

# Southern Forest Opportunities

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NO SECTION of the United States offers more favorable opportunities for forest culture than the South.<sup>1</sup> Its 270 million acres of forest represents two-fifths of the commercial forest land of the entire nation. Proper development of this great natural resource will help to assure ample future wood supplies for the whole country, as well as furnishing continuous employment and an improved standard of living for many people in the region. Fortunately, the South offers many advantages for the maintenance of forest industries on a large scale. The soil and climate favor rapid tree growth; there are numerous valuable hardwood and softwood tree species native to the region; logging operations are relatively simple; all parts of the region are easily accessible to good rail and water transportation facilities; markets for forest products are generally good; ample labor is at hand; and industrial development is well under way.

When the first settlers came into the South the country was almost completely covered with forest. The clearing of land for agriculture and the establishment of communities and cities gradually reduced the forest area. It was not until the latter part of the nineteenth century, however, that commercial logging operations reached large-scale proportions. During the next half century, this nature-grown timber resource was so thoroughly exploited that today only a few remnants of the magnificent and inspiring old-growth forests remain.

The lumber industry in the South grew up on a cut-out-and-get-out basis. Operations were planned with the objective of liquidating the virgin timber and selling the cut-over lands for farming or livestock enterprises. No thought was given to the production of timber crops for the future or for operating sawmills on a continuous basis. As a result, large numbers of sawmills passed out of existence when the end of the original tim-

<sup>1</sup> In this paper, the South refers to the 11 Southern States from North Carolina to Texas and Oklahoma.

ber resource was reached. Many thought that the great southern lumber industry would soon be a thing of the past. They did not reckon, however, on the fact that southern cut-over forest lands usually restock themselves naturally and, given half a chance, develop new commercial stands of timber.

Although little or no thought was given to the possibility of growing future crops of timber, the harvesting of the original forest benefited the South in many ways. It provided much-needed material for home-building, furniture, and the thousand and one other necessities of an expanding civilization; it gave employment to thousands of workers (even today southern forest industries employ more labor than any other activity except farming); it stimulated the building of railroads and other transportation facilities; it furnished revenues for the construction of schools, courthouses, and other public buildings. In addition, the cut-over lands opened new frontiers for farming and livestock enterprises. Some of the cut-over lands proved sufficiently fertile for permanent agriculture, but most people are surprised to learn that even now, after more than a century of effort to convert southern forest lands to farms, almost 60 percent of the total land area remains in forest.

#### USES OF SOUTHERN FOREST PRODUCTS

The most important industries depending upon southern forests for their raw material are those manufacturing lumber, naval stores, and wood pulp. Other important southern forest products include fuel wood, veneer, cooperage, poles, piling, posts, mine timbers, railroad cross ties, and chemical wood. Southern forest lands also support an important range livestock industry, provide a home for game animals, protect the soil from excessive erosion, exert a beneficial influence in conserving rainfall, in regulating streamflow and preventing floods, and afford opportunities for hunting and other recreational activities.

For many years the South has led the United States in the production of hardwood and softwood lumber. Of all the products cut from southern forests, lumber accounts for about 50 percent of the volume. At present there are more than 14,000 sawmills in operation in the South, employing the equivalent of about 250,000 full-time workers, including laborers in the woods.

The most important forest product next to lumber is fuel wood; about one-quarter of all the wood removed goes into this item. Railroad cross ties, telephone poles, cooperage, pulp-

wood, and other miscellaneous products consume the remaining quarter of the enormous volume of wood annually taken from southern forests.

The naval stores industry, which produces practically all of the rosin and turpentine used in this country and in normal times a large part of that used abroad, is centered in the long-leaf-slash pine forests of the Southeast. From 30,000 to 40,000 people are normally employed in this industry. The product is processed in approximately 1,000 gum turpentine stills and in 26 wood distillation plants using stumpwood.

Wood is the principal source of many kinds of pulp and paper products, so essential to our everyday life and to the war effort. In the South, the pulp and paper industry has rapidly expanded during the past decade. Investments of over \$125,000,000 in pulp mills were made during that period and at present over 40 percent of all the pulp produced in the United States comes from the South. The value of pulp and paper produced in the South exceeds \$200,000,000 annually. This industry employs more than 80,000 men on a year-round basis in both woods and mills. With normal paper consumption increasing in this country and with many foreign supplies shut off because of the war (before 1939, the United States imported more than half of its pulp and paper requirements, chiefly from Scandinavia and Canada), the opportunities for further growth of this industry in the South appear promising. How far this expansion can go, however, will be controlled by the quantity, quality, and availability of wood, the effect of competition for raw material supplies on other forest-products industries, and by the availability of financing. It is also contingent upon the maintenance of the South's marked advantages over other sections of the United States and foreign sources in regard to costs of pulpwood and other raw materials used, and of the manufacturing operations. An outstanding advantage to the southern pulp and paper industry is its nearness to supplies of chemicals used in the manufacturing processes.

