

Forest Industries of East Texas

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The great majority of the commercial forests of East Texas grow as a mixture of shortleaf and loblolly pine and various hardwoods such as oak, hickory, and gums. In the southeast part of East Texas, longleaf pine is found in virgin tracts but even these have been cut over and occupy only about ten per cent of the total forest area.

The climate of the East Texas forest is warm and humid with a long growing season that causes trees to mature rapidly. There is rainfall throughout the year with an average total rainfall between 45 and 50 inches. The temperature ranges from an average of 45°F. in January to 84° in July in Bowie County and from 54° in January to 83° in July in Hardin County.

The soils of the forest are mostly light in texture, consisting of fine sand and sandy loams. They are generally light colored. The subsoils of the groups represented in the forest area are usually coarse, and red, brown, yellow, and grey in color. The heavy rainfall of this area has badly leached the soils and they are low in organic matter.

There are five main forest types in East Texas. They are longleaf pine, shortleaf-loblolly pine, shortleaf-loblolly pine, and hardwoods, upland hardwoods, and bottomland hardwoods. The total acreage is approximately 10,500,000.

THE LUMBER INDUSTRY

As they arrive at the sawmill, the logs are often dumped into a pond beside the mill to await milling. Around this pond stand the buildings of the sawmill. All of these buildings along with the pond may take up twenty or thirty acres. In 1950, there were 644 sawmills in East Texas, 378 being portable and 266 stationary.

The stationary mills accounted for 68 per cent of the total lumber cut. About sixty per cent of the lumber produced in Texas is used in the state. The lumbering unit of the East Texas forest employs a great majority of the man-power used in the industry.

PULPWOOD INDUSTRY

Lumber uses about 57 per cent of the forest trees cut and ranks first in the value of its products. Pulpwood is second in percentage of the trees used with 17 per cent and the value of its various paper products also ranks second. There are only two pulpwood mills in Texas, one at Houston and one at Lufkin, but five more outside the state, two in Arkansas and three in Louisiana, use East Texas pulpwood. Some of these mills, both in and outside the state, use hardwood to some extent but 90 per cent of the pulpwood is pine.

Texas produced 790,900 cords of pulpwood in 1949, some 41,200 cords being hardwood. Montgomery County with 63,588 cords, led all other Texas counties in the amount of pulpwood cut.

Of the two paper mills in Texas, the older one at Lufkin makes "Kraft" paper and newsprint and the newer mill at Houston manufactures the paper used for magazines such as *Life*.

CROSS TIE INDUSTRY

The third most important use of timber from the East Texas forest is the making of cross ties. Each mile of railroad track requires approximately 3,000 cross ties. Since there are 22,000 miles of railroads in Texas, the

number of cross ties needed is very large. Because ties are made of wood and will eventually wear out, no matter how well they are treated chemically or how good the condition of the road bed and track may be, railroad companies have long sought to replace them with something more permanent. Steel and re-enforced concrete were tried but steel lacked resistance to corrosion and concrete ties could not stand the load and speed of modern trains. Wooden ties will probably be used as long as there are railroads.

More than one-third of all the ties hewn in Texas are cut from oak. Southern pine as a source for ties has declined and only nine per cent of the total ties in 1951 were of pine.

Although only five per cent of the Texas forest is used for cross ties, the industry is very important. In 1945, 4,500,000 ties were cut, valued at over \$4,000,000. In the same year 2300 people were employed in the industry.

VENEER AND PLYWOOD INDUSTRY

The container and plywood industry of East Texas is divided into two parts, veneer-using and lumber-using. In 1947, there were 46 companies making wooden containers. These companies produce products worth \$12,000,000 for mill work and plywood, and \$7,500,000 for containers. The industry has grown so large in recent years that a great deal of the wood used in the industry is shipped in from other states. Only two per cent of the state's commercial lumber finds its way into this industry. The container out-put includes wire bound boxes of all sizes, tomato lugs, potato crates, and citrus crates.

Both pine and hardwood veneers are cut for box and basket material, although in East Texas hardwoods are usually used, especially in making baskets.

