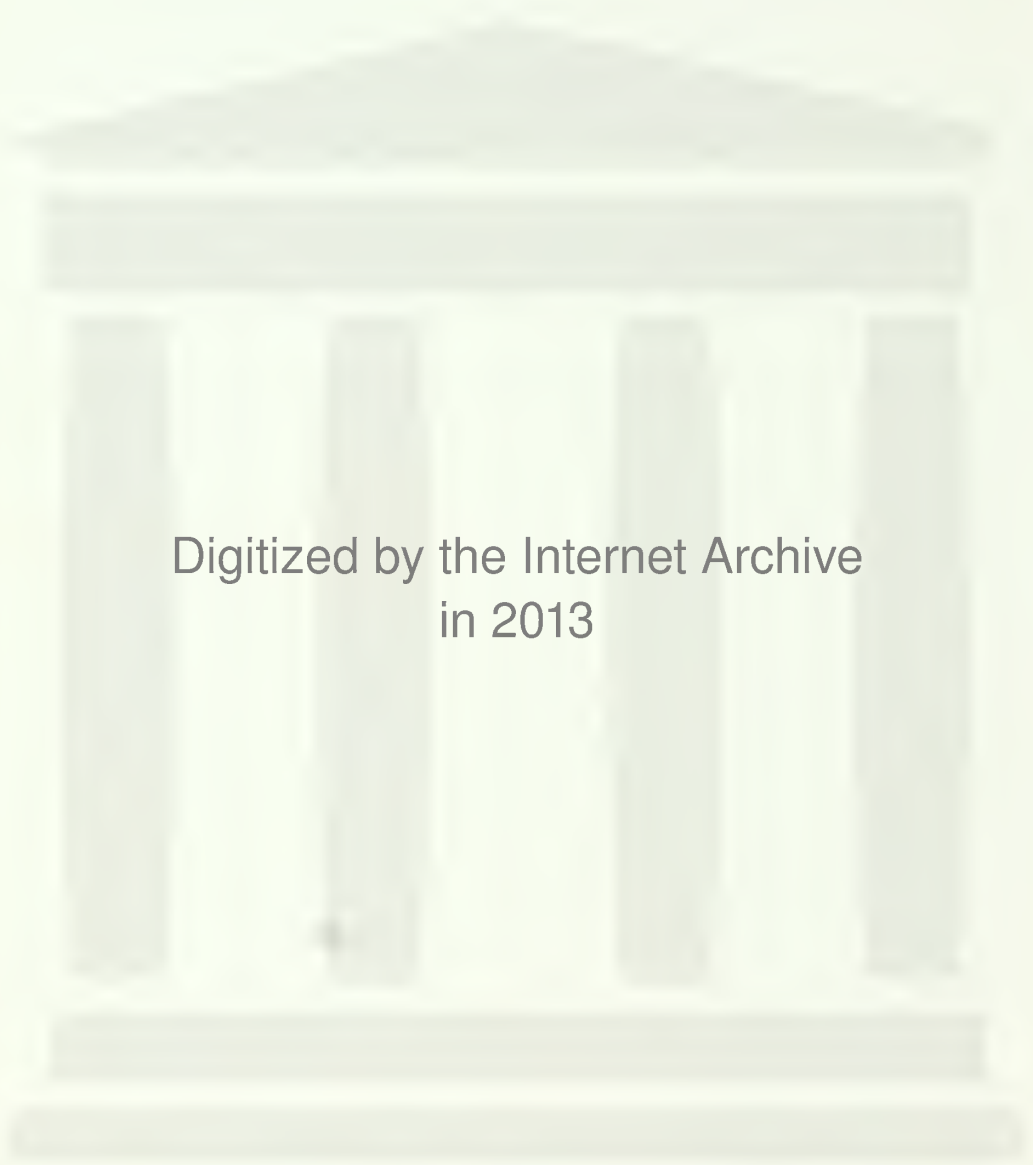
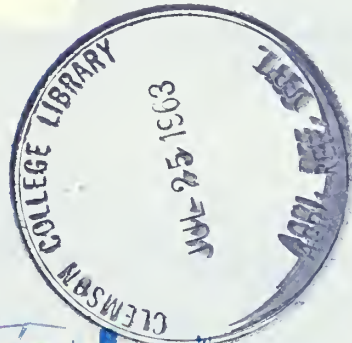




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SOUTHERN PULPWOOD PRODUCTION, 1962



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SOUTHERN PULPWOOD PRODUCTION, 1962

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in cooperation with

SOUTHERN PULPWOOD CONSERVATION ASSOCIATION
Atlanta, Georgia



PULPWOOD PRODUCTION IN THE SOUTH rose to an all-time high of 25,586,300 cords in 1962—58 percent of the Nation's total. At the year's end, 80 southern pulpmills were operating; their combined daily pulping capacity was more than 52,000 tons. Nine mills outside the region were using wood grown in the South.

The South's 1962 pulpwood harvest was 6 percent greater than in 1961, the previous record year. Gains in output varied from 47 percent in Oklahoma to 1 percent in North Carolina. One State, Texas, showed a decline, but of less than 1 percent. Georgia produced 5.2 million cords, to continue as southern leader for the fifteenth consecutive year. Alabama, with a cut of 3.4 million cords, ranked second. South Carolina, Florida, North Carolina, Mississippi, and Louisiana harvested more than 2 million cords each.

Table 1. *Pulpwood production in the South during 1962, and change since 1961*

State	Round pulpwood and residues	Change
	Thousand cords	Percent
Alabama	3,448.2	+ 4
Arkansas	1,729.8	+ 5
Florida	2,464.5	+ 9
Georgia	5,217.0	+ 5
Louisiana	2,006.2	+ 9
Mississippi	2,100.0	+ 9
North Carolina	2,323.9	+ 1
Oklahoma	59.3	+47
South Carolina	2,481.5	+ 8
Tennessee	432.3	+ 3
Texas	1,429.6	- 1
Virginia	1,894.0	+ 3
All states	25,586.3	+ 6

Pulpwood made from residues accounted for 15 percent of the total output; in 1961 the proportion was 14 percent. The 1962 residue

volume was 3,849,500 cord equivalents, an increase of 16 percent over the preceding year. Ninety-eight percent of the 1962 total arrived at pulpmills in the form of chips, primarily from sawmills and veneer plants. Unchipped residues were mainly veneer cores, cull cross-ties, and pole and piling trim.

Some 21,736,800 cords of pulpwood were delivered to mills as bolts. This was a 4-percent increase over 1961. All States except Tennessee and Oklahoma cut more than a million cords of roundwood. Georgia alone cut 4,556,300 cords, Alabama 2,842,500. Florida and South Carolina harvested more than 2 million cords each.

Table 2. *Round pulpwood production in the South, by State and species group, 1962*

State	All species	Pine	Soft hardwoods ¹	Hard hardwoods
- - - - Thousand cords - - - -				
Alabama	2,842.5	2,174.4	552.2	115.9
Arkansas	1,310.0	974.0	249.1	86.9
Florida	2,252.6	2,111.5	104.6	36.5
Georgia	4,556.3	4,057.5	362.6	136.2
Louisiana	1,782.8	1,375.9	301.3	105.6
Mississippi	1,831.9	858.6	861.8	111.5
North Carolina	1,849.9	1,390.2	242.3	217.4
Oklahoma	31.7	10.7	14.8	6.2
South Carolina	2,092.0	1,615.2	368.8	108.0
Tennessee	409.8	201.5	55.5	152.8
Texas	1,091.4	838.2	226.2	27.0
Virginia	1,685.9	1,159.5	121.2	405.2
All states	21,736.8	16,767.2	3,460.4	1,509.2

¹ Includes gums, cottonwood, willow, yellow-poplar, bay, magnolia, maples, basswood, sycamore, soft elm, hackberry.

As in past years, Baldwin County, Alabama, produced more rough bolts than any other southern county; the 1962 cut was 208,500 cords. Union Parish, Louisiana, was second with 176,000 cords. All together, 23 counties harvested more than 100,000 cords apiece. Their combined output accounted for 14 percent of the South's roundwood production.

Southern pines made up 77 percent of last year's roundwood output. In 1961 they accounted for 79 percent. Pine bolt production declined in Arkansas, Mississippi, North Carolina, Oklahoma, Tennessee, Texas, and Virginia.

Hardwood bolts totaled 4,969,600 cords. This volume was 13 percent above that of 1961 and set a new record for the twelfth straight year. Almost one-fourth of the total roundwood was hardwood. Nearly 70 percent came from soft-textured species, such as sweetgum and yellow-poplar

Some 42 percent of the total hardwood bolts were delivered to mills that use only the sulfate process. These mills prefer soft-textured species. Firm-textured hardwoods are most in demand at mills employing the semichemical process.

Table 3. Round hardwood receipts by pulping process, 1962

Mills	Pulping capacity, 24 hours	All hardwoods		
		Tons	Percent	
Sulfate	24,175	42	45	31
Sulfate and semichemical	14,135	25	21	36
Sulfate and groundwood	6,627	11	14	3
Groundwood	2,359	8	11	3
Semichemical	2,200	11	7	20
Other	2,650	3	2	7
Total	52,146	100	100	100

The South continues to expand its pulping capacity. In 1962 mill capabilities increased from 51,000 tons of pulp per day to 52,000. Two new mills, with a combined capacity of more than 1,100 tons, are presently under construction in the Southeast. Georgia leads all States in pulping capacity with 18 percent of the South's total. Florida ranks second, and is followed by Louisiana, Alabama, and South Carolina.

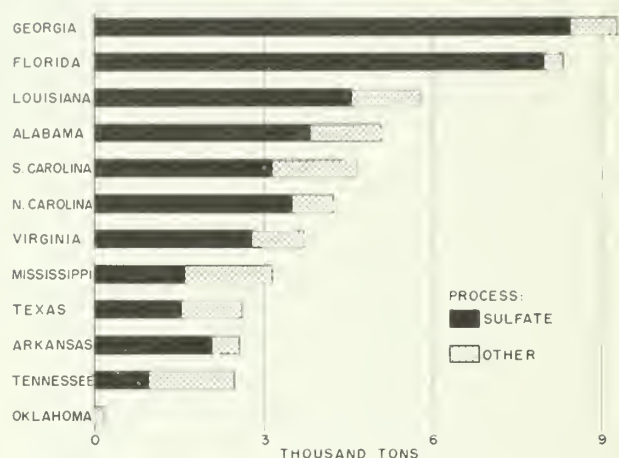


Figure 1. Pulping capacity by State, 1962.

The sulfate process still dominates the industry, accounting for 78 percent of the southern mill capacity; 11 percent is groundwood or other mechanical processes, and 10 percent is semichemical. Two mills with 1 percent of the capabilities employ the soda and sulfite process. Current developments in the planning and construction of new mills indicate that the sulfate process will make up an even larger share of the South's pulping facilities in the near future.

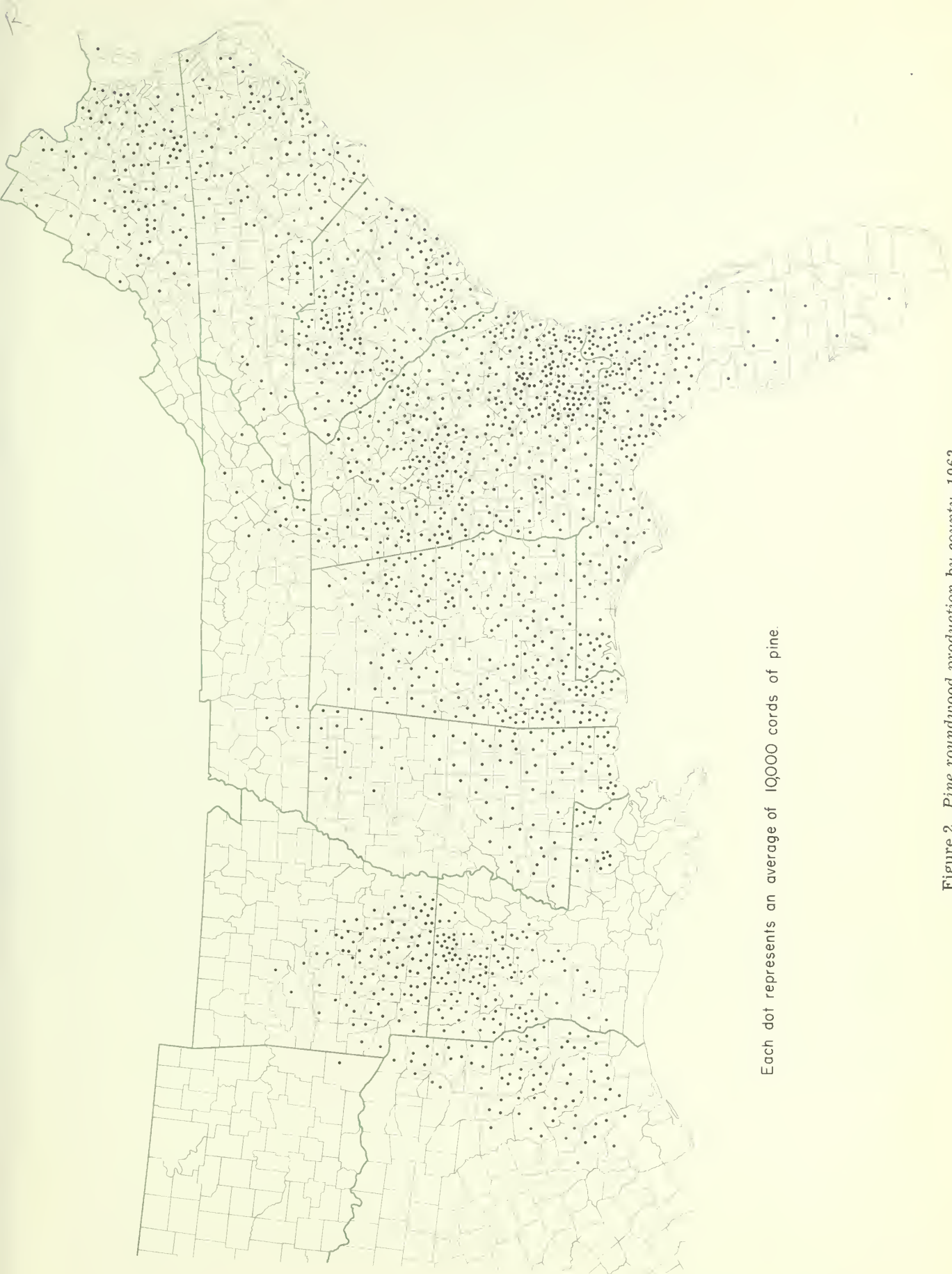
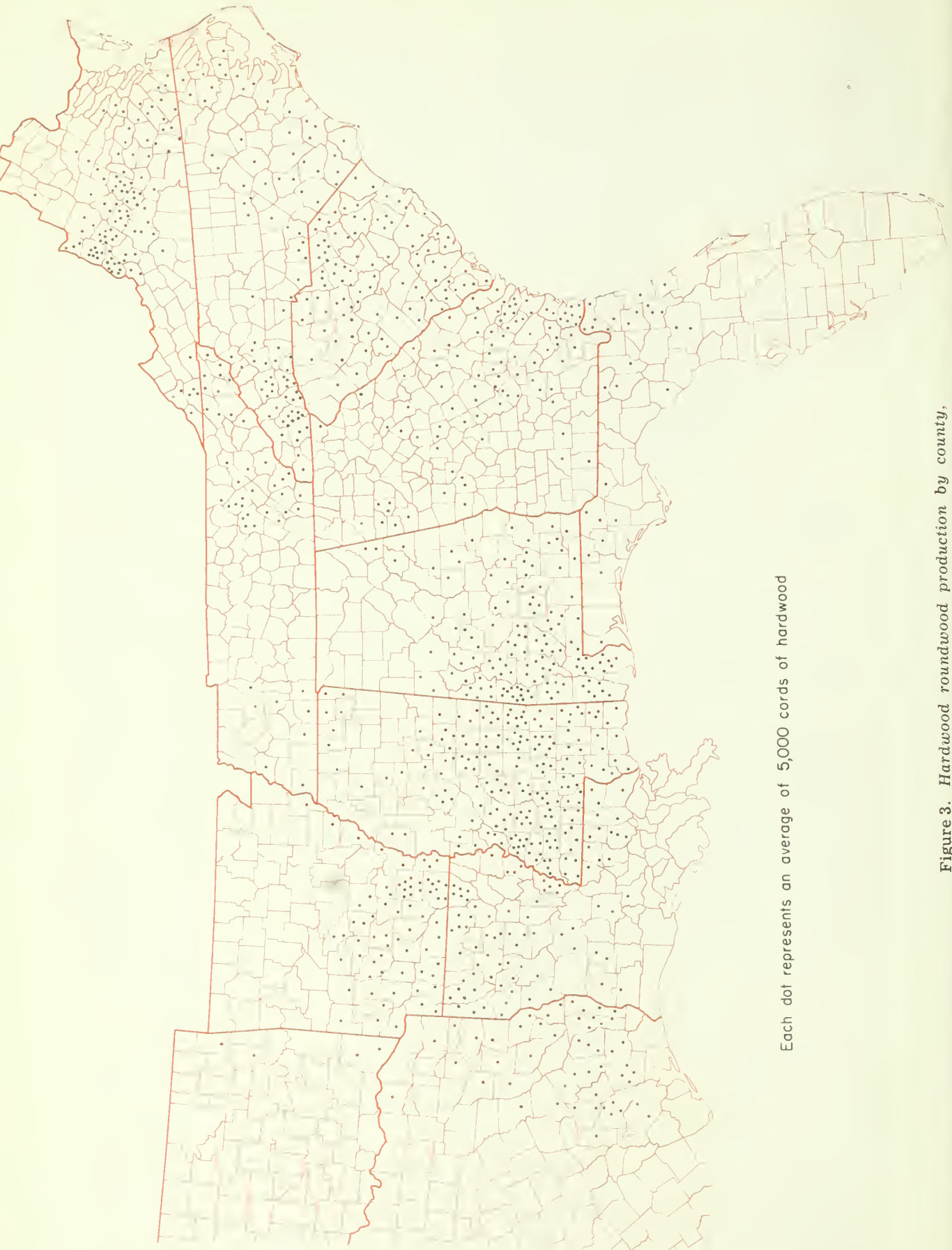


Figure 2. *Pine roundwood production by county, 1962.*



Each dot represents an average of 5,000 cords of hardwood

Figure 3. Hardwood roundwood production by county, 1962.

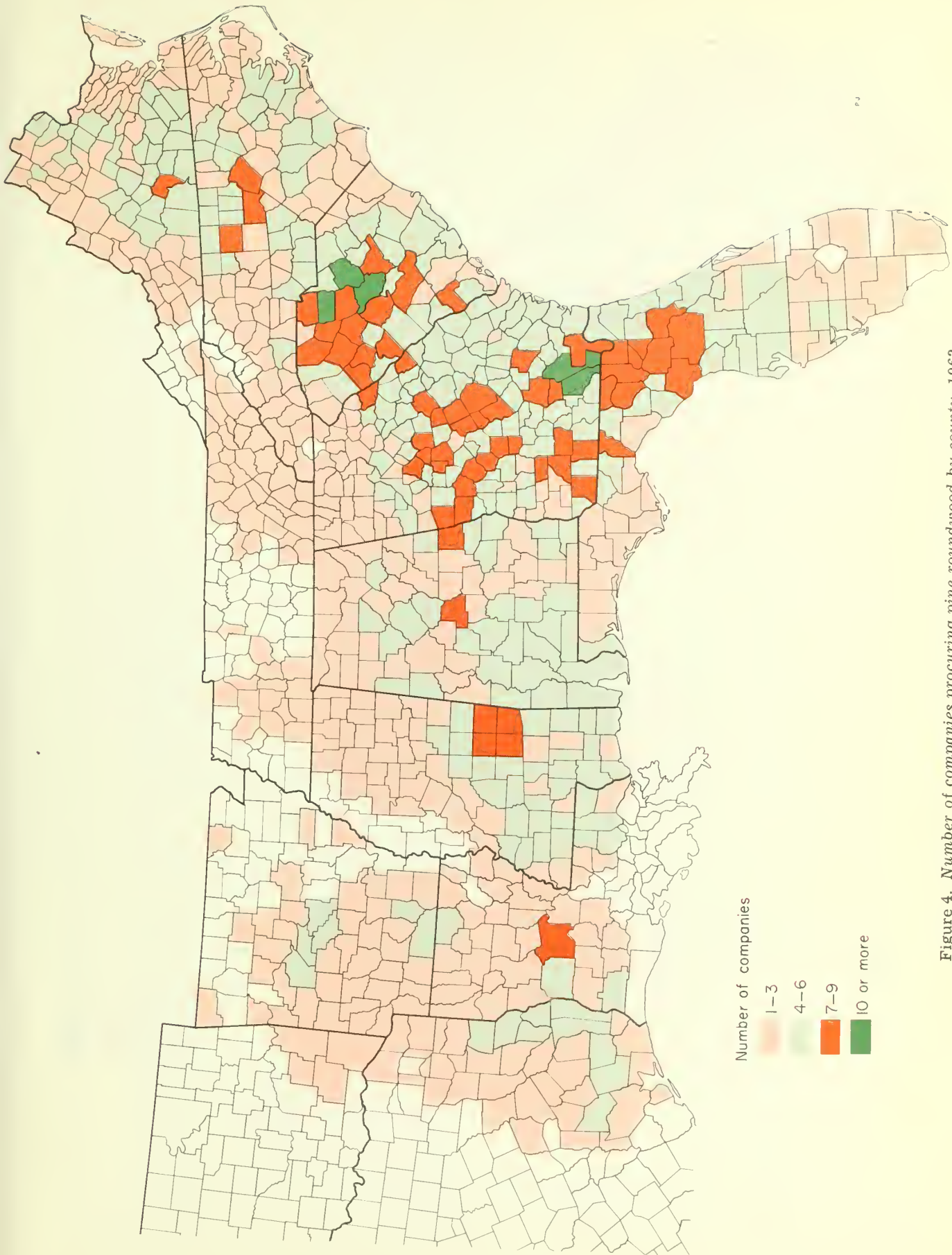


Figure 4. Number of companies procuring pine roundwood by county, 1962.

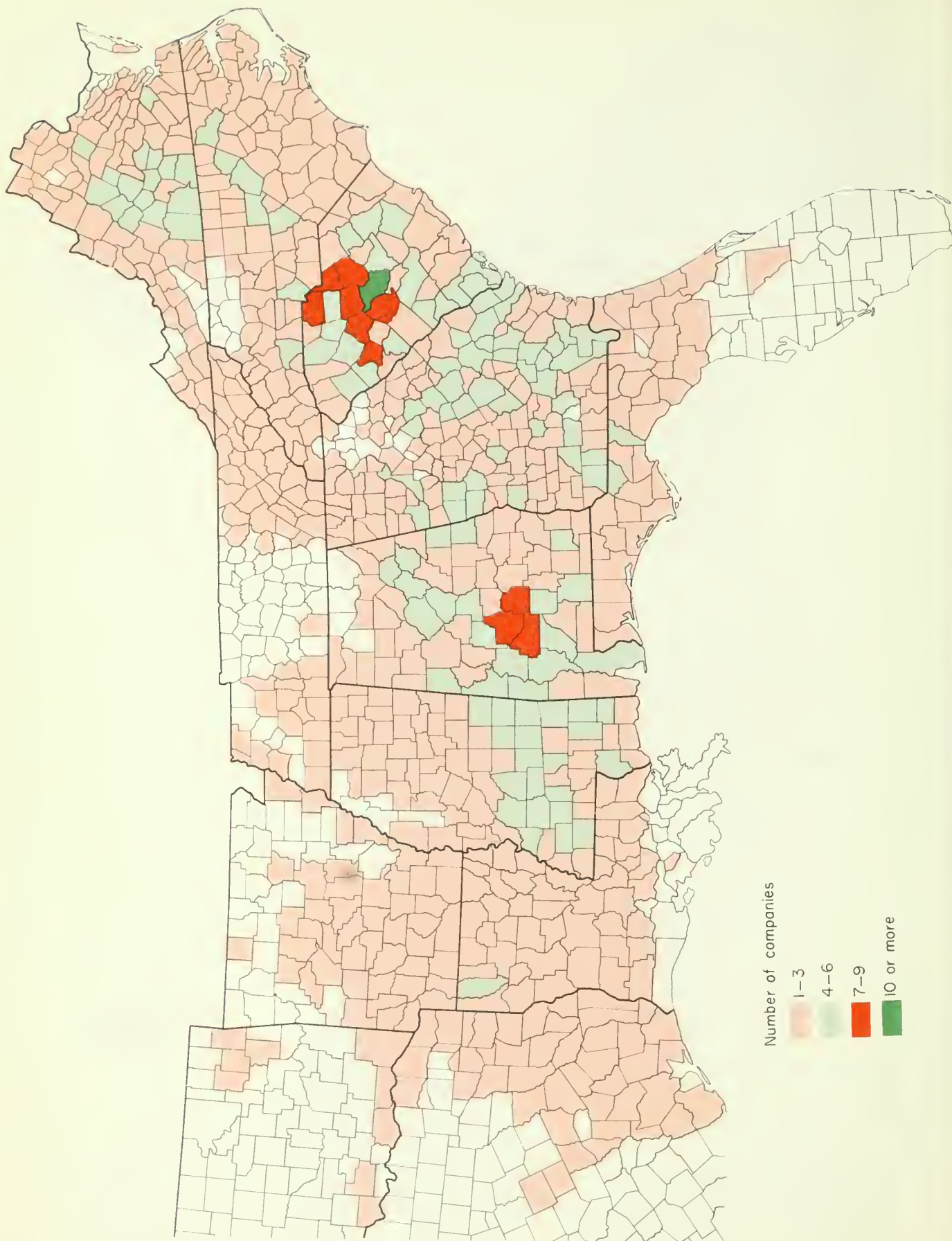


Figure 5. Number of companies procuring hardwood roundwood by county, 1962.

DETAILED TABLES

Table 4. Round pulpwood production in the South, by State and species group, 1962 and 1961

State	Change from 1961	1962			1961		
		All species	Pine	Hardwood	All species	Pine	Hardwood
----- <i>Thousand cords</i> -----							
Alabama	+ 1	2,842.5	2,174.4	668.1	2,805.6	2,168.9	636.7
Arkansas	+ 6	1,310.0	974.0	336.0	1,235.8	987.0	248.8
Florida	+ 9	2,252.6	2,111.5	141.1	2,058.8	1,954.4	104.4
Georgia	+ 3	4,556.3	4,057.5	498.8	4,406.0	3,923.9	482.1
Louisiana	+ 9	1,782.8	1,375.9	406.9	1,630.3	1,306.2	324.1
Mississippi	+ 7	1,831.9	858.6	973.3	1,718.9	889.4	829.5
North Carolina	- 2	1,849.9	1,390.2	459.7	1,879.9	1,430.4	449.5
Oklahoma	+41	31.7	10.7	21.0	22.5	13.3	9.2
South Carolina	+ 6	2,092.0	1,615.2	476.8	1,964.7	1,535.7	429.0
Tennessee	+ 1	409.8	201.5	208.3	403.8	214.8	189.0
Texas	- 3	1,091.4	838.2	253.2	1,130.5	906.9	223.6
Virginia	+ 1	1,685.9	1,159.5	526.4	1,662.2	1,190.0	472.2
All states	+ 4	21,736.8	16,767.2	4,969.6	20,919.0	16,520.9	4,398.1

Table 5. Wood residues used for pulp manufacture in the South, by State and species group, 1962 and 1961

State	Change from 1961	1962			1961		
		All species	Pine	Hardwood	All species	Pine	Hardwood
----- <i>Thousand cords</i> -----							
Alabama	+22	605.7	456.4	149.3	494.8	395.9	98.9
Arkansas	+ 3	419.8	407.4	12.4	407.0	385.8	21.2
Florida	+ 3	211.9	174.4	37.5	206.6	180.9	25.7
Georgia	+22	660.7	559.9	100.8	543.1	463.7	79.4
Louisiana	+ 8	223.4	204.5	18.9	207.2	182.6	24.6
Mississippi	+34	268.1	206.1	62.0	199.9	155.9	44.0
North Carolina	+15	474.0	383.3	90.7	412.0	342.0	70.0
Oklahoma	+54	27.6	27.6	...	17.9	17.9	...
South Carolina	+19	389.5	307.7	81.8	326.0	260.9	65.1
Tennessee	+53	22.5	9.8	12.7	14.7	4.1	10.6
Texas	+ 9	338.2	324.7	13.5	311.0	288.8	22.2
Virginia	+21	208.1	165.3	42.8	171.5	153.7	17.8
All states	+16	3,849.5	3,227.1	622.4	3,311.7	2,832.2	479.5

Table 6. Wood residues used for pulp manufacture in the South, by State and type of residue, 1962

State	All types	Chips			Other residues ¹		
		All species	Pine	Hardwood	All species	Pine	Hardwood
----- <i>Thousand cords</i> -----							
Alabama	605.7	596.2	454.0	142.2	9.5	2.4	7.1
Arkansas	419.8	418.8	406.4	12.4	1.0	1.0	...
Florida	211.9	210.8	174.4	36.4	1.1	...	1.1
Georgia	660.7	641.2	559.0	82.2	19.5	.9	18.6
Louisiana	223.4	221.9	204.2	17.7	1.5	.3	1.2
Mississippi	268.1	257.9	205.0	52.9	10.2	1.1	9.1
North Carolina	474.0	456.8	382.2	74.6	17.2	1.1	16.1
Oklahoma	27.6	27.6	27.6	...	...	...	...
South Carolina	389.5	378.9	306.5	72.4	10.6	1.2	9.4
Tennessee	22.5	22.2	9.8	12.4	.3	..	.3
Texas	338.2	338.2	324.7	13.5	²	(²)	...
Virginia	208.1	204.3	165.3	39.0	3.8	...	3.8
All states	3,849.5	3,774.8	3,219.1	555.7	74.7	8.0	66.7

¹ Veneer cores, pole and piling trim, cull crossties, secondary residues.

² Negligible.

Table 7. Southern pulpwood production by State and survey region, 1962

Round pulpwood and residues	Survey region ¹	All species	Pine	Hardwood	Round pulpwood and residues	Survey region ¹	All species	Pine	Hardwood
Number		Standard cords			Number		Standard cords		
SOUTH					SOUTHERN STATION				
					ALABAMA				
Roundwood		21,736,824	16,767,202	4,969,622	Roundwood	1	588,394	441,840	146,554
Wood residues		3,849,505	3,227,194	622,311		2	698,835	432,149	266,686
All pulpwood		25,586,329	19,994,396	5,591,933		3	697,360	549,480	147,880
						4	258,558	198,939	59,619
						5	541,549	500,095	41,454
						6	57,751	51,885	5,866
					Total		2,842,447	2,174,388	668,059
					Wood residues		605,748	456,389	149,359
					All pulpwood		3,448,195	2,630,777	817,418
SOUTHEASTERN STATION					ARKANSAS				
					FLORIDA				
Roundwood	1	1,484,273	1,387,807	96,466	Roundwood	1	74,858	26,142	48,716
	2	622,203	577,720	44,483		2	5,810	5	5,805
	3	119,211	119,083	128		3	1,092,011	838,561	253,450
	4	26,889	26,889			4	113,427	89,588	23,839
Total		2,252,576	2,111,499	141,077		5	23,923	19,742	4,181
Wood residues		211,838	174,361	37,477	Total		1,310,029	974,038	335,991
All pulpwood		2,464,414	2,285,860	178,554	Wood residues		419,807	407,404	12,403
					All pulpwood		1,729,836	1,381,442	348,394
					LOUISIANA				
					GEORGIA				
Roundwood	1	1,994,828	1,707,611	287,217	Roundwood	1	129,663	48,954	80,709
	2	452,512	420,529	31,983		2	29,157	4,996	24,161
	3	1,265,506	1,159,895	105,611		3	425,409	356,256	69,153
	4	634,488	582,934	51,554		4	260,227	199,512	60,715
	5	208,950	186,522	22,428		5	938,388	766,234	172,154
Total		4,556,284	4,057,491	498,793	Total		1,782,844	1,375,952	406,892
Wood residues		660,711	559,901	100,810	Wood residues		223,435	204,501	18,934
All pulpwood		5,216,995	4,617,392	599,603	All pulpwood		2,006,279	1,580,453	425,826
					MISSISSIPPI				
					NORTH CAROLINA				
Roundwood	1	559,858	458,869	100,989	Roundwood	1	72,160	3,706	68,454
	2	475,375	390,767	84,608		2	202,516	122,687	79,829
	3	508,107	408,421	99,686		3	520,458	234,373	286,085
	4	306,569	132,116	174,453		4	643,531	368,194	275,337
Total		1,849,909	1,390,173	459,736		5	393,252	129,683	263,569
Wood residues		474,047	383,325	90,722	Total		1,831,917	858,643	973,274
All pulpwood		2,323,956	1,773,498	550,458	Wood residues		268,105	206,177	61,928
					All pulpwood		2,100,022	1,064,820	1,035,202
					OKLAHOMA ²				
					SOUTH CAROLINA				
Roundwood	1	474,904	358,992	115,912	Roundwood		31,662	10,686	20,976
	2	769,108	525,658	243,450	Wood residues		27,568	27,568	
	3	847,976	730,546	117,430	All pulpwood		59,230	38,254	20,976
Total		2,091,988	1,615,196	476,792	TENNESSEE				
Wood residues		389,467	307,749	81,718	Roundwood	1	46,501	19,521	26,980
All pulpwood		2,481,455	1,922,945	558,510		2	20,160	10,830	9,330
						3	52	46	6
						4	82,806	35,776	47,030
						5	260,300	135,285	125,015
					Total		409,819	201,458	208,361
					Wood residues		22,480	9,820	12,660
					All pulpwood		432,299	211,278	221,021
					TEXAS				
					Roundwood	1	695,655	504,317	191,338
Roundwood	1	606,561	498,059	108,502		2	376,023	324,953	51,070
	2	512,682	394,257	118,425		3	19,736	8,922	10,814
	3	258,280	183,509	74,771	Total		1,091,414	838,192	253,222
	4	252,842	67,644	185,198	Wood residues		338,179	324,726	13,453
	5	55,570	16,017	39,553	All pulpwood		1,429,593	1,162,918	266,675
Total		1,685,935	1,159,486	526,449					
Wood residues		208,120	165,273	42,847					
All pulpwood		1,894,053	1,324,759	569,296					

¹ For location of survey region, see figure 6² All units.

Table 8. *Southern pulpwood production by Experiment Station territory, 1962*

Station and source of wood	All species	Pine	Hardwood
--- Standard cords ---			
Southeastern			
Roundwood	12,436,692	10,333,845	2,102,847
Residues	1,944,183	1,590,609	353,574
Total	14,380,875	11,924,454	2,456,421
Southern			
Roundwood	9,300,132	6,433,357	2,866,775
Residues	1,905,322	1,636,585	268,737
Total	11,205,454	8,069,942	3,135,512
All pulpwood	25,586,329	19,994,396	5,591,933

Table 9. *Round pulpwood production in Alabama, 1962*

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Autauga	5,185	4,928	257	Houston	16,220	12,430	3,790
Baldwin	208,456	150,220	58,236	Jackson	5,243	5,243	...
Barbour	40,230	31,421	8,809	Jefferson	30,862	30,014	848
Bibb	37,267	33,012	4,255	Lamar	10,499	8,784	1,715
Blount	6,369	6,142	227	Lauderdale	1,561	1,164	397
Bullock	25,875	18,833	7,042	Lawrence	507	507	...
Butler	67,176	46,845	20,331	Lee	49,331	43,983	5,348
Calhoun	57,326	54,129	3,197	Limestone	2,734	2,734	...
Chambers	24,651	22,338	2,313	Lowndes	41,150	29,390	11,760
Cherokee	34,494	23,911	10,583	Macon	10,405	9,856	549
Chilton	26,633	20,778	5,855	Madison	1,806	1,806	...
Choctaw	148,259	88,605	59,654	Marengo	88,466	56,918	31,548
Clarke	116,495	70,048	46,447	Marion	8,581	8,223	358
Clay	40,300	34,774	5,526	Marshall	12,369	12,155	214
Cleburne	43,572	40,319	3,253	Mobile	121,927	89,059	32,868
Coffee	21,665	16,930	4,735	Monroe	99,618	70,122	29,496
Colbert	6,122	4,601	1,521	Montgomery	47,740	38,420	9,320
Conecuh	75,120	51,132	23,988	Morgan	2,234	1,740	494
Coosa	55,553	49,091	6,462	Perry	25,440	12,195	13,245
Covington	53,929	47,455	6,474	Pickens	35,627	26,109	9,518
Crenshaw	23,104	15,096	8,008	Pike	58,779	40,789	17,990
Cullman	6,030	5,983	47	Randolph	44,251	43,428	823
Dale	38,096	23,772	14,324	Russell	37,974	37,048	926
Dallas	20,935	13,614	7,321	St. Clair	40,315	38,661	1,654
De Kalb	15,043	13,298	1,745	Shelby	50,223	46,616	3,607
Elmore	29,651	28,935	716	Sumter	72,976	37,903	35,073
Escambia	76,379	58,893	17,486	Talladega	45,339	43,633	1,706
Etowah	32,876	30,489	2,387	Tallapoosa	65,792	56,854	8,938
Fayette	22,026	20,826	1,200	Tuscaloosa	65,955	61,731	4,224
Franklin	10,132	8,637	1,495	Walker	42,674	41,642	1,032
Geneva	16,942	14,104	2,838	Washington	127,703	96,213	31,490
Greene	25,858	15,320	10,538	Wilcox	97,901	57,421	40,480
Hale	27,305	12,739	14,566	Winston	11,365	11,263	102
Henry	29,826	23,116	6,710	All counties	2,842,447	2,174,388	668,059

Table 10. Round pulpwood production in Arkansas, 1962

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Arkansas	..	..	..	Lincoln	15,898	6,461	9,437
Ashley	146,253	103,803	42,450	Little River	10,332	7,205	3,127
Baxter	..	..	..	Logan	3,975	3,867	108
Benton	448	448	..	Lonoke	794	..	794
Boone	3	..	3	Madison	..	..	..
Bradley	56,577	44,695	11,882	Marion	..	..	..
Calhoun	51,603	47,715	3,888	Miller	27,099	17,699	9,400
Carroll	..	..	..	Mississippi	992	..	992
Chicot	14,661	..	14,661	Monroe	..	..	..
Clark	65,822	47,071	18,751	Montgomery	27,049	21,645	5,404
Clay	..	..	..	Nevada	31,442	26,556	4,886
Cleburne	..	..	..	Newton	..	..	..
Cleveland	38,960	31,418	7,542	Ouachita	67,338	56,774	10,564
Columbia	82,773	69,933	12,840	Perry	6,206	6,158	48
Conway	1,672	1,462	210	Phillips	6,017	4	6,013
Craighead	..	..	..	Pike	30,829	23,644	7,185
Crawford	408	408	..	Poinsett	..	..	..
Crittenden	4,813	..	4,813	Polk	3,162	323	2,839
Cross	..	..	..	Pope	16,670	14,400	2,270
Dallas	61,173	44,847	16,326	Prairie	26	..	26
Desha	6,150	..	6,150	Pulaski	9,117	7,807	1,310
Drew	80,332	37,167	43,165	Randolph	6	6	..
Faulkner	11	9	2	St. Francis	5	5	..
Franklin	..	..	..	Saline	28,688	20,698	7,990
Fulton	..	..	..	Scott	1,490	1,490	..
Garland	19,023	13,994	5,029	Searcy	2	2	..
Grant	87,498	74,168	13,330	Sebastian	203	203	..
Greene	..	..	..	Sevier	14,374	10,437	3,937
Hempstead	37,160	31,618	5,542	Sharp	..	..	..
Hot Spring	40,368	28,303	12,065	Stone	..	..	..
Howard	22,211	17,151	5,060	Union	111,147	97,868	13,279
Independence	162	..	162	Van Buren	85	70	15
Izard	..	..	..	Washington	..	..	..
Jackson	..	..	..	White	714	25	689
Jefferson	27,825	19,677	8,148	Woodruff	..	..	..
Johnson	3,742	2,912	830	Yell	14,514	13,403	1,111
Lafayette	28,720	20,489	8,231	All counties	1,310,029	974,038	335,991
Lawrence	..	..	..				
Lee	3,487	..	3,487				

Table 11. Round pulpwood production in Florida, 1962

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Alachua	58,094	56,625	1,469	Lake	4,522	4,522	...
Baker	94,309	94,155	154	Lee	1,047	1,047	...
Bay	40,799	40,465	334	Leon	36,714	36,115	599
Bradford	54,763	53,084	1,679	Levy	44,825	44,357	468
Brevard	1,422	1,422	...	Liberty	42,911	42,153	758
Broward	...	...	...	Madison	40,170	39,204	966
Calhoun	33,811	28,794	5,017	Manatee	1,595	1,595	...
Charlotte	11,674	11,674	...	Marion	127,875	117,828	10,047
Citrus	3,034	3,034	...	Martin	63	63	...
Clay	59,379	51,667	7,712	Monroe	...	...	...
Collier	5,222	5,222	...	Nassau	148,441	122,716	25,725
Columbia	95,683	90,362	5,321	Okaloosa	14,161	13,498	663
Dade	3,086	3,086	...	Okeechobee	2,885	2,885	...
De Soto	3,128	3,128	...	Orange	1,284	1,284	...
Dixie	65,501	62,105	3,396	Osceola	18,416	18,288	128
Duval	107,207	102,207	5,000	Palm Beach	1,302	1,302	...
Escambia	71,206	67,692	3,514	Pasco	7,065	7,065	...
Flagler	57,832	55,232	2,600	Pinellas	768	768	...
Franklin	19,760	19,754	6	Polk	37,919	37,919	...
Gadsden	33,329	29,434	3,895	Putnam	71,263	57,506	13,757
Gilchrist	9,419	7,419	2,000	St. Johns	86,949	82,136	4,813
Glades	278	278	...	St. Lucie	...	...	...
Gulf	18,423	17,700	723	Santa Rosa	98,316	96,814	1,502
Hamilton	85,532	79,096	6,436	Sarasota	3,595	3,595	...
Hardee	3,435	3,435	...	Seminole	5,522	5,522	...
Hendry	4,217	4,217	...	Sumter	2,230	2,230	...
Hernando	8,892	8,892	...	Suwannee	21,950	19,174	2,776
Highlands	5,434	5,434	...	Taylor	121,910	119,982	1,928
Hillsborough	8,065	8,065	...	Union	21,986	21,986	...
Holmes	37,618	31,462	6,156	Volusia	80,930	80,773	157
Indian River	...	...	...	Wakulla	33,076	32,943	133
Jackson	40,397	31,305	9,092	Walton	40,193	34,372	5,821
Jefferson	23,694	22,036	1,658	Washington	37,795	33,183	4,612
Lafayette	30,255	30,193	62	All counties	2,252,576	2,111,499	141,077

Table 12. Round pulpwood production in Georgia, 1962

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Appling	81,896	78,966	2,930	Hall	36,962	36,962	
Atkinson	62,600	58,961	3,639	Hancock	30,177	27,690	2,487
Bacon	36,318	33,264	3,054	Haralson	25,722	21,164	4,558
Baker	6,342	5,514	828	Harris	49,314	44,971	4,343
Baldwin	28,869	28,027	842	Hart	32	32	
Banks	6,089	6,086	3	Hcard	18,175	17,708	467
Barrow	4,335	4,335		Henry	33,904	33,280	624
Bartow	17,580	16,216	1,364	Houston	25,426	18,971	6,455
Ben Hill	17,010	15,655	1,355	Irwin	11,800	11,050	750
Berrien	55,479	49,532	5,947	Jackson	19,202	19,024	178
Bibb	7,490	6,414	1,076	Jasper	48,796	45,274	3,522
Bleckley	9,262	6,709	2,553	Jeff Davis	48,998	46,473	2,525
Brantley	85,471	72,432	13,039	Jefferson	21,493	18,536	2,957
Brooks	24,012	22,784	1,228	Jenkins	17,561	12,049	5,512
Bryan	99,755	90,057	9,698	Johnson	14,834	12,532	2,302
Bulloch	38,617	29,439	9,178	Jones	69,777	62,018	7,759
Burke	22,228	16,099	6,129	Lamar	17,020	16,276	744
Butts	18,118	17,478	640	Lanier	32,829	32,235	594
Calhoun	22,276	20,991	1,285	Laurens	28,262	19,740	8,522
Camden	134,476	96,190	38,286	Lee	3,971	3,912	59
Candler	13,799	11,492	2,307	Liberty	73,244	44,884	28,360
Carroll	38,830	35,423	3,407	Lincoln	15,336	13,727	1,609
Catoosa	5,961	5,658	303	Long	46,936	34,406	12,530
Charlton	112,481	101,952	10,529	Lowndes	30,679	30,354	325
Chatham	19,728	12,057	7,671	Lumpkin	6,114	6,114	
Chattahoochee	23,843	22,606	1,237	McDuffie	40,548	35,276	5,272
Chattooga	10,722	9,121	1,601	McIntosh	38,527	30,459	8,068
Cherokee	26,432	26,194	238	Macon	14,446	12,952	1,494
Clarke	1,838	1,838		Madison	6,023	6,018	5
Clay	7,163	6,801	362	Marion	14,548	14,085	463
Clayton	2,435	2,435		Meriwether	43,332	38,678	4,654
Clinch	146,772	146,439	333	Miller	7,054	7,022	32
Cobb	20,367	20,021	346	Mitchell	19,688	17,104	2,584
Coffee	78,231	70,057	8,174	Monroe	53,397	48,982	4,415
Colquitt	28,199	25,678	2,521	Montgomery	26,831	21,259	5,572
Columbia	20,130	18,083	2,047	Morgan	30,227	27,284	2,943
Cook	18,609	18,609		Murray	14,114	13,271	843
Coweta	21,859	20,883	976	Muscogee	10,681	10,324	357
Crawford	30,844	28,681	2,163	Newton	24,079	23,347	732
Crisp	22,846	22,281	565	Oconee	14,513	11,145	3,368
Dade	750	732	18	Oglethorpe	26,575	24,145	2,430
Dawson	1,902	1,890	12	Paulding	42,788	28,366	14,422
Decatur	26,082	24,736	1,346	Peach	9,887	9,756	131
De Kalb	5,219	5,216	3	Pickens	15,023	14,926	97
Dodge	54,671	48,857	5,814	Pierce	61,398	58,116	3,282
Dooly	18,596	18,163	433	Pike	7,533	7,388	145
Dougherty	55,336	54,724	612	Polk	24,781	18,562	6,219
Douglas	24,759	23,629	1,130	Pulaski	15,643	15,561	82
Early	19,915	18,393	1,522	Putnam	38,086	37,725	361
Echols	37,093	37,074	19	Quitman	8,973	8,113	860
Effingham	45,871	35,922	9,949	Rabun	8,843	2,028	6,815
Elbert	22,324	17,621	4,703	Randolph	23,819	21,922	1,897
Emanuel	50,767	45,320	5,447	Richmond	14,073	10,457	3,616
Evans	12,274	8,344	3,930	Rockdale	3,393	3,393	
Fannin	3,769	3,722	47	Schley	15,170	13,359	1,811
Fayette	23,053	22,079	974	Screven	32,387	25,524	6,863
Floyd	25,901	18,705	7,196	Seminole	7,112	6,570	542
Forsyth	2,142	2,139	3	Spalding	9,005	8,822	183
Franklin	7,705	7,705		Stephens	5,075	5,075	
Fulton	21,960	21,759	201	Stewart	42,659	42,250	409
Gilmer	4,223	4,214	9	Sumter	13,931	13,615	316
Glascock	7,751	7,345	406	Talbot	53,379	44,903	8,476
Glynn	57,747	45,657	12,090	Taliaferro	8,935	7,724	1,211
Gordon	15,857	14,368	1,489	Tattnall	43,613	33,112	10,501
Grady	23,829	20,805	3,024	Taylor	18,850	18,542	308
Greene	46,108	41,870	4,238				
Gwinnett	34,331	34,155	176				
Habersham	9,640	9,640					

Table 12. Round pulpwood production in Georgia, 1962 (Continued)

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Telfair	60,908	46,200	14,708	Walton	3,063	3,063	...
Terrell	12,466	12,441	25	Ware	128,308	124,812	3,496
Thomas	18,092	15,978	2,114	Warren	19,559	17,557	2,002
Tift	10,483	8,734	1,749	Washington	38,338	35,220	3,118
Toombs	35,408	25,986	9,422	Wayne	108,213	101,406	6,807
Towns	...	...	...	Webster	11,162	10,962	200
Treutlen	13,407	9,294	4,113	Wheeler	47,426	38,879	8,547
Troup	65,693	63,901	1,792	White	2,906	2,906	...
Turner	9,318	7,676	1,642	Whitfield	17,288	16,185	1,103
Twiggs	36,458	33,854	2,604	Wilcox	26,745	24,385	2,360
Union	1,207	1,183	24	Wilkes	27,526	26,604	922
Upson	47,558	44,272	3,286	Wilkinson	56,926	51,564	5,362
Walker	15,643	14,374	1,269	Worth	17,793	17,271	522
				All counties	4,556,284	4,057,491	498,793

Table 13. Round pulpwood production in Louisiana, 1962

Parish	All species	Pine	Hardwood	Parish	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Acadia	2,529	2,474	55	Madison	3,669	861	2,808
Allen	44,789	34,023	10,766	Morehouse	69,525	38,422	31,103
Ascension	...	...	...	Natchitoches	58,513	45,652	12,861
Assumption	...	...	...	Orleans	...	...	...
Avoyelles	2,027	1,978	49	Ouachita	36,952	27,376	9,576
Beauregard	26,378	22,544	3,834	Plaquemines	...	...	...
Bienville	107,351	86,791	20,560	Pointe Coupee	2,288	...	2,288
Bossier	64,690	45,833	18,857	Rapides	68,269	53,522	14,747
Caddo	30,433	17,786	12,647	Red River	23,712	16,185	7,527
Calcasieu	11,197	7,793	3,404	Richland	201	...	201
Caldwell	31,029	26,463	4,566	Sabine	94,321	84,638	9,683
Cameron	...	...	...	St. Bernard	...	...	...
Catahoula	13,134	8,699	4,435	St. Charles	...	...	...
Claiborne	76,338	70,416	5,922	St. Helena	29,752	18,041	11,711
Concordia	26,284	7	26,277	St. James	...	...	...
De Soto	75,752	59,677	16,075	St. John the Baptist	...	...	...
East Baton Rouge	4,674	548	4,126	St. Landry	11,901	179	11,722
East Carroll	947	...	947	St. Martin	3,887	...	3,887
East Feliciana	19,787	10,385	9,402	St. Mary	...	...	...
Evangeline	5,134	4,789	345	St. Tammany	23,822	19,918	3,904
Franklin	995	934	61	Tangipahoa	34,865	24,537	10,328
Grant	34,418	29,073	5,345	Tensas	14,751	1	14,750
Iberia	...	...	...	Terrebonne	...	...	...
Iberville	145	...	145	Union	175,954	148,870	27,084
Jackson	95,672	79,155	16,517	Vermilion	...	...	...
Jefferson	...	...	...	Vernon	21,003	20,572	431
Jefferson Davis	751	244	507	Washington	64,424	56,001	8,423
Lafayette	...	...	...	Webster	53,874	42,714	11,160
Lafourche	...	...	...	West Baton Rouge	510	...	510
La Salle	60,636	53,406	7,230	West Carroll	157	30	127
Lincoln	63,304	56,276	7,028	West Feliciana	5,870	365	5,505
Livingston	82,903	70,082	12,821	Winn	103,327	88,692	14,635
				All parishes	1,782,844	1,375,952	406,892

Table 14. Round pulpwood production in Mississippi, 1962

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Adams	23,602	2,918	20,684	Lincoln	42,529	19,425	23,104
Alcorn	10,159	6,405	3,754	Lowndes	3,966	3,896	70
Amite	34,729	12,263	22,466	Madison	12,890	2,596	10,294
Attala	21,908	7,062	14,846	Marion	40,593	14,443	26,153
Benton	5,234	1,878	3,356	Marshall	11,534	6,096	5,438
Bolivar	7,670		7,670	Monroe	5,147	4,410	737
Calhoun	876	171	705	Montgomery	5,123	1,151	3,972
Carroll	7,889	995	6,894	Neshoba	21,428	8,021	13,407
Chickasaw	6,193	5,467	726	Newton	32,221	12,359	19,862
Choctaw	13,588	3,162	10,426	Noxubee	16,401	13,374	3,027
Claiborne	45,592	7,248	38,344	Oktibbeha	5,811	2,847	2,964
Clarke	86,309	48,074	38,235	Panola	2,532	1	2,531
Clay	2,050	992	1,058	Pearl River	28,081	12,050	16,031
Coahoma				Perry	30,793	23,168	7,625
Copiah	47,349	17,034	30,315	Pike	26,754	11,419	15,335
Covington	28,142	8,482	19,660	Pontotoc	4,089	3,765	324
De Soto				Prentiss	12,983	8,787	4,196
Forrest	24,865	14,409	10,456	Quitman			
Franklin	57,806	30,684	27,122	Rankin	44,323	16,409	27,914
George	48,682	32,888	15,794	Scott	30,209	15,146	15,063
Greene	64,664	41,137	23,527	Sharkey	4,175		4,175
Grenada	6,233	2,958	3,275	Simpson	35,304	14,897	20,407
Hancock	62,888	50,949	11,939	Smith	17,636	5,642	11,994
Harrison	29,753	25,714	4,039	Stone	25,011	15,963	9,048
Hinds	36,408	7,221	29,187	Sunflower			
Holmes	24,650	3,043	21,607	Tallahatchie	1,721	39	1,682
Humphreys	1,537		1,537	Tate	1,116		1,116
Issaquena	9,274		9,274	Tippah	12,799	10,072	2,727
Itawamba	6,191	5,139	1,052	Tishomingo	26,262	17,278	8,984
Jackson	63,437	52,769	10,668	Tunica			
Jasper	58,080	23,748	34,332	Union	5,953	5,294	659
Jefferson	39,549	12,865	26,684	Walthall	22,761	5,657	17,104
Jefferson Davis	8,589	4,596	3,993	Warren	17,021	608	16,413
Jones	60,259	17,855	42,404	Washington	2,028		2,028
Kemper	34,068	20,640	13,428	Wayne	49,886	30,486	19,400
Lafayette	11,557	9,980	1,577	Webster	17,110	11,297	5,813
Lamar	22,178	7,565	14,613	Wilkinson	26,044	6,010	20,034
Lauderdale	54,314	27,308	27,006	Winston	34,043	12,433	21,610
Lawrence	32,946	10,063	22,883	Yalobusha	12,551	5,786	6,765
Leake	34,214	9,260	24,954	Yazoo	3,157	12	3,145
Lee	5,570	4,860	710				
Leflore	927	4	923	All counties	1,831,917	858,643	973,274

Table 15. Round pulpwood production in North Carolina, 1962

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Alamance	1,123	916	207	Lee	7,542	5,989	1,553
Alexander	4,398	4,332	66	Lenoir	6,117	6,050	67
Alleghany	...	...	...	Lincoln	6,206	4,092	2,114
Anson	56,685	40,945	15,740	McDowell	25,564	14,665	10,899
Ashe	...	...	...	Macon	17,892	4,748	13,144
Avery	3,100	...	3,100	Madison	4,485	2,796	1,689
Beaufort	91,101	73,714	17,387	Martin	14,000	11,876	2,124
Bertie	26,338	18,101	8,237	Mecklenburg	18,550	15,693	2,857
Bladen	43,001	35,083	7,918	Mitchell	3,087	...	3,087
Brunswick	56,981	52,774	4,207	Montgomery	16,647	15,926	721
Buncombe	49,683	17,575	32,108	Moore	20,315	17,261	3,054
Burke	27,540	19,556	7,984	Nash	12,827	11,667	1,160
Cabarrus	3,459	2,092	1,367	New Hanover	6,104	6,104	...
Caldwell	16,362	14,341	2,021	Northampton	10,860	9,803	1,057
Camden	1,257	1,075	182	Onslow	58,044	51,836	6,208
Carteret	21,662	21,659	3	Orange	9,644	8,719	925
Caswell	725	650	75	Pamlico	11,101	11,101	...
Catawba	3,769	3,396	373	Pasquotank	3,927	2,940	987
Chatham	38,527	23,872	14,655	Pender	62,365	45,735	16,630
Cherokee	39,707	30,441	9,266	Perquimans	9,914	7,240	2,674
Chowan	11,994	8,064	3,930	Person	9,006	8,472	534
Clay	...	...	...	Pitt	16,900	14,782	2,118
Cleveland	13,533	11,684	1,849	Polk	12,929	3,701	9,228
Columbus	56,339	39,332	17,007	Randolph	3,180	2,999	181
Craven	53,657	48,320	5,337	Richmond	31,163	22,641	8,522
Cumberland	28,581	19,075	9,506	Robeson	35,738	27,034	8,704
Currituck	8,261	7,033	1,228	Rockingham	13,852	13,714	138
Dare	1,528	1,516	12	Rowan	4,903	4,547	356
Davidson	4,408	4,317	91	Rutherford	25,116	13,362	11,754
Davie	2,690	2,611	79	Sampson	32,570	27,456	5,114
Duplin	47,546	44,233	3,313	Scotland	5,282	4,482	800
Durham	13,785	13,488	297	Stanly	6,796	6,472	324
Edgecombe	8,616	6,478	2,138	Stokes	3,879	3,879	...
Forsyth	7,243	6,423	820	Surry	9,545	9,545	...
Franklin	41,918	34,242	7,676	Swain	6,255	3,006	3,249
Gaston	17,779	13,399	4,380	Transylvania	21,212	2,039	19,173
Gates	19,105	11,761	7,344	Tyrrell	31,685	28,618	3,067
Graham	2,210	801	1,409	Union	25,050	19,349	5,701
Granville	12,975	11,752	1,223	Vance	8,245	7,729	516
Greene	3,932	3,246	686	Wake	43,631	37,430	6,201
Guilford	18,917	16,679	2,238	Warren	28,475	26,269	2,206
Halifax	47,034	44,601	2,433	Washington	15,678	4,752	10,926
Harnett	11,460	8,764	2,696	Watauga	...	...	...
Haywood	10,805	2,608	8,197	Wayne	8,690	8,385	305
Henderson	27,765	8,831	18,934	Wilkes	4,962	4,962	...
Hertford	22,483	15,108	7,375	Wilson	12,568	9,700	2,868
Hoke	8,617	7,861	756	Yadkin	1,520	1,520	...
Hyde	22,681	20,660	2,021	Yancey	1,492	...	1,492
Iredell	19,197	14,403	4,794	All counties	1,849,909	1,390,173	459,736
Jackson	44,448	5,747	38,701				
Johnston	11,167	8,593	2,574				
Jones	18,304	16,935	1,369				

Table 16. *Round pulpwood production in Oklahoma, 1962*

County ¹	All species	Pine	Hardwood
--- Standard cords ---			
Bryan	43		43
Carter	1,703		1,703
Cherokee	3,472		3,472
Choctaw	93		93
Delaware	2,728		2,728
Jefferson	125		125
Latimer	29	29	
Le Flore	1,299	1,299	
Mc Curtain	18,478	9,080	9,398
Mayes	1,707		1,707
Pushmataha	278	278	
Rogers	1,707		1,707
All counties	31,662	10,686	20,976

¹ Counties with no pulpwood production are omitted.

Table 17. *Round pulpwood production in South Carolina, 1962*

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Abbeville	42,890	39,172	3,718	Jasper	43,593	29,352	14,241
Aiken	50,642	43,582	7,060	Kershaw	112,622	80,910	31,712
Allendale	26,490	18,091	8,399	Lancaster	59,958	44,974	14,984
Anderson	33,887	29,507	4,380	Laurens	47,523	40,005	7,518
Bamberg	17,987	9,811	8,176	Lee	14,677	9,547	5,130
Barnwell	27,192	17,702	9,490	Lexington	25,494	19,917	5,577
Beaufort	19,907	9,369	10,538	McCormick	23,056	21,421	1,635
Berkeley	101,404	84,526	16,878	Marion	16,320	5,062	11,258
Calhoun	7,596	6,319	1,277	Marlboro	20,917	7,792	13,125
Charleston	67,666	48,688	18,978	Newberry	80,629	71,685	8,944
Cherokee	18,578	17,574	1,004	Oconee	21,922	19,517	2,405
Chester	72,709	62,698	10,011	Orangeburg	26,300	19,052	7,248
Chesterfield	72,387	40,356	32,031	Pickens	7,253	6,810	443
Clarendon	25,003	17,630	7,373	Richland	70,897	50,997	19,900
Colleton	104,601	87,656	16,945	Saluda	27,052	22,491	4,561
Darlington	21,147	9,582	11,565	Spartanburg	34,954	28,419	6,535
Dillon	15,800	9,888	5,912	Sumter	24,767	18,533	6,234
Dorchester	68,516	54,191	14,325	Union	54,510	50,263	4,247
Edgefield	60,244	49,736	10,508	Williamsburg	49,040	30,212	18,828
Fairfield	138,792	121,224	17,568	York	64,129	51,556	12,573
Florence	39,143	22,407	16,736	All counties	2,091,988	1,615,196	476,792
Georgetown	77,187	60,870	16,317				
Greenville	22,011	20,714	1,297				
Greenwood	37,879	32,780	5,099				
Hampton	56,586	43,950	12,636				
Horry	40,131	28,658	11,473				

Table 18. Round pulpwood production in Tennessee, 1962

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Anderson	10,739	5,975	4,764	Lauderdale	3,765	...	3,765
Bedford	...	...	...	Lawrence	...	...	...
Benton	6,172	2,956	3,216	Lewis	...	...	...
Bledsoe	4,610	4,023	587	Lincoln	...	...	...
Blount	12,824	6,419	6,405	Loudon	3,285	1,871	1,414
Bradley	11,313	7,795	3,518	McMinn	28,943	21,462	7,481
Campbell	3,460	3,294	166	McNairy	13,363	8,561	4,802
Cannon	...	...	...	Macon	...	...	...
Carroll	4,054	958	3,096	Madison	651	205	446
Carter	11,130	...	11,130	Marion	1,326	1,326	...
Cheatham	46	46	...	Marshall	...	...	...
Chester	4,170	2,774	1,396	Maury	...	...	...
Claiborne	1,179	1,159	20	Meigs	14,418	8,599	5,819
Clay	...	...	...	Monroe	29,148	16,451	12,697
Cocke	10,395	7,317	3,078	Montgomery	...	...	...
Coffee	...	...	...	Moore	...	...	...
Crockett	...	...	...	Morgan	24,148	6,299	17,849
Cumberland	28,165	9,023	19,142	Obion	850	...	850
Davidson	...	...	...	Overton	18	...	18
Decatur	1,586	668	918	Perry	1,660	18	1,642
De Kalb	...	...	...	Pickett	...	...	...
Dickson	...	...	...	Polk	22,893	17,714	5,179
Dyer	850	...	850	Putnam	259	259	...
Fayette	1,027	...	1,027	Rhea	15,992	6,420	9,572
Fentress	5,692	4,141	1,551	Roane	4,554	2,038	2,516
Franklin	...	...	...	Robertson	...	...	...
Gibson	71	71	...	Rutherford	...	...	...
Giles	6	...	6	Scott	10,905	4,578	6,327
Grainger	2,516	2,263	253	Sequatchie	1,559	1,550	9
Greene	6,625	2,894	3,731	Sevier	2,321	1,872	449
Grundy	1,024	1,024	...	Shelby	3,913	...	3,913
Hamblen	562	343	219	Smith	...	...	...
Hamilton	9,147	7,455	1,692	Stewart	...	...	...
Hancock	435	...	435	Sullivan	11,342	364	10,978
Hardeman	5,635	1,740	3,895	Sumner	...	...	...
Hardin	10,468	6,960	3,508	Tipton	...	...	...
Hawkins	12,633	3,885	8,748	Trousdale	...	...	...
Haywood	...	...	...	Unicoi	3,618	...	3,618
Henderson	8,136	5,196	2,940	Union	8,767	5,375	3,392
Henry	16	16	...	Van Buren	...	...	...
Hickman	154	154	...	Warren	...	...	...
Houston	...	...	...	Washington	6,864	2,952	3,912
Humphreys	...	...	...	Wayne	120	74	46
Jackson	...	...	...	Weakley	...	...	...
Jefferson	510	37	473	White	1,640	259	1,381
Johnson	7,296	...	7,296	Williamson	...	...	...
Knox	10,851	4,625	6,226	Wilson	...	...	...
Lake	...	...	...	All counties	409,819	201,458	208,361

Table 19. *Round pulpwood production in Texas, 1962*

County ¹	All species	Pine	Hardwood
--- Standard cords ---			
Anderson	10,654	7,872	2,782
Angelina	48,929	47,162	1,767
Bowie	13,373	11,946	1,427
Brazoria	255		255
Brazos	435		435
Camp	2,871	2,508	363
Cass	39,520	36,710	2,810
Chambers	1,925	981	944
Cherokee	41,159	37,489	3,670
Falls	366		366
Fort Bend	423		423
Franklin	228	228	
Galveston	124	124	
Gregg	5,574	4,363	1,211
Grimes	10,072	7,262	2,810
Hardin	45,732	36,210	9,522
Harris	25,014	16,152	8,862
Harrison	32,290	28,948	3,342
Houston	37,097	30,757	6,340
Jasper	70,398	46,263	24,135
Jefferson	1,033	516	517
Lamar	2,526		2,526
Leon	3,705	1,277	2,428
Liberty	62,779	42,179	20,600
McLennan	259		259
Marion	17,988	13,589	4,399
Montgomery	58,353	36,609	21,744
Morris	7,780	7,299	481
Nacogdoches	48,075	45,046	3,029
Newton	39,078	18,330	20,748
Orange	5,091	2,656	2,435
Panola	48,298	43,712	4,586
Polk	69,441	53,028	16,413
Red River	20	19	1
Robertson	575		575
Rusk	19,324	14,980	4,344
Sabine	36,413	27,755	8,658
San Augustine	53,016	41,269	11,747
San Jacinto	17,278	10,763	6,515
Shelby	55,837	44,397	11,440
Smith	5,723	2,950	2,773
Trinity	44,752	39,961	4,791
Tyler	45,833	31,921	13,912
Upshur	26,356	21,997	4,359
Walker	33,493	21,805	11,688
Waller	996	259	737
Wood	953	900	53
All counties	1,091,414	838,192	253,222

¹ Counties with no pulpwood production are omitted.

Table 20. Round pulpwood production in Virginia, 1962

County ¹	All species	Pine	Hardwood	County ¹	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Accomack	5,666	5,666		King William	15,939	13,394	2,545
Albemarle	27,734	21,655	6,079	Lancaster	9,785	9,785	
Alleghany	51,431	8,491	42,940	Lee	3,102		3,102
Amelia	25,166	22,106	3,060	Loudoun	3,162	2,994	168
Amherst	53,855	21,787	32,068	Louisa	16,985	14,406	2,579
Appomattox	48,556	23,328	25,228	Lunenburg	16,039	14,714	1,325
Arlington	19			Madison	3,004	2,974	30
Augusta	20,817	5,741	15,076	Mathews	2,202	1,925	277
Bath	37,756	3,083	34,673	Mecklenburg	17,693	16,260	1,433
Bedford	50,976	37,190	13,786	Middlesex	12,573	11,694	879
Bland	526	487	39	Montgomery	5,351	5,306	45
Botetourt	22,918	6,309	16,609	Nansemond	18,947	9,709	9,238
Brunswick	70,441	56,753	13,688	Nelson	32,156	14,827	17,329
Buchanan				New Kent	26,803	22,245	4,558
Buckingham	81,082	42,667	38,415	Norfolk	761	677	84
Campbell	56,587	46,558	10,029	Northampton	688	546	142
Caroline	20,425	20,210	215	Northumberland	5,690	5,690	
Carroll	1,850	1,850		Nottoway	20,243	17,489	2,754
Charles City	16,637	11,850	4,787	Orange	8,547	7,709	838
Charlotte	28,210	24,897	3,313	Page	1,201	760	441
Chesterfield	35,788	27,253	8,535	Patrick	5,677	5,663	14
Clarke	1,666	1,611	55	Pittsylvania	37,774	35,721	2,053
Craig	15,739	3,638	12,101	Powhatan	23,372	17,051	6,321
Culpeper	5,587	5,509	78	Prince Edward	27,008	24,147	2,861
Cumberland	16,369	12,913	3,456	Prince George	38,725	31,431	7,294
Dickenson	15		15	Prince William	19,614	18,375	1,239
Dinwiddie	34,611	28,640	5,971	Princess Anne	351	80	271
Elizabeth City	2	2		Pulaski	2,872	2,843	29
Essex	14,433	13,986	447	Rappahannock	100	100	
Fairfax	7,070	6,892	178	Richmond	15,054	15,034	20
Fauquier	3,218	3,164	54	Roanoke	3,312	2,973	339
Floyd	1,583	1,583		Rockbridge	48,031	7,273	40,758
Fluvanna	19,499	11,196	8,303	Rockingham	9,197	7,165	2,032
Franklin	23,578	19,721	3,857	Russell	1,371		1,371
Frederick	7,581	6,948	633	Scott	17,362		17,362
Giles	412	403	9	Shenandoah	14,363	9,462	4,901
Gloucester	20,250	19,021	1,229	Smyth	574		574
Goochland	16,760	16,181	579	Southampton	31,706	21,585	10,121
Grayson				Spotsylvania	27,628	23,822	3,806
Greene	2,447	1,871	576	Stafford	10,895	10,028	867
Greensville	49,594	39,182	10,412	Surry	17,987	14,096	3,891
Halifax	19,678	19,286	392	Sussex	48,025	33,640	14,385
Hanover	7,324	7,047	277	Tazewell			
Henrico	4,197	4,057	140	Warren	5,115	3,285	1,830
Henry	14,674	14,546	128	Warwick	44	44	
Highland	13,715	905	12,810	Washington	5,079	216	4,863
Isle of Wight	14,327	9,093	5,234	Westmoreland	12,606	12,606	
James City	8,471	7,235	1,236	Wise	11,748		11,748
King and Queen	40,321	38,980	1,341	Wythe	3,725	3,329	396
King George	1,577	749	828	York	4,611	4,154	457
				All counties	1,685,935	1,159,486	526,449

¹ Includes independent cities.

