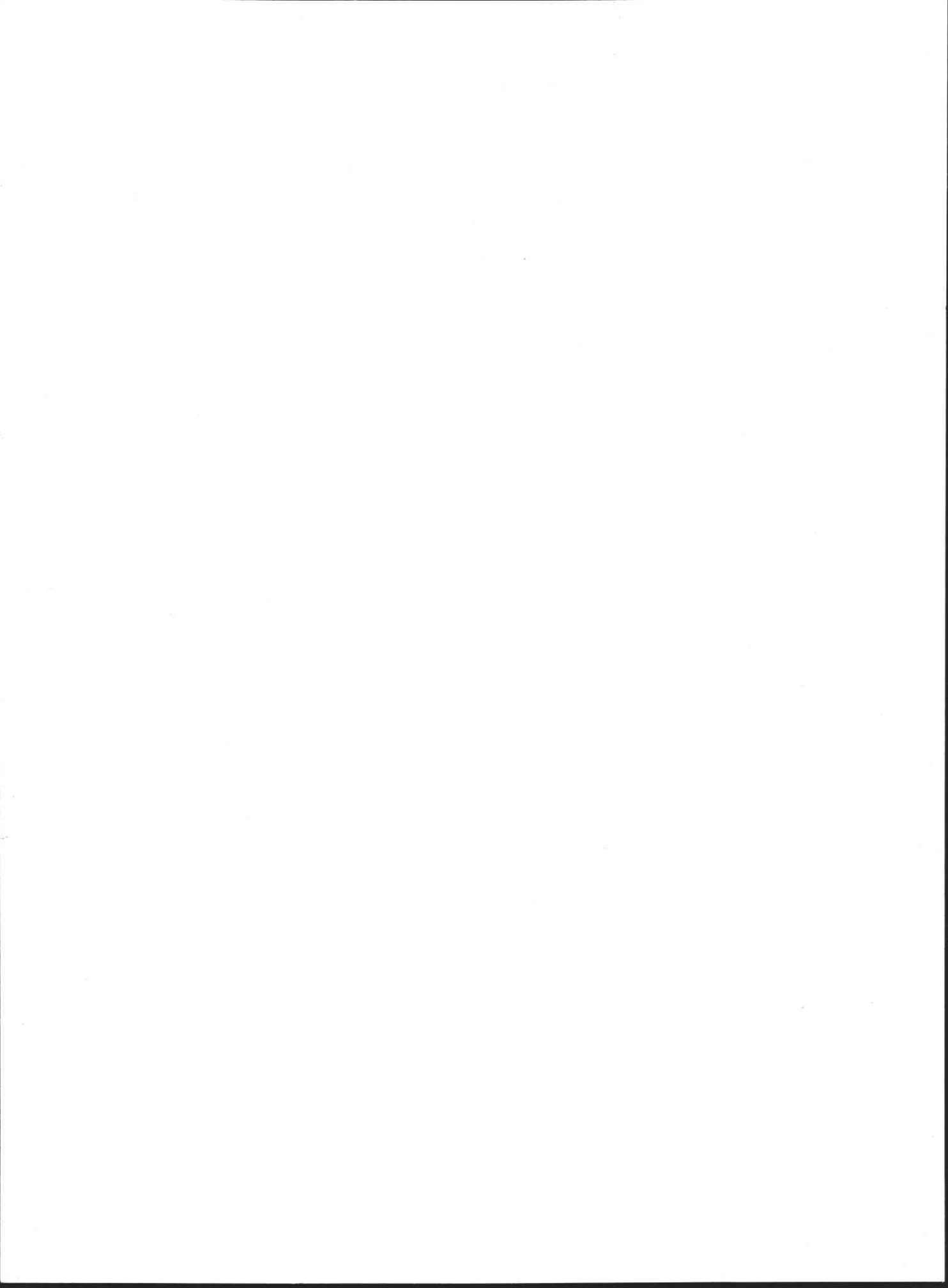


*Carolyn*

# 1959 PULPWOOD PRODUCTION IN THE SOUTH





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*A. S. Todd, Jr.*

*and*

*Agnes C. Nichols*

**U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE**



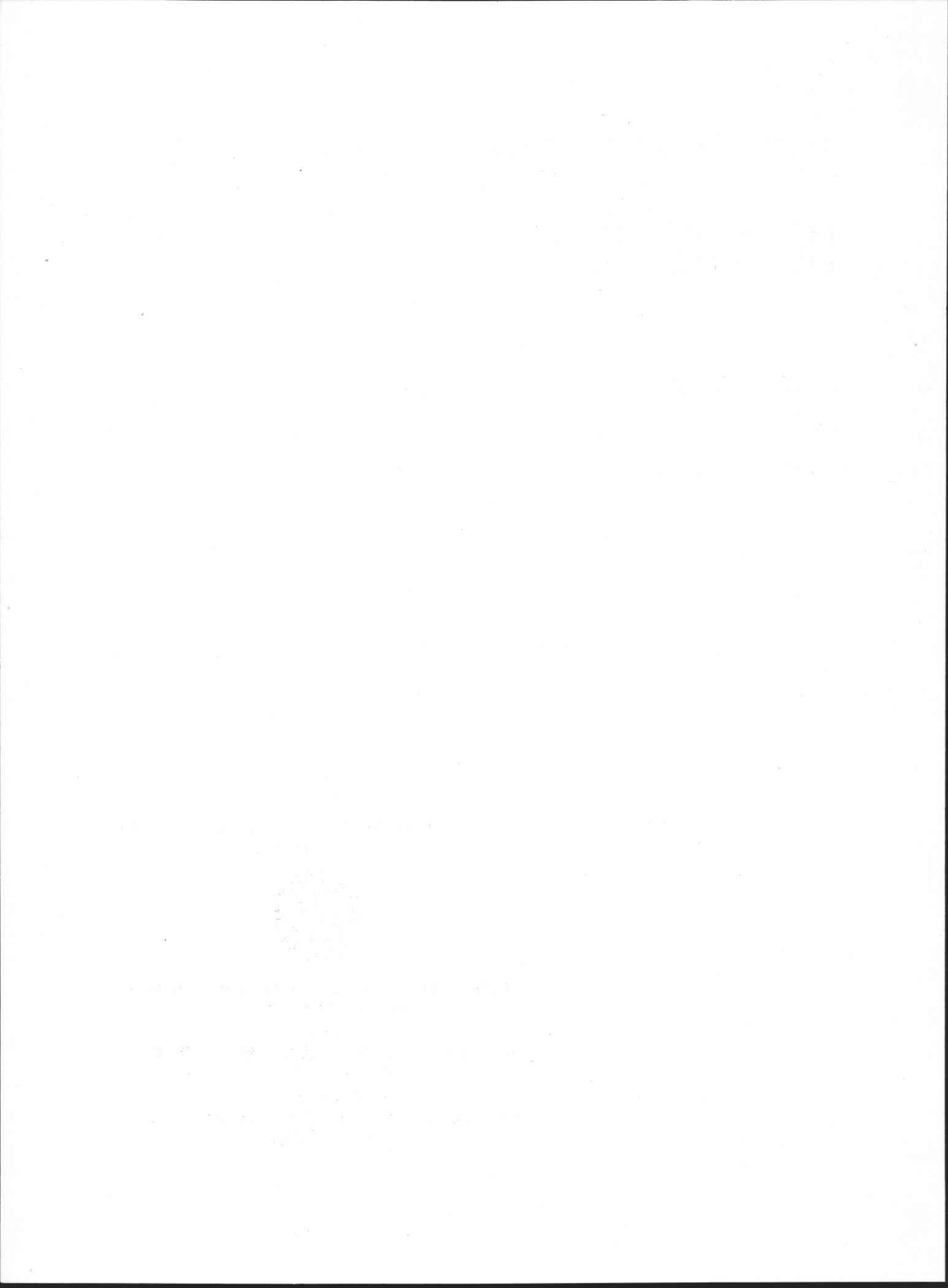
**SOUTHEASTERN FOREST EXPERIMENT STATION**  
Asheville, North Carolina

*and*

**SOUTHERN FOREST EXPERIMENT STATION**  
New Orleans, Louisiana

*in cooperation with*

**SOUTHERN PULPWOOD CONSERVATION ASSOCIATION**  
Atlanta, Georgia



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**P**ULPWOOD OUTPUT IN THE SOUTH reached 22,750,100 cords in 1959, an all-time record. The previous high was 20,344,900 cords set in pre-recession 1956. The year 1959 also saw continued rapid expansion in the use of hardwood species and wood residues, the latter chiefly in the form of chips from sawmills. Altogether, 81 pulpmills received wood from the South, and 76 of these were southern mills.