There are two different kinds of veneer—face veneer and container veneer. Face veneer is used for furniture and ornamentation of all sorts. Texas produces about 65,000 pieces of furniture worth over \$900,000 a year. The furniture industry, since there are 266 furniture and allied industrial plants, is a story in itself. Some of the furniture products from veneer are radio cabinets, piano cases, trunks, and tables. The softest of the hardwoods are used to make container veneer. Species used are gum, cottonwood, magnolia, elm, and some quantities of other hardwoods.

Plywood is defined as wood manufactured with three or more separate sheets, glued and pressed together, with the grain of the sheets at right angles to each other. This wood is very strong and is used in place of a heavier wood. Waterproof plywood is used for signs, canoes, rowboats, and other places where, as the name indicates, water-proofing is essential.

POLE, PILING, AND POST INDUSTRY

There are 21 preserving plants in the state including seventeen commercial plants. Two plants are operated by railroads and two are operated by utility companies. Nineteen of the preserving plants are pressure type. These plants also treat, in addition to post and piling, other products such as trees, wood blocks, fence posts, and lumber.

Most of the pole and piling are made from pine, some of which reach 120 feet in height. Tree trunks must be at least 16 feet long before they can be used as poles. The Rural Electrification Administration buys most of the poles, but the telephone and telegraph companies also buy some since they must replace over five million poles a year.

Piling finds many uses in Texas. With a long coast line and many docks and wharves in the Texas ports, there is always a market for piling. Piling is used for construction of railroads across rivers, lakes, and marshes.

The foundations of many large buildings are also poles driven into the ground.

The demand for fence posts in Texas is great. Approximately 10,000,000 posts are used every year to fence in Texas farms and ranches. The common wood for posts is pine although most any tree type can be used if it is straight enough. The job of replacing posts is a large one, for most of the posts used in Texas are not treated to resist decay. Untreated posts will last about three years while those treated with the common preservatives last as long as fifteen years. Pentachlorophenol and creosote are commonly used as preservatives.

In 1945, there were 540,000 poles, piling, and posts manufactured in Texas, and these were valued at \$2,000,000. Products made from wood preserving plants were worth \$10,500,000 in 1947.

OTHER WOOD INDUSTRIES

Handle plants in Texas vary from factories turning out two million handles per month to small home-factories manufacturing only 2,000 per month. The finished products are broom handles of pine and hardwood; garden implement handles of ash, hickory, and oak; brush handles of all types; and various other handles of all sorts. In 1945, there were 16,000,000 pieces produced bringing \$900,000.

There are six cooperage plants in Texas. At the present time, they are making three types of tight staves. These are (1) high quality white oak for storing bourbon, (2) high quality white oak, but allowing for more defects than for bourbon, and (3) staves for oil. The six plants are located, for the most part, in the northern part of East Texas.

The most poorly developed industry in East Texas is the fuelwood industry. Although quite a lot of East Texas wood is used for fuel not too much is sold. The demand for fuelwood varies with the seasons, and is greatest during the winter. The summer demand is sometimes made up entirely of what is sold to roadside barbecue stands.

FUTURE OF THE EAST TEXAS FOREST

An important fact about the wood industries is that, with intelligent cutting methods, careful reforestation, establishment of fire-control centers, and suppression of tree-destroying insects and fungi, the forests are inexhaustible. The lumber industry in Texas is well developed and will probably maintain or increase its present production. The pulpwood, tie, poles, piling, post, plywood, veneer, and other smaller industries could probably be expanded. Some areas of East Texas also have potential for new forest industries. Cedar chest companies are using East Texas cedars and occasionally a copper company will buy low-grade hardwoods for use in smelting. One lumber company has supplied a Mexican mine company with mine props for many years. There is also a possibility that the market for naval stores, for which East Texas supplied 18,000 barrels in 1919, will be opened again. There exists a large supply of stumps for wood stores and some 60,000 acres in Newton county, and 290,000 acres in Tyler, Polk, and Hardin counties are available for gum stores.

The practice of forestry in Texas is like that in many other states. Not enough money is being spent to insure protection and preservation of the trees now growing and the replanting and thinning methods are inadequate. Improvement is being made along these lines, however, and the future may see an even larger forest industry in East Texas.