Table 21. Mills using southern pulpwood in 1962, by process and capacity ¹

Location	Map code ²	Company	Pulping capacity, 24 hours ³				
			All processes	Sulfate	Groundwood and other mechanical	Semi- chemical	Soda and sulfite
----- Tons -----							
ALABAMA							
Brewton	(1)	Container Corp. of America	300	300			
Demopolis	(2)	Gulf States Paper Corp.	400	400			
Tuscaloosa	(3)	Gulf States Paper Corp.	450	450			
Mobile	(4)	International Paper Co.	1,315	1,015	300		
Coosa Pines	(5)	Kimberly-Clark Corporation, Coosa River Newsprint Division	960	320	640		
Nahcola	(6)	Marathon Southern Corp.	420	420			
Mobile	(7)	National Gypsum Co.	300		150	150	
Mobile	(8)	The Ruberoid Co.	48		48		
Mobile	(9)	Scott Paper Co.	900	900			
Total			5,093	3,805	1,138	150	
ARKANSAS							
Pine Bluff	(10)	Dierks Paper Co.	150	150			
Crossett	(11)	Georgia-Pacific Corporation Crossett Division—Paper	675	575		100	
Camden	(12)	International Paper Co.	625	625			
Pine Bluff	(13)	International Paper Co.	1,145	745	400		
Total			2,595	2,095	400	100	
FLORIDA							
Foley	(14)	The Buckeye Cellulose Corp.	910	910			
Fernandina	(15)	Container Corp. of America	650	650			
Palatka	(16)	Hudson Pulp and Paper Corp.	850	850			
Panama City	(17)	International Paper Co.	1,620	1,620			
Jacksonville	(18)	Owens-Illinois, Forest Products Div.	500	500			
Fernandina	(19)	Rayonier, Inc.	350				350
Port St. Joe	(20)	St. Joe Paper Co.	1,200	1,200			
Jacksonville	(21)	St. Regis Paper Co.	1,500	1,500			
Pensacola	(22)	St. Regis Paper Co.	750	750			
Total			8,330	7,980			350
GEORGIA							
Macon	(23)	Armstrong Cork Co.	200		200		
Brunswick	(24)	Brunswick Pulp and Paper Co.	1,120	1,120			
Savannah	(25)	Certain-teed Products Corp.	65		65		
Augusta	(26)	Continental Can Co., Inc.	475	350		125	
Savannah	(27)	Continental Can Co., Inc.	600	600			
Macon	(28)	Georgia Kraft Co., Macon Div.	700	700			
Rome	(29)	Georgia Kraft Co., Rome Div.	1,300	1,300			
Valdosta	(30)	Owens-Illinois, Forest Products Div.	630	630			
Jesup	(31)	Rayonier, Inc.	675	675			
Savannah	(32)	The Ruberoid Co.	48		48		
St. Marys	(33)	St. Marys Kraft Corp.	900	900			
Savannah	(34)	Union Bag-Camp Paper Corp.	2,575	2,175		400	
Total			9,288	8,450	313	525	
ILLINOIS							
Alton	(35)	Alton Box Board Co.	250			250	
East St. Louis	(36)	Certain-teed Products Corp.	85		85		
Wilmington	(37)	Lehon Co.	25			25	
Total			360		85	275	
LOUISIANA							
Shreveport	(38)	Bird and Son, Inc.	60			60	
Elizabeth	(39)	Calcasieu Paper Co., Inc.	240	240			
Hodge	(40)	Continental Can Co., Inc.	640	500		140	
Bogalusa	(41)	Crown Zellerbach Corp.	1,175	1,040		135	
New Orleans	(42)	The Flintkote Co.	60		60		
Bastrop	(43)	International Paper Co. (Bastrop Mill)	590			590	
Bastrop	(44)	International Paper Co. (Louisiana Mill)	635	590	45		
Springhill	(45)	International Paper Co.	1,550	1,550			
West Monroe	(46)	Olin Mathieson Chemical Corp.	650	650			
St. Francisville	(47)	St. Francisville Paper Co.	235		235		
Total			5,835	4,570	340	925	
MARYLAND							
Luke	(48)	West Virginia Pulp and Paper Co.	600	600			
Total			600	600			

Table 21. Mills using southern pulpwood in 1962, by process and capacity¹ (Continued)

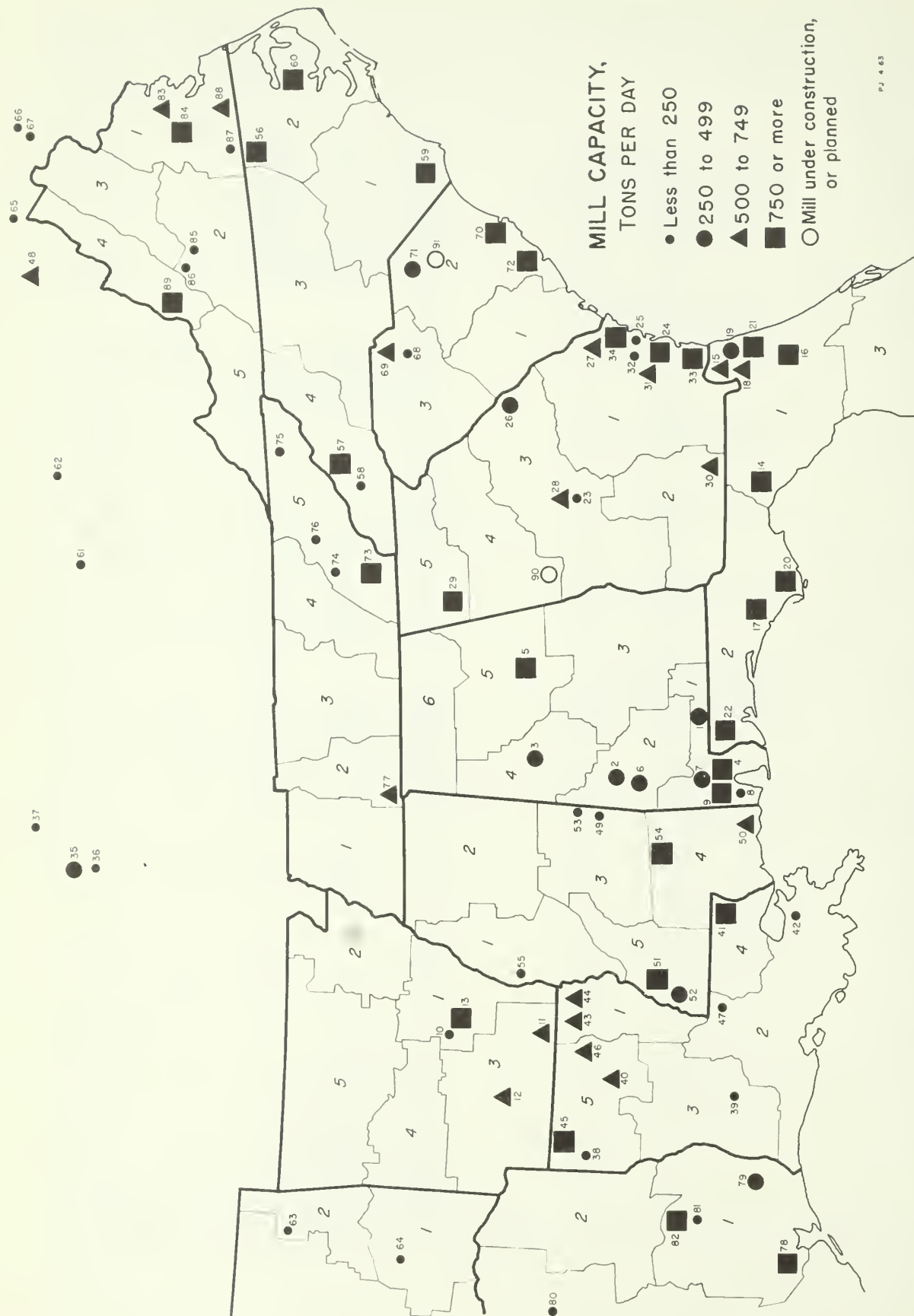
			Pulping capacity, 24 hours ³				
Location	Map code ²	Company	All processes	Sulfate	Groundwood and other mechanical	Semi- chemical	Soda and sulfite
----- Tons -----							
MISSISSIPPI							
Meridian	(49)	The Flintkote Co.	133	...	133	...	...
Moss Point	(50)	International Paper Co.	660	660	...	...	...
Natchez	(51)	International Paper Co.	925	925	...	...	...
Natchez	(52)	Johns-Manville Products Corp.	350	...	230	120	...
Meridian	(53)	Kroehler Mfg. Co. of Miss., Inc. ⁴	80	...	80	...	...
Laurel	(54)	Masonite Corp.	800	...	800	...	...
Greenville	(55)	United States Gypsum Co.	200	...	200	...	...
		Total	3,148	1,585	1,443	120	...
NORTH CAROLINA							
Roanoke Rapids	(56)	Albemarle Paper Manufacturing Co.	800	800	...	...	...
Canton	(57)	Champion Papers, Inc.	980	930	...	50	...
Sylva	(58)	The Mead Corp.	225	...	...	225	...
Acme	(59)	Riegel Paper Corp.	775	645	...	130	...
Plymouth	(60)	Weyerhaeuser Co., N. C. Div.	1,450	1,125	...	325	...
		Total	4,230	3,500	...	730	...
OHIO							
Cincinnati	(61)	Philip Carey Mfg. Co.	200	...	200	...	...
Chillicothe	(62)	The Mead Corp.	210	...	...	...	210
		Total	410	...	200	...	210
OKLAHOMA							
Pryor	(63)	Bestwall Gypsum Co.	90	...	...	90	...
Craig	(64)	Dierks Forests, Inc.	50	...	50	...	...
		Total	140	...	50	90	...
PENNSYLVANIA							
Roaring Springs	(65)	D. M. Bare Paper Co.	120	120	...	...	...
York	(66)	Certain-teed Products Corp.	70	...	...	70	...
Spring Grove	(67)	P. H. Glatfelter Co.	190	190	...	...	...
		Total	380	310	...	70	...
SOUTH CAROLINA							
Catawba	(68)	Bowaters Board Co.	200	...	200	...	...
Catawba	(69)	Bowaters Carolina Corp.	550	400	150	...	...
Georgetown	(70)	International Paper Co.	1,990	1,455	...	535	...
Hartsville	(71)	Sonoco Products Co.	375	...	...	375	...
Charleston	(72)	West Virginia Pulp and Paper Co.	1,550	1,290	...	260	...
		Total	4,665	3,145	350	1,170	...
TENNESSEE							
Calhoun	(73)	Bowaters Southern Paper Corp.	1,425	450	800	175	...
Harriman	(74)	The Mead Corp.	170	...	...	170	...
Kingsport	(75)	The Mead Corp.	225	...	...	...	225
Knoxville	(76)	Southern Extract Co.	150	...	...	150	...
Counce	(77)	Tennessee River Pulp and Paper Co.	500	500	...	...	...
		Total	2,470	950	800	495	225
TEXAS							
Pasadena	(78)	Champion Papers	772	700	72	...	...
Evadale	(79)	East Texas Pulp and Paper Co.	425	425	...	...	...
Dallas	(80)	The Ruberoid Co.	40	...	40	...	...
Diboll	(81)	Southern Pine Lumber Co.	130	...	...	130	...
Lufkin	(82)	Southland Paper Mills, Inc.	1,250	400	850	...	...
		Total	2,617	1,525	962	130	...
VIRGINIA							
West Point	(83)	The Chesapeake Corp. of Virginia	675	675	...	...	...
Hopewell	(84)	Continental Can Co., Inc.	850	700	...	150	...
Lynchburg	(85)	The Mead Corp.	175	...	...	175	...
Big Island	(86)	Owens-Illinois, Forest Products Div.	235	...	...	235	...
Jarratt	(87)	Southern Johns-Manville Products Corp.	200	...	200	...	...
Franklin	(88)	Union Bag-Camp Paper Co.	600	600	...	...	...
Covington	(89)	West Virginia Pulp and Paper Co.	1,000	800	...	200	...
		Total	3,735	2,775	200	760	...
		All States	53,896	41,290	6,281	5,540	785

¹ In 1962, two mills were under construction in the South. One, owned by the Great Southern Land and Paper Company, is at Cedar Springs, Georgia (No. 90 in fig. 6); its designed capacity is 700 tons daily. The other, at Florence, South Carolina (No. 91), is owned by South Carolina Industries, Inc. It will be completed in April 1964 and will have a daily capacity of 420 tons.

² Corresponds to numbers at mill locations in figures 6 and 7.

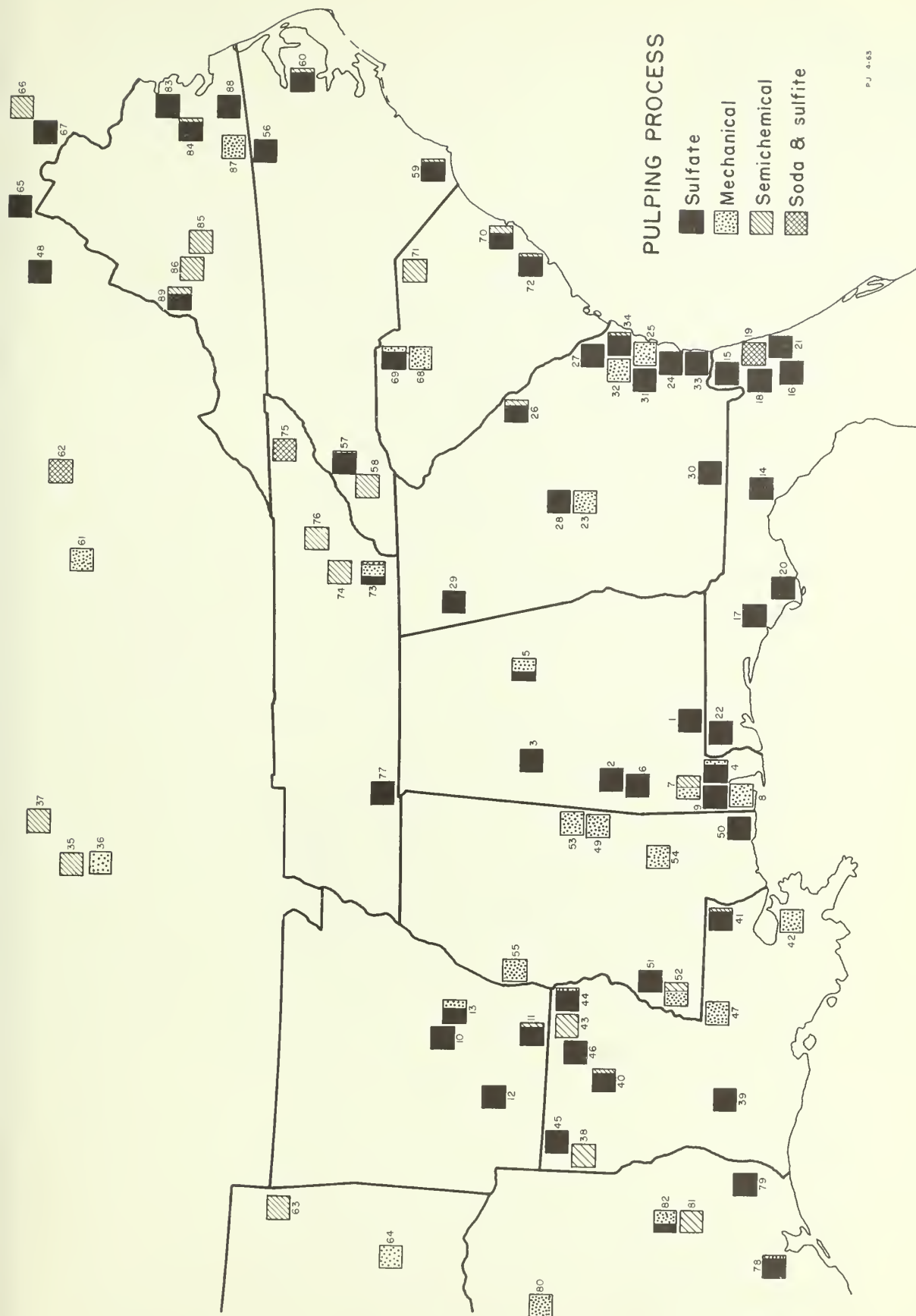
³ Southern Pulp and Paper Manufacturer, vol. 25, No. 10 (Oct. 1, 1962); and other sources.

⁴ Operates exclusively on secondary wood residues.



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Figure 6. Mills using southern pulpwood in 1962, and those planned or under construction. Numbered areas are Forest Survey regions. Small numbers at mill locations correspond to numbers in table 21.



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Figure 7. Mills using southern pulpwood in 1962, by process. Numbers correspond to those in table 2.

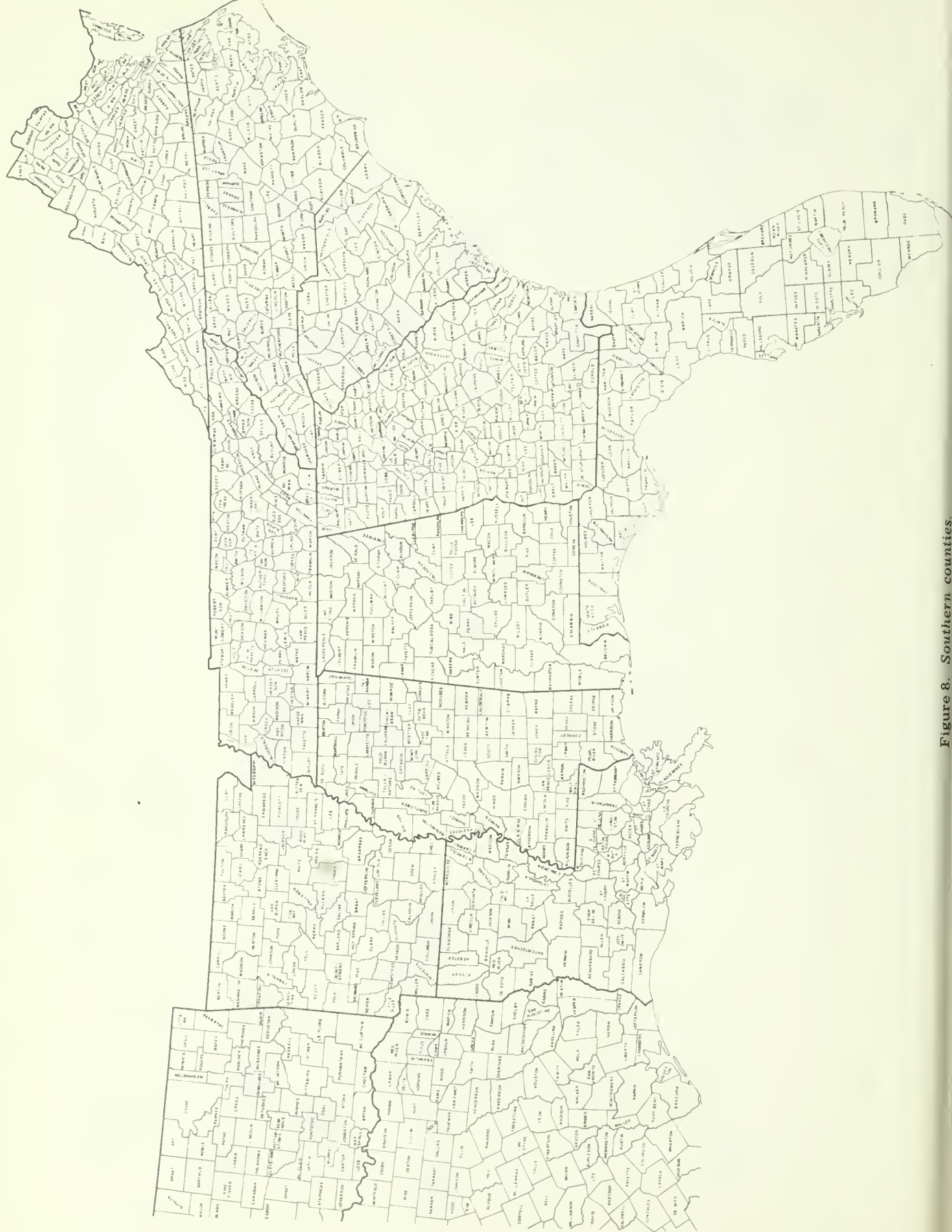


Figure 8. Southern counties.

U. S. Forest Service Resource Bulletin SO-1

SOUTHERN FOREST EXPERIMENT STATION

New Orleans, Louisiana

Forest Service, U.S. Department of Agriculture

1963

Louisiana

forest industry statistics, 1962

Joe F. Christopher and Erin R. Gunter



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LOUISIANA FOREST INDUSTRY STATISTICS, 1962

Joe F. Christopher

Southern Forest Experiment Station

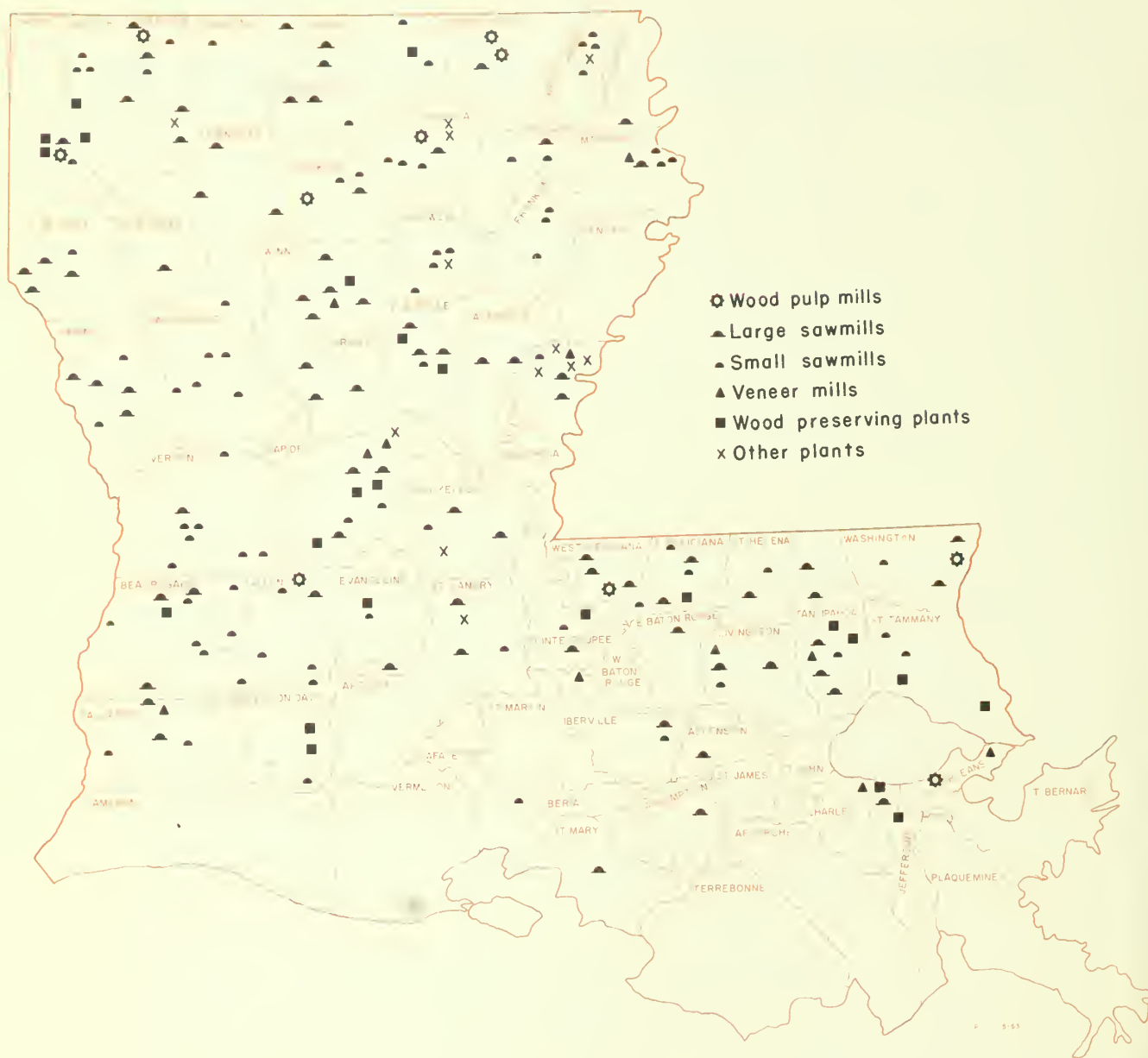
Erin R. Gunter

Louisiana Forestry Commission

This report summarizes information on the 1962 production of industrial roundwood (except pulpwood) in Louisiana. Because parish output is included--as well as State totals--this report should be locally useful to foresters, economists, and others concerned with the formation of forestry programs, the evaluation of timber production trends, the appraisal of plant location opportunities, and outlets for marketing timber products.

The data were collected by the Louisiana Forestry Commission and compiled by the Southern Forest Experiment Station. Information on pulpwood production is issued annually in a separate report prepared by the Southern Station in cooperation with the Southeastern Forest Experiment Station and the Southern Pulpwood Conservation Association.

Also included here is a list of the primary wood-using plants in the State. Though an effort was made to locate all active plants, a few may have been accidentally missed. Omission of a firm, therefore, is no reflection upon its activities, nor does inclusion constitute a recommendation.



Location of primary wood-using plants in Louisiana, 1962.

Table 1.--Volume of industrial roundwood

Product ¹	Volume in standard units				Roundwood volume		
	Standard units	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
					- - - M cubic ft. - - -		
Saw logs	M bd.ft. ²	981,426	592,772	388,654	155,375	97,930	57,445
Veneer logs	M bd.ft. ²	35,572	...	35,572	4,982	...	4,982
Piling	M linear ft.	4,783	4,783	...	2,887	2,887	...
Poles	M pieces	400	400	...	7,491	7,491	...
Posts	M pieces	3,034	3,034	...	1,374	1,374	...
Misc. products	M cu.ft.	4,255	20	4,235	4,255	20	4,235
Total		...	...	...	176,364	109,702	66,662

¹ Excludes pulpwood.² International 1/4-inch rule.Table 2.--Industrial roundwood¹ by species

Species group	Saw logs	Veneer logs	Piling	Poles	Posts	Miscellaneous products
	- - M board ft. ² - -		M linear ft.	- - M pieces - -		M cubic ft.
Softwood:						
Pines	565,401	...	4,783	400	3,034	17
Cypress	26,795	...	...	...	...	3
Other softwoods	576	...	...	...	...	...
Total	592,772	...	4,783	400	3,034	20
Hardwood:						
Black and tupelo gums	39,204	5,691	...	...	...	646
Sweetgum	65,441	14,500	...	...	...	657
Other soft hardwoods ³	43,728	4,085	...	...	...	914
Red oaks	124,344	11,296	...	...	...	355
White oaks	65,075	...	...	...	...	812
Other hardwoods	50,862	...	...	...	...	851
Total	388,654	35,572	...	...	...	4,235
All species	981,426	35,572	4,783	400	3,034	4,255

¹ Excludes pulpwood.² International 1/4-inch rule.³ Includes bay, magnolia, cottonwood, willow, maple, yellow-poplar, elm, hackberry, sycamore, black cherry, basswood, and box elder.

Table 3.--Residues, by primary wood-using plants

Type of industry ¹	All species			Softwoods			Hardwoods		
	Total	Fine ²	Coarse ³	Total	Fine ²	Coarse ³	Total	Fine ²	Coarse ³
- - - - M cubic ft. - - - -									
Lumber	64,183	28,414	35,769	39,401	16,112	23,289	24,782	12,302	12,480
Veneer	2,600	108	2,492	...	...	...	2,600	108	2,492
Piling, poles, and posts	1,625	993	632	1,625	993	632	...	...	...
Miscellaneous products	1,847	975	872	6	...	6	1,841	975	866
All products	70,255	30,490	39,765	41,032	17,105	23,927	29,223	13,385	15,838

¹ Excludes wood pulp industry.² Fine residues include sawdust, screenings, and other material generally too small for chipping.³ Coarse residues include slabs, edgings, trimmings, and other material generally suitable for chipping.

Table 4.--Volume of primary plant residues used

Source industry ¹	Type of use	All species	Softwoods	Hardwoods
- - - - M cubic ft. - - - -				
Lumber	Fuel ²	23,213	12,507	10,706
	Fiber ³	19,088	17,922	1,166
	Other ⁴	981	336	645
	Total	43,282	30,765	12,517
Veneer	Fuel	606	...	606
	Fiber	1,335	...	1,335
	Other	...	...	...
	Total	1,941	...	1,941
Piling, poles, and posts	Fuel	268	268	...
	Fiber	9	9	...
	Other	...	...	...
	Total	277	277	...
Miscellaneous industries	Fuel	309	...	309
	Fiber	...	...	...
	Other	20	...	20
	Total	329	...	329
All industries	Fuel	24,396	12,775	11,621
	Fiber	20,432	17,931	2,501
	Other	1,001	336	665
	Total	45,829	31,042	14,787

¹ Excludes wood pulp industry.² Includes all residues used as fuel by industrial plants and domestic fuel either sold or given away.³ Includes all residues used in manufacture of fiber products, such as pulp or hardboard.⁴ Includes residues used as livestock bedding, mulch, floor sweepings, and specialty items.

Table 5.--Saw log production by parish

Parish ¹	All species	Softwoods	Hardwoods
	- - - M board ft. ² - - -		
Acadia	666	173	493
Allen	14,980	10,698	4,282
Ascension	3,690	202	3,488
Assumption	7,205	720	6,485
Avoyelles	49,723	1,914	47,809
Beauregard	11,255	5,791	5,464
Bienville	40,025	29,986	10,039
Bossier	14,880	12,455	2,425
Caddo	1,641	532	1,109
Calcasieu	11,295	5,588	5,707
Caldwell	23,419	16,414	7,005
Catahoula	1,390	720	670
Claiborne	3,561	1,462	2,099
Concordia	41,395	2,649	38,746
De Soto	13,155	11,681	1,474
East Baton Rouge	9,450	1,499	7,951
East Carroll	6,129	126	6,003
East Feliciana	15,531	4,096	11,435
Evangeline	14,387	8,280	6,107
Franklin	5,980	570	5,410
Grant	33,353	27,200	6,153
Iberia	139	108	31
Iberville	16,950	1,679	15,271
Jackson	41,971	33,317	8,654
Jefferson Davis	684	589	95
Lafourche	13,771	6,753	7,018
La Salle	27,540	20,405	7,135
Lincoln	8,996	7,623	1,373
Livingston	49,068	41,318	7,750

Parish ¹	All species	Softwoods	Hardwoods
	- - - M board ft. ² - - -		
Madison	14,582	595	13,987
Morehouse	9,217	723	8,494
Natchitoches	30,388	23,551	6,837
Ouachita	8,044	736	7,308
Pointe Coupee	9,174	431	8,743
Rapides	23,654	14,921	8,733
Red River	15,351	12,792	2,559
Richland	3,029	17	3,012
Sabine	70,612	62,947	7,665
St. Charles	1,330	202	1,128
St. Helena	16,114	14,838	1,276
St. James	1,604	302	1,302
St. John the Baptist	2,929	375	2,554
St. Landry	28,500	834	27,666
St. Martin	2,245	...	2,245
St. Mary	261	...	261
St. Tammany	9,600	8,942	658
Tangipahoa	20,097	20,065	32
Tensas	3,373	...	3,373
Terrebonne	1,107	968	139
Union	70,426	58,743	11,683
Vermilion	298	...	298
Vernon	19,587	9,289	10,298
Washington	20,077	16,746	3,331
Webster	18,409	15,910	2,499
West Baton Rouge	2,015	204	1,811
West Carroll	3,869	63	3,806
West Feliciana	12,528	1,101	11,427
Winn	80,777	72,929	7,848
Total	981,426	592,772	388,654

¹ Parishes with no saw log output are omitted.² International 1/4-inch rule.

Table 6.--Saw log movement

Parish ¹	Logged and remained in parish	Outgoing shipments	Incoming receipts	Total log receipts by parish
- - - - - M board ft. ² - - - - -				
Allen	9,103	5,877	11,400	20,503
Avoyelles	42,642	7,081	13,392	56,034
Beauregard	9,240	2,015	6,621	15,861
Bienville	33,234	6,791	29,426	62,660
Bossier	4,598	10,282	919	5,517
Calcasieu	8,282	3,013	4,913	13,195
Caldwell	1,932	21,487	973	2,905
Concordia	19,368	22,027	...	19,368
De Soto	10,411	2,744	28,669	39,080
East Feliciana	7,097	8,434	1,671	8,768
Franklin	472	5,508	3	475
Grant	14,462	18,891	4,873	19,335
Jackson	8,099	33,872	...	8,099
La Salle	20,615	6,925	16,316	36,931
Lincoln	7,096	1,900	3,514	10,610
Livingston	6,829	42,239	4,698	11,527
Madison	7,575	7,007	14,308	21,883
Natchitoches	9,085	21,303	810	9,895
Ouachita	5,343	2,701	15,501	20,844
Rapides	14,500	9,154	43,766	58,266
Richland	2,892	137	3,296	6,188
Sabine	47,961	22,651	10,044	58,005
St. Landry	11,103	17,397	3,402	14,505
Tangipahoa	15,768	4,329	40,968	56,736
Union	14,191	56,235	5,608	19,799
Vernon	9,368	10,219	694	10,062
Washington	2,949	17,128	5,817	8,766
Webster	15,401	3,008	24,658	40,059
West Carroll	349	3,520	62	411
West Feliciana	11,828	700	20,258	32,086
Winn	70,632	10,145	51,962	122,594
All other parishes	38,363	115,918	79,226	117,589
Total	480,788	500,638	447,768	928,556

¹ Omitted parishes have either negligible receipts or less than 3 sawmills.² International 1/4-inch rule.Table 7.--Veneer log production
by parish

Parish ¹	All species hardwoods M board ft. ²
Ascension	2,086
Avoyelles	177
Calcasieu	1,330
Caldwell	198
Catahoula	1,267
Claiborne	45
Concordia	1,070
East Baton Rouge	2,877
Evangeline	258
Franklin	198
Grant	171
Iberville	3,164
Jackson	580
Jefferson	158
Lafourche	158
La Salle	772
Livingston	4,303
Plaquemines	158
Pointe Coupee	1,718
Rapides	858
St. Helena	2,165
St. John the Baptist	871
St. Landry	178
St. Martin	669
St. Tammany	1,821
Tangipahoa	897
Tensas	634
Terrebonne	158
Union	758
Vernon	86
Washington	238
West Baton Rouge	669
West Feliciana	75
Winn	4,807
Total	35,572

¹ Parishes with negligible output are omitted.² International 1/4-inch rule.

Table 8.--*Piling production by parish*

Parish ¹	All species softwoods
	<i>M linear ft.</i>
Allen	77
Avoyelles	18
Beauregard	205
Bienville	40
Bossier	4
Caddo	4
Calcasieu	74
De Soto	4
Evangeline	28
Grant	195
Jackson	65
La Salle	46
Livingston	437
Natchitoches	99
Rapides	434
Sabine	115
St. Tammany	2,047
Tangipahoa	377
Vernon	196
Washington	279
Webster	4
Winn	35
Total	4,783

¹ Parishes with negligible output are omitted.

Table 9.--*Pole production by parish*

Parish ¹	All species softwoods
	<i>M linear ft.</i>
Allen	5
Avoyelles	1
Beauregard	16
Bienville	2
Bossier	2
Caddo	2
Calcasieu	7
Caldwell	2
De Soto	10
Evangeline	4
Grant	29
Jackson	6
La Salle	17
Livingston	3
Natchitoches	16
Rapides	20
Red River	13
Sabine	17
St. Tammany	21
Tangipahoa	145
Union	6
Vernon	12
Washington	5
Webster	2
Winn	37
Total	400

¹ Parishes with negligible output are omitted.

Table 10.--*Commercial post production by parish*

Parish ¹	All species softwoods
	<i>M pieces</i>
Acadia	146
Allen	187
Avoyelles	80
Beauregard	126
Bossier	62
Caddo	70
De Soto	30
East Feliciana	204
Evangeline	131
Grant	94
Jefferson Davis	157
La Salle	105
Livingston	41
Natchitoches	465
Rapides	424
Red River	8
Sabine	242
St. Tammany	1
Tangipahoa	187
Union	75
Vernon	196
Washington	3
Total	3,034

¹ Parishes with negligible output are omitted.

Table 11.--Output of miscellaneous products¹ by parish

Parish ²	All species M cubic ft.	Parish ²	All species M cubic ft.	Parish ²	All species M cubic ft.
Acadia	5	Evangeline	68	St. Landry	105
Allen	³ 168			Tensas	1
Avoyelles	870	Franklin	51	Vernon	2
Beauregard	8	Grant	145		
		La Salle	119	Webster	46
Caldwell	368			West Carroll	12
Catahoula	153	Morehouse	454	Winn	318
Concordia	1,127	Ouachita	54		
East Carroll	36	Rapides	145	Total	4,255

¹ Includes cooperage logs and bolts, handle stock, furniture stock, chemical wood, and other miscellaneous products.² Parishes with negligible output are omitted.³ Includes 20 M cubic ft. softwood; all others hardwood.

Table 12.--Industrial roundwood production, except pulpwood, by parish

Parish ¹	All species M cubic ft.	Softwoods	Hardwoods	Parish ¹	All species M cubic ft.	Softwoods	Hardwoods
Acadia	151	74	77	Madison	2,167	99	2,068
Allen	2,764	1,983	781	Morehouse	1,828	119	1,709
Ascension	841	33	808	Natchitoches	5,510	4,499	1,011
Assumption	1,077	119	958	Ouachita	1,255	121	1,134
Avoyelles	8,329	368	7,961				
				Plaquemines	22	...	22
Beauregard	2,244	1,429	815	Pointe Coupee	1,604	71	1,533
Bienville	6,502	5,018	1,484	Rapides	4,843	3,287	1,556
Bossier	2,482	2,124	358	Red River	2,731	2,353	378
				Richland	448	3	445
Caddo	320	156	164				
Calcasieu	2,129	1,100	1,029	Sabine	12,139	11,006	1,133
Caldwell	4,176	2,744	1,432	St. Charles	200	33	167
Catahoula	548	119	429	St. Helena	2,943	2,451	492
Claiborne	558	242	316	St. James	242	50	192
Concordia	7,442	438	7,004	St. John the Baptist	561	62	499
				St. Landry	4,357	138	4,219
De Soto	2,355	2,137	218	St. Martin	426	...	426
East Baton Rouge	1,826	248	1,578	St. Mary	39	...	39
East Carroll	944	21	923	St. Tammany	3,457	3,105	352
East Feliciana	2,433	742	1,691				
Evangeline	2,510	1,504	1,006	Tangipahoa	6,445	6,314	131
				Tensas	589	...	589
Franklin	973	95	878	Terrebonne	203	160	43
Grant	6,262	5,184	1,078	Union	11,692	9,859	1,833
Iberia	23	18	5	Vermilion	44	...	44
Iberville	2,978	278	2,700	Vernon	3,533	1,997	1,536
Jackson	7,019	5,659	1,360	Washington	3,557	3,031	526
Jefferson	22	...	22	Webster	3,081	2,665	416
Jefferson Davis	163	149	14	West Baton Rouge	396	34	362
				West Carroll	585	10	575
Lafourche	2,175	1,116	1,059	West Feliciana	1,881	182	1,699
La Salle	5,061	3,779	1,282	Winn	14,911	12,760	2,151
Lincoln	1,462	1,259	203				
Livingston	8,906	7,157	1,749	Total	176,364	109,702	66,662

¹ Parishes with negligible output are omitted.

Table 13.--*Industrial roundwood receipts, except
pulpwood, by parish*

Parish ¹	All species	Softwoods	Hardwoods
- - - M cubic ft. - - -			
Allen	3,402	1,957	1,445
Avoyelles	8,865	131	8,734
Beauregard	3,392	2,484	908
Bienville	10,110	8,062	2,048
Bossier	1,156	1,048	108
Caddo	2,327	2,022	305
Calcasieu	2,850	1,474	1,376
Caldwell	568	351	217
Concordia	4,710	132	4,578
De Soto	6,322	5,186	1,136
East Feliciana	1,399	417	982
Franklin	74	32	42
Grant	3,105	2,350	755
Iberville	2,202	302	1,900
Jackson	1,277	765	512
Jefferson	1,493	403	1,090
Jefferson Davis	230	226	4
La Salle	7,112	5,654	1,458
Lincoln	1,715	1,389	326
Livingston	2,458	143	2,315
Madison	3,239	47	3,192
Natchitoches	1,720	1,167	553
Ouachita	3,984	162	3,822
Pointe Coupee	1,031	8	1,023
Rapides	12,103	6,697	5,406
Richland	921	60	861
Sabine	9,750	9,487	263
St. Landry	2,171	25	2,146
St. Tammany	2,257	2,138	119
Tangipahoa	10,783	10,118	665
Union	3,271	1,949	1,322
Vernon	1,659	660	999
Washington	1,306	102	1,204
Webster	6,547	5,514	1,033
West Carroll	110	15	95
West Feliciana	4,795	505	4,290
Winn	21,110	19,336	1,774
Total	151,524	92,518	59,006

¹ Omitted parishes have less than 3 plants. Total receipts in these parishes amount to 15,193 M cubic ft.

Table 14.--Plant residues used, by parish

Parish ¹	All species		Softwoods		Hardwoods	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
- - - - - M cubic ft. - - - - -						
Allen	597	750	329	476	268	274
Avoyelles	540	321	4	8	536	313
Beauregard	394	516	266	385	128	131
Bienville	1,964	2,643	1,493	2,162	471	481
Bossier	155	249	147	220	8	29
Caddo	105	153	35	89	70	64
Calcasieu	40	554	40	223	...	331
Caldwell	...	39	...	39	...	...
Concordia	...	267	...	...	...	267
De Soto	938	1,435	775	1,391	163	44
East Feliciana	48	61	28	39	20	22
Franklin	1	4	...	...	1	4
Grant	...	454	...	454	...	...
Iberville	16	331	...	...	16	331
Jackson	136	111	89	52	47	59
Jefferson	297	323	46	67	251	256
La Salle	780	1,491	476	1,181	304	310
Livingston	127	144	13	19	114	125
Madison	1	694	...	...	1	694
Rapides	1,853	2,406	878	1,273	975	1,133
Richland	195	59	11	...	184	59
Sabine	1,496	2,158	1,477	2,138	19	20
St. Landry	429	440	5	7	424	433
St. Tammany	144	271	144	255	...	16
Tangipahoa	859	2,735	846	2,440	13	295
Union	347	357	246	357	101	...
Vernon	...	33	...	33	...	...
Washington	19	37	1	3	18	34
Webster	1,019	1,698	812	1,478	207	220
West Carroll	23	17	2	2	21	15
West Feliciana	1,054	1,081	93	130	961	951
Winn	2,554	5,394	2,273	4,862	281	532
Total	16,131	27,226	10,529	19,783	5,602	7,443

¹ Omitted parishes have either negligible volume or less than 3 plants. Total used residues in these parishes amount to 2,472 M cubic ft.

Table 15.--Unused plant residues, by parish

Parish ¹	All species		Softwoods		Hardwoods	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
- - - - - M cubic ft. - - - - -						
Allen	62	134	33	52	29	82
Avoyelles	5	41	5	4	...	37
Beauregard	198	197	122	102	76	95
Bossier	44	9	28	9	16	...
Caddo	339	178	339	171	...	7
Calcasieu	393	321	234	173	159	148
Caldwell	125	111	70	60	55	51
Concordia	1,028	899	25	36	1,003	863
De Soto	291	230	192	6	99	224
East Feliciana	248	275	43	58	205	217
Franklin	15	17	6	9	9	8
Grant	609	354	435	177	174	177
Iberville	301	381	56	82	245	299
Jackson	129	230	59	159	70	71
Jefferson Davis	28	25	27	24	1	1
La Salle	539	154	508	116	31	38
Lincoln	333	451	258	374	75	77
Livingston	276	594	13	19	263	575
Madison	741	73	9	13	732	60
Natchitoches	341	447	218	292	123	155
Ouachita	854	1,012	31	44	823	968
Pointe Coupee	342	254	1	1	341	253
Rapides	416	257	156	96	260	161
Richland	14	163	...	16	14	147
Sabine	304	412	264	362	40	50
St. Landry	70	75	...	...	70	75
St. Tammany	58	17	31	...	27	17
Tangipahoa	944	107	944	107	...	...
Union	296	457	96	128	200	329
Vernon	346	370	118	124	228	246
Washington	277	273	18	24	259	249
Webster	242	23	209	...	33	23
West Carroll	4	9	1	2	3	7
West Feliciana	27	62	1	6	26	56
Winn	1,301	243	1,290	243	11	...
Total	11,540	8,855	5,840	3,089	5,700	5,766

¹ Omitted parishes have either negligible volume or less than 3 plants. Total unused residues in these parishes amount to 4,031 M cubic ft.

Table 16.--Large sawmills¹

Parish	Firm	Plant	
		Location	Address ²
Allen	Hillyer-Deutsch-Edwards, Inc.	Oakdale	
Ascension	Port Barre Lumber Co.	Donaldsonville	
Assumption	DeJean Hardwood Lumber Co.	Napoleonville	
Avoyelles	Elder Lumber Co., Inc. Riverland Hardwoods	Marksville Simmesport	
Beauregard	International Paper Co. C. N. Lockwood	De Ridder De Ridder	
Bienville	Hunt Lumber Co., Inc. Martin Timber Co. Woodard-Walker Lumber Co.	Danville Castor Taylor	Ruston
Bossier	Willis Lumber Co.	Princeton	
Caddo	J. W. Jeffries Lumber Co.	Shreveport	
Calcasieu	Carter Lumber Co. Emmick Lumber Co. Johnson Lumber Co.	De Quincy De Quincy Sulphur	
Catahoula	Easterling Lumber Co. Mississippi Valley Hardwood Co., Inc.	Jonesville Jonesville	
Claiborne	Anthony Kervin Lumber Co., Inc.	Junction City	
Concordia	Ferriday Hardwood Lumber Co. Rogers Brothers Lumber Co.	Ferriday Ferriday	
De Soto	McCoy Brothers Lumber Co. Matthews Lumber Co. Matthews Lumber Co. James A. Pace Lumber Co.	Stanley Mansfield Mansfield Logansport	Logansport
East Baton Rouge	Zachary Hardwood Lumber Co.	Zachary	
East Carroll	E. Sondheimer Co.	Sondheimer	
East Feliciana	J. B. Brunt Lumber Co. Central Creosoting Co.	Clinton Slaughter	
Grant	Colfax Lumber Co., Inc. Carroll W. Maxwell Lumber Co., Inc. Verda Lumber Co.	Colfax Pollock New Verda	
Iberville	Johnson Hardwood Lumber Co., Inc.	Plaquemine	
Jackson	W. L. Browder Lumber Co.	Chatham	
Jefferson	W. A. Ransom Lumber Co.	Harahan	
La Salle	Carraway & McDougald Lumber Co. Tullos Lumber Co. The Urania Lumber Co., Ltd.	Jena Jena Urania	
Lincoln	M. L. Hood G. L. Trammell & Sons	Dubach Dubach	

Table 16.--Large sawmills¹(Continued)

Parish	Firm	Plant	
		Location	Address ²
Livingston	E. E. Fowler Lumber Co. Starns-McConnell Lumber Corp.	Denham Springs Holden	
Madison	Chicago Mill & Lumber Co.	Tallulah	
Morehouse	Simpson Lumber Co., Inc.	Bastrop	
Ouachita	Kellogg Lumber Co.	Monroe	
Pointe Coupee	Esper Marionneau Lumber Co.	Livonia	
Rapides	Crowell Lumber Industries Kellogg, Graves, Moorhead Lumber Co., Inc. Roy O. Martin Lumber Co.	Longleaf Alexandria Alexandria	
Red River	Almond Brothers Lumber Co.	Coushatta	
Richland	George B. Franklin	Holly Ridge	
Sabine	Hunt Lumber Co., Inc. Louisiana Longleaf Lumber Co. Mathews Lumber Co., Inc. Sabine Lumber Co.	Zwolle Fisher Many Zwolle	
St. Helena	Terrebonne Lumber & Supply Co., Inc.	Pine Grove	
St. Landry	Gant & Nicholson Lumber Co. May Brothers Lumber Co. Turner Lumber Co.	Opelousas Eunice Lemoyne	Le Moyen
St. Mary	May Brothers Lumber Co.	Garden City	
Tangipahoa	Clemmons Brothers Lumber Co. Conway Guiteau Lumber Co. Louisiana Cypress Lumber Co. Ponchatoula Lumber Co., Inc. Reimers-Schneider Lumber Co., Inc.	Amite Fluker Ponchatoula Ponchatoula Natalbany	
Union	Bernice Hardwood Co., Inc. C. A. Reed Lumber Co., Inc.	Bernice Bernice	
Vernon	Anderson Enterprises	Leesville	
Washington	T. P. Fornea Pearl River Lumber Co.	Varnado Bogalusa	
Webster	Johnson Lumber Co. Pace Brothers Lumber Co. Springhill Lumber Co. Woodard-Walker Sawmill Co.	Cotton Valley Minden Springhill Heflin	
West Feliciana	King Lumber Industries Riverland Hardwoods Tunica Hardwood Co.	St. Francisville Tunica Tunica	
Winn	Brewton & Taylor Lumber Co. L. L. Brewton Lumber Co. Hunt Lumber Co., Inc. Olin-Mathieson Chemical Corporation Tremont Lumber Co.	Winnfield Winnfield Dodson Winnfield Joyce	

¹ Output of more than 3 million board feet.² Specified only if different from plant location.

Table 17.--Small sawmills ¹

Parish	Firm	Plant	
		Location	Address ²
Allen	Allen Timber Co. Marvin S. Houston Putnam Industries Savant Lumber Co.	LeBlanc Elizabeth Elton Indian Village	Kinder Rt. 3, Pitkin
Avoyelles	M. L. Bordelon	Belledeau	Hessmer
Beauregard	W. T. Baldwin Bennett Lumber Co., Inc. Carl Collins Sawmill J. R. Eoff L. M. Malone Martin Brothers	Longville De Ridder Sugartown Longville Merryville Dry Creek	Rt. 1, De Ridder Kirbyville Rt. 1, De Ridder
Bossier	Maston Nance Mill #1 Maston Nance Mill #2 Earl Young Tie Mill	Plain Dealing Plain Dealing Plain Dealing	
Caddo	Russell Lumber Co.	Shreveport	
Calcasieu	Foster Brothers Sawmill Reeves Lumber Co.	Vinton Lake Charles	
Caldwell	Critchett & Woods Lumber Co. Jeta Brothers Tie Mill N. D. Roberts Lumber Co., Inc. Rowan Lumber Co.	Olla Clarks Grayson Grayson	Alexandria
Claiborne	Leon Zeigler Mill	Haynesville	
Concordia	J. B. Gordon	Wildsville	Jonesville
De Soto	The Laffitte Co.	Mansfield	
East Feliciana	Allen Haynes Mill Earl Haynes Sawmill Frank Leggett	Clinton Norwood Port Hudson	Norwood
Evangeline	Verrette Sawmill	Mamou	
Franklin	W. C. Guthrie C. E. Sullivan G. T. Washington	Gilbert Crowville Crowville (Hill Ridge)	Ferriday Rt. 1, Winnsboro Rt. 4, Winnsboro
Iberia	Joe Dubroc	New Iberia	Hessmer
Iberville	A. Wilbert & Son	Plaquemine	
Jackson	Lakeside Lumber Co., Inc. W. R. Roberts Lumber Co.	Chatham Chatham	
Jefferson Davis	N. L. Barron Sawmill Inc. Varise Conner	Elton Lake Arthur	
La Salle	Denton Lumber Co.	Jena	
Lincoln	Dewitt Sanders	Choudrant	Ruston

Table 17.--Small sawmills¹ (Continued)

Parish	Firm	Plants	
		Location	Address ²
Livingston	W. B. Brown & Sons, Inc.	Denham Springs	
Madison	G. Click Mill M. C. McIntyre Timberlane Plantation Mill	Tallulah (Warsaw) Tallulah Eagle Lake (Bear Lake)	Tallulah
Natchitoches	Davis Sawmill Howard Hall Sawmill Hendricks Sawmill Inc. G. L. Johnson Lumber Co. Percy Parker Sawmill Provencal Sawmill	Provencal Hagewood Marthaville Campti Vowells Mill Provencal	Natchitoches Rt. 3, Robeline
Ouachita	Albright Sawmill & Lumber Co. W. B. Nelson Lumber Co. W. B. Nelson Lumber Co.	West Monroe Cheniere Cheniere	W. Monroe W. Monroe
Pointe Coupee	A. N. Smith Lumber Co.	Blanks	
Rapides	H. E. Duck Lumber Co. G. W. Eldridge, Jr., Lumber Co.	Forest Hill Lecompte	
Richland	S. I. Carson Kelly E. Eubanks	Dunn Rayville	Rt. 2, Delhi
Sabine	E. W. McDaniels Skinner Brothers Sawmill	Negreet Belmont	Many
St. Helena	Jenkins & Richardson Mill	Greensburg	
St. Landry	Krotz Springs Lumber Co.	Krotz Springs	
St. Tammany	T. E. Brunning & Sons Lumber Co. Jenkins Lumber Co.	Covington Folsom	Franklinton
Tangipahoa	Maurin Lumber Co.	Hammond	
Union	W. B. Haile & Son Lumber Co. Tyner & Cross Lumber Co.	Haile Litroe	Marion
Vernon	Cooper Sawmill Kurthwood Lumber Co., Inc. Louisiana Pine Lumber Co. Martin Nolan Sawmill McDonald Sawmill Presswood Sawmill C. A. Stephens Sawmills	Rosepine Kurthwood Leesville Pitkin Pitkin Leesville Pickering	Rt. 4, Leesville Rt. 1, Leesville
Washington	Richardson Sawmill	Franklinton	
Webster	Clinton Martin Tie Mill James O. Rice Tie Mill	Shongaloo Sarepta	
West Carroll	Ben Bennett Mill R. W. Dawson Mill R. L. Helmer T. E. Mitchell Mill	Oak Grove Oak Grove Pioneer Oak Grove	

¹ Output of less than 3 million board feet.² Specified only if different from plant location.

Table 18.--Wood preserving plants

Parish	Firm	Location	Type ¹
Beauregard	International Paper Co., Wood Preserving Division	De Ridder	P
Bossier	Benton Creosoting Co.	Benton	P
	Joslyn Manufacturing & Supply Co.	Bossier City	P
Caddo	Olin-Mathieson Chemical Corp.	Shreveport	P
	Standard Wood Preservers of Shreveport, Inc.	Shreveport	P
East Feliciana	Central Creosoting Co.	Slaughter	P
Evangeline	Reddell Creosote Co., Inc.	Reddell	P
Jefferson	Celcure Wood Preserving Corp. of Louisiana	Kenner	P
	Joslyn Manufacturing & Supply Co.	Harahan	P
Jefferson Davis	Evr-Wood Treating Co.	Jennings	P
	Renner Creosoting Co.	Jennings	P
La Salle	LaSalle Creosoting Co., Inc.	Jena	P
	The Urania Lumber Co., Ltd.	Urania	P
Pointe Coupee	Laurent Wood Treating Service	New Roads	P, N
Rapides	Colfax Creosote Co., division of R. O. Martin Lumber Co.	Pineville	P
	Koppers Co., Inc., Wood Preserving Division	Alexandria	P
	Glenmora Creosote Co.	Glenmora	P
St. Tammany	American Creosote Works, Inc.	Slidell	P
	Madisonville Creosote Works	Madisonville	P
Tangipahoa	Oliver Treated Products Co.	Hammond	P
	R & K Creosoting Co.	Natalbany	P
Union	Linville Creosoting Co.	Linville	P
Winn	American Creosote Works, Inc.	Winnfield	P

¹ "P" indicates pressure treating.

"N" indicates nonpressure treating.

Table 19.--Veneer plants

Parish	Firm	Location	Type ¹
Calcasieu	General Box Co.	De Quincy	C
Concordia	Wilson & Co.	Clayton	C
Iberville	Wirebound Box Division of St. Regis Paper Co.	Maringouin	C
Livingston	Denham Springs Veneer Co., Inc.	Denham Springs	O
Madison	Chicago Mill & Lumber Co.	Tallulah	O
Orleans	Higgins, Inc.	Michoud	O
Rapides	Parks Wood Products	Pineville	O
	Red River Veneer Co.	Pineville	C
St. Charles	Delta Match Corporation	Kenner	O
Tangipahoa	Hammond Wood Products Co.	Hammond	C
Winn	Brown-Hart-McIntyre Veneer Co.	Winnfield	O

¹ "C" indicates plants producing chiefly container veneer.

"O" indicates plants producing chiefly commercial and other veneers.

Table 20.--Miscellaneous plants

Parish	Firm	Location
Avoyelles	Louisiana Hoop Company, Inc.	Bunkie
Caldwell	Winters Hardwood Products	Columbia
Concordia	Leon E. Ellis	Wildsville ¹
	L. L. McDowell	Ferriday
	Rogers Brothers Lumber Co.	Ferriday
	Winters Hardwood Products	Wildsville
Ouachita	Walter C. Crowell Co.	Monroe
	Louisville Cooperage Co. ²	Monroe
Rapides	Standard Lumber Company	Tioga
St. Landry	Martin Furniture Works	Washington
Webster	Leakey's Mill	Minden
West Carroll	Bennett Lumber Co.	Oak Grove

¹ Address Columbia, La.

² Produces tight cooperage; all others produce dimension stock.

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SOUTHERN FOREST EXPERIMENT STATION

New Orleans, Louisiana

Forest Service, U.S. Department of Agriculture

1963

ALABAMA FORESTS



Foreword

This report presents the principal findings of the third Forest Survey of Alabama, completed in 1963 by the Southern Forest Experiment Station. The survey, which was undertaken as one phase of the nationwide inventory being conducted by the U. S. Forest Service, provides up-to-date information on the kind, amount, and condition of forest resources; the industries they support; and the possibilities for improving wood production. Comparison with the previous survey of 1953 helps to clarify timber trends.

Generous assistance from public and private organizations made it possible to keep the field work for the new inventory ahead of the schedule that could have been maintained with regularly allotted funds. The very material aid of the organizations listed below, and of the individuals in them, is gratefully acknowledged:

Alabama Department of Conservation

Alabama Extension Service

Tennessee Valley Authority

Container Corporation of America

Coosa River Newsprint Company

Georgia Kraft Company

Hiwassee Land Company

International Paper Company

Marathon Southern Corporation

Scott Paper Company

W. T. Smith Lumber Company

Weyerhaeuser Company

ALABAMA FORESTS

Herbert S. Sternitzke

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana

1963

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Figure 1. Forest Survey regions in Alabama.

Alabama Timber Highlights

The decade that elapsed between the 1953 and 1963 Alabama forest surveys was a period of many changes. Shifts in land use and changes in product demand, timber growth, cutting, management, and many other factors importantly affected the State's forest resources. Some of these improved the ability of the forests to supply industry with the kind and volume of timber it needs; others did not.

The pulp and paper industry greatly enlarged its capabilities. New pulpmills were established at Brewton, Demopolis, and Naheola (fig. 1). Existing plants were expanded. In response to industrial expansion, the production of pulpwood increased twofold. Especially noteworthy has been the sizable gain in the use of hardwoods for pulp. Pulpwood is now the dominant product of Alabama forests. The volume of pulpwood bolts harvested in 1962 topped that of saw logs by nearly 25 percent. Further expansion of the pulp industry within the State and in peripheral areas points to new highs in future pulpwood output.

The lumber industry developed a new and profitable market for plant residues that were formerly regarded as unavoidable waste. At least 120 Alabama sawmills convert slabs and edgings, chiefly pine, into high-quality chips for sale to pulpmills. The equivalent of one in every six cords of pine pulpwood produced in Alabama is currently derived from chips. Use of hardwood residues is also gaining, although handicapped by the need to separate species for most pulping processes.

Alabama's veneer industry, which consumes mainly soft-textured hardwoods such as sweetgum, shrank from 42 to 34 plants during the past decade. The average annual output of those that survived, however, rose sharply. Moreover, sustained partly by foreign imports and logs brought in from neighboring States, total consumption of veneer logs is greater now than at the time of the previous forest survey. Increasing numbers of the veneer plants, too, are making pulp chips from residues.

In response to demand for treated wood, 17 new wood-preserving plants have been constructed since 1951. Of the 25 establishments now operating, 21 are pressure-type.

In anticipation of greater long-term demand for timber, pine management programs have been expanded and intensified in many parts of the State, especially on forest industry lands and public holdings. Both public agencies and forest industries are also sponsoring programs of technical assistance to stimulate good practices on small woodlands. Management of hardwoods, however, has progressed much less than pine.

How have these and other trends affected the forest resources of Alabama?

In area, the forests are 5 percent or one million acres greater than in 1953. They now occupy 67 percent of Alabama's total land area. In volume, softwood growing stock (virtually all pine) has risen some 28 percent; softwood sawtimber has gained 30 percent. These are reversals of earlier volume trends.

Other aspects of the forest situation are less encouraging. Several million acres that are capable of growing pine, for example, are dominated by other species. Volume in high-quality hardwoods—that is, those most suitable for factory lumber and veneer—has declined precipitously. One in every four hardwoods is a cull—a waster of growing space that could be devoted to thrifty timber. The current growth of timber is less than half of the potential. And stocking in many stands is far less than most forest managers might desire.

Almost 15 of Alabama's nearly 22 million forest acres are in ownerships of less than 5,000 acres. On these holdings especially, there are numerous opportunities for increasing future supplies of timber that can support new industries. The greatest possibilities for enhancing forest productivity are in raising the level of pine stocking and in applying stand improvement practices on all sites capable of growing high-quality hardwoods rapidly. The most promising remedial measures are to remove culls and other low-value trees that are interfering with the growth or establishment of desirable ones; to plant pine sites on which adequate natural regeneration is not likely; and on hardwood lands especially, to plan timber harvests in a way that will insure a buildup in trees of the quality, sizes, and utility normally demanded for industrial purposes.



Forest Resource Trends

TRENDS IN FOREST AREA

More Forest Land

Alabama is the most extensively wooded State in the Midsouth. Forests now cover 67 percent, 21.8 million acres, of the land. About 28 thousand of these acres are classified as non-commercial, either because they are reserved for nontimber uses or because their timber-growing capacity is extremely low. In 1953 forest acreage totaled 20.8 million.

Recent changes in Alabama's rural economy underlie the expansion of forest acreage. Land in farms, for example, declined some 20 percent in the 1950's. At the same time, rural population dropped 14 percent, while urban areas experienced a 34-percent gain. The State's population now resides mostly in cities and towns. In 1950 it was still largely rural.

Forest acreage expansion has been widespread. Increases have resulted both from natural reseeding and from extensive planting of pine on abandoned farmland. Fifty-four of Alabama's 67 counties have more woodland today than they did in 1953; 6 in the northern section and 5 in the extreme south registered modest declines. Gains of 15 percent or more occurred in some counties of the Tennessee Valley and the southeastern Coastal Plain. Statewide, the net result of land-use shifts is that commercial forest acreage is 5 percent greater than it was 10 years ago (table I).

Table I. Commercial forest land (1963) and change since 1953

Region	Commercial forest	Change
	Thousand acres	Percent
North ¹	10,134.0	+ 5
Southeast	5,452.8	+ 8
Southwest	6,155.4	+ 1
Total	21,742.2	+ 5

¹ Includes the three northernmost regions shown in figure 1.

What about future land-use trends? The most recent nationwide study of projected land-use requirements by the Department of Agriculture concluded that retirement of cropland would greatly exceed anticipated increases in pasture and range land requirements by 1980.¹ If local land-use changes parallel national trends, further gains in Alabama's forest area are likely in the next decade or two.

Increase In Big Ownerships

Most timberland in Alabama is in small tracts. Statewide, commercial forest land in holdings of less than 5,000 acres aggregates nearly 14.7 million acres. This is about the same total as in 1953. In the same time span, 1953-63, acreage in ownerships of 50,000 acres or more rose from 2.6 to 4.0 million. The increase in big holdings largely reflects expansion of industrially owned lands.

Commercial forest land held by wood-using industries now totals 4.1 million acres, or about 19 percent of the State's woodland acreage. In 1953 the industrial segment totaled 15 percent. Virtually all of the recent gain is attributable to increases in pulp and paper company holdings. In Alabama, as in most of the South, major investments in pulping facilities tend to go hand-in-hand with programs of land acquisition. These programs stem partly from the need for dependable supplies of raw material to protect multi-million dollar investments in plants and partly from an increasing recognition of the profitable possibilities of growing timber crops in the southern pine region.

The total commercial forest acreage in private, nonindustrial holdings—16.6 million acres

¹ U. S. Department of Agriculture. Land and water resources. 73 pp., illus. Washington, D. C. 1962.

—remained about the same in the last 10 years. But the woodland area classified as “farmer-owned,” declined noticeably. This change is at least partially due to a shift in occupation of many landowners who were formerly farm operators.

Publicly owned lands make up a scant 5 percent, 1 million acres, of the commercial forest land in Alabama. Although the total area in such holdings increased slightly, the Federal share declined as a result of land disposition.

Gain In Upland Timber Types

Forests predominately of longleaf and slash pine typify Alabama's lower Coastal Plain and dominate 2 million acres of commercial forest land. Longleaf is also found in the central part of the State, but here much of its former acreage was taken over by other pines when the old-growth was logged off years ago. Extending north from the coastal region, loblolly and shortleaf pine cover 7.4 million acres. Another 4.8 million acres of uplands are occupied by oak, hickory, and other hardwoods in mixture with various pines. Along the Mobile, Tombigbee, Black Warrior, and other streams throughout the State are stands of bottom-land hardwoods that aggregate 2.4 million acres. Upland hardwood forests, chiefly in the northern half of the State, total 5.1 million acres.²

Between surveys there was some shifting of acreages in the major forest types. Forests in which southern pines make up at least 25 percent of the stand gained 4 percent, mainly because of conversion of abandoned fields to forest. Acreage of bottom-land forests remained virtually unchanged. But stands of upland oak and hickory increased some 10 percent. Most of the acreage presently supporting upland hardwoods is capable of growing excellent crops of pine. On these sites, hardwoods usually represent an inferior source of industrial raw material and often cannot be marketed at all.

Better Stocking

Along with the increase in forest area, stocking has improved noticeably. The gain is most

²A map detailing the major forest types in the South is available upon request from the Southern Forest Experiment Station. The scale is 40 miles to the inch.

evident in the smaller tree sizes. Stocking of saplings, for example, has increased nearly 20 percent since 1953. Half of Alabama's commercial forest land is presently well stocked in the sense that it has at least 70 percent of the number of growing-stock trees needed to make effective use of the site. About 10 percent is poorly stocked (less than 40 percent of full stocking). Inadequate stocking is associated to some extent with the expansion of forest acreage during the past decade. Invasion of forests into abandoned fields ordinarily extends over a period of years. Many fields which have only recently qualified as forest are still in the initial stages of reversion to woodland and consequently are understocked.

Regeneration following timber harvesting has usually been prompt, but the species, quality, and vigor of the restocking trees in many areas leave something to be desired. Only 31 percent of Alabama's forest area is stocked with trees considered desirable—the kind that the land is capable of growing under good management. Another 33 percent is stocked with acceptable trees. These trees qualify as growing stock, but because of low vigor, high risk, rot, excessive forking or limbiness, or other limitations, they will not yield the highest volume and quality of products possible. Moreover, some 36 percent of the forest area is either nonstocked or else is encumbered with shrubs and cull trees that inhibit stand development. Intensifying measures that will improve stand regeneration appears to be a high-priority management task.

TRENDS IN TIMBER VOLUME

More Pine

Softwood volume in Alabama has risen 28 percent since 1953 (table II). This is a reversal of earlier trends. Southern pine (fig. 2) makes up all but 2 percent of the 7.7 billion cubic feet of softwood. Other species include cypress and eastern redcedar (fig. 3). Nearly two-thirds of

Table II. *Growing-stock volume (1963) and change since 1953*

Region	Softwood		Hardwood	
	Volume	Change	Volume	Change
	Million cu. ft.	Per- cent	Million cu. ft.	Per- cent
North	2,741.2	+ 37	2,994.7	— 6
Southeast	1,743.7	+ 30	1,534.3	— 2
Southwest	3,188.2	+ 20	2,245.8	+ 13
Total	7,673.1	+ 28	6,774.8	+ 1

the current softwood volume is in trees 6 to 12 inches in diameter.

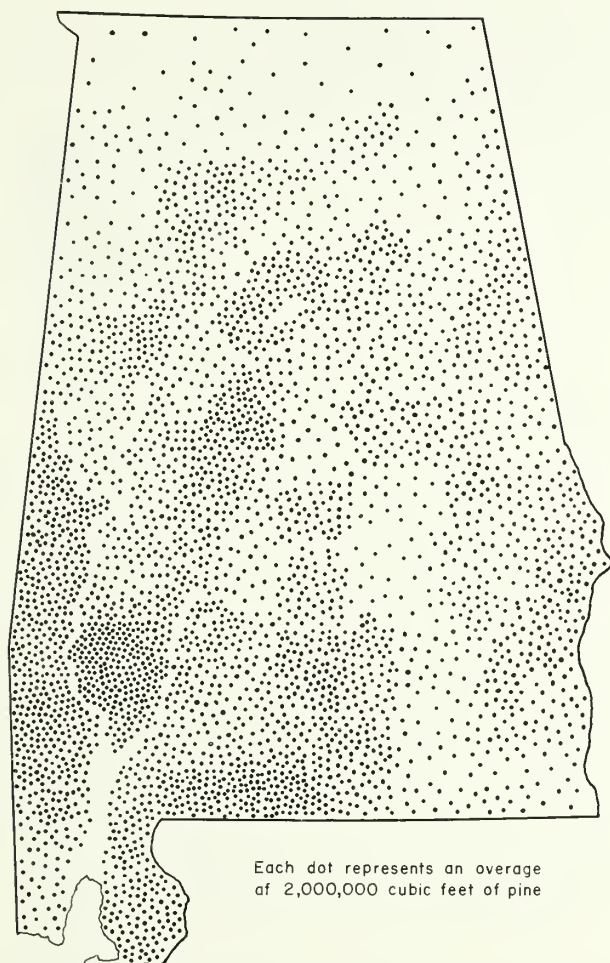


Figure 2. Generalized distribution of pine growing stock in Alabama.

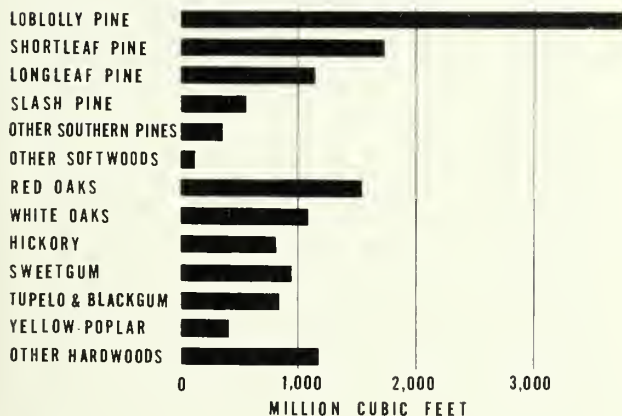


Figure 3. Growing stock by species.

Changes in softwood tree size between the latest two surveys are summarized in figure 4. Part of the increase in the smallest diameter

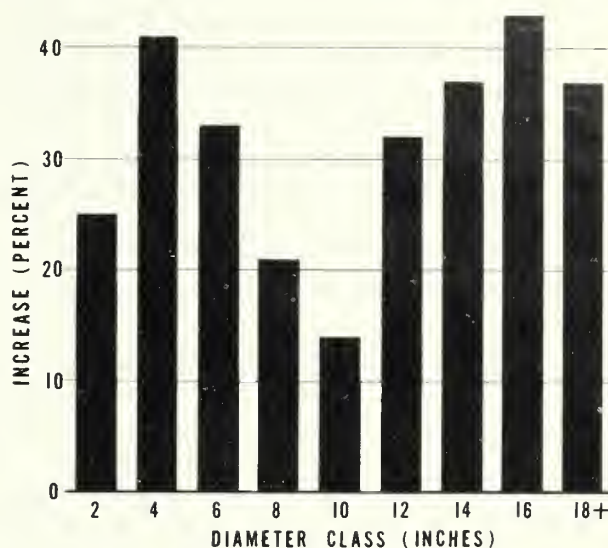


Figure 4. Percentage change in number of softwood growing stock trees between surveys.

classes is related to the sizable expansion of forest acreage in the uplands. The increase in 6- to 12-inch trees is especially encouraging because considerable pulpwood is harvested from these diameter classes. The 40-percent gain in numbers of trees 16 inches and larger is even more impressive; it is noteworthy that nearly two-fifths of the softwoods in these diameters are growing on the 5 million forest acres held by timber industries and public agencies. As a result of these changes, softwood volume increased some 1.7 billion cubic feet.

The increase in board-foot volume of softwoods large enough for sawtimber totaled 6.6 billion board feet. Changes in volume differed among the major classes of landowners (fig. 5). On public holdings, for example, volume

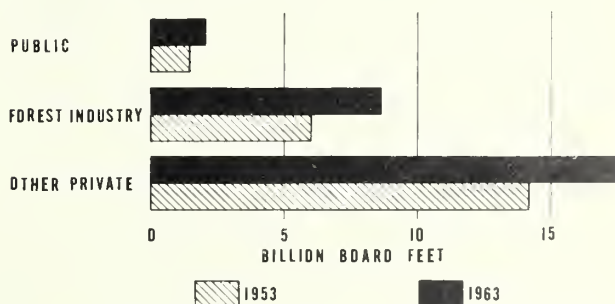


Figure 5. Softwood sawtimber volume by class of ownership, 1953 and 1963.

of softwood sawtimber is some 36 percent greater than in 1953. Forest industry ownerships gained 44 percent. The improvement on industrial ownership may be partly attributable to forest acquisition during the intersurvey period. On private ownership other than that held by industry, the gain in softwood sawtimber totaled about 24 percent.

Softwood timber quality also improved discernibly. On both the 1953 and 1963 forest surveys, softwood sawtimber trees were tallied by the standard log grades for southern pine. Between surveys the volume of upper-grade logs—that is, grades 1 and 2—increased some 23 percent. The volume in grade-3 logs rose by more than 50 percent. All together, logs graded 2 and 3 now make up nearly three-fifths of Alabama's softwood sawtimber inventory. They are well adapted to the manufacture of dimension lumber provided they are not coarse grained. The nascent southern pine plywood industry is also expected to rely mainly upon No. 2 and 3 logs.

Although Alabama's softwood inventory has gained both in volume and quality during the last 10 years, most pine sites are still lightly stocked with sawtimber. Statewide, for example, forested uplands that are better adapted to pine than hardwood support about 1,400 board feet per acre in softwood sawtimber trees. Public and forest industry holdings each average about 2,300. But pine sites on farm and other private, nonindustrial holdings have only 1,200 board feet per acre of softwood sawtimber. Additionally, the typical pine site on all classes of ownership supports several hundred board feet of hardwood.

Hardwood Quality Has Declined

The total volume of hardwood growing stock has shown little change since 1953. But in the bottom lands, where many hardwood species attain their best development, volume has declined some 7 percent. Upland hardwoods have increased about 5 percent. Most hardwood trees on upland sites are slow growing, have little market potential, and represent a poor utilization of the land. Pine is usually a more attractive investment in the uplands.

It will be noted from figure 6 that the number of hardwood trees has declined in most

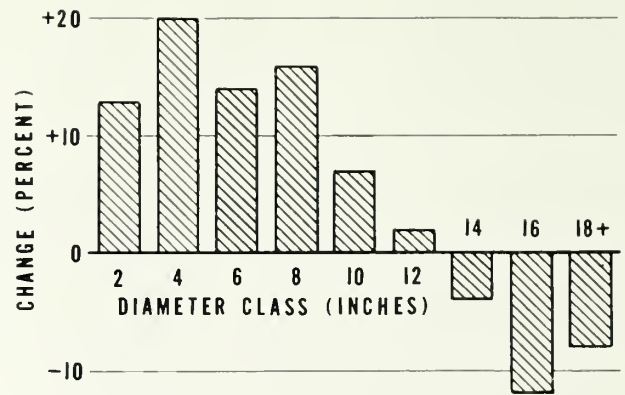


Figure 6. *Percentage change in number of hardwood growing stock trees between surveys.*

sawtimber sizes. As a result of these stand-structure changes, hardwood sawtimber volume is presently somewhat below the 1953 level. It now stands at 18.3 billion board feet, a 4-percent drop. This is a continuation of earlier trends.

Recent changes in hardwood sawtimber volume have not been uniform throughout the State (table III). But only in the southwest section, where most of the board footage is in the bottom lands, has the supply increased noticeably. Here it has risen 13 percent in the past decade. In fact, hardwood inventory in the southwest has been steadily gaining since the midthirties.

Table III. *Sawtimber volume (1963) and change since 1953*

Region	Softwood		Hardwood	
	Volume	Change	Volume	Change
	Million bd. ft.	Per- cent	Million bd. ft.	Per- cent
North	9,071.3	+ 42	7,655.2	- 13
Southeast	6,500.8	+ 33	3,742.5	- 11
Southwest	12,734.6	+ 22	6,897.5	+ 13
Total	28,306.7	+ 30	18,295.2	- 4

Another significant aspect of the changing hardwood situation is in upper-grade standard lumber logs. These are the logs that are normally most in demand for lumber and other products requiring clear material. Between the two most recent surveys the volume of such logs—that is, grades 1 and 2—declined about 25 percent (table IV). Volume in lower-grade logs rose about 4 percent. Nearly two-fifths of the latter volume is in tie and timber logs that are presently suited only for low-value end uses such as crating and crossties.

The outlook for preferred hardwoods in Alabama could be markedly improved by intensive timber management. Hardwood forestry is now being facilitated by the rising production of hardwood pulps, which is enabling more and more timber managers to thin their hardwood stands and make improvement cuttings to favor the trees suitable for more exacting products.

Table IV. Sawtimber volume by log grade and tree diameter, 1963

Species group and d.b.h. class (inches)	All grades	Grade 1 ¹	Grade 2	Lower grades
----- Million board feet -----				
Softwood:				
10 to 12	12,778.0	35.0	156.3	12,586.7
14 to 18	12,420.9	17.1	2,394.7	10,009.1
20 and up	3,107.8	415.2	705.2	1,987.4
Total	28,306.7	467.3	3,256.2	24,583.2
Hardwood:				
12	4,525.1	.	11.0	4,514.1
14 to 18	9,527.6	225.8	1,872.8	7,429.0
20 and up	4,242.5	966.5	1,076.7	2,199.3
Total	18,295.2	1,192.3	2,960.5	14,142.4

¹ All cedar saw logs were graded as No. 1.

TIMBER GROWTH AND CUT

Growth Is Far Below Potential

Forest fires, insect pests, tree diseases, and other natural agents kill about 133 million cubic feet of Alabama timber annually. The loss is equivalent to 16 percent of the net growth of growing stock, and is substantially higher in hardwoods than in softwoods. After allowance is made for mortality, net annual growth is 629 million cubic feet of softwood growing stock and 227 million of hardwood. This equals 39 cubic feet per acre a year, or about 0.5 cord. At this rate, the forests are growing wood at less than half of their capacity.

For sawtimber alone, growth totals 2,601 million board feet of softwood and 695 million of hardwood. Virtually all of the softwood growth is southern pine. Some two-fifths of the hardwood growth is oak. The more valuable red and white oaks—cherrybark, Shumard, northern red, white, swamp chestnut, swamp white, and chinkapin oak—make up 34 percent of all oak sawtimber growth and the less desirable ones 66 percent. Among the

numerous other hardwood species in Alabama, sweetgum accounts for the biggest share of the sawtimber growth.

Cut Is Chiefly Softwood

Loggers removed 309 million cubic feet of softwood growing stock and 215 million cubic feet of hardwood from commercial forest land in 1962, when the most recent statistics were compiled. The estimate of hardwood cut includes 33 million cubic feet deadened in timber stand improvement operations. Oak made up 34 percent of the total hardwood cut. Sweetgum, which is being increasingly used for pulpwood, provided 24 percent. The rest of the hardwood cut was largely in soft-textured species, like yellow-poplar.

Alabama's primary wood-using industries are largely dependent upon trees of sawtimber size—softwoods at least 9.0 inches in diameter, and hardwoods 11.0 inches and larger in d.b.h. For the State as a whole, sawtimber growth was double the 1962 cut (fig. 7), but this com-

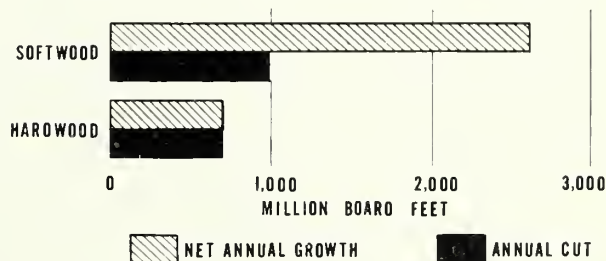


Figure 7. Growth and cut of sawtimber, 1962.

parison masks critical differences in softwood and hardwood relationships. Whereas the growth of softwood sawtimber was 2.6 times the softwood harvest, the growth and cut of hardwood sawtimber were barely in equilibrium. Furthermore, the hardwood growth is largely taking place on trees that are still too small in diameter to yield high-quality logs in the immediate future. The favorable growth-cut ratio in softwoods together with the strong upward trend in softwood inventory, is highly encouraging for dependent industries. At the same time, it appears that industries producing hardwood veneer and factory lumber may find it increasingly difficult to obtain domestic timber of the sizes and quality that have long sustained them.



Timber Products Output

Industrial roundwood production in Alabama totaled 423 million cubic feet in 1962. Output of home-use products, chiefly fuelwood, was 54 million.