Pulpwood production was generally upward from 1958 levels (table 1). Southwide, it rose 12 percent. Virginia, with a 19-percent increase, registered the greatest gain, followed by Arkansas and Georgia with 16 percent. Only two states, Oklahoma and Tennessee, showed a decline. For the twelfth year Georgia was the leading producer of the Southern States, with over 4.7 million cords. Alabama continued a strong second, with North Carolina, Florida, Mississippi, and South Carolina nearly tied for third place.

Table 1.—1959 pulpwood production in the South and change from 1958

State	Round pulpwood and residues	Change
	Thousand cords	Percent
Alabama	2,931.0	+12
Arkansas	1,524.3	+16
Florida	2,113.4	+15
Georgia	4,735.1	+16
Louisiana	1,799.6	+14
Mississippi	2,015.8	+ 7
North Carolina	2,145.8	+13
Oklahoma	54.8	-13
South Carolina	1,933.3	+11
Tennessee	353.0	( <sup>1</sup> )
Texas	1,415.6	+ 2
Virginia	1,728.4	+19
All states	22,750.1	+12

<sup>1</sup> Negligible.

## ROUNDWOOD PRODUCTION

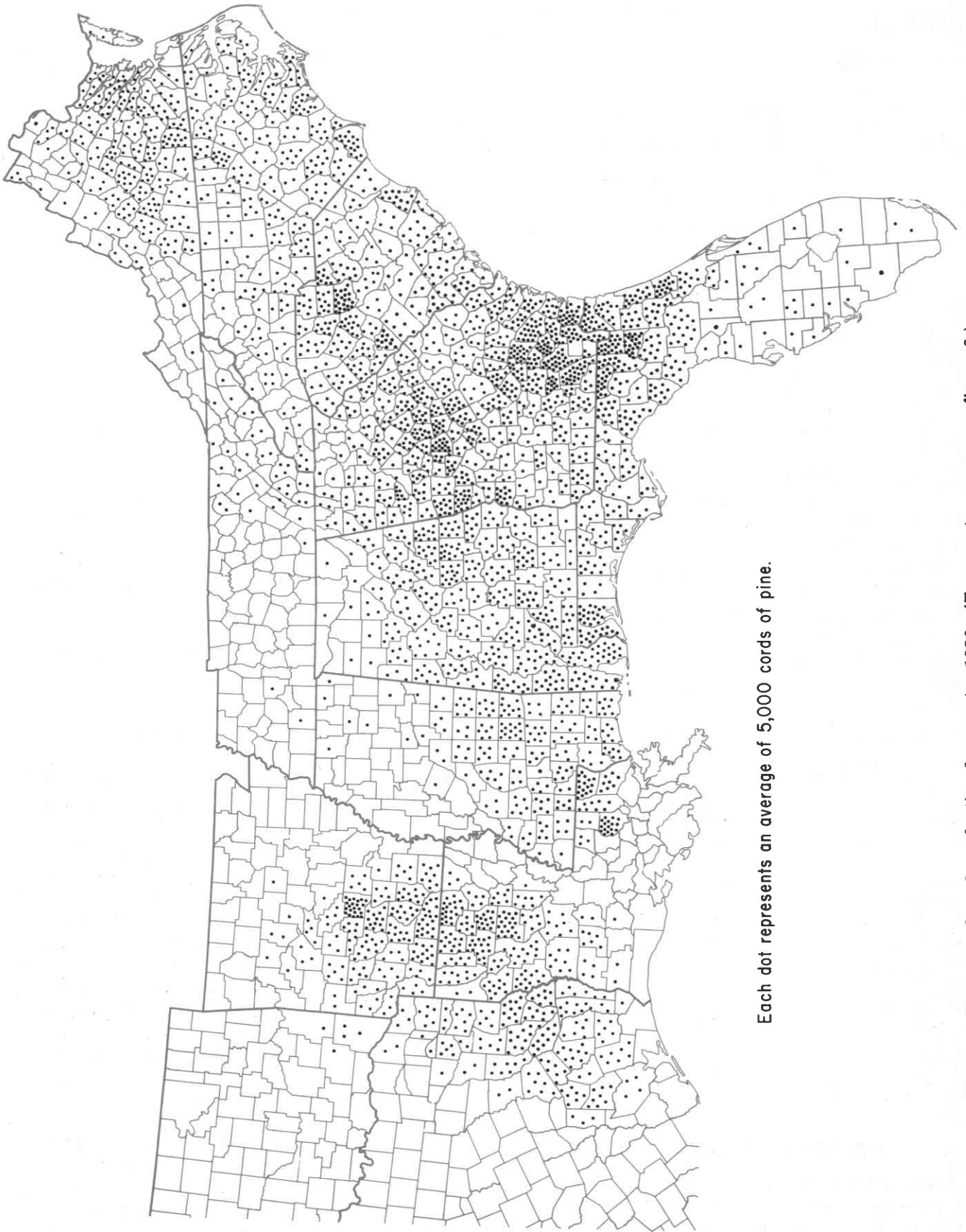
Roundwood—bolts cut from standing timber—provides most of the wood pulped. Out of the total southern production of 22,750,100

