penetrometer for measuring depth of soil freezing*. Soil Science, January 1958, pp. 47-50.
- *Wakeley, P.C., and Marrero, J. *Five-year intercept as site index in southern pine plantations*. Journal of Forestry, May 1958, pp. 332-336.
- *Woods, F.W. *Some effects of site preparation on soil moisture in sandhills of west Florida*. Soil Science, March 1958, pp. 148-155.
- *Zahner, R. *Site-quality relationships of pine forests in southern Arkansas and northern Louisiana*. Forest Science, June 1958, pp. 162-176.
- Zahner, R. *For growing pines, how good is your land?* Forest Farmer, April 1958, pp. 6-7.

*Copies are available at the Southern Station.