Most of the southern pulp mills use the sulphate process of conversion, the bulk of the pulp being made into Kraft paper, bags, board, and containers. In the Kraft paper field the South produces over 80 percent of United States requirements and thus dominates the nation's markets. Until recently the white paper and miscellaneous pulp industries made up only a small part of southern paper production, but technical developments such as bleaching pine sulphate pulp or mixing pine and hardwood pulps have enabled a few southern mills to turn out the

better grades of white paper and board. Furthermore, of two large southern pulp mills which began operation in 1940, one is making sulphite pulp for rayon and the other produces newsprint, both using southern pine.

Altogether the primary forest industries in the South employ the equivalent of almost 500,000 full-time workers. In addition, there are many thousands of workers employed in truck, rail, and water transportation of forest products, in secondary wood-processing industries, in the care and protection of forest lands, and in service trades.

#### SOUTHERN FORESTS AND THE WAR

Southern forests are contributing generously to the war program in furnishing immense quantities of lumber needed for cantonment construction, for building factories, and homes for war workers; in the construction of bridges, ships, and docks; for wood for gunstocks; plywood for airplanes; wood and paper-board containers for the crating or boxing of munitions, machinery, food, and other war necessities; charcoal, turpentine, and rosin for use in flares, flame throwers and munitions; and cellulose for explosives. Because many large Army camps are located there, the South has been called upon to supply a large proportion of the increased construction needed. In many cases, these camps have been carved out of forest areas, and training maneuvers and bombing practice grounds have been centered in timbered sections.

The contribution of southern forests in the period of adjustment that will follow the war promises to be as important as its war contributions. Not only will they be called on to provide a plentiful supply of raw materials for a huge reconstruction program all over the world. but also they will be needed to maintain local industries and employ local labor.

#### PRESENT FOREST SITUATION

The existing forests of the 11 Southern States, according to a recently completed forest survey, cover almost 171 million acres and contain about 1½ billion cords, or 344 billion board feet, of merchantable timber. They are, in the main, young stands of rather thinly stocked second-growth of the same species and forest types that made up the original forests, much of it below the minimum size for most industrial uses. The trees range in age from seedlings to 40- and 50-year-old timber just reaching a size suitable for saw-timber use. While these young forests do not have the high quality of the original

old-growth stands, they are able to supply most market needs. Only about 13 percent of the present forest area contains virgin growth.

The recent forest survey of the timber resources of the South made during the depression years disclosed that the region, from an over-all standpoint, was reducing its total wood volume almost as rapidly as it was being replaced through growth. In the saw-timber and higher-quality tree-sizes generally, saw timber was being cut faster than it was being grown. Far more serious, however, was the forest survey finding that southern forests are greatly understocked and growing at only about one-third of their productive capacity.

Uncontrolled fires, frequently set purposely, sweep over millions of acres of southern forests each year. Considerably more than half of the private forest area is not yet under organized fire protection. The average area burned over during the 4-year period, 1938-1941, according to a compilation made by the U. S. Forest Service, exceeded 26 million acres of State and private forest land annually, or 14 percent of the forest area needing protection. Twenty-three percent of the unprotected area burned annually in contrast to 2.4 percent of the protected area.

War demands have increased the amount of saw-timber cut from southern forests. Despite current overcutting, if the remaining timber resources in the South were being protected and well managed for future growth, the situation would be relatively favorable. However, protection and management practices are far from adequate. Small sawmill operations, which produce more than half of the lumber cut in the South, are particularly negligent in this respect. The South will not be able to balance the budget of increased timber needs in the future unless a constructive program of forest rehabilitation and industrial adjustment is worked out soon.

According to the 1940 Census, slightly over one-third of the total forest acreage of the South is owned by farmers. Approximately 7 percent is in national and State forests and other publicly owned forest land; the remaining 60 percent is divided among lumber companies, pulp and paper mills, banks, railroads, and other nonfarm owners. The ownership pattern is complex, which is a deterrent to the adoption and carrying through of a unified forest conservation program. But such unity must be achieved if forest production is to contribute its potential share to the future economic development of the region.