cords, 20,288,000 or practically 90 percent was in this form as compared with 18,447,400 cords in 1958.

About four-fifths of the roundwood was of the southern pine species (table 2). Loblolly and shortleaf predominated and with longleaf and slash made up the bulk of the cut. However, a substantial volume of Virginia pine was produced in the piedmont and mountains of the Southeast, while pond, pitch, and even sand pine were locally important.

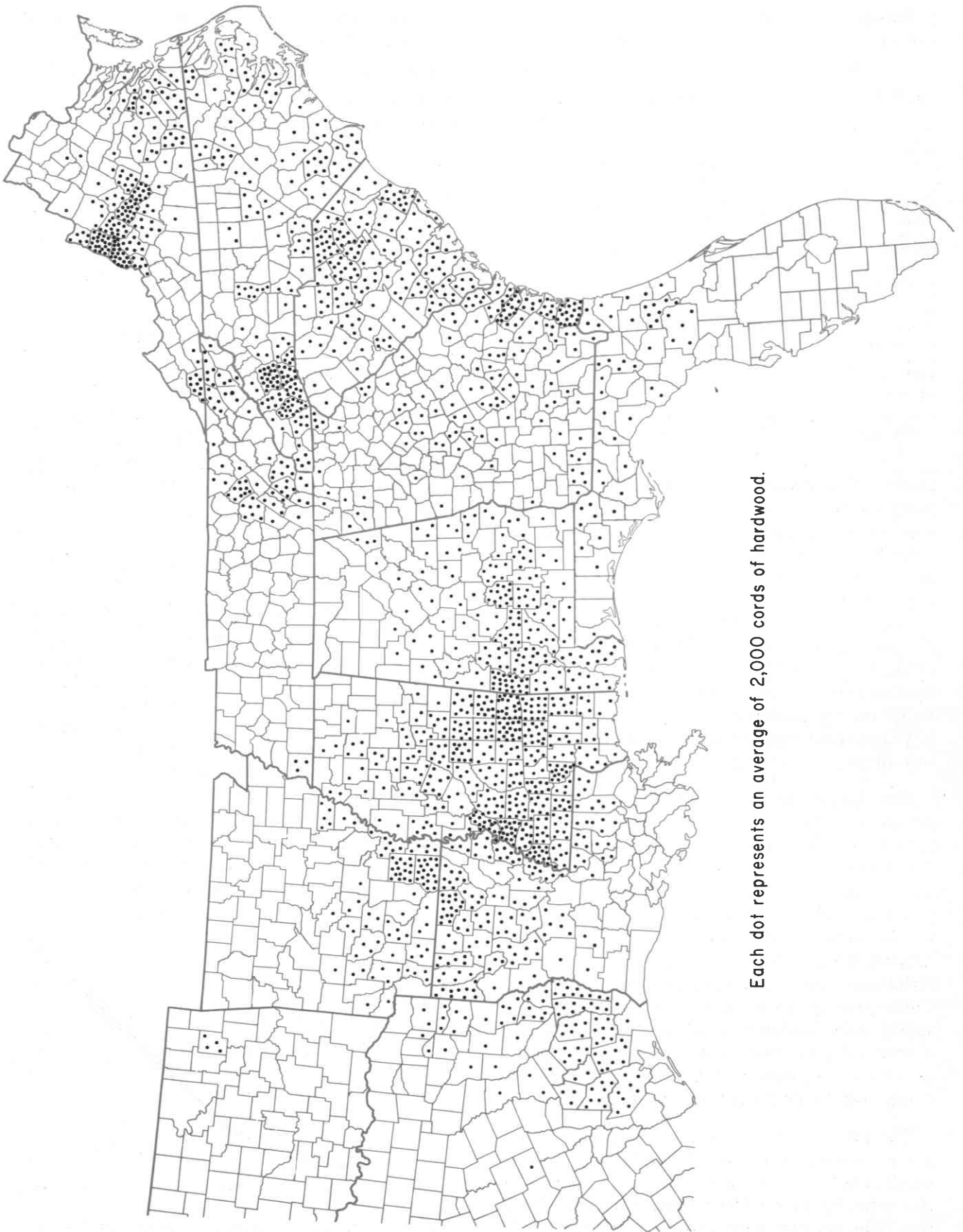
Although pine roundwood is still the mainstay of the pulp industry, the use of hardwoods has been expanding for the past decade. In 1959, this trend was accentuated. Hardwood production was 3,772,500 cords, up a record 28 percent from the previous year. However, perhaps more notable than the increase itself was the size of the production gain in relation to that of pine. Hardwoods, which have comprised from 14 to 16 percent of the total roundwood harvest in recent years, now account for 19 percent. Letting the more abundant hardwoods play a greater role in supporting pulp industry expansion is a significant step toward better timber utilization. By relieving pressure on the heavily used pines, it augurs well for the timber supply and the continued orderly growth of the industry.

Less favorable from a conservation standpoint is the distribution of the hardwood cut among the various hardwood species. At one time, pulpable hardwoods were almost exclusively soft-textured, notably the gums and



Each dot represents an average of 5,000 cords of pine.