The composition of Alabama's output of industrial roundwood changed markedly during the past decade. Rising demand for paper and the availability of desired species helped to boost pulpwood into ascendancy. It makes up half of the current industrial output; saw logs about 40 percent. The rest is largely veneer logs, cooperage bolts, poles, piling, and posts.

LUMBER IS MAINLY PINE

Alabama is among the Nation's chief lumber manufacturers. In recent years it has ranked seventh in the United States and third in the South.

The State's 1962 saw-log harvest exceeded a billion board feet. More than two-thirds was softwood—almost all pine. But some cypress, redcedar, and hemlock were also sawn. Oak supplied half of the hardwood; sweetgum, blackgum, tupelo, and yellow-poplar most of the remainder.

The years since World War II have been a period of drastic change for the lumber industry. Some 555 sawmills were active in Alabama during 1962. In 1946, when the last complete sawmill census was made, 3,030 mills were active. The losses were mostly among small, generally portable, ones. Mills cutting in excess of 3 million board feet annually decreased in number from 83 to 74, but average annual output per large mill rose over a third.

To cope with the changing market conditions of the past few years many large mills have made investments in new equipment, especially machinery for converting slabs and edgings

into pulp chips.³ This has resulted in versatility in product mix, decreased waste of wood, greater output per man-hour, and reduced maintenance costs. Sale of pulp chips has also helped to keep mills solvent by adding several dollars of gross income per thousand board feet of lumber sawn.

PULPWOOD AT ALL-TIME HIGH

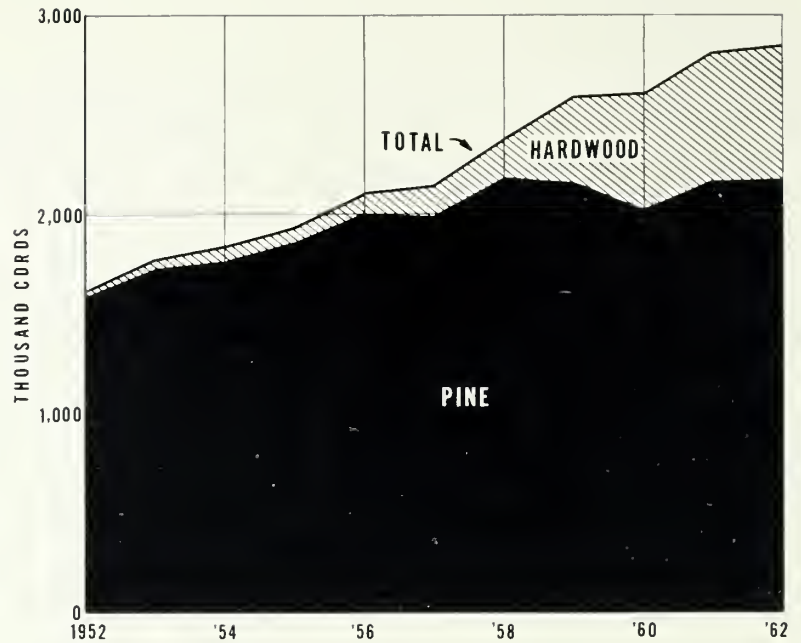
Pulp and paper is the most rapidly expanding segment of Alabama's forest industry.

Since 1946, total pulpwood production has risen from 756 thousand cords to a current level of 3.4 million. Although pine roundwood is still the mainstay of the pulp industry, hardwood has gained steadily. Hardwoods made up about 4 percent of the pulpwood bolt output in the late 1940's. Today they account for 24 percent (fig. 8). The industry's preference is for soft-textured species, which are also in heavy demand for lumber and veneer. More than 80 percent of the hardwood bolts cut in 1962 were from gums and other soft-textured species. Output of oak and other firm-textured bolts, however, is trending up; it reached 116 thousand cords in 1962, a rise of 3 percent from the previous year.

The increase in the use of chips made largely from sawmill residues has been spectacular. In 1956 about 84 thousand cords of plant waste were converted into pulp chips. By 1962, chip output totaled 596 thousand cords. This volume comprised 17 percent of the State's entire pulpwood production. At least 136 Alabama firms produced chips for sale to pulpmills in 1962. Some 76 percent of the chips were southern pine. Hardwood sales are gaining, although

³ Whaley, Ross S., and Guttenberg, Sam. Alabama's changing lumber industry. South. Lumberman 206(2571): 28-30, 32. illus. 1963.

Figure 8.
Production of pulp-
wood bolts, 1952-
62.



presently handicapped by the need to separate species for most pulping processes.

Establishment of new mills, as well as expansion of existing facilities, boosted Alabama's daily pulping capability from 1,106 tons in 1946 to 5,093 tons in 1962. During this period, Alabama's share of mill capacity in the seven Midsouth States increased from 15 to 23 percent. The average mill can now manufacture about 566 tons of pulp every day, as compared to 221 tons in 1946. Individual mills range in capability from 48 to 1,315 tons daily.

Plans have been announced for a new pulp-mill at Jackson and expansion of several existing ones. These facilities are expected to have a combined capacity of some 1,000 tons daily. Alabama's pulpwood harvest thus promises to trend upward for some time. The continued growth of the pulp and paper industry provides woodland owners with a strong incentive for managing their timber.

VENEER IS NEARLY ALL HARDWOOD

Most of the veneer processed in Alabama is used for containers of various kinds.

Veneer-log production in 1962 totaled 101.4 million board feet, of which 3.9 million were shipped out-of-State. Some 8.6 million board

feet of logs were brought into Alabama for manufacture. The imports were from Florida, Georgia, Mississippi, and Tennessee—and also from Central America. The 34 veneer mills now in the State consumed an average of 3.1 million board feet per plant (fig. 9). The 42 mills active in 1951 used an average of 2.3 million per plant.

Virtually all of the veneer logs made in Alabama are hardwood. More than 90 percent of the total is soft-textured wood. Gums and yellow-poplar are by far the leading veneer species, sweetgum alone accounting for about 40 percent of the total. Firm-textured logs are largely oak, sycamore, and hackberry.

OTHER PRODUCTS

Alabama is a top-ranking producer of southern pine poles and piling. In all, some 847,000 pines were cut for these purposes in 1962. The volume was 13 million cubic feet, of which more than 90 percent was cut in southwest Alabama. About half of the poles and piling cut within the State are shipped to local wood-preserving plants for treatment. Between 1951 and 1962, 17 new wood-preserving plants were constructed. Of the 25 establishments now operating, 21 are pressure-type. These plants also treat large quantities of lumber, crossties, and fence posts.

Following the downward trend in number of households burning wood for heating and cooking, output of roundwood fuel dropped from 1.2 million cords in 1951 to 0.7 million in 1962. Rising urbanization and per capita income are expected to contribute to further reduction in

domestic fuelwood consumption.

All other timber products harvested in 1962 supplied about two percent of the total roundwood output in Alabama. Their volume, 9.8 million cubic feet, was mostly in fence posts and cooperage bolts.

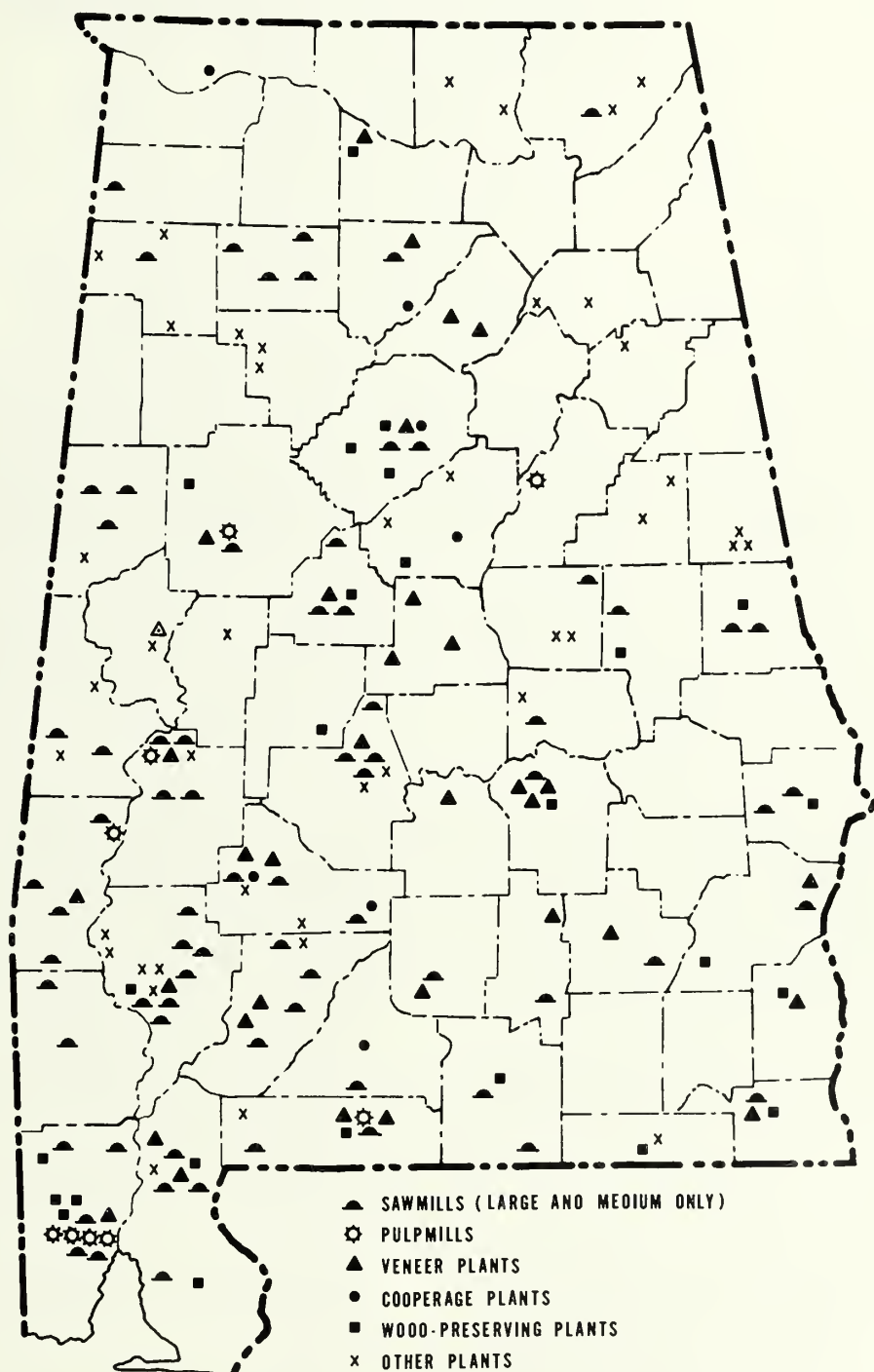


Figure 9. Location of primary wood-using plants in Alabama, 1962.



Improving Forest Productivity

The long-range outlook for forest products is bright. Anticipated gains in population and gross national product are expected to boost future timber demands. Nationwide, for example, consumption of pulp and paper may triple within the next few decades. Use of plywood and veneer may more than double. Total use of lumber is projected to increase by as much as 60 to 70 percent by the year 2000.⁴ Only with fuller development of potentially productive forest lands can these needs be met. Essential to such development is heavy and sustained investment in cultural measures, such as timber stand improvement and planting. The recent improvement in Alabama's pine resources is partly attributable to the effort already expended on such measures. But overall, the task of forest betterment is still sizable.

BUILDING UP PINE STOCKING

Of the 21.7 million acres of commercial forest land in Alabama, 17.5 are suitable for growing pine—as evidenced by pine's present or former occurrence.

Some 10.6 million acres of the potential pine sites are less than 40 percent stocked with desirable timber—that is, thrifty trees that are presently or potentially capable of yielding high-quality saw logs or other forest products. Scarcely 7 percent of the latter acreage—about 705 thousand acres—is expected to restock itself naturally and adequately within the next 10 years. On 346 thousand acres, only planting or seeding is likely to improve future yields. The largest share of the acreage that requires planting is in the southeastern counties. On the

majority of pine sites, 7.0 million acres, removal of culls and other undesirable trees will be needed in order to assure successful establishment of natural pine reproduction. On another 2.5 million acres, restoration may be more expensive. Here, both planting and removal of undesirable trees will be required if timber yields are to be substantially increased.

These estimates do not include fields that are no longer in cultivation but have not yet reverted to forest. Some such areas are of course highly plantable.

About 5.4 million acres of pine sites are already 40 to 70 percent stocked with desirable trees. Part of this area is expected to attain full stocking without stand treatment. But some 3.0 million acres of the total is encumbered with trees whose defects limit their present or prospective use. Removal of such trees will not only create openings for reproduction, but also speed the development of desirable trees already established.

The remaining 1.5 million acres of pine sites are more than 70 percent stocked with desirables. Given adequate protection from fire and premature cutting, these stands can be expected to produce excellent crops of pine.

IMPROVING HARDWOOD STANDS

Alabama has 4.2 million acres of commercial forest that appear to be primarily suited to growing hardwood. This forest is a comparatively neglected resource. Most hardwood stands are clearly deficient in trees of the quality, sizes, and utility demanded by the distinctive hardwood industries. Moreover, the typical stand contains a high proportion of trees that are undesirable as future growing stock. All told, the productivity of some 3.8

⁴ Cliff, Edward P. *The outlook for timber resources*. Speech before the American Forestry Association. Washington, D. C. 1963.

million acres of hardwood sites is noticeably hampered by culls and other trees that are of little potential value.

After the merchantable components of this overburden have been removed, the greatest returns per dollar of expenditure will probably be realized by concentrating improvement efforts on large dominant culls. But restricting cull-tree control to the larger stems will not improve areas covered with thickets of small

weed trees or shrubs. These areas require some kind of blanket treatment. Before such treatments are undertaken, however, their potential effectiveness and cost need to be carefully appraised.

Hardwood sites in Alabama include some of the most potentially productive in the Nation. Translating the capability into reality depends upon sharply accelerating the tempo of forestry efforts.

Appendix

ACCURACY OF THE SURVEY

The data on forest acreage and timber volume in this report were secured by a systematic sampling method involving a forest-nonforest classification on aerial photographs and on-the-ground measurements of trees at sample locations. The sample locations were at the intersections of a grid of lines spaced 3 miles apart. At each location, 10 small plots were systematically distributed on an area of about one acre.

Accuracy of the estimates may be affected by two types of errors. The first stems from the use of a sample to estimate the whole and from variability of the items being sampled. This type is termed sampling error; it is susceptible to a mathematical evaluation of the probability of error. The second type—often referred to as reporting or estimating error—derives from mistakes in measurement, judgment, arithmetic, or recording, and limitations of method or equipment. Its effects cannot be appraised mathematically, but the Forest Survey constantly attempts to hold such error to a minimum by proper training and good supervision, and by emphasis on careful work.

Statistical analysis of the data indicates a sampling error of plus or minus 0.3 percent for the estimate of total forest area, 1.5 percent for total cubic volume, and 2.1 percent for total board-foot volume. As these totals are broken down by forest type, species, tree diameter, and other subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the following tabulation, which shows the sampling error to which the estimates are liable, two chances out of three.

Forest area	Sampling error ¹	Cubic volume	Sampling error ²	Board-foot volume	Sampling error ²
Thousand acres	Percent	Million cu. ft.	Percent	Million bd. ft.	Percent
21,770.0	0.3	..	..	..	..
1,959.3	1.0	14,447.9	1.5	..	..
489.8	2.0	8,126.9	2.0	46,601.9	2.1
217.7	3.0	3,612.0	3.0	22,834.9	3.0
122.5	4.0	2,031.7	4.0	12,844.6	4.0
78.4	5.0	1,300.3	5.0	8,220.6	5.0
19.6	10.0	325.1	10.0	2,055.1	10.0
8.7	15.0	144.5	15.0	913.4	15.0
4.9	20.0	81.3	20.0	513.8	20.0
3.1	25.0	52.0	25.0	328.8	25.0
.8	50.0	13.0	50.0	82.2	50.0

¹ By random-sampling formula.

² Estimated by use of a procedure described by D. B. DeLury in *Values and Integrals of the Orthogonal Polynomials up to n = 26*. Univ. Toronto Press, 33 pp. Toronto, Ont. 1950.

Growth estimates were derived from diameter-growth measurements and mortality data taken at sample locations. No attempt was made to calculate sampling error in these estimates.

Estimates of annual timber cut are based on studies conducted during the period of forest inventory. The sampling error to which the estimates are liable, on a probability of two chances out of three, are:

Cubic volume	Sampling error ¹	Board-foot volume	Sampling error ¹
Million cu. ft.	Percent	Million bd. ft.	Percent
523.8	2.2	1,686.8	2.9
101.4	5.0	567.4	5.0
25.4	10.0	141.9	10.0
11.3	15.0	63.0	15.0
6.3	20.0	35.5	20.0
4.1	25.0	22.7	25.0
1.0	50.0	5.7	50.0

¹ By random-sampling formula.

In computing changes in timber volumes since 1953, data from the earlier survey were adjusted to make them closely comparable to those from the latest survey. This was necessary because of certain basic differences between the two sets of data. In every case, the data from the earlier survey were adjusted to conform to the standards of the latest survey before the change was computed.

DEFINITIONS OF TERMS

Forest Land Class

Forest land.—Land at least 10 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for non-forest use.

Commercial forest land.—Forest land which is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization.

Productive-reserved forest land.—Productive public forest land withdrawn from timber utilization through statute or administrative regulation.

Unproductive forest land.—Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

Tree Species

Commercial species.—Tree species presently or prospectively suitable for industrial wood products;

excludes so-called weed species, such as blackjack oak and blue beech.

Hardwoods.—Dicotyledonous trees, usually broad-leaved and deciduous.

Softwoods.—Coniferous trees, usually evergreen, having needle or scale-like leaves.

Forest Type

Longleaf-slash pine.—Forests in which 50 percent or more of the stand is longleaf or slash pine, singly or in combination. Common associates include other southern pines, oak, and gum.

Loblolly-shortleaf pine.—Forests in which 50 percent or more of the stand is loblolly pine, shortleaf pine, or other southern yellow pines except longleaf or slash pine, singly or in combination. Common associates include oak, hickory, and gum.

Oak-pine.—Forests in which 50 percent or more of the stand is hardwoods, usually upland oaks, but in which southern pines make up 25-49 percent of the stand. Common associates include gum, hickory, and yellow-poplar.

Oak-hickory.—Forests in which 50 percent or more of the stand is upland oaks or hickory, singly or in combination, except where pines comprise 25-49 percent, in which case the stand would be classified oak-pine. Common associates include yellow-poplar, elm, maple, and black walnut.

Oak-gum-cypress.—Bottom-land forests in which 50 percent or more of the stand is tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, except where pines comprise 25-49 percent, in which case the stand would be classified oak-pine. Common associates include cottonwood, willow, ash, elm, hackberry, and maple.

Elm-ash-cottonwood.—Forests in which 50 percent or more of the stand is elm, ash, or cottonwood, singly or in combination. Common associates include willow, sycamore, beech, and maple.

Class of Timber

Growing-stock trees.—Sawtimber trees, pole-timber trees, saplings, and seedlings; that is, all live trees except cull trees.

Desirable trees.—Growing-stock trees that have no serious defects to limit present or prospective use, are of relatively high vigor, and contain no pathogens that may result in death or serious deterioration before rotation age. They comprise the type of trees that forest managers aim to grow; that is, the trees left in silvicultural cutting or favored in cultural operations.

Acceptable trees.—Trees meeting the specifications for growing stock but not qualifying as desirable trees.

Sawtimber trees.—Live trees of commercial species, 9.0 inches and larger in diameter at breast height for softwoods and 11.0 inches and larger for hardwoods, and containing at least one saw log.

Poletimber trees.—Live trees of commercial species, 5.0 to 9.0 inches in d.b.h. for softwoods and 5.0 to 11.0 inches for hardwoods, and of good form and vigor.

Saplings.—Live trees of commercial species, 1.0 inch to 5.0 inches in d.b.h. and of good form and vigor.

Cull trees.—Live trees of sawtimber or poletimber size that are unmerchantable for saw logs now or prospectively because of defect, rot, or species.

Salvable dead trees.—Standing or down dead trees that are considered currently or potentially merchantable.

Stand-Size Class

Sawtimber stands.—Stands at least 10 percent stocked with growing-stock trees, and with sawtimber trees making up a plurality of this stocking.

Poletimber stands.—Stands at least 10 percent stocked with growing-stock trees, and with poletimber trees making up a plurality of this stocking.

Sapling-seedling stands.—Stands at least 10 percent stocked with growing-stock trees, and with saplings and/or seedlings making up a plurality of this stocking.

Nonstocked areas.—Commercial forest lands less than 10 percent stocked with growing-stock trees.

Stocking

A measure of area occupancy by trees of specified classes. Three categories of stocking are considered in the Survey: (1) all live trees, (2) growing-stock trees, and (3) desirable trees. Stocking in terms of all trees is used in the delineation of forest land and forest types. Stocking in terms of growing-stock trees is used in stand-size and age classifications. Stocking in terms of desirable trees is used in delineating area-condition and stand-treatment classes.

Volume

Volume of sawtimber.—Net volume of the saw-log portion of live sawtimber trees, in board feet of the International rule, 1/4-inch kerf.

Volume of growing stock.—Volume of sound wood in the bole of sawtimber and poletimber trees from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

Volume of timber.—The volume of sound wood in the bole of growing stock, cull, and salvable dead trees 5.0 inches and larger in d.b.h., from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

Softwood Log Grades

Softwood log grades are based on the value yield per unit outturn of yard lumber. The value of lumber yield may be expressed relative to the value of No. 2 Common lumber taken as 100 percent. Expressed thus, studies have shown that lumber from grade 1 logs has a value 244 percent as great as No. 2 Common lumber, while the corresponding percentages are 189 percent for grade 2 logs, 142 percent for grade 3 logs, and 107 percent for grade 4 logs. For detailed specifications of log grades, see **Interim log grades for southern pine**, U. S. Forest Service, Southern Forest Experiment Station, 18 pp. 1953.

Hardwood Log Grades

Specifications for standard lumber logs (hardwood log grades 1, 2, and 3) are based on suitability for standard factory lumber. Studies have shown that, for nearly all species tested, the yield of No. 1 Common and better lumber in grade 1 logs varies from 65 to 80 percent; in grade 2 logs from 40 to 64 percent; and in grade 3 logs from 13 to 36 percent. For detailed specifications of log grades, see **Hardwood log grades for standard lumber: proposals and results**, U. S. Forest Products Laboratory D1737. 1949.

Tie and timber logs are suitable for ties, timber, and certain other construction lumber items. Specifications for tie and timber logs are based chiefly on knot size and log soundness; clear cuttings are not required.

Area-Condition Class

Class 1.—Areas 70 percent or more stocked with desirable trees.

Class 2.—Areas 40 to 70 percent stocked with desirable trees and with 30 percent or less of the area controlled by other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

Class 3.—Areas 40 to 70 percent stocked with desirable trees and with more than 30 percent of the area controlled by other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

Class 4.—Areas less than 40 percent stocked with desirable trees and with adequate seed source and seedbed favorable to natural restocking.

Class 5.—Areas less than 40 percent stocked with desirable trees and with inadequate seed source and/or seedbed unfavorable to natural regeneration.

Stand-Treatment Class

No treatment.—Stands ready for harvest, stands in highly productive condition, stands where there is little or no practical opportunity to increase harvest yields by cultural measures, and areas where prompt natural regeneration is expected.

Stand improvement.—Stands where cleaning, thinning, cull-tree deadening, sanitation-salvage cutting, or pruning will effectively increase the volume and/or value of harvest yields.

Regeneration.—Areas where planting, seeding, scarification, removal of inhibiting vegetation, or other measures to obtain natural or artificial regeneration will be primarily effective in increasing yields of desirable trees.

Miscellaneous Definitions

D.b.h. (Diameter breast high).—Tree diameter in inches, outside bark, measured at 4-½ feet above ground.

Diameter classes.—The 2-inch diameter classes extend from 1.0 inch below to 0.9 inch above the stated midpoint. Thus, the 12-inch class includes trees 11.0 inches to and including 12.9 inches d.b.h.

Site classes.—A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

Farmer-owned lands.—Lands owned by operators of farms.

Net annual growth of sawtimber.—The annual change in net board-foot volume of live sawtimber trees during a specified period resulting from natural causes.

Net annual growth of growing stock.—The annual change in volume of sound wood in live sawtimber and poletimber trees during a specified period resulting from natural causes.

Mortality of sawtimber.—The net board-foot volume of sawtimber trees dying annually from natural causes during a specified period.

Mortality of growing stock.—The volume of sound wood in live sawtimber and poletimber trees dying annually from natural causes during a specified period.

Timber cut from sawtimber.—The net board-foot volume of live sawtimber trees cut for forest products during a specified period, including both roundwood products and logging residues.

Timber cut from growing stock.—The volume of sound wood in live sawtimber and poletimber trees cut for forest products during a specified period, including both roundwood products and logging residues.

Timber products.—Roundwood products and by-products of wood manufacturing plants.

STANDARD TABLES

Tables similar in format to those that follow will be found in all State reports issued by the Forest Survey. Their purpose is to facilitate compilation of data for various States and regions.

Table 1. Area by land classes, Alabama, 1963

Land class	Area
	Thousand acres
Forest:	
Commercial	21,742.2
Unproductive	6.6
Productive-reserved	21.2
Total forest	21,770.0
Nonforest ¹	10,908.4
All land ²	32,678.4

¹Includes some acreage of water according to survey standards of area classification but defined by Bureau of the Census as land.

²From U.S. Bureau of the Census, Land and Water Area of the United States, 1960.

Table 2. Area of commercial forest land by ownership classes, Alabama, 1963

Ownership class	Area
	Thousand acres
Public:	
National forest	629.7
Miscellaneous federal	169.4
State	156.8
County and municipal	45.5
Total public	1,001.4
Private:	
Forest industry	4,073.7
Farmer	7,631.7
Miscellaneous private	9,035.4
Total private	20,740.8
All ownerships	21,742.2

Table 3. Area of commercial forest land by stand-size and ownership classes, Alabama, 1963

Stand-size class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
	Thousand acres				
Sawtimber	8,885.3	431.5	201.4	1,885.4	6,367.0
Poletimber	5,224.0	116.4	76.4	888.5	4,142.7
Sapling and seedling	7,468.5	81.8	93.9	1,283.3	6,009.5
Nonstocked areas	164.4			16.5	147.9
All classes	21,742.2	629.7	371.7	4,073.7	16,667.1

Table 4. Area of commercial forest land by stand-volume classes for saw-timber and other stand-size classes, Alabama, 1963

Stand volume per acre	All stands	Sawtimber stands	Other stands
	Thousand acres		
Less than 1,500 board feet	12,225.9	1,071.6	11,154.3
1,500 to 5,000 board feet	6,897.0	5,203.6	1,693.4
More than 5,000 board feet	2,619.3	2,610.1	9.2
All classes	21,742.2	8,885.3	12,856.9

Table 5. Area of commercial forest land by stocking classes based on alternative stand components, Alabama, 1963

Stocking percentage	Stocking classified in terms of		
	All trees	Growing stock trees	Desirable trees
	Thousand acres		
90 to 100	6,092.2	2,133.3	206.5
80 to 90	6,021.2	3,793.2	452.1
70 to 80	4,684.1	4,766.9	905.4
60 to 70	2,507.5	4,072.1	1,431.7
50 to 60	1,309.7	2,898.3	2,186.9
40 to 50	541.4	1,870.6	2,645.5
30 to 40	306.2	1,085.2	3,358.9
20 to 30	136.9	656.4	3,538.9
10 to 20	103.9	301.8	3,622.0
Less than 10	39.1	164.4	3,394.3
All areas	21,742.2	21,742.2	21,742.2

Table 6. Area of commercial forest land by stocking classes of growing stock trees and by stand-size classes, Alabama, 1963

Stocking class	All stands	Saw-timber	Pole-timber	Sapling and seedling	Non-stockied
	Thousand acres				
70 percent or more	10,693.4	4,904.6	2,421.7	3,367.1	
40 to 70 percent	8,841.0	3,438.9	2,314.8	3,087.3	
10 to 40 percent	2,043.4	541.8	487.5	1,014.1	
Less than 10 percent	164.4				164.4
All classes	21,742.2	8,885.3	5,224.0	7,468.5	164.4

Table 7. *Area of commercial forest land by area-condition and ownership classes, Alabama, 1963*

Area-condition class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
----- Thousand acres -----					
1	1,564.0	48.2	23.9	431.9	1,060.0
2	2,690.6	90.1	32.4	578.7	1,989.4
3	3,573.5	104.5	51.3	879.3	2,538.4
4	807.9	15.3	7.3	111.8	673.5
5	13,106.2	371.6	256.8	2,072.0	10,405.8
All classes	21,742.2	629.7	371.7	4,073.7	16,667.1

Table 8. *Area of commercial forest land by area-condition and stand-treatment classes, Alabama, 1963*

Area-condition class	All areas	No treatment	Stand improvement	Regeneration
----- Thousand acres -----				
1	1,564.0	1,564.0	.	.
2	2,690.6	2,690.6	.	.
3	3,573.5	.	3,573.5	.
4	807.9	807.9	.	.
5	13,106.2	.	.	13,106.2
All classes	21,742.2	5,062.5	3,573.5	13,106.2

Table 9. *Area of commercial forest land by site and ownership classes, Alabama, 1963*

Site class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
----- Thousand acres -----					
120 cu. ft. or more	2,867.1	54.0	28.0	805.8	1,979.3
85 to 120 cu. ft.	7,011.6	180.8	105.1	1,282.1	5,443.6
50 to 85 cu. ft.	9,859.6	317.8	193.7	1,599.5	7,748.6
Less than 50 cu. ft.	2,003.9	77.1	44.9	386.3	1,495.6
All classes	21,742.2	629.7	371.7	4,073.7	16,667.1

Table 10. *Area of commercial forest land by forest types and ownership classes, Alabama, 1963*

Type	All ownerships	Public	Private
----- Thousand acres -----			
Longleaf-slash pine	1,998.7	144.3	1,854.4
Loblolly-shortleaf pine	7,437.8	305.5	7,132.3
Oak-pine	4,834.9	220.4	4,614.5
Oak-hickory	5,105.5	283.9	4,821.6
Oak-gum-cypress	2,271.1	47.3	2,223.8
Elm-ash-cottonwood	94.2	.	94.2
All types	21,742.2	1,001.4	20,740.8

Table 11. *Area of noncommercial forest land by forest types, Alabama, 1963*

Type	All areas	Productive-reserved areas	Un-productive areas
----- Thousand acres -----			
Longleaf-slash pine	(¹)	(¹)	.
Loblolly-shortleaf pine	20.7	14.1	6.6
Oak-pine	6.2	6.2	.
Oak-hickory	.9	.9	.
All types	27.8	21.2	6.6

¹ Negligible

Table 12. *Number of growing-stock trees on commercial forest land by diameter classes and by softwoods and hardwoods, Alabama, 1963*

D.b.h. class (inches)	All species	Softwood	Hardwood
----- Thousand trees -----			
1.0 - 2.9	6,350,310	2,015,120	4,335,190
3.0 - 4.9	2,004,610	956,630	1,047,980
5.0 - 6.9	904,020	485,630	418,390
7.0 - 8.9	491,130	256,050	235,080
9.0 - 10.9	281,950	136,420	145,530
11.0 - 12.9	150,000	79,160	70,840
13.0 - 14.9	79,590	39,640	39,950
15.0 - 16.9	39,480	19,190	20,290
17.0 - 18.9	18,840	8,350	10,490
19.0 and larger	17,831	6,277	11,554
All classes	10,337,761	4,002,467	6,335,294

Table 13. *Number of cull and salvable dead trees on commercial forest land by diameter groups and by softwoods and hardwoods, Alabama, 1963*

D.b.h. class (inches)	Cull trees	Salvable dead trees
----- Thousand trees -----		
Softwood:		
5.0 - 8.9	16,000	2,889
9.0 - 18.9	9,500	1,042
19.0 and larger	139	24
Total	25,639	3,955
Hardwood:		
5.0 - 10.9	252,760	4,000
11.0 - 18.9	61,130	720
19.0 and larger	6,137	59
Total	320,027	4,779
All species	345,666	8,734

Table 14. Volume of timber on commercial forest land by class of timber and by softwoods and hardwoods, Alabama, 1963

Class of timber	All species	Softwood	Hardwood
--- Million cubic feet ---			
Sawtimber trees:			
Saw-log portion	7,883.9	4,816.9	3,067.0
Upper-stem portion	1,788.2	854.7	933.5
Total	9,672.1	5,671.6	4,000.5
Poletimber trees	4,775.8	2,001.5	2,774.3
All growing stock	14,447.9	7,673.1	6,774.8
Sound cull trees:			
Sawtimber-size	853.7	73.7	780.0
Poletimber-size	431.0	19.2	411.8
Total	1,284.7	92.9	1,191.8
Rotten cull trees:			
Sawtimber-size	422.8	13.1	409.7
Poletimber-size	79.9	3.6	76.3
Total	502.7	16.7	486.0
Salvable dead trees:			
Sawtimber-size	42.4	22.0	20.4
Poletimber-size	21.8	7.8	14.0
Total	64.2	29.8	34.4
All timber	¹ 16,299.5	7,812.5	8,487.0

¹ Estimates of additional volumes on unproductive forest land total 0.2 million cubic feet in trees 5.0 inches and larger d.b.h., including 0.1 million cubic feet of softwoods and 0.1 million cubic feet of hardwoods.

Table 15. Volume of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, Alabama, 1963

Ownership class	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
-- Million cubic feet --				-- Million board feet --		
Public:						
National forest	558.4	368.4	190.0	2,067.9	1,552.7	515.2
Other public	271.7	147.9	123.8	878.4	511.9	366.5
Total	830.1	516.3	313.8	2,946.3	2,064.6	881.7
Private:						
Forest industry	3,366.3	2,192.8	1,173.5	11,973.9	8,685.6	3,288.3
Farmer and misc. private	10,251.5	4,964.0	5,287.5	31,681.7	17,556.5	14,125.2
Total	13,617.8	7,156.8	6,461.0	43,655.6	26,242.1	17,413.5
All ownerships	14,447.9	7,673.1	6,774.8	46,601.9	28,306.7	18,295.2

Table 16. Volume of growing stock and sawtimber on commercial forest land by stand-size classes and by softwoods and hardwoods, Alabama, 1963

Stand-size class	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
-- Million cubic feet --				-- Million board feet --		
Sawtimber	10,111.4	5,502.9	4,608.5	38,068.0	23,352.3	14,715.7
Poletimber	2,876.3	1,260.1	1,616.2	4,673.3	2,245.9	2,427.4
Sapling and seedling	1,458.4	909.0	549.4	3,857.6	2,706.8	1,150.8
Nonstocked areas	1.8	1.1	.7	3.0	1.7	1.3
All classes	14,447.9	7,673.1	6,774.8	46,601.9	28,306.7	18,295.2

Table 17. Volume of growing stock on commercial forest land by species and diameter classes, Alabama, 1963

Species	Diameter class (inches at breast height)								
	All classes	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0 and larger
----- Million cubic feet -----									
Softwood:									
Longleaf and slash pines	1,703.8	144.0	276.3	341.7	410.1	258.1	151.1	77.0	45.5
Shortleaf and loblolly pines	5,502.5	555.3	874.5	1,038.0	943.3	787.1	562.2	330.0	412.1
Other yellow pines	349.9	56.5	67.7	52.3	55.6	44.0	28.5	22.1	23.2
Cypress	87.0	1.1	5.9	3.9	9.7	7.0	10.3	7.5	41.6
Other softwoods	29.9	10.5	9.7	3.8	3.4	1.2	.5	.8	.
Total	7,673.1	767.4	1,234.1	1,439.7	1,422.1	1,097.4	752.6	437.4	522.4
Hardwood:									
Select white oaks ¹	575.4	38.1	67.4	92.2	103.1	96.5	62.9	39.2	76.0
Select red oaks ²	222.8	9.6	21.6	28.3	27.8	28.0	29.0	21.3	57.2
Other white oaks	512.8	51.5	86.1	101.5	85.5	65.8	40.6	32.3	49.5
Other red oaks	1,303.9	110.2	182.3	222.3	204.4	169.2	136.5	90.4	188.6
Hickory	803.4	71.1	127.3	166.3	138.7	108.0	73.6	48.6	69.8
Hard maple	11.0	1.0	1.6	1.6	.3	1.5	1.4	1.7	1.9
Soft maple	125.1	17.5	19.8	22.4	19.4	16.9	9.3	10.9	8.9
Beech	97.3	1.7	7.5	9.0	5.9	13.8	11.5	13.8	34.1
Sweetgum	938.3	112.2	151.1	169.4	163.7	125.3	78.1	44.9	93.6
Tupelo and blackgum	832.7	57.9	131.6	157.4	171.6	123.4	78.9	43.3	68.6
Ash	225.9	20.1	28.2	34.5	34.6	36.9	22.6	19.5	29.5
Cottonwood	12.4	.3	.1	3.2	3.1	1.5	2.9	.	1.3
Basswood	27.3	1.6	4.2	5.7	3.3	5.5	3.8	2.5	.7
Yellow-poplar	409.7	17.9	33.6	61.7	53.1	84.1	50.1	31.4	77.8
Black walnut	8.3	.2	2.3	1.7	.6	2.0	.7	.5	.3
Other hardwoods	668.5	80.3	112.7	128.5	106.6	74.4	55.2	50.4	60.4
Total	6,774.8	591.2	977.4	1,205.7	1,121.7	952.8	657.1	450.7	818.2
All species	14,447.9	1,358.6	2,211.5	2,645.4	2,543.8	2,050.2	1,409.7	888.1	1,340.6

¹ Includes white, swamp chestnut, swamp white, and chinkapin oaks.² Includes cherrybark, Shumard, and northern red oaks.

Table 18. Volume of sawtimber on commercial forest land by species, and diameter classes, Alabama, 1963

Species	Diameter class (inches at breast height)						
	All classes	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0 and larger
----- Million board feet -----							
Softwood:							
Longleaf and slash pines	6,530.3	1,481.9	2,049.6	1,399.5	856.2	457.3	285.8
Shortleaf and loblolly pines	20,202.1	4,157.7	4,511.8	4,131.7	3,079.4	1,874.8	2,446.7
Other yellow pines	1,114.7	221.9	268.3	221.4	145.1	119.9	138.1
Cypress	410.1	13.2	38.6	34.4	51.4	35.3	237.2
Other softwoods	49.5	17.6	17.4	6.0	3.1	5.4	.
Total	28,306.7	5,892.3	6,885.7	5,793.0	4,135.2	2,492.7	3,107.8
Hardwood:							
Select white oaks ¹	1,731.5	.	412.6	431.1	291.2	204.1	392.5
Select red oaks ²	768.7	.	111.7	119.8	133.2	95.7	308.3
Other white oaks	1,250.6	.	349.3	296.3	187.4	156.6	261.0
Other red oaks	3,625.2	.	803.7	733.9	639.3	436.8	1,011.5
Hickory	1,997.5	.	584.9	476.5	350.1	230.4	355.6
Hard maple	29.8	.	1.5	6.4	5.4	6.5	10.0
Soft maple	279.2	.	79.4	67.7	44.2	51.4	36.5
Beech	391.2	.	25.5	65.3	55.9	73.5	171.0
Sweetgum	2,407.4	.	666.9	574.4	394.6	246.3	525.2
Tupelo and blackgum	2,287.6	.	697.5	597.0	386.2	227.0	379.9
Ash	628.1	.	139.3	151.4	103.1	93.4	140.9
Cottonwood	37.9	.	11.8	6.2	14.3	.	5.6
Basswood	68.5	.	14.2	23.1	16.9	9.9	4.4
Yellow-poplar	1,218.4	.	191.4	330.7	212.0	133.4	350.9
Black walnut	22.6	.	3.3	11.3	4.1	2.2	1.7
Other hardwoods	1,551.0	.	432.1	324.0	259.5	247.9	287.5
Total	18,295.2	.	4,525.1	4,215.1	3,097.4	2,215.1	4,242.5
All species	46,601.9	5,892.3	11,410.8	10,008.1	7,232.6	4,707.8	7,350.3

¹ Includes white, swamp chestnut, swamp white, and chinkapin oaks.² Includes cherrybark, Shumard, and northern red oaks.

Table 19. Volume of sawtimber on commercial forest land by species and log grade, Alabama, 1963

Species	All grades	Grade 1 logs	Grade 2 logs	Grade 3 logs	Lower grade logs
----- Million board feet -----					
Softwood:					
Yellow pines	27,847.1	383.0	3,108.0	12,829.7	11,526.4
Cypress	410.1	34.8	148.2	140.8	86.3
Other softwoods	49.5	49.5	.	.	.
Total	<u>28,306.7</u>	<u>467.3</u>	<u>3,256.2</u>	<u>12,970.5</u>	<u>11,612.7</u>
Hardwood:					
Select white and red oaks	2,500.2	217.5	469.9	1,217.9	594.9
Other white and red oaks	4,875.8	282.2	614.5	2,188.7	1,790.4
Hickory	1,997.5	102.1	304.8	1,031.7	558.9
Hard maple	29.8	.	2.2	7.5	20.1
Sweetgum	2,407.4	140.2	424.7	1,189.0	653.5
Ash, black walnut, and black cherry	663.2	54.4	156.4	356.3	96.1
Yellow-poplar	1,218.4	86.9	168.0	482.0	481.5
Other hardwoods	4,602.9	309.0	820.0	2,441.2	1,032.7
Total	<u>18,295.2</u>	<u>1,192.3</u>	<u>2,960.5</u>	<u>8,914.3</u>	<u>5,228.1</u>
All species	46,601.9	1,659.6	6,216.7	21,884.8	16,840.8

Table 20. Volume of salvable dead sawtimber-size trees on commercial forest land by softwoods and hardwoods, Alabama, 1963

Species group	Volume
----- Million board feet -----	
Softwood	110.0
Hardwood	93.0
All species	203.0

Table 21. Net annual growth and cut of growing stock on commercial forest land by species, Alabama, 1962

Species	Net annual growth	Annual timber cut
----- Million cubic feet -----		
Softwood:		
Yellow pines	619.6	308.3
Other softwoods	9.6	.7
Total	<u>629.2</u>	<u>309.0</u>
Hardwood:		
Select white and red oaks	26.7	14.6
Other white and red oaks	60.9	57.8
Hickory	26.9	25.7
Sweetgum	31.4	50.9
Yellow-poplar	13.7	15.5
Other hardwoods	67.3	50.3
Total	<u>226.9</u>	<u>214.8</u>
All species	856.1	523.8

Table 22. Net annual growth and cut of growing stock on commercial forest land by ownership classes and by softwoods and hardwoods, Alabama, 1962

Ownership class	Net annual growth			Annual timber cut		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
----- Million cubic feet -----						
Public	52.8	42.3	10.5	23.1	15.3	7.8
Forest industry	219.1	179.8	39.3	110.8	61.7	49.1
Farmer and misc. private	<u>584.2</u>	<u>407.1</u>	<u>177.1</u>	<u>389.9</u>	<u>232.0</u>	<u>157.9</u>
All ownerships	856.1	629.2	226.9	523.8	309.0	214.8

Table 23. *Net annual growth and cut of sawtimber on commercial forest land by species, Alabama, 1962*

Species	Net annual growth	Annual timber cut
Million board feet		
Softwood:		
Yellow pines	2,559.2	990.4
Other softwoods	42.2	2.1
Total	2,601.4	992.5
Hardwood:		
Select white and red oaks	95.0	53.6
Other white and red oaks	185.3	154.2
Hickory	75.9	63.2
Sweetgum	91.5	195.0
Yellow-poplar	46.3	65.1
Other hardwoods	201.2	163.2
Total	695.2	694.3
All species	3,296.6	1,686.8

Table 24. *Net annual growth and cut of sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, Alabama, 1962*

Ownership class	Net annual growth			Annual timber cut		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
----- Million board feet -----						
Public	223.2	189.7	33.5	69.9	50.9	19.0
Forest industry	923.2	798.2	125.0	360.1	223.4	136.7
Farmer and misc. private	2,150.2	1,613.5	536.7	1,256.8	718.2	538.6
All ownerships	3,296.6	2,601.4	695.2	1,686.8	992.5	694.3

Table 25. *Annual mortality of growing stock and sawtimber on commercial forest land by species, Alabama, 1962*

Species	Growing stock	Sawtimber
	Million cubic feet	Million board feet
Softwood:		
Yellow pines	30.2	128.1
Other softwoods	.5	2.1
Total	30.7	130.2
Hardwood:		
Select white and red oaks	12.0	42.5
Other white and red oaks	27.4	82.9
Hickory	12.1	34.0
Sweetgum	14.1	40.9
Yellow-poplar	6.2	20.7
Other hardwoods	30.2	90.0
Total	102.0	311.0
All species	132.7	441.2

Table 26. *Annual mortality of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, Alabama, 1962*

Ownership class	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
----- Million cubic feet ----- Million board feet -----						
Public	6.8	2.1	4.7	24.5	9.5	15.0
Forest industry	26.5	8.8	17.7	95.9	40.0	55.9
Farmer and misc. private	99.4	19.8	79.6	320.8	80.7	240.1
All ownerships	132.7	30.7	102.0	441.2	130.2	311.0

Table 27. Annual mortality of growing stock and sawtimber on commercial forest land by causes and by softwoods and hardwoods, Alabama, 1962

Cause of death	Growing stock			Sawtimber		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood
	Million cubic feet			Million board feet		
Fire	14.0	2.1	11.9	38.1	7.0	31.1
Insects	7.1	6.4	.7	23.0	25.8	2.2
Disease	3.8	.9	2.9	11.1	3.0	8.1
Other	43.5	9.0	34.5	149.2	38.8	110.4
Unknown	64.3	12.3	52.0	214.8	55.6	159.2
All causes	132.7	30.7	102.0	441.2	130.2	311.0

Table 28. Total output of timber products by product, by type of material used, and by softwoods and hardwoods, Alabama, 1962

Product and species group	Total output in standard units		Output from roundwood		Output from plant by-products (standard units)
	Unit	Number	Standard units	M cubic feet	
Saw logs:					
Softwood	M bd. ft. ¹	749,790	749,790	122,948	
Hardwood	M bd. ft. ¹	342,312	342,312	50,756	
Total	M bd. ft. ¹	1,092,102	1,092,102	173,704	
Veneer logs and bolts:					
Softwood	M bd. ft.	426	426	70	
Hardwood	M bd. ft.	100,999	100,999	14,053	
Total	M bd. ft.	101,425	101,425	14,123	
Cooperage logs and bolts:					
Softwood	M bd. ft.	8,331	8,331	1,364	
Hardwood	M bd. ft.	3,195	3,195	456	
Total	M bd. ft.	11,526	11,526	1,820	
Pulpwood:					
Softwood	Std. cords ²	2,630,777	2,174,388	163,940	456,389
Hardwood	Std. cords ²	817,418	668,059	51,590	149,359
Total	Std. cords ²	3,448,195	2,842,447	215,530	605,748
Piling:					
Softwood	M linear ft.	1,201	1,201	1,152	
Hardwood	M linear ft.				
Total	M linear ft.	1,201	1,201	1,152	
Poles:					
Softwood	M pieces	820	820	11,883	
Hardwood	M pieces				
Total	M pieces	820	820	11,883	
Mine timbers (round):					
Softwood	M cu. ft.	30	30	30	
Hardwood	M cu. ft.	174	174	174	
Total	M cu. ft.	204	204	204	
Misc. industrial wood:					
Softwood	M cu. ft.	2,255	162	162	2,093
Hardwood	M cu. ft.	4,075	2,612	2,612	1,463
Total	M cu. ft.	6,330	2,774	2,774	3,556
Posts (round and split):					
Softwood	M pieces	2,790	2,790	1,730	
Hardwood	M pieces	4,855	4,855	3,272	
Total	M pieces	7,645	7,645	5,002	
Fuelwood:					
Softwood	Std. cords	341,817	91,819	6,929	⁴ 249,998
Hardwood	Std. cords	726,213	587,481	44,068	⁴ 138,732
Total	Std. cords	1,068,030	679,300	50,997	⁴ 388,730
All products:					
Softwood	M cu. ft.			310,208	
Hardwood	M cu. ft.			166,981	
Total	M cu. ft.			477,189	

¹ International 1/4-inch rule.

² Rough wood basis (for example, chips converted to equivalent standard cords).

³ Includes chemical wood, excelsior, handle stock, furniture and other dimension, shuttleblocks, and miscellaneous domestic use. Additionally, byproducts include material used for livestock bedding, mulch, etc.

⁴ Includes plant byproducts used for industrial and domestic fuel.

Table 29. Total output of roundwood products by source and by softwoods and hardwoods, Alabama, 1962

Source	All species	Softwood	Hardwood
--- Thousand cubic feet ---			
Growing stock trees: ¹			
Sawtimber	284,144	191,917	92,227
Poletimber	154,182	101,404	52,778
Total	438,326	293,321	145,005
Cull trees ¹	4,404	368	4,036
Salvable dead trees ¹	4,636	1,161	3,475
Other sources ²	29,823	15,358	14,465
All sources	477,189	310,208	166,981

¹ On commercial forest land.

² Includes noncommercial forest land, nonforest land such as fence rows, trees less than 5.0 inches in diameter, and treetops and limbs.

Table 30. Annual timber cut from growing stock on commercial forest land by product and logging residues, and by softwoods and hardwoods, Alabama, 1962

Product and residues	All species	Softwood	Hardwood
--- Thousand cubic feet ---			
Roundwood products:			
Saw logs	172,666	122,642	50,024
Veneer logs and bolts	14,112	70	14,042
Cooperage logs and bolts	1,804	1,350	454
Pulpwood	195,431	150,031	45,400
Piling	1,152	1,152	
Poles	11,883	11,883	
Mine timbers	204	30	174
Miscellaneous industrial wood ¹	2,537	137	2,400
Posts	4,640	1,520	3,120
Fuelwood	33,897	4,506	29,391
All products	438,326	293,321	145,005
Logging residues	52,258	15,635	36,623
Cultural operations	33,200		33,200
Timber cut	523,784	308,956	214,828

¹ Includes 248 M cu. ft. of miscellaneous farm products.

Table 31. Annual timber cut from live sawtimber on commercial forest land by product and logging residues, and by softwoods and hardwoods, Alabama, 1962

Product and residues	All species	Softwood	Hardwood
--- Thousand board feet ---			
Roundwood products:			
Saw logs	1,019,013	695,730	323,283
Veneer logs and bolts	101,340	402	100,938
Cooperage logs and bolts	10,329	7,287	3,042
Pulpwood	309,920	195,700	114,220
Piling	6,288	6,288	
Poles	64,754	64,754	
Mine timbers	3	3	
Miscellaneous industrial wood ¹	9,438	196	9,242
Posts	4,404	1,581	2,823
Fuelwood	29,519	3,674	25,845
All products	1,555,008	975,615	579,393
Logging residues	50,518	16,959	33,559
Cultural operations	81,300		81,300
Timber cut	1,686,826	992,574	694,252

¹ Includes 47 M bd. ft. of miscellaneous farm products.

Table 32. Volume of plant residues by industrial source and type of residue, and by softwoods and hardwoods, Alabama, 1962

Industrial source	All species			Softwood			Hardwood		
	Total	Coarse ¹	Fine ²	Total	Coarse ¹	Fine ²	Total	Coarse ¹	Fine ²
--- Thousand cubic feet ---									
Lumber industry	21,488	7,991	13,497	12,617	3,686	8,931	8,871	4,305	4,566
Veneer and plywood industry	234	165	69				234	165	69
Other primary industries	1,560	184	1,376	1,014	116	898	546	68	478
All industries	23,282	8,340	14,942	13,631	3,802	9,829	9,651	4,538	5,113

¹ Unused material suitable for chipping, such as slabs, edgings, and veneer cores.

² Unused material not suitable for chipping, such as sawdust and shavings.

Table 33. *Timber growth projections, Alabama, 1962 to 1992*¹

Period	Assumed cut			Projected growth		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
GROWING STOCK						
----- Thousand cubic feet -----						
1962 (year of inventory)	524,000	309,000	215,000	856,000	629,000	227,000
1972 (plus 10 years)	530,000	370,000	160,000	1,030,000	790,000	240,000
1982 (plus 20 years)	660,000	490,000	170,000	1,200,000	940,000	260,000
1992 (plus 30 years)	820,000	640,000	180,000	1,360,000	1,060,000	300,000
SAWTIMBER						
----- Thousand board feet -----						
1962 (year of inventory)	1,687,000	993,000	694,000	3,297,000	2,602,000	695,000
1972 (plus 10 years)	1,600,000	1,110,000	490,000	4,000,000	3,280,000	720,000
1982 (plus 20 years)	2,190,000	1,680,000	510,000	4,670,000	3,870,000	800,000
1992 (plus 30 years)	3,080,000	2,520,000	560,000	5,300,000	4,380,000	920,000

¹ Based on assumptions that timber output in the United States and Alabama will increase with anticipated gains in population and gross national product; that industrial wood products will largely maintain their relative position in the national economy; and that forestry progress will continue at the rate indicated by recent trends.

Table 34. *Basal area per acre of growing stock and cull trees by forest type and Survey region, Alabama, 1963*

Forest type	State of Alabama	North	North-central	West-central	South-east	South-west-north	South-west-south
----- Square feet -----							
Longleaf-slash pine:							
2- and 4-inch good trees ¹	8.3	.	9.7	6.7	6.7	6.6	8.9
Growing stock	36.8	.	41.3	43.3	22.0	30.4	41.0
2- and 4-inch poor trees	2.1	.	3.2	5.4	2.5	.7	1.8
Cull trees	3.0	.	2.5	5.4	3.5	5.2	2.5
All trees	50.2	.	56.7	60.8	34.7	42.9	54.2
Loblolly-shortleaf pine:							
2- and 4-inch good trees ¹	14.8	13.3	16.5	17.8	12.0	16.1	13.5
Growing stock	38.9	37.0	36.5	41.0	33.4	51.4	43.6
2- and 4-inch poor trees	2.6	2.1	2.7	2.2	2.6	2.7	4.7
Cull trees	4.2	5.2	4.7	4.0	3.9	3.9	4.4
All trees	60.5	57.6	60.4	65.0	51.9	74.1	66.2
Oak-pine:							
2- and 4-inch good trees ¹	13.0	15.8	12.5	16.6	11.5	13.9	9.9
Growing stock	32.8	31.8	27.2	34.1	30.4	49.9	32.7
2- and 4-inch poor trees	3.9	2.5	4.1	3.6	4.7	3.4	3.5
Cull trees	7.3	7.1	6.2	6.5	9.2	6.2	7.5
All trees	57.0	57.2	50.0	60.8	55.8	73.4	53.6
Oak-hickory:							
2- and 4-inch good trees ¹	11.1	11.8	10.3	13.4	10.7	12.3	4.9
Growing stock	31.8	35.6	28.5	29.8	28.6	44.6	19.0
2- and 4-inch poor trees	4.4	4.1	4.2	4.1	5.6	2.9	4.7
Cull trees	10.0	9.3	10.6	8.7	12.2	9.1	8.0
All trees	57.3	60.8	53.6	56.0	57.1	68.9	36.6
Elm-ash-cottonwood:							
2- and 4-inch good trees ¹	14.7	11.2	9.4	16.9	23.4	6.3	.
Growing stock	28.4	56.2	7.5	58.1	26.3	16.3	.
2- and 4-inch poor trees	4.1	3.8	3.8	5.6	5.6	1.2	.
Cull trees	14.7	.	11.2	35.6	15.9	6.2	.
All trees	61.9	71.2	31.9	116.2	71.2	30.0	.
Oak-gum-cypress:							
2- and 4-inch good trees ¹	11.1	16.4	14.3	11.3	9.3	10.2	12.5
Growing stock	52.7	50.4	47.1	44.9	48.2	57.7	73.6
2- and 4-inch poor trees	5.0	3.0	2.7	4.4	6.8	3.8	4.5
Cull trees	15.7	7.5	9.9	14.0	21.0	13.1	13.4
All trees	84.5	77.3	74.0	74.6	85.3	84.8	104.0
All types:							
2- and 4-inch good trees ¹	12.6	13.1	13.3	15.5	11.0	13.5	9.5
Growing stock	37.1	36.4	31.7	37.9	33.6	49.8	41.3
2- and 4-inch poor trees	3.5	3.5	3.6	3.3	4.2	3.0	3.1
Cull trees	7.5	8.1	6.9	7.0	9.0	6.8	5.6
All trees	60.7	61.1	55.5	63.7	57.8	73.1	59.5

¹ Includes only sound, well-formed trees.

COUNTY TABLES

The tables that follow are intended for use in compiling forest resource estimates for groups of counties. Since the sampling procedure used by the Forest Survey in Alabama was intended primarily to furnish inventory data for the State as a whole, individual county estimates have limited and variable accuracy. As county totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the tabulations on page 15.

Table 35. *Land area and commercial forest by county, Alabama, 1963*

County	Commercial forest			County	Commercial forest		
	All land	Thousand	Percent		All land	Thousand	Percent
	Thousand	acres			Thousand	acres	
Autauga	383.4	252.0	65.7	Houston	369.9	140.4	38.0
Baldwin	1,032.3	760.0	73.6	Jackson	719.4	442.0	61.4
Barbour	575.4	382.5	66.5	Jefferson	715.6	499.8	69.8
Bibb	400.0	344.0	86.0	Lamar	387.2	299.2	77.3
Blount	409.6	246.0	60.1	Lauderdale	440.3	174.9	39.7
Bullock	393.6	231.0	58.7	Lawrence	439.0	217.8	49.6
Butler	494.7	369.6	74.7	Lee	391.7	270.1	69.0
Calhoun	390.4	254.1	65.1	Limestone	348.8	98.0	28.1
Chambers	382.7	258.4	67.5	Lowndes	458.2	246.4	53.8
Cherokee	384.0	244.2	63.6	Macon	394.2	237.6	60.3
Chilton	447.4	320.0	71.5	Madison	514.0	177.0	34.4
Choctaw	587.5	506.0	86.1	Marengo	625.3	399.6	63.9
Clarke	794.2	695.2	87.5	Marion	475.5	353.4	74.3
Clay	385.9	315.4	81.7	Marshall	365.4	176.0	48.2
Cleburne	367.4	313.2	85.2	Mobile	794.9	580.0	73.0
Coffee	433.3	235.6	54.4	Monroe	662.4	510.3	77.0
Colbert	394.2	222.0	56.3	Montgomery	505.6	206.5	40.8
Conecuh	544.0	404.0	74.3	Morgan	367.4	149.6	40.7
Coosa	414.7	361.0	87.1	Perry	469.8	304.0	64.7
Covington	661.8	442.0	66.8	Pickens	567.7	422.4	74.4
Crenshaw	391.0	255.5	65.3	Pike	430.7	240.0	55.7
Cullman	475.5	270.0	56.8	Randolph	371.8	265.6	71.4
Dale	358.4	206.5	57.6	Russell	409.0	246.4	60.2
Dallas	624.7	336.6	53.9	St. Clair	410.2	307.5	75.0
De Kalb	497.9	252.0	50.6	Shelby	512.0	404.2	78.9
Elmore	401.9	253.5	63.1	Sumter	583.1	358.9	61.6
Escambia	615.7	484.0	78.6	Talladega	480.0	297.0	61.9
Etowah	355.2	201.5	56.7	Tallapoosa	455.0	378.4	83.2
Fayette	401.3	315.0	78.5	Tuscaloosa	857.6	690.0	80.5
Franklin	412.2	281.2	68.2	Walker	517.8	394.8	76.2
Geneva	369.9	177.0	47.9	Washington	684.1	601.4	87.9
Greene	407.6	262.8	64.5	Wilcox	576.0	414.0	71.9
Hale	424.3	251.6	59.3	Winston	405.1	326.8	80.7
Henry	361.6	208.8	57.7	All counties	32,678.4	21,742.2	66.5

Table 36. Growing stock volume by species groups and county, Alabama, 1963

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	Pine	Other	Total	Gum	Other	Total	Oak	Other
----- Million cubic feet ¹ -----										
Autauga	167.8	102.0	102.0	.	35.4	21.7	13.7	30.4	23.1	7.3
Baldwin	637.6	360.4	349.6	10.8	181.0	129.6	51.4	96.2	29.9	66.3
Barbour	229.8	151.5	151.5	.	35.3	25.2	10.1	43.0	28.9	14.1
Bibb	275.9	185.8	184.6	1.2	35.8	28.1	7.7	54.3	39.0	15.3
Blount	117.1	49.4	49.4	.	12.2	10.1	2.1	55.5	36.8	18.7
Bullock	127.7	85.2	83.9	1.3	24.2	17.0	7.2	18.3	9.3	9.0
Butler	283.7	185.7	181.8	3.9	38.1	23.6	14.5	59.9	33.2	26.7
Calhoun	94.6	56.2	56.2	.	6.8	4.8	2.0	31.6	21.7	9.9
Chambers	115.0	57.1	57.1	.	34.2	22.4	11.8	23.7	14.7	9.0
Cherokee	84.7	47.4	47.4	.	9.9	8.6	1.3	27.4	18.7	8.7
Chilton	150.6	54.3	54.3	.	35.4	19.0	16.4	60.9	38.9	22.0
Choctaw	446.6	308.6	291.6	17.0	46.7	35.8	10.9	91.3	62.5	28.8
Clarke	832.2	464.9	452.9	12.0	161.5	111.6	49.9	205.8	124.0	81.8
Clay	156.3	74.3	74.3	.	19.2	6.7	12.5	62.8	46.2	16.6
Cleburne	163.3	96.4	96.4	.	11.8	5.2	6.6	55.1	38.4	16.7
Coffee	88.4	36.8	36.6	.2	29.5	13.3	16.2	22.1	18.5	3.6
Colbert	91.5	9.5	8.8	.7	10.0	7.6	2.4	72.0	40.6	31.4
Conecuh	319.2	173.5	172.4	1.1	80.4	48.9	31.5	65.3	51.4	13.9
Coosa	176.0	101.4	101.4	.	22.4	11.1	11.3	52.2	34.9	17.3
Covington	303.6	216.1	216.1	.	63.0	31.2	31.8	24.5	21.6	2.9
Crenshaw	256.9	132.1	127.8	4.3	66.4	40.4	26.0	58.4	44.0	14.4
Cullman	152.4	90.7	90.7	.	11.5	5.7	5.8	50.2	35.9	14.3
Dale	141.6	63.5	63.0	.5	46.3	28.4	17.9	31.8	25.4	6.4
Dallas	201.5	111.1	110.6	.5	53.2	45.0	8.2	37.2	23.2	14.0
De Kalb	84.9	30.7	30.7	.	11.4	7.2	4.2	42.8	35.0	7.8
Elmore	116.8	38.9	36.2	2.7	39.7	30.8	8.9	38.2	20.6	17.6
Escambia	433.1	313.6	313.3	.3	85.0	33.3	51.7	34.5	27.0	7.5
Etowah	89.8	22.7	22.7	.	14.7	8.8	5.9	52.4	36.0	16.4
Fayette	120.2	66.9	66.9	.	26.6	20.5	6.1	26.7	21.7	5.0
Franklin	116.6	36.1	35.9	.2	6.6	5.2	1.4	73.9	39.6	34.3
Geneva	111.7	41.0	41.0	.	55.1	38.0	17.1	15.6	13.4	2.2
Greene	211.7	85.4	75.9	9.5	52.1	45.1	7.0	74.2	28.7	45.5
Hale	203.9	116.4	116.4	.	34.4	20.7	13.7	53.1	44.2	8.9
Henry	108.0	60.4	60.4	.	19.0	12.9	6.1	28.6	21.7	6.9
Houston	75.3	29.6	26.6	3.0	26.9	17.8	9.1	18.8	14.0	4.8
Jackson	319.4	21.8	14.6	7.2	42.2	19.1	23.1	255.4	155.2	100.2
Jefferson	306.6	234.7	234.7	.	11.6	7.0	4.6	60.3	46.6	13.7
Lamar	129.4	43.1	42.4	.7	38.4	32.5	5.9	47.9	35.2	12.7
Lauderdale	78.4	6.7	6.7	.	10.7	5.8	4.9	61.0	35.5	25.5
Lawrence	137.3	38.1	32.8	5.3	10.4	7.6	2.8	88.8	69.1	19.7
Lee	159.2	102.2	102.2	.	43.2	23.5	19.7	13.8	7.6	6.2
Limestone	75.4	10.5	10.4	.1	18.0	9.0	9.0	46.9	31.1	15.8
Lowndes	224.3	116.8	116.8	.	34.3	24.3	10.0	73.2	31.6	41.6
Macon	133.0	65.4	65.4	.	41.7	22.8	18.9	25.9	8.6	17.3
Madison	104.3	13.7	10.4	3.3	21.6	5.2	16.4	69.0	36.2	32.8
Marengo	316.0	175.3	172.5	2.8	36.2	22.0	14.2	104.5	51.1	53.4
Marion	81.2	33.0	33.0	.	4.8	4.5	.3	43.4	30.9	12.5
Marshall	120.6	62.6	60.7	1.9	8.8	6.8	2.0	49.2	29.1	20.1
Mobile	279.4	181.1	179.2	1.9	69.0	49.0	20.0	29.3	22.5	6.8
Monroe	474.0	182.2	179.8	2.4	128.1	85.8	42.3	163.7	111.7	52.0
Montgomery	93.3	34.0	32.5	1.5	37.5	28.5	9.0	21.8	9.2	12.6
Morgan	97.3	22.6	21.1	1.5	21.9	16.0	5.9	52.8	27.5	25.3
Perry	261.2	174.6	172.4	2.2	49.2	37.4	11.8	37.4	19.6	17.8
Pickens	272.1	141.7	140.8	.9	55.1	47.2	7.9	75.3	56.4	18.9
Pike	144.4	51.0	50.5	.5	53.4	36.5	16.9	40.0	22.1	16.9
Randolph	130.1	67.5	67.5	.	12.5	5.0	7.5	50.1	39.5	10.6
Russell	150.7	113.6	113.6	.	29.6	20.8	8.8	7.5	3.8	3.7
St. Clair	213.6	126.9	126.7	.2	17.8	11.9	5.9	68.9	46.9	22.0
Shelby	186.1	108.7	108.7	.	13.9	9.1	4.8	63.5	45.3	18.2
Sumter	390.6	259.2	258.8	.4	43.8	31.6	12.2	87.6	54.4	33.2
Talladega	180.2	98.2	98.2	.	21.3	12.0	9.3	60.7	37.9	22.8
Tallapoosa	198.3	111.5	111.5	.	19.5	12.8	6.7	67.3	42.3	25.0
Tuscaloosa	503.5	240.4	239.4	1.0	118.4	85.6	32.8	144.7	109.2	35.5
Walker	213.4	117.1	117.1	.	25.2	9.7	15.5	71.1	37.2	33.9
Washington	558.7	338.7	325.8	12.9	137.6	85.8	51.8	82.4	60.3	22.1
Wilcox	443.0	214.6	213.6	1.0	80.0	50.7	29.3	148.4	89.0	59.4
Winston	186.9	110.0	110.0	.	11.2	4.2	7.0	65.7	48.6	17.1
All counties	14,447.9	7,673.1	7,556.2	116.9	2,708.6	1,771.0	937.6	4,066.2	2,614.9	1,451.3

¹ Cubic feet per cord converting factors are: softwood, 75; hardwood, 67.

