

Forestry and Utilization as Practiced

by

The Great Southern Lumber Company

By P. M. Garrison, Assistant Forester

Twenty odd years have elapsed since a group of financiers gazed upon the vast expanse of forest covered hills of this great commonwealth of Louisiana and dreamed of an industrial community supplemented by a prosperous agricultural development of the adjacent country. Not the idle dream of a dreamer with his head in the clouds, but the dream of business men who had their feet firmly on the ground.

So came into being the industrial city of Bogalusa, the seat of the Great Southern Lumber Company and the home of "Bogalusa Brand products." Distinctly an industrial city, created from and maintained by the adjacent timber resources. Not a city founded by a heretofore migratory industry which would thrive and prosper for a period of time and then decay and sink into oblivion as the timber resources were exhausted and the industry moved on to more fertile fields, but founded upon the one idea of a permanent city. As has been the case with other men so was it a repetition with the directors of the company who founded Bogalusa as a timber producing center—that after exhausting the adjacent timber resources the cutover land would revert to agriculture and a prosperous rural community would maintain the ever growing city.

As is the case with most well regulated dreams, parts of them materialize and prosper far beyond our wildest hopes while other parts fail to materialize. As the industry developed and areas of virgin forest were removed it was gradually discovered that the future agricultural development could not be realized for two reasons, namely—(1) the great expanse of cutover land suitable for agricultural purposes was not needed for the production of farm crops at this time; (2) the agricultural producing power of other areas was not sufficiently strong to make farming economically possible. The estab-

lishment of a permanent city was the real desire of the directors and obviously some other means must be found to insure its existence after the failure of agriculture. There must be an alternative. These men logically reasoned that although the land could not economically be developed for agriculture there was no sound reason why, if this same land had produced a valuable timber crop originally with no assistance, it was not reasonable and practical that with the aid of man it would produce a second crop of timber which would be as valuable as the original crop which was found upon the ground.

Thus in 1920 came into existence the Department of Forestry founded and dedicated to the sole purpose of producing a second crop of timber to maintain the industry, and to produce this crop upon the same land which had contributed its timber wealth to the establishment of this community.

This new department was not founded and started to function in a day but only after considerable study. Sentiment had to be developed among the people for the support of this new project. So it was that not a highly trained, technical, ideal burdened, forester was selected to head this new department, but rather a man with sound practical common sense who knew the ways of the people with whom he had to deal, was selected to preach the gospel of forestry in the surrounding country and establish the department on a firm basis. The two men instrumental in the establishment of this new enterprise, namely, Col. A. C. Goodyear, president of the company, and Col. W. H. Sullivan, vice president and general manager, and Mr. J. K. Johnson, forester, upon whose shoulders fell the responsibility of operating the new department, early realized that while facts and figures could be collected and compiled sufficient to convert even a graven image to the support of the new project, the most convincing argument was an actual, living, growing, second man-made forest.

So it was that the beginning was made by the fencing of 800 acres of cutover land upon which in the winter of 1920-1921, the first man-made forest was established. This forest was established by direct seeding on prepared plowed furrows eight feet apart. This man-made forest although leaving something to be desired was successful and stands today as a monument to the first hand-planted forest of the South.

With the advent of the Forestry Department came other changes in the former policies of the company. Realizing that artificial planting was costly and that less expensive

methods of reforestation could be devised, the practice of leaving groups of young thrifty seed trees at the time of logging was instigated. Another practice—fire protection, which we believe to be 90% of reforestation and hitherto unknown in this section, was established on all lands adjacent to Bogalusa.

From this small start in 1920 the project has grown both through artificial planting and natural reseeding of cutover land until today the project extends over some 450,000 acres of land, all of which is under fire protection and intensive management.

The state forestry laws have been such as to encourage private operators to endeavor to become timber producers as well as timber exploiters.

In the fall of 1920 an unusually heavy seed crop was produced and fell on lands which were being logged or were to be logged the next year. This area was immediately fenced and put under intensive fire protection. This fortunate happening added impetus to the new forestry project and incidentally added 15,000 acres of natural well-stocked seedling forest to the then infant project.

During the next year a broad educational program was carried on, seed trees were marked to be left behind the logging operation, plantations were established from natural stock and direct seeding, and the entire area intensely protected from fire.

During 1923 the practice of direct seeding was abandoned because of excessive cost and the scarcity of seed. To re-



At the start.

place this practice there was established a forest nursery for the production of seedling pines to restock the barren, cutover areas.

It was found that nursery stock suitable for field planting could be produced in seven months. These seedlings were lifted from the beds in December and January after they had become dormant and transported to the field where they were set out in shallow plowed furrows eight feet apart, being set six feet apart in the rows, giving 960 trees per acre.