Figure 1. Pine roundwood production by county, 1959. (For county names, see figure 8.)



Each dot represents an average of 2,000 cords of hardwood.

Figure 2. *Hardwood roundwood production by county, 1959.*

yellow-poplar. The introduction of semichemical and other hardwood pulping processes has

Table 2.—1959 roundwood production by state and species group

State	All species	Pine	Soft hardwoods <sup>1</sup>	Hard hardwoods
Thousand cords				
Alabama	2,582.2	2,150.7	406.0	25.5
Arkansas	1,192.4	1,002.0	152.6	37.8
Florida	1,979.3	1,882.5	73.7	23.1
Georgia	4,354.5	4,009.0	301.9	43.6
Louisiana	1,612.1	1,297.4	238.2	76.5
Mississippi	1,875.5	1,024.3	769.2	82.0
North Carolina	1,834.1	1,429.5	179.2	225.4
Oklahoma	38.1	29.1	.6	8.4
South Carolina	1,709.9	1,342.1	268.2	99.6
Tennessee	346.1	200.8	27.3	118.0
Texas	1,120.0	906.3	199.6	14.1
Virginia	1,643.8	1,241.8	94.7	307.3
All states	20,288.0	16,515.5	2,711.2	1,061.3

<sup>1</sup>The gums, cottonwood, willow, yellow-poplar, bay, magnolia, maple, basswood, sycamore, soft elm, hackberry.

altered this situation considerably in certain parts of the South, and some firm-textured species are produced in every state. However, table 2 indicates that the industry's preference for soft-textured species is still pronounced. Regionwide, they make up 72 percent of the round hardwood, and in certain states almost 95 percent; yet, the hardwood growing stock of the Region is 60 percent oaks, hickories, etc. Spokesmen of industry say this imbalance will be gradually corrected, and such development is particularly desirable as over-all consumption of hardwood rises.