Table 37. Growing stock volume by diameter classes and county, Alabama, 1963

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	5.0-12.9 inches	13.0 inches and up	Total	5.0-12.9 inches	13.0 inches and up	Total	5.0-12.9 inches	13.0 inches and up
----- Million cubic feet -----										
Autauga	167.8	102.0	60.7	41.3	35.4	21.1	14.3	30.4	17.9	12.5
Baldwin	637.6	360.4	265.3	95.1	181.0	88.4	92.6	96.2	33.6	62.6
Barbour	229.8	151.5	100.9	50.6	35.3	26.3	9.0	43.0	21.5	21.5
Bibb	275.9	185.8	114.2	71.6	35.8	22.0	13.8	54.3	40.4	13.9
Blount	117.1	49.4	44.4	5.0	12.2	6.9	5.3	55.5	32.6	22.9
Bullock	127.7	85.2	53.8	31.4	24.2	15.4	8.8	18.3	8.7	9.6
Butler	283.7	185.7	89.9	95.8	38.1	22.0	16.1	59.9	30.8	29.1
Calhoun	94.6	56.2	39.7	16.5	6.8	4.8	2.0	31.6	18.6	13.0
Chambers	115.0	57.1	44.4	12.7	34.2	18.3	15.9	23.7	15.2	8.5
Cherokee	84.7	47.4	32.6	14.8	9.9	4.5	5.4	27.4	16.9	10.5
Chilton	150.6	54.3	41.1	13.2	35.4	28.5	6.9	60.9	45.5	15.4
Choctaw	446.6	308.6	196.0	112.6	46.7	34.6	12.1	91.3	51.1	40.2
Clarke	832.2	464.9	248.5	216.4	161.5	80.7	80.8	205.8	90.0	115.8
Clay	156.3	74.3	49.1	25.2	19.2	12.1	7.1	62.8	40.0	22.8
Cleburne	163.3	96.4	62.5	33.9	11.8	9.6	2.2	55.1	37.1	18.0
Coffee	88.4	36.8	27.5	9.3	29.5	22.3	7.2	22.1	12.2	9.9
Colbert	91.5	9.5	8.4	1.1	10.0	6.4	3.6	72.0	45.4	26.6
Conecuh	319.2	173.5	104.1	69.4	80.4	52.9	27.5	65.3	40.6	24.7
Coosa	176.0	101.4	74.8	26.6	22.4	14.2	8.2	52.2	29.7	22.5
Covington	303.6	216.1	150.8	65.3	63.0	50.8	12.2	24.5	18.6	5.9
Crenshaw	256.9	132.1	82.9	49.2	66.4	46.5	19.9	58.4	29.6	28.8
Cullman	152.4	90.7	67.3	23.4	11.5	5.1	6.4	50.2	40.7	9.5
Dale	141.6	63.5	40.2	23.3	46.3	29.0	17.3	31.8	17.2	14.6
Dallas	201.5	111.1	64.1	47.0	53.2	42.3	10.9	37.2	23.8	13.4
De Kalb	84.9	30.7	24.8	5.9	11.4	6.1	5.3	42.8	29.0	13.8
Elmore	116.8	38.9	29.7	9.2	39.7	24.2	15.5	38.2	25.5	12.7
Escambia	433.1	313.6	189.9	123.7	85.0	45.6	39.4	34.5	14.4	20.1
Etowah	89.8	22.7	17.6	5.1	14.7	7.4	7.3	52.4	28.9	23.5
Fayette	120.2	66.9	53.4	13.5	26.6	19.8	6.8	26.7	20.9	5.8
Franklin	116.6	36.1	34.3	1.8	6.6	5.9	7	73.9	53.9	20.0
Geneva	111.7	41.0	27.4	13.6	55.1	31.6	23.5	15.6	8.9	6.7
Greene	211.7	85.4	47.0	38.4	52.1	20.1	32.0	74.2	34.6	39.6
Hale	203.9	116.4	65.8	50.6	34.4	23.9	10.5	53.1	18.9	34.2
Henry	108.0	60.4	41.6	18.8	19.0	13.7	5.3	28.6	16.9	11.7
Houston	75.3	29.6	14.2	15.4	26.9	17.5	9.4	18.8	11.1	7.7
Jackson	319.4	21.8	18.3	3.5	42.2	20.2	22.0	255.4	145.6	109.8
Jefferson	306.6	234.7	138.7	96.0	11.6	8.7	2.9	60.3	42.8	17.5
Lamar	129.4	43.1	34.1	9.0	38.4	28.4	10.0	47.9	35.8	12.1
Lauderdale	78.4	6.7	6.7	.	10.7	7.0	3.7	61.0	38.0	23.0
Lawrence	137.3	38.1	18.1	20.0	10.4	5.4	5.0	88.8	36.1	52.7
Lee	159.2	102.2	67.3	34.9	43.2	23.3	19.9	13.8	7.1	6.7
Limestone	75.4	10.5	4.6	5.9	18.0	11.2	6.8	46.9	17.5	29.4
Lowndes	224.3	116.8	55.0	61.8	34.3	20.0	14.3	73.2	37.6	35.6
Macon	133.0	65.4	37.8	27.6	41.7	25.9	15.8	25.9	11.3	14.6
Madison	104.3	13.7	11.0	2.7	21.6	9.8	11.8	69.0	44.0	25.0
Marengo	316.0	175.3	119.5	55.8	36.2	16.8	19.4	104.5	44.8	59.7
Marion	81.2	33.0	30.8	2.2	4.8	3.2	1.6	43.4	31.1	12.3
Marshall	120.6	62.6	29.4	33.2	8.8	5.3	3.5	49.2	29.9	19.3
Mobile	279.4	181.1	128.2	52.9	69.0	35.6	33.4	29.3	13.1	16.2
Monroe	474.0	182.2	88.7	93.5	128.1	78.0	50.1	163.7	59.1	104.6
Montgomery	93.3	34.0	18.9	15.1	37.5	26.1	11.4	21.8	12.2	9.6
Morgan	97.3	22.6	17.9	4.7	21.9	11.6	10.3	52.8	24.6	28.2
Perry	261.2	174.6	94.7	79.9	49.2	22.6	26.6	37.4	20.6	16.8
Pickens	272.1	141.7	109.5	32.2	55.1	35.6	19.5	75.3	33.1	42.2
Pike	144.4	51.0	31.2	19.8	53.4	34.6	18.8	40.0	25.4	14.6
Randolph	130.1	67.5	51.8	15.7	12.5	7.2	5.3	50.1	24.5	25.6
Russell	150.7	113.6	80.0	33.6	29.6	17.8	11.8	7.5	3.0	4.5
St. Clair	213.6	126.9	95.5	31.4	17.8	10.1	7.7	68.9	43.2	25.7
Shelby	186.1	108.7	81.4	27.3	13.9	7.4	6.5	63.5	46.5	17.0
Sumter	390.6	259.2	110.0	149.2	43.8	29.4	14.4	87.6	46.1	41.5
Talladega	180.2	98.2	70.4	27.8	21.3	14.2	7.1	60.7	33.7	27.0
Tallapoosa	198.3	111.5	75.6	35.9	19.5	13.3	6.2	67.3	42.8	24.5
Tuscaloosa	503.5	240.4	157.7	82.7	118.4	80.2	38.2	144.7	98.2	46.5
Walker	213.4	117.1	91.3	25.8	25.2	18.1	7.1	71.1	49.2	21.9
Washington	558.7	338.7	176.1	162.6	137.6	72.7	64.9	82.4	31.4	51.0
Wilcox	443.0	214.6	125.8	88.8	80.0	36.5	43.5	148.4	82.7	65.7
Winston	186.9	110.0	78.4	31.6	11.2	4.4	6.8	65.7	43.2	22.5
All counties	14,447.9	7,673.1	4,863.3	2,809.8	2,708.6	1,621.1	1,087.5	4,066.2	2,274.9	1,791.3

Table 38. Sawtimber volume by species groups and county, Alabama, 1963

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	Pine	Other	Total	Gum	Other	Total	Oak	Other
----- Million board feet -----										
Autauga	572.4	401.4	401.4	.	89.4	47.7	41.7	81.6	64.1	17.5
Baldwin	2,305.5	1,389.6	1,335.0	54.6	588.7	443.0	145.7	327.2	93.4	233.8
Barbour	784.0	599.6	599.6	.	69.4	40.0	29.4	115.0	84.4	30.6
Bibb	819.2	630.3	630.3	.	91.6	76.9	14.7	97.3	74.9	22.4
Blount	312.9	112.3	112.3	.	34.9	26.7	8.2	165.7	116.9	48.8
Bullock	430.1	327.5	327.5	.	48.7	36.2	12.5	53.9	30.9	23.0
Butler	1,052.0	773.2	760.9	12.3	106.5	60.5	46.0	172.3	89.3	83.0
Calhoun	295.3	193.5	193.5	.	15.2	12.7	2.5	86.6	68.2	18.4
Chambers	283.4	147.9	147.9	.	81.2	53.0	28.2	54.3	39.5	14.8
Cherokee	234.6	160.0	160.0	.	19.7	17.3	2.4	54.9	46.2	8.7
Chilton	341.3	188.2	188.2	.	48.5	19.8	28.7	104.6	72.4	32.2
Choctaw	1,608.2	1,193.8	1,091.7	102.1	125.8	88.0	37.8	288.6	194.3	94.3
Clarke	3,038.9	1,865.6	1,823.1	42.5	518.9	375.0	143.9	654.4	400.6	253.8
Clay	369.7	220.5	220.5	.	28.9	11.9	17.0	120.3	104.8	15.5
Cleburne	481.6	322.4	322.4	.	26.6	11.0	15.6	132.6	91.0	41.6
Coffee	216.5	121.8	121.8	.	44.8	20.4	24.4	49.9	40.1	9.8
Colbert	217.9	19.4	16.2	3.2	21.5	20.4	1.1	177.0	91.3	85.7
Conecuh	951.1	580.2	575.3	4.9	191.5	122.5	69.0	179.4	139.2	40.2
Coosa	523.2	329.4	329.4	.	53.4	22.6	30.8	140.4	98.4	42.0
Covington	1,008.1	859.3	859.3	.	100.0	40.6	59.4	48.8	40.6	8.2
Crenshaw	824.9	512.6	493.1	19.5	144.2	79.7	64.5	168.1	135.6	32.5
Cullman	412.4	278.6	278.6	.	32.8	15.0	17.8	101.0	73.3	27.7
Dale	401.7	211.6	211.6	.	104.7	59.0	45.7	85.4	64.6	20.8
Dallas	589.2	387.6	384.5	3.1	125.7	99.4	26.3	75.9	61.0	14.9
De Kalb	194.1	68.9	68.9	..	34.3	27.5	6.8	90.9	81.3	9.6
Elmore	327.5	121.4	111.3	10.1	105.9	87.0	18.9	100.2	74.7	25.5
Escambia	1,655.0	1,269.2	1,269.2	.	265.9	113.4	152.5	119.9	89.6	30.3
Etowah	252.5	73.3	73.3	.	36.7	21.3	15.4	142.5	117.7	24.8
Fayette	279.7	171.6	171.6	.	51.7	32.0	19.7	56.4	44.8	11.6
Franklin	226.5	43.9	43.9	.	5.8	4.4	1.4	176.8	100.7	76.1
Geneva	361.1	162.4	162.4	.	158.2	129.6	28.6	40.5	36.2	4.3
Greene	751.8	348.0	289.6	58.4	194.2	176.9	17.3	209.6	91.4	118.2
Hale	694.8	459.2	459.2	.	60.9	39.9	21.0	174.7	152.0	22.7
Henry	324.9	216.5	216.5	.	45.0	29.2	15.8	63.4	47.5	15.9
Houston	234.1	127.1	114.7	12.4	57.5	37.4	20.1	49.5	40.2	9.3
Jackson	928.4	53.4	43.6	9.8	133.9	52.1	81.8	741.1	478.7	262.4
Jefferson	1,119.4	946.6	946.6	.	23.9	8.4	15.5	148.9	121.5	27.4
Lamar	303.8	120.4	117.9	2.5	75.4	62.2	13.2	108.0	70.8	37.2
Lauderdale	201.1	8.9	8.9	.	27.6	8.6	19.0	164.6	91.2	73.4
Lawrence	453.0	163.8	147.5	16.3	25.9	23.6	2.3	263.3	213.1	50.2
Lee	462.2	325.9	325.9	.	95.1	47.2	47.9	41.2	19.8	21.4
Limestone	250.6	44.4	44.4	.	42.3	21.2	21.1	163.9	112.5	51.4
Lowndes	877.7	559.1	559.1	.	93.0	66.3	26.7	225.6	115.7	109.9
Macon	411.3	253.8	253.8	.	81.7	46.5	35.2	75.8	27.8	48.0
Madison	262.9	35.4	32.6	2.8	63.4	14.3	49.1	164.1	98.9	65.2
Marengo	1,122.7	613.6	603.4	10.2	117.3	63.8	53.5	391.8	192.1	199.7
Marion	170.9	51.1	51.1	.	14.7	14.7	..	105.1	77.4	27.7
Marshall	411.2	245.7	244.4	1.3	25.3	18.0	7.3	140.2	92.1	48.1
Mobile	967.3	650.1	643.8	6.3	213.7	182.1	31.6	103.5	83.4	20.1
Monroe	1,650.7	729.8	720.9	8.9	335.7	209.4	126.3	585.2	415.2	170.0
Montgomery	267.1	122.2	117.4	4.8	80.7	65.4	15.3	64.2	27.5	36.7
Morgan	282.3	63.2	58.3	4.9	66.7	56.6	10.1	152.4	74.3	78.1
Perry	940.8	709.9	698.1	11.8	139.9	118.0	21.9	91.0	45.5	45.5
Pickens	862.3	466.9	462.3	4.6	130.9	102.8	28.1	264.5	184.2	80.3
Pike	455.3	191.7	189.7	2.0	139.4	104.8	34.6	124.2	73.8	50.4
Randolph	336.8	170.9	170.9	.	26.9	13.3	13.6	139.0	114.3	24.7
Russell	487.0	389.9	389.9	.	73.3	51.3	22.0	23.8	13.8	10.0
St. Clair	649.8	418.8	418.8	.	60.3	48.0	12.3	170.7	127.7	43.0
Shelby	485.1	324.8	324.8	.	44.3	31.2	13.1	116.0	82.6	33.4
Sumter	1,723.8	1,350.8	1,350.8	.	119.4	79.8	39.6	253.6	167.7	85.9
Talladega	506.8	331.1	331.1	.	44.8	19.8	25.0	130.9	89.3	41.6
Tallapoosa	539.6	359.4	359.4	.	33.1	14.4	18.7	147.1	90.9	56.2
Tuscaloosa	1,441.0	828.6	828.6	.	283.3	190.2	93.1	329.1	249.4	79.7
Walker	509.6	307.6	307.6	.	52.7	15.4	37.3	149.3	64.6	84.7
Washington	2,037.5	1,335.9	1,285.6	50.3	419.9	289.1	130.8	281.7	200.3	81.4
Wilcox	1,563.3	896.7	896.7	.	254.8	152.0	102.8	411.8	265.6	146.2
Winston	544.5	348.5	348.5	..	35.9	6.6	29.3	160.1	103.2	56.9
All counties	46,601.9	28,306.7	27,847.1	459.6	7,103.9	4,695.0	2,408.9	11,191.3	7,376.0	3,815.3

Table 39. Sawtimber volume by diameter classes and county, Alabama, 1963

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	9.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up
----- Million board feet -----										
Autauga	572.4	401.4	255.1	146.3	89.4	41.5	47.9	81.6	45.6	36.0
Baldwin	2,305.5	1,389.6	1,121.6	268.0	588.7	253.9	334.8	327.2	81.9	245.3
Barbour	784.0	599.6	451.2	148.4	69.4	47.6	21.8	115.0	43.4	71.6
Bibb	819.2	630.3	401.4	228.9	91.6	65.3	26.3	97.3	58.7	38.6
Blount	312.9	112.3	97.3	15.0	34.9	14.7	20.2	165.7	73.7	92.0
Bullock	430.1	327.5	236.3	91.2	48.7	27.1	21.6	53.9	23.3	30.6
Butler	1,052.0	773.2	344.1	429.1	106.5	57.2	49.3	172.3	94.0	78.3
Calhoun	295.3	193.5	145.2	48.3	15.2	5.9	9.3	86.6	48.5	38.1
Chambers	283.4	147.9	108.7	39.2	81.2	33.3	47.9	54.3	14.4	39.9
Cherokee	234.6	160.0	116.2	43.8	19.7	11.1	8.6	54.9	31.2	23.7
Chilton	341.3	188.2	147.5	40.7	48.5	31.1	17.4	104.6	68.6	36.0
Choctaw	1,608.2	1,193.8	845.5	348.3	125.8	85.2	40.6	288.6	128.3	160.3
Clarke	3,038.9	1,865.6	1,156.6	709.0	518.9	197.0	321.9	654.4	232.9	421.5
Clay	369.7	220.5	136.7	83.8	28.9	14.7	14.2	120.3	54.5	65.8
Cleburne	481.6	322.4	219.4	103.0	26.6	16.2	10.4	132.6	97.4	35.2
Coffee	216.5	121.8	95.9	25.9	44.8	31.0	13.8	49.9	20.1	29.8
Colbert	217.9	19.4	16.2	3.2	21.5	2.7	18.8	177.0	100.8	76.2
Conecuh	951.1	580.2	367.0	213.2	191.5	132.7	58.8	179.4	93.8	85.6
Coosa	523.2	329.4	240.0	89.4	53.4	33.1	20.3	140.4	82.2	58.2
Covington	1,008.1	859.3	669.1	190.2	100.0	73.4	26.6	48.8	31.7	17.1
Crenshaw	824.9	512.6	367.9	144.7	144.2	119.1	25.1	168.1	53.4	114.7
Cullman	412.4	278.6	193.8	84.8	32.8	11.5	21.3	101.0	67.3	33.7
Dale	401.7	211.6	149.9	61.7	104.7	73.4	31.3	85.4	32.6	52.8
Dallas	589.2	387.6	233.9	153.7	125.7	101.9	23.8	75.9	24.4	51.5
De Kalb	194.1	68.9	56.3	12.6	34.3	9.3	25.0	90.9	58.3	32.6
Elmore	327.5	121.4	100.5	20.9	105.9	55.4	50.5	100.2	52.3	47.9
Escambia	1,655.0	1,269.2	863.1	406.1	265.9	147.3	118.6	119.9	32.7	87.2
Etowah	252.5	73.3	55.9	17.4	36.7	7.7	29.0	142.5	55.7	86.8
Fayette	279.7	171.6	124.1	47.5	51.7	31.1	20.6	56.4	47.7	8.7
Franklin	226.5	43.9	43.9	.	5.8	5.8	.	176.8	94.4	82.4
Geneva	361.1	162.4	113.6	48.8	158.2	67.8	90.4	40.5	20.9	19.6
Greene	751.8	348.0	200.2	147.8	194.2	65.9	128.3	209.6	65.8	143.8
Hale	694.8	459.2	241.3	217.9	60.9	36.1	24.8	174.7	74.1	100.6
Henry	324.9	216.5	167.9	48.6	45.0	31.3	13.7	63.4	36.9	26.5
Houston	234.1	127.1	68.0	59.1	57.5	35.5	22.0	49.5	23.9	25.6
Jackson	928.4	53.4	43.7	9.7	133.9	72.7	61.2	741.1	366.7	374.4
Jefferson	1,119.4	946.6	575.3	371.3	23.9	13.0	10.9	148.9	101.9	47.0
Lamar	303.8	120.4	105.4	15.0	75.4	42.9	32.5	108.0	74.1	33.9
Lauderdale	201.1	8.9	8.9	.	27.6	11.9	15.7	164.6	82.6	82.0
Lawrence	453.0	163.8	61.6	102.2	25.9	8.6	17.3	263.3	68.9	194.4
Lee	462.2	325.9	219.6	106.3	95.1	27.2	67.9	41.2	23.9	17.3
Limestone	250.6	44.4	19.0	25.4	42.3	19.1	23.2	163.9	68.8	95.1
Lowndes	877.7	559.1	271.7	287.4	93.0	52.1	40.9	225.6	76.0	149.6
Macon	411.3	253.8	165.1	88.7	81.7	36.4	45.3	75.8	28.7	47.1
Madison	262.9	35.4	22.5	12.9	63.4	27.4	36.0	164.1	75.3	88.8
Marengo	1,122.7	613.6	460.1	153.5	117.3	52.3	65.0	391.8	151.7	240.1
Marion	170.9	51.1	47.7	3.4	14.7	5.3	9.4	105.1	72.7	32.4
Marshall	411.2	245.7	124.7	121.0	25.3	15.4	9.9	140.2	81.1	59.1
Mobile	967.3	650.1	511.4	138.7	213.7	90.0	123.7	103.5	30.6	72.9
Monroe	1,650.7	729.8	398.1	331.7	335.7	193.1	142.6	585.2	184.0	401.2
Montgomery	267.1	122.2	74.6	47.6	80.7	48.7	32.0	64.2	26.2	38.0
Morgan	282.3	63.2	49.2	14.0	66.7	30.2	36.5	152.4	63.0	89.4
Perry	940.8	709.9	421.8	288.1	139.9	58.0	81.9	91.0	36.8	54.2
Pickens	862.3	466.9	367.9	99.0	130.9	75.6	55.3	264.5	90.8	173.7
Pike	455.3	191.7	117.6	74.1	139.4	81.2	58.2	124.2	77.6	46.6
Randolph	336.8	170.9	112.5	58.4	26.9	14.3	12.6	139.0	78.9	60.1
Russell	487.0	389.9	291.6	98.3	73.3	43.4	29.9	23.8	9.6	14.2
St. Clair	649.8	418.8	330.3	88.5	60.3	28.6	31.7	170.7	98.3	72.4
Shelby	485.1	324.8	229.7	95.1	44.3	12.6	31.7	116.0	94.9	21.1
Sumter	1,723.8	1,350.8	531.7	819.1	119.4	55.0	64.4	253.6	99.8	153.8
Talladega	506.8	331.1	244.2	86.9	44.8	30.0	14.8	130.9	58.3	72.6
Tallapoosa	539.6	359.4	269.0	90.4	33.1	10.0	23.1	147.1	62.6	84.5
Tuscaloosa	1,441.0	828.6	504.7	323.9	283.3	166.3	117.0	329.1	192.8	136.3
Walker	509.6	307.6	268.7	38.9	52.7	37.2	15.5	149.3	64.3	85.0
Washington	2,037.5	1,335.9	783.4	552.5	419.9	242.2	177.7	281.7	53.4	228.3
Wilcox	1,563.3	896.7	589.4	307.3	254.8	127.2	127.6	411.8	170.8	241.0
Winston	544.5	348.5	198.6	149.9	35.9	8.9	27.0	160.1	99.1	61.0
All counties	46,601.9	28,306.7	18,571.0	9,735.7	7,103.9	3,710.6	3,393.3	11,191.3	5,029.6	6,161.7

Table 40. *Annual cut of growing stock and sawtimber by county, Alabama, 1962*

County	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
	— Million cubic feet —			— Million board feet —		
Autauga	5.5	1.8	3.7	24.8	8.3	16.5
Baldwin	30.0	21.8	8.2	96.1	71.6	24.5
Barbour	7.9	4.4	3.5	26.4	13.3	13.1
Bibb	8.1	5.8	2.3	28.9	20.8	8.1
Blount	2.2	.9	1.3	6.1	2.6	3.5
Bullock	3.9	1.9	2.0	10.9	4.3	6.6
Butler	12.8	9.7	3.1	47.3	38.6	8.7
Calhoun	7.2	4.9	2.3	15.5	9.8	5.7
Chambers	5.3	3.9	1.4	17.9	13.9	4.0
Cherokee	4.1	2.0	2.1	9.1	3.6	5.5
Chilton	4.1	2.1	2.0	11.5	5.0	6.5
Choctaw	24.8	16.3	8.5	86.4	62.1	24.3
Clarke	28.8	18.2	10.6	111.1	77.3	33.8
Clay	6.0	3.7	2.3	15.8	9.2	6.6
Cleburne	5.1	3.4	1.7	10.8	5.8	5.0
Coffee	3.6	2.5	1.1	10.3	7.5	2.8
Colbert	3.5	1.0	2.5	12.9	3.8	9.1
Conecuh	14.8	9.9	4.9	53.3	38.0	15.3
Coosa	7.4	5.0	2.4	19.0	12.1	6.9
Covington	9.8	8.2	1.6	33.7	29.2	4.5
Crenshaw	5.6	2.8	2.8	19.3	9.8	9.5
Cullman	4.2	1.9	2.3	15.0	7.9	7.1
Dale	4.3	2.4	1.9	9.5	5.5	4.0
Dallas	6.1	1.9	4.2	18.9	5.4	13.5
De Kalb	4.0	2.2	1.8	11.9	7.7	4.2
Elmore	4.9	3.4	1.5	14.4	9.7	4.7
Escambia	16.4	12.9	3.5	62.1	50.5	11.6
Etowah	5.4	2.8	2.6	14.0	5.7	8.3
Fayette	4.3	2.1	2.2	13.2	5.0	8.2
Franklin	2.3	.8	1.5	6.5	1.5	5.0
Geneva	2.8	1.6	1.2	7.5	4.2	3.3
Greene	5.5	2.0	3.5	18.8	5.8	13.0
Hale	5.1	1.7	3.4	15.9	4.7	11.2
Henry	5.4	3.0	2.4	18.3	8.3	10.0
Houston	3.3	1.7	1.6	9.9	5.0	4.9
Jackson	6.9	2.1	4.8	27.5	9.0	18.5
Jefferson	10.1	4.6	5.5	35.9	14.4	21.5
Lamar	4.2	1.4	2.8	15.2	4.7	10.5
Lauderdale	2.1	.2	1.9	5.9	.3	5.6
Lawrence	2.5	.6	1.9	8.7	2.7	6.0
Lee	5.1	3.8	1.3	10.4	7.3	3.1
Limestone	1.9	.3	1.6	5.2	.4	4.8
Lowndes	6.5	3.4	3.1	19.6	9.5	10.1
Macon	3.5	1.9	1.6	11.6	6.4	5.2
Madison	2.3	.2	2.1	5.6	.2	5.4
Marengo	15.4	8.2	7.2	51.0	27.2	23.8
Marion	3.8	1.9	1.9	14.2	7.5	6.7
Marshall	2.8	1.4	1.4	7.5	3.7	3.8
Mobile	17.6	13.6	4.0	55.0	46.6	8.4
Monroe	17.6	10.2	7.4	58.4	33.4	25.0
Montgomery	5.8	2.9	2.9	12.8	3.9	8.9
Morgan	3.2	1.0	2.2	12.2	4.5	7.7
Perry	5.8	2.5	3.3	20.4	9.7	10.7
Pickens	9.5	4.5	5.0	34.9	16.6	18.3
Pike	6.7	3.6	3.1	17.0	7.3	9.7
Randolph	5.6	3.6	2.0	12.6	6.1	6.5
Russell	5.6	4.6	1.0	16.3	13.9	2.4
St. Clair	6.8	3.8	3.0	19.2	8.8	10.4
Shelby	8.7	5.5	3.2	25.0	14.8	10.2
Sumter	16.2	9.6	6.6	60.3	40.1	20.2
Talladega	8.2	5.3	2.9	23.5	14.4	9.1
Tallapoosa	7.0	5.5	1.5	15.9	12.6	3.3
Tuscaloosa	12.0	5.8	6.2	36.3	12.8	23.5
Walker	7.0	4.0	3.0	19.0	8.9	10.1
Washington	17.1	11.4	5.7	51.4	32.7	18.7
Wilcox	16.9	8.5	8.4	56.2	28.4	27.8
Winston	4.9	2.5	2.4	19.1	10.2	8.9
All counties	523.8	309.0	214.8	1,686.8	992.5	694.3

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SOUTHERN FOREST EXPERIMENT STATION

New Orleans, Louisiana

Forest Service, U.S. Department of Agriculture

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MISSISSIPPI

forest industry statistics, 1962

Joe F. Christopher



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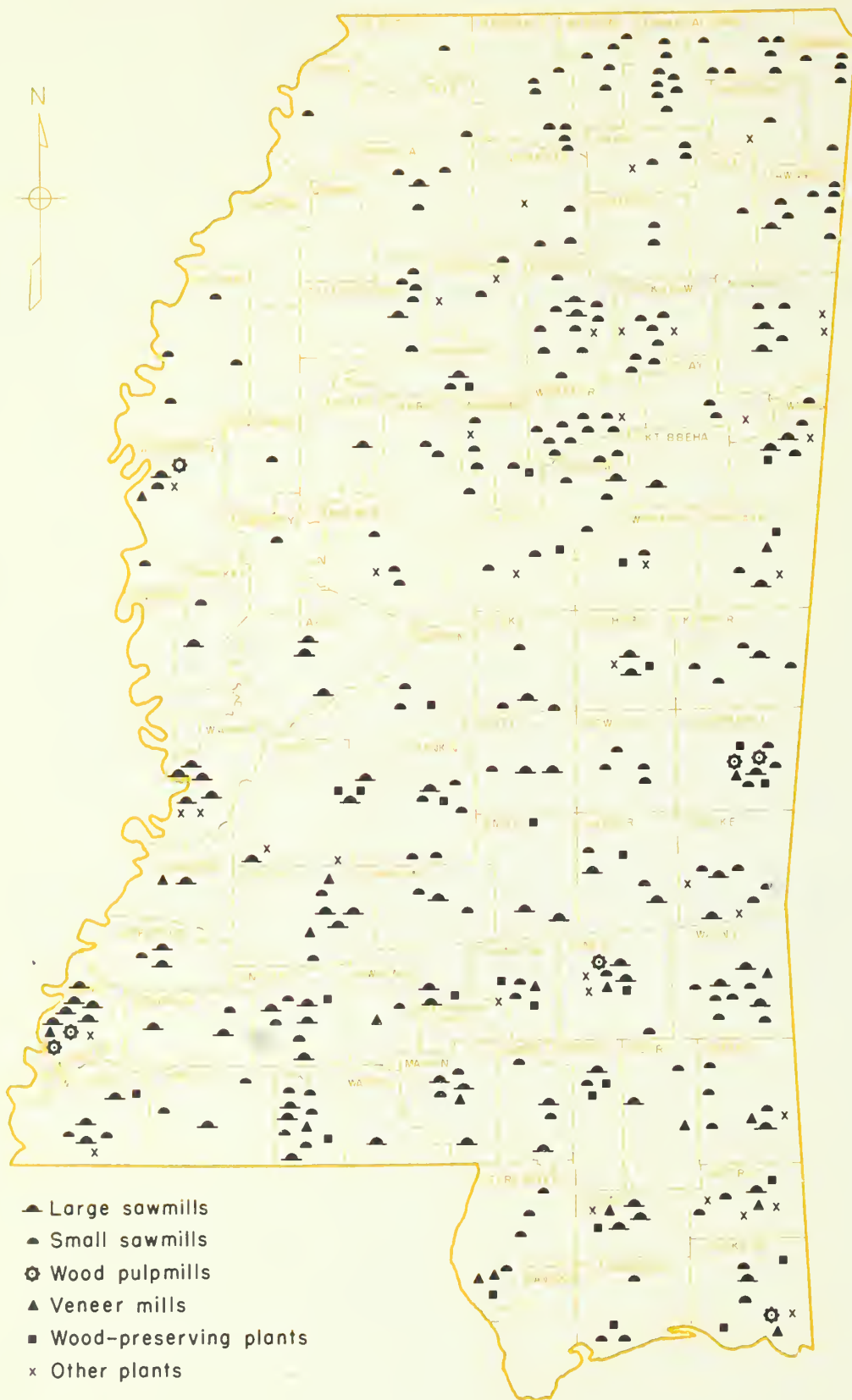
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Southern Forest Experiment Station

This report summarizes information on the 1962 production of industrial roundwood (except pulpwood) in Mississippi. Because county output is included--as well as State totals--this report should be locally useful to foresters, economists, and others concerned with the formation of forestry programs, the evaluation of timber production trends, the appraisal of plant location opportunities, and outlets for marketing timber products.

The data were collected by the Mississippi Forestry Commission and compiled by the Southern Forest Experiment Station. Information on pulpwood production is issued annually in a separate report prepared by the Southern Station in cooperation with the Southeastern Forest Experiment Station and the Southern Pulpwood Conservation Association.

Also included here is a list of the primary wood-using plants in the State. Though an effort was made to locate all active plants, a few may have been accidentally missed. Omission of a firm, therefore, is no reflection upon its activities, nor does inclusion constitute a recommendation.



Location of primary wood-using plants in Mississippi, 1962.

Table 1.--Volume of industrial roundwood

Product ¹	Volume in standard units				Roundwood volume		
	Standard units	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
					- - - M cubic ft. - - -		
Saw logs	M bd.ft. ²	802,744	429,322	373,422	126,112	70,933	55,179
Veneer logs	M bd.ft. ²	74,272	437	73,835	10,419	66	10,353
Piling	M linear ft.	3,861	3,861	...	2,362	2,362	...
Poles	M pieces	467	467	...	6,560	6,560	...
Posts	M pieces	2,037	2,037	...	953	953	...
Misc. products	M cu.ft.	7,057	196	6,861	7,057	196	6,861
Total		...	...	...	153,463	81,070	72,393

¹ Excludes pulpwood.² International 1/4-inch rule.Table 2.--Industrial roundwood¹ by species

Species group	Saw logs	Veneer logs	Piling	Poles	Posts	Miscellaneous products
	- - M board ft. ² - -		M linear ft.	- - M pieces - -		M cubic ft.
Softwood:						
Pines	421,181	437	3,861	467	2,037	196
Cypress	7,526	...	...	...	...	...
Other softwoods	615	...	...	...	...	...
Total	429,322	437	3,861	467	2,037	196
Hardwood:						
Black and tupelo gums	31,188	15,082	...	...	...	267
Sweetgum	47,537	20,268	...	...	...	637
Other soft hardwoods ³	71,781	35,251	...	...	...	934
Red oaks	120,934	1,841	...	...	...	1,091
White oaks	53,878	310	...	...	...	835
Other hard hardwoods	48,104	1,083	...	...	...	3,097
Total	373,422	73,835	...	...	...	6,861
All species	802,744	74,272	3,861	467	2,037	7,057

¹ Excludes pulpwood.² International 1/4-inch rule.³ Includes bay, magnolia, cottonwood, willow, maple, yellow-poplar, elm, hackberry, sycamore, black cherry, hawthorn, and box elder.

Table 3.--Residues, by primary wood-using plants

Type of industry ¹	All species			Softwoods			Hardwoods		
	Total	Fine ²	Coarse ³	Total	Fine ²	Coarse ³	Total	Fine ²	Coarse ³
- - - - - M cubic ft. - - - - -									
Lumber	63,516	28,261	35,255	36,273	15,193	21,080	27,243	13,068	14,175
Veneer	6,370	457	5,913	28	1	27	6,342	456	5,886
Piling, poles, and posts	2,231	1,391	840	2,231	1,391	840	...	...	...
Miscellaneous products	2,371	1,303	1,068	91	55	36	2,280	1,248	1,032
All products	74,488	31,412	43,076	38,623	16,640	21,983	35,865	14,772	21,093

¹ Excludes wood pulp industry.² Fine residues include sawdust, screenings, and other material generally too small for chipping.³ Coarse residues include slabs, edgings, trimmings, and other material generally suitable for chipping.

Table 4.--Volume of primary plant residues used

Source industry ¹	Type of use	All species	Softwoods	Hardwoods
- - - - - M cubic ft. - - - - -				
Lumber	Fuel ²	17,917	6,277	11,640
	Fiber ³	18,849	16,613	2,236
	Other ⁴	1,825	1,360	465
	Total	38,591	24,250	14,341
Veneer	Fuel	972	...	972
	Fiber	3,674	27	3,647
	Other	66	...	66
	Total	4,712	27	4,685
Piling, poles, and posts	Fuel	973	973	...
	Fiber	76	76	...
	Other	6	6	...
	Total	1,055	1,055	...
Miscellaneous industries	Fuel	946	40	906
	Fiber	...	...	...
	Other	68	51	17
	Total	1,014	91	923
All industries	Fuel	20,808	7,290	13,518
	Fiber	22,599	16,716	5,883
	Other	1,965	1,417	548
	Total	45,372	25,423	19,949

¹ Excludes wood pulp industry.² Includes all residues used as fuel by industrial plants and domestic fuel either sold or given away.³ Includes all residues used in manufacture of fiber products, such as pulp or hardboard.⁴ Includes residues used as livestock bedding, mulch, floor sweepings, and specialty items.

Table 5.--Saw-log production by county

County ¹	All species	Softwoods	Hardwoods	County ¹	All species	Softwoods	Hardwoods
	- - - - M board ft. ² - - -				- - - - M board ft. ² - - -		
Adams	23,282	4,650	18,632	Madison	6,869	3,500	3,369
Alcorn	1,784	151	1,633	Marion	5,290	2,705	2,585
Amite	16,259	13,200	3,059	Marshall	4,469	284	4,185
Attala	6,418	2,552	3,866	Monroe	15,608	2,209	13,399
Benton	4,791	993	3,798	Montgomery	3,266	1,460	1,806
Bolivar	23,862	215	23,647				
Calhoun	20,507	3,574	16,933	Neshoba	9,561	7,557	2,004
Carroll	2,446	1,020	1,426	Newton	9,180	8,017	1,163
Chickasaw	3,672	539	3,133	Noxubee	9,369	6,304	3,065
Choctaw	7,307	4,613	2,694	Oktibbeha	855	255	600
Claiborne	14,545	2,910	11,635	Panola	2,159	48	2,111
Clarke	33,942	28,264	5,678	Pearl River	4,811	4,374	437
Clay	3,713	726	2,987	Perry	15,930	15,209	721
Coahoma	3,954	873	3,081	Pike	7,274	4,718	2,556
Copiah	22,585	13,872	8,713	Pontotoc	370	73	297
Covington	2,884	1,910	974	Prentiss	1,276	490	786
				Quitman	2,962	183	2,779
De Soto	1,238	226	1,012				
Forrest	12,035	10,827	1,208	Rankin	17,424	12,317	5,107
Franklin	21,819	17,756	4,063	Scott	24,164	21,629	2,535
George	8,666	5,509	3,157	Sharkey	16,413	680	15,733
Greene	12,065	7,588	4,477	Simpson	13,710	9,888	3,822
Grenada	4,412	636	3,776	Smith	13,060	9,702	3,358
				Stone	13,824	13,768	56
Harrison	8,940	8,862	78	Sunflower	1,587	55	1,532
Hinds	6,226	1,879	4,347				
Holmes	3,732	342	3,390	Tallahatchie	10,566	1,173	9,393
Humphreys	543	...	543	Tate	801	...	801
Issaquena	6,291	215	6,076	Tippah	6,543	2,058	4,485
Itawamba	7,828	3,261	4,567	Tishomingo	1,283	619	664
				Tunica	3,079	431	2,648
Jackson	3,680	2,179	1,501	Union	1,033	125	908
Jasper	16,645	11,607	5,038				
Jefferson	21,134	17,454	3,680	Walthall	1,563	927	636
Jefferson Davis	2,938	2,294	644	Warren	15,787	187	15,600
Jones	10,346	3,649	6,697	Washington	5,361	192	5,169
Kemper	23,787	17,319	6,468	Wayne	31,241	25,870	5,371
				Webster	3,052	1,925	1,127
Lafayette	5,158	1,059	4,099	Wilkinson	33,651	16,775	16,876
Lamar	23,286	15,570	7,716	Winston	10,008	8,850	1,158
Lauderdale	14,180	11,055	3,125				
Lawrence	2,851	1,941	910	Yalobusha	1,978	639	1,339
Leake	12,676	11,105	1,571	Yazoo	16,002	430	15,572
Lee	875	207	668				
Leflore	5,591	171	5,420				
Lincoln	15,271	8,261	7,010				
Lowndes	17,201	2,662	14,539				
				Total	802,744	429,322	373,422

¹ Counties with no saw-log output are omitted.² International 1/4-inch rule.

Table 6.--Saw-log movement

County ¹	Logged and remained in county	Outgoing shipments	Incoming receipts	Total log receipts by county
-# board ft. ² -				
Adams	18,471	4,811	23,560	42,031
Alcorn	1,471	313	176	1,647
Amite	4,913	11,346	4,260	9,173
Benton	1,976	2,815	1,100	3,076
Bolivar	2,755	21,107	...	2,755
Calhoun	19,835	672	6,002	25,837
Carroll	2,254	192	1,467	3,721
Chickasaw	1,049	2,623	3	1,052
Choctaw	7,188	119	6,108	13,296
Clarke	24,171	9,771	2,294	26,465
Copiah	15,783	6,802	8,491	24,274
Franklin	12,098	9,721	9,626	21,724
George	4,872	3,794	4,549	9,421
Greene	6,794	5,271	895	7,689
Harrison	4,114	4,826	903	5,017
Hinds	4,496	1,730	6,661	11,157
Holmes	1,697	2,035	...	1,697
Itawamba	6,794	1,034	2,885	9,679
Jackson	3,680	...	1,358	5,038
Jasper	9,279	7,366	4,044	13,323
Jefferson	2,589	18,545	4,754	7,343
Jones	10,346	...	14,155	24,501
Kemper	9,652	14,135	544	10,196
Lafayette	2,307	2,851	238	2,545
Lamar	17,700	5,586	3,067	20,767
Lauderdale	11,948	2,232	11,685	23,633
Leake	5,759	6,917	2,329	8,088
Lincoln	13,033	2,238	11,856	24,889
Lowndes	16,183	1,018	9,653	25,836
Marion	3,628	1,662	20,520	24,148
Marshall	3,960	509	1,509	5,469
Monroe	8,582	7,026	2,707	11,289
Montgomery	1,028	2,238	60	1,088
Newton	2,965	6,215	...	2,965
Panola	2,028	131	8,588	10,616
Pearl River	466	4,345	...	466
Pike	6,482	792	16,504	22,986
Rankin	12,472	4,952	5,129	17,601
Scott	17,628	6,536	6,452	24,080
Simpson	9,051	4,659	...	9,051
Stone	10,699	3,125	10,046	20,745
Tallahatchie	4,794	5,772	1,575	6,369
Tippah	3,169	3,374	1,966	5,135
Tishomingo	877	406	647	1,524
Union	1,033	...	168	1,201
Washington	4,519	842	6,057	10,576
Wayne	26,505	4,736	3,313	29,818
Webster	2,432	620	2,552	4,984
Wilkinson	28,808	4,843	16,041	44,849
Yazoo	14,902	1,100	9,238	24,140
All other counties	76,812	102,944	117,316	194,128
Total	486,047	316,697	373,051	859,098

¹ Omitted counties have either negligible receipts or less than 3 sawmills.² International 1/4-inch rule.

Table 7.--Veneer-log production by county

County ¹	All species	Softwoods	Hardwoods
- - - - M board ft. ² - - - -			
Adams	3,282	...	3,282
Amite	840	...	840
Bolivar	1,742	...	1,742
Claiborne	2,152	...	2,152
Clarke	449	...	449
Coahoma	4,253	...	4,253
Copiah	3,010	...	3,010
Covington	728	...	728
Forrest	2,693	...	2,693
Franklin	618	...	618
George	2,619	...	2,619
Greene	3,193	...	3,193
Grenada	52	...	52
Hancock	1,089	250	839
Harrison	893	...	893
Hinds	24	...	24
Issaquena	2,455	...	2,455
Jackson	4,299	...	4,299
Jasper	2,083	...	2,083
Jefferson	1,630	...	1,630
Jones	2,103	...	2,103
Lamar	33	...	33
Lauderdale	1,479	...	1,479
Lawrence	687	...	687
Leflore	1,715	...	1,715
Lincoln	1,723	...	1,723
Marion	1,183	...	1,183
Newton	218	...	218
Noxubee	1,980	...	1,980
Pearl River	5,224	187	5,037
Perry	2,557	...	2,557
Pike	1,419	...	1,419
Simpson	799	...	799
Smith	399	...	399
Stone	3,238	...	3,238
Tunica	3,065	...	3,065
Walthall	308	...	308
Warren	1,981	...	1,981
Washington	2,534	...	2,534
Wayne	2,347	...	2,347
Wilkinson	1,176	...	1,176
Total	74,272	437	73,835

¹ Counties with negligible output are omitted.² International 1/4-inch rule.

Table 8.--Piling production by county

County ¹	All species softwoods
M linear ft.	
Amite	581
Attala	3
Choctaw	3
Clarke	14
Copiah	58
Covington	3
Forrest	58
Franklin	258
George	162
Greene	11
Hancock	135
Harrison	23
Hinds	5
Jackson	235
Jasper	13
Jefferson	510
Jones	56
Lamar	151
Lauderdale	6
Lawrence	5
Leake	16
Lincoln	144
Madison	2
Marion	4
Neshoba	3
Newton	5
Noxubee	9
Pearl River	321
Perry	314
Pike	142
Rankin	9
Simpson	8
Smith	6
Stone	92
Wayne	27
Wilkinson	455
Winston	14
Total	3,861

¹ Counties with negligible output are omitted.

Table 9.--*Pole production by county*

County ¹	All species softwoods
	<i>M pieces</i>
Amite	36
Clarke	3
Copiah	7
Forrest	44
Franklin	19
George	27
Greene	2
Hancock	7
Harrison	20
Jackson	50
Jefferson	27
Jefferson Davis	1
Jones	8
Lamar	16
Lauderdale	13
Lawrence	1
Leake	4
Lincoln	22
Madison	1
Marion	2
Newton	3
Noxubee	1
Pearl River	37
Perry	41
Pike	13
Rankin	2
Scott	1
Smith	1
Stone	27
Wayne	5
Wilkinson	24
Winston	2
Total	467

¹ Counties with negligible output are omitted.

Table 10.--*Commercial post production by county*

County ¹	All species softwoods
	<i>M pieces</i>
Amite	162
Attala	31
Calhoun	36
Carroll	36
Choctaw	8
Claiborne	15
Clarke	15
Copiah	44
Covington	213
Forrest	69
Franklin	41
George	16
Greene	4
Grenada	72
Hancock	35
Harrison	73
Hinds	4
Jackson	32
Jasper	11
Jefferson	22
Jefferson Davis	52
Jones	26
Kemper	5
Lamar	115
Lauderdale	17
Lawrence	4
Leake	5
Lincoln	37
Madison	5
Marion	2
Montgomery	75
Neshoba	8
Newton	9
Noxubee	73
Pearl River	86
Perry	37
Pike	122
Rankin	8
Scott	1
Smith	50
Stone	88
Walthall	46
Wayne	6
Webster	3
Wilkinson	89
Winston	105
Yalobusha	24
Total	2,037

¹ Counties with negligible output are omitted.

Table 11.--Output of miscellaneous products¹ by county

County ²	All species	Softwoods	Hardwoods	County ²	All species	Softwoods	Hardwoods
- - - - - M cubic ft. - - - - -				- - - - - M cubic ft. - - - - -			
Adams	44	...	44	Madison	49	49	...
Alcorn	9	...	9	Marshall	45	...	45
Amite	47	...	47	Monroe	155	...	155
Attala	367	...	367	Montgomery	128	...	128
Bolivar	195	...	195				
Calhoun	452	...	452	Noxubee	596	...	596
Carroll	85	...	85	Oktibbeha	3	...	3
Chickasaw	378	...	378	Perry	2	...	2
Choctaw	6	...	6	Pontotoc	124	...	124
Claiborne	51	...	51	Prentiss	31	...	31
Clarke	791	...	791	Rankin	49	49	...
Clay	251	...	251	Scott	49	49	...
Coahoma	23	...	23	Simpson	49	49	...
Copiah	1	...	1	Smith	59	...	59
Covington	5	...	5	Stone	4	...	4
Forrest	2	...	2	Tallahatchie	28	...	28
Franklin	27	...	27	Tippah	6	...	6
George	207	...	207	Tishomingo	6	...	6
Greene	22	...	22	Union	148	...	148
Grenada	74	...	74				
Harrison	7	...	7	Warren	94	...	94
Holmes	74	...	74	Washington	135	...	135
				Wayne	447	...	447
Issaquena	673	...	673	Webster	63	...	63
Jackson	106	...	106	Wilkinson	128	...	128
Jasper	91	...	91	Winston	283	...	283
Jefferson	3	...	3				
Jones	84	...	84	Yalobusha	90	...	90
Lafayette	75	...	75	Yazoo	2	...	2
Lee	25	...	25				
Lowndes	109	...	109	Total	7,057	196	6,861

¹ Includes cooperage logs and bolts, handle stock, chemical wood, and other miscellaneous products.² Counties with negligible output are omitted.

Table 12.--Industrial roundwood production, except pulpwood, by county

County	All species	Softwoods	Hardwoods	County	All species	Softwoods	Hardwoods
- - - M cubic ft. - - -				- - - M cubic ft. - - -			
Adams	4,035	770	3,265	Madison	1,138	642	496
Alcorn	275	24	251	Marion	1,029	480	549
Amite	3,771	3,157	614	Marshall	708	48	660
Attala	1,373	435	938	Monroe	2,502	365	2,137
Benton	722	164	558	Montgomery	669	274	395
Bolivar	3,970	36	3,934				
Calhoun	3,554	607	2,947	Neshoba	1,552	1,255	297
Carroll	481	184	297	Newton	1,578	1,375	203
Chickasaw	929	88	841	Noxubee	2,422	1,096	1,326
Choctaw	1,174	768	406	Oktibbeha	135	42	93
Claiborne	2,560	489	2,071				
Clarke	6,421	4,728	1,693	Panola	319	8	311
Clay	812	120	692	Pearl River	2,274	1,505	769
Coahoma	1,220	145	1,075	Perry	3,766	3,300	466
Copiah	4,160	2,450	1,710	Pike	1,676	1,101	575
Covington	661	411	250	Pontotoc	182	12	170
				Prentiss	228	81	147
De Soto	188	37	151	Quitman	442	30	412
Forrest	3,038	2,481	557				
Franklin	4,103	3,388	715	Rankin	2,874	2,121	753
George	2,376	1,339	1,037	Scott	4,012	3,637	375
Greene	2,420	1,290	1,130	Sharkey	2,440	111	2,329
Grenada	777	137	640	Simpson	2,363	1,687	676
				Smith	2,247	1,636	611
Hancock	349	230	119	Stone	3,211	2,746	465
Harrison	1,938	1,794	144	Sunflower	235	9	226
Hinds	961	316	645				
Holmes	632	57	575	Tallahatchie	1,608	194	1,414
Humphreys	79	...	79	Tate	118	...	118
Issaquena	1,949	36	1,913	Tippah	1,012	341	671
Itawamba	1,217	539	678	Tishomingo	206	102	104
				Tunica	892	72	820
Jackson	2,142	1,212	930	Union	305	21	284
Jasper	3,057	1,929	1,128				
Jefferson	4,386	3,608	778	Walthall	308	173	135
Jefferson Davis	510	414	96	Warren	2,707	31	2,676
Jones	2,123	753	1,370	Washington	1,286	32	1,254
Kemper	3,817	2,864	953	Wayne	5,927	4,359	1,568
				Webster	551	320	231
Lafayette	854	175	679	Wilkinson	6,255	3,460	2,795
Lamar	4,087	2,940	1,147	Winston	1,998	1,545	453
Lauderdale	2,690	2,023	667				
Lawrence	570	339	231	Yalobusha	408	117	291
Leake	2,136	1,904	232	Yazoo	2,374	71	2,303
Lee	156	34	122				
Leflore	1,071	29	1,042	Total	153,463	81,070	72,393
Lincoln	3,064	1,787	1,277				
Lowndes	2,698	440	2,258				

Table 13.--*Industrial roundwood receipts, except
pulpwood, by county*

County ¹	All species	Softwoods	Hardwoods
- - - M cubic ft. - - -			
Adams	7,197	308	6,889
Alcorn	246	22	224
Amite	1,494	1,311	183
Benton	468	139	329
Bolivar	412	36	376
Calhoun	4,241	713	3,528
Carroll	576	280	296
Chickasaw	920	3	917
Choctaw	2,108	1,327	781
Clarke	5,785	3,718	2,067
Copiah	4,686	2,624	2,062
Franklin	3,549	3,214	335
George	2,389	1,216	1,173
Greene	1,455	567	888
Harrison	2,194	2,145	49
Hinds	1,907	295	1,612
Holmes	345	33	312
Itawamba	1,508	707	801
Jackson	4,428	1,888	2,540
Jasper	2,174	1,929	245
Jefferson	1,087	35	1,052
Jones	4,509	1,576	2,933
Kemper	1,616	1,069	547
Lafayette	466	198	268
Lamar	3,300	2,176	1,124
Lauderdale	4,854	3,625	1,229
Leake	1,319	1,167	152
Lincoln	4,804	3,380	1,424
Lowndes	4,203	526	3,677
Marion	4,065	3,573	492
Marshall	811	64	747
Monroe	1,760	184	1,576
Montgomery	458	111	347
Newton	474	342	132
Panola	1,576	86	1,490
Pearl River	2,429	999	1,430
Pike	5,796	4,195	1,601
Rankin	2,838	2,252	586
Scott	3,935	3,568	367
Simpson	1,448	1,056	392
Stone	4,174	3,470	704
Tallahatchie	954	105	849
Tippah	786	240	546
Tishomingo	237	110	127
Union	365	25	340
Warren	6,501	62	6,439
Washington	3,142	51	3,091
Wayne	5,725	4,201	1,524
Webster	796	388	408
Wilkinson	10,161	8,077	2,084
Yazoo	3,580	127	3,453
All other counties	30,920	19,517	11,403
Total	167,171	89,030	78,141

¹ Omitted counties have less than 3 plants.

Table 14.--Plant residues used, by county

County ¹	All species		Softwoods		Hardwoods	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
- - - - - M cubic ft. - - - - -						
Adams	687	1,178	35	72	652	1,106
Amite	33	354	33	354	...	...
Bolivar	91	114	7	10	84	104
Calhoun	355	388	26	79	329	309
Carroll	...	123	...	54	...	69
Chickasaw	108	122	...	...	108	122
Clarke	551	1,113	551	997	...	116
Copiah	443	757	412	706	31	51
Franklin	...	862	...	862	...	...
George	97	658	85	267	12	391
Greene	17	217	15	110	2	107
Harrison	93	197	84	185	9	12
Hinds	436	426	62	46	374	380
Holmes	17	55	...	4	17	51
Itawamba	...	80	...	61	...	19
Jackson	...	168	...	120	...	48
Jasper	365	568	348	518	17	50
Jefferson	116	119	...	1	116	118
Jones	802	1,051	282	395	520	656
Kemper	...	221	...	209	...	12
Lamar	240	463	240	463	...	...
Lauderdale	620	954	499	657	121	297
Leake	...	271	...	252	...	19
Lincoln	...	469	...	469	...	...
Lowndes	...	811	...	93	...	718
Marion	2	1,014	...	959	2	55
Montgomery	...	75	...	13	...	62
Newton	...	50	...	50	...	...
Panola	214	363	10	22	204	341
Pearl River	131	710	119	98	12	612
Pike	...	1,227	...	792	...	435
Rankin	376	317	247	224	129	93
Scott	555	1,059	490	957	65	102
Simpson	250	317	161	224	89	93
Stone	...	1,226	...	918	...	308
Tallahatchie	...	40	...	4	...	36
Tippah	...	7	...	4	...	3
Tishomingo	...	14	...	7	...	7
Union	...	29	...	2	...	27
Warren	1,484	1,559	11	17	1,473	1,542
Washington	479	961	9	14	470	947
Wayne	719	1,420	645	1,014	74	406
Wilkinson	1,544	1,602	1,294	1,602	250	...
Yazoo	819	846	24	35	795	811
All other counties	2,294	6,859	1,456	4,338	838	2,521
Total	13,938	31,434	7,145	18,278	6,793	13,156

¹ Omitted counties have either negligible volume or less than 3 plants.

Table 15.--Unused plant residues, by county

County ¹	All species		Softwoods		Hardwoods	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
-# cubic ft.-						
Adams	1,477	520	544	10	933	510
Alcorn	54	68	4	6	50	62
Amite	253	51	212	...	41	51
Benton	100	132	28	40	72	92
Calhoun	508	617	113	117	395	500
Carroll	123	40	56	25	67	15
Chickasaw	143	66	...	...	143	66
Choctaw	432	579	259	367	173	212
Clarke	276	49	139	2	137	47
Copiah	345	613	77	...	268	613
Franklin	670	94	594	...	76	94
George	284	79	150	67	134	12
Greene	242	216	93	45	149	171
Harrison	243	140	241	138	2	2
Hinds	8	4	8	4	...	...
Holmes	39	18	7	5	32	13
Itawamba	315	331	135	132	180	199
Jackson	405	1,152	283	145	122	1,007
Jasper	47	15	9	...	38	15
Jefferson	133	138	7	9	126	129
Jones	107	125	11	27	96	98
Kemper	333	220	209	88	124	132
Lafayette	107	125	39	56	68	69
Lamar	426	394	168	125	258	269
Lauderdale	225	281	144	196	81	85
Leake	257	91	223	68	34	23
Lincoln	899	631	576	275	323	356
Lowndes	962	192	99	50	863	142
Marion	744	103	661	...	83	103
Marshall	182	227	14	16	168	211
Monroe	397	436	34	50	363	386
Montgomery	116	27	22	17	94	10
Newton	98	84	69	46	29	38
Panola	142	40	7	2	135	38
Pearl River	30	19	5	7	25	12
Pike	901	243	713	99	188	144
Rankin	197	448	191	398	6	50
Scott	188	...	172	...	16	...
Simpson	43	71	43	68	...	3
Stone	654	2	639	2	15	...
Tallahatchie	214	199	20	25	194	174
Tippah	169	211	47	63	122	148
Tishomingo	48	52	21	25	27	27
Union	68	77	5	4	63	73
Warren	4	3	...	...	4	3
Washington	5	32	...	...	5	32
Wayne	232	287	145	122	87	165
Webster	169	219	76	109	93	110
Wilkinson	271	517	30	35	241	482
All other counties	3,189	1,364	2,153	620	1,036	744
Total	17,474	11,642	9,495	3,705	7,979	7,937

¹ Omitted counties have either negligible volume or less than 3 plants.

Table 16.--Large sawmills¹

County	Firm	Plant	
		Location	Address ²
Adams	Buckles and Viar Co.	Natchez	Box 82
	T. B. Buckles Lumber Co.	Natchez	Box 89
	J. M. Jones Lumber Co., Inc. ³	Natchez	Box 1219
	McGehee Lumber Co.	Natchez	Box 1293
	Natchez Hardwood Co.	Natchez	Box 354
	W. S. Ricks Lumber Co.	Natchez	Box 1175
Amite	Sam Mabry Lumber Co. ³	Liberty	
Calhoun	E. L. Bruce Co., Inc.	Bruce	Box 337
	T. W. Plunk	Bruce	
Choctaw	E. L. Steadman	Reform	
Claiborne	Claiborne County Lumber Co. ³	Hermanville	
Clarke	Warren A. Hood Enterprises ³	Quitman	
	Jones Brothers Lumber Co. ³	Shubuta	
Copiah	Graves Lumber Co. ³	Hazlehurst	
	Hutchison Lumber Co. ³	Georgetown	
	R. C. Owen Co.	Hazlehurst	Box 111
Forrest	Clinton Lumber Co. ³	Petal	
Franklin	O. V. Clements Lumber Co. ³	Bude	
	Haltom Lumber Co. ³	Roxie	
George	A. F. Holcomb Lumber Co. ³	Lucedale	
Greene	Southern Oak and Pine Lumber Co. ³	Leakesville	
Grenada	H. M. Blair Sawmill	Grenada	1227 Lake View
Hinds	C. M. Gooch Lumber Co.	Jackson	Box 4328
	Kitchens Brothers Manufacturing Co. ³	Utica	Jackson
	Williams and Voris Hardwood Co.	Jackson	Box 165
Itawamba	T. F. Evans Lumber Co., Inc. ³	Dorsey	Rt. 2, Fulton
Jackson	R. O. Cumbest Manufacturing Co. ³	Three Rivers	Rt. 2, Pascagoula
Jasper	McClellan Lumber Co. ³	Heidelberg	
	Sims Enterprises ³	Bay Springs	Star Route
Jefferson	Fayette Hardwood Co.	Fayette	Box 95
	S. R. Pickens and Son	Lorman	Rt. 1
Jefferson Davis	Reardon Lumber Co.	Prentiss	
	Stamps and Sons Lumber Co. ³	Prentiss	Box 123
Jones	Bailey Lumber Co. ³	Laurel	
	Donald-Thrash Lumber Corp.	Laurel	
Kemper	A. Barnett Sawmill	De Kalb	Rt. 5
Lamar	Joe N. Miles and Sons Lumber Co. ³	Lumberton	
	Purvis Hardwood Lumber Co.	Purvis	
Lauderdale	Sanders Lumber Co. ³	Meridian	
Leake	W. C. Croft Lumber Co. ³	Walnut Grove	
Leflore	Georgia-Pacific Corp.	Greenwood	Box 194
Lincoln	W. L. Byrd	Brookhaven	Rt. 5, Laurel
	Columbus Lumber Co. ³	Brookhaven	
	Z. M. Redd	Norfield	Box 133, Summit
	Smith Brothers Lumber Co. ³	Brookhaven	

Table 16. --Large sawmills¹ (Continued)

County	Firm	Plant	
		Location	Address ²
Lowndes	Airline Manufacturing Co. ³	Columbus	Box 2087
	Davis Lumber Co. ³	Columbus	Hwy. 12, Heidelberg
Marion	Jack Forbes Lumber Co. ³	Sandy Hook	
	J.R.Fornea Lumber Co. ³	Foxworth	
	C.L.Rogers Lumber Co. ³	Columbia	
Monroe	Bradley Lumber Co.	Aberdeen	Box 163
	Nickles Lumber Co.	Aberdeen	
Neshoba	Deemer Wood Products Co. ³	Philadelphia	
	A.DeWeese Lumber Co. ³	Philadelphia	
Noxubee	R.E.Prince Lumber Co. ³	Shuqualak	
Oktibbeha	Sturgis Lumber Co. ³	Sturgis	
Panola	D.B.Floyd Lumber Co.	Sardis	
Perry	Addikson Lumber Co. ³	New Augusta	Newton
Pike	M.D.Hayles Lumber Co. ³	Fernwood	Box A
	Guy Holland Lumber Co. ³	Osyka	
	D.G.Seago and Son Lumber Co. ³	McComb	Box 606
Rankin	Price Paschal Lumber Co. ³	Brandon	
Scott	Hankins and Eubanks Lumber Co. ³	Lake	Box 128
	King Lumber Co. ³	Forest	Box 55
Sharkey	Bellgrade Lumber Co.	Cary	
Simpson	Broadhead Lumber and Manufacturing Co. ³	Mendenhall	
Smith	T.H.Luckey Lumber Co., Inc. ³	Mize	Rt. 1
	Taylorsville Lumber Co.	Taylorsville	Box 536
Stone	J.F.Miller Lumber Co. ³	Wiggins	
	N.E.Neeley Lumber Co. ³	Bond	
	Wiggins Lumber Co. ³	Wiggins	
Tallahatchie	A.P.DeMange Lumber Co., Inc.	Charleston	Box 347
Walthall	Wm.Brent Lumber Co. ³	Tylertown	
Warren	Anderson-Tully Co. ³	Vicksburg	Box 128
	Anderson-Tully Co. ³	Vicksburg	Box 128
	Anderson-Tully Co. ³	Vicksburg	Box 128
	Anderson-Tully Co. ³	Vicksburg	Box 128
	Houston Brothers Lumber Co. ³	Vicksburg	Box 350
Washington	Chicago Mill and Lumber Co.	Greenville	Box 1019
Wayne	E.C.Douglas Lumber Co. ³	Buckatunna	
	Gatlin Lumber Co. ³	Waynesboro	
	J.C.Martin Lumber Co. ³	Waynesboro	
Wilkinson	Crosby Lumber and Manufacturing Co. ³	Crosby	
	Laurel Hill Lumber Co.	Woodville	Box 246
	C.T.Netterville Lumber Co.	Wilkinson	Rt. 1, Woodville
Yazoo	Cathey-Williford-Jones Co.	Bentonla	Memphis, Tenn.
	Gooch Brothers Lumber Co.	Yazoo City	Box 586
	McGraw-Curran Lumber Co.	Yazoo City	Box 450

¹ Output of 3 million board feet or more.² Specified only if different from plant location.³ Produced chips for sale to pulpmills.

Table 17.--Small sawmills¹

County	Firm	Plant	
		Location	Address ²
Alcorn	Crow Brothers Sawmill	Corinth	Rt. 7
	E. T. Mills	Rienzi	Rt. 3
	W. C. Shipman Sawmill	Corinth	Rt. 4
	H. L. Sitton	Glens	Rt. 1
	Grady Wegman Sawmill	Corinth	Rt. 7
	Dalton Whittemore	Rienzi	Rt. 1
	Claude Wilbanks Sawmill	Walnut	Rt. 3
Amite	C. L. Krug Lumber Co.	Gloster	Ferguson, Mo.
	O. R. and R. E. Williams Lbr. Co.	Smithdale	
Attala	Attala Lumber Co.	Ethel	
	Harold Evans Lumber Co.	Kosciusko	Box 745
Benton	J. C. Britt	Canaan	
	V. L. McElwain	West of Falkner	Falkner
	Otis Norris	Ashland	Rt. 1
	Ward Brothers Sawmill	West of Ripley	Ripley
	W. C. Woods	West of Walnut	Walnut
Bolivar	Earp Lumber Co.	Rosedale	
	G. C. Nail Sawmill	Benoit	
	A. J. Overton Sawmill	Roundlake	
	D. A. Yarborough and Son Sawmill	Merigold	
Calhoun	Buchanan Timber Contractors	Bruce	
	S. B. Denton	Slate Spring	
	Andrew Edwards	Banner	
	James Fergusen	Bruce	
	Joe Grist	Bruce	
	Mabry Lumber Co. ³	Derma	Box 56
	Wade Massey	Bruce	
	Charles Neal	Bruce	
	Troy Lumber Co.	Calhoun City	Box 343
Carroll	George W. Fisackerly	Carrollton	520 N. Union, Winona
	John W. Fisher	Vaiden	Rt. 2, West
	J. H. Williams Lumber Co.	Carrollton	Box 137, N. Carrollton
Chickasaw	James Carter	Houston	Rt. 1
	Lee Edmodson	Woodland	Rt. 1
	M. L. Falkner	Woodland	
	Robert and J. H. Falkner	Woodland	Rt. 1
	C. L. Herrod	Woodland	Rt. 1
	P. J. Pettit	Houston	Rt. 1
	J. H. Tabb and Co.	Houston	Box 146
Choctaw	J. E. Crimm	Ackerman	
	Mack Dewberry	Southwest Maben	Maben
	Waymond Fondren	Mathiston	
	Victor Hunt	East of McCool	McCool
	Everette Pearson	South of Tomnolen	Tomnolen
Clarke	J. L. Becton	Carmichael	Star Route, Shubuta
	R. J. Jones Sawmill	Quitman	
	Ralph McCarra Sawmill	Quitman	Rt. 2
	Percy Thompson Sawmill	Carmichael	Rt. 4, Quitman
Clay	J. E. Seitz Lumber Co. ³	West Point	Box 7
	Trulove Brothers	West Point	Rt. 1, Box 77B
Copiah	O. H. Davis and Son	Hazlehurst	Rt. 4
	W. R. Turnbo and Sons	Wesson	

Table 17.--Small sawmills¹(Continued)

County	Firm	Plant	
		Location	Address ²
Covington	William R. Culpepper Rutland and Sons	Collins Collins	
De Soto	K. R. Tranium, Jr.	Lewisburg	Corinth
Forrest	Forrest Lumber Co.	Hattiesberg	Box 70
Franklin	W. A. and R. B. Wallace	McCall Creek	
George	Dickerson Sawmill Co. ³ J. W. Rhodes	Lucedale Ramsey Springs	Rt. 4 Rt. 4, Perkinston
Greene	M. W. Hicks ³ Hilton Jones Sawmill J. W. Roberts Sawmill W. E. Roberts Sawmill	Leakesville Sand Hill Avera McClain	Rt. 5, Lucedale Rt. 4, Richton Rt. 4, Richton Box 142
Grenada	David Haile	Grenada	Rt. 4
Harrison	Murry Boyette Neeley Lumber Co. ³ West Creek Lumber Co.	Gulfport Gulfport Saucier	R. F. D. 1, Box 88 Box 2345 R. F. D. 1
Holmes	Allen Lumber and Manufacturing Co. Hutchison and Allen Lumber Co. Lee Mayo	Tchula Lexington Lexington	 110 Race St.
Humphreys	Cathey-Williford-Jones Lumber Co.	Belzoni	Box 329
Itawamba	Dock Ashley Dow Brewer Marvin Haynes Orville Lewis Pee Wee Mauldin Riley Lumber Co. O. M. Stevens Lumber Co.	Fairview Tremont Tremont Clay Tremont Fulton Fulton	Rt. 1, Golden Rt. 1, Red Bay, Ala. Tremont
Jackson	Erwin G. Lennep Porters Sawmill	Three Rivers Moss Point	Rt. 2, Pascagoula Rt. 2, Pascagoula
Jasper	C. F. Bassett Davis Lumber Co.	Louin Heidelberg	
Jefferson	Case Lumber Co.	Fayette	Box 456
Jones	Fall and Haynes Lumber Co. ³ Gatlin Timber Co.	Ovett Laurel	 Box 704
Kemper	T. E. Darnell Sawmill Monroe Dean Sawmill ³ Fisher Brothers Lumber Co. J. A. McDade Lumber Co. ³	Moscow Cleveland De Kalb Electric Mills	Rt. 1, De Kalb Rt. 2, De Kalb Box 308
Lafayette	Murry G. Duncan W. E. Gandy Henry Todd	West of Randolph Paris West of Pontotoc	Star Route, Randolph Pontotoc
Lamar	T. V. Lott and Son Lumber Co. J. W. Williamson	Purvis Sumrall	 Rt. 1
Lauderdale	Covington Brothers Sawmill R. L. Powell Scruggs Sawmill	Meridian Toomsaba Meridian	Rt. 4 Rt. 6

Table 17.--Small sawmills¹ (Continued)

County	Firm	Plant	
		Location	Address ²
Lawrence	Hartzog Lumber Co.	Silver Creek	
Leake	Easom Lumber Co. Neese Lumber Co. ³ W. E. Sessums	Walnut Grove Carthage Lena	Box 67 Hwy. 16, East
Lee	D.C. Mitchell	Mooreville	
Lincoln	Olin and Robert Cupit J. J. Meyers Bert Parnell Lumber Co.	Brookhaven Bogue Chitto Brookhaven	McCall Creek Box 21
Lowndes	Atkins Lumber Co. Eugene Coleman Sawmill Hubert O. Davis	Columbus Caledonia Caledonia	Box 2004 Rt. 1 Rt. 2
Madison	Canton Casket Co. L. A. Penn	Canton Canton	314 Firebough St. 304 Yandell St.
Marion	W. F. Foxworth and Son Wesley Lumber Co.	Foxworth Columbia	Box 5
Marshall	R. S. Bates William L. Cline O. T. Hill Roy Newsom J. O. Simpson Delma Whaley Sawmill Louis Whaley Sawmill	Potts Camp Holly Springs Holly Springs Potts Camp West of Ashland Potts Camp Potts Camp	Myrtle Ashland
Monroe	Grover Evans Sawmill Hall-Inzer Lumber Co. F. S. Reeves Lumber Co.	Aberdeen Amory Amory	Rt. 2 Drawer 210 Box 327
Montgomery	Charlie Ballard L. J. Ellis Elbert Land Sawmill Alvin Pullen	Duck Hill Winona Winona Kilmichael	Rt. 2, Kilmichael Rt. 3 Rt. 1 Rt. 2, Vaiden
Newton	E. D. and H. G. Chapman R. D. Davis Decatur Retail Lumber Co. R. C. White	Newton Hickory Decatur Hickory	Rt. 2 Rt. 1 Box 145 Box 87
Noxubee	O. B. Persons Lumber Co. ³	Shuqualak	
Panola	Batesville Lumber Co. Claud Beeler Sawmill Higgs Lumber Co.	Batesville Sardis Sardis	Rt. 1
Pearl River	L. P. Childs T. H. Parris Joe H. Reyer and Son John Thompson	Poplarville Poplarville Poplarville Ozona	R. F. D. 3 Rt. 2, Box 268, Picayune
Perry	Cooper Lumber Co.	Richton	
Pike	W. H. Lamb and Son Lumber Co. J. R. Lea and Sons W. G. Sellers Forest Products Aubry Williams Iley Williams	Summit Osyka McComb Osyka Magnolia	Box 821 Magnolia

Table 17. - *Small sawmills*¹ (Continued)

County	Firm	Plant	
		Location	Address ²
Pontotoc	J. W. Kidd Sawmill	Pontotoc	Rt. 5
	Joe Todd Lumber Co.	Pontotoc	Rt. 5
Prentiss	Walden Sawmill	Booneville	Rt. 5
Rankin	R. M. Hogan	Brandon	
	Dan Lawford	Star	
	Mashburn Lumber Co.	Brandon	Box 101
	George Rhodes	Rankin County	Sturgis
	Lib Vanderford	Rankin County	Mendenhall
Scott	E. G. Laughlin and Sons, Inc. ³	Morton	Box 308
Sharkey	B. J. Anderson	Anguilla	Rt. 1, Rolling Fork
Simpson	M. L. Brown Sawmill	D'Lo	
	Reynolds Lumber Co. ³	Magee	Box 755
Sunflower	Brown Lumber Co.	Moorhead	Box 486
Tallahatchie	Belmont Lumber Co.	Charleston	
	L. V. Beville	Charleston	East Main
	Lake Hodges	Enid	Rt. 1
	Festues D. Mullen	Cascilla	Rt. 1
	Pritchard Lumber Co.	Charleston	Box 283
Tate	K. R. Tranium, Jr.	Tyro	Corinth
Tippah	Davis Brothers	Ripley	Rt. 1
	Freeman Brothers	Ripley	Rt. 2
	LeLand Gresham	Ripley	
	Earnest Hodum	Walnut	Rt. 4
	James Jumper	Ripley	
	A. Z. Nails	Walnut	Rt. 3
	J. H. Weatherly	Ripley	
	Jeff Young	Ripley	
Tishomingo	C. A. Brown	Burnsville	Rt. 2
	Jack Grisham	Iuka	Rt. 2
	F. J. Horn	Belmont	Rt. 1, Golden
	Owin Nunley	Iuka	Rt. 1
	A. E. Parson	Iuka	Rt. 1
Tunica	F. J. Jacks Lumber Co.	Tunica	
Union	Fred Green Lumber Co.	Graham	Rt. 1, Baldwin
	C. B. Hall	Graham	Rt. 1, Baldwin
	Clyde Langford Lumber Co.	New Albany	Rt. 1
Washington	National Packing Co.	Greenville	Box 157
	E. G. Nelson	Chatham	Greenville
Wayne	H. C. Carr Sawmill	Waynesboro	Rt. 1
	Cooley Co.	Waynesboro	
	Hollis Davis Sawmill	Whistle	Heidelberg
	T. T. Dobson Lumber Co.	Waynesboro	
	Lee Brothers Sawmill	Buckatunna	
	Utsey Sawmill	Clara	
Webster	John W. Barton Lumber Co.	Eupora	Longview

Table 17.--*Small sawmills*¹ (Continued)

County	Firm	Plant	
		Location	Address ²
Webster	T. L. Brown	Eupora	
	J. T. Fowler	Pellez	Stewart
	Horace Helms	Eupora	Rt. 4
	C. G. McBride and Son	Eupora	Mathiston
	M. L. Orr	Tomnolen	
	Otho Poque	Eupora	
	Robert Scarbrough	Eupora	Rt. 4
	Jake Williams	Eupora	Rt. 4
Wilkinson	Lepetts Sawmill	Woodville	Rt. 4, Liberty
	C. M. Mangum Cedar Lumber Co.	Woodville	Natchez
Winston	Hervy Pearson Sawmill	Louisville	
Yalobusha	Johnson and Son Lumber Co.	Coffeeville	Box 37
	O. B. Pinkerton	Water Valley	Rt. 3

¹ Output of less than 3 million board feet.² Specified only if different from plant location.³ Produced chips for sale to pulpmills.Table 18.--*Wood pulpmills*

County	Firm	Location
Adams	International Paper Co.	Natchez
	Johns-Manville Products Corp.	Natchez
Jackson	International Paper Co.	Moss Point
Jones	Masonite Corp.	Laurel
Lauderdale	The Flintkote Co.	Meridian
	Kroehler Manufacturing Co. of Mississippi, Inc.	Meridian
Washington	United States Gypsum Co.	Greenville

Table 19.--Wood preserving plants

County	Firm	Location	Type ¹
Attala	Attala Wood Preservers	McCool	N
Covington	Ray Blackwell Creosote Co. Covington Products Co.	Seminary Collins	N N
Forrest	C. and S. Wood Treating Corp. Carter-Foote Post and Lumber Treating Plant	Petal Hattiesburg	P N
George	Buchanan Manufacturing Co., Inc.	Lucedale	P
Grenada	Koppers Co., Inc., Wood Preserving Division	Grenada	P
Harrison	Gulfport Creosoting Co.	Gulfport	P
Hinds	Hinds Wood Preserving Co. Follen Wood Preserving Co.	Learned Jackson	P P, N
Jackson	Hurley Creosoting Co. Wells Industries	Hurley Gautier	N P
Jasper	Louin Post Manufacturer	Louin	N
Jefferson Davis	Prentiss Creosote Material	Prentiss	N
Jones	Laurel Lumber Treating Co.	Laurel	N
Lauderdale	Gulf States Creosoting Co. Sanders Lumber Co.	Meridian Meridian	P P, N
Lincoln	Mississippi Wood Preserving Co.	Brookhaven	P
Lowndes	T. J. Moss Tie Co.	Columbus	P
Madison	Canton Treating Co.	Canton	P
Montgomery	Curtis Post Co.	Stewart	N
Neshoba	A. DeWeese Lumber Co.	Philadelphia	P
Noxubee	Woody Jones Creosote Plant	Macon	P, N
Pearl River	Crosby Forest Products Co.	Picayune	P
Pike	Fernwood Industries	Fernwood	P
Rankin	R. D. Morrow and Sons	Brandon	N
Smith	Henderson and Gatewood Post Plant	South of Forest	N
Stone	Southern Pine Post Co.	Wiggins	P
Wilkinson	Crosby Lumber and Manufacturing Co.	Crosby	P
Winston	American Creosote Works, Inc.	Louisville	P

¹ "P" indicates pressure treating.

"N" indicates nonpressure treating.

Table 20.--Veneer plants

County	Firm	Location	Type ¹
Adams	Natchez Veneer and Lumber Co. ²	Natchez	O
Claiborne	Port Gibson Veneer and Box Co. ²	Port Gibson	C
Copiah	Central Box Co.	Crystal Springs	C
	Hazlehurst Box Co.	Hazlehurst	C
Covington	Rhymes Veneers, Inc. ²	Collins	O
George	Lucedale Veneer Co. ²	Lucedale	O
Greene	Leakesville Forest Products, Inc. ²	Leakesville	C
Jackson	Pascagoula Veneer Co.	Pascagoula	O
Jones	The Mengel Co.	Laurel	O
Lauderdale	Tuscaloosa Veneer Co. ²	Meridian	O
Lawrence	Monticello Veneer and Plywood Box Co.	Monticello	C
Marion	Foxworth Plywood-Veneer Co.	Foxworth	O
Noxubee	Noxubee Veneer Co. ²	Macon	C
Pearl River	Pearl Veneer Co., Inc.	Picayune	O
	St. Regis Paper Co., Wirebound Box Division ²	Picayune	C
Perry	Perry County Plywood Corp. ²	Beaumont	O
Pike	American Box Co. ²	Fernwood	C
Stone	Wiggins Veneer Co. ²	Wiggins	O
Washington	Chicago Mill and Lumber Co. ²	Greenville	O
Wayne	Consumers Wire Bound Box Co. ²	Waynesboro	C

¹ "C" indicates plants producing chiefly container veneer.¹ "O" indicates plants producing chiefly commercial and other veneers.² Produced chips for sale to pulpmills.

Table 21.--*Miscellaneous plants*

County	Firm	Location
Adams	C. T. Sigmon Block Mill ⁴	Natchez
Attala	Attala Land and Wood Products Co. ¹	Kosciusko
Calhoun	Blackjack Charcoal Co., Inc. ¹	Bruce
Chickasaw	Chickasaw Handle Co., Inc. ³ E. F. Dyer Handle Co. ³	Houston Pyland
Clarke	Dizzy Dean Enterprises ¹ Bud Logan Dogwood Mill ⁴	Pachuta Shubuta
Clay	Winters Dimension Co., Inc. ³	West Point
Covington	William R. Culpepper ⁴	Collins
George	Buchanan Manufacturing Co., Inc. ⁵ Jim Havens ⁴ U. B. Wilson ⁴	Lucedale Benndale Lucedale
Greene	Brewer Dogwood Mill ⁴	Leakesville
Hinds	Fireproof Products of Mississippi Inc. ⁷ V. A. Taylor Dogwood Mill ⁴	Terry Utica
Holmes	Black Creek Charcoal Co. ¹	Lexington
Jackson	J. M. Rogers and Sons ⁵	Moss Point
Jones	James M. Fullar Hickory Mill ³ Hartwell Brothers Handle Co. ³	Laurel Laurel
Lafayette	Delois Arbuckle ⁶	Oxford
Lowndes	Columbus Handle Co. ³	Columbus
Monroe	J. B. Dove ⁶ Wright's Hickory Mill ³	Gattman Gattman
Montgomery	Winona Handle Co. ³	Winona
Neshoba	A. DeWeese Lumber Co. ⁶	Philadelphia
Noxubee	Shuqualak Charcoal Co. ¹	Shuqualak
Prentiss	Hickory Ski and Dimension Mill ⁶	Booneville
Stone	Fairley Dogwood Mill ⁴	Bond
Union	McCall-Champion Co. ²	New Albany
Warren	James A. and Dudley L. Keen ⁴ King Stave Co. ²	Oak Ridge Vicksburg

Table 21.--*Miscellaneous plants* (Continued)

County	Firm	Location
Washington	Greenville Stave Co. ²	Greenville
Webster	Watt Finch ³	Eupora
Wilkinson	B. and T. Handle Co. ³	Woodville
Winston	B. E. Watson and Sons ³	Louisville
Yalobusha	W. N. Arbuckle ³	Tillatoba
	J. C. and C. L. Peacock Handle Co. ³	Water Valley

¹ Charcoal producer.² Cooperage mill.³ Handle stock mill.⁴ Shuttleblock mill.⁵ Paper roll plug mill.⁶ Miscellaneous dimension mill.⁷ Fiber and cement board mill.

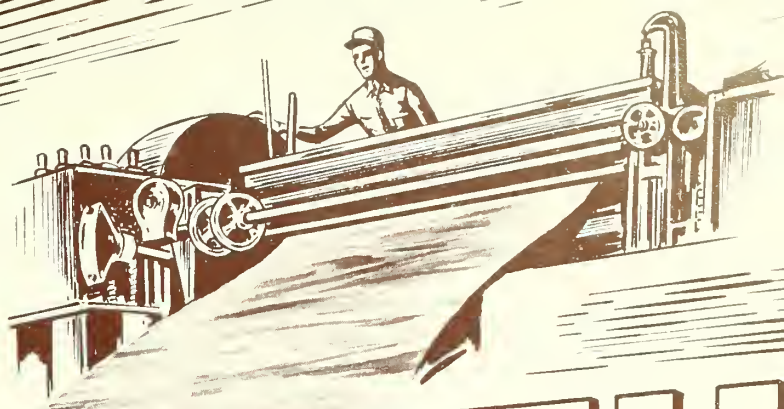
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SOUTHERN FOREST EXPERIMENT STATION

New Orleans, Louisiana

Forest Service, U.S. Department of Agriculture

1963



MIDSOUTH VENEER INDUSTRY



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SOUTHERN FOREST EXPERIMENT STATION

New Orleans, Louisiana

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1964

Foreword

This report presents information on 1963 veneer log production and consumption in the Midsouth. The information is from a canvass of the industry made by the Southern Forest Experiment Station. Though an effort was made to locate all active plants, a few may have been overlooked. Omission of a firm, therefore, is no reflection upon its activities, nor does inclusion constitute a recommendation.