## FORESTRY PROGRESS IN THE SOUTH

Much progress has been made in southern forestry during the past two decades, probably more than in any other extensive forest region of the United States. A recent Forest Service estimate indicated that about 20 million acres of privately owned southern forest land were being managed with the objective of continuous timber production, involving the employment of many technically trained foresters. In addition, national, State, and other publicly owned forest lands under management in the South now total almost 14 million acres. Also, many farmers and other small landowners have taken steps to protect their lands from fire and have adopted conservative cutting and turpentine practices designed to increase and prolong forest yields.

Each southern State has contributed to forestry progress through an established State forest service as well as a State extension forester working under the Extension Service. Several Federal and State agencies are cooperating in extending aid to private forest owners for fire protection, planting, research, and in other ways.

## A FORESTRY PROGRAM FOR THE FUTURE

If southern forests are to contribute their full share to increased prosperity, many obstacles must be overcome. A first step is to greatly increase efforts to protect these forests from fire, insects, disease, and destructive cutting. To eliminate needless fire losses, all forest lands, regardless of ownership, must be placed under organized fire protection at the earliest possible date. It is estimated that adequate fire protection of all State and privately owned forest lands in the South would cost over \$8,000,000 annually, whereas present expenditures are only about a quarter of that amount. Increased provisions are also needed to assure early discovery and control of tree disease epidemics and invasions of destructive insect pests.

Although forest protection is essential, it is only the starting point for good forestry. To obtain a crop of timber by good forest protection is of no permanent value if the productivity of an area is seriously curtailed or ruined by improper or destructive cutting. Sufficient information as to proper and practicable cutting practices is available for all major southern forest types so that there is no reason for delaying their application. Good forest management is just good business. It is therefore important to make sure that southern forests in all ownerships, whether public or private, are well managed.

There is need, also, for much additional information to provide the scientific basis for growing continuous crops of timber, and this can best be obtained through an adequate program of forest research. Present forest research efforts in the South fall far short of actual needs.

Many millions of acres of southern forest lands are in need of planting if they are to grow timber crops within any reasonable period and adequately safeguard soil and water resources.

Other provisions needed for a sound forest program involve the removal or amelioration of obstacles to stabilized ownership necessary for long-time forest management, including discriminatory taxes, unfair freight rates, and unfavorable credit facilities.

The major forestry problems which confront the South cannot be solved by one group or another alone. The people who work in the forests and for the forest industries, as well as those who live in the communities and cities dependent in whole or in part on the forest resource, have as much at stake in the continuity of forest production as does the man who owns or operates forest land. Since forests are so important to the local, regional, and national economy, public interest must demand the conservation and wise use of these resources. Where private owners are unable to profitably operate their forest land, the public should acquire and manage it. However, if private owners are unwilling to protect and use the resource wisely, some public control measures will be necessary.

Federal and State agencies have contributed much to southern forestry progress in the way of education, research, fire prevention and control, demonstration, and technical guidance. Such aids need to be greatly expanded and strengthened.

Increased public ownership of forest lands by municipalities, counties, States, and the Federal Government seems to offer the best means (1) to restore clear-cut, depleted forest lands and submarginal and worn-out agricultural lands to productivity; (2) to protect certain vital watersheds in the best public interest; and (3) to test and demonstrate proper forest management practices. In the South, there are between 11 and 12 million acres of forest land in public ownership, or about 7 percent of the total forested area of the region. Even if public ownership were extended to three or four times this area, as may eventually be desirable for the purposes stated above, it still leaves the great bulk of the forestry job to the private owners.

The South stands on the threshold of an era wherein its great

human resources and its capacity for the production of raw materials are available to achieve greater security and prosperity for its people. All prospects point to increased industrialization of the South. Such industrial expansion must be based on a large and continuous supply of raw materials. Southern forest resources, occupying about 6 out of every 10 acres of its present land area, can and should play a major role. The South has a matchless opportunity—she can at one and the same time make her forests more effective in helping to win the war and the peace.



### SLABS OF THE SUNBURNED WEST

An arm-chair for a one-eyed giant;  
two pine trees grow in the left arm of the chair;  
a bluejay shoots and twitters . . . out and across . . .  
tumbled skyscrapers and wrecked battleships,  
walls of crucifixions and wedding breakfasts;  
ruin, ruin—a brute gnashed, dug, kept on—  
kept on and quit: and this is It.  
Falling away, the brute is working.  
Sheets of white veils cross a woman's face  
An eye socket glooms and wonders.  
The brute hangs his head and drags on to the job.  
The mother of mist and light and air murmurs. Wait.

—*Carl Sandburg*