The seed was drilled in four foot beds and covered with burlap. No soil was used to cover the seed; the whole bed was then kept in moist condition until the seed had germinated. The burlap was then raised eighteen inches and supported on a framework in such a way as to give partial shade for the young seedlings. This shade was maintained about three months and then removed. Weeding of the seedling beds was carried on until the seedlings were large enough to crowd out all weeds. The cost of the seed, nursery, preparation and weeding was 36 cents per thousand. The seedlings are lifted, packed in moss and container liner and transported to the field after they have become dormant in December and January. This operation costs 33 cents per thousand, making the cost of the seedlings in the field ready to plant 69 cents per thousand.

During the months of December and January, which is the slack farming season, the farmers and their boys are recruited to form the planting crews. A man and boy work together forming an individual unit of the planting crew. The man using a dibble makes a hole in a prepared furrow suitable to receive the seedling which is inserted and held by the boy until the soil is packed firmly around the roots. This crew will plant two acres or roughly two thousand trees per day. The total cost of this operation, including collection and extraction of seed, growing the seedlings in the nursery, lifting, packing and transporting seedlings to the field, preparing the ground to receive the seedlings, and actual planting of the young trees, was \$3.42. This figure has varied somewhat from year to year, running from \$3.42 in 1925 to \$6.10 in 1927. The variation of this cost depends directly upon the cost of collecting and extracting the seed.

The planting and fire protection are the two large activities of the department which are carried on continuously. The general plan of reforestation is to obtain as much natural reproduction as possible by proper methods of cutting and to plant where natural reproduction does not come back, or promises to come back without too great delay.

From the small beginning of 1920 with 800 acres of hand planted forest, the project has grown by leaps and bounds until today it is perhaps the largest private reforestation project in the United States, consisting of the following:

- 426,000 acres under intensive fire protection,
- 107,000 acres of second growth timber,
- 16,500 acres of hand planted forests,
- 90,000 acres with seed trees standing sufficient to restock area,
- 475 miles of fire lines,
- 65 miles of telephone lines,
- 50 miles of gravel roads through plantations,
- 51½ acres of nursery,
- 50 permanent employees.

During the summer of 1926 data was collected and compiled from local stands of second growth timber in sufficient



Near the end.

quantity to formulate local yield tables for the three principle species of pine, i. e., Longleaf, Slash, and Loblolly. In the summer of 1927 an intensive forest inventory was made of all lands supporting second growth timber. Thinnings have been laid out using various methods of silviculture and degrees of thinnings. All of the above data is being used to formulate a working plan for both the sawmill and paper mill.

1927 being an usually good seed year in Louisiana, 5,000 pounds of seed were collected and extracted. Nursery space

has been prepared and it is planned to raise ten to twelve million seedlings for the 1928-29 planting.

One of the most outstanding and novel practices of the company is the complete utilization of logs in the sawmill and close utilization of all material such as limbs and tops for pulpwood. With the erection of the paper mill in 1924 came the complete utilization of what was formerly considered sawmill waste and the monster refuse burner which for 16 years had consumed thousands of dollars worth of material, had its fire forever extinguished.

Allow me to trace the log through the mill. Upon entering the mill the tree-length logs are cut into their most usable lengths by the buttin saw. Defective and knotty logs pass to the twin band saws where they are sawn into lumber by gang saws. The better logs pass to the four carriages where the better grades of lumber, dimension stock, ship timbers, etc., are cut. The timbers go immediately to the timber docks while the lower grades of lumber are soda-dipped to prevent stain and pass into the yard to be stacked and air seasoned. The better grades of lumber pass to the automatic stackers and to the dry kilns, and from the kilns to the planing mills where it is manufactured into moulding, sheeting, siding, flooring, interior finish and numberable other products. Short length flooring is end notched while still other short lengths are converted into box material. The waste from the planing mill is conveyed to the Cline retorts where the turpentine is extracted before it passes to the furnaces where it is used to generate the power which runs the mill. The slabs pass onto a conveyor where the most desirable are sorted out and used for the manufacture of lath and handles. The balance of the slabs pass to the paper mill where the bark is removed and the balance is used to manufacture Bogalusa Kraft paper. The trimmings and edgings pass to a conveyor where the most desirable are also taken out to be manufactured into lath and handles, the balance is conveyed to the paper mill or converted into fuel to generate power for the mill.

As reforestation and utilization go hand in hand so it can be seen that whereas thirty-seven percent of the log was formerly utilized, one hundred percent is now utilized by the Great Southern Lumber Company, and it is said that the shriek of the saws is used to blow the whistle and the murmur of the winds in the tall pines is used by Morpheus as a lullaby to soothe the coming generation into the land of sleep and pleasant dreams.