MIDSOUTH VENEER INDUSTRY

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U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

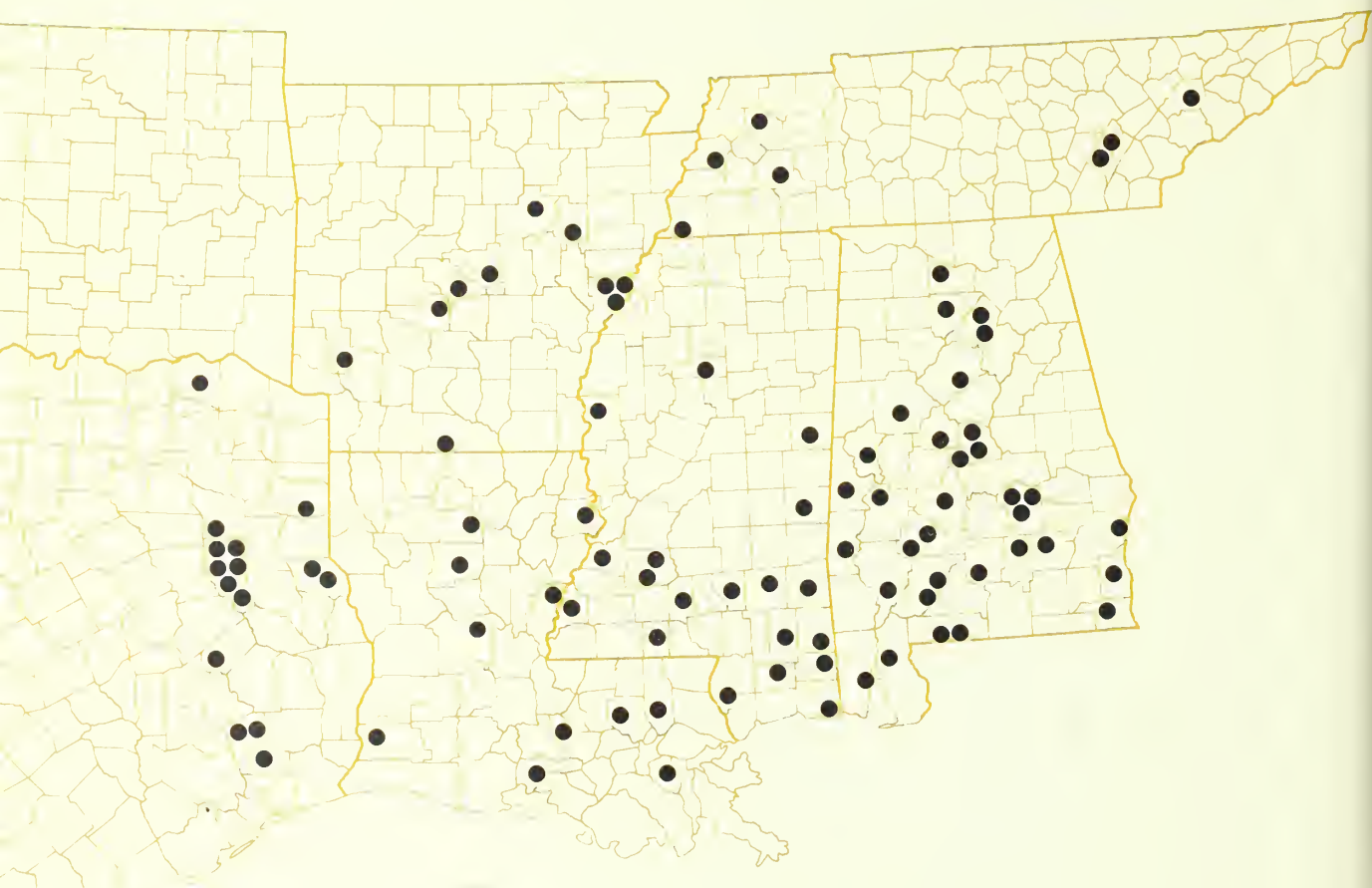


SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana

1964

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Location of veneer plants that operated in 1963.

ABOUT 30 PERCENT OF THE HARDWOOD VENEER LOGS made in the United States are cut in the Midsouth—Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas. In 1963 the Midsouth's hardwood veneer log output totaled 249 million board feet (International 1/4-inch rule). Softwood production was barely 6 million.

Alabama was the leading producer in 1963, providing 29 percent of the total. Mississippi ranked second and Louisiana a close third. The three States together accounted for two-thirds of the Midsouth's veneer log harvest (fig. 1).

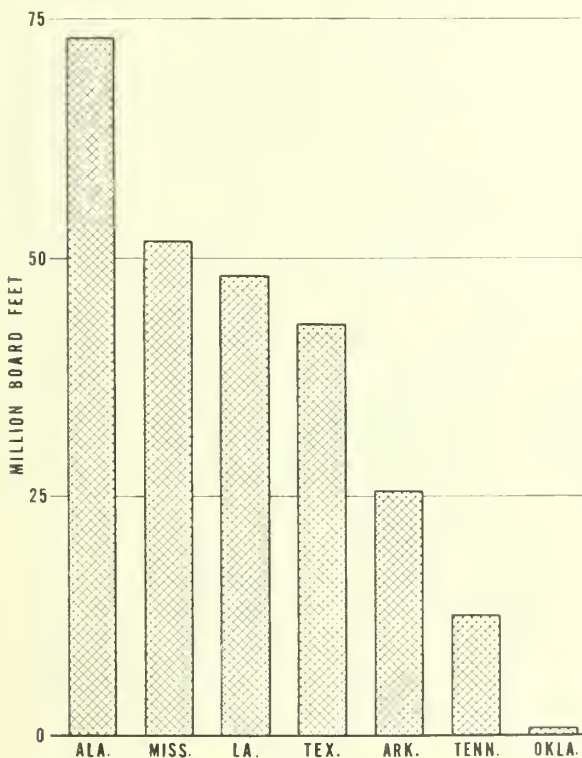


FIGURE 1. Veneer log output by State, 1963.

The most significant aspect of the veneer industry's hardwood use is its preference for soft-textured species. Sweetgum alone, for example, made up 36 percent of the hardwood

veneer log output in 1963 (fig. 2). Tupelo, blackgum, cottonwood, and yellow-poplar are also in heavy demand. Other commonly used soft hardwoods include sweetbay, southern magnolia, white elm, and soft maple. Oak—mainly red—is the most widely used firm-textured hardwood. Walnut, while not contributing greatly to the total volume, is highly prized for fancy and figured veneers.

Historically the industry has been largely based on hardwood. Southern pine, for example, made up a scant 2 percent of the 1963 output, and all of it went to plants that are mainly engaged in processing hardwood veneer. Today a southern pine plywood industry is developing. The growth potential of this industry points to huge gains in the future production of pine veneer.

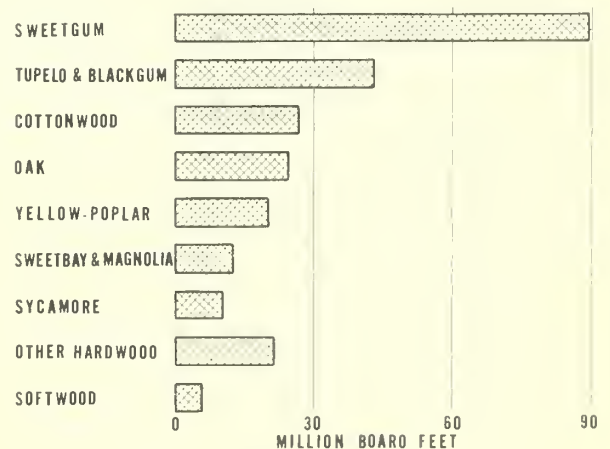


FIGURE 2. Midsouth veneer log output by species, 1963.

About 44 million board feet of veneer logs grown in the Midsouth moved interstate in 1963. This volume was 17 percent of the harvest. Nearly 10 million board feet went to destinations beyond the Midsouth. North Carolina was the principal recipient. Eight other States also received Midsouth logs: Florida, Georgia, Indiana, Kentucky, Missouri, South Carolina, Virginia, and West Virginia (fig. 3).

Some 32 million board feet of veneer logs were brought into the Midsouth from other States and foreign countries in 1963. Florida and Georgia were by far the largest suppliers of domestic logs. Others were Illinois, Indiana, Kentucky, Missouri, and Pennsylvania. Foreign imports included cativo, khaya, and virola logs. In recent years, though not in 1963, Midsouth veneer plants have also used mahogany and lauan logs.

Nationwide, the volume of hardwood veneer logs imported is relatively small. By contrast,

imports of hardwood plywood and veneer are increasing rapidly. In the decade 1952-62, for example, imports of hardwood plywood rose from 85 million square feet to 1.4 billion. Hardwood veneer imports increased in the same period from 428 million square feet to 1.2 billion.¹

Practically all of the logs used in the Midsouth—both foreign and domestic—are peeled on rotary lathes. About 46 percent of the 277 million board feet of veneer logs consumed by Midsouth plants during 1963 were used in the manufacture of containers; the rest were utilized for commercial and other veneers.² Foreign logs made up about 8 percent of the total volume.

¹ Hair, Dwight, and Ulrich, A.H. The demand and price situation for forest products—1963. U.S. Dept. Agr. Misc. Pub. 953, 50 pp., illus. 1963.

² Definitions of the various types of veneer will be found on page 4.

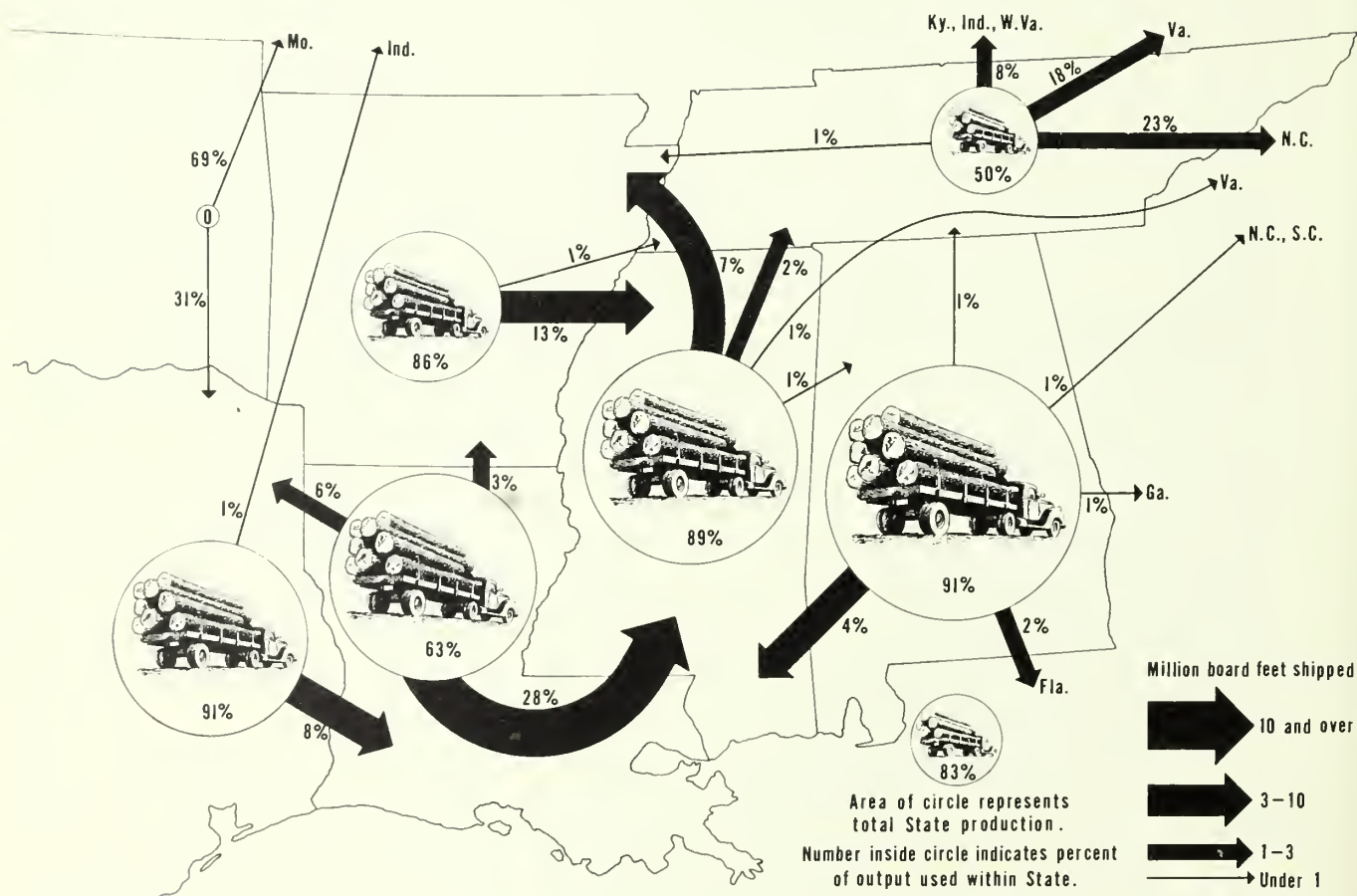


FIGURE 3. Out-of-State veneer log shipments, 1963.

Container veneer operations used an average of 2.6 million board feet of logs per plant in 1963. Mills producing commercial and other veneers averaged 3.3 million. Most Midsouth plants consumed hardwoods exclusively. But 10 also used some southern pine, mainly for containers and furniture parts. Mississippi and Alabama were the leading users of veneer logs, accounting for over half of the 1963 consumption (fig. 4). These two States also had the largest number of active veneer plants:

State	Container plants	Other plants	Total
----- Number -----			
Alabama	21	12	33
Arkansas	3	7	10
Louisiana	6	5	11
Mississippi	6	13	19
Tennessee	4	3	7
Texas	10	5	15
Total	50	45	95

Veneer plants are only about half as numerous as they were a decade ago. The decline has been greatest among container producers. The closures presumably are due in part to the keen competition offered by packaging made of fiber and plastics.

Converting logs into thin sheets of specified size and thickness commonly is only the initial step at veneer-processing establishments. At least 54 Midsouth veneer operations engage in further manufacture. Baskets and wirebound boxes are the chief items manufactured by 30 container producers. Basket makers are mostly located in Alabama and east Texas; box plants are found chiefly east of the Mississippi River. Nearly all of the other 24 veneer plants engaged in secondary manufacture are making hardwood plywood. These plants are largely situated in Alabama and Mississippi.

Logs are obtained almost entirely through open-market dealings. In 1963, some 70 per-

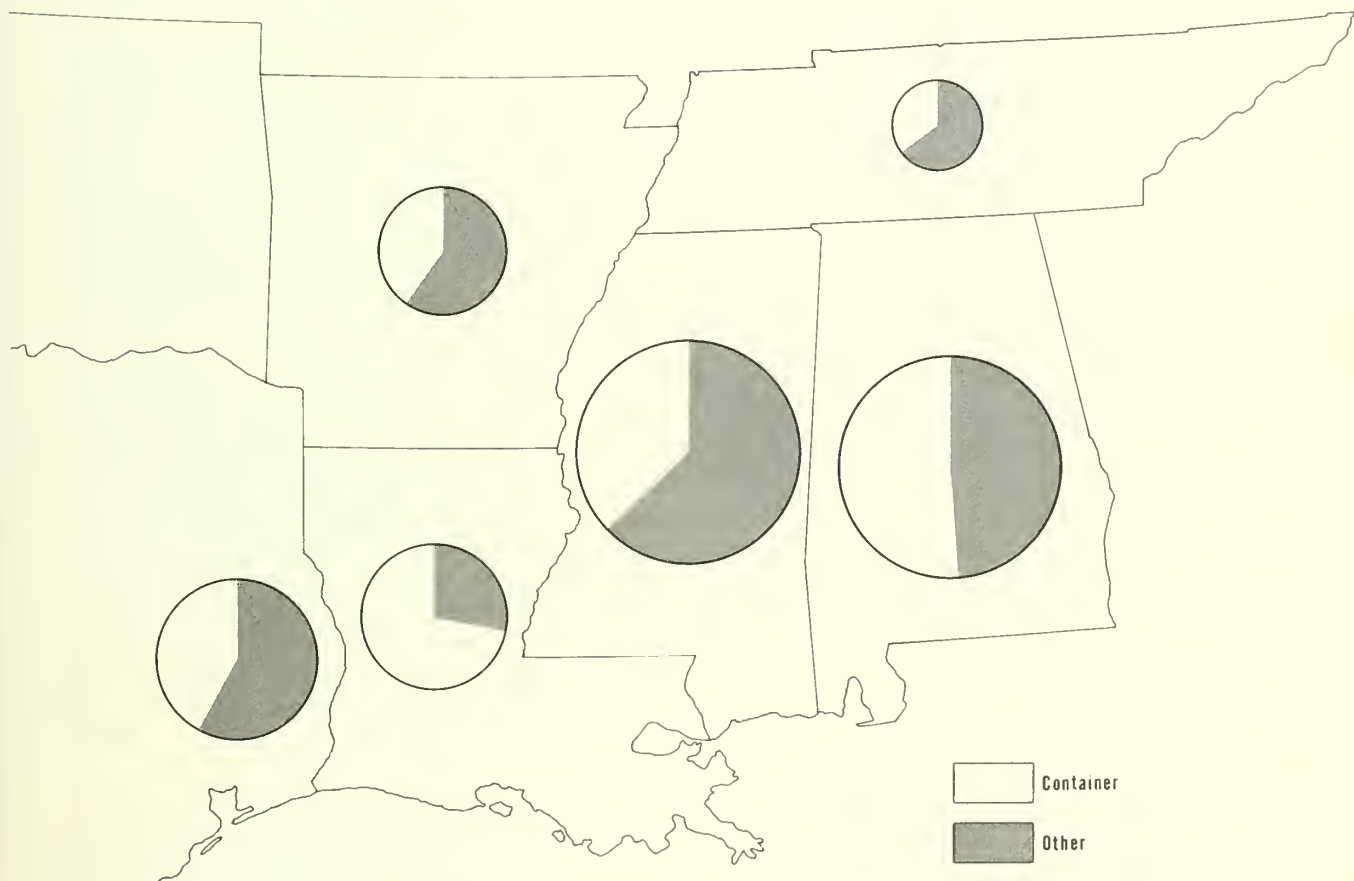


FIGURE 4. Veneer log consumption by type of veneer, 1963.

cent were bought at the millyard, mainly from contract loggers. The rest were largely acquired by stumpage purchases; less than a tenth were cut on company-owned forests. Although 10 and 12 inches are most commonly specified as minimum diameters for domestic logs delivered to Midsouth veneer plants, the range is from 8 to 16 inches (fig. 5).

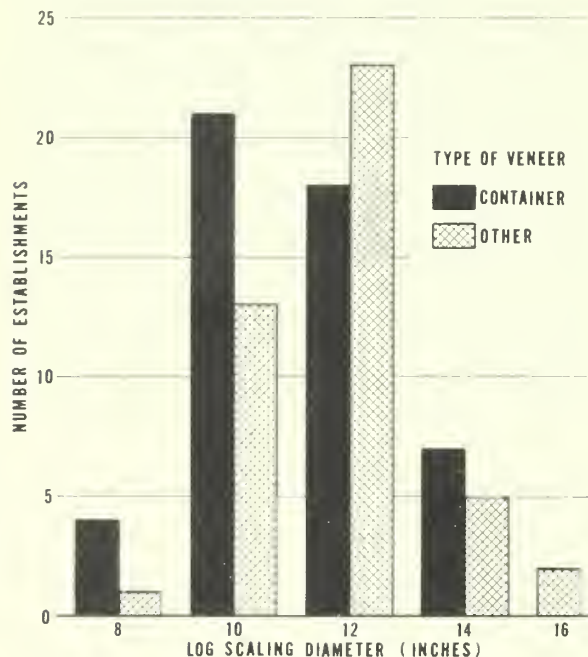


FIGURE 5. Minimum log diameter specified by Midsouth veneer firms.

The tabulation below indicates the caliber of logs delivered to container and other types of veneer plants in the Midsouth. It is based on a sample of 855 domestic hardwood logs graded at the decks of veneer plants throughout the region.

Log grade	Container plants	Other plants	All plants
- Percent of volume -			
1	47	62	55
2	31	23	27
3	19	14	16
4	3	1	2
Total	100	100	100

Grading was by rules developed at the U. S. Forest Products Laboratory.³ Logs classed as grade 1 by these rules are usually most in de-

³ For detailed specifications of log grades, see *Hardwood log grades for standard lumber: proposals and results*. U. S. Forest Serv. Forest Prod. Lab. D1737, 64 pp., illus. 1949.

mand for products requiring high proportions of clear material. Grades 2 and 3 are of intermediate quality. Some veneer plants were found to be using logs that did not meet the specifications for the three standard grades; such logs were called grade 4.

Plant waste resulting from the manufacture of veneer in the Midsouth totaled about 18 million cubic feet in 1963. Nearly all of the volume consisted of cores, veneer trimmings, and other coarse material generally suitable for making pulp chips, and all but 5 percent was utilized in one manner or another. Almost two-thirds, 11 million cubic feet, was converted into fiber products; 37 Midsouth veneer plants chipped their coarse residues before shipping them to pulpmills. The remaining volume, 7 million cubic feet, was largely used for industrial fuel.

The veneer industry in the Midsouth is undergoing a major transformation. As noted earlier, a southern pine plywood industry is now developing. Large-scale production of certified sheathing-grade pine plywood was initiated early in 1964 at Fordyce, Arkansas. Two more plywood plants are under construction at Diboll and Silsbee, Texas. Plans have also been announced for plants in the vicinity of Oakdale and Many in Louisiana, at Crossett, Arkansas, and at Keltys, Texas.⁴ It is estimated that these plants will have the capacity to mill more than a quarter of a billion board feet (International 1/4-inch rule) of veneer logs annually.

Locational advantages favor further southern expansion of the softwood plywood industry. Freight costs to major consuming centers in the South and North, for example, are expected to be considerably below those from western plywood-producing areas. The southern market alone consumes about a fourth of the annual output of Douglas-fir plywood. Moreover, pine supplies in Midsouth States are increasing rapidly both in quantity and quality, notably on industrial and public holdings.

DEFINITIONS OF VENEER TYPES

The veneer types recognized in this report are those defined by the Bureau of the Census, U. S. Department of Commerce.

⁴ In the Southeast, a pine plywood plant is reported under construction at Plymouth, North Carolina.

Veneers are thin sheets of wood which may be (a) cut in a continuous strip by rotating bolts against the edge of a lathe knife, (b) produced by sawing, (c) sliced by moving a log or flitch against a large stationary knife, or (d) by variations of these procedures. Thicknesses vary from 1/100 to 1/4 inch, although occasionally thinner or thicker veneer is made.

Container type.—This veneer is produced for the fabrication of wirebound and nailed veneer boxes and other containers such as berry cups, tills, hampers, and baskets. It does not include veneer that is used in the manufacture of container type plywood; such veneer is classified as commercial and utility type.

Commercial and utility type.—This classification includes all wood veneer manufactured

for container and packaging type plywood, and the cores, crossbands, and backs for other plywoods.

Face type.—This classification includes the fancy and figured veneers used in cabinet and furniture manufacture and the veneers used for faces on plywoods for wall paneling, doors, furniture, etc.

Flat type.—This veneer is produced for the manufacture of such items as ice cream spoons and sticks, tongue depressors, matches, broom splints, and other woodenware.

Special type.—This classification includes the veneers made to meet certain definite requirements, such as those delineated by the exacting specifications for aircraft veneers or marine veneers.



TABLE 1.—Veneer log production by State and species, 1963

Species	All States	Alabama	Arkansas	Louisiana	Mississippi	Oklahoma	Tennessee	Texas
----- Thousand board feet ¹ -----								
Softwoods:								
Southern pine	4,362	1,212			605			2,545
Eastern redcedar	1,429						1,429	
Total	5,791	1,212			605		1,429	2,545
Hardwoods:								
Sweetgum	89,575	26,761	9,740	19,605	15,884	123	1,503	15,959
Tupelo and blackgum	43,144	15,712	1,149	10,254	11,264		430	4,335
Cottonwood	26,634	326	8,340	5,095	6,516	191	1,601	4,565
Yellow-poplar	20,443	12,610	32	271	4,015		3,515	
Red oak	20,337	456	89	6,117	1,765		531	11,379
Sycamore	10,275	3,456	1,950	1,754	1,661	41	687	726
Sweetbay	9,763	5,245	52	461	3,863			142
Elm	4,973	1,042	1,414	792	1,149		222	354
White oak	4,434		25	1,624	738		185	1,862
Hackberry	3,490	1,249	736	138	843		204	320
Magnolia	3,183	1,197		658	923			405
Maple	2,418	987	237	322	715		146	11
Pecan	1,859		428	169	509	235	181	337
Walnut	1,629	49			18		1,562	
Ash	1,448	423	57	399	345		31	193
Hickory	1,311	946		87	220		12	46
Beech	1,167	449		197	251		258	12
Willow	981	42	783	36	120			
River birch	948	398	247	6	245		52	
Basswood	792	446	28	84	192		11	31
Boxelder	237		187		50			
Locust	94		57		37			
Cherry	46		28		18			
Chestnut	22						22	
Total	249,203	71,794	25,579	48,069	51,341	590	11,153	40,677
All species	254,994	73,006	25,579	48,069	51,946	590	12,582	43,222

¹ International 1/4-inch rule.

TABLE 2.—Veneer log movement by State, 1963

State	Logged and used in State	Outgoing shipments	Incoming receipts	Total log receipts
— — — Thousand board feet ¹ — — —				
Alabama	66,414	6,592	13,627	80,041
Arkansas	21,861	3,718	4,839	26,700
Louisiana	30,479	17,590	3,512	33,991
Mississippi	46,239	5,707	34,682	80,921
Oklahoma	...	590		
Tennessee	6,389	6,193	6,899	13,288
Texas	39,420	3,802	2,894	42,314
Total	210,802	44,192	66,453	277,255

¹ International 1/4-inch rule.

TABLE 3.—Veneer log movement by species, 1963

Species	Logged in Midsouth			Midsouth imports	Net used in Midsouth
	Total	Retained	Exported		
- - - - - Thousand board feet ¹ - - - - -					
Sweetgum	89,575	89,077	498	2,532	91,609
Tupelo and blackgum	43,144	42,314	830	3,156	45,470
Cottonwood	26,634	26,465	169		26,465
Oak	24,771	24,195	576		24,195
Yellow-poplar	20,443	17,067	3,376	1,974	19,041
Sweetbay and magnolia	12,946	12,574	372	813	13,387
Sycamore	10,275	10,230	45	372	10,602
Elm and hackberry	8,463	8,463		68	8,531
Other soft hardwood ²	5,422	5,389	33	1,314	6,703
Other hardwood	7,530	4,991	2,539	363	5,354
Softwood	5,791	4,344	1,447		4,344
Cativo	...	...	...	18,930	18,930
Other foreign	...	...	...	2,624	2,624
All species	254,994	245,109	9,885	32,146	277,255

¹ International 1/4-inch rule.² Includes maple, willow, basswood, river birch, boxelder, cherry.

TABLE 4.—Veneer plant residues used, 1963

State	All	Fiber	Fuel	Other
— — — Thousand cubic feet — — —				
Alabama	5,012	2,947	2,047	18
Arkansas	1,726	674	1,052	
Louisiana	1,787	1,278	509	...
Mississippi	5,022	3,239	1,769	14
Tennessee	770	435	335	...
Texas	2,671	2,170	352	149
Total	16,988	10,743	6,064	181

TABLE 5.—Veneer plant residues not used, 1963

State	All types	Coarse ¹	Fine
— Thousand cubic feet —			
Alabama	169	150	19
Arkansas	4		4
Louisiana	416	345	71
Mississippi	215	148	67
Tennessee	1		1
Texas	51	33	18
Total	856	676	180

¹ Coarse residues include cores and other material generally suitable for chipping.

TABLE 6.—*Alabama veneer plants, 1963*

County	Type ¹	Firm	Location	Address ²
Baldwin	O	Bacon-McMillan Veneer Co. ³	Stockton	P. O. Box 3326
Barbour	C	Alabama-Georgia Veneer Co. ³	Eufaula	P. O. Box 21
Bibb	O	W. E. Belcher Co., Inc. ³	Centreville	
Blount	C	Marsh and Standridge	Nector	Rt. 1, Cleveland
	C	Oneonta Basket Factory	Oneonta	
Butler	C	Georgiana Veneer Co.	Georgiana	P. O. Box 171
Chilton	C	Jemison Basket Co.	Jemison	P. O. Box 96
	O	Maplesville Veneer Co., Inc.	Maplesville	P. O. Box 66
	C	Rocket Power Woodworks	Clanton	
Choctaw	C	General Box Co. ³	Gilbertown	
Clarke	C	Winborn Veneer Co.	Suggsville	Allen
Crenshaw	C	Browder Veneer Co.	Bradleyton	P. O. Box 23, Petrey
Cullman	C	E. Malchow and Sons	Cullman	P. O. Box 145
Dallas	O	Howell Veneer Co., Inc.	Selma	P. O. Box 502
Escambia	O	Harold Brothers Lumber Co.	East Brewton	Rt. 3, Brewton
	C	T. R. Miller Mill Co. ³	Brewton	
Greene	C	Sumter Veneer Works ³	Eutaw	P. O. Box 495
Henry	O	Dixie Veneer Co. ³	Abbeville	P. O. Box 9
Houston	O	Howell Plywood Corp. ³	Dothan	P. O. Box 917
Jefferson	C	Fairmont Basket Works	Birmingham	P. O. Box 3065
Lowndes		E. O. Browder Veneer Co. ⁴	St. Clair	
Marengo	O	A. R. Taylor Veneer Co.	Demopolis	P. O. Box 212
Mobile	C	Southern Basket Works	Chickasaw	3100 Pleasant Valley Rd.
Monroe	O	Alabama Veneer and Panel Co.	Mexia	P. O. Box 617, Monroeville
	O	Beatrice Veneer Works, Inc. ³	Monroeville	P. O. Box 149
Montgomery	O	Alabama Veneer and Panel Co.	Montgomery	1104 N. McDonough St.
	C	Browder Veneer Works ³	Montgomery	P. O. Box 1291
	C	Capital Veneer Works, Inc. ³	Montgomery	P. O. Box 2214
Morgan	C	Decatur Box and Basket Co. ³	Decatur	P. O. Box 2088
Pike	C	Troy Veneer and Crate Co.	Troy	P. O. Box 346
Sumter	C	York Veneer Co. ³	York	
Tuscaloosa	O	Thompson and Swain Plywood, Inc.	Tuscaloosa	P. O. Box 243
Wilcox	C	Browder Veneer Inc. ³	Camden	P. O. Box 310
	C	Miller's Bend Veneer Co.	Pine Hill	

¹ C indicates plants producing chiefly container veneer.

O indicates plants producing chiefly commercial and other veneers.

² Specified only if different from plant location.³ Produces chips for sale to pulpmills.⁴ Plant idle in 1963.

TABLE 7.—*Arkansas veneer plants, 1963*

County	Type ¹	Firm	Location	Address ²
Columbia		Waldo Veneer Co. ⁴	Waldo	P. O. Box 325
Hot Spring	O	Van Veneer Co.	Malvern	P. O. Box 61
Howard	C	Nashville Basket Co.	Nashville	P. O. Box 129
Phillips	O	Beisel Veneer Hoop Co.	West Helena	P. O. Box 2338
	O	Chicago Mill and Lumber Co. ⁴	West Helena	P. O. Box 2517
	O	McKnight Veneer and Plywoods, Inc. ³	West Helena	
Pulaski	C	Little Rock Containers, Inc. ³	Little Rock	1623 E. 14
Saline	O	Mooney Plywoods	Benton	P. O. Box 224
Union	C	Junction City Veneer Corp. ³	Junction City	
White	O	Enterprise Box Co.	Judsonia	P. O. Box 231
Woodruff	O	Delta Plywood Corp.	Cotton Plant	P. O. Box 1

¹ C indicates plants producing chiefly container veneer.

O indicates plants producing chiefly commercial and other veneers.

² Specified only if different from plant location.³ Produces chips for sale to pulpmills.⁴ Plant idle in 1963.TABLE 8.—*Louisiana veneer plants, 1963*

Parish	Type ¹	Firm	Location	Address ²
Calcasieu	C	General Box Co. ³	Lunita	P. O. Box 997 De Quincy
Concordia	C	Wilson and Co., Inc.	Clayton	P. O. Box 8
Iberia	O	Grimes and Freeman	Jeanerette	
Iberville	C	Southwood Veneer Co. ³	Maringouin	P. O. Box 37
Jackson	O	Louisiana Veneer Co. ³	Chatham	P. O. Box 366
Livingston	O	McIntyre Veneers, Inc.	Denham Springs	P. O. Box 787
Madison	C	Chicago Mill and Lumber Co.	Tallulah	
Orleans		Higgins, Inc. ⁴	Michoud	Chef Menteur Hwy.
Rapides	C	American Box Co. ³	Pineville	P. O. Box 248, Fernwood, Miss.
		Parks Wood Products ⁴	Pineville	P. O. Box 111
St. Charles	O	Delta Match Corp. of Louisiana	Kenner	P. O. Box 368
Tangipahoa	C	American Box Co.	Hammond	P. O. Box 248, Fernwood, Miss.
Winn	O	Winnfield Veneer Co. ³	Winnfield	P. O. Box 871

¹ C indicates plants producing chiefly container veneer.

O indicates plants producing chiefly commercial and other veneers.

² Specified only if different from plant location.³ Produces chips for sale to pulpmills.⁴ Plant idle in 1963.

TABLE 9.—*Mississippi veneer plants, 1963*

County	Type ¹	Firm	Location	Address ²
Adams	O	Natchez Veneer and Lumber Co. ³	Natchez	P. O. Box 526
Claiborne	C	Port Gibson Veneer and Box Co. ³	Port Gibson	
Copiah	C	Central Box Co.	Crystal Springs	P. O. Box 129
	C	Hazlehurst Box Co.	Hazlehurst	P. O. Box 506
Covington	O	Rhymes Veneers, Inc. ³	Collins	P. O. Box 345
George	O	Lucedale Veneer Co. ³	Lucedale	P. O. Box 207
Greene	O	Leakesville Forest Products ³	Leakesville	P. O. Box 256
Grenada	O	Grenada Veneer Co.	Elliott	P. O. Box 626
Jackson	O	Pascagoula Veneer Co.	Pascagoula	P. O. Box 612
Jones	O	Mengel Wood Industries, Inc.	Laurel	P. O. Box 568
Lauderdale	O	Tuscaloosa Veneer Co. ³	Meridian	P. O. Box 107
Lawrence	O	Monticello Veneer and Plywood Box Co.	Monticello	
Noxubee	O	Noxubee Veneer Co. ³	Macon	
Pearl River	C	St. Regis Paper Co., Wirebound Box Division ³	Picayune	
Perry	O	Perry County Plywood Corp. ³	Beaumont	
Pike	C	American Box Co. ³	Fernwood	P. O. Box 248
Stone	O	Wiggins Veneer Co. ³	Wiggins	P. O. Box 98
Washington	O	Chicago Mill and Lumber Co. ³	Greenville	P. O. Box 1019
Wayne	C	Consumer Wire Bound Box Co. ³	Waynesboro	P. O. Drawer 151

¹ C indicates plants producing chiefly container veneer.

O indicates plants producing chiefly commercial and other veneers.

² Specified only if different from plant location.³ Produces chips for sale to pulpmills.TABLE 10.—*Tennessee veneer plants, 1963*

County	Type ¹	Firm	Location	Address ²
Gibson	C	Dyer Fruit Box Co. ³	Dyer	
		Milan Box Co. ⁴	Milan	
Knox	O	Foreign and Domestic Veneers, Inc.	Knoxville	P. O. Box 1067
Lauderdale	C	Ripley Box and Basket Co., Inc.	Ripley	P. O. Box 106
Madison	O	Ashby Veneer and Lumber Co.	Jackson	P. O. Box 648
Rhea	C	Gholston Basket Co.	Dayton	P. O. Box 109
	C	W. A. Shipley Basket Manufacturing Co.	Dayton	P. O. Box 341
Shelby		Memphis Wood Products Co. ⁴	Memphis	P. O. Box 7174
	O	Tennessee Veneer Co., Inc.	Memphis	P. O. Box 9126

¹ C indicates plants producing chiefly container veneer.

O indicates plants producing chiefly commercial and other veneers.

² Specified only if different from plant location.³ Produces chips for sale to pulpmills.⁴ Plant idle in 1963.

TABLE 11.—*Texas veneer plants, 1963*

County	Type ¹	Firm	Location	Address ²
Cherokee	C	Aber Box and Basket Factory	Jacksonville	P. O. Box 1270
	O	Halbert Mill Co.	Dialville	
	C	Newton-Shank Manufacturing Co.	Jacksonville	P. O. Box 1110
	C	Peacock Crate Factory	Jacksonville	1529½ S. Jackson St.
	C	F. A. Shinalt and Sons	Turney	Rt. 1, Jacksonville
	C	Bruce Slover Crate and Lumber Mill Co., Inc.	Rusk	
Harrison	C	Key Brothers Manufacturing Co.	Marshall	P. O. Box 1177
Lamar	C	American Box Co.	Paris	P. O. Box 761
Liberty	C	Cleveland Veneers	Cleveland	P. O. Box 505
	O	Liberty Veneer and Panel Co.	Liberty	P. O. Box 231
	O	Walker Veneer and Plywood Co.	Cleveland	P. O. Box 425
Shelby	O	E. L. Bruce Co. of Texas ³	Center	
	O	Center Plywood Co.	Center	P. O. Box 511
Smith	C	B. C. Slover Crate Factory	Gresham	Rt. 8, Tyler
Trinity	C	American Box Co.	Trinity	P. O. Box 591

¹ C indicates plants producing chiefly container veneer.

O indicates plants producing chiefly commercial and other veneers.

² Specified only if different from plant location.³ Produces chips for sale to pulpmills.TABLE 12.—*Veneer plants under construction or announced in the Midsouth ¹*

State	County	Firm	Location
Arkansas	Ashley	Georgia-Pacific Corp.	Crossett
	Dallas	Georgia-Pacific Corp. ²	Fordyce
Louisiana	Allen	Vancouver Plywood Co.	Oakdale
	Sabine	Vancouver Plywood Co.	Many
Texas	Angelina	Angelina Plywood Co.	Keltys
	Angelina	Southern Pine Plywood Co.	Diboll
	Hardin	Kirby Lumber Corp.	Silsbee

¹ All listed plants are designed to produce southern pine plywood.² Fordyce plant became operational February 1964.

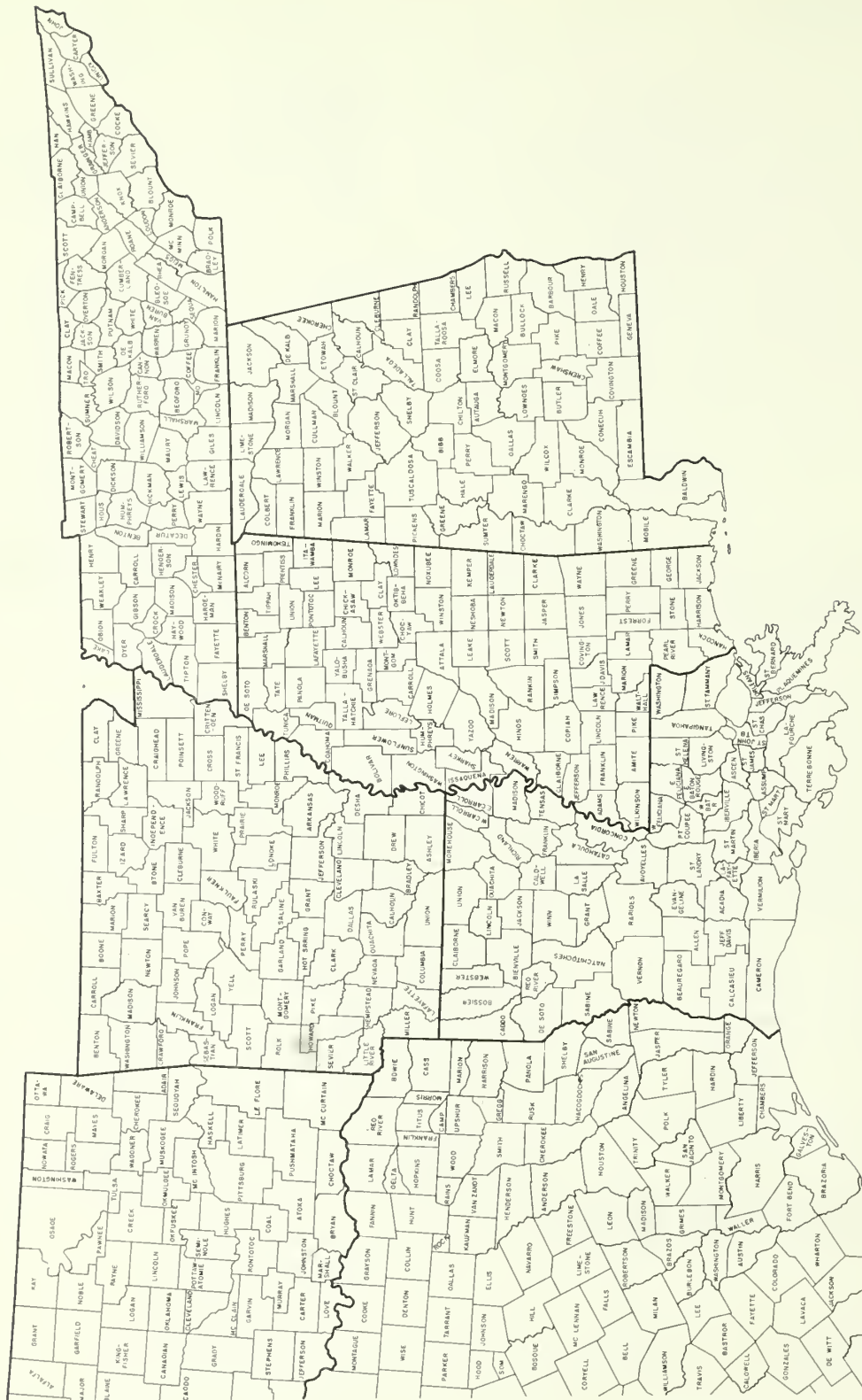


FIGURE 6. Midsouth counties.

SOUTHERN PULPWOOD PRODUCTION, 1964



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SOUTHERN PULPWOOD PRODUCTION, 1964

Joe F. Christopher

SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana

and

SOUTHEASTERN FOREST EXPERIMENT STATION
Asheville, North Carolina

of the

Forest Service, U. S. Department of Agriculture

in cooperation with

SOUTHERN PULPWOOD CONSERVATION ASSOCIATION
Atlanta, Georgia



SOUTHERN PULPWOOD OUTPUT rose to a new high of 28,825,800 cords in 1964—61 percent of the Nation's total. Gains in pine roundwood were highest of the past 7 years. At the year's end, the South had 82 pulpmills with a total daily capacity of some 56,000 tons. Eleven mills outside the region were using wood harvested in the South.

In 1964, for the sixth consecutive year, pulpwood production in the South established a new record. Gains in 11 of the 12 States raised the total 8 percent above that of 1963. The cordage increases were largest in Alabama and Georgia. These two States also led in volume harvested; together they accounted for more than a third of the 1964 total. All but three of the Southern States cut more than 2 million cords apiece. Tennessee was the only State showing a decline from the previous year.

Table 1. *Pulpwood production in the South during 1964, and change since 1963*

State	Round pulpwood and residues	Change
	Thousand cords	Percent
Alabama	4,155.4	+ 14
Arkansas	2,062.4	+ 11
Florida	2,745.3	+ 9
Georgia	5,842.9	+ 6
Louisiana	2,399.5	+ 7
Mississippi	2,157.7	+ 8
North Carolina	2,624.4	+ 8
Oklahoma	70.6	+ 9
South Carolina	2,629.6	+ 7
Tennessee	417.4	- 2
Texas	1,590.5	+ 10
Virginia	2,130.1	+ 7
All States	28,825.8	+ 8

Pulpwood delivered to mills in the form of chips amounted to 4,643,300 cords, or 16 percent of the total output. An additional 74,000 cords were made up of unchipped plant resi-

dues and sawdust; as in 1963, about 84 percent of the chips were pine. Although production was higher than in 1963, the rate of increase was less. Most of the chips were from sawmill residues, but pine plywood plants and roundwood chipping yards have become recent sources of supply and will probably develop rapidly.

Pulpwood bolts made up more than 24 million cords of the 1964 harvest. This was an 8-percent increase over 1963. All States except Tennessee and Oklahoma participated in the gain. The largest increase was in Alabama. Georgia was the biggest producer, with more than 5 million cords.

For the first time since 1955, Baldwin County, Alabama, failed to lead in bolt output. Union Parish, Louisiana, was high with 207,008 cords, Baldwin County being second with 199,968 cords. All together, 28 southern counties harvested more than 100,000 cords apiece—25 counties topped that amount in 1963.

Of the boltwood, pine comprised some 18.5 million cords, as compared to 17.1 million in 1963. This is the largest increase since 1956; gains were recorded in 10 of the 12 Southern States. The rapidly expanding roundwood harvest is supported by increasing pine inventories in many States, according to recent forest surveys.

Pulpwood cut from hardwood bolts rose to a new high of 5.6 million cords, or 23 percent of the region's roundwood output. This volume

Table 2. Round pulpwood production in the South, by State and species group, 1964

State	All species	Pine	Soft hardwoods				Hard hardwoods			Total hardwoods
			Gums	Yellow-poplar, cottonwood, willow, magnolia, maple, basswood, and boxelder	Elm, hackberry, and sycamore	Total soft hardwoods	Oaks	Other hardwoods	Total hard hardwoods	
----- Thousand cords -----										
Alabama	3,463.4	2,644.8	430.1	102.3	49.1	581.5	185.1	52.0	237.1	818.6
Arkansas	1,497.3	1,041.7	92.6	33.6	.1	126.3	326.0	3.3	329.3	455.6
Florida	2,482.5	2,238.9	111.4	17.8	.8	130.0	99.9	13.7	113.6	243.6
Georgia	5,082.2	4,556.1	313.6	27.5	3.0	344.1	164.2	17.8	182.0	526.1
Louisiana	2,109.0	1,584.0	294.6	60.4	13.0	368.0	145.5	11.5	157.0	525.0
Mississippi	1,801.9	941.9	577.2	143.3	40.0	760.5	38.6	60.9	99.5	860.0
North Carolina	2,070.1	1,527.7	133.8	124.8	22.4	281.0	195.0	66.4	261.4	542.4
Oklahoma	23.6	3.9	3.1	9.2	4.2	16.5	3.2	(¹)	3.2	19.7
South Carolina	2,165.0	1,657.8	235.6	69.2	16.0	320.8	156.6	29.8	186.4	507.2
Tennessee	385.5	192.4	9.5	30.0	3.8	43.3	131.6	18.2	149.8	193.1
Texas	1,144.4	857.4	162.6	21.4	4.4	188.4	94.9	3.7	98.6	287.0
Virginia	1,883.8	1,273.6	32.3	81.7	7.6	121.6	369.2	119.4	488.6	610.2
All States	24,108.7	18,520.2	2,396.4	721.2	164.4	3,282.0	1,909.8	396.7	2,306.5	5,588.5

¹ Negligible.

was 7 percent above that of 1963, and set a new record for the fourteenth straight year. The hardwood cut ranged from 20,000 cords in Oklahoma to 860,000 cords in Mississippi. Nearly six-tenths came from soft-textured species, such as gum, yellow-poplar, and cottonwood. In 1963, these species made up almost 70 percent of the total. The increase in use of firm-textured hardwoods should stimulate hardwood forestry efforts by providing markets for timber not prospectively suitable for more exacting industrial products.

About half of the total hardwood bolts were delivered to mills that use only the sulfate process. Soft-textured hardwoods are favored for this and the groundwood process. Firm-textured hardwoods are most in demand at mills making semichemical pulp, but the proportion being taken at sulfate mills is steadily rising.

Establishment of two new mills, together with expansion of existing facilities, boosted

Table 3. Round hardwood receipts by pulping process, 1964

Mills	Pulping capacity, 24 hours	All hardwoods	Soft hardwoods	Hard hardwoods
	Tons	-----	Percent	-----
Sulfate	29,110	49	52	46
Sulfate and semichemical	13,575	20	18	22
Sulfate and groundwood	6,161	10	11	8
Groundwood	2,804	7	10	2
Semichemical	2,155	11	7	17
Other	2,725	3	2	5
Total	56,530	100	100	100

the South's pulping capacity by 2,300 tons per day. At the end of 1964, two mills were under construction; together they will be capable of pulping 780 tons per day. Georgia continues to lead in pulping capacity, with 18 percent of the South's total. Florida ranks second and is followed by Louisiana, Alabama, and South Carolina.

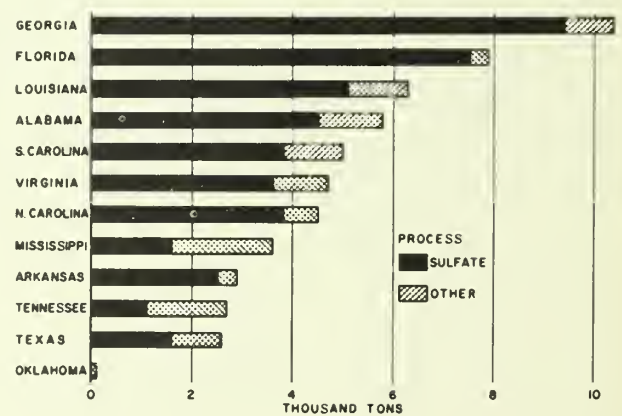
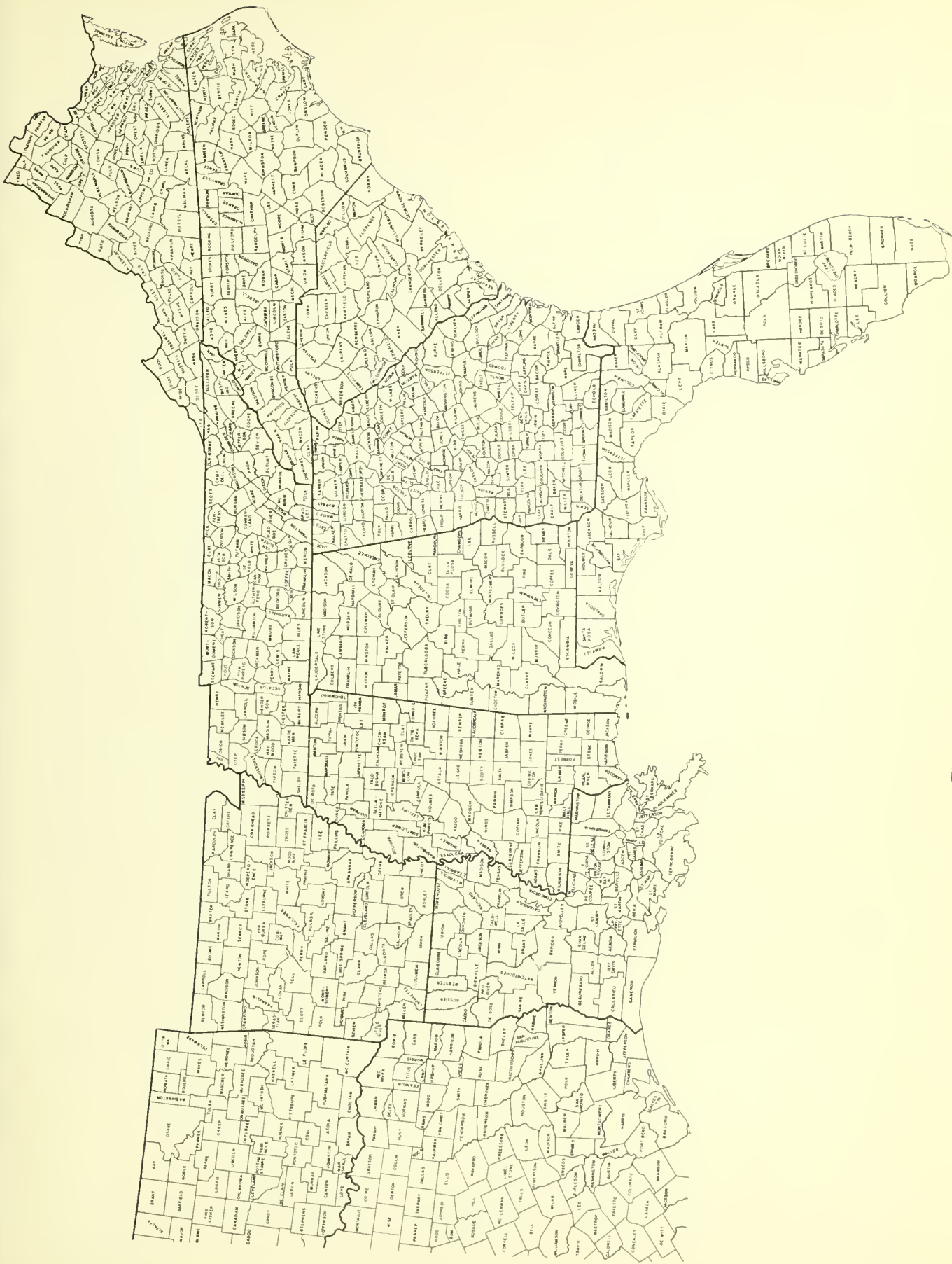
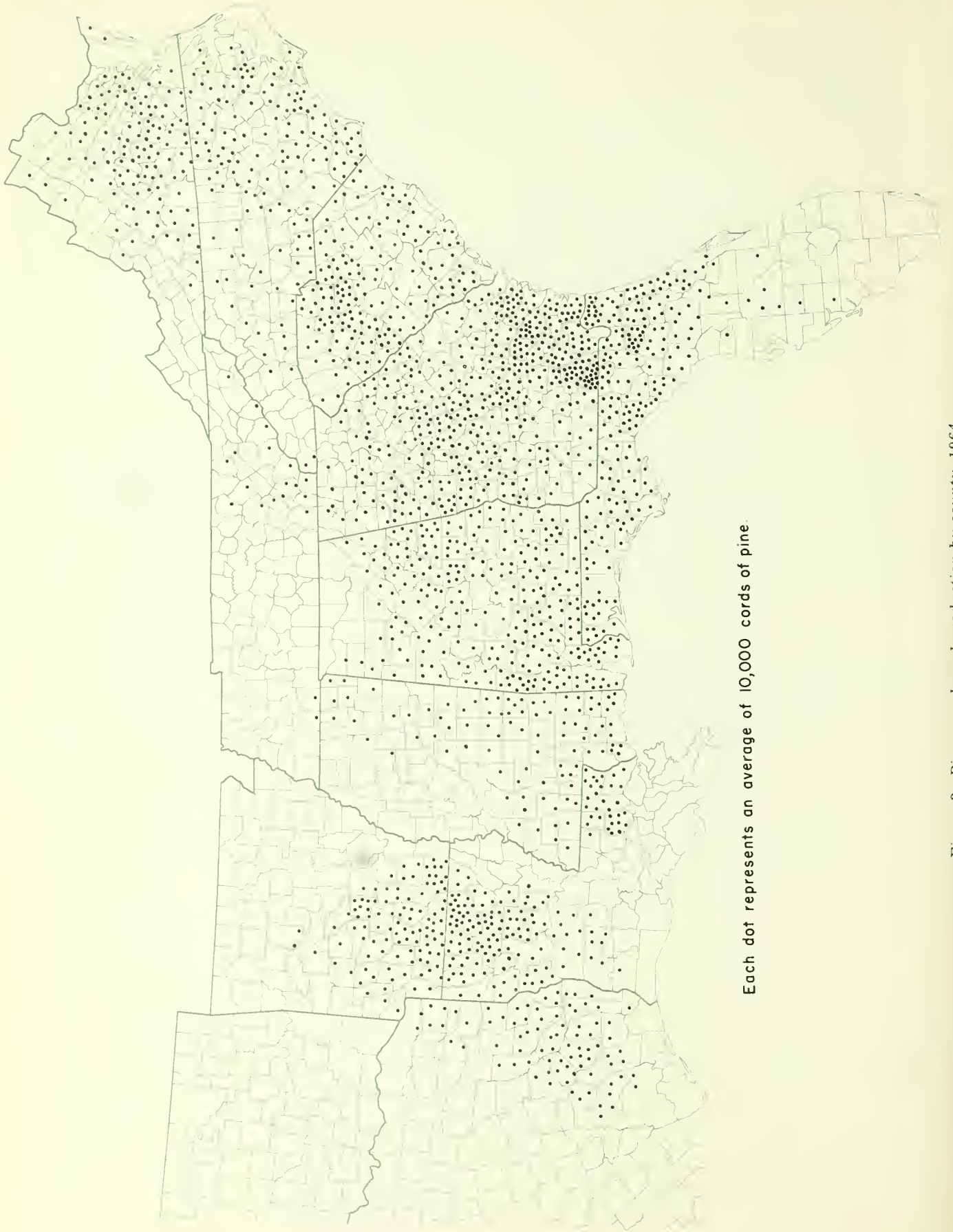


Figure 1. Pulping capacity by State, 1964.

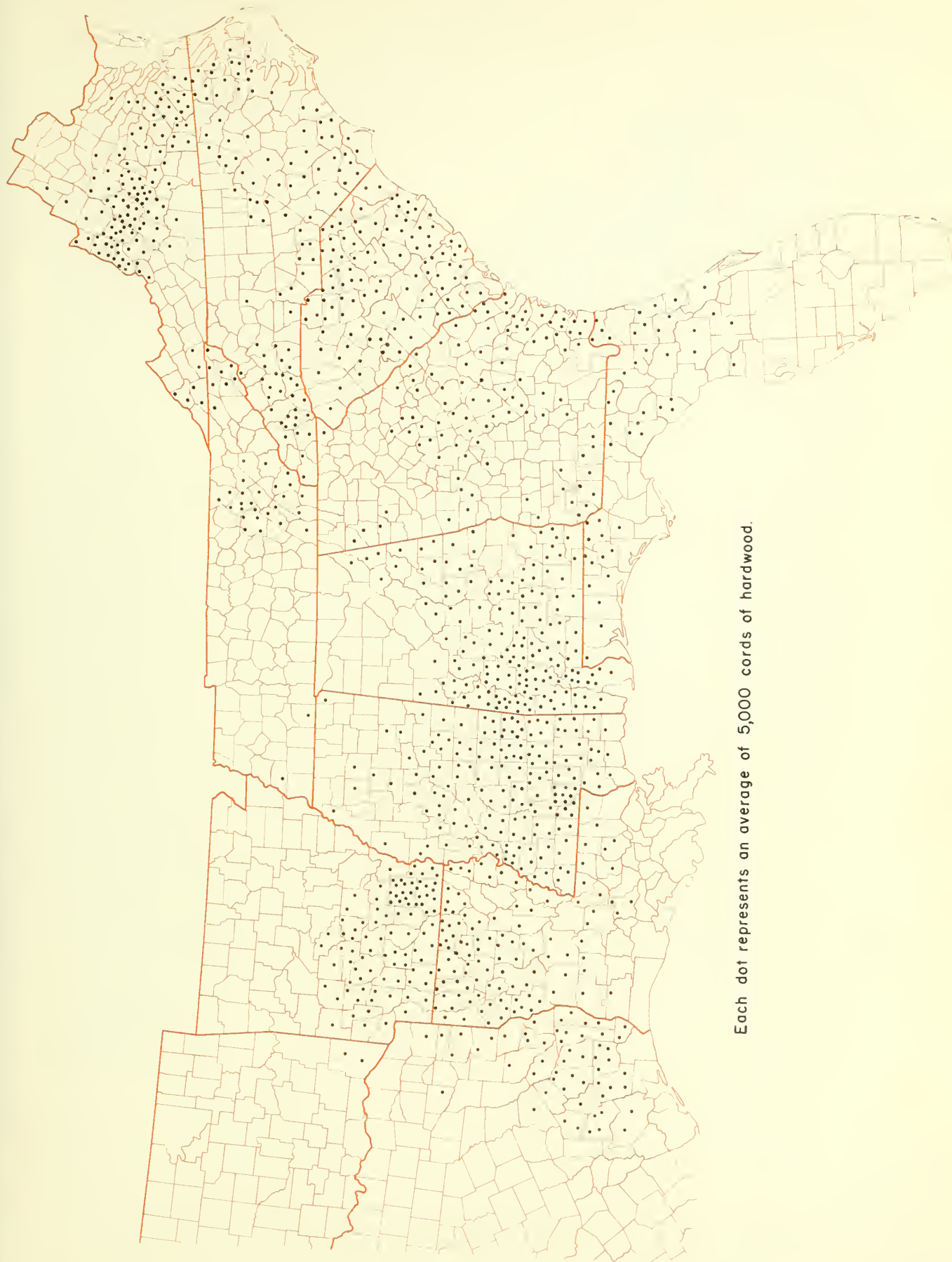
The sulfate process is the mainstay of the industry, accounting for nearly four-fifths of the South's capabilities. In the past decade, it made up 76 percent of the industry's expansion; groundwood and other mechanical processes, 13 percent; semichemical, 11 percent. Further substantial increases in the sulfate process are assured by current mills under construction and planned.





Each dot represents an average of 10,000 cords of pine

Figure 3. Pine roundwood production by county, 1964.



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

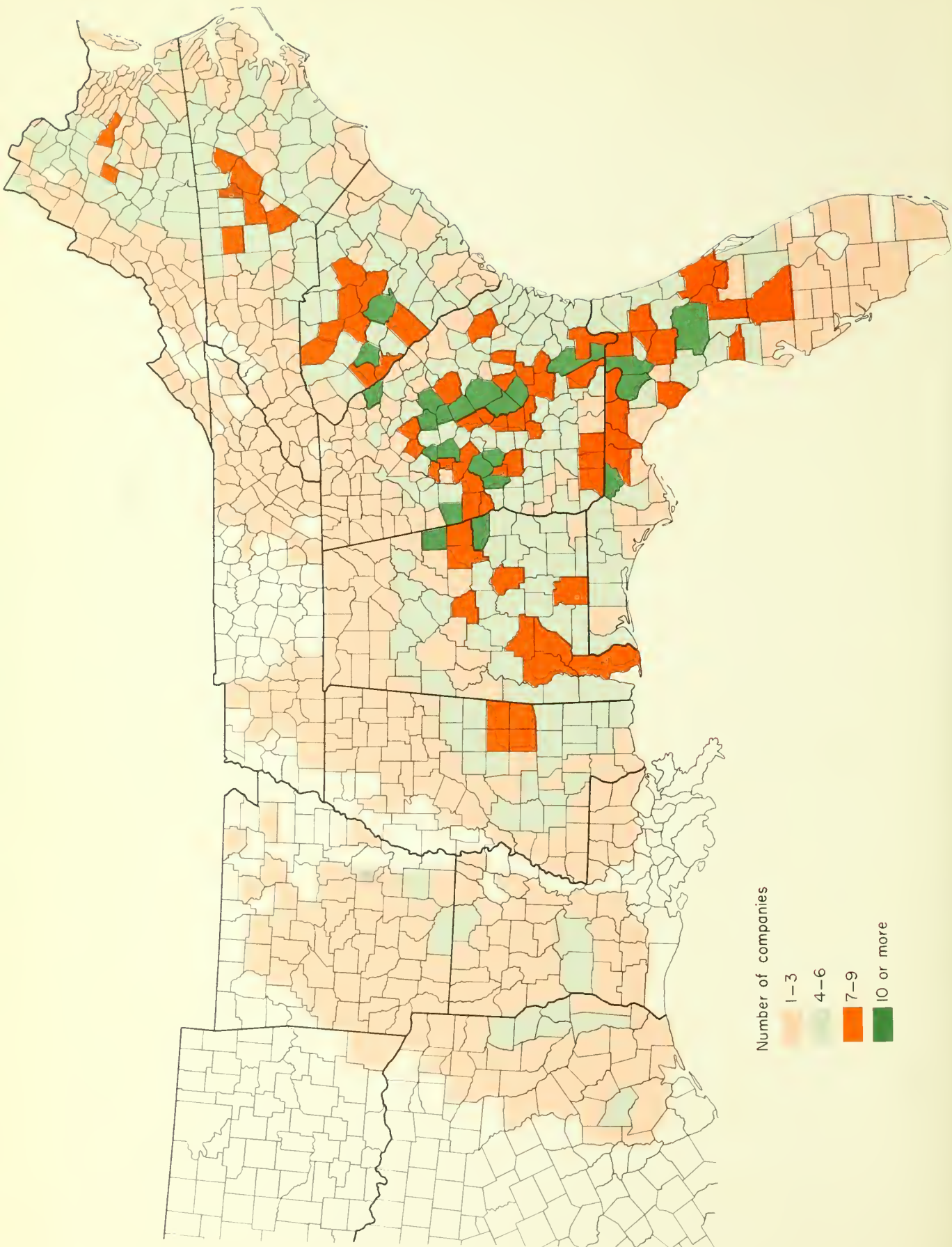
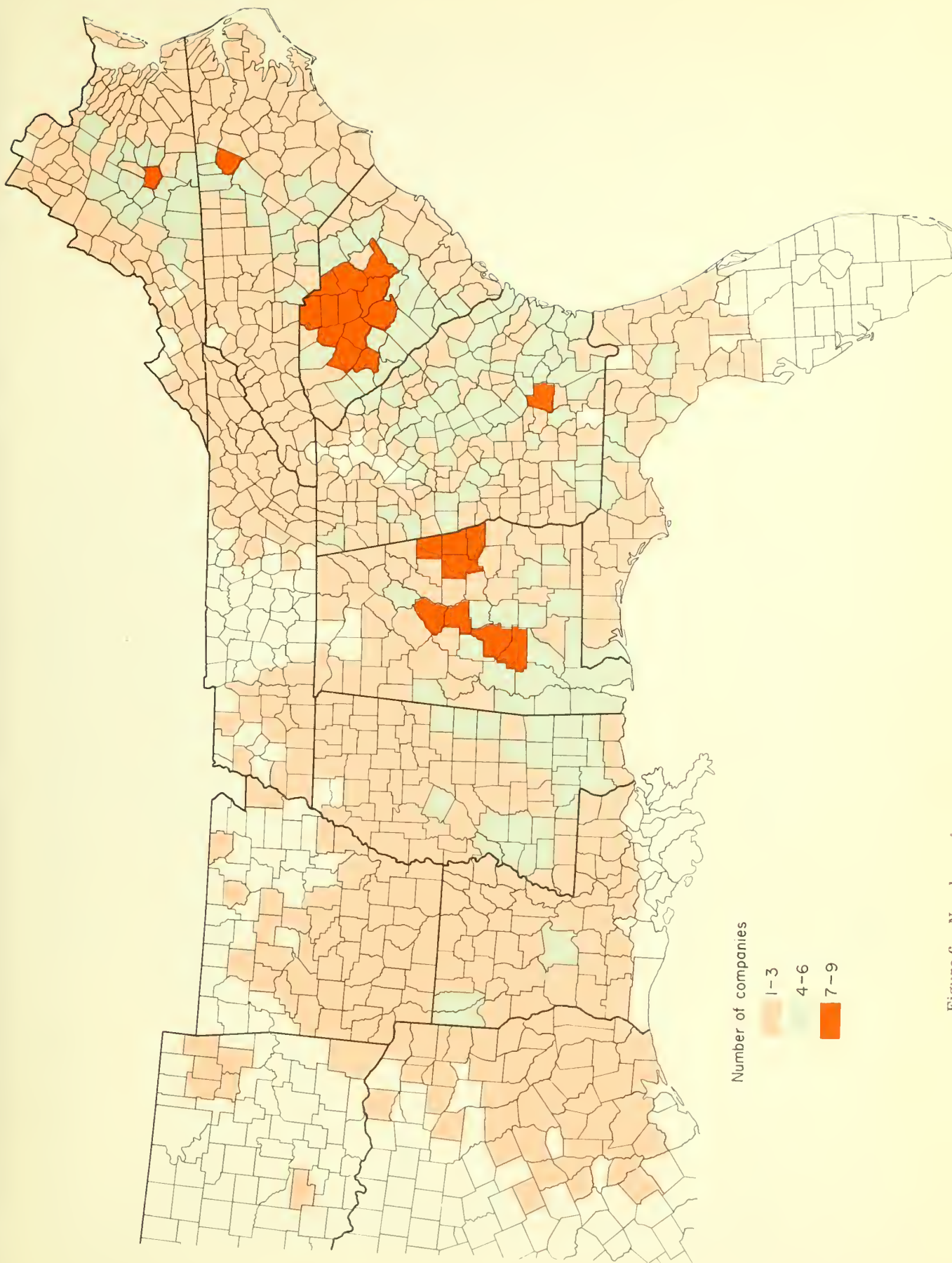


Figure 5. Number of companies procuring pine roundwood by county, 1964.



DETAILED TABLES

Table 4. Round pulpwood production in the South, by State and species group, 1964 and 1963

State	Change from 1963	1964			1963		
		All species	Pine	Hardwood	All species	Pine	Hardwood
----- <i>Thousand cords</i> -----							
Alabama	+15	3,463.4	2,644.8	818.6	3,014.1	2,325.1	689.0
Arkansas	+ 9	1,497.3	1,041.7	455.6	1,372.1	1,003.1	369.0
Florida	+ 8	2,482.5	2,238.9	243.6	2,289.0	2,121.6	167.4
Georgia	+ 6	5,082.2	4,556.1	526.1	4,800.7	4,269.8	530.9
Louisiana	+ 7	2,109.0	1,584.0	525.0	1,968.5	1,503.0	465.5
Mississippi	+ 6	1,801.9	941.9	860.0	1,706.2	683.2	1,023.0
North Carolina	+ 9	2,070.1	1,527.7	542.4	1,898.2	1,439.1	459.1
Oklahoma	- 6	23.6	3.9	19.7	25.2	6.5	18.7
South Carolina	+ 7	2,165.0	1,657.8	507.2	2,024.3	1,509.3	515.0
Tennessee	- 3	385.5	192.4	193.1	395.8	198.6	197.2
Texas	+ 8	1,144.4	857.4	287.0	1,063.0	820.3	242.7
Virginia	+ 6	1,883.8	1,273.6	610.2	1,772.0	1,235.5	536.5
All States	+ 8	24,108.7	18,520.2	5,588.5	22,329.1	17,115.1	5,214.0

Table 5. Southern output of wood residues chipped for pulp manufacture, by State and species group, 1964 and 1963

State	Change from 1963	1964			1963		
		All species	Pine	Hardwood	All species	Pine	Hardwood
----- Thousand cords -----							
Alabama	+ 9	692.0	536.3	155.7	635.7	477.4	158.3
Arkansas	+18	565.1	548.7	16.4	478.3	461.2	17.1
Florida	+10	262.8	217.5	45.3	238.9	194.9	44.0
Georgia	+ 6	760.7	652.9	107.8	719.7	621.8	97.9
Louisiana	+ 8	290.5	258.2	32.3	269.7	242.6	27.1
Mississippi	+24	355.8	273.8	82.0	287.0	214.1	72.9
North Carolina	+ 6	554.3	436.9	117.4	524.7	417.5	107.2
Oklahoma	+19	47.0	47.0	.	39.4	39.4	.
South Carolina	+ 6	464.6	375.7	88.9	438.9	344.7	94.2
Tennessee	+ 3	31.9	13.3	18.6	30.9	10.6	20.3
Texas	+17	446.1	404.0	42.1	380.6	352.2	28.4
Virginia	+13	246.3	181.5	64.8	218.1	165.2	52.9
All States	+11	4,717.1	3,945.8	771.3	4,261.9	3,541.6	720.3

Table 6. Southern output of wood residues chipped for pulp manufacture, by State and type of residue, 1964

State	All types	Chips			Other residues ¹		
		All species	Pine	Hardwood	All species	Pine	Hardwood
----- <i>Thousand cords</i> -----							
Alabama	692.0	680.2	531.3	148.9	11.8	5.0	6.8
Arkansas	565.1	564.5	548.1	16.4	.6	.6	.
Florida	262.8	262.1	217.5	44.6	.7	(²)	.7
Georgia	760.7	754.0	652.8	101.2	6.7	.1	6.6
Louisiana	290.5	282.8	252.3	30.5	7.7	5.9	1.8
Mississippi	355.8	336.9	262.2	74.7	18.9	11.6	7.3
North Carolina	554.3	536.3	436.2	100.1	18.0	.7	17.3
Oklahoma	47.0	47.0	47.0	.	.	.	.
South Carolina	464.6	458.8	374.9	83.9	5.8	.8	5.0
Tennessee	31.9	31.8	13.3	18.5	.1	.	.1
Texas	446.1	446.1	404.0	42.1	.	.	.
Virginia	246.3	242.8	181.5	61.3	3.5	.	3.5
All States	4,717.1	4,643.3	3,921.1	722.2	73.8	24.7	49.1

¹ Veneer cores, pole and piling trim, cull crossties, sawdust, secondary residues.

² Negligible.