The geographic distribution of roundwood production (figs. 1 and 2) is beginning to coincide more and more closely with the natural occurrence of the various species in the woods. This is especially true of the pines. Twenty years ago, there were only 25 pine pulpmills in the South, nearly all in the coastal area. Except for a cluster in Louisiana and south Arkansas, they were rather widely spaced. Consequently, pine pulpwood production was spotty and localized. Today, there is hardly a tract of pine that is not within easy reach of a mill, and pine pulpwood is cut in almost every county or parish where it grows.

The pattern of hardwood production is not yet so widespread. Nevertheless, some hardwood is cut in every state and in a majority of the counties in several states. Comparison of the 1959 pattern with those for earlier years

indicates that hardwood production will soon be general throughout all parts of the South.

Tables 10 to 21 show the 1959 production of roundwood by county. Baldwin County, Alabama, with 147,000 cords, led all the other southern counties in production, as it has in many preceding years. A close second was Camden County, Georgia, with 143,000. Including these two, there were 12 counties with cuts of more than 100,000 cords. Another 28 produced between 75,000 and 100,000, while 79 more were in the 50,000 to 75,000 class.

### PRODUCTION FROM RESIDUES

The pulping of wood residues continues to expand. Production from this source totaled 2,462,100 cords in 1959, a 38-percent increase over 1958. Ninety-seven percent of this material was in the form of chips from sawmills and veneer plants; the rest consisted of veneer cores, cull crossties, pole and piling ends, and other coarse residues.

The pulp and paper industry has always been keenly interested in the possibilities of utilizing the wood waste of other industries. A number of southern hardwood mills originally depended on spent chips from now defunct tanning extract plants and, during the labor-short years of World War II, there was experimentation with residues from a wide variety of sources. In 1952, the first successful sawmill installations of barkers and chippers made several million cords of slabs and edgings per year usable. During 1953, pulpmill receipts of chipped residues amounted to 25,700 cords (fig. 3). Since then, the volume of chips purchased has climbed rapidly as more and more sawmills

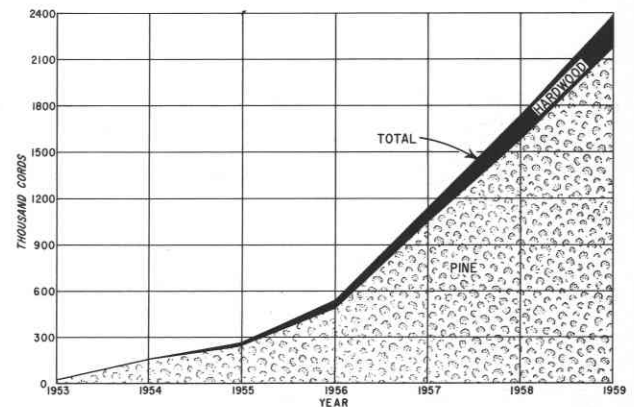


Figure 3. Chipped-residue production, 1953-1959.

installed the necessary equipment. Today some 600 plants are converting their residues to pulp chips, and 1959 production was almost 2.4 million cords.

Residues, chipped and unchipped, accounted for 10.8 percent of all pulpwood in 1959 (fig. 4).

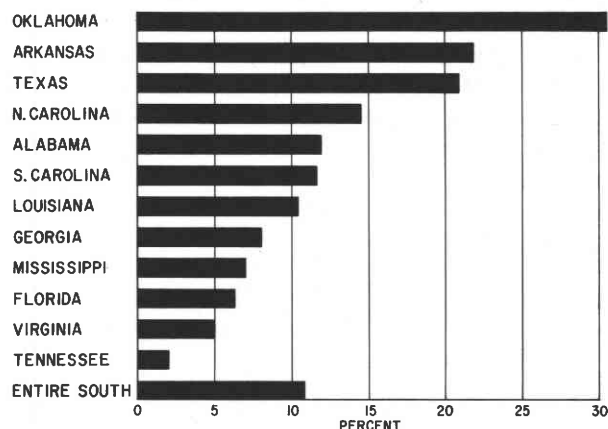


Figure 4. Portion of total production obtained from wood residues, 1959.