Table 7. *Southern pulpwood production by Experiment Station territory, 1964*

Station and source of wood	All species	Pine	Hardwood
----- Standard cords -----			
Southeastern			
Roundwood	13,683,593	11,254,138	2,429,455
Residues	2,288,709	1,864,501	424,208
Total	15,972,302	13,118,639	2,853,663
Southern			
Roundwood	10,425,075	7,266,038	3,159,037
Residues	2,428,427	2,081,320	347,107
Total	12,853,502	9,347,358	3,506,144
All States			
Roundwood	24,108,668	18,520,176	5,588,492
Residues	4,717,136	3,945,821	771,315
Total	28,825,804	22,465,997	6,359,807

Table 8. *Round pulpwood production in Alabama, 1964*

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Autauga	7,545	4,574	2,971	Houston	15,963	12,062	3,901
Baldwin	199,968	151,327	48,641	Jackson	6,033	4,493	1,540
Barbour	50,873	42,837	8,036	Jefferson	31,739	30,610	1,129
Bibb	44,672	38,016	6,656	Lamar	9,749	9,663	86
Blount	15,121	15,062	59	Lauderdale	4,331	3,552	779
Bullock	27,866	26,110	1,756	Lawrence	449	449	
Butler	83,603	63,627	19,976	Lee	52,801	44,970	7,831
Calhoun	55,200	51,233	3,967	Limestone	3,135	3,135	
Chambers	41,364	34,207	7,157	Lowndes	41,863	31,146	10,717
Cherokee	34,042	24,726	9,316	Macon	7,266	7,208	58
Chilton	52,375	42,648	9,727	Madison	1,251	1,238	13
Choctaw	177,111	115,405	61,706	Marengo	90,157	56,350	33,807
Clarke	138,131	75,578	62,553	Marion	23,839	23,131	708
Clay	47,526	38,198	9,328	Marshall	12,037	11,726	311
Cleburne	45,018	41,948	3,070	Mobile	132,880	100,706	32,174
Coffee	42,200	31,450	10,750	Monroe	106,974	75,886	31,088
Colbert	6,230	6,026	204	Montgomery	85,859	54,655	31,204
Conecuh	76,105	55,412	20,693	Morgan	2,112	2,112	
Coosa	79,731	65,616	14,115	Perry	33,536	13,253	20,283
Covington	86,192	69,972	16,220	Pickens	45,187	37,617	7,570
Crenshaw	52,901	39,774	13,127	Pike	72,407	54,016	18,391
Cullman	11,785	11,775	10	Randolph	70,588	58,530	12,058
Dale	73,122	58,878	14,244	Russell	37,258	36,839	419
Dallas	35,134	22,612	12,522	St. Clair	37,237	35,515	1,722
De Kalb	22,031	16,477	5,554	Shelby	73,215	64,840	8,375
Elmore	46,952	42,697	4,255	Sumter	77,562	40,505	37,057
Escambia	98,175	76,244	21,931	Talladega	56,725	52,176	4,549
Etowah	31,144	26,444	4,700	Tallapoosa	82,872	66,158	16,714
Fayette	22,528	21,942	586	Tuscaloosa	65,780	59,809	5,971
Franklin	9,486	9,094	392	Walker	53,710	53,406	304
Geneva	20,984	18,138	2,846	Washington	139,329	102,558	36,771
Greene	39,389	21,354	18,035	Wilcox	120,248	71,786	48,462
Hale	38,456	21,680	16,776	Winston	9,260	9,046	214
Henry	47,006	34,486	12,520	All counties	3,463,318	2,644,713	818,605

Table 9. Round pulpwood production in Arkansas, 1964

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Arkansas	28		28	Lincoln	16,421	5,274	11,147
Ashley	186,815	127,822	58,993	Little River	15,734	12,226	3,508
Baxter		...	...	Logan	2,151	2,144	7
Benton		...	...	Lonoke	14	10	4
Boone		...	...	Madison			
Bradley	35,016	23,220	11,796	Marion			
Calhoun	64,560	54,136	10,424	Miller	23,939	17,803	6,136
Carroll		...	...	Mississippi	259		259
Chicot	24,344		24,344	Monroe			
Clark	67,357	44,179	23,178	Montgomery	31,309	21,659	9,650
Clay				Nevada	39,090	30,978	8,112
Cleburne	44	29	15	Newton	498	494	4
Cleveland	54,257	40,274	13,983	Ouachita	99,786	76,110	23,676
Columbia	95,745	77,075	18,670	Perry	1,465	1,385	80
Conway	253	253		Phillips	138	6	132
Craighead	3	3		Pike	39,469	26,283	13,186
Crawford		...	...	Poinsett			
Crittenden		...	...	Polk	3,730	1,068	2,662
Cross				Pope	17,663	15,243	2,420
Dallas	58,563	43,704	14,859	Prairie	2	2	
Desha	4,286		4,286	Pulaski	4,034	3,655	379
Drew	104,476	40,081	64,395	Randolph	9	6	3
Faulkner	13	9	4	St. Francis			
Franklin		...	...	Saline	33,767	23,505	10,262
Fulton		...	...	Scott	278	260	18
Garland	18,403	11,781	6,622	Searcy	3	3	
Grant	112,355	86,806	25,549	Sebastian			
Greene		...	...	Sevier	16,478	10,622	5,856
Hempstead	46,573	30,599	15,974	Sharp			
Hot Spring	43,346	30,616	12,730	Stone			
Howard	24,648	17,043	7,605	Union	132,481	106,974	25,507
Independence	9	9		Van Buren	272	266	6
Izard	199	47	152	Washington			
Jackson				White			
Jefferson	30,646	21,493	9,153	Woodruff			
Johnson	2,928	2,920	8	Yell	5,715	5,587	128
Lafayette	37,525	28,067	9,458	All counties	1,497,319	1,041,729	455,590
Lawrence							
Lee	222		222				

Table 10. Round pulpwood production in Florida, 1964

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Alachua	73,103	65,700	7,403	Lake	37,512	26,956	10,556
Baker	73,603	73,603		Lee	3,164	3,164	
Bay	52,572	52,147	425	Leon	34,036	33,006	1,030
Bradford	64,070	58,820	5,250	Levy	52,463	51,504	959
Brevard	706	706		Liberty	48,925	48,575	350
Broward				Madison	72,481	65,987	6,494
Calhoun	49,442	45,594	3,848	Manatee	4,304	4,304	
Charlotte	14,000	14,000		Marion	93,652	81,403	12,249
Citrus	2,997	2,755	242	Martin	2,226	2,226	
Clay	73,807	66,280	7,527	Monroe			
Collier	3,270	3,270		Nassau	173,209	151,168	22,041
Columbia	76,691	69,267	7,424	Okaloosa	27,165	23,974	3,191
Dade	2,884	2,884		Okeechobee	1,947	1,947	
De Soto	4,972	4,972		Orange	4,142	4,142	
Dixie	81,011	64,491	16,520	Osceola	8,405	8,405	
Duval	68,557	67,599	958	Palm Beach	406	406	
Escambia	66,380	60,808	5,572	Pasco	3,167	3,125	42
Flagler	62,006	58,506	3,500	Pinellas	129	129	
Franklin	29,432	29,327	105	Polk	35,295	35,295	
Gadsden	38,485	36,771	1,714	Putnam	75,441	64,170	11,271
Gilchrist	5,342	5,269	73	St. Johns	92,682	82,682	10,000
Glades	906	906		St. Lucie			
Gulf	19,860	19,678	182	Santa Rosa	89,479	86,640	2,839
Hamilton	66,597	57,204	9,393	Sarasota	899	899	
Hardee	6,049	6,049		Seminole	7,979	7,979	
Hendry	1,458	1,458		Sumter	4,788	4,788	
Hernando	16,564	11,540	5,024	Suwannee	21,491	19,544	1,947
Highlands	891	891		Taylor	170,450	154,466	15,984
Hillsborough	2,490	2,490		Union	81,153	77,304	3,849
Holmes	43,974	33,585	10,389	Volusia	73,832	69,618	4,214
Indian River	195	195		Wakulla	37,126	35,995	1,131
Jackson	59,875	40,186	19,689	Walton	55,840	45,769	10,071
Jefferson	35,890	30,820	5,070	Washington	38,644	29,717	8,927
Lafayette	31,918	25,801	6,117	All counties	2,482,429	2,238,859	243,570

Table 11. Round pulpwood production in Georgia, 1964

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
- - - - Standard cords - - - -				- - - - Standard cords - - - -			
Appling	95,763	94,096	1,667	Grady	23,386	19,858	3,528
Atkinson	53,625	50,967	2,658	Greene	55,604	44,457	11,147
Bacon	41,250	40,086	1,164	Gwinnett	28,886	28,886	
Baker	18,558	12,111	6,447	Habersham	6,395	5,758	637
Baldwin	24,231	21,575	2,656	Hall	27,019	27,019	
Banks	3,745	3,745		Hancock	26,730	24,589	2,141
Barrow	2,386	2,386		Haralson	28,750	26,741	2,009
Bartow	25,399	23,223	2,176	Harris	49,923	47,242	2,681
Ben Hill	26,318	23,777	2,541	Hart	1,000	1,000	
Berrien	18,377	13,105	5,272	Heard	23,609	23,338	271
Bibb	18,692	15,087	3,605	Henry	15,923	15,208	715
Bleckley	16,721	12,843	3,878	Houston	28,810	25,405	3,405
Brantley	71,298	62,508	8,790	Irwin	12,879	7,728	5,151
Brooks	19,989	14,915	5,074	Jackson	16,729	16,664	65
Bryan	77,068	70,904	6,164	Jasper	46,035	38,170	7,865
Bulloch	37,820	31,077	6,743	Jeff Davis	63,663	60,993	2,670
Burke	20,676	13,368	7,308	Jefferson	28,357	20,908	7,449
Butts	27,816	26,531	1,285	Jenkins	16,885	12,694	4,191
Calhoun	12,516	10,277	2,239	Johnson	24,733	20,106	4,627
Camden	128,236	108,505	19,731	Jones	65,556	58,754	6,802
Candler	15,247	12,387	2,860	Lamar	6,487	6,286	201
Carroll	42,065	41,182	883	Lanier	20,883	20,833	50
Catoosa	7,241	6,630	611	Laurens	68,231	57,141	11,090
Charlton	95,589	88,537	7,052	Lee	13,165	13,150	15
Chatham	22,876	12,476	10,400	Liberty	132,577	107,716	24,861
Chattahoochee	10,250	10,079	171	Lincoln	17,703	15,272	2,431
Chattooga	17,601	12,869	4,732	Long	66,847	59,877	6,970
Cherokee	26,825	26,494	331	Lowndes	25,796	25,796	
Clarke	3,202	2,990	212	Lumpkin	2,378	2,378	
Clay	18,326	14,042	4,284	McDuffie	36,890	32,491	4,399
Clayton	2,298	2,298		McIntosh	38,131	34,124	4,007
Clinch	157,443	156,648	795	Macon	47,740	43,782	3,958
Cobb	24,818	24,762	56	Madison	8,855	8,154	701
Coffee	59,126	53,681	5,445	Marion	27,273	25,697	1,576
Colquitt	20,023	18,175	1,848	Meriwether	35,841	34,426	1,415
Columbia	33,583	28,152	5,431	Miller	6,924	3,118	3,806
Cook	26,206	24,449	1,757	Mitchell	21,266	15,325	5,941
Coweta	34,380	33,957	423	Monroe	52,660	47,280	5,380
Crawford	21,410	18,801	2,609	Montgomery	20,997	19,454	1,543
Crisp	19,174	19,074	100	Morgan	21,266	18,341	2,925
Dade	606	533	73	Murray	14,031	13,384	647
Dawson	5,382	5,373	9	Muscogee	15,656	15,488	168
Decatur	29,999	22,418	7,581	Newton	24,177	22,879	1,298
Dc Kalb	1,743	1,743		Oconee	13,892	9,240	4,652
Dodge	103,084	95,160	7,924	Oglethorpe	17,739	15,714	2,025
Dooly	6,563	6,512	51	Paulding	29,949	26,209	3,740
Dougherty	39,467	37,111	2,356	Peach	19,854	19,205	649
Douglas	17,834	16,726	1,108	Pickens	13,461	13,091	370
Early	18,954	18,048	906	Pierce	52,166	50,741	1,425
Echols	155,799	155,749	50	Pike	1,698	1,544	154
Effingham	56,454	42,683	13,771	Polk	26,858	22,864	3,994
Elbert	42,440	40,078	2,362	Pulaski	14,301	13,830	471
Emanuel	37,359	33,452	3,907	Putnam	52,606	49,783	2,823
Evans	24,582	22,842	1,740	Quitman	29,573	27,462	2,111
Fannin	6,007	5,211	796	Rabun	4,086	103	3,983
Fayette	19,132	19,026	106	Randolph	20,038	17,516	2,522
Floyd	21,029	14,205	6,824	Richmond	9,338	6,142	3,196
Forsyth	11,780	11,767	13	Rockdale	3,636	3,636	
Franklin	6,853	6,677	176	Schley	24,117	22,527	1,590
Fulton	8,492	8,392	100	Screven	24,903	17,860	7,043
Gilmer	5,552	4,954	598	Seminole	12,298	4,075	8,223
Glassecock	2,308	2,219	89				
Glynn	71,893	52,551	19,342				
Gordon	15,814	14,480	1,334				

Table 11. Round pulpwood production in Georgia, 1964 (Continued)

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Spalding	9,899	9,577	322	Union	2,943	2,319	624
Stephens	7,973	7,813	160	Upson	43,473	39,140	4,333
Stewart	37,390	37,062	328	Walker	14,133	12,043	2,090
Sumter	24,923	24,519	404	Walton	4,056	3,995	61
Talbot	68,415	59,944	8,471	Ware	145,659	143,338	2,321
Taliaferro	10,114	9,464	650	Warren	26,502	22,854	3,648
Tattnall	51,590	44,806	6,784	Washington	55,310	44,494	10,816
Taylor	34,832	33,386	1,446	Wayne	166,400	157,791	8,609
Telfair	60,160	49,134	11,026	Webster	24,235	24,128	107
Terrell	12,460	12,059	401	Wheeler	45,539	38,571	6,968
Thomas	33,451	24,547	8,904	White	4,642	4,642	
Tift	5,776	4,226	1,550	Whitfield	14,497	13,973	524
Toombs	50,988	44,262	6,726	Wilcox	43,680	41,688	1,992
Towns				Wilkes	36,740	30,399	6,341
Treutlen	25,101	21,951	3,150	Wilkinson	76,988	66,438	10,550
Troup	72,523	68,950	3,573	Worth	9,274	8,374	900
Turner	18,398	17,641	757				
Twiggs	49,657	46,470	3,187	All counties	5,082,173	4,556,129	526,044

Table 12. Round pulpwood production in Louisiana, 1964

Parish	All species	Pine	Hardwood	Parish	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Acadia	2,616	2,096	520	Madison	10,258		10,258
Allen	52,583	40,375	12,208	Morehouse	62,066	33,338	28,728
Ascension	626		626	Natchitoches	63,096	41,944	21,152
Assumption				Orleans			
Avoyelles	2,958	2,938	20	Ouachita	52,328	36,419	15,909
Beauregard	29,673	22,965	6,708	Plaquemines			
Bienville	132,546	108,239	24,307	Pointe Coupee	8,202		8,202
Bossier	84,011	56,411	27,600	Rapides	77,830	60,782	17,048
Caddo	31,316	21,818	9,498	Red River	27,170	16,158	11,012
Calcasieu	11,874	7,937	3,937	Richland	48		48
Caldwell	31,637	27,629	4,008	Sabine	95,171	66,525	28,646
Cameron				St. Bernard			
Catahoula	14,258	5,475	8,783	St. Charles			
Claiborne	89,925	75,491	14,434	St. Helena	35,275	29,252	6,023
Concordia	9,245		9,245	St. James			
De Soto	73,665	46,061	27,604	St. John the Baptist			
East Baton Rouge	4,114	183	3,931	St. Landry	11,470	348	11,122
East Carroll	15,002	15	14,987	St. Martin	12,515		12,515
East Feliciana	12,676	7,439	5,237	St. Mary			
Evangeline	9,700	6,310	3,390	St. Tammany	41,757	41,024	733
Franklin	754	414	340	Tangipahoa	54,914	49,306	5,608
Grant	43,650	35,973	7,677	Tensas	10,668		10,668
Iberia				Terrebonne			
Iberville	9		9	Union	207,008	167,091	39,917
Jackson	102,908	89,304	13,604	Vermilion			
Jefferson				Vernon	35,584	25,004	10,580
Jefferson Davis	1,237	406	831	Washington	97,644	90,772	6,872
Lafayette				Webster	63,153	45,198	17,955
Lafourche				West Baton Rouge	238		238
La Salle	52,026	46,171	5,855	West Carroll	211	145	66
Lincoln	81,643	62,849	18,794	West Feliciana	6,573	416	6,157
Livingston	99,954	91,370	8,584	Winn	145,267	122,450	22,817
				All parishes	2,109,052	1,584,041	525,011

Table 13. Round pulpwood production in Mississippi, 1964

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
- - - - Standard cords - - - -				- - - - Standard cords - - - -			
Adams	15,862	3,999	11,863	Lincoln	36,668	19,506	17,162
Alcorn	7,024	5,931	1,093	Lowndes	7,534	4,616	2,918
Amite	22,130	11,823	10,307	Madison	10,957	3,526	7,431
Attala	21,812	5,492	16,320	Marion	80,514	41,396	39,118
Benton	2,621	1,592	1,029	Marshall	6,911	4,668	2,243
Bolivar	5,219		5,219	Monroe	1,246	874	372
Calhoun	5,087	4,305	782	Montgomery	4,645	1,095	3,550
Carroll	8,118	1,112	7,006	Neshoba	23,733	10,858	12,875
Chickasaw	14,424	11,703	2,721	Newton	34,140	16,383	17,757
Choctaw	16,644	9,249	7,395	Noxubee	18,213	12,970	5,243
Claiborne	38,748	6,808	31,940	Oktibbeha	8,103	6,347	1,756
Clarke	87,747	48,543	39,204	Panola	3,668		3,668
Clay	13,361	9,887	3,474	Pearl River	35,903	21,210	14,693
Coahoma	80		80	Perry	41,172	33,208	7,964
Copiah	40,064	19,223	20,841	Pike	30,362	18,870	11,492
Covington	25,734	6,757	18,977	Pontotoc	6,441	4,343	2,098
De Soto				Prentiss	10,316	8,819	1,497
Forrest	28,354	15,660	12,694	Quitman	1,149	80	1,069
Franklin	28,549	17,652	10,897	Rankin	33,447	13,406	20,041
George	45,967	33,556	12,411	Scott	18,385	7,793	10,592
Greene	72,237	44,906	27,331	Sharkey	4,634		4,634
Grenada	4,285	103	4,182	Simpson	33,970	15,054	18,916
Hancock	42,714	35,349	7,365	Smith	16,589	3,308	13,281
Harrison	21,343	17,574	3,769	Stone	36,264	23,737	12,527
Hinds	29,594	10,978	18,616	Sunflower	161		161
Holmes	29,421	1,939	27,482	Tallahatchie	1,619	176	1,443
Humphreys	4,065	23	4,042	Tate			
Issaquena	5,170		5,170	Tippah	10,486	9,170	1,316
Itawamba	12,046	10,927	1,119	Tishomingo	29,235	24,819	4,416
Jackson	49,784	43,302	6,482	Tunica	6,039		6,039
Jasper	50,590	22,993	27,597	Union	6,929	5,895	1,034
Jefferson	30,212	12,820	17,392	Walthall	28,951	11,941	17,910
Jefferson Davis	8,727	1,964	6,763	Warren	20,915	1,138	19,777
Jones	42,666	11,034	31,632	Washington	10,938		10,938
Kemper	29,447	24,051	5,396	Wayne	59,669	35,993	23,676
Lafayette	17,109	13,058	4,051	Webster	16,397	12,175	4,222
Lamar	24,860	8,336	16,524	Wilkinson	18,457	5,505	12,952
Lauderdale	67,059	44,667	22,392	Winston	35,595	17,052	18,543
Lawrence	26,967	10,976	15,991	Yalobusha	14,485	8,008	6,477
Leake	20,530	6,012	14,518	Yazoo	15,213	416	14,797
Lee	4,525	4,150	375				
Leflore	933		933	All counties	1,801,882	941,909	859,973

Table 14. Round pulpwood production in North Carolina, 1964

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Alamance	3,209	3,088	121	Lee	10,046	6,731	3,315
Alexander	4,428	4,149	279	Lenoir	8,270	8,233	37
Alleghany	12	10	2	Lincoln	5,204	3,787	1,417
Anson	63,832	43,993	19,839	McDowell	19,297	10,352	8,945
Ashe				Macon	12,198	1,284	10,914
Avery	270		270	Madison	4,232	2,277	1,955
Beaufort	100,304	83,269	17,035	Martin	27,455	22,798	4,657
Bertie	39,926	28,898	11,028	Mecklenburg	31,733	21,994	9,739
Bladen	41,106	31,121	9,985	Mitchell	5,173		5,173
Brunswick	92,638	81,857	10,781	Montgomery	6,301	4,390	1,911
Buncombe	39,515	13,770	25,745	Moore	29,407	25,711	3,696
Burke	17,088	12,016	5,072	Nash	19,140	15,289	3,851
Cabarrus	4,135	3,244	891	New Hanover	7,191	6,671	520
Caldwell	8,175	5,783	2,392	Northampton	13,511	12,444	1,067
Camden	425	120	305	Onslow	90,643	81,324	9,319
Carteret	17,803	17,623	180	Orange	4,598	4,260	338
Caswell	1,190	1,030	160	Pamlico	17,273	16,481	792
Catawba	1,373	1,117	256	Pasquotank	15,461	14,695	766
Chatham	55,057	35,985	19,072	Pender	76,128	54,937	21,191
Cherokee	30,814	21,488	9,326	Perquimans	11,662	7,011	4,651
Chowan	10,788	7,654	3,134	Person	10,406	10,220	186
Clay				Pitt	14,436	12,322	2,114
Cleveland	12,318	10,200	2,118	Polk	12,002	4,740	7,262
Columbus	84,141	61,273	22,868	Randolph	4,854	3,675	1,179
Craven	40,371	35,541	4,830	Richmond	28,620	21,398	7,222
Cumberland	40,077	30,203	9,874	Robeson	27,441	19,706	7,735
Currituck	3,697	2,462	1,235	Rockingham	12,721	12,347	374
Dare	2,618	2,495	123	Rowan	7,532	5,816	1,716
Davidson	7,428	7,036	392	Rutherford	28,965	16,319	12,646
Davie	4,633	3,688	945	Sampson	65,668	55,813	9,855
Duplin	40,406	34,317	6,089	Scotland	11,997	8,265	3,732
Durham	26,551	23,959	2,592	Stanly	7,594	7,105	489
Edgecombe	7,479	5,469	2,010	Stokes	3,378	3,221	157
Forsyth	7,701	6,968	733	Surry	5,887	5,670	217
Franklin	62,447	46,967	15,480	Swain	7,816	3,781	4,035
Gaston	17,839	12,962	4,877	Transylvania	13,864	1,845	12,019
Gates	23,391	12,435	10,956	Tyrrell	14,106	11,375	2,731
Graham	1,449	645	804	Union	26,884	20,763	6,121
Granville	18,761	17,259	1,502	Vance	7,288	5,564	1,724
Greene	1,068	1,068		Wake	46,631	36,989	9,642
Guilford	10,125	9,927	198	Warren	38,046	35,024	3,022
Halifax	56,114	43,621	12,493	Washington	22,333	9,170	13,163
Harnett	9,143	5,533	3,610	Watauga	88		88
Haywood	9,018	2,172	6,846	Wayne	13,452	11,119	2,333
Henderson	18,786	5,458	13,328	Wilkes	8,487	7,690	797
Hertford	32,325	15,674	16,651	Wilson	11,842	7,446	4,396
Hoke	3,047	2,472	575	Yadkin	6,502	5,954	548
Hyde	22,433	14,340	8,093	Yancey	239		239
Iredell	15,498	12,860	2,638	All counties	2,070,181	1,527,749	542,432
Jackson	38,355	1,109	37,246				
Johnston	16,751	11,154	5,597				
Jones	30,121	28,261	1,860				

Table 15. *Round pulpwood production in Oklahoma, 1964*

County	All species	Pine	Hardwood
----- Standard cords -----			
Cherokee	1,663		1,663
Delaware	1,664		1,664
Garvin	812		812
McCurtain	14,518	3,904	10,614
Mayes	1,664		1,664
Rogers	1,663		1,663
Wagoner	1,664		1,664
All counties	23,648	3,904	19,744

Table 16. *Round pulpwood production in South Carolina, 1964*

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Abbeville	40,669	35,271	5,398	Jasper	61,280	50,950	10,330
Aiken	64,223	49,429	14,794	Kershaw	120,304	93,593	26,711
Allendale	33,093	22,182	10,911	Lancaster	63,064	48,840	14,224
Anderson	32,696	27,155	5,541	Laurens	59,256	50,757	8,499
Bamberg	23,473	13,201	10,272	Lee	20,736	11,863	8,873
Barnwell	36,924	32,040	4,884	Lexington	26,794	22,321	4,473
Beaufort	14,083	7,242	6,841	McCormick	25,306	23,503	1,803
Berkely	92,279	63,028	29,251	Marion	16,412	11,100	5,312
Calhoun	9,243	7,528	1,715	Marlboro	26,774	11,882	14,892
Charleston	59,452	40,164	19,288	Newberry	95,687	86,407	9,280
Cherokee	13,416	12,157	1,259	Oconee	26,052	19,571	6,481
Chester	77,827	64,213	13,614	Orangeburg	24,836	15,345	9,491
Chesterfield	66,921	43,628	23,293	Pickens	5,421	4,920	501
Clarendon	29,123	21,010	8,113	Richland	60,801	47,707	13,094
Colleton	64,673	42,060	22,613	Saluda	38,956	26,915	12,041
Darlington	22,523	12,699	9,824	Spartanburg	29,908	23,070	6,838
Dillon	20,814	16,463	4,351	Sumter	32,047	24,642	7,405
Dorchester	46,638	28,646	17,992	Union	78,908	72,210	6,698
Edgefield	81,525	65,138	16,387	Williamsburg	55,697	37,333	18,364
Fairfield	121,301	108,389	12,912	York	60,566	45,587	14,979
Florence	33,948	20,690	13,258	All counties	2,164,989	1,657,783	507,206
Georgetown	100,689	72,400	28,289				
Greenville	18,275	15,175	3,100				
Greenwood	42,399	37,982	4,417				
Hampton	46,994	36,542	10,452				
Horry	42,983	34,835	8,148				

Table 17. Round pulpwood production in Tennessee, 1964

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Anderson	7,109	2,943	4,166	Lauderdale			
Bedford				Lawrence			
Benton	1,146	729	417	Lewis	35	35	
Bledsoe	5,476	3,969	1,507	Lincoln			
Blount	17,126	12,115	5,011	Loudon	2,933	1,126	1,807
Bradley	13,785	10,061	3,724	McMinn	22,238	16,141	6,097
Campbell	7,099	5,040	2,059	McNairy	12,555	9,062	3,493
Cannon				Macon			
Carroll	1,731	1,110	621	Madison	1,538	1,020	518
Carter	9,110	1,213	7,897	Marion	386	386	
Cheatham				Marshall			
Chester	3,794	3,427	367	Maury			
Claiborne	1,149	1,091	58	Meigs	12,550	7,584	4,966
Clay				Monroe	24,761	11,543	13,218
Cocke	10,685	8,920	1,765	Montgomery			
Coffee				Moore			
Crockett				Morgan	29,308	5,883	23,425
Cumberland	31,346	5,901	25,445	Obion			
Davidson				Overton			
Decatur	2,147	1,481	666	Perry	480	22	458
De Kalb				Pickett			
Dickson				Polk	19,191	13,794	5,397
Dyer	25		25	Putnam	1,580	1,092	488
Fayette	179	110	69	Rhea	13,600	5,636	7,964
Fentress	7,054	5,270	1,784	Roane	8,077	1,780	6,297
Franklin				Robertson			
Gibson	70	70		Rutherford			
Giles				Scott	12,366	4,349	8,017
Grainger	2,400	1,998	402	Sequatchie	3,046	1,605	1,441
Greene	1,806		1,806	Sevier	5,552	5,217	305
Grundy	3,233	3,116	117	Shelby	764		764
Hamblen	36		36	Smith			
Hamilton	11,987	7,020	4,967	Stewart			
Hancock	165		165	Sullivan	10,381		10,381
Hardeman	6,582	5,031	1,551	Sumner			
Hardin	3,919	2,813	1,106	Tipton	5,582		5,582
Hawkins	7,984	1,861	6,123	Trousdale			
Haywood				Unicoi	7,345	1,213	6,132
Henderson	4,534	3,987	547	Union	6,364	5,249	1,115
Henry	30	30		Van Buren			
Hickman				Warren			
Houston				Washington	8,268	5,275	2,993
Humphreys				Wayne	535	498	37
Jackson				Weakley	1,210		1,210
Jefferson	183	79	104	White	866		866
Johnson	4,126		4,126	Williamson			
Knox	7,983	4,471	3,512	Wilson			
Lake				All counties	385,480	192,366	193,114

Table 18. *Round pulpwood production in Texas, 1964*

County	All species	Pine	Hardwood
- - - - Standard cords - - - -			
Anderson	1,229	1,152	77
Angelina	61,468	51,609	9,859
Austin	208		208
Bowie	17,655	15,577	2,078
Brazos	268		268
Burleson	85		85
Camp	1,146	934	212
Cass	41,701	36,127	5,574
Chambers	1,769	963	806
Cherokee	32,698	32,675	23
Colorado	199		199
Falls	156		156
Fort Bend	194		194
Freestone	540		540
Gregg	9	9	
Grimes	8,851	8,383	468
Hardin	44,478	20,190	24,288
Harris	30,791	21,287	9,504
Harrison	20,135	12,491	7,644
Houston	36,770	30,515	6,255
Jasper	68,238	44,830	23,408
Jefferson	1,277	456	821
Lamar	885		885
Leon	1,762		1,762
Liberty	70,055	44,212	25,843
Marion	19,445	12,134	7,311
Montgomery	64,719	45,826	18,893
Morris	3,072	2,496	576
Nacogdoches	45,835	42,653	3,182
Newton	49,924	30,083	19,841
Orange	19,862	11,277	8,585
Panola	46,619	34,622	11,997
Polk	98,975	75,091	23,884
Robertson	107		107
Rusk	8,938	8,894	44
Sabine	36,393	32,467	3,926
San Augustine	49,849	32,573	17,276
San Jacinto	20,448	14,248	6,200
Shelby	49,646	42,572	7,074
Smith	307	307	
Titus	35	3	32
Trinity	63,262	57,072	6,190
Tyler	58,678	43,711	14,967
Upshur	22,096	20,941	1,155
Van Zandt	425		425
Walker	35,931	26,241	9,690
Waller	756	398	358
Wood	6,487	2,357	4,130
All counties	1,144,376	857,376	287,000

Table 19. Round pulpwood production in Virginia, 1964

County ¹	All species	Pine	Hardwood	County ¹	All species	Pine	Hardwood
--- Standard cords ---				--- Standard cords ---			
Accomack	19,430	19,425	5	King William	26,618	24,453	2,165
Albemarle	39,312	23,727	15,585	Lancaster	7,580	6,799	781
Alleghany	45,304	8,626	36,678	Lee	2,384	3	2,381
Amelia	45,259	39,306	5,953	Loudoun	1,095	1,095	
Amherst	54,562	20,698	33,864	Louisa	21,510	16,020	5,490
Appomattox	56,216	22,366	33,850	Lunenburg	15,695	12,567	3,128
Arlington	19	19		Madison	1,750	1,660	90
Augusta	16,462	4,537	11,925	Mathews	2,422	1,892	530
Bath	35,184	3,767	31,417	Mecklenburg	27,359	26,034	1,325
Bedford	44,793	25,610	19,183	Middlesex	14,359	13,593	766
Bland	886	691	195	Montgomery	4,049	4,043	6
Botetourt	24,853	7,801	17,052	Nansemond	15,682	7,630	8,052
Brunswick	59,345	42,254	17,091	Nelson	35,292	13,360	21,932
Buchanan	3	3		New Kent	27,295	23,221	4,074
Buckingham	83,708	47,689	36,019	Norfolk	1,832	1,726	106
Campbell	50,809	33,088	17,721	Northampton	956	869	87
Caroline	17,302	16,896	406	Northumberland	3,767	3,390	377
Carroll	5,639	5,600	39	Nottoway	30,099	26,059	4,040
Charles City	22,073	16,669	5,404	Orange	9,979	8,382	1,597
Charlotte	33,774	27,700	6,074	Page	386	261	125
Chesterfield	41,385	32,274	9,111	Patrick	6,829	6,795	34
Clarke	4,379	4,169	210	Pittsylvania	45,192	40,028	5,164
Craig	16,567	3,833	12,734	Powhatan	29,956	26,032	3,924
Culpeper	6,920	6,912	8	Prince Edward	47,948	39,622	8,326
Cumberland	23,417	17,431	5,986	Prince George	52,959	42,288	10,671
Dickenson	92	3	89	Prince William	11,896	11,294	602
Dinwiddie	57,872	47,740	10,132	Princess Anne	640	243	397
Elizabeth City	6	6		Pulaski	2,845	2,845	
Essex	20,182	19,657	525	Rappahannock			
Fairfax	4,101	3,932	169	Richmond	24,000	23,979	21
Fauquier	13,508	13,324	184	Roanoke	2,620	1,359	1,261
Floyd	3,262	3,262		Rockbridge	51,666	8,320	43,346
Fluvanna	22,302	15,361	6,941	Rockingham	15,491	11,655	3,836
Franklin	23,892	18,957	4,935	Russell	1,231		1,231
Frederick	7,136	5,927	1,209	Scott	11,674	4	11,670
Giles	170	124	46	Shenandoah	10,271	6,936	3,335
Gloucester	25,152	23,127	2,025	Smyth	2,072	8	2,064
Goochland	25,986	23,125	2,861	Southampton	52,254	28,669	23,585
Grayson	33		33	Spotsylvania	23,015	21,206	1,809
Greene	3,749	2,860	889	Stafford	9,291	7,474	1,817
Greensville	33,572	25,695	7,877	Surry	23,305	16,696	6,609
Halifax	13,970	12,978	992	Sussex	54,899	29,427	25,472
Hanover	7,758	7,166	592	Tazewell			
Henrico	5,000	4,016	984	Warren	2,989	2,347	642
Henry	16,600	16,386	214	Warwick	1,236	1,097	139
Highland	9,012	502	8,510	Washington	7,882		7,882
Isle of Wight	14,867	7,999	6,868	Westmoreland	8,586	8,586	
James City	11,366	10,623	743	Wise	10,650	9	10,641
King and Queen	44,964	41,466	3,498	Wythe	3,419	1,892	1,527
King George	2,592	2,542	50	York	4,151	3,881	270
				All counties	1,883,821	1,273,618	610,203

¹ Includes independent cities.

Table 20. Mills using southern pulpwood in 1964, by process and capacity¹

Location	Map code ²	Company	Pulping capacity, 24 hours ³				
			All processes	Sulfate	Groundwood and other mechanical	Semi- chemical	Soda and sulfite
----- Tons -----							
ALABAMA							
Jackson	(1)	Allied Paper Corp.	300	300	.	...	.
Brewton	(2)	Container Corp. of America	600	600	.	...	.
Demopolis	(3)	Gulf States Paper Corp.	400	400	.	...	.
Tusealoosa	(4)	Gulf States Paper Corp.	450	450	...	.	.
Mobile	(5)	International Paper Co.	1,315	1,015	300	.	.
Coosa Pines	(6)	Kimberly-Clark Corp., Coosa River Newsprint Div.	1,006	366	640	.	.
Naheola	(7)	Marathon Southern Corp.	490	490	.	...	.
Mobile	(8)	National Gypsum Co.	300	.	150	150	.
Mobile	(9)	The Ruberoid Co.	48	.	48	.	.
Mobile	(10)	Scott Paper Co.	900	900	.	...	...
Total			5,809	4,521	1,138	150	.
ARKANSAS							
Pine Bluff	(11)	Dierks Paper Co.	150	150	...	.	...
Crossett	(12)	Georgia-Pacific Corp. Crossett Division—Paper	815	815	...	.	...
Camden	(13)	International Paper Co.	625	625	...	.	...
Pine Bluff	(14)	International Paper Co.	1,300	900	400	.	.
Total			2,890	2,490	400	.	.
FLORIDA							
Foley	(15)	The Buckeye Cellulose Corp.	910	910	...	.	.
Fernandina Beach	(16)	Container Corp. of America	700	700	.	...	.
Palatka	(17)	Hudson Pulp and Paper Corp.	850	850	...	.	.
Panama City	(18)	International Paper Co.	1,230	1,230	.	...	.
Jacksonville	(19)	Owens-Illinois, Forest Products Div.	500	500	.	.	.
Fernandina Beach	(20)	Rayonier, Inc.	375	.	...	.	375
Port St. Joe	(21)	St. Joe Paper Co.	1,200	1,200	...	.	.
Jacksonville	(22)	St. Regis Paper Co.	1,400	1,400	...	.	.
Pensacola	(23)	St. Regis Paper Co.	800	800	...	.	.
Total			7,965	7,590	.	.	375
GEORGIA							
Macon	(24)	Armstrong Cork Co.	400	.	400	.	.
Brunswick	(25)	Brunswick Pulp and Paper Co.	1,120	1,120	...	.	.
Savannah	(26)	Certain-teed Products Corp.	65	.	65	.	.
Augusta	(27)	Continental Can Co., Inc.	350	225	.	125	.
Port Wentworth	(28)	Continental Can Co., Inc.	600	600	...	.	.
Macon	(29)	Georgia Kraft Co., Macon Div.	700	700	.	.	.
Rome	(30)	Georgia Kraft Co., Rome Div.	1,375	1,375	.	...	.
St. Marys	(31)	Gilman Paper Co., St. Marys Kraft Div.	950	950	.	.	.
Cedar Springs	(32)	Great Southern Land and Paper Co.	700	700	.	.	.
Valdosta	(33)	Owens-Illinois, Forest Products Div.	760	760	.	.	.
Jesup	(34)	Rayonier, Inc.	675	675	...	.	.
Savannah	(35)	The Ruberoid Co.	48	.	48	.	.
Savannah	(36)	Union Bag-Camp Paper Corp.	2,680	2,280	...	400	.
Total			10,423	9,385	513	525	.
ILLINOIS							
Alton	(37)	Alton Box Board Co.	250	.	.	250	.
East St. Louis	(38)	Certain-teed Products Corp.	85	.	85	.	.
Wilmington	(39)	Lehon Co.	25	.	.	25	.
Total			360	.	85	275	.
LOUISIANA							
Shreveport	(40)	Bird and Son, Inc.	60	.	...	60	...
Elizabeth	(41)	Calcasieu Paper Co., Inc.	240	240	...	.	.
Hodge	(42)	Continental Can Co., Inc.	650	500	.	150	.
Bogalusa	(43)	Crown Zellerbach Corp.	1,435	1,300	...	135	.
Bastrop	(44)	International Paper Co. (Bastrop Mill)	535	.	.	535	.
Bastrop	(45)	International Paper Co. (Louisiana Mill)	800	800	...	.	.
Springhill	(46)	International Paper Co.	1,625	1,625	.	.	.
West Monroe	(47)	Olin Mathieson Chemical Corp.	650	650	.	.	.
St. Francisville	(48)	St. Francisville Paper Co.	235	.	235	.	.
New Orleans	(49)	Southern Johns-Manville Products Corp.	60	.	60	.	.
Total			6,290	5,115	295	880	.
MARYLAND							
Luke	(50)	West Virginia Pulp and Paper Co.	600	600	...	.	.
Total			600	600	.	.	.

Table 20. Mills using southern pulpwood in 1964, by process and capacity ¹ (Continued)

Location	Map code ²	Company	Pulping capacity, 24 hours ³				
			All processes	Sulfate	Groundwood and other mechanical	Semi- chemical	Soda and sulfite
			----- Tons -----				
MISSISSIPPI							
Meridian	(51)	The Flintkote Co.	133		133		
Moss Point	(52)	International Paper Co.	660	660			
Natchez	(53)	International Paper Co.	950	950			
Natchez	(54)	Johns-Manville Products Corp.	350		230	120	
Meridian	(55)	Kroehler Mfg. Co. of Miss., Inc. ⁴	80		80		
Laurel	(56)	Masonite Corp.	1,200		1,200		
Greenville	(57)	United States Gypsum Co.	200		200		
Total			3,573	1,610	1,843	120	
NORTH CAROLINA							
Roanoke Rapids	(58)	Albemarle Paper Mfg. Co.	850	850			
Canton	(59)	Champion Papers, Inc.	980	930		50	
Sylva	(60)	The Mead Corp.	275			275	
Acme	(61)	Riegel Paper Corp.	920	920			
Plymouth	(62)	Weyerhaeuser Co., N. C. Div.	1,500	1,150		350	
Total			4,525	3,850		675	
OHIO							
Cincinnati	(63)	The Philip Carey Mfg. Co.	200		200		
Chillicothe	(64)	The Mead Corp.	500				500
Total			700		200		500
OKLAHOMA							
Pryor	(65)	Bestwall Gypsum Co.	45		45		
Craig	(66)	Dierks Forests, Inc.	50		50		
Total			95		95		
PENNSYLVANIA							
Roaring Spring	(67)	D. M. Bare Paper Co.	120	120			
Philadelphia	(68)	Barrett Div., Allied Chemical Corp.	160		160		
York	(69)	Certain-teed Products Corp.	75			75	
Spring Grove	(70)	P. H. Glatfelter Co.	215	215			
Erie	(71)	Hammermill Paper Co.	400			50	350
Total			970	335	160	125	350
SOUTH CAROLINA							
Catawba	(72)	Bowaters Carolina Corp.	500	400	100		
Georgetown	(73)	International Paper Co.	2,130	1,650		480	
Hartsville	(74)	Sonoco Products Co.	375			375	
Florence	(75)	South Carolina Industries, Inc.	400	400			
Charleston	(76)	West Virginia Pulp and Paper Co.	1,550	1,290		260	
Total			4,955	3,740	100	1,115	
TENNESSEE							
Calhoun	(77)	Bowaters Southern Paper Corp.	1,475	450	850	175	
Harriman	(78)	The Mead Corp.	170			170	
Kingsport	(79)	The Mead Corp.	225				225
Knoxville	(80)	Southern Extract Co.	150			150	
Counce	(81)	Tennessee River Pulp and Paper Co.	650	650			
Total			2,670	1,100	850	495	225
TEXAS							
Pasadena	(82)	Champion Papers, Inc.	790	725	65		
Evadale	(83)	East Texas Pulp and Paper Co.	425	425			
Dallas	(84)	The Ruberoid Co.	40		40		
Lufkin	(85)	Southland Paper Mills, Inc.	1,250	400	850		
Diboll	(86)	Temple Industries, Fiber Products Div.	130			130	
Total			2,635	1,550	955	130	
VIRGINIA							
West Point	(87)	The Chesapeake Corp. of Virginia	1,050	1,050			
Hopewell	(88)	Continental Can Co., Inc.	1,000	830		170	
Lynchburg	(89)	The Mead Corp.	175			175	
Big Island	(90)	Owens-Illinois, Forest Products Div.	285			285	
Jarratt	(91)	Southern Johns-Manville Products Corp.	200		200		
Franklin	(92)	Union Bag-Camp Paper Corp.	690	690			
Covington	(93)	West Virginia Pulp and Paper Co.	1,300	1,050		250	
Total			4,700	3,620	200	880	
All States			59,160	45,506	6,834	5,370	1,450

¹ In 1964, two mills were under construction in the South. One, owned by Cox Newsprint, Inc., is at Augusta, Georgia (No. 94 in fig. 7). It will be completed in 1966 and is designed for a capacity of 280 tons daily. The other, at St. Francisville, Louisiana (No. 95), is owned by Crown Zellerbach Corporation. It will be completed in 1965 and will have a daily capacity of 500 tons.

² Corresponds to numbers at mill locations in figure 7.

³ *Southern Pulp and Paper Manufacturer*, vol. 27, No. 10 (Oct. 1, 1964); and other sources.

⁴ Operates exclusively on secondary wood residues.

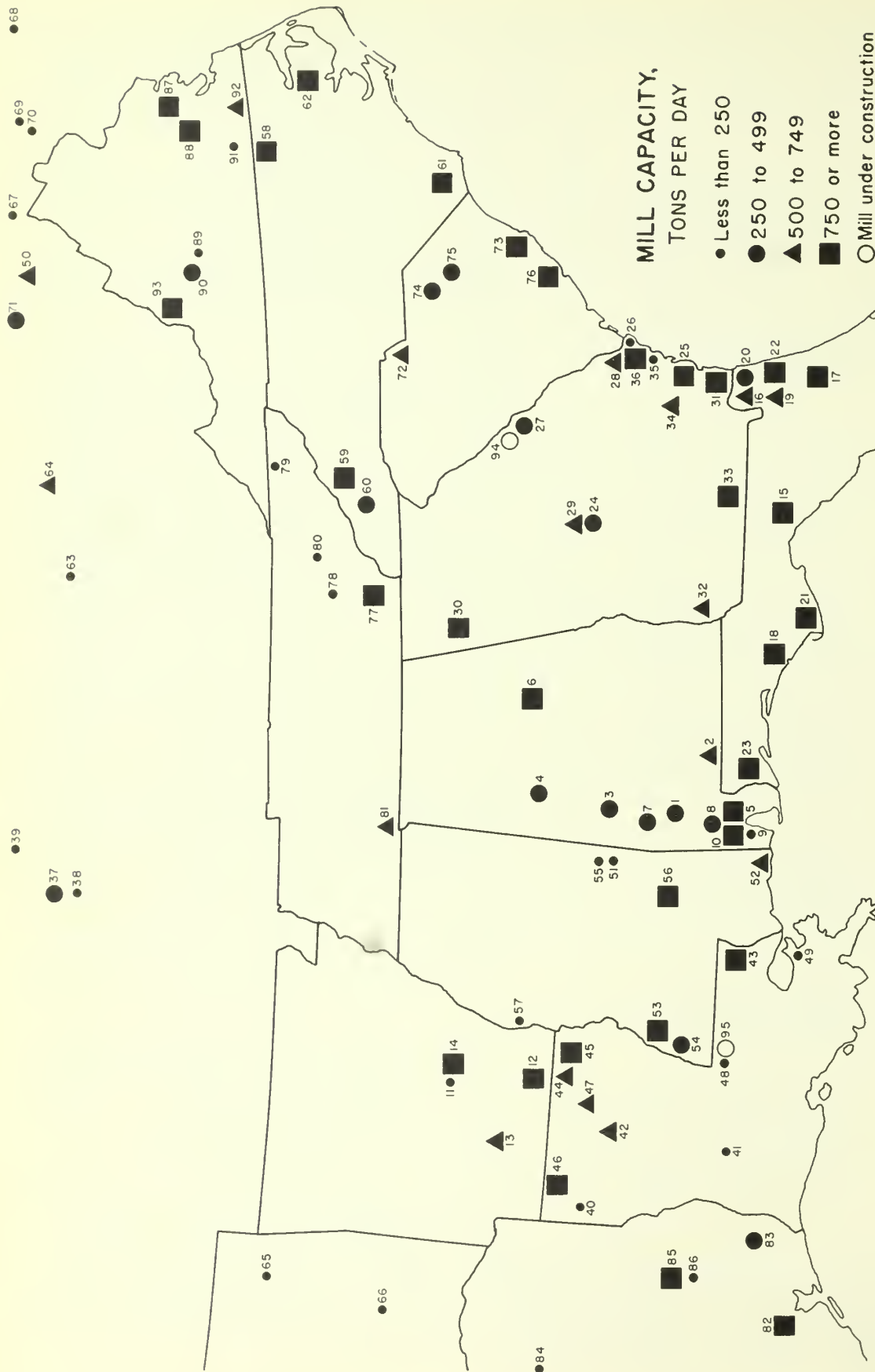


Figure 7. Mills using southern pulpwood in 1964, and those under construction. Numbers at mill locations correspond to numbers in table 20.

U. S. Forest Service Resource Bulletin SO-6

SOUTHERN FOREST EXPERIMENT STATION

New Orleans, Louisiana

Forest Service, U.S. Department of Agriculture

1965

LOUISIANA FORESTS



Foreword

This report describes the principal findings of the third Forest Survey of Louisiana, completed in 1964 by the Southern Forest Experiment Station. The survey, which was undertaken as one phase of the continuing nationwide inventory being conducted by the U. S. Forest Service, provides up-to-date information on the kind, amount, and condition of forest resources; the industries they support; and the possibilities for improving wood production. Comparison with the previous survey of 1954 helps to clarify timber trends.

Generous assistance from public and private organizations made it possible to keep the field work for the new inventory ahead of the schedule that could have been maintained with regularly allotted funds. The very material aid of the organizations listed below, and of the individuals in them, is gratefully acknowledged:

Louisiana Forestry Commission
Louisiana Wild Life and Fisheries Commission
The Louisiana Forestry Association
Frank Bennett & Associates
Calcasieu Paper Company, Inc.
Chicago Mill and Lumber Company
Central Louisiana Electric Company, Inc.
Continental Can Company, Inc.
Crown Zellerbach Corporation
Deltic Farm & Timber Company, Inc.
Georgia-Pacific Corporation
Hillyer Deutsch Edwards, Inc.
International Paper Company
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LOUISIANA FORESTS

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U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana

1965

*Photos by
Louisiana Forestry Commission*

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Figure 1. Forest Survey regions in Louisiana.

Highlights

The total amount of forest land in Louisiana is virtually the same today as it was a decade ago. But its distribution has changed noticeably. In the Delta, for example, forest acreage is still declining; between 1954 and 1964, it dropped some 7 percent, thus closely paralleling trends in the Delta sections of neighboring Arkansas and Mississippi. Outside the Delta, forest acreage has increased some 3 percent since 1954. Modest losses in the southeast and southwest regions have been overshadowed by woodland expansion in the northwest (fig. 1).

Fire protection, natural reproduction, planting, and direct seeding have all helped to upgrade the deforested and poorly stocked areas in the State. The reduction in denuded acreage is especially evident in the southwestern parishes, which formerly had a vast expanse of cutover longleaf pine acreage. Today only 2 percent of the forest area in this region is non-stocked in the sense that it supports less than 10 percent in growing stock.

Timber volumes found on the millions of forest acres in Louisiana have also changed markedly since the midfifties. Softwood now totals 29 billion board feet, having gained some 43 percent since 1954. This is a continuation of earlier trends. Pine makes up 85 percent, 25 billion board feet, of softwood timber. The rest is largely cypress but includes some eastern redcedar.

All sections of the State have shared in the softwood gain. The southwest has some 50 percent more softwood sawtimber than in 1954. The southeast and northwest regions have a third more. Cypress has gained in the Delta.

The hardwood situation is much less encouraging. Hardwood has declined over most of the State. The biggest drop was in the North

Delta, where land development was most extensive. Statewide, hardwood sawtimber now totals 20 billion board feet, about 23 percent less than in 1954. The decline in high-quality hardwoods—that is, those most suitable for factory lumber and veneer—was especially severe.

Timber harvested from Louisiana forests totaled more than 380 million cubic feet in 1963. This volume supplied roundwood to more than 220 primary wood-using plants within the State, and to about 60 in surrounding States.

All together, the output of timber products has increased slightly since 1953. Production of pulpwood rose considerably and saw logs made modest gains. These increases were more than enough to offset declines in fuelwood, veneer logs, fence posts, piling, hewn ties, and cooperage bolts.

The growth of sawtimber was in excess of the cut for 1963, the year in which the latest harvest statistics were compiled. Growth and cut relationships, however, differ sharply for hardwood and softwood. Hardwood sawtimber is being used faster than it grows. Management of hardwood forests simply must be improved and extended.

Softwood sawtimber growth is double the cut. The continuing buildup in volume and tree size will provide increased opportunities for forest industries. The emergence of a southern pine plywood industry in the State and the current expansion of pulping capacity are largely related to recent gains in inventory and growth. They are but a preview of the industrial growth that is possible if Louisiana's forest resources are wisely managed.



Resource Trends

TRENDS IN FOREST AREA

State More Than Half Forested

More of Louisiana is devoted to forest growth than to any other type of land use. Today forests cover 56 percent, 16 million acres, of the land. Nearly all are both available and suitable for timber production. Only 38,000 acres are reserved from timber harvesting, mainly because they are within restricted zones on military reservations. Statewide, forest acreage is virtually the same as during the previous survey of 1954. But the total masks noteworthy regional shifts.

Forest acreage is still shrinking in the Louisiana Delta. In fact, Delta forests have steadily declined since at least the mid-1930's, when the first regional timber inventory was made. For example, forest land decreased 8 percent (446,400 acres) between 1935 and 1954 and has since declined another 7 percent (345,200 acres). Land clearing has been heaviest on the rich alluvial soils of the northern Delta. Much of Louisiana's cotton is raised there. Moreover, soybeans developed into an important crop during the past decade, and the bulk of the State's output now comes from this area (table I).

Recent land-use trends in the Delta regions of Arkansas and Mississippi closely parallel Louisiana changes. In the Mississippi Delta, for example, woodland area was reduced some 6 percent between 1948 and 1957. The Arkansas Delta experienced a 7-percent drop between

1951 and 1959. It appears that the brunt of agricultural expansion in the Delta is being borne by the better hardwood sites, and that the forests are being increasingly restricted to areas that flooding, poor drainage, and soil conditions render unsuitable for farming. With the unusually favorable circumstances for agriculture over much of the Delta, including public participation in flood control and major drainage projects, and with public support of farm prices, the outlook is for still further net reduction in forest acreage.

The Delta has long been noted for the quality and quantity of timber yielded by its heterogeneous forests. These forests are generally regarded as the most productive hardwood lands of any size in the entire South or perhaps the Nation. The decade-by-decade attrition of hardwood acreage in the Delta has caused widespread local concern over the long-range future of the region's wood-processing industry. One hopeful development is that this situation appears to be stimulating interest in the lands that are still available for timber development and at the same time generating wider activity in hardwood management research.

Outside of the Delta—that is, in the upland regions—forest acreage has increased some 3 percent since 1954. This increase represents a net gain after allowance is made for forest lost to land clearing, highways, urban areas, and other nontimber uses. Acreage lost to nonforest uses, however, frequently supports substantial volumes of timber that are often only partially made available to industry when the area is converted. By contrast, the acreage gained is essentially farmland that has only recently reverted to forest growth and thus as yet bears little, if any, marketable volume.

The gain in the upland regions has followed a well-defined pattern. As between earlier surveys, modest forest acreage losses in most southeastern and southwestern parishes were attributable to continuing expansion of the

Table I. Commercial forest land in 1964 and change since 1954

Region	Commercial forest	Change
	Thousand acres	Percent
North Delta	1,894.8	- 13
South Delta	2,750.9	- 2
Southwest	4,822.3	- 1
Southeast	1,884.4	- 6
Northwest	4,684.1	+ 12
Total	16,036.5	(¹)

¹ Negligible.

major towns and cities and to agricultural development. These losses were overshadowed by woodland expansion in the northwest. Here, forest acreage has risen 12 percent—about 500,000 acres—in the last 10 years (table I), chiefly from extensive planting and natural reseeding of pine on abandoned farms.

The northwest is now the most heavily timbered part of the State. Almost 8 acres in every 10—78 percent, to be exact—are presently in forest. The South Delta is the least wooded section, with 28 percent of its area in forest. A natural prairie extends through the western part of the South Delta; in this prairie the only forest lands are in belts bordering the streams. Moreover, the entire coastal strip is a marshy low-lying area up to 30 or more miles wide. Elsewhere in Louisiana, the proportion of land in forest ranges between these two extremes.

Industry Holdings Extensive

All but 6 percent of the forest land—880,000 acres—is privately owned. Public lands are divided among Federal, State, parish, and municipal ownership. The Kisatchie National Forest in central Louisiana makes up the largest share of the public tracts.

Among the major classes of private forest owners, farmers hold the smallest share. All together, their holdings encompass some 15 percent of the forest area. By contrast, farmers own two-fifths of the forest acreage in the Southern States as a whole. The small proportion of such holdings in Louisiana seems at least partially due to change in occupation of many landowners who were formerly farm operators.

Wood-using industries presently hold more than 3 million acres—20 percent of the forest. This acreage is about equally divided between lumber companies and pulp concerns. Very little is held by other kinds of wood-processing firms. The distinction between pulp concerns and other classes of industrial owners has become less and less meaningful in the South, however, as the manufacture of pulp and other wood products has become more closely integrated within large companies. Most of the industrially owned land is in large holdings—that is, in excess of 50,000 acres each.

The bulk of the forest land—59 percent of the total—is in miscellaneous private holdings.

The owners represent a great variety of business and professional people, housewives, wage earners, oil companies, and other owner groups. They are largely engaged in occupations not directly connected with timber growing. But there are some notable exceptions consisting of big tracts operated by timber-holding companies that resemble forest industry ownerships in many respects. Such firms may account for a million or more acres, and many have long been strongly interested in forest management.

Upland Timber Types Gain

Forests of oak-gum-cypress and other prized lowland species like cottonwood are concentrated on some 6.5 million acres in the Delta and along secondary waterways, such as the Red and Pearl Rivers.

The 9.5 million acres in upland types can be divided into four major zones. Loblolly-shortleaf pine woodlands occupy most of northwest Louisiana. Longleaf pine forests are found in the southwest. East of the Mississippi River, longleaf-slash pine forests extend from the Pearl River to Tangipahoa Parish. The area westward to the edge of the Delta is largely made up of loblolly and shortleaf pines. Intermingled with the pine types are thousands of acres on which oak and hickory are the residual stand left after the pine was cut from mixed pine-hardwood forests.

A few changes have recently taken place in the distribution of major forest types.¹ Forests in which southern pine makes up at least 25 percent of the stand have gained about a tenth in the northwest since 1954. In area, if not in quality of the sites, the losses of hardwood land in the Delta have been nearly balanced by the abandonment and reversion to forest of many fields in smaller river bottoms not so well suited to mechanized agriculture. Gains outside the Delta will not necessarily continue. Reservoir construction may eventually remove a significant proportion of hardwood land from secondary river bottoms, such as the Sabine. The fragmentation of the bottom-land forest in Louisiana and other Mid-south States is likely to make operations more

¹A map detailing the major forest types in the South is available upon request to the Southern Forest Experiment Station. The scale is 40 miles to the inch.

difficult for timber growers and hardwood industries.

Stocking Increasing In Some Forests

Better fire protection, natural regeneration, planting, and direct seeding have all helped to upgrade the deforested and poorly stocked forest areas. The improvement in fire protection has been particularly striking during the past 10 years. For the 4 years ending in 1953 the average annual burn was 2.6 percent of the total forest area. From 1960 to 1963 it was 0.8 percent. This means that some 120,000 acres are now burning annually, as compared to 420,000 a decade ago.

The reduction in denuded acreage is especially evident in the southwest, which formerly had much cutover longleaf pine acreage concentrated in and around Beauregard and Vernon Parishes. Today only 2 percent of the southwest forest area is nonstocked in the sense that it has less than 10 percent growing stock trees.

Despite indications of increasing stand density, only 38 percent of Louisiana's forest land is occupied by trees considered desirable—the kind the land is capable of growing under good management. Another 25 percent is stocked with trees classed as acceptable. That is, they qualify as growing stock but, because of low vigor, rot, excessive forking or limbiness, or other limitations, their yields will not be high in volume and in quality. The remaining 37 percent of the forest area is either nonstocked or else is encumbered with shrubs and cull trees that inhibit stand development.

TRENDS IN TIMBER VOLUME

More Pine

Louisiana is no longer a predominantly hardwood State. Softwood, up 43 percent (table II), now comprises half the total growing stock.

Table II. Growing stock volume in 1964 and change since 1954

Region	Softwood		Hardwood	
	Volume	Change	Volume	Change
	Million cu. ft.	Per- cent	Million cu. ft.	Per- cent
North Delta	141.8	+ 23	1,267.6	- 29
South Delta	791.3	+ 45	2,062.3	- 15
Southwest	2,151.8	+ 55	1,184.8	- 22
Southeast	977.6	+ 32	573.2	- 1
Northwest	2,307.1	+ 38	1,243.8	- 21
Total	6,369.6	+ 43	6,331.7	- 20

Ten years ago it accounted for little more than a third. All together, southern pines (fig. 2) now add to 86 percent of the softwood inventory. The rest is largely cypress but includes some eastern redcedar (fig. 3).

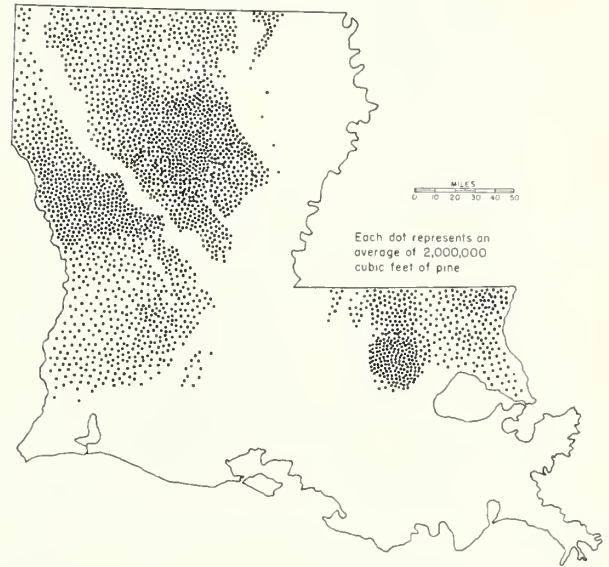


Figure 2. Generalized distribution of pine growing stock in Louisiana.

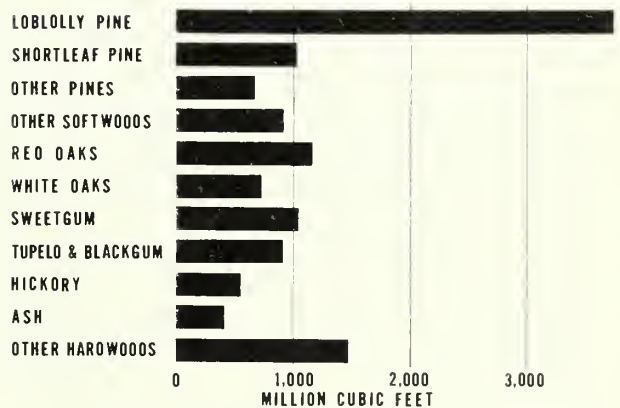


Figure 3. Growing stock by species.

Examination of the marked change in numbers of trees by diameter classes helps to reveal the significance of the softwood increase. As shown in figure 4, gains have taken place in all size classes. The number of sapling-size softwoods—2 to 4 inches in diameter—has risen a third. These young pines can be counted on to further improve the growing stock volume as they attain pole size within the next few

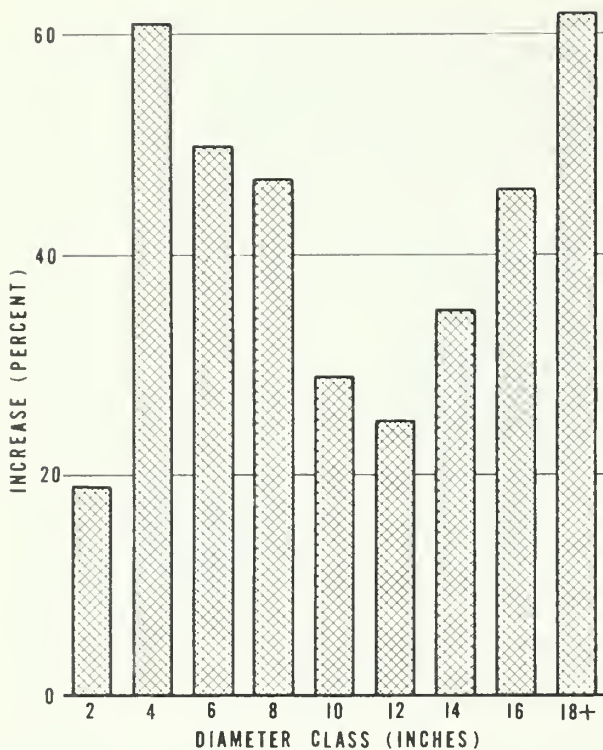


Figure 4. *Percentage change in number of softwood growing stock trees between surveys.*

years. Among the diameters most heavily used by Louisiana's expanding pulp industry—6 to 12 inches—numbers of softwoods have increased 43 percent. To the pine lumber industry and the emerging plywood industry, the even more striking gains in softwoods 16 inches and larger are especially promising. Trees of these sizes make up nearly two-fifths of the softwood volume. Most are in the pine parishes west of the Mississippi River, the rest largely in the Delta.

Softwoods in the Delta are mainly cypress. Louisiana presently has about a fifth of the Nation's supply. Only Florida, with some 1.5 billion cubic feet, has more. Growth on millions of young trees during recent decades has swelled the total to more than 900 million cubic feet, most of it in trees less than 15 inches in diameter. The biggest concentration is in five parishes of the Acadian region—Assumption, Iberville, Lafourche, St. Martin, and Terrebonne.

The board-foot volume in softwoods has risen from 20 to 29 billion. About 9 percent of the total is publicly held. Forest industries own another 34 percent. The rest is distributed

among farmers and other miscellaneous private owners.

Much of the recent sawtimber increase is attributable to gains in diameters above 15 inches. As a result of these increases, the distribution of volume by size class has improved somewhat. In 1954, softwood of these diameters comprised 47 percent of the sawtimber. By 1964, they made up 52 percent of an even larger board-footage. The vigorous young stands now developing in response to fire protection and other management practices can be expected not only to sustain existing industrial needs but also permit some further buildup in the diameters generally preferred for lumber and veneer.

Another bright spot is the improvement in timber quality. On both the 1954 and 1964 surveys, softwood trees were rated by the standard log grades for southern pine. Between surveys the volume in trees with upper-grade butt logs—namely, grades 1 and 2—increased some 56 percent. The volume in grade 3 trees rose about the same. All together, trees graded 2 and 3 now make up four-fifths of Louisiana's softwood sawtimber inventory. They are well adapted to the manufacture of lumber and similar products. The developing southern pine plywood industry is expected to rely mainly upon medium- and dense-grained No. 2 and 3 logs.

Less Hardwood

Trends in hardwood contrast sharply with those for pine. The volume of hardwood growing stock now stands at 6.3 billion cubic feet, or 20 percent less than in 1954. Most of the net reduction was in the bottom lands and more than two-thirds of the remaining inventory is in the bottom lands, chiefly the Delta, where desirable species generally prevail. The rest is scattered in the uplands, mainly on pine sites, where it seldom offers an attractive source of industrial timber or an investment opportunity.

Throughout the State, numbers of hardwoods have fallen off in nearly all diameter classes. The declines have been heaviest in the larger sizes, that is, those most suitable for factory lumber and veneer. Land clearing in the bottoms, excessive cutting, and a record drought all contributed to the shrinkage. The biggest

drop in sawtimber trees was in the North Delta, where land development was most extensive. Statewide, hardwood sawtimber volume presently totals 20.3 billion board feet, 23 percent less than in 1954 (table III).

Table III. *Sawtimber volume in 1964 and change since 1954*

Region	Softwood		Hardwood	
	Volume	Change	Volume	Change
	Million bd. ft.	Per- cent	Million bd. ft.	Per- cent
North Delta	704.3	+ 27	4,309.6	- 34
South Delta	3,896.1	+ 59	6,768.2	- 14
Southwest	10,073.4	+ 53	3,664.0	- 28
Southeast	4,577.6	+ 34	1,814.2	+ 1
Northwest	10,181.7	+ 35	3,770.1	- 26
Total	29,433.1	+ 43	20,326.1	- 23

An important aspect of recent hardwood shifts is the decline in volume of the gums. Gums are preferred for many uses. They make up about 57 percent of the harvest of hardwood pulp bolts. They are the chief reliance of hardwood veneer processors, and lumber manufacturers also regard them with favor. The current volume is 2 billion cubic feet, 20 percent less than a decade ago. One healthy development, however, is the use of cull timber to help extend the available resource. A recent survey of logging operations, for example, found that 12 percent of the hardwood pulpwood was taken from cull trees.

The total volume of hardwood sawtimber in Louisiana includes a variety of tree qualities with a wide range of suitability for forest products. Most producers normally prefer timber with a high proportion of clear material, particularly for such uses as factory lumber and veneer. Between surveys the volume of trees with such material—that is, grades 1 and 2 butt logs—declined about a third. A sixth of the hardwood sawtimber is in class 4 trees that are presently suited only for low-value end uses such as crating and crossties (table IV). It is likely that some traditional hardwood industries dependent upon open-market stumpage may be pressed to maintain current production levels, at least in terms of the size and quality of timber that have long sustained them. At the same time, management efforts are being facilitated by the rising demand for hardwood pulps. This recent development will allow more and more forest managers to thin their hardwoods and to make improvement

cuttings without reducing the inventory suitable for more exacting products.

Table IV. *Sawtimber volume by grade and tree diameter, 1964*

Species group and d.b.h. class (inches)	All grades	Grade 1 ¹	Grade 2	Grade 3	Lower grades
----- Million board feet -----					
Softwood:					
10 to 12	8,426.5	3.6	616.9	6,851.9	954.1
14 to 18	14,961.4	66.8	7,313.9	6,385.7	1,195.0
20 and up	6,045.2	1,733.8	2,257.3	1,668.8	385.3
Total	29,433.1	1,804.2	10,188.1	14,906.4	2,534.4
Hardwood:					
12	3,423.5		178.7	2,512.8	732.0
14 to 18	10,771.7	889.3	3,368.1	4,638.2	1,876.1
20 and up	6,130.9	1,747.6	1,661.6	1,898.8	822.9
Total	20,326.1	2,636.9	5,208.4	9,049.8	3,431.0

¹ All cedar saw logs were graded as No. 1.

Sawtimber Growth Exceeds Cut

Louisiana's timber loss from fire, insects, disease, and other natural causes annually totals about 138 million cubic feet, chiefly hardwood. It is equivalent to about 1 percent of the growing stock. The annual growth after allowing for mortality is 493 million cubic feet of softwood and 144 million of hardwood. This volume equals about a half cord, or 40 cubic feet, per acre. Nevertheless, Louisiana forests are growing timber at under half of their capability.

The significance of recent trends in pine and hardwood volume is further emphasized by current growth-cut relationships. Louisiana's industries are largely dependent on trees of sawtimber size. In such trees, net annual growth amounts to 2,361 million board feet of softwood and 565 million of hardwood. In 1963, cutting totaled 1,056 million board feet of softwood and 623 million of hardwood (fig. 5). Thus decadal trends appear to be continuing: softwood sawtimber growth considerably exceeds the cut, while hardwood is being used faster than it is growing.

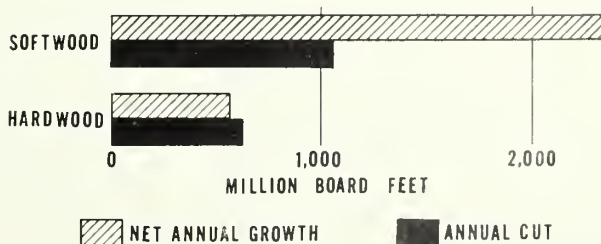


Figure 5. *Growth and cut of sawtimber, 1963.*



Timber Products Output

In 1963, timber products from Louisiana forests totaled 381 million cubic feet. This harvest supplied roundwood to more than 220 primary wood-using plants within the State, and to about 60 in surrounding States.

Output has increased slightly since 1953. Less fuelwood and fewer veneer logs, fence posts, cooperage bolts, piling, and hewn ties were cut in 1963 than in 1953. But these losses were more than offset by increases in saw logs and pulpwood.

SAW LOGS MAINLY PINE

The harvest of logs for lumber exceeded a billion board feet in 1963. This volume made up nearly half of the State's total timber output. Most of the saw logs were softwood, almost all pine but including some cypress and redcedar; oak and gum made up three-fourths of the hardwood. A decade ago Louisiana's saw-log harvest was largely made up of hardwoods. The shift in usage reflects in part the recent declines in hardwood sawtimber volume and quality, as well as the rising trend of pine inventory. Pine production is likely to continue to rise.²

In all, Louisiana mills processed 86 percent of the 1963 saw-log harvest. The balance, 144 million board feet, was delivered to plants in Arkansas, Mississippi, and Texas. At the same time, some 31 million board feet were brought into Louisiana from neighboring States. More than 90 percent of all the logs sawn in the State were cut by 84 mills, each of which produced at least 3 million board feet of lumber in 1963. Of these establishments, 28 cut more than 10 million apiece. The rest of the lumber was sawn by some 80 small, generally portable mills.

Utilization of sawmill residues for pulp chips has risen sharply in the past decade. Sale of

chips has helped Louisiana mills offset the rising costs of lumber production. In 1954, only five mills were equipped to produce bark-free pulp chips from slabs, edgings, and other waste wood. Today more than 40 are making chips. Most are large mills. But at least a half dozen mills that saw less than 3 million board feet annually are also chipping their waste. More than a tenth of Louisiana's pulpwood output now comes from sawmill chips, mainly pine.

RECORD PULPWOOD OUTPUT

Louisiana's pulpwood production is trending up sharply.

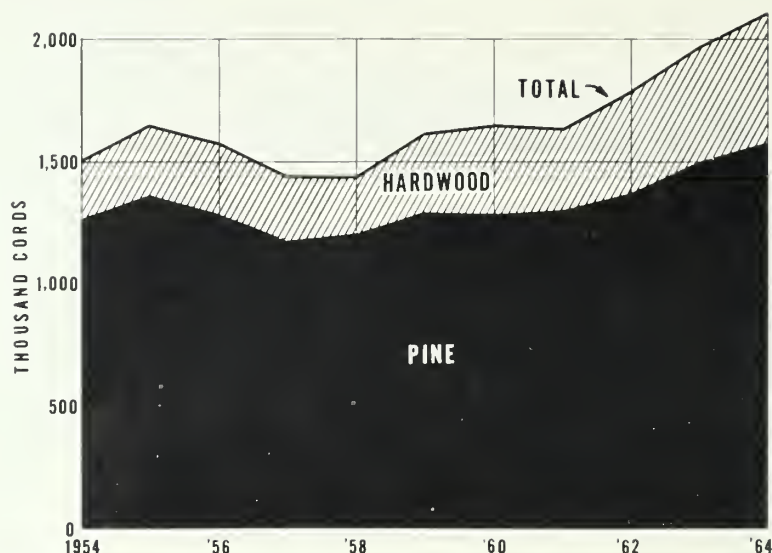
The harvest of trees for pulpwood bolts topped more than 2 million cords in 1964. Another 300,000 cords came from residues salvaged at sawmills and other plants. The total volume of 2.4 million cords exceeded 1963 by a comfortable 7 percent.

Although boltwood is mainly pine, the hardwood portion is climbing rapidly. In the past decade it has gone from 16 to 25 percent of the total (fig. 6). More than half of the hardwood is gum. Another seventh is from other soft-textured species, mostly cottonwood, magnolia, maple, willow, and boxelder. The rest is chiefly oak.

Louisiana mills bought more than 90 percent of the wood produced in the State during 1964. The rest went largely to Mississippi. At the same time, Louisiana plants brought in a fourth of their needs from neighboring States, principally Arkansas and Mississippi. The drawing territories of individual mills vary considerably, according to the timber supply and ownership, competition from other users of wood, transportation facilities, and company wood-procurement policies. The typical mill draws the bulk of its wood from within a radius of 100 miles, and few bolts move more than 200 miles.

² Row, Clark. Regional competition in softwood lumber. Soc. Amer. Foresters Proc. 1962: 97-103, illus. 1963.

Figure 6.
*Production of pulp-
wood bolts, 1954-64.*



While 9 of the State's 10 pulpmills have been in operation since before World War II, they have constantly been enlarged. The establishment of a new mill at St. Francisville in 1958, plus expansion of existing mills, boosted the industry's daily capability by 1,030 tons during the past 7 years. The total capability now is 6,300 tons of pulp per day—more than is found in any other Southern State except Georgia and Florida.

The State's eleventh mill is now under construction—also at St. Francisville. Scheduled for completion by the end of 1965, it will have 500 tons of capacity. Expansion of a mill at West Monroe will provide another 350 tons. Still further increases amounting to 800 tons are in the planning stages. These developments all point to continued pulpwood production gains in the decade ahead.

VENEER ALL HARDWOOD

Louisiana is a leading producer of hardwood veneer logs. In 1963 it ranked eighth in the Nation. More than three-fourths of the 1963 volume was soft-textured, sweetgum, blackgum, and tupelo being by far the leading species. Sweetgum alone contributed 40 percent of the total volume. Most of the firm-textured wood was oak.

The output totaled 48.1 million board feet in 1963, of which 17.6 million were shipped to neighboring States for manufacture. Another 3.5 million were brought into Louisiana

for processing. The 11 veneer plants active in 1963 used an average of 3 million board feet apiece (fig. 7).

Historically the veneer industry in Louisiana—as elsewhere in the South—has been based on hardwood. For example, barely 3 percent of the entire veneer-log output in the South was softwood in 1963. Today a pine plywood industry is developing rapidly. At least seven plywood plants are already under construction or planned in Louisiana. Within the next few years, Louisiana may well emerge as the number one producer of southern pine veneer and plywood.

MISCELLANEOUS PRODUCTS

Louisiana residents burned 376,000 cords of round fuelwood in 1963. A decade ago, the volume was 761,000 cords. The decline will continue, as other fuels are being substituted both in home cooking and heating.

Pine poles and piling accounted for 3 percent—11 million cubic feet—of the 1963 harvest. Most of this material was shipped to local wood-preserving plants for treatment. Of the 29 Louisiana plants that treat roundwood, all but one are of the pressure type. They also treat large quantities of lumber, crossties, and fence posts.

All other products cut in 1963 supplied 2 percent of the total roundwood output. Their volume, 7.7 million cubic feet, was mostly in fence posts and dimension stock.

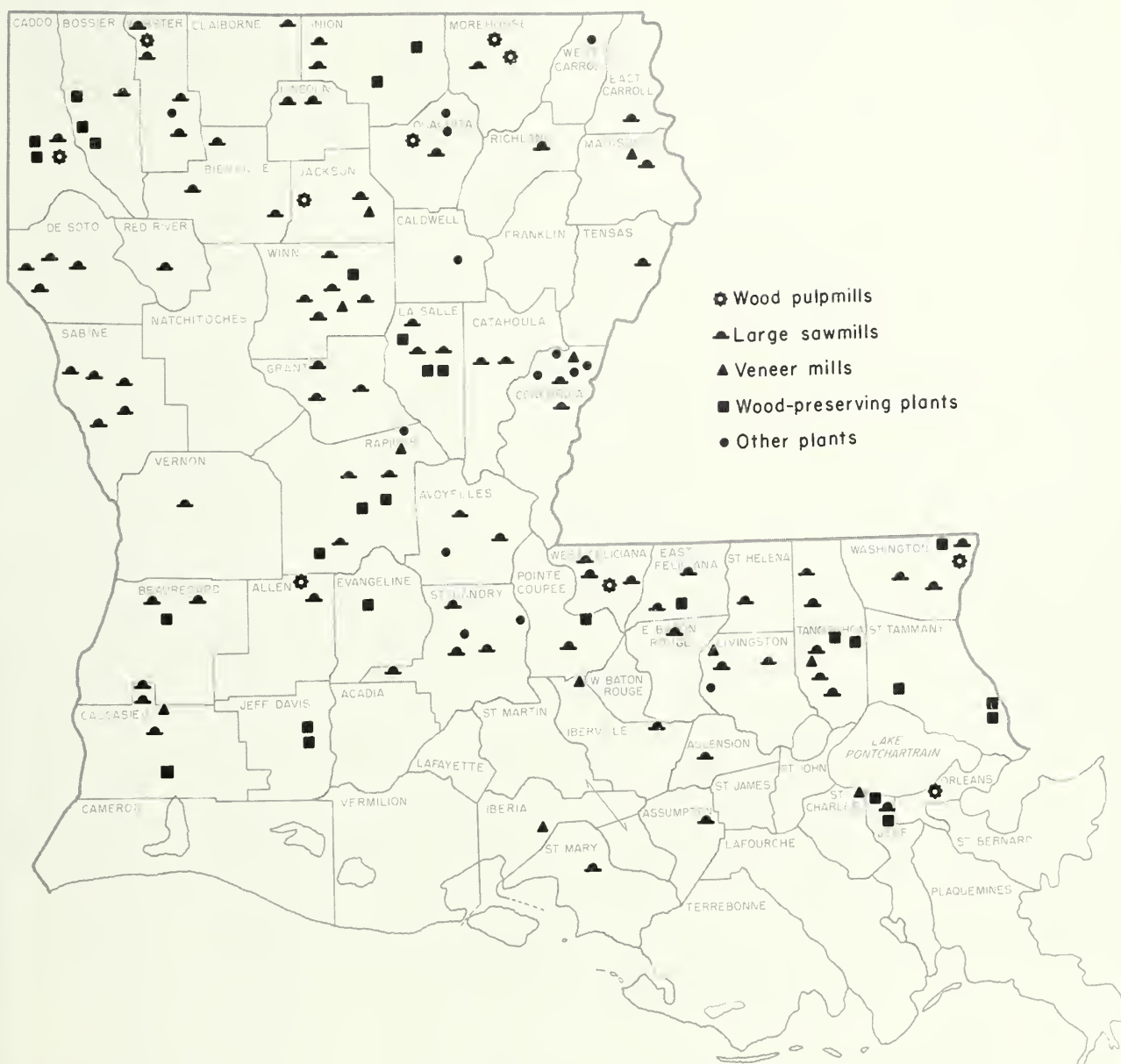


Figure 7. Location of primary wood-using plants in Louisiana, 1963.



Improving Productivity

The current enlargement of pulping capacity and the emergence of a southern pine plywood industry are only a preview of the industrial expansion that is possible if Louisiana's forests are effectively managed. Recent productivity gains are encouraging. But heavy and sustained investment in forest development is essential. The State is presently realizing only half of its timber-growing potential, because many landowners are not taking advantage of the possibilities offered by their woodlands.

Most of the commercial forest land offers opportunities to increase growth. About 2.1 million acres, however, are at least 70 percent stocked with desirable timber—that is, thrifty trees that presently or potentially are capable of yielding high-quality saw logs or other forest products. Virtually all of this area is made up of stands that do not require special treatments of any kind to insure a high level of growth. The largest share of these productive acres consists of pine sites in the western part of the State.

A third of the forest area, or 5.7 million acres, is between 40 to 70 percent stocked with desirable trees. Some 30 percent of this area is expected to attain full stocking without treatment. But the remaining 3.9 million acres will require special efforts to free desirable trees from competition.

Pine sites at least 40 percent stocked with desirable trees offer excellent stand improvement chances. In all, there are 2.6 million acres on which removal of low-quality trees will create openings for pine reproduction and speed the growth of desirable trees already established.

Of the 16 million acres of forest land in Louisiana, 8.2 million are less than 40 percent

stocked with desirable trees. Some 6 million of these acres, however, are 40 percent or better stocked in trees that are still acceptable as growing stock. Many of these stands, especially the ones that are at least 70 percent stocked, would probably justify stand improvement. Moreover, on some pine sites planting may be required to improve their productivity.

More than 2 million forest acres are presently contributing very little to Louisiana's timber growth—they do not even support 40 percent stocking in trees good enough to be accepted as growing stock. In fact, nonstocked areas and culls make up fully two-thirds of this acreage. Most of this unproductive forest land is in private, nonindustrial holdings. At least a quarter of these 2 million acres is in pine sites that could be restored to full productivity through site preparation and planting or direct seeding.

The extent to which timber management will be intensified in the future must largely depend upon the thousands of owners of farm and other private, nonindustrial woodlands. All together, they control three-fourths of the forest acreage, including the bulk of the inherently most productive timber-growing sites. Most of the forestry efforts by landowners and public agencies have up to now been aimed at protecting and regenerating pine. Although a great deal remains to be done, it must also be acknowledged that tremendous progress has been made in improving the pine situation. Louisiana's hardwood resources for the most part have remained comparatively neglected. Yet 2 in every 5 forest acres in the State are better adapted to growing hardwood than pine. Greatly intensified efforts to improve the hardwood resource can open new opportunities for forest industry in Louisiana.

Appendix

ACCURACY OF THE SURVEY

The data on forest acreage and timber volume in this report were secured by a systematic sampling method involving a forest-nonforest classification on aerial photographs and on-the-ground measurements of trees at sample locations. The sample locations were at the intersections of a grid of lines spaced 3 miles apart. At each location, 10 small plots were systematically distributed on an area of about 1 acre.

Accuracy of the estimates may be affected by two types of errors. The first stems from the use of a sample to estimate the whole and from variability of the items being sampled. This type it termed sampling error; it is susceptible to a mathematical evaluation of the probability of error. The second type—often referred to as reporting or estimating error—derives from mistakes in measurement, judgment, arithmetic, or recording, and limitations of method or equipment. Its effects cannot be appraised mathematically, but the Forest Survey constantly attempts to hold such error to a minimum by proper training and good supervision, and by emphasis on careful work.

Statistical analysis of the data indicates a sampling error of plus or minus 0.4 percent for the estimate of total forest area, 1.7 percent for total cubic volume, and 2.2 percent for total board-foot volume. As these totals are broken down by forest type, species, tree diameter, and other subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the following tabulation, which shows the sampling error to which the estimates are liable, two chances out of three.

Forest area	Sampling error	Cubic volume	Sampling error	Board-foot volume	Sampling error
Thousand acres	Percent	Million cu. ft.	Percent	Million bd. ft.	Percent
16,074.7	0.4	.	.	.	.
2,572.0	1.0	12,701.3	1.7	.	.
643.0	2.0	9,176.7	2.0	49,759.2	2.2
285.8	3.0	4,078.5	3.0	26,759.4	3.0
160.7	4.0	2,294.2	4.0	15,052.2	4.0
102.9	5.0	1,468.3	5.0	9,633.4	5.0
25.7	10.0	367.1	10.0	2,408.3	10.0
11.4	15.0	163.1	15.0	1,070.4	15.0
6.4	20.0	91.8	20.0	602.1	20.0
4.1	25.0	58.7	25.0	385.3	25.0
1.0	50.0	14.7	50.0	96.3	50.0

Growth estimates were derived from diameter-growth measurements and mortality data taken at sample locations. No attempt was made to calculate sampling error in these estimates.

Estimates of annual timber cut are based on studies conducted during the period of forest inventory. The sampling error to which the estimates are liable, on a probability of two chances out of three, are:

Cubic volume	Sampling error	Board-foot volume	Sampling error
Million cu. ft.	Percent	Million bd. ft.	Percent
422.7	2.3	1,679.0	3.0
89.4	5.0	604.4	5.0
22.4	10.0	151.1	10.0
9.9	15.0	67.2	15.0
5.6	20.0	37.8	20.0
3.6	25.0	24.2	25.0
.9	50.0	6.0	50.0

In computing changes in timber volumes since 1954, data from the earlier survey were adjusted to make them closely comparable to those from the latest survey. This was necessary because of certain basic differences between the two sets of data. In every case, the data from the earlier survey were adjusted to conform to the standards of the latest survey before the change was computed.

DEFINITIONS OF TERMS

Forest Land Class

Forest land.—Land at least 10 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for non-forest use.

Commercial forest land.—Forest land which is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization.

Productive-reserved forest land.—Productive public forest land withdrawn from timber utilization through statute or administrative regulation.

Unproductive forest land.—Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

Tree Species

Commercial species.—Tree species presently or prospectively suitable for industrial wood products; excludes so-called weed species, such as blackjack oak and blue beech.

Hardwoods.—Dicotyledonous trees, usually broad-leaved and deciduous.

Softwoods.—Coniferous trees, usually evergreen, having needle or scale-like leaves.

Forest Type

Longleaf-slash pine.—Forests in which 50 percent or more of the stand is longleaf or slash pine, singly or in combination. Common associates include other southern pines, oak, and gum.

Loblolly-shortleaf pine.—Forests in which 50 percent or more of the stand is loblolly pine, shortleaf pine, or other southern yellow pines except longleaf or slash pine, singly or in combination. Common associates include oak, hickory, and gum.

Oak-pine.—Forests in which 50 percent or more of the stand is hardwoods, usually upland oaks, but in which southern pines make up 25-49 percent of the stand. Common associates include gum, hickory, and yellow-poplar.

Oak-hickory.—Forests in which 50 percent or more of the stand is upland oaks or hickory, singly or in combination, except where pines comprise 25-49 percent, in which case the stand would be classified oak-pine. Common associates include yellow-poplar, elm, maple, and black walnut.

Oak-gum-cypress.—Bottom-land forests in which 50 percent or more of the stand is tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, except where pines comprise 25-49 percent, in which case the stand would be classified oak-pine. Common associates include cottonwood, willow, ash, elm, hackberry, and maple.

Elm-ash-cottonwood.—Forests in which 50 percent or more of the stand is elm, ash, or cottonwood, singly or in combination. Common associates include willow, sycamore, beech, and maple.

Class of Timber

Growing-stock trees.—Sawtimber trees, poletimber trees, saplings, and seedlings; that is, all live trees except cull trees.

Desirable trees.—Growing-stock trees that have no serious defects to limit present or prospective use, are of relatively high vigor, and contain no pathogens that may result in death or serious deterioration before rotation age. They comprise the type of trees that forest managers aim to grow; that is, the trees left in silvicultural cutting or favored in cultural operations.

Acceptable trees.—Trees meeting the specifications for growing stock but not qualifying as desirable trees.

Sawtimber trees.—Live trees of commercial species, 9.0 inches and larger in diameter at breast height for softwoods and 11.0 inches and larger for hardwoods, and containing at least one saw log.

Poletimber trees.—Live trees of commercial species, 5.0 to 9.0 inches in d.b.h. for softwoods and 5.0 to 11.0 inches for hardwoods, and of good form and vigor.

Saplings.—Live trees of commercial species, 1.0 inch to 5.0 inches in d.b.h. and of good form and vigor.

Cull trees.—Live trees of sawtimber or poletimber size that are unmerchantable for saw logs now or prospectively because of defect, rot, or species.

Salvable dead trees.—Standing or down dead trees that are considered currently or potentially merchantable.

Stand-Size Class

Sawtimber stands.—Stands at least 10 percent stocked with growing-stock trees, and with sawtimber trees making up a plurality of this stocking.

Poletimber stands.—Stands at least 10 percent stocked with growing-stock trees, and with poletimber trees making up a plurality of this stocking.

Sapling-seedling stands.—Stands at least 10 percent stocked with growing-stock trees, and with saplings and/or seedlings making up a plurality of this stocking.

Nonstocked areas.—Commercial forest lands less than 10 percent stocked with growing-stock trees.

Stocking

A measure of area occupancy by trees of specified classes. Three categories of stocking are considered in the Survey: (1) all live trees, (2) growing-stock trees, and (3) desirable trees. Stocking in terms of all trees is used in the delineation of forest land and forest types. Stocking in terms of growing-stock trees is used in stand-size and age classifications. Stocking in terms of desirable trees is used in delineating area-condition and stand-treatment classes.

Volume

Volume of sawtimber.—Net volume of the sawlog portion of live sawtimber trees, in board feet of the International rule, 1/4-inch kerf.

Volume of growing stock.—Volume of sound wood in the bole of sawtimber and poletimber trees from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

Volume of timber.—The volume of sound wood in the bole of growing stock, cull, and salvable dead trees 5.0 inches and larger in d.b.h., from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

Tree Grades

Tree grades are based on the log grade of the butt log graded according to standards presented by the U. S. Forest Service in "Interim Log Grades for Southern Pines," issued by the Southern Forest Experiment Station in 1953, and "Hardwood Log Grades for Standard Lumber," issued by the Forest Products Laboratory under the designation D1737 in 1949.

Hardwood log grades include, in addition to the hardwood log grades for standard lumber, a grade 4 tie and timber log. Specifications for tie and timber logs are based chiefly on knot size and log soundness; clear cuttings are not required.

Area-Condition Class

Class 1.—Areas 70% or more stocked with desirable trees.

Class 2.—Areas 40 to 70% stocked with desirable trees, and with 30% or less of the area controlled by acceptable growing-stock trees, cull trees, inhibiting vegetation, slash, or nonstockable conditions.

Class 3.—Areas 40 to 70% stocked with desirable trees and with more than 30% of the area controlled by other trees and/or conditions that ordinarily prevent occupancy by desirable trees.

Class 4.—Areas less than 40% stocked with desirable trees, but with 70% or more stocking with growing-stock trees.

Class 5.—Areas less than 40% stocked with desirable trees, but with 40 to 70% stocking with growing-stock trees.

Class 6.—Areas less than 40% stocked with desirable trees and with less than 40% stocking with growing-stock trees.

Miscellaneous Definitions

D.b.h. (Diameter breast high).—Tree diameter in inches, outside bark, measured at 4½ feet above ground.

Diameter classes.—The 2-inch diameter classes extend from 1.0 inch below to 0.9 inch above the stated midpoint. Thus, the 12-inch class includes trees 11.0 inches to and including 12.9 inches d.b.h.

Site classes.—A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

Net annual growth of sawtimber.—The annual change in net board-foot volume of live sawtimber trees during a specified period resulting from natural causes.

Net annual growth of growing stock.—The annual change in volume of sound wood in live sawtimber and poletimber trees during a specified period resulting from natural causes.

Mortality of sawtimber.—The net board-foot volume of sawtimber trees dying annually from natural causes during a specified period.

Mortality of growing stock.—The volume of sound wood in live sawtimber and poletimber trees dying annually from natural causes during a specified period.

Timber cut from sawtimber.—The net board-foot volume of live sawtimber trees cut for forest products during a specified period, including both roundwood products and logging residues.

Timber cut from growing stock.—The volume of sound wood in live sawtimber and poletimber trees cut for forest products during a specified period, including both roundwood products and logging residues.

Timber products.—Roundwood products and by-products of wood manufacturing plants.

STANDARD TABLES

Tables similar in format to those that follow will be found in all State reports issued by the Forest Survey. Their purpose is to facilitate compilation of data for various States and regions.

Table 1. *Area by land classes, Louisiana, 1964*

Land class	Area
<i>Thousand acres</i>	
Forest:	
Commercial	16,036.5
Unproductive	.
Productive-reserved	38.2
Total forest	16,074.7
Nonforest ¹	12,793.2
All land ²	28,867.9

¹ Includes some acreage of water according to survey standards of area classification but defined by Bureau of the Census as land.

² From U. S. Bureau of the Census, Land and Water Area of the United States, 1960.

Table 2. *Area of commercial forest land by ownership classes, Louisiana, 1964*

Ownership class	Area
<i>Thousand acres</i>	
Public:	
National forest	574.8
Miscellaneous federal	140.7
State	163.6
County and municipal	4.1
Total public	883.2
Private:	
Forest industry	3,180.8
Farmer	2,419.6
Miscellaneous private	9,552.9
Total private	15,153.3
All ownerships	16,036.5

Table 3. *Area of commercial forest land by stand-size and ownership classes, Louisiana, 1964*

Stand-size class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
<i>Thousand acres</i>					
Sawtimber	9,871.0	412.5	211.6	2,196.2	7,050.7
Poletimber	2,017.6	53.9	20.7	292.6	1,650.4
Sapling and seedling	3,952.4	103.2	74.7	669.7	3,104.8
Nonstocked areas	195.5	5.2	1.4	22.3	166.6
All classes	16,036.5	574.8	308.4	3,180.8	11,972.5

Table 4. *Area of commercial forest land by stand-volume classes for sawtimber and other stand-size classes, Louisiana, 1964*

Stand volume per acre	All stands	Sawtimber stands	Other stands
<i>Thousand acres</i>			
Less than 1,500 board feet	6,642.0	1,499.0	5,143.0
1,500 to 5,000 board feet	6,036.0	5,053.3	982.7
More than 5,000 board feet	3,358.5	3,318.7	39.8
All classes	16,036.5	9,871.0	6,165.5

Table 5. *Area of commercial forest land by stocking classes based on alternative stand components, Louisiana, 1964*

Stocking percentage	Stocking classified in terms of		
	All trees	Growing stock trees	Desirable trees
<i>Thousand acres</i>			
90 to 100	7,252.9	2,125.3	293.2
80 to 90	3,831.7	2,546.3	671.1
70 to 80	2,178.2	2,725.8	1,130.4
60 to 70	1,178.2	2,676.8	1,601.4
50 to 60	644.2	2,206.1	1,732.9
40 to 50	348.4	1,483.5	2,350.0
30 to 40	248.2	1,072.5	2,387.7
20 to 30	153.0	660.2	2,378.9
10 to 20	114.3	344.5	2,111.7
Less than 10	87.4	195.5	1,379.2
All areas	16,036.5	16,036.5	16,036.5

Table 6. *Area of commercial forest land by stocking classes of growing stock trees and by stand-size classes, Louisiana, 1964*

Stocking class	All stands	Saw-timber	Pole-timber	Sapling and seedling	Non-stockied
<i>Thousand acres</i>					
70 percent or more	7,397.4	4,436.3	964.9	1,996.2	.
40 to 70 percent	6,366.4	4,254.0	743.7	1,368.7	.
10 to 40 percent	2,077.2	1,180.7	309.0	587.5	.
Less than 10 percent	195.5	.	.	.	195.5
All classes	16,036.5	9,871.0	2,017.6	3,952.4	195.5

Table 7. *Area of commercial forest land by area-condition and ownership classes, Louisiana, 1964*

Area-condition class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
----- Thousand acres -----					
1	2,094.7	149.2	16.6	645.1	1,283.8
2	1,817.5	109.0	22.5	450.0	1,236.0
3	3,866.8	161.4	48.3	905.9	2,751.2
4	1,471.1	41.7	42.3	299.1	1,088.0
5	4,513.7	62.1	104.8	670.7	3,676.1
6	2,272.7	51.4	73.9	210.0	1,937.4
All classes	16,036.5	574.8	308.4	3,180.8	11,972.5

Table 8. *Area of commercial forest land, by area-condition and stocking classes, Louisiana, 1964*

Area-condition class	All classes		Stocking class									
			Growing stock				Cull trees		Shrubs		Nonstocked	
			Desirable		Other							
Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	
1	2,094.7	100.0	1,638.5	78.2	209.8	10.0	93.6	4.5	5.0	0.2	147.8	7.1
2	1,817.5	100.0	1,019.1	56.1	248.9	13.7	144.0	7.9	14.2	.8	391.3	21.5
3	3,866.8	100.0	1,878.9	48.6	1,013.4	26.2	630.2	16.3	60.7	1.6	283.6	7.3
4	1,471.1	100.0	375.0	25.5	766.8	52.1	168.3	11.4	15.9	1.1	145.1	9.9
5	4,513.7	100.0	970.4	21.5	1,411.0	31.2	1,167.2	25.9	129.4	2.9	835.7	18.5
6	2,272.7	100.0	263.8	11.6	287.2	12.6	705.0	31.1	148.8	6.5	867.9	38.2
All classes	16,036.5	100.0	6,145.7	38.3	3,937.1	24.6	2,908.3	18.1	374.0	2.3	2,671.4	16.7

Table 9. *Area of commercial forest land by site and ownership classes, Louisiana, 1964*

Site class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
----- Thousand acres -----					
120 cu. ft. or more	2,015.6	87.1	37.6	639.5	1,251.4
85 to 120 cu. ft.	9,002.9	260.3	157.4	1,624.2	6,961.0
50 to 85 cu. ft.	3,154.0	170.1	44.9	668.9	2,270.1
Less than 50 cu. ft.	1,864.0	57.3	68.5	248.2	1,490.0
All classes	16,036.5	574.8	308.4	3,180.8	11,972.5

Table 10. *Area of commercial forest land by forest types and ownership classes, Louisiana, 1964*

Type	All ownerships	Public	Private
-- Thousand acres --			
Longleaf-slash pine	1,220.1	151.5	1,068.6
Loblolly-shortleaf pine	4,439.3	277.9	4,161.4
Oak-pine	2,169.4	135.0	2,034.4
Oak-hickory	1,700.5	51.3	1,649.2
Oak-gum-cypress	5,820.5	243.6	5,576.9
Elm-ash-cottonwood	686.7	23.9	662.8
All types	16,036.5	883.2	15,153.3

Table 11. *Area of noncommercial forest land by forest types, Louisiana, 1964*

Type	All areas	Productive-reserved areas	Un-productive areas
--- Thousand acres ---			
Longleaf-slash pine	35.0	35.0	
Loblolly-shortleaf pine	3.2	3.2	
All types	38.2	38.2	

Table 12. Number of growing-stock trees on commercial forest land by diameter classes and by softwoods and hardwoods, Louisiana, 1964

D.b.h. class (inches)	All species	Softwood	Hardwood
----- Thousand trees -----			
1.0- 2.9	3,211,536	934,737	2,276,799
3.0- 4.9	1,185,851	514,449	671,402
5.0- 6.9	511,772	245,880	265,892
7.0- 8.9	306,318	144,153	162,165
9.0-10.9	189,273	81,233	108,040
11.0-12.9	116,485	54,299	62,186
13.0-14.9	82,326	37,919	44,407
15.0-16.9	52,478	23,701	28,777
17.0-18.9	29,954	13,045	16,909
19.0 and larger	33,206	12,359	20,847
All classes	5,719,199	2,061,775	3,657,424

Table 13. Number of cull and salvable dead trees on commercial forest land by diameter groups and by softwoods and hardwoods, Louisiana, 1964

D.b.h. class (inches)	Cull trees	Salvable dead trees
----- Thousand trees -----		
Softwood:		
5.0- 8.9	11,354	465
9.0-18.9	6,478	100
19.0 and larger	1,137	7
Total	18,969	572
Hardwood:		
5.0-10.9	313,914	315
11.0-18.9	89,653	227
19.0 and larger	18,926	50
Total	422,493	592
All species	441,462	1,164

Table 14. Volume of timber on commercial forest land by class of timber and by softwoods and hardwoods, Louisiana, 1964

Class of timber	All species	Softwood	Hardwood
----- Million cubic feet -----			
Sawtimber trees:			
Saw-log portion	8,292.0	4,646.5	3,645.5
Upper-stem portion	1,438.1	638.9	799.2
Total	9,730.1	5,285.4	4,444.7
Poletimber trees	2,971.2	1,084.2	1,887.0
All growing stock	12,701.3	6,369.6	6,331.7
Sound cull trees:			
Sawtimber-size	1,286.1	56.7	1,229.4
Poletimber-size	532.9	14.4	518.5
Total	1,819.0	71.1	1,747.9
Rotten cull trees:			
Sawtimber-size	871.8	78.6	793.2
Poletimber-size	77.7	1.7	76.0
Total	949.5	80.3	869.2
Salvable dead trees:			
Sawtimber-size	11.0	3.3	7.7
Poletimber-size	1.8	1.2	.6
Total	12.8	4.5	8.3
All timber	15,482.6	6,525.5	8,957.1

Table 15. Volume of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, Louisiana, 1964

Ownership class	Growing stock			Sawtimber		
	All species	Soft- wood	Hard- wood	All species	Soft- wood	Hard- wood
----- Million cubic feet ----- ----- Million board feet -----						
Public:						
National forest	595.4	482.5	112.9	2,652.3	2,338.1	314.2
Other public	232.8	86.6	146.2	853.3	399.3	454.0
Total	828.2	569.1	259.1	3,505.6	2,737.4	768.2
Private:						
Forest industry	3,291.9	2,029.6	1,262.3	14,468.7	10,006.2	4,462.5
Farmer and misc. private	8,581.2	3,770.9	4,810.3	31,784.9	16,689.5	15,095.4
Total	11,873.1	5,800.5	6,072.6	46,253.6	26,695.7	19,557.9
All ownerships	12,701.3	6,369.6	6,331.7	49,759.2	29,433.1	20,326.1

Table 16. Volume of growing stock and sawtimber on commercial forest land by stand-size classes and by softwoods and hardwoods, Louisiana, 1964

Stand-size class	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
	-- Million cubic feet --			-- Million board feet --		
Sawtimber	10,854.4	5,332.0	5,522.4	45,317.7	26,411.3	18,906.4
Poletimber	1,160.7	571.5	589.2	2,034.3	1,158.2	876.1
Sapling and seedling	683.6	464.6	219.0	2,394.3	1,855.3	539.0
Nonstocked areas	2.6	1.5	1.1	12.9	8.3	4.6
All classes	12,701.3	6,369.6	6,331.7	49,759.2	29,433.1	20,326.1

Table 17. Volume of growing stock on commercial forest land by species and diameter classes, Louisiana, 1964

Species	Diameter class (inches at breast height)								
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0 and larger
	----- Million cubic feet -----								
Softwood:									
Longleaf and slash pines	572.7	54.1	88.7	118.1	105.5	86.3	62.9	36.1	21.0
Shortleaf and loblolly pines	4,795.0	338.2	502.4	594.5	702.5	721.5	681.5	499.7	754.7
Other yellow pines	88.4	4.0	8.8	7.0	10.6	12.1	13.1	11.0	21.8
Cypress	912.2	27.0	60.5	103.8	126.7	190.7	124.2	113.0	166.3
Other softwoods	1.3	.3	.2	.	.6	.	.	.2	.
Total	6,369.6	423.6	660.6	823.4	945.9	1,010.6	881.7	660.0	963.8
Hardwood:									
Select white oaks ¹	239.6	14.6	19.9	28.9	41.1	50.5	30.8	20.3	33.5
Select red oaks ²	131.8	9.9	13.0	12.8	21.8	21.1	12.0	12.8	28.4
Other white oaks	487.9	33.0	45.2	54.1	53.4	63.3	47.3	41.1	150.5
Other red oaks	1,030.7	79.9	109.8	123.1	132.7	140.2	125.9	113.8	205.3
Hickory	577.0	27.0	43.5	55.5	59.0	67.8	82.3	64.7	177.2
Hard maple	1.2	.4	.1	.3	...	...	.4	...	...
Soft maple	116.7	19.4	22.1	19.7	12.4	16.1	13.7	5.5	7.8
Beech	95.4	2.6	4.8	8.7	15.4	14.0	20.3	10.8	18.8
Sweetgum	1,048.6	94.1	131.4	157.9	159.0	176.0	132.1	82.9	115.2
Tupelo and blackgum	914.4	46.4	98.5	151.4	165.8	135.9	110.2	84.0	122.2
Ash	413.3	24.2	44.2	51.7	56.9	48.4	49.2	42.8	95.9
Cottonwood	83.6	1.4	2.4	5.5	7.3	6.6	12.4	9.3	38.7
Basswood	3.1	.9	.6	1.0	.	...	.6	...	...
Yellow-poplar	14.4	1.3	1.1	4.3	1.8	2.8	.6	1.4	1.1
Black walnut	.7	.2	.2	.3	...	...	...	...	...
Other hardwoods	1,173.3	62.9	107.5	149.3	179.8	182.1	163.0	123.0	205.7
Total	6,331.7	418.2	644.3	824.5	906.4	924.8	800.8	612.4	1,200.3
All species	12,701.3	841.8	1,304.9	1,647.9	1,852.3	1,935.4	1,682.5	1,272.4	2,164.1

¹ Includes white, swamp chestnut, swamp white, and burr oaks.

² Includes cherrybark, Shumard, and northern red oaks.

Table 18. Volume of sawtimber on commercial forest land by species and diameter classes, Louisiana, 1964

Species	Diameter class (inches at breast height)						
	All classes	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0 and larger
----- Million board feet -----							
Softwood:							
Longleaf and slash pines	2,270.8	517.5	545.7	491.9	374.5	215.0	126.2
Shortleaf and loblolly pines	22,315.9	2,614.7	3,653.9	4,147.6	4,090.7	3,050.7	4,758.3
Other yellow pines	434.1	29.6	62.1	76.1	79.7	56.8	129.8
Cypress	4,407.3	411.9	587.5	998.1	717.2	661.7	1,030.9
Other softwoods	5.0		3.6			1.4	
Total	29,433.1	3,573.7	4,852.8	5,713.7	5,262.1	3,985.6	6,045.2
Hardwood:							
Select white oaks ¹	824.6		165.7	227.8	153.0	98.7	179.4
Select red oaks ²	431.3		74.4	86.2	59.1	62.3	149.3
Other white oaks	1,661.7		208.7	272.5	228.5	198.0	754.0
Other red oaks	3,287.6		483.8	602.8	576.0	561.9	1,063.1
Hickory	2,122.1		225.0	290.6	390.5	310.6	905.4
Hard maple	1.3				1.3		
Soft maple	205.4		42.6	56.7	54.9	22.1	29.1
Beech	360.8		60.1	61.3	93.9	54.1	91.4
Sweetgum	3,155.8		614.2	799.4	655.8	439.8	646.6
Tupelo and blackgum	2,889.3		644.1	579.6	530.6	444.5	690.5
Ash	1,231.5		193.9	191.1	219.3	187.8	439.4
Cottonwood	346.0		22.4	27.1	59.0	45.6	191.9
Basswood	2.8				2.8		
Yellow-poplar	35.0		8.0	12.5	3.8	4.1	6.6
Black walnut							
Other hardwoods	3,770.9		680.6	791.2	741.8	573.1	984.2
Total	20,326.1		3,423.5	3,998.8	3,770.3	3,002.6	6,130.9
All species	49,759.2	3,573.7	8,276.3	9,712.5	9,032.4	6,988.2	12,176.1

¹Includes white, swamp chestnut, swamp white, and burr oaks.

²Includes cherrybark, Shumard, and northern red oaks.

Table 19. Volume of sawtimber on commercial forest land by species and grade, Louisiana, 1964

Species	All grades	Grade 1	Grade 2	Grade 3	Lower grades
----- Million board feet -----					
Softwood:					
Yellow pines	25,020.8	1,616.2	8,807.7	12,474.3	2,122.6
Cypress	4,407.3	183.0	1,380.4	2,432.1	411.8
Other softwoods	5.0	5.0			
Total	29,433.1	1,804.2	10,188.1	14,906.4	2,534.4
Hardwood:					
Select white and red oaks	1,255.9	153.0	302.4	543.6	256.9
Other white and red oaks	4,949.3	383.5	962.5	2,062.3	1,541.0
Hickory	2,122.1	225.3	615.7	921.6	359.5
Hard maple	1.3				1.3
Sweetgum	3,155.8	493.1	911.9	1,425.7	325.1
Ash, black walnut, and black cherry	1,247.5	266.2	377.9	530.2	73.2
Yellow-poplar	35.0	2.2	7.5	18.9	6.4
Other hardwoods	7,559.2	1,113.6	2,030.5	3,547.5	867.6
Total	20,326.1	2,636.9	5,208.4	9,049.8	3,431.0
All species	49,759.2	4,441.1	15,396.5	23,956.2	5,965.4

Table 20. *Volume of salvable dead sawtimber-size trees on commercial forest land by softwoods and hardwoods, Louisiana, 1964*

Species group	Volume
	<i>Million board feet</i>
Softwood	18.6
Hardwood	37.2
All species	55.8

Table 21. *Net annual growth and cut of growing stock on commercial forest land by species, Louisiana, 1963*

Species	Net annual growth	Annual timber cut
	<i>- Million cubic feet -</i>	
Softwood:		
Yellow pines	422.3	245.4
Other softwoods	70.7	5.5
Total	493.0	250.9
Hardwood:		
Select white and red oaks	8.5	16.5
Other white and red oaks	34.6	53.8
Hickory	13.2	16.0
Sweetgum	23.9	25.8
Yellow-poplar	.3	.5
Other hardwoods	63.9	59.2
Total	144.4	171.8
All species	637.4	422.7

Table 22. *Net annual growth and cut of growing stock on commercial forest land by ownership classes and by softwoods and hardwoods, Louisiana, 1963*

Ownership class	Net annual growth			Annual timber cut		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood
	<i>- - - - - Million cubic feet - - - - -</i>					
Public	49.9	44.0	5.9	22.7	18.1	4.6
Forest industry	185.9	157.1	28.8	110.2	91.3	18.9
Farmer and mise. private	401.6	291.9	109.7	289.8	141.5	148.3
All ownerships	637.4	493.0	144.4	422.7	250.9	171.8

Table 23. *Net annual growth and cut of sawtimber on commercial forest land by species, Louisiana, 1963*

Species	Net annual growth	Annual timber cut
	<i>- Million board feet -</i>	
Softwood:		
Yellow pines	2,006.6	1,024.7
Other softwoods	353.9	31.7
Total	2,360.5	1,056.4
Hardwood:		
Select white and red oaks	34.9	64.8
Other white and red oaks	137.6	205.5
Hickory	59.0	59.1
Sweetgum	87.7	72.2
Yellow-poplar	1.0	1.2
Other hardwoods	244.9	219.8
Total	565.1	622.6
All species	2,925.6	1,679.0

Table 24. *Net annual growth and cut of sawtimber on commereial forest land by ownership classes and by softwoods and hardwoods, Louisiana, 1963*

Ownership class	Net annual growth			Annual timber cut		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
----- Million board feet -----						
Public	240.9	219.5	21.4	100.0	81.3	18.7
Forest industry	926.6	802.5	124.1	476.8	415.2	61.6
Farmer and misc. private	1,758.1	1,338.5	419.6	1,102.2	559.9	542.3
All ownerships	2,925.6	2,360.5	565.1	1,679.0	1,056.4	622.6

Table 25. *Annual mortality of growing stock and sawtimber on commereial forest land by species, Louisiana, 1963*

Species	Growing stock	Sawtimber
	Million cubic feet	Million board feet
Softwood:		
Yellow pines	23.5	115.1
Other softwoods	3.9	20.3
Total	27.4	135.4
Hardwood:		
Select white and red oaks	6.5	23.1
Other white and red oaks	26.6	91.1
Hickory	10.1	39.0
Sweetgum	18.3	58.1
Yellow-poplar	.3	.6
Other hardwoods	49.0	162.1
Total	110.8	374.0
All species	138.2	509.4

Table 26. *Annual mortality of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, Louisiana, 1963*

Ownership class	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
- Million cubic feet - - Million board feet -						
Public	6.9	2.4	4.5	26.7	12.6	14.1
Forest industry	30.8	8.7	22.1	128.1	46.0	82.1
Farmer and misc. private	100.5	16.3	84.2	354.6	76.8	277.8
All ownerships	138.2	27.4	110.8	509.4	135.4	374.0

Table 27. *Annual mortality of growing stock and sawtimber on commereial forest land by causes and by softwoods and hardwoods, Louisiana, 1963*

Cause of death	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
- Million cubic feet - - Million board feet -						
Fire	7.1	0.7	6.4	20.2	1.9	18.3
Insects	3.9	3.5	.4	21.9	21.9	..
Disease	4.3	.2	4.1	9.0	.	9.0
Other	30.6	5.2	25.4	100.5	16.7	83.8
Unknown	92.3	17.8	74.5	357.8	94.9	262.9
All causes	138.2	27.4	110.8	509.4	135.4	374.0

Table 28. *Total output of timber products by product, by type of material used, and by softwoods and hardwoods, Louisiana, 1963*

Product and species group	Total output in standard units		Output from roundwood		Output from plant by-products (standard units)
	Unit	Number	Standard units	M cubic feet	
Saw logs:					
Softwood	M bd. ft. ¹	673,572	673,572	110,803	
Hardwood	M bd. ft. ¹	392,316	392,316	65,399	
Total	M bd. ft. ¹	1,065,888	1,065,888	176,202	
Veneer logs and bolts:					
Softwood	M bd. ft.				
Hardwood	M bd. ft.	48,069	48,069	8,066	
Total	M bd. ft.	48,069	48,069	8,066	
Pulpwood:					
Softwood	Std. cords ²	1,745,590	1,502,990	113,325	242,600
Hardwood	Std. cords ²	492,631	465,531	36,218	27,100
Total	Std. cords ²	2,238,221	1,968,521	149,543	269,700
Piling:					
Softwood	M linear ft.	4,891	4,891	3,941	
Hardwood	M linear ft.				
Total	M linear ft.	4,891	4,891	3,941	
Poles:					
Softwood	M pieces	473	473	7,419	
Hardwood	M pieces				
Total	M pieces	473	473	7,419	
Misc. industrial wood:					
Softwood	M cu. ft.	381	20	20	361
Hardwood	M cu. ft.	6,095	5,404	5,404	691
Total	M cu. ft.	6,476	5,424	5,424	1,052
Posts (round and split):					
Softwood	M pieces	4,111	4,111	1,946	
Hardwood	M pieces	514	514	329	
Total	M pieces	4,625	4,625	2,275	
Fuelwood:					
Softwood	Std. cords	202,989	21,159	1,587	⁴ 181,830
Hardwood	Std. cords	521,684	354,777	26,608	⁴ 166,907
Total	Std. cords	724,673	375,936	28,195	⁴ 348,737
All products:					
Softwood	M cu. ft.			239,041	
Hardwood	M cu. ft.			142,024	
Total	M cu. ft.			381,065	

¹ International 1/4-inch rule.

² Rough wood basis (for example, chips converted to equivalent standard cords).

Includes cooperage logs and bolts, chemical wood, handle stock, furniture and other dimension, shuttleblocks, and miscellaneous domestic use. Additionally, byproducts include material used for livestock bedding, mulch, etc.

⁴ Includes plant byproducts used for industrial and domestic fuel.

Table 29. *Total output of roundwood products by source and by softwoods and hardwoods, Louisiana, 1963*

Source	All species	Softwood	Hardwood
-- Thousand cubic feet --			
Growing stock trees: ¹			
Sawtimber	290,438	194,868	95,570
Poletimber	64,986	37,217	27,769
Total	355,424	232,085	123,339
Cull trees ¹	8,889	989	7,900
Salvable dead trees ¹	3,841	125	3,716
Other sources ²	12,911	5,842	7,069
All sources	381,065	239,041	142,024

¹ On commercial forest land.

² Includes noncommercial forest land, nonforest land such as fence rows, trees less than 5.0 inches in diameter, and treetops and limbs.

Table 30. *Annual timber cut from growing stock on commercial forest land by product and logging residues, and by softwoods and hardwoods, Louisiana, 1963*

Product and residues	All species	Softwood	Hardwood
-- Thousand cubic feet --			
Roundwood products:			
Saw logs	173,029	110,062	62,967
Veneer logs and bolts	7,927		7,927
Pulpwood	137,009	107,914	29,095
Piling	3,924	3,924	
Poles	7,364	7,364	
Miscellaneous industrial wood ¹	5,333	20	5,313
Posts	2,067	1,770	297
Fuelwood	18,771	1,031	17,740
All products	355,424	232,085	123,339
Logging residues	51,360	18,804	32,556
Cultural operations	15,876		15,876
Timber cut	422,660	250,889	171,771

¹ Includes 127 M cu. ft. of miscellaneous farm products.

Table 31. *Annual timber cut from live sawtimber on commercial forest land by product and logging residues, and by softwoods and hardwoods, Louisiana, 1963*

Product and residues	All species	Softwood	Hardwood
-- Thousand board feet --			
Roundwood products:			
Saw logs	1,033,924	665,422	368,502
Veneer logs and bolts	46,636		46,636
Pulpwood	359,100	295,787	63,313
Piling	23,272	23,272	
Poles	37,638	37,638	
Miscellaneous industrial wood	28,381	109	28,272
Posts	1,076	741	335
Fuelwood	16,453	842	15,611
All products	1,546,480	1,023,811	522,669
Logging residues	106,609	32,608	74,001
Cultural operations	25,917		25,917
Timber cut	1,679,006	1,056,419	622,587

Table 32. *Volume of plant residues by industrial source and type of residue, and by softwoods and hardwoods, Louisiana, 1963*

Industrial source	All species			Softwood			Hardwood		
	Total	Coarse ¹	Fine ²	Total	Coarse ¹	Fine ²	Total	Coarse ¹	Fine ²
-- Thousand cubic feet --									
Lumber industry	24,335	10,630	13,705	9,622	3,643	5,979	14,713	6,987	7,726
Veneer and plywood industry	416	345	71	..	...	...	416	345	71
Other primary industries	2,977	1,225	1,752	1,406	480	926	1,571	745	826
All industries	27,728	12,200	15,528	11,028	4,123	6,905	16,700	8,077	8,623

¹ Unused material suitable for chipping, such as slabs, edgings, and veneer cores.

² Unused material not suitable for chipping, such as sawdust and shavings.

Table 33. *Timber growth projections, Louisiana, 1963 to 1993*¹

Period	Assumed cut			Projected growth		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
GROWING STOCK						
----- Thousand cubic feet -----						
1963 (year of inventory)	422,700	250,900	171,800	637,400	493,000	144,400
1973 (plus 10 years)	463,000	271,000	192,000	686,900	537,800	149,100
1983 (plus 20 years)	583,600	361,300	222,300	765,300	616,200	149,100
1993 (plus 30 years)	794,700	511,800	282,900	695,300	560,200	135,100
SAWTIMBER						
----- Thousand board feet -----						
1963 (year of inventory)	1,679,000	1,056,400	622,600	2,925,600	2,360,500	565,100
1973 (plus 10 years)	1,934,200	1,320,500	613,700	3,197,700	2,625,900	571,800
1983 (plus 20 years)	2,474,400	1,798,400	676,000	3,603,800	3,058,900	544,900
1993 (plus 30 years)	3,217,300	2,452,400	764,900	3,229,200	2,751,600	477,600

Based on assumptions that timber output in the United States and Louisiana will increase with anticipated gains in population and gross national product and that forestry efforts will continue at recent levels.

Table 34. *Basal area per acre of growing stock and cull trees by forest type, Louisiana, 1964*

Forest type	All trees	2- and 4-inch good trees ¹	Growing stock	2- and 4-inch poor trees	Cull trees
----- Square feet -----					
Longleaf-slash pine	35.1	6.4	25.3	0.9	2.5
Loblolly-shortleaf pine	72.3	14.0	49.0	2.3	7.0
Oak-pine	66.6	11.1	37.5	4.1	13.9
Oak-hickory	62.4	9.2	30.9	4.8	17.5
Elm-ash-cottonwood	79.5	8.0	45.0	4.9	21.6
Oak-gum-cypress	85.2	6.8	48.2	4.6	25.6
All types	72.4	9.7	43.2	3.6	15.9

¹Includes only sound, well-formed trees.

PARISH TABLES

The tables that follow are intended for use in compiling forest resource estimates for groups of parishes. Since the sampling procedure used by the Forest Survey in Louisiana was intended primarily to furnish inventory data for the State as a whole, individual parish estimates have limited and variable accuracy. As parish totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the tabulations on page 14.

Table 35. *Land area and commercial forest by parish, Louisiana, 1964*

Parish	Commercial forest			Parish	Commercial forest		
	Thousand acres	Thousand acres	Percent		Thousand acres	Thousand acres	Percent
Acadia	423.7	71.5	16.9	Madison	423.7	244.8	57.8
Allen	496.0	367.2	74.0	Morehouse	512.7	291.5	56.9
Ascension	192.0	103.7	54.0	Natchitoches	827.5	616.0	74.4
Assumption	228.5	143.0	62.6	Orleans	127.4	.	.
Avoyelles	528.6	313.5	59.3	Ouachita	408.3	300.8	73.7
Beauregard	757.8	661.2	87.3	Plaquemines	629.8	.	.
Bienville	526.1	437.4	83.1	Pointe Coupee	361.0	194.7	53.9
Bossier	537.0	414.0	77.1	Rapides	842.2	621.6	73.8
Caddo	568.3	352.8	62.1	Red River	264.3	174.0	65.8
Calcasieu	706.6	244.2	34.6	Richland	368.6	149.1	40.5
Caldwell	352.0	305.0	86.6	Sabine	658.6	540.0	82.0
Cameron	924.1	(¹)	(¹)	St. Bernard	326.4	.	.
Catahoula	467.2	345.0	73.8	St. Charles	194.6	68.8	35.4
Claiborne	490.2	365.8	74.6	St. Helena	268.8	203.0	75.5
Concordia	453.8	313.6	69.1	St. James	159.4	85.5	53.6
De Soto	570.9	428.4	75.0	St. John the Baptist	144.0	93.8	65.1
East Baton Rouge	295.7	130.9	44.3	St. Landry	595.2	255.0	42.8
East Carroll	275.8	109.2	39.6	St. Martin	461.4	310.0	67.2
East Feliciana	290.6	161.0	55.4	St. Mary	387.2	143.0	36.9
Evangeline	433.3	219.6	50.7	St. Tammany	581.1	404.7	69.6
Franklin	411.5	144.0	35.0	Tangipahoa	513.9	345.6	67.3
Grant	423.7	359.9	84.9	Tensas	398.7	230.1	57.7
Iberia	376.3	115.0	30.6	Terrebonne	890.2	122.4	13.7
Iberville	401.9	280.8	69.9	Union	579.9	489.7	84.4
Jackson	373.1	335.0	89.8	Vermilion	783.4	31.6	4.0
Jefferson	261.8	.	.	Vernon	867.8	736.7	84.9
Jefferson Davis	421.1	81.9	19.4	Washington	425.6	280.8	66.0
Lafayette	181.1	14.1	7.8	Webster	397.4	295.8	74.4
Lafourche	740.5	156.0	21.1	West Baton Rouge	128.0	69.3	54.1
La Salle	408.3	374.0	91.6	West Carroll	227.8	67.5	29.6
Lincoln	300.2	218.4	72.8	West Feliciana	262.4	179.2	68.3
Livingston	425.6	358.4	84.2	Winn	607.3	567.0	93.4
				All parishes	28,867.9	16,036.5	55.6

¹ Cameron included in Vermilion.

Table 36. *Growing stock volume by species groups and parish, Louisiana, 1964*

Parish	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	Pine	Other	Total	Gum	Other	Total	Oak	Other
----- Thousand cords -----										
Acadia ¹	1,540	313	256	57	884	884	-	343	198	145
Allen	3,798	2,656	2,592	64	666	623	43	476	352	124
Ascension	1,296	304	128	176	631	534	97	361	134	227
Assumption	3,749	1,593		1,593	1,905	1,568	337	251	52	199
Avoyelles	3,030	589	183	406	493	377	116	1,948	657	1,291
Beauregard	3,739	2,243	2,180	63	672	642	30	824	651	173
Bienville	4,549	3,556	3,525	31	554	487	67	439	278	161
Bossier	2,949	1,888	1,852	36	322	280	42	739	548	191
Caddo	1,993	968	956	12	358	242	116	667	516	151
Calcasieu	1,654	987	934	53	358	336	22	309	234	75
Caldwell	4,365	2,125	2,058	67	627	552	75	1,613	1,039	574
Cameron ¹										
Catahoula	3,530	692	584	108	331	250	81	2,507	1,064	1,443
Claiborne	2,877	2,147	2,140	7	348	348		382	281	101
Concordia	4,086	44		44	1,130	476	654	2,912	1,039	1,873
De Soto	4,523	3,225	3,034	191	346	321	25	952	651	301
East Baton Rouge	1,337	113	54	59	512	473	39	712	521	191
East Carroll	1,444	8		8	630	251	379	806	255	551
East Feliciana	1,617	932	932		230	196	34	455	416	39
Evangeline	1,485	833	825	8	373	366	7	279	161	118
Franklin	914	113	30	83	300	293	7	501	281	220
Grant	5,144	3,311	3,306	5	503	464	39	1,330	1,046	284
Iberia	1,427	491		491	754	216	538	182	46	136
Iberville	4,515	785		785	1,643	397	1,246	2,087	430	1,657
Jackson	4,803	3,215	3,212	3	533	509	24	1,055	849	206
Jefferson Davis	799	485	485		151	151		163	162	1
Lafayette ¹										
Lafourche	2,646	1,001		1,001	1,281	860	421	364	90	274
La Salle	3,669	2,216	2,168	48	313	295	18	1,140	591	549
Lincoln	1,234	764	761	3	218	173	45	252	189	63
Livingston	7,233	4,438	4,237	201	1,855	1,655	200	940	748	192
Madison	3,588				1,001	588	413	2,587	621	1,966
Morehouse	2,736	975	931	44	243	171	72	1,518	918	600
Natchitoches	6,906	4,417	4,336	81	722	674	48	1,767	1,022	745
Ouachita	3,276	1,231	994	237	285	282	3	1,760	1,229	531
Pointe Coupee	2,589	53		53	661	531	130	1,875	410	1,465
Rapides	6,262	3,132	3,037	95	1,033	940	93	2,097	1,079	1,018
Red River	1,516	668	663	5	436	272	164	412	242	170
Richland	1,089	59	59		73	73		957	479	478
Sabine	7,944	5,271	5,176	95	952	876	76	1,721	1,051	670
St. Charles	936	344	3	341	373	191	182	219	19	200
St. Helena	2,234	1,788	1,788		201	179	22	245	230	15
St. James	1,783	701		701	881	650	231	201	46	155
St. John the Baptist	2,109	808		808	1,152	974	178	149	31	118
St. Landry	3,417	463	87	376	906	585	321	2,048	931	1,117
St. Martin	3,416	835		835	2,045	628	1,417	536	45	491
St. Mary	1,978	629		629	1,215	963	252	134	61	73
St. Tammany	3,473	1,992	1,817	175	1,100	937	163	381	265	116
Tangipahoa	2,818	1,631	1,523	108	703	590	113	484	390	94
Tensas	2,801				734	353	381	2,067	749	1,318
Terrebonne	2,393	955		955	1,057	800	257	381	64	317
Union	5,387	3,079	2,910	169	778	751	27	1,530	1,043	487
Vermilion ¹										
Vernon	4,974	3,140	3,069	71	797	643	154	1,037	772	265
Washington	2,878	2,141	2,076	65	403	275	128	334	176	158
Webster	2,361	1,553	1,506	47	357	339	18	451	327	124
West Baton Rouge	2,318	32		33	758	219	539	1,527	315	1,212
West Carroll	621				122	122		499	369	130
West Feliciana	2,189	652	261	391	537	418	119	1,000	343	657
Winn	9,494	6,343	6,080	263	1,106	1,055	51	2,045	1,503	542
All parishes	179,431	84,928	72,748	12,180	39,552	29,298	10,254	54,951	28,209	26,742

¹ Cameron, Lafayette, and Vermilion included in Acadia.

Table 37. *Sawtimber volume by species groups and parish, Louisiana, 1964*

Parish	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	Pine	Other	Total	Gum	Other	Total	Oak	Other
----- Million board feet -----										
Acadia ¹	398.4	112.5	95.5	17.0	201.8	201.8	.	84.1	52.8	31.3
Allen	1,362.0	1,086.4	1,065.0	21.4	169.9	155.1	14.8	105.7	75.5	30.2
Ascension	273.9	107.7	48.9	58.8	101.2	89.5	11.7	65.0	45.2	19.8
Assumption	951.6	586.7	.	586.7	314.4	243.1	71.3	50.5	11.4	39.1
Avoyelles	792.1	176.7	62.8	113.9	113.4	89.5	23.9	502.0	189.8	312.2
Beauregard	1,084.4	748.8	721.6	27.2	146.4	142.9	3.5	189.2	155.5	33.7
Bienville	1,524.3	1,283.0	1,269.1	13.9	137.1	127.9	9.2	104.2	67.8	36.4
Bossier	791.5	610.6	603.0	7.6	44.4	39.1	5.3	136.5	110.8	25.7
Caddo	527.8	294.1	292.1	2.0	81.0	57.1	23.9	152.7	126.2	26.5
Calcasieu	503.9	343.8	325.7	18.1	91.0	84.7	6.3	69.1	52.8	16.3
Caldwell	1,365.9	832.3	804.2	28.1	150.2	144.9	5.3	383.4	242.6	140.8
Cameron ¹	..	..	..	..	..	..	..	..	..	..
Catahoula	964.9	284.8	250.0	34.8	81.6	59.1	22.5	598.5	269.2	329.3
Claiborne	740.6	614.1	612.1	2.0	52.2	52.2	.	74.3	49.1	25.2
Concordia	1,033.0	26.8	.	26.8	269.2	104.9	164.3	737.0	254.3	482.7
De Soto	1,152.1	903.7	830.9	72.8	55.9	53.6	2.3	192.5	140.8	51.7
East Baton Rouge	301.7	43.2	26.1	17.1	101.2	95.1	6.1	157.3	115.6	41.7
East Carroll	276.2	2.7	.	2.7	138.1	36.0	102.1	135.4	39.4	96.0
East Feliciana	487.9	317.0	317.0	.	51.7	46.1	5.6	119.2	112.5	6.7
Evangeline	418.0	271.3	271.3	.	86.3	83.0	3.3	60.4	41.5	18.9
Franklin	224.3	35.9	7.8	28.1	64.9	64.9	.	123.5	63.6	59.9
Grant	1,778.8	1,355.6	1,352.1	3.5	130.4	123.6	6.8	292.8	221.8	71.0
Iberia	337.7	151.4	.	151.4	157.8	39.2	118.6	28.5	12.6	15.9
Iberville	1,200.5	308.0	.	308.0	428.3	105.4	322.9	464.2	120.5	343.7
Jackson	1,346.9	1,060.6	1,060.6	..	110.4	109.5	.9	175.9	130.7	45.2
Jefferson Davis	221.6	150.2	150.2	.	37.7	37.7	.	33.7	33.7	...
Lafayette ¹	..	..	..	..	..	..	..	..	..	..
Lafourche	689.6	394.9	.	394.9	237.4	169.3	68.1	57.3	33.1	24.2
La Salle	1,187.3	848.4	833.2	15.2	73.1	67.7	5.4	265.8	137.8	128.0
Lincoln	306.9	229.2	229.2	.	35.3	28.4	6.9	42.4	27.9	14.5
Livingston	2,248.5	1,640.9	1,568.8	72.1	390.0	358.8	31.2	217.6	177.5	40.1
Madison	850.2	.	.	.	225.5	111.0	114.5	624.7	143.7	481.0
Morehouse	682.9	332.4	316.3	16.1	44.6	33.4	11.2	305.9	190.3	115.6
Natchitoches	1,892.7	1,429.5	1,402.2	27.3	113.5	105.0	8.5	349.7	176.5	173.2
Ouachita	742.8	383.5	314.0	69.5	44.6	44.6	...	314.7	209.3	105.4
Pointe Coupee	629.6	22.6	.	22.6	123.8	98.1	25.7	483.2	98.9	384.3
Rapides	1,743.1	1,057.7	1,028.3	29.4	216.4	211.3	5.1	469.0	217.9	251.1
Red River	392.2	227.2	227.2	.	78.4	47.1	31.3	86.6	53.5	33.1
Richland	240.4	21.7	21.7	.	12.6	12.6	..	206.1	103.1	103.0
Sabine	2,225.3	1,803.5	1,768.5	35.0	123.6	112.7	10.9	298.2	185.2	113.0
St. Charles	267.5	133.2	1.6	131.6	99.7	63.7	36.0	34.6	5.5	29.1
St. Helena	759.8	684.8	684.8	.	22.2	18.8	3.4	52.8	51.6	1.2
St. James	477.9	275.9	.	275.9	159.1	102.4	56.7	42.9	10.7	32.2
St. John the Baptist	561.8	308.2	.	308.2	231.4	200.6	30.8	22.2	7.3	14.9
St. Landry	853.3	179.5	40.5	139.0	175.8	107.2	68.6	498.0	247.9	250.1
St. Martin	839.0	315.6	.	315.6	407.5	103.2	304.3	115.9	13.1	102.8
St. Mary	475.1	198.8	.	198.8	247.9	205.4	42.5	28.4	17.7	10.7
St. Tammany	963.8	663.8	590.3	73.5	217.9	188.6	29.3	82.1	58.7	23.4
Tangipahoa	775.5	535.7	513.3	22.4	133.6	118.9	14.7	106.2	88.1	18.1
Tensas	626.5	.	.	.	181.4	94.0	87.4	445.1	160.4	284.7
Terrebonne	722.9	355.2	.	355.2	272.0	222.1	49.9	95.7	16.6	79.1
Union	1,352.2	879.3	820.9	58.4	175.2	168.3	6.9	297.7	202.9	94.8
Vermilion ¹	..	..	..	..	..	..	..	..	..	..
Vernon	1,320.3	978.2	954.7	23.5	159.7	138.4	21.3	182.4	134.0	48.4
Washington	854.6	692.2	664.0	28.2	91.7	70.4	21.3	70.7	38.6	32.1
Webster	594.2	440.8	440.8	.	65.5	62.8	2.7	87.9	64.8	23.1
West Baton Rouge	567.4	15.8	.	15.8	143.6	49.5	94.1	408.0	88.4	319.6
West Carroll	115.5	.	.	.	17.7	17.7	.	97.8	76.9	20.9
West Feliciana	626.0	253.4	93.3	160.1	129.4	95.7	33.7	243.2	90.1	153.1
Winn	3,114.4	2,423.3	2,341.2	82.1	237.3	231.5	5.8	453.8	341.5	112.3
All parishes	49,759.2	29,433.1	25,020.8	4,412.3	8,203.9	6,045.1	2,158.8	12,122.2	6,205.2	5,917.0

¹ Cameron, Lafayette, and Vermilion included in Acadia.

Table 38. Sawtimber volume by diameter classes and parish, Louisiana, 1964

Parish	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	9.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up
----- Million board feet -----										
Acadia ¹	398.4	112.5	70.3	42.2	201.8	127.9	73.9	84.1	27.8	56.3
Allen	1,362.0	1,086.4	597.0	489.4	169.9	62.3	107.6	105.7	47.9	57.8
Ascension	273.9	107.7	53.4	54.3	101.2	84.8	16.4	65.0	15.1	49.9
Assumption	951.6	586.7	289.5	297.2	314.4	147.4	167.0	50.5	24.8	25.7
Avoyelles	792.1	176.7	96.4	80.3	113.4	28.4	85.0	502.0	121.2	380.8
Beauregard	1,084.4	748.8	383.6	365.2	146.4	52.3	94.1	189.2	53.1	136.1
Bienville	1,524.3	1,283.0	639.4	643.6	137.1	64.8	72.3	104.2	50.2	54.0
Bossier	791.5	610.6	381.5	229.1	44.4	22.0	22.4	136.5	77.1	59.4
Caddo	527.8	294.1	187.0	107.1	81.0	32.1	48.9	152.7	71.0	81.7
Calcasieu	503.9	343.8	177.8	166.0	91.0	39.7	51.3	69.1	29.0	40.1
Caldwell	1,365.9	832.3	366.6	465.7	150.2	53.0	97.2	383.4	118.3	265.1
Cameron ¹	..	..	..	..	..	..	..	..	..	..
Catahoula	964.9	284.8	79.8	205.0	81.6	29.9	51.7	598.5	137.7	460.8
Claiborne	740.6	614.1	363.0	251.1	52.2	37.0	15.2	74.3	26.7	47.6
Concordia	1,033.0	26.8	1.2	25.6	269.2	59.3	209.9	737.0	164.3	572.7
De Soto	1,152.1	903.7	527.1	376.6	55.9	28.5	27.4	192.5	92.2	100.3
East Baton Rouge	301.7	43.2	8.1	35.1	101.2	61.7	39.5	157.3	32.6	124.7
East Carroll	276.2	2.7	..	2.7	138.1	34.5	103.6	135.4	44.3	91.1
East Feliciana	487.9	317.0	158.8	158.2	51.7	41.2	10.5	119.2	53.0	66.2
Evangeline	418.0	271.3	143.9	127.4	86.3	29.4	56.9	60.4	23.9	36.5
Franklin	224.3	35.9	14.6	21.3	64.9	24.9	40.0	123.5	39.6	83.9
Grant	1,778.8	1,355.6	550.1	805.5	130.4	29.0	101.4	292.8	115.7	177.1
Iberia	337.7	151.4	85.4	66.0	157.8	72.2	85.6	28.5	17.3	11.2
Iberville	1,200.5	308.0	155.1	152.9	428.3	154.5	273.8	464.2	103.7	360.5
Jackson	1,346.9	1,060.6	570.1	490.5	110.4	44.3	66.1	175.9	84.7	91.2
Jefferson Davis	221.6	150.2	53.2	97.0	37.7	20.2	17.5	33.7	13.8	19.9
Lafayette ¹	..	..	..	..	..	..	..	..	..	..
Lafourche	689.6	394.9	147.9	247.0	237.4	81.9	155.5	57.3	15.7	41.6
La Salle	1,187.3	848.4	301.8	546.6	73.1	32.8	40.3	265.8	94.5	171.3
Lincoln	306.9	229.2	140.8	88.4	35.3	18.4	16.9	42.4	15.7	26.7
Livingston	2,248.5	1,640.9	518.5	1,122.4	390.0	119.5	270.5	217.6	59.3	158.3
Madison	850.2	..	..	..	225.5	93.8	131.7	624.7	159.4	465.3
Morehouse	682.9	332.4	92.7	239.7	44.6	19.9	24.7	305.9	99.5	206.4
Natchitoches	1,892.7	1,429.5	726.4	703.1	113.5	58.4	55.1	349.7	157.3	192.4
Ouachita	742.8	383.5	185.8	197.7	44.6	29.3	15.3	314.7	101.7	213.0
Pointe Coupee	629.6	22.6	10.4	12.2	123.8	69.4	54.4	483.2	109.2	374.0
Rapides	1,743.1	1,057.7	559.4	498.3	216.4	91.7	124.7	469.0	163.1	305.9
Red River	392.2	227.2	107.2	120.0	78.4	22.2	56.2	86.6	29.3	57.3
Richland	240.4	21.7	..	21.7	12.6	..	11.7	206.1	47.3	158.8
Sabine	2,225.3	1,803.5	750.0	1,053.5	123.6	76.9	46.7	298.2	145.2	153.0
St. Charles	267.5	133.2	42.6	90.6	99.7	31.3	68.4	34.6	13.1	21.5
St. Helena	759.8	684.8	426.0	258.8	22.2	16.7	5.5	52.8	21.1	31.7
St. James	477.9	275.9	91.9	184.0	159.1	84.1	75.0	42.9	18.4	24.5
St. John the Baptist	561.8	308.2	93.8	214.4	231.4	125.8	105.6	22.2	4.4	17.8
St. Landry	853.3	179.5	93.5	86.0	175.8	62.0	113.8	498.0	151.1	346.9
St. Martin	839.0	315.6	163.5	152.1	407.5	157.0	250.5	115.9	64.8	51.1
St. Mary	475.1	198.8	121.5	77.3	247.9	107.9	140.0	28.4	9.2	19.2
St. Tammany	963.8	663.8	359.4	304.4	217.9	77.8	140.1	82.1	38.3	43.8
Tangipahoa	775.5	535.7	326.8	208.9	133.6	59.5	74.1	106.2	41.3	64.9
Tensas	626.5	..	..	..	181.4	59.3	122.1	445.1	119.2	325.9
Terrebonne	722.9	355.2	148.1	207.1	272.0	95.0	177.0	95.7	27.7	68.0
Union	1,352.2	879.3	474.1	405.2	175.2	66.3	108.9	297.7	127.8	169.9
Vermilion ¹	..	..	..	..	..	..	..	..	..	..
Vernon	1,320.3	978.2	609.8	368.4	159.7	91.1	68.6	182.4	83.1	99.3
Washington	854.6	692.2	429.1	263.1	91.7	28.6	63.1	70.7	22.2	48.5
Webster	594.2	440.8	246.0	194.8	65.5	39.1	26.4	87.9	32.7	55.2
West Baton Rouge	567.4	15.8	..	15.8	143.6	101.8	41.8	408.0	92.7	315.3
West Carroll	115.5	..	..	..	17.7	17.7	..	97.8	40.4	57.4
West Feliciana	626.0	253.4	92.6	160.8	129.4	49.2	80.2	243.2	72.8	170.4
Winn	3,114.4	2,423.3	927.7	1,495.6	237.3	84.3	153.0	453.8	208.9	244.9
All parishes	49,759.2	29,433.1	14,140.2	15,292.9	8,203.9	3,450.9	4,753.0	12,122.2	3,971.4	8,150.8

¹ Cameron, Lafayette, and Vermilion included in Acadia.

Table 39. Annual cut of growing stock and sawtimber by parish, Louisiana, 1963

Parish	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
	- Million cubic feet -			- Million board feet -		
Acadia ¹	2.2	0.5	1.7	4.3	1.9	2.4
Allen	8.8	5.8	3.0	29.6	22.6	7.0
Ascension	1.6	.2	1.4	6.9	1.0	5.9
Assumption	.8	.1	.7	2.1	.4	1.7
Avoyelles	8.7	.6	8.1	38.4	2.4	36.0
Beauregard	5.5	4.0	1.5	21.6	16.2	5.4
Bienville	16.4	11.9	4.5	55.1	46.1	9.0
Bossier	10.2	7.7	2.5	35.3	29.5	5.8
Caddo	3.2	1.6	1.6	7.6	4.5	3.1
Calcasieu	3.6	1.5	2.1	14.2	6.8	7.4
Caldwell	9.6	5.0	4.6	38.8	21.2	17.6
Cameron ¹	..	..	..	..	..	..
Catahoula	5.8	1.5	4.3	19.5	6.4	13.1
Claiborne	7.2	6.1	1.1	21.8	18.2	3.6
Concordia	12.0	.3	11.7	52.3	2.7	49.6
De Soto	11.2	7.0	4.2	36.5	27.0	9.5
East Baton Rouge	3.2	.6	2.6	13.0	3.2	9.8
East Carroll	1.5	(²)	1.5	5.1	(²)	5.1
East Feliciana	5.4	2.5	2.9	23.8	12.2	11.6
Evangeline	3.8	1.9	1.9	16.3	8.9	7.4
Franklin	2.5	.1	2.4	10.0	.3	9.7
Grant	12.3	10.1	2.2	56.9	48.3	8.6
Iberia	.5	(²)	.5	1.3	(²)	1.3
Iberville	4.8	.3	4.5	22.1	1.6	20.5
Jackson	22.9	15.6	7.3	89.4	66.2	23.2
Jefferson Davis	.9	.5	.4	3.2	2.2	1.0
Lafayette ¹	..	..	..	..	..	..
Lafourche	1.6	.3	1.3	5.5	1.6	3.9
La Salle	10.0	7.8	2.2	40.8	33.6	7.2
Lincoln	7.0	5.3	1.7	19.6	15.3	4.3
Livingston	22.4	17.3	5.1	100.3	78.8	21.5
Madison	5.0	.	5.0	22.6	.	22.6
Morehouse	15.5	9.5	6.0	65.3	44.0	21.3
Natchitoches	9.6	6.0	3.6	35.0	22.1	12.9
Ouachita	7.4	4.3	3.1	26.9	16.1	10.8
Pointe Coupee	4.4	.1	4.3	19.8	.3	19.5
Rapides	11.1	7.2	3.9	39.4	26.2	13.2
Red River	4.9	3.9	1.0	20.4	17.4	3.0
Richland	.8	(²)	.8	3.1	.1	3.0
Sabine	22.9	15.5	7.4	95.4	67.8	27.6
St. Charles	.5	(²)	.5	.8	.1	.7
St. Helena	9.1	7.6	1.5	41.8	36.8	5.0
St. James	1.9	.5	1.4	7.8	2.5	5.3
St. John the Baptist	.8	(²)	.8	3.0	.3	2.7
St. Landry	4.4	.1	4.3	15.5	.6	14.9
St. Martin	3.7	(²)	3.7	13.3	.2	13.1
St. Mary	.4	(²)	.4	.6	(²)	.6
St. Tammany	8.2	6.5	1.7	36.1	29.9	6.2
Tangipahoa	10.9	8.2	2.7	46.1	36.9	9.2
Tensas	4.6	.	4.6	18.9	.	18.9
Terrebonne	1.5	.3	1.2	5.8	1.9	3.9
Union	26.5	20.4	6.1	103.6	82.2	21.4
Vermilion ¹	..	..	..	..	..	..
Vernon	5.4	3.8	1.6	23.1	16.9	6.2
Washington	11.7	10.4	1.3	44.1	40.4	3.7
Webster	7.8	5.2	2.6	28.8	19.4	9.4
West Baton Rouge	1.1	(²)	1.1	4.9	(²)	4.9
West Carroll	.7	(²)	.7	2.4	.	2.4
West Feliciana	3.7	.3	3.4	15.9	1.4	14.5
Winn	32.6	25.0	7.6	147.3	113.8	33.5
All parishes	422.7	250.9	171.8	1,679.0	1,056.4	622.6

¹ Cameron, Lafayette, and Vermilion included in Acadia.² Negligible.

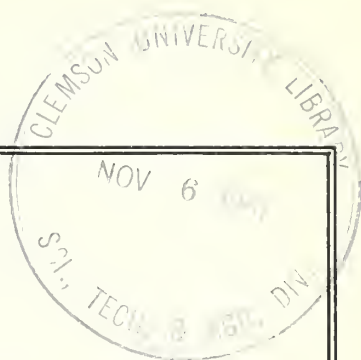
U. S. Forest Service Resource Bulletin SO-7

SOUTHERN FOREST EXPERIMENT STATION

New Orleans, Louisiana

Forest Service, U.S. Department of Agriculture

1965



FOREST INDUSTRIES IN APPALACHIA COUNTIES OF TENNESSEE

By

Charles C. Van Sickle

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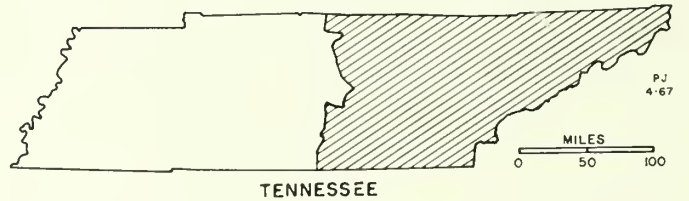
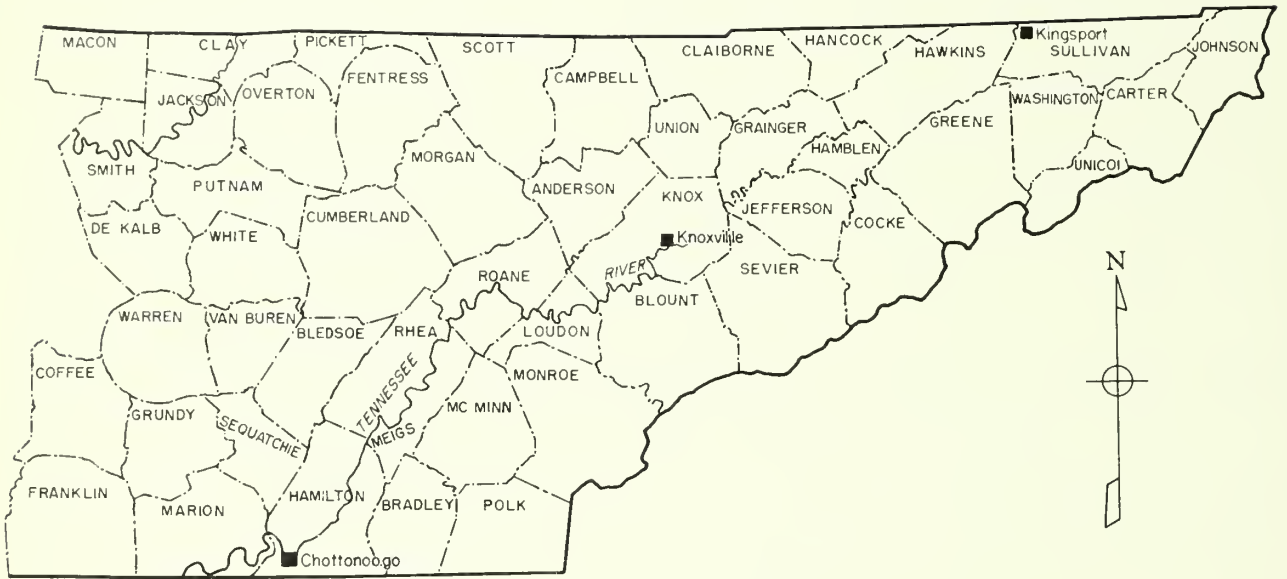
1967

The information in this report is largely from a canvass of primary wood-using industries made by the Southern Forest Experiment Station. Though an effort was made to locate all active plants, a few may have been overlooked. Omission of a firm is no reflection upon its activities, nor does inclusion constitute a recommendation.

The Tennessee Department of Conservation's Division of Forestry and the Tennessee Valley Authority's Division of Forestry Relations cooperated in the collection of industry data.

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Counties in Appalachia Region of Tennessee.

Timber Products Output

This report offers information on 1965 timber products output, plant residue production, and timber cut in the Appalachian Region of eastern Tennessee. The 49 counties that comprise this region are a part of the area defined by the Appalachian Regional Development Act of March 9, 1965.

This region is a mountainous area where 3 out of every 5 acres are forested. Timber makes up a vital part of the economy, yet the productive capacity of the forests is still largely undeveloped.

The region's timberland contains some 4.2 billion cubic feet of growing stock, that is, trees whose quality is such that now or in the future they will yield at least one saw log. Three-fourths of the volume is in hardwood species, the most common of which are red and white oaks, hickory, yellow-poplar, and gums. The softwood volume is mostly southern pines, but white pine, hemlock, and cedar are important in some places.

In 1965, logs, bolts, and other roundwood harvested from these forests totaled 91 million cubic feet. Forest industries used 71 million cubic feet. The other 20 million cubic feet went for domestic needs such as fuelwood and fenceposts. Figure 1 shows how the harvest was distributed. Saw logs made up 40 percent of the output, pulpwood 28 percent, fuelwood 19 percent, and all other products 13 percent.

The industrial wood supplied more than 440 plants within the region plus some 30 plants in adjoining areas. Appalachian plants numbered about 350 sawmills, 4 wood pulpmills, 14 cooperage plants, 17 handle stock mills, 41 charcoal operations, 3 veneer plants, and 19 other plants.

Because timber is a renewable resource, the forest represents a continuing supply of income. With the present industry structure as a base, the Appalachian economy can expand. Developing the region's potential will require increasing the forest pro-

ductivity, closer utilization of the timber, and strengthening the markets for forest products.

SAW LOGS

Saw logs made up half of the industrial roundwood in 1965. Three-fourths of the 218 million board feet of saw logs were from hardwoods. Softwood logs were mainly southern pines, but cedar, hemlock, and white pine were also sawn. More than half of the hardwoods were oak. Yellow-poplar made up 20 percent, and the remainder was mostly hickory, gum, ash, maple, and walnut.

Saw logs in Appalachia are not usually purchased by grade. But the quality of products sawn is closely related to log quality. In general, requirements are more demanding for hardwood than for pine. Among the several industrial uses of hardwoods, the manufacture of standard factory lumber predominates. The suitability of logs for this purpose, therefore, may be taken as a measure of their variability and utility.

The quality of hardwood logs received at sawmills in the region is shown in figure 2. The graph is based on a sample of 1,070 logs at the decks of 75 sawmills. Grading was by rules developed at the U.S. Forest Products Laboratory, which relate diameter, length, and amount of defect to the expected return of products. Logs of grades 1, 2, and 3 may be considered high, medium, and low in quality for standard factory lumber. Grade 4 includes logs suitable for structural or weight-bearing purposes, such as ties or timbers. Logs below grade 4 may be used where requirements for appearance and strength are not stringent.