By individual states, the percents varied from 2.0 in Tennessee to 30.5 in Oklahoma. How much of the annual wood requirement can eventually be filled from residues is uncertain. Informed estimates for the South as a whole range between 15 and 20 percent, a few even higher.

### PRODUCTION TRENDS BY KIND OF WOOD

With the onset of the business recession in 1957, pulpwood production dropped some 560,000 cords from the record high of 1956. During the gradual 1958 recovery, about 80 percent of this loss was regained. Then, in 1959, a new record was set. How did these fluctuations affect the pattern of production by kind of wood? The effects were far from uniform and may disclose a trend of more than passing interest.

Examining the production of the past four years (table 3), one is struck by the fact that only pine roundwood declined significantly. Round hardwood was held to minor increases in 1957 and 1958, but climbed more rapidly during 1959 than in any previous year. Chip output, largely controlled by purchase contracts covering several years, could not decline.

On the other hand, there is no indication that the growth of the chip procurement program was even impeded. Production of pine chips, for instance, continued to expand a steady half-million cords each year.

With the production of most forms of wood on the increase, pine roundwood took the full effects of curtailed pulpmill activity. In 1957, while total production declined 560,000 cords, round pine fell 1.2 million. In 1958, when total production rose 450,000, round pine lost an additional 210,000. Even in 1959, with total production up 2.5 million cords, round pine showed only a sluggish recovery—an increase of slightly over 1 million cords. This left it still 400,000 cords short of the 1956 mark.

### THE EXPANDING MARKET FOR WOOD

Completion of a new pulpmill in South Carolina during the year brought the total number in the Region to 76, with a combined daily capacity of 46,112 tons of dry pulp (table 4). Flor-

Table 3.—Pulpwood production by type of wood, 1956-1959

Type of wood	Production			
	1956	1957	1958	1959
	<i>Thousand cords</i>			
Round pine	16,920	15,714	15,503	16,515
Round hardwood	2,766	2,866	2,944	3,773
Pine chips	488	1,047	1,581	2,177
Hardwood chips	46	78	146	207
Other pine residue	15	11	8	9
Other hardwood residue	110	67	51	69
All types	20,345	19,783	20,233	22,750

Table 4.—Number of pulp mills and pulping capacity by state, 1959<sup>1</sup>

State	Mills	24-hour capacity
	Number	Tons
Alabama	9	4,203
Arkansas	4	2,285
Florida	10	8,100
Georgia	10	6,875
Louisiana	10	5,605
Mississippi	6	3,072
North Carolina	5	3,835
Oklahoma	1	90
South Carolina	4	4,330
Tennessee	4	1,832
Texas	5	2,405
Virginia	8	3,480
All states	76	46,112

<sup>1</sup> Southern Pulp and Paper Manufacturer, vol. 22, no. 10 (Oct. 1, 1959); and other sources.

ida, with 10 mills and 8,100 tons capacity, ranked first among the southern states. Georgia and Louisiana, each with 10 mills also, ranked second and third.

By year's end, seven additional pulpmills were either planned or already under construction. When completed, they will add an estimated 2,125 tons of capacity, and announced enlargement of existing plants will add still more. Tables 22 and 23 list the pulpmills existing and planned, while the map in figure 7 shows their location.

Growth of the pulp and paper industry has not only intensified the competition for wood but has extended the wood market to all parts of the South. One index of competition is the number of mills that procure wood from an area. Half the counties that produce pulpwood now supply four or more mills simultaneously (figs. 5 and 6), and it is not too unusual to find buyers from 10 or more mills active in a single county. As for the nonproducing counties, they are becoming fewer in number each year and are largely restricted to areas with little pulpable timber.