The sample showed that three-fifths of the logs currently sawn are of grades 3 and 4; another fifth are grade 2. This distribution closely parallels the proportions to be found in the forest. It is unlikely

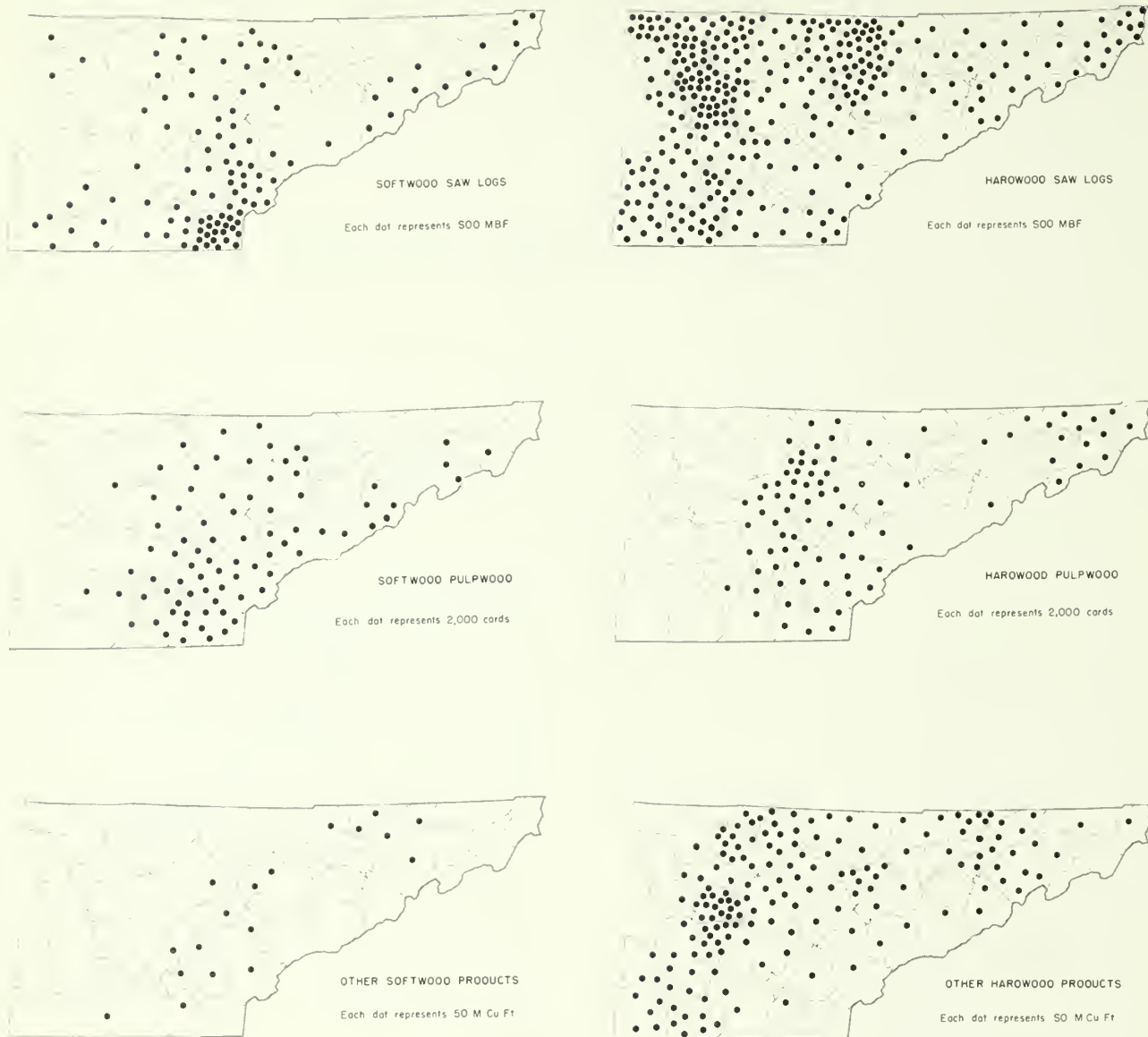


Figure 1.—Output of logs and bolts in Appalachia counties of Tennessee, 1965.

that the region now contains large concentrations of hardwoods having the quality necessary for high-grade factory lumber.

The hardwood logs sampled ranged in size from 6 to 34 inches, measured at the small end. As figure 3 indicates, logs from 12 to 20 inches are the mainstay of the industry. Almost three-fourths of the volume was in these sizes.

Pine log grades are closely related to diameter. The Appalachian pine resource, as indicated by the latest forest survey,¹ contains virtually no grade 1 logs and only 8 percent of grade 2 logs. (The minimum diameter for a grade 2 log is 10 inches at

the small end.) Because of the prevailingly small size of the trees, pine logs were not sampled.

About 350 sawmills operated in the region during 1965 (fig. 4). Seven were large mills, each cutting more than 3 million board feet of logs that year. Seventeen percent of the saw logs harvested went to these mills. They are typically year-round operations. The machinery required to maintain high output necessitates permanent facilities.

Medium-sized sawmills get 63 percent of the logs. Their log requirements range from one-half to 3 million board feet annually. They number 133, or slightly more than a third of all sawmills.

Medium-sized mills seem well suited to the conditions prevailing in the Appalachian region. Some

¹ Sternitzke, H.S. Tennessee forests. U.S. Forest Serv. Southern Forest Exp. Sta. Forest Survey Release 86, 29 pp. 1962.

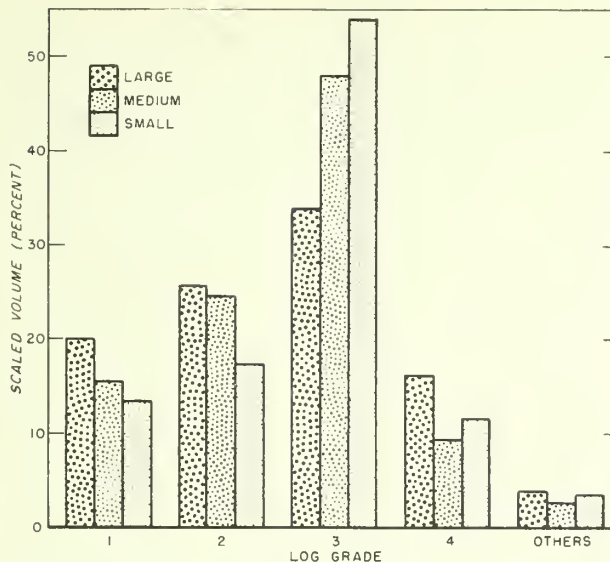


Figure 2.—Grades of hardwood logs received by sawmills in Appalachia counties of Tennessee, 1965.

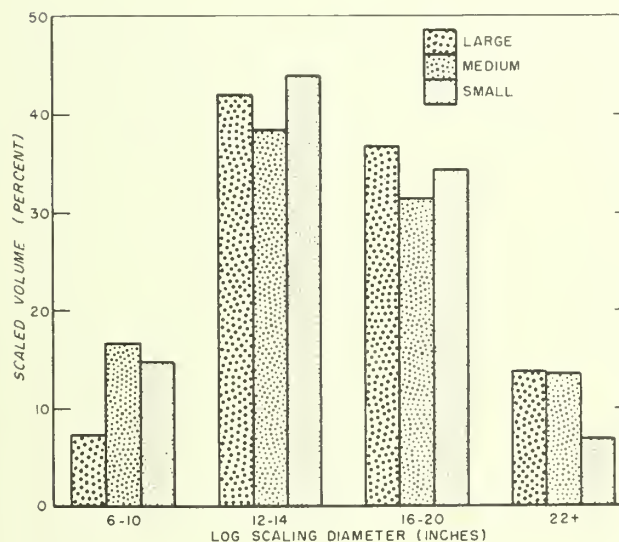


Figure 3.—Diameters of hardwood logs received by sawmills in Appalachia counties of Tennessee, 1965.

are permanently located, but almost half are portable. With underdeveloped roads in some areas, portable mills are competitive even though they do not market their slabs and edgings. Their mobility enables them to truck out only finished lumber and leave the log waste in the woods. They also enjoy operating advantages in poorly stocked stands, a chronic condition in Appalachia.

More than 210 small sawmills were active in 1965. These mills used 15 percent of the logs. Most

are part-time ventures. Some are crosstie producers going into operation when the demand for ties is high, as it was in 1965. Some are farmer-owned mills that saw to order for local consumption. And some simply were not in business long enough during 1965 to be classed as medium mills. Operating a sawmill on an intermittent basis would probably not be profitable with new equipment. But most of the mills are using machinery long since depreciated to a nominal value.

Substantial changes have taken place in the sawmilling industry since 1960, when the last sawmill canvass was made. The number of active mills is slightly more than half of the number operating then. Losses occurred in the small and medium classes in nearly equal proportions. Seven large sawmills were operating then also, but only three of the mills were tallied both times. Lumber production is estimated to have dropped by a third of the 1960 figure. Now, however, the average output per mill is greater.

The remaining 5 percent of the saw logs went to plants outside the region.

PULPWOOD

Round pulpwood cut in Tennessee's Appalachia counties totaled 337 thousand cords in 1965. This was 88 percent of the State's total, and most of it was used by the region's four pulpmills. Pulpwood bolts ranked second only to saw logs in regional wood production.

Hardwoods made up slightly more than half of the harvest. Three-fourths of the hardwood was oak. Some gum, yellow-poplar, maple, elm, and sycamore was also cut.

Morgan County was the biggest pulpwood-producing county in the region, shipping 33 thousand cords. Monroe and Cumberland Counties also ranked high.

U.S. pulpwood demand is expected to triple by the year 2000, according to projections made by the U.S. Forest Service. Much of the expansion will be in the South, which in recent times has been supplying 63 percent of the Nation's pulpwood. Because Tennessee's output has lagged behind that of surrounding States, it is probable that Tennessee production will rally in the near future. Mill construction already announced for surrounding areas tends to confirm this surmise.

Plans have been announced for a mill nearby in Kentucky. A site in southeastern Tennessee is under consideration for a newsprint mill. And two pulp

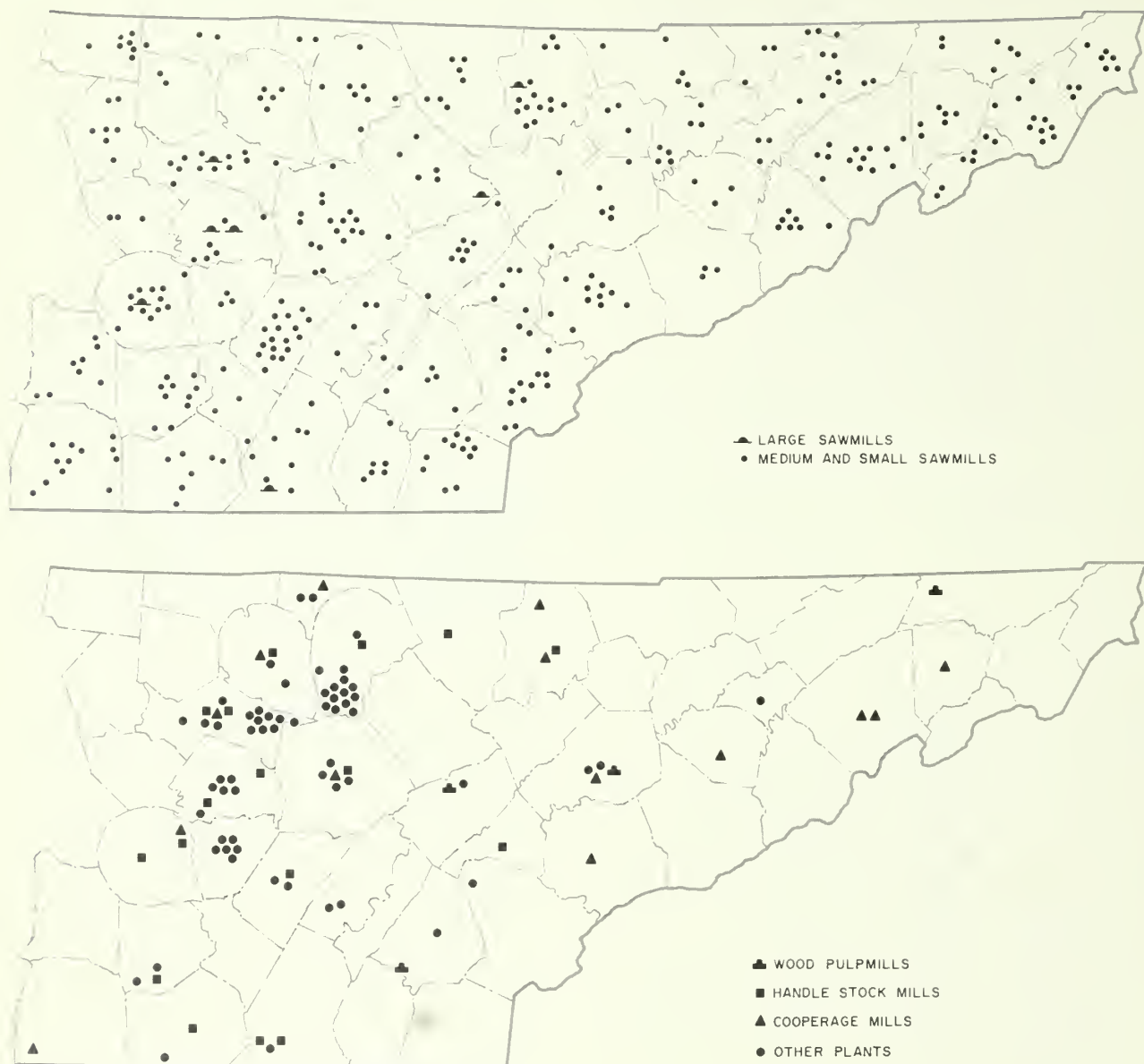


Figure 4.—Location of primary wood-using industries in Appalachia counties of Tennessee, 1965.

companies hold options on Tennessee River sites in Alabama. Even if these mills do not draw directly from Appalachia, the resulting shifts in wood procurement patterns will increase the demand for Appalachian wood.

HANDLE STOCK

Handle stock is a leading specialty item in the region. In 1965, 17 mills were making handles and related products such as ladder and chair rungs and ski blanks. Most of the wood is hickory for handles of striking tools, but ash and even oak are also used.

Hickory's combined qualities of toughness, hardness, strength, and shock resistance are unequalled by any other commercial species.

The total output was 1.8 million cubic feet. Bolts and billets usually range from 40 to 60 inches in length and from 8 to 20 inches in diameter. Some logs are also used.

COOPERAGE

One million cubic feet of logs and bolts were harvested for cooperage during 1965. White oak for bourbon barrels was the mainstay of the industry,

accounting for approximately two-thirds of the output. A small amount of tight cooperage was also produced for other types of barrels. The remaining third was for slack cooperage, chiefly tobacco hogsheads. Red oak, hickories, and even pines are used for this purpose.

Future trends in consumption of timber for tight cooperage will be dependent on Federal regulations relating to the use of bourbon barrels. With a continuation of present regulations, it seems likely that the demand for tight cooperage will show some increase. Slack cooperage, however, is not likely to maintain its position in the face of competition from other types of containers.

OTHER PRODUCTS

The output of wood for all other products in Appalachia made up 29 percent of the total.

Three-fourths of this wood was for domestic use, chiefly fuel. In other areas in the South, increasing per capita income and decreasing rural populations have reduced domestic wood use over the years. Usually this product represents less than 10 percent of the harvest. In Appalachia the demand is still relatively high, though it almost certainly will decline.

Miscellaneous industrial products totaled 6.2 million cubic feet. These include bolts or logs for charcoal, mine timbers, furniture stock, veneer, hardwood dimension, pine poles and posts, and flakeboard.

Charcoal was first among these products, accounting for 20 thousand cords of wood. Roundwood for roof props in underground mines ran a close second.

Veneer logs were an important minor product. The high value of quality logs permits shipment over long distances. Nineteen percent of the region's veneer log production was of walnut, none of which was used by local plants. Hickory made up half of the veneer log production. Most of the remainder was yellow-poplar and cedar.

PLANT RESIDUES

For every cubic foot of roundwood that goes to Appalachian mills, more than two-fifths becomes manufacturing residue. Total volume of residues in 1965 was more than 20 million cubic feet of wood. Fifty-five percent of this volume was coarse residues—slabs, edgings, miscuts, cull pieces, and other material suitable for conversion to pulp chips. The remaining residue is classed as fine, and includes sawdust and shavings.

Seven million cubic feet of residues were used, principally coarse residues for fuel and fiber (fig. 5). Some coarse and fine material also went for miscellaneous purposes like livestock and poultry bedding, soil mulch, charcoal, and tobacco stakes.

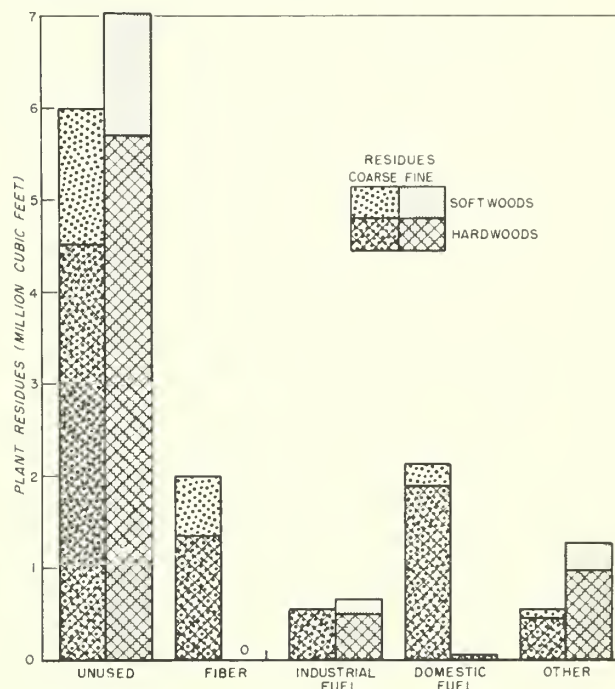


Figure 5.—Residue disposition, coarse and fine, Appalachia counties of Tennessee, 1965.

About 25 plants sold coarse residues for fiber. The 2 million cubic feet thus salvaged was less than a fifth of the total produced. When a market is available, sales of residue often contribute substantially to profits from sawmilling. Portable sawmills are seldom situated so that they can market their residues. The result is that much usable wood is left at the mill site.

OPPORTUNITIES FOR FOREST INDUSTRY EXPANSION

Appalachian hardwoods are highly regarded in the Nation's lumber and furniture markets. They are a mainstay for the South's thriving furniture industry. But thus far man can take little credit for this valuable timber supply. Appalachia's forests have long been heavily exploited and also ravaged by fire, disease, and insects.

Stocking in many stands is far less than most forest managers might desire. More than a fourth of the total acreage has less than 50 percent of the growing stock trees it could support. Only one-third is well stocked—that is, has at least 70 percent of

full stocking. In addition, the stands everywhere are encumbered with culls—trees that, because of defect, rot, or species, are worthless for saw logs. On the average acre, one-fifth of the growing space is wasted on such trees. Growth on growing stock trees averages 26 cubic feet per acre each year, or 0.37 cord. This is about one-third of what it could be under improved management.

An important aspect of the timber supply situation is the pattern of ownership. Almost 80 percent of the region's forests are held by farmers or other private owners whose interest in timber growing is secondary. If supplies of high-quality saw logs and veneer logs are to be increased, action must be taken to adapt already proven systems of forest management to the needs of these owners. Upgrading timber quality will not be easy. Even when the owners occupy the land—and they often do not—they lack the knowledge, the equipment, or the time to manage their stands. Too, there is a strong temptation to take short-term gains rather than to wait for higher but more remote returns on forest capital.

Though the stands are depleted, they still are a good base for expanding the region's forest economy. Total net growth (with mortality allowed for) is 190 million cubic feet annually. The volume harvested in 1965 was only half of this amount. Thus it is possible to increase the region's industrial output substantially and still reserve some of the growth to build up forest stocking.

Timber harvesting and utilization practices can be improved. Under the present distribution of timber

ownership, small and sometimes inefficient sawmills can operate profitably, but stumpage values often suffer. The practice of carrying the sawmill to the woods must eventually give way to the more efficient practice of carrying the wood to the sawmill. Among other things, such a change would permit the salvage of a large volume of residues now burned or left in the woods.

The pulpwood market offers an excellent opportunity for improving forest productivity. From all indications, the pulp industries will soon expand their procurement in the region. Many of the low-grade hardwoods that encumber the forests will yield pulpwood bolts, and thus improvement cuts will become increasingly feasible. Furthermore, the strong, year-round demand for pulpwood does much to stabilize wood harvesting.

The demand for timber products in the U.S. is expected to nearly double during the last half of the twentieth century. Furthermore, widespread land clearing in the lower Mississippi River Valley has removed prime hardwood land from timber production. This trend is expected to continue. Thus, hardwood users will have to turn to Appalachia for their rising needs.

The forests of the Appalachia portion of Tennessee can support an expanding industry. And there is little doubt that they will be required to do so. Whether the drain depletes the forest or improves it will be decided by the efforts of forest managers and forest industry.

Statistical Tables

Table 1.—Output of roundwood products, 1965

Product	Volume in standard units				Roundwood volume		
	Standard units	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
					— — — <i>M cu. ft.</i> — — —		
Saw logs	M bd.ft. ¹	217,890	54,750	163,140	36,378	8,999	27,379
Veneer logs	M bd.ft. ¹	3,862	420	3,442	662	70	592
Cooperage logs and bolts	M bd.ft. ¹	7,017	(²)	7,017	1,007	(²)	1,007
Pulpwood	Std. cords	337,070	162,262	174,808	25,835	12,235	13,600
Mine timbers (round and split)	M cu. ft.	1,354	157	1,197	1,354	157	1,197
Poles	M pieces	25	25	...	109	109	...
Misc. industrial wood ³	M cu. ft.	5,680	375	5,305	5,680	375	5,305
Posts (round and split)	M pieces	4,084	1,025	3,059	2,619	661	1,958
Fuelwood ⁴	Std. cords	232,456	6,605	225,851	17,437	498	16,939
Total					91,081	23,104	67,977

¹International ¼-inch rule.

²Pine production is included in hardwood output to avoid revealing operations of individual companies.

³Includes handle stock, chemical wood, furniture and other dimension, and shuttle blocks.

⁴Includes miscellaneous domestic use.

Table 2.—Industrial roundwood (except pulpwood) by species

Species group	Saw logs	Veneer logs	Cooperage logs	Miscellaneous products
	— — — <i>M cu. ft.</i> — — — <i>M cu. ft.</i>			
Softwood:				
Pines ²	51,309	...	(³)	794
Cedar	3,441	420	...	35
Total	54,750	420	(³)	829
Hardwood:				
Gums	4,490	...	55	486
Yellow-poplar	33,141	702	25	653
Red oaks	55,058	31	836	1,128
White oaks	34,447	33	4,812	765
Ash	1,741	...	...	493
Hickories	9,806	1,914	689	1,745
Walnut	2,485	718	...	7
Other hardwoods	21,972	44	600	1,225
Total	163,140	3,442	7,017	6,502
All species	217,890	3,862	7,017	7,331

¹International ¼-inch rule.

²Includes white pine and hemlock.

³Pine production is included in output of other hardwoods to avoid revealing individual company operations.

Table 3.—*Primary plant residues*

Species and type	At sawmills		At other plants		All industries ¹	
	Fine ²	Coarse ³	Fine	Coarse	Fine	Coarse
	<i>M cu. ft.</i>					
Softwood						
Used						
Fuel ⁴	111	245	58	1	169	246
Fiber ⁵	...	636	...	...	...	636
Other ⁶	306	29	...	30	306	59
Unused	1,230	1,411	103	58	1,333	1,469
Hardwood						
Used						
Fuel	527	1,782	9	656	536	2,438
Fiber	...	1,362	...	...	...	1,362
Other	854	316	115	164	969	480
Unused	4,395	3,905	1,300	617	5,695	4,522
All species						
Used	1,798	4,370	182	851	1,980	5,221
Unused	5,625	5,316	1,403	675	7,028	5,991
Total	7,423	9,686	1,585	1,526	9,008	11,212

¹ Excludes woodpulp industry.² Fine residues include sawdust, screenings, and other material generally too small for chipping.³ Coarse residues include slabs, edgings, trimmings, and other material generally suitable for chipping.⁴ Includes all residues used as fuel by industrial plants and domestic fuel either sold or given away.⁵ Includes all residues used in the manufacture of fiber products, such as pulp and hardboard.⁶ Includes residues used as livestock bedding, mulch, floor sweepings, and specialty items.Table 4.—*Saw log production by county*

County	All species	Softwoods	Hardwoods	County	All Species	Softwoods	Hardwoods
	<i>M bd. ft.¹</i>				<i>M bd. ft.¹</i>		
Anderson	7,072	823	6,249	McMinn	2,699	1,635	1,064
Bledsoe	4,555	492	4,063	Macon	6,872	309	6,563
Blount	1,612	765	847	Marion	8,405	1,719	6,686
Bradley	4,230	3,012	1,218	Meigs	1,186	483	703
Campbell	13,773	2,812	10,961	Monroe	10,326	8,159	2,167
Carter	3,446	1,167	2,279	Morgan	5,800	1,555	4,245
Claiborne	2,195	196	1,999	Overton	6,143	118	6,025
Clay	3,768	15	3,753	Pickett	2,845	...	2,845
Cocke	3,907	1,540	2,367	Polk	14,112	10,643	3,469
Coffee	4,619	...	4,619	Putnam	11,532	41	11,491
Cumberland	5,132	1,568	3,564	Rhea	991	150	841
De Kalb	3,501	59	3,442	Roane	4,592	2,775	1,817
Fentress	5,619	2,384	3,235	Scott	9,306	891	8,415
Franklin	6,930	1,257	5,673	Sequatchie	5,131	516	4,615
Grainger	1,474	215	1,259	Sevier	1,746	706	1,040
Greene	3,771	1,350	2,421	Smith	2,576	340	2,236
Grundy	3,492	1,056	2,436	Sullivan	1,194	91	1,103
Hamblen	703	...	703	Unicoi	1,858	977	881
Hamilton	3,568	1,073	2,495	Union	1,554	348	1,206
Hancock	915	44	871	Van Buren	2,024	45	1,979
Hawkins	1,758	74	1,684	Warren	4,103	51	4,052
Jackson	7,819	219	7,600	Washington	1,036	137	899
Jefferson	1,576	110	1,466	White	8,546	164	8,382
Johnson	5,096	1,658	3,438	Total	217,890	54,750	163,140
Knox	2,081	663	1,418				
Loudon	701	345	356				

¹ International 1/4-inch rule.

Table 5.—*Saw log movement by county*

County ¹	Logged and remained in county	Outgoing shipments	Incoming receipts	Total log receipts by county
	— — — — — <i>M bd. ft.</i> ² — — — — —			
Bledsoe	4,379	176	1,903	6,282
Blount	1,543	69	913	2,456
Bradley	2,873	1,357	426	3,299
Campbell	10,346	3,427	5,129	15,475
Carter	3,173	273	119	3,292
Claiborne	1,614	581	324	1,938
Clay	1,697	2,071	873	2,570
Cocke	3,073	834	148	3,221
Coffee	3,297	1,322	2,931	6,228
Cumberland	3,998	1,134	588	4,586
De Kalb	120	3,381	77	197
Fentress	3,644	1,975	...	3,644
Franklin	4,287	2,643	2,278	6,565
Grainger	710	764	1,068	1,778
Greene	2,828	943	279	3,107
Grundy	2,493	999	1,282	3,775
Hamblen	699	4	3,993	4,692
Hamilton	3,293	275	5,752	9,045
Hancock	321	594	32	353
Hawkins	957	801	148	1,105
Jefferson	466	1,110	118	584
Johnson	5,096	...	273	5,369
Knox	962	1,119	445	1,407
Loudon	132	569	2,302	2,434
McMinn	530	2,169	1,037	1,567
Macon	4,439	2,433	4,459	8,898
Marion	4,793	3,612	16	4,809
Monroe	7,830	2,496	3,672	11,502
Morgan	5,472	328	9,079	14,551
Overton	2,254	3,889	2,769	5,023
Polk	9,649	4,463	1,068	10,717
Putnam	10,405	1,127	9,144	19,549
Rhea	331	660	21	352
Roane	4,592	...	379	4,971
Scott	5,332	3,974	1,987	7,319
Sequatchie	2,029	3,102	673	2,702
Sevier	962	784	403	1,365
Smith	2,179	397	3,671	5,850
Sullivan	916	278	807	1,723
Unicoi	1,841	17	394	2,235
Union	384	1,170	25	409
Van Buren	769	1,255	51	820
Warren	3,516	587	4,657	8,173
Washington	917	119	692	1,609
White	5,759	2,787	1,813	7,572
All other counties	4,341	14,581	2,573	6,914
Total	141,241	76,649	80,791	222,032

¹Omitted counties have less than three sawmills.²International ¼-inch rule.Table 6.—*Pulpwood production by county*¹

County	All species	Softwoods	Hardwoods
	— — — — — <i>Std. cords</i> — — — — —		
Anderson	7,594	5,065	2,529
Bledsoe	4,882	3,382	1,500
Blount	15,353	10,587	4,766
Bradley	16,654	12,291	4,363
Campbell	7,954	5,975	1,979
Carter	8,033	1,469	6,564
Claiborne	2,475	1,067	1,408
Clay	...	...	...
Cocke	12,010	9,930	2,080
Coffee	...	...	...
Cumberland	24,980	5,675	19,305
De Kalb	...	...	...
Fentress	6,271	4,513	1,758
Franklin	...	...	...
Grainger	518	...	518
Greene	1,043	...	1,043
Grundy	1,994	1,994	...
Hamblen	...	...	...
Hamilton	9,828	5,070	4,758
Hancock	196	...	196
Hawkins	6,213	382	5,831
Jackson	...	...	...
Jefferson	57	...	57
Johnson	1,820	...	1,820
Knox	6,951	3,347	3,604
Loudon	5,360	2,769	2,591
McMinn	20,931	14,481	6,450
Macon	...	...	...
Marion	135	135	...
Meigs	12,365	7,170	5,195
Monroe	24,289	12,036	12,253
Morgan	33,100	5,534	27,566
Overton	...	...	...
Pickett	...	...	...
Polk	19,343	11,132	8,211
Putnam	2,081	1,787	294
Rhea	17,294	5,993	11,301
Roane	12,699	6,908	5,791
Scott	13,879	4,296	9,583
Sequatchie	2,447	1,084	1,363
Sevier	4,248	4,096	152
Smith	...	...	...
Sullivan	10,155	...	10,155
Unicoi	5,584	1,469	4,115
Union	10,379	9,033	1,346
Van Buren	...	...	...
Warren	...	...	...
Washington	7,172	3,439	3,733
White	783	153	630
Total	337,070	162,262	174,808

¹Includes only roundwood.

Table 7.—*Production of other industrial wood by county*

County	All species	Softwoods	Hardwoods
— — — — M cu. ft. — — — —			
Anderson	468	84	384
Bledsoe	25	...	25
Blount	101	...	101
Bradley	68	37	31
Campbell	95	9	86
Carter	...	...	...
Claiborne	204	44	160
Clay	4	...	4
Cocke	135	17	118
Coffee	137	11	126
Cumberland	498	11	487
De Kalb	75	2	73
Fentress	414	...	414
Franklin	236	...	236
Grainger	41	...	41
Greene	367	36	331
Grundy	215	2	213
Hamblen	139	10	129
Hamilton	52	16	36
Hancock	383	80	303
Hawkins	379	76	303
Jackson	33	...	33
Jefferson	13	...	13
Johnson	44	...	44
Knox	114	...	114
Loudon	91	24	67
McMinn	106	68	38
Macon	...	...	...
Marion	425	45	380
Meigs	90	90	...
Monroe	113	57	56
Morgan	335	48	287
Overton	553	...	553
Pickett	272	...	272
Polk	11	...	11
Putnam	214	2	212
Rhea	193	34	159
Roane	134	42	92
Scott	329	15	314
Sequatchie	146	23	123
Sevier	51	...	51
Smith	7	...	7
Sullivan	63	12	51
Unicoi	...	...	...
Union	38	...	38
Van Buren	501	3	498
Warren	226	14	212
Washington	67	...	67
White	795	4	791
Total	9,000	916	8,084

Table 8.—*Industrial roundwood receipts, except pulpwood, by county*

County ¹	All species	Softwoods	Hardwoods
— — — — M cu. ft. — — — —			
Bledsoe	1,081	211	870
Blount	687	149	538
Bradley	545	422	123
Campbell	2,672	523	2,149
Carter	548	189	359
Claiborne	370	25	345
Clay	436	...	436
Cocke	533	267	266
Coffee	1,061	...	1,061
Cumberland	1,173	98	1,075
De Kalb	34	...	34
Fentress	1,052	341	711
Franklin	1,168	...	1,168
Grainger	298	74	224
Greene	882	245	637
Grundy	679	218	461
Hamblen	1,735	182	1,553
Hamilton	1,668	315	1,353
Hancock	61	7	54
Hawkins	183	6	177
Jefferson	187	...	187
Johnson	892	277	615
Knox	972	53	919
Loudon	482	261	221
McMinn	277	153	124
Macon	1,488	...	1,488
Marion	1,430	137	1,293
Monroe	2,326	1,939	387
Morgan	2,590	277	2,313
Overton	1,312	61	1,251
Pickett	835	...	835
Polk	1,776	1,313	463
Putnam	3,646	...	3,646
Rhea	144	26	118
Roane	1,370	658	712
Scott	1,547	397	1,150
Sequatchie	593	58	535
Sevier	227	135	92
Smith	980	191	789
Sullivan	288	31	257
Unicoi	374	166	208
Union	66	26	40
Van Buren	400	5	395
Warren	2,328	6	2,322
Washington	292	39	253
White	2,036	49	1,987
Total	45,724	9,530	36,194

¹Omitted counties have less than three plants. Total receipts in these counties amount to 846 M cu. ft.

Table 9.—*Plant residues by county*¹

County	Used					Unused				
	All species	Softwoods		Hardwoods		All species	Softwoods		Hardwoods	
		Fine	Coarse	Fine	Coarse		Fine	Coarse	Fine	Coarse
	— M cu. ft. —					— M cu. ft. —				
Anderson	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Bledsoe	51	...	36	...	15	459	40	20	186	213
Blount	101	20	9	61	11	256	9	31	68	148
Bradley	58	36	12	6	4	195	44	101	21	29
Campbell	(²)	(²)	(²)	(²)	(²)	851	97	137	444	173
Carter	220	23	51	50	96	42	13	...	28	1
Claiborne	17	1	1	6	9	140	3	4	60	73
Clay	99	...	...	...	99	109	...	...	93	16
Cocke	190	31	64	32	63	62	20	8	26	8
Coffee	267	...	...	77	190	239	...	...	149	90
Cumberland	168	3	2	96	67	382	15	24	155	188
De Kalb	5	...	...	...	5	11	...	...	7	4
Fentress	82	1	...	30	51	308	64	92	90	62
Franklin	332	...	...	167	165	226	...	...	76	150
Grainger	7	...	1	1	5	136	14	19	48	55
Greene	304	41	60	56	147	120	6	5	84	25
Grundy	75	25	...	48	2	230	16	58	45	111
Hamblen	92	...	...	41	51	728	51	34	341	302
Hamilton	557	17	32	244	264	165	35	33	43	54
Hancock	12	...	2	2	8	16	1	...	9	6
Hawkins	41	...	2	3	36	49	1	...	36	12
Jackson	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Jefferson	13	...	...	...	13	85	...	...	44	41
Johnson	131	11	19	36	65	296	42	55	98	101
Knox	399	10	11	43	335	54	1	3	25	25
Loudon	17	...	1	...	16	209	50	69	53	37
McMinn	45	21	2	8	14	85	8	39	21	17
Macon	171	...	...	...	171	552	...	...	323	229
Marion	183	...	...	57	126	373	19	26	197	131
Meigs	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)	(²)
Monroe	407	129	217	20	41	543	210	208	63	62
Morgan	(²)	(²)	(²)	(²)	(²)	267	50	71	65	81
Overton	138	...	...	...	138	456	12	16	264	164
Pickett	122	...	...	25	97	281	...	...	156	125
Polk	143	23	92	18	10	682	227	261	81	113
Putnam	351	...	...	6	345	1,337	...	...	782	555
Rhea	22	...	...	1	21	25	4	6	7	8
Roane	235	...	123	...	112	408	141	41	179	47
Scott	291	32	92	41	126	396	41	11	203	141
Sequatchie	3	...	...	3	...	215	7	10	87	111
Sevier	98	26	33	19	20	8	...	4	...	4
Smith	39	...	...	...	39	429	36	51	170	172
Sullivan	124	4	8	43	69	15	2	...	13	...
Unicoi	88	4	32	11	41	88	28	13	33	14
Union	7	...	3	...	4	25	5	4	9	7
Van Buren	24	...	1	...	23	43	1	...	29	13
Warren	369	...	...	147	222	667	1	2	387	277
Washington	132	8	11	54	59	11	...	...	1	10
White	44	...	...	18	26	657	11	13	326	307
Total	6,274 ³	466	917	1,470	3,421	12,931 ³	1,325	1,469	5,625	4,512

¹ Excludes woodpulp industry.² Data omitted to avoid disclosure of individual operations.³ With omitted data included, total residues amount to 7,201 M cu. ft. used and 13,019 M cu. ft. unused.

Table 10.—*Timber cut from growing stock and sawtimber, by county*

County	Growing stock			Sawtimber		
	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
	— — — <i>M cu. ft.</i> — — —			— — — <i>M bd. ft.</i> ¹ — — —		
Anderson	2,961	619	2,342	9,575	1,909	7,666
Bledsoe	1,472	343	1,129	5,954	1,182	4,772
Blount	2,119	945	1,174	5,911	2,942	2,969
Bradley	2,415	1,521	894	8,066	5,650	2,416
Campbell	3,931	984	2,947	16,651	4,109	12,542
Carter	1,655	340	1,315	5,253	1,527	3,726
Claiborne	1,111	164	947	3,518	525	2,993
Clay	945	12	933	4,180	50	4,130
Cocke	2,050	1,051	999	7,285	3,645	3,640
Coffee	1,494	10	1,484	6,176	18	6,158
Cumberland	3,950	729	3,221	13,250	2,777	10,473
De Kalb	1,074	25	1,049	4,503	113	4,390
Fentress	2,353	790	1,563	8,905	3,385	5,520
Franklin	2,313	238	2,075	9,679	1,305	8,374
Grainger	577	46	531	2,104	235	1,869
Greene	1,809	308	1,501	7,295	1,651	5,644
Grundy	1,415	351	1,064	5,670	1,494	4,176
Hamblen	460	13	447	1,423	39	1,384
Hamilton	2,151	614	1,537	6,232	2,183	4,049
Hancock	678	90	588	2,097	302	1,795
Hawkins	1,518	124	1,394	4,260	446	3,814
Jackson	1,921	48	1,873	8,793	257	8,536
Jefferson	601	21	580	2,036	114	1,922
Johnson	1,386	312	1,074	6,078	1,717	4,361
Knox	2,187	377	1,810	5,381	1,362	4,019
Loudon	900	299	601	2,468	958	1,510
McMinn	2,418	1,459	959	7,318	4,745	2,573
Macon	1,679	58	1,621	7,529	322	7,207
Marion	2,593	387	2,206	10,304	1,829	8,475
Meigs	1,279	715	564	3,711	2,142	1,569
Monroe	4,116	2,486	1,630	15,773	10,981	4,792
Morgan	4,075	739	3,336	12,346	2,752	9,594
Overton	2,266	29	2,237	9,153	143	9,010
Pickett	1,007	5	1,002	4,025	18	4,007
Polk	4,258	2,799	1,459	18,248	13,166	5,082
Putnam	3,323	150	3,173	14,034	423	13,611
Rhea	1,845	503	1,342	5,129	1,386	3,743
Roane	2,335	1,059	1,276	8,005	4,273	3,732
Scott	3,799	510	3,289	14,155	1,794	12,361
Sequatchie	1,525	206	1,319	5,991	761	5,230
Sevier	1,075	443	632	3,466	1,563	1,903
Smith	765	94	671	3,100	471	2,629
Sullivan	1,785	40	1,745	3,875	188	3,687
Unicoi	907	298	609	2,977	1,317	1,660
Union	1,292	738	554	4,135	2,169	1,966
Van Buren	1,197	16	1,181	4,297	65	4,232
Warren	1,599	31	1,568	6,380	99	6,281
Washington	1,293	293	1,000	3,299	853	2,446
White	3,001	59	2,942	11,981	250	11,731
Total	94,878	23,491	71,387	341,974	91,605	250,369

¹International 1/4-inch rule.

Plant Directory

Table 11.—*Large sawmills*¹

County	Name	Location	Address ²	Type ³
Campbell	Gennett Lumber Co.	Royal Blue	Jacksboro	H
Hamilton	Williams and Voris Lumber Co.	Chattanooga	P. O. Box 1821 E. Lake Branch	H
Morgan	Georgia Pacific Corp.	Coalfield	Rt. 1, Oliver Springs	H
Putnam	H. T. Whitson Lumber Co.	Cookeville		H
Warren	Walker Lumber Co.	McMinnville	P. O. Box 110	H
White	White County Lumber Co. ⁴	Sparta	Rt. 4	H

¹Output of 3 million bd. ft. or more.

²Specified only when different from plant location.

³All mills saw mainly hardwoods.

⁴Operates two sawmills at this location.

Table 12.—*Medium and small sawmills*¹

County	Name	Location	Address ²	Type ³
Anderson	Walker Lumber Co.	Clinton	Rt. 4	H
Bledsoe	Allison and Boyd	Pikeville	P. O. Box 52	H
	Leonard Bickford	Pikeville		H
	Lee Brewer	Pikeville		H
	Mobley Brown	Pikeville		H
	Houston Dodson	Pikeville	Rt. 2	P-H
	D. E. Hankins	College	Rt. 4, Pikeville	H
	George Henderson	Pikeville		H
	John M. Johnson	Pikeville	Rt. 2	H
	R. E. Johnson	Pailo	Pikeville	H
	Willis Johnson	Pikeville		H
	J. W. Miller	Pikeville		H
	Morgan Manufacturing Co.	Pikeville	P. O. Box 256	H
	G. B. Myers	Pikeville	Rt. 2	H
	Dennis Pendergrass	Pikeville		H
	Robert Pendergrass	Pikeville	Rt. 1	H
	E. C. Sapp	Pikeville	Rt. 4	H
	Jonny Wooden	Pikeville		H
	H. C. Wooten	Pikeville	Rt. 5	P
Blount	John Bishop	Maryville	Rt. 4	H
	Daford Bookout	Maryville	Rt. 4	P
	Davis Lumber and Manufacturing Co.	Maryville	Rt. 5	H
	N. C. Dillingham	Maryville	Rt. 8	P
	Owen Downey and Willie Boring	Friendsville	Rt. 6, Maryville	H
	Howard Lambert	Jena	Rt. 2, Greenback	P
	John H. Ogle	Walland	Rt. 1	H
	Sam D. Payne, Jr.	Maryville	Rt. 6	H
	Earnest Perkins	Maryville	Rt. 7	P
	H. M. Skeen	Wellsville	Rt. 8, Maryville	P
	Kie N. Sparks and Eugene Sparks	Maryville	Rt. 7	P
Bradley	Bill Calhoun	Cleveland	Rt. 4	P
	J. R. Evans	Cleveland	Rt. 7	P
	Lake Lawson	Cleveland	Rt. 5	P
	Acey Murphy	Charleston	Rt. 4, Cleveland	P
	Murray Lumber Co.	Cleveland	P. O. Box 621	P
	C. L. Withrow	Black Fox	Rt. 3, Cleveland	P
Campbell	Baird Lumber Co., Inc.	Jellico	P.O. Box 239	H
	Freeman Brock	Royal Blue	Star Route, Sunbright	P-H
	Leonard Chapman	La Follette		P-H
	Dewey Childress	Royal Blue	Rt. 2, Pioneer	P
	Bill Creekmore	Newcomb	Rt. 1, Box 12	H
	Clyde Garrett	Royal Blue	Monterey	P
	Jess Goins	La Follette	Rt. 2	H
	J. W. Housley	La Follette	P.O. Box 62	H
	Alfred Mansfield	Royal Blue	Rt. 3, Oneida	P
	Bill Parrott	Jacksboro	P.O. Box 344, La Follette	H
	Estelle Payne	Royal Blue	Rt. 3, Oneida	P

Table 12.—*Medium and small sawmills* (Continued)¹

County	Name	Location	Address ²	Type ³
Carter	Otis Richardson	Jacksboro	Rt. 2	P-H
	Emmett Spradlin	La Follette	Rt. 2	P-H
	Oran Teasley	Newcomb		H
	Earl Banner	Roan Mountain		P
	Paul Blevins	Blevins	Rt. 2, Roan Mountain	H
	Howard Gource and Son Sawmill	Milligan	Rt. 2, Johnson City	H
	Hart and Brewer Sawmill	Roan Mountain	Rt. 1	P-H
	Higgins and Kerley	Roan Mountain	Rt. 1	H
	Wayne Holtsclaw	Roan Mountain	P.O. Box 22	H
	Thurman Julian	Roan Mountain		H
	McCloud Lumber Co.	Elizabethton		H
	J. R. Pritchard	Hunter	203 W. Doe Ave., Elizabethton	H
Claiborne	Fred Stout	Roan Mountain		H
	W. F. Bolton	Harrogate	P.O. Box 43	H
	Sam Duncan	New Tazewell	Rt. 1	H
	Kyle Mabe	Tazewell	Rt. 7	H
	Charlie Rice	Clairfield		H
	Riddle Lumber Co.	Tazewell		H
Clay	Prentiss Clark Lumber Co.	Bakerton	Rt. 4, Red Boiling Springs	H
	Herman Gass	Moss		H
Cocke	J. H. Overstreet Lumber Co.	Celina	P.O. Box 368	H
	Harley Bradshaw	Del Rio	Rt. 3	P-H
	Breeden Lumber Co.	Newport	Rt. 2	H
	Bryant and Pack Lumber Co.	Newport	1408 Cosby Rd.	P
	D. S. Fowler	Point Pleasant	Rt. 5, Newport	H
	Cecil Lindsay	Newport	Rt. 3	P
	Earl Lindsay	Newport	1505 North St.	H
	Connie Williams	Newport	134 North St.	H
	Campbell Lumber Co.	Tullahoma	P.O. Box 607	H
	Crouch Lumber Co.	Tullahoma	P.O. Box 366	H
Coffee	A. W. Danial	Manchester	102 N. Waite	H
	L. N. Danial, Jr.	Hillsboro		H
	Matt Floyd	Summitville		H
	Marvin Phelps	Manchester	Rt. 5	H
	Wayne Roberts Pallet Co.	Summitville		H
	O. O. Vaughn	Manchester	Rt. 2	H
	Jimmy Baisley	Crossville	Rt. 1	H
	Ezrey Buck	Rinnie	Rt. 1, Crossville	P
	Semp D. Burgess	Crossville	Rt. 6	H
	Westly Christian	Winesap	Rt. 6, Crossville	H
	Cox and Wyatt Lumber Co.	Plateau	Rt. 1, Box 240, Crossville	H
	Morris and Dallas Cox	Crossville	Rt. 1	H
Cumberland	Albert Frye	Crossville	Rt. 7	H
	H. E. Gunnels	Crossville	Rt. 7	H
	Virgil Kendrick	Daysville	Rt. 1, Rockwood	P
	Bill McFarland	Crossville	Rt. 5	H
	C. C. Neely	Winesap	Rt. 6, Box 455, Crossville	H
	Bill Neely	Lantana	Rt. 7, Sparta	H
	Denton Richards	Pleasant Hill	Grimsley	H
	Donald Rose	Crossville	Rt. 3	H
	Hubert Roy	Crossville	Rt. 6, Box 220	H
	Bluford Stamps	Plateau	Rt. 1, Crossville	H
	Glenn Tanner	Pleasant Hill	Rt. 4, Crossville	H
	James Wyatt	Lantana	Rt. 6, Crossville	H
	Troy Cripps	Liberty	Rt. 1	H
	Keith Lumber Co.	Smithville	Sparta Rd.	H
	Marvin Parker	Liberty		H
	Cantrell Bros.	Riverton	N. High St., Livingston	P
	Victor Garrett	Jamestown	Rt. 2	P
	Arvil Key	Pall Mall		P-H
	Ky-Tenn Lumber Co.	Jamestown		P
De Kalb	Noahy Norris	Banner Springs	Rt. 1, Jamestown	P
	B. D. Shapiro	Jamestown	P.O. Box 236	P-H
	Oscar Smith	Allardt	Rt. 2, Jamestown	P
	Olin Tompkins	Armthwaite		H
Fentress				

Table 12.—*Medium and small sawmills (Continued)*¹

County	Name	Location	Address ²	Type ³
Franklin	Earnest Brewer	Winchester	Rt. 1	H
	Clark and Jones	Winchester	Rt. 2	H
	Carlton Cunningham	Sherwood		H
	Dechard Sawmill	Dechard	c/o Thurman Jones	H
	Evans Log and Lumber Co.	Winchester Springs	Rt. 3, Winchester	H
	Ray M. Johnson and Co.	Huntland	P.O. Box 220	H
	Joe B. Milner	Sewanee	Rt. 1	H
	Partin and Dixon	Dechard	Rt. 1	H
	Earl Stephens	Winchester	Rt. 1	H
	Jack Summers	Sewanee	Sherwood	H
	University of The South	Sewanee		H
	F. L. Zimmerman	Belvidere		H
Grainger	Amos and James Buckner	Blaine	3301 Ashland Ave. P-H Knoxville	
	Ralph Campbell	Red Hill	Rt. 1, New Tazewell	H
	Kyle B. Hensley	Rutledge	Rt. 3	H
	Howard Jarnigan	Blaine	Rt. 2	H
	George McAlhaney	Rutledge	Rt. 2	H
	Cog Nicely	Blaine	Rt. 2	H
	Raleigh Norton	Blaine	Rt. 2	H
Greene	J. C. Arrington	Greenville	Rt. 7	H
	Baily Manufacturing Co.	Chuckey	Rt. 4	H
	C. C. Cress Lumber Co.	Greenville	P.O. Box 23	H
	R. B. Crum Lumber Co.	Greenville		P
	Fay Fillers	Camp Creek	Rt. 1, Afton	H
	Mark Fillers	Greenville	Rt. 4	H
	Guy Keifer	Midway		H
	Ezra Looney	Greenville	404 Park St.	H
	Phillips Brothers Lumber and Logs	Warrensburg	P.O. Box 285, Erwin	H
	Jay Rader	Mosheim	Midway	H
	Jimmy Riley	Mohawk		H
	Aubry Talliver	Jearoldstown	Rt. 12, Greenville	H
	Vernie Vest	Midway		H
Grundy	Paul Best	Altamont		H
	John Campbell	Altamont		P-H
	Greeter Lumber Co.	Altamont		P
	Hampton Bros. Lumber Co.	Altamont	Star Route	H
	Ed Lane	White City	Rt. 1, Tracy City	H
	Mitchell Meeks	Laager		H
	Clint Pickett	Laager		H
	Earl Pickett	Gruetli		H
	Seals and Swafford	Cagle	P.O. Box 136	H
Hamblen	Hugh Wooten	Tracy City		H
	Carroll Brothers	Witt	Mooresburg	H
	Geo. H. Hatfield Export Corp.	Morristown	P.O. Box 133A	H
Hamilton	Paul Hatfield Log and Lumber Co.	Morristown	1432 Davis St.	H
	Stanley Brown	Soddy	Brayton	H
	Cumberland Case Co.	Chattanooga	1 Wiehls St.	H
Hancock	Reece Hodge	Signal Mt.	Rt. 1, Sale Creek	P
	Hooker and Owens	Sale Creek		P
	Lester Lewis Sawmill	Mowbray	Rt. 1, Daisy	P
	Platt Lumber Yard	Chattanooga	Signal Mt. Blvd.	P
	Carl Roark	Hixon	Rt. 1, Birchwood	P
	Earl Rutledge	Soddy	Dunlap	H
	Ray and Don Baker	Kyles Ford		H
	John Clounce	Sneedville		H
Hawkins	Mack Harvey	Sneedville	Rt. 3	H
	H. C. Johnson	Kyles Ford	Rt. 2, Eidson	H
	Fred Livesay	Kyles Ford		H
	Louis Turnmeier	Treadway	Rt. 1, Thorn Hill	H
	J. W. Bradshaw	Van Hill	P.O. Box 803, Kingsport	H
	Milton Clounce	St. Clair	Bean Station	H
	Anderson Everhart	Persia		H
	Blake Henard	Rogersville	Rt. 4	H
Jackson	Walter Mathews	Rogersville	Rt. 6	H
	Hugh S. Moles Lumber Co.	Rogersville	P.O. Box 151	H
	Larry Morrison	Van Hill	Rt. 6, Rogersville	H
	Kelly Seals	Eidson		H
	P. G. Sizemore	Eidson	Rt. 2	H
	W. W. Cassety Lumber Co.	North Springs		H
	Sadler and Sadler Lumber Co.	North Springs		H

Table 12.—Medium and small sawmills (Continued)¹

County	Name	Location	Address ²	Type ³
Jefferson	Reed Bull	New Market	Rt. 2	H
	Willis Dykes	Kansas	Rt. 1, Strawberry Plains	H
	Algar Slaton	Dandridge	Rt. 3	H
Johnson	H. D. Arnold	Butler	Rt. 3	P-H
	A. N. Blevins	Shady Valley		H
	Tommy Collins	Butler	Rt. 3	P-H
	Clyde Cress	Mountain City	Rt. 1	H
	Daniel Moody Lumber Co.	Mountain City	P.O. Box 184	H
	Geo. C. Shoun Sawmill	Butler	Rt. 3	H
	Burl Simcox	Shouns		H
	Hardin Snyder	Shouns		H
	A. J. Stalcup	Mountain City	Rt. 3, Butler	H
Knox	Ben Abbott	Concord	Rt. 1	H
	C. B. Hoskins	Halls Crossroads	Rt. 1, Concord	H
	L. E. Nicely and Ralph Helton	Graveston	Liberty Hill	H
	Frank Roark	Knoxville		H
	Rogers Lumber and Supply Co.	Knoxville	929 Lee Ave.	P
	Arthur Wright Sawmill	Knoxville	Rt. 4, Clinton	H
Loudon	Curtis Owen Babb	Lenoir City	Rt. 1	H
	Harless Cansler	Greenback	Rt. 3, Madisonville	P
	J. T. Carter	Lenoir City	Rt. 3	P-H
	J. C. Lambert	Loudon	Rt. 2	P
	Earl Millsaps	Philadelphia	Rt. 4, Loudon	P
McMinn	Arlie Benton	Decatur	Rt. 1	H
	Bruce Coffee	Athens	Rt. 3	H
	Henry Guffey	Riceville		P
	Lloyd Harrod	Athens	Rt. 3	H
	Raymond Howell Dogwood Mill	Athens	P.O. Box 483	H
	Herman Mantooth	Etowah	Rt. 4, Cleveland	P
Macon	Bohanon Lumber Co.	Lafayette	Rt. 4	H
	Cassety Lumber Co.	Red Boiling Springs	Drawer D	H
	Charles Clark Lumber Co.	Red Boiling Springs		H
	Genie Jones Lumber Co.	Red Boiling Springs		H
	Macon Lumber Co.	Red Boiling Springs	Rt. 1	H
	Witcher Lumber Co.	Red Boiling Springs		H
	Kenneth Witcher Lumber Co.	Red Boiling Springs		H
Marion	Melvin Borne	Whitwell	Gruetli	H
	Earl Brewer	South Pittsburg	Tateville	P-H
	Emory Hastings	Battle Creek	Rt. 1, Sewanee	H
	Pete Meeks	Powells Cross-roads	Altamont	H
	Moss-American	Sequatchie	Jasper	H
	James A. Nale	Jasper	Rt. 1	H
	Jess Sargent	Firy Gizzard Cove	Rt. 1, Sewanee	H
Meigs	Kay Jennings	Decatur		H
Monroe	B and D Lumber Co.	Vonore	Rt. 4	P-H
	Edward E. Bivens	Rafter	Star Route, Tellico Plains	P
	Jess Brooks Lumber Co.	Tellico Plains		P
	Clyde Burris	Tellico Plains		P
	Jess Holder	Cokercreek	Star Route 1, Tellico Plains	H
	W. E. Lee	Rafter	Tellico Plains	P
	U. G. Leslie	Lakeside	Rt. 3, Madisonville	P-H
	Richie and Laney	Rafter	Rt. 1, Madisonville	P
	Charles Roberts	Belltown	970 Patterson Rd., Madisonville	P
	R. F. Sitzlar	Tellico Plains		P
	A. M. Stakley	Madisonville	Rt. 1	P-H
	Henry Torbett	Tellico Plains	Rt. 1, Madisonville	P
	Trotter Lumber Co.	Tellico Plains		P
	Watson Lumber Co.	Madisonville	P.O. Box 187	P
	Don West	Cokercreek	Tellico Plains	P
Morgan	Ernest Ahler	Gobey	Rt. 2, Knoxville	H
	John Freels	Sunbright	Rt. 1	P
	Pete Neskang	Wartburg		H
	Scott Lumber Co.	Lancing		P-H
	Randle Wortley	Deer Lodge		H

Table 12.—Medium and small sawmills (Continued)¹

County	Name	Location	Address ²	Type ³
Overton	S. B. Howard Lumber Co.	Livingston	P.O. Box 189	P
	Roy Keisling Lumber Co.	Livingston	905 Chestnut St.	H
	Scott Mill	Monroe		H
	Simcox and Copeland Lumber Co.	Livingston		H
	O. V. Story Lumber Co.	Livingston	Rt. 2	H
Pickett	Mullins Lumber Co.	Byrdstown	Star Route	H
	Sells Lumber Co.	Byrdstown	Rt. 2	H
Polk	C and W Lumber Co.	Benton		H
	Jim Carden	Parksville	1812 Louis St., Cleveland	P
	Jim Davis	Reliance	Rt. 2, Riceville	P
	Dock Evans	Parksville	Rt. 1, Benton	P
	Wayford Frerichs	Wetmore	Star Route, Tellico Plains	P-H
	Vick Hyde	Reliance	1500 W. Madison St., Athens	P
	McKinney Brothers	Reliance	P.O. Box 407, Athens	P
	Harry Murray	Benton	Rt. 1, Georgetown	P
	Tom Shannon	Wetmore	Ladd Springs Rd., Cleveland	P
	Leo Swanson	Wetmore	Coker Creek	P
	Ernest West	Wetmore	Tellico Plains	P
Putnam	Cookeville Planing Mills	Cookeville		H
	Dry Valley Lumber Co.	Cookeville	P.O. Box 434	H
	Emory and Farrel	Cookeville	Rt. 2, Sparta	H
	Grinders Creek Lumber Co.	Cookeville	P.O. Box 498	H
	Herren Lumber Co.	Silver Point	Rt. 1	H
	Lee Lumber Co.	Algood	P.O. Box 248	H
	Roy Luke Mill	Baxter		H
	Allon Martin	Baxter	Rt. 2	H
	Willard Nash	Baxter	Rt. 2	H
	Putnam County Lumber Co.	Monterey	P.O. Box 188	H
	Robert Shubert	Cookeville	Rt. 5	H
	Thompson Manufacturing Co., Inc.	Algood		H
Rhea	R. M. Bell	Dayton	Pikeville	H
	Burgess Harris	Spring City		H
	Jack Pelfrey	Evensville	Rt. 2, Box 16	P-H
	Irving Simpson	Spring City	Rt. 1	H
Roane	Orvall Collins	Rockwood	Rt. 2	P
	Bernie East	Rockwood	Rt. 2	P
	Julian Hooper	Oliver Springs	Rt. 2	P
	Dutch Johnson ⁴	Kingston	P.O. Box 196, Pikeville	H
	C. B. Jones	Rockwood	Rt. 2	P
	Ten Mile Lumber Co.	Ten Mile		P
	Earl Waldo	Rockwood	Rt. 2	P
Scott	Elgin Wood Products Corp.	Elgin		H
	Elwood Jeffers	Huntsville	Rt. 1	H
	Starling Lawson	Elgin	Huntsville	H
	Oneida Wood Industries, Inc.	Oneida	P.O. Box 398	P
	Adam Susak	Robbins	Rt. 1, Lancing	H
	Arthur Watters	Oneida		H
	Luther West	Helenwood	Rt. 1	H
Sequatchie	Sutton Campbell Lumber Co.	Dunlap		H
	W. L. Meeks	Palmer	P.O. Box 151, Jasper	H
	Don Stoker	Cagle		H
Sevier	H. W. Worley	Signal Mt.	P.O. Box 55	H
	Charlie W. Hurst	Sevierville	Rt. 6	P-H
	M. B. McMahan and Co.	Sevierville		P-H
Smith	Mize Lumber Co.	Sevierville	P.O. Box 386	P
	Massey and Winkler Lumber	Pleasant Shade		H
	Alton Owens Mill	Carthage		P
	Baxter Owens Mill	Carthage		P
	Houston Owens Lumber Co.	Carthage		H
	J. C. Owens Mill	Carthage		P
	Shepard Lumber Co.	Difficult		H
	Tedrow Log and Lumber Co.	Gordonsville		H

Table 12.—*Medium and small sawmills (Continued)*¹

County	Name	Location	Address ²	Type ³
Sullivan	Calhoun Brothers	Kingsport	1805 Fairview Ave.	H
	Joe Harr	Blountville	Rt. 4	H
	Garland Jarrett	Bluff City	Rt. 3	H
	Cecil Milhorn	Piney Flats	Rt. 1	H
	Quillen Brothers Lumber Co.	Morrison City	P.O. Box 664, Gate City, Va.	H
	Smith Brothers	Bluff City		H
Unicoi	D. C. Brummitt	Unicoi		P
	Lloyd Garland	Unicoi	Rt. 1	P-H
	Clarence Harris	Flag Pond		H
	Ray Kegley	Erwin	Rt. 2	P-H
	Tom Masters	Erwin	Rt. 2	H
	Royal Shelton	Flag Pond	Rt. 1	H
	Grady Simmons	Erwin	Rt. 2	P-H
Union	Cliff Bailey	Sharps Chapel	Rt. 3, Maynardville	H
	Herbert Lay, Jr.	Maynardville	Rt. 3	P
	Rouse Brothers	Sharps Chapel	Rt. 1	H
Van Buren	H. T. Argo	Spencer		H
	L. S. Bouldin Mill	Spencer	Rt. 1	H
	E. N. Walker	Spencer	Rt. 1	H
Warren	Burroughs-Ross-Colville Co.	McMinnville	Depot St.	H
	J. M. Cunningham	McMinnville	510 Spring St.	H
	Donaldson Mill	McMinnville	104 Linger	H
	Raymond Earl	McMinnville	Rt. 6	H
	E. L. Hillis	McMinnville	Rt. 5	H
	W. W. McCoy	McMinnville		H
	Howard Rhea	Morrison	Rt. 2	H
	Nunley Rice Sawmill	McMinnville	Rt. 1	H
	Rogers Lumber Co.	Rock Island	Rt. 1	H
	Scott Mill	McMinnville	Rt. 2	H
	James Smith	McMinnville	Rt. 2	H
	Wanamaker and Hobbs	McMinnville		H
Washington	G. F. Arrowood	Limestone	Rt. 1, Chuckey	H
	A. R. Briggs	Jonesboro	Rt. 2	H
	W. S. Jackson	Jonesboro	Rt. 8	H
	Niles Keys	Limestone	Rt. 1	H
	Malone Lumber Co.	Jonesboro	Rt. 8	H
	Ed Roberts	Jonesboro	Rt. 1	H
White	Bowland Lumber Co.	Quebeck		H
	Elmore Carter Lumber Co.	Sparta	Rt. 1	H
	E. P. Judd	Doyle		H
	W. S. Maynard	Doyle	Spencer	H
	Casto Norris	Ravenscroft	Rt. 6, Crossville	H
	Slatton Mill	Quebeck		P

¹ Output of less than 3 million bd. ft.² Specified when different from plant location.³ H indicates mills sawing mainly hardwoods.

P indicates mills sawing mainly pine.

⁴ Operates two sawmills.Table 13.—*Wood pulpmills*

County	Name	Location
Knox	Southern Extract Co.	Knoxville
McMinn	Bowaters Southern Paper Corp.	Calhoun
Roane	The Mead Corp.	Harriman
Sullivan	The Mead Corp.	Kingsport

Table 14.—*Handle stock plants*

County	Name	Location	Address ¹
Bledsoe	Sequatchie Handle Works, Inc.	Pikeville	P.O. Box 331
Campbell	Clyde Davis	La Follette	P.O. Box 262
Cumberland	Turner, Day, and Woolworth Handle Corp.	Crossville	
Fentress	Turner, Day, and Woolworth Handle Corp.	Jamestown	P.O. Box 213
Grundy	True Temper Corp.	Tracy City	
Hamilton	Blanchard Handle Corp. Dixie Logging Tool Co.	Chattanooga Chattanooga	P.O. Box 5056
Loudon	Loudon Hickory Products, Inc.	Loudon	P.O. Box 309
Marion	Sequatchie Handle Works, Inc.	Sequatchie	
Overton	Livingston Handle Co.	Livingston	
Putnam	Chattanooga Handle Co. Tennessee Handle Co.	Cookeville Cookeville	
Scott	Charles D. Roberts Co.	Helenwood	P.O. Box 3033, Greensboro, N.C.
Warren	O. Ames Co. Burroughs-Ross-Colville Co.	Champaign McMinnville	P.O. Box 34 Depot Street
White	Ed Judd Casto Norris	Doyle Ravens Croft	Rt. 6, Crossville

¹Specified only if different from plant location.Table 15.—*Cooperage mills*

County	Name	Location	Address ¹
Blount	Sam D. Payne, Jr.	Sixmile	Rt. 6, Maryville
Campbell	Clyde Davis Robinson and Thompson	La Follette Newcomb	P.O. Box 262 East Burnstead, Ky.
Cumberland	E. W. Tanner	Crossville	
Franklin	Huntland Stave Co.	Huntland	
Greene	R. B. Crum Greenville Stave Co. ²	Greenville Greenville	
Jefferson	Witcher and Parrott	Dandridge	Red Boiling Springs
Knox	Dixon Trading and Manufacturing Co.	Knoxville	1026 Maryville Pike
Overton	W. W. Stave and Heading Co.	Livingston	Rt. 2
Pickett	Oren Rich and Son	Static	P.O. Box 32, Byrdstown
Putnam	Johnson Brothers Lumber and Stave Co.	Cookeville	P.O. Box 532
Warren	Ralph Hash	Rock Island	Rt. 1
Washington	W. H. Guinn	Jonesboro	Rt. 1

¹Specified only if different from plant location.²Produces slack cooperage; all others produce tight cooperage.Table 16.—*Veneer mills*

County	Name	Location	Address ¹
Knox	Foreign and Domestic Veneers, Inc.	Knoxville	P.O. Box 1067
Rhea	Gholdston Basket Co. Shipley's Basket Co.	Dayton Dayton	

¹Specified only if different from plant location.

Table 17.—*Wood-preserving plants*¹

County	Name	Location	Address ²
Hamilton	Southern Wood Preserving Co.	Chattanooga	P.O. Box 1368
Monroe	The Langdale Co.	Sweetwater	P.O. Box 168

¹ Both plants use pressure treatments.² Specified only if different from plant location.Table 18.—*Charcoal producers*

County	Name	Location	Address ¹
Bledsoe	Albert Gilbert Robert Simmons	Pikeville Pikeville	
Cumberland	Earl Jones Richard Shepherd Odis Sisco James Walker	Crossville Crossville Crossville Crossville	
Fentress	Claude Atkinson Guy Beaty George Coley Lloyd Dearman Paul Dixon Oliver Elmore James M. Franklin Vernon R. Harris Horace Hicks Terry Miller Auldon Phillips Warner Phillips Plateau Inc. Thurston Walker	Clarkrange Grimsley Clarkrange Clarkrange Clarkrange Clarkrange Jamestown Clarkrange Clarkrange Clarkrange Clarkrange Clarkrange Wilder Clarkrange	Rt. 1
Grundy	Elmer Bryant Underwriter Oil Co.	Tracy City Monteagle	
Overton	Culbert Reed	Crawford	
Putnam	Don Beaty Arb Hedgecough Homer Looper M. B. Masters and Arvin Vaughn Beecher Phillips J. E. Ray Ronald Reagan Kernel Swallows Tennessee Handle Co.	Monterey Baxter Monterey Monterey Monterey Monterey Monterey Monterey Cookeville	P.O. Box 116
Van Buren	H. S. Argo L. S. Bouldin Joel Davis Gene Manis Plateau Inc. J. P. Sullivan	Spencer Spencer Spencer Spencer Spencer Spencer	
White	J. C. Blaylock Hasten and Hill Charcoal Co. Kee Charcoal Co.	Sparta Sparta Sparta	

¹ Specified only if different from plant location.

Table 19.—*Miscellaneous plants*

County	Name	Location	Address ¹
Hamblen	Tenn-Flake Corp. ²	Morristown	2525 Trade St.
Knox	J. D. Tallent Block Mill ³	Knoxville	5312 Hamburg Dr.
McMinn	Raymond Howell Dogwood Mill ^{3, 4}	Athens	P.O. Box 483
Marion	Pedens Wood Products Co. ⁴	South Pittsburg	
Overton	Livingston Square Mill ⁴	Livingston	
Pickett	Arlen King Lumber Co. ⁴	Byrdstown	Rt. 2
	Leo V. Story Mill ⁴	Byrdstown	P.O. Box 34
Putnam	All-Good Chair Co. ⁴	Algood	
	Cumberland Timber Products ⁴	Monterey	Rt. 3
	J. H. Taylor ⁴	Monterey	Rt. 3
	Tennessee Handle Co. ⁴	Cookeville	
Roane	Yankee Lumber Co. ⁴	Harriman	
White	Roscoe Griffin ³	Sparta	201 West Bronson St.
	White County Lumber Co. ⁴	Sparta	Rt. 4
	Volunteer Specialty Co. ⁴	Quebec	Sparta

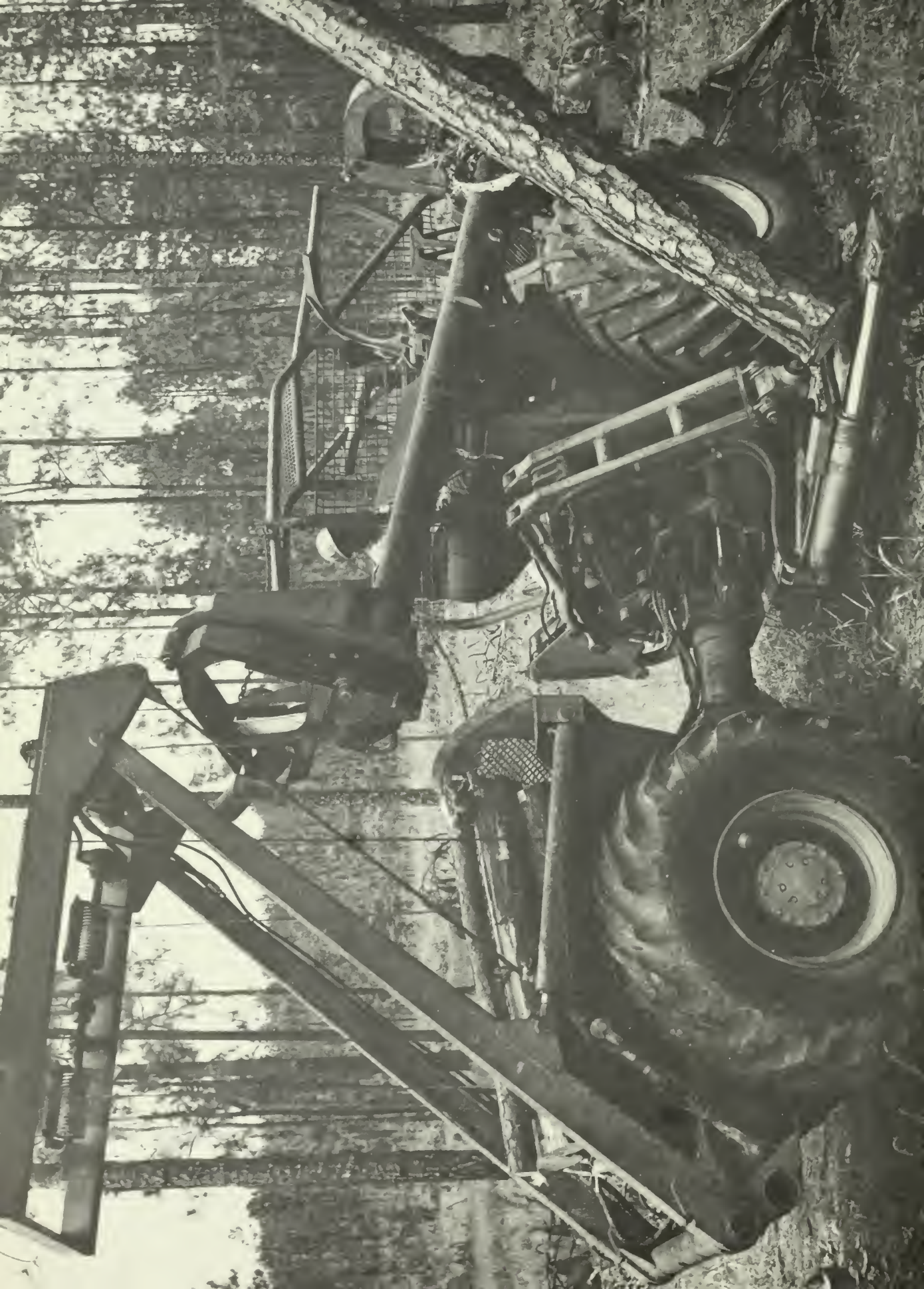
¹Specified only if different from plant location.²Produces particle board.³Produces shuttle blocks.⁴Produces furniture and miscellaneous dimension.

SOUTHERN PULPWOOD PRODUCTION 1966



SSW
88076





The South's booming pulpwood industry again had a record-breaking year in 1966, when a total of 33.1 million cords of wood were produced. This amount, nearly 61 percent of the Nation's total, went to 87 mills in the 12 Southern States and 10 mills outside of the South. Expansion of existing facilities plus the addition of 5 new mills during the year increased the South's pulping capacity to 64.7 thousand tons per day—a gain of more than 9 percent.

Pulpwood production in the South rose 7 percent in 1966, to 33,061,243 cords. This is the highest output on record and the ninth consecutive increase in annual production. Pine roundwood accounted for 57 percent of the increase, and residues or byproducts from other wood-using industries, 26 percent. The remainder was due to an increase in the harvest of hardwood bolts.

Gains in pulpwood production were reported in 10 of the 12 Southern States (table 1). Mississippi had the largest increase—686,000 cords. Alabama produced nearly 430,000 cords more in 1966 than in 1965. In view of current construction, it is almost certain that output in the two States will continue to increase rapidly. In Mississippi, two mills with a combined capacity of more than 2,500 tons per day are under construction. Alabama also has two mills going up, which will increase the State's daily pulping capacity by 1,450 tons. In addi-

tion, two new mills started up in Alabama in late 1966.

Louisiana, South Carolina, and Texas all increased their outputs by more than 200,000 cords in 1966. Of the remaining Southern States, all but Oklahoma, Virginia, and Tennessee produced 100,000 cords more in 1966 than in 1965. Production declined 2 percent in Virginia and 11 percent in Tennessee.

A total of 43 counties produced 100,000 cords or more in 1966, as compared to 37 in 1965. Union Parish, Louisiana, was the leader for the third consecutive year with 213,149 cords. Fairfield County, South Carolina, was second with 204,635 cords, and Choctaw County, Alabama, was third with a total output of 201,629 cords.

Of the 27.3 million cords of roundwood harvested in 1966, 20.8 million were pine and 6.5 million were hardwood. Oaks accounted for

Table 1. *Pulpwood production in the South during 1966 and change since 1965*

State	Round pulpwood and residues	Change
	Thousand cords	Percent
Alabama	5,291.9	+ 9
Arkansas	2,193.2	+ 5
Florida	2,989.9	+ 4
Georgia	6,298.1	+ 2
Louisiana	2,675.2	+ 9
Mississippi	2,949.5	+30
North Carolina	3,052.5	+ 7
Oklahoma	117.0	+28
South Carolina	2,854.3	+ 8
Tennessee	370.0	-11
Texas	1,904.1	+14
Virginia	2,365.5	- 2
All States	33,061.2	+ 7

Table 2. *Round pulpwood production in the South, by State and species group, 1966*

State	All species	Pine	Hardwoods			
			Total	Gums	Oaks	Other hardwoods
----- Thousand cords -----						
Alabama	4,464.3	3,269.4	1,194.9	477.0	386.4	331.5
Arkansas	1,544.8	989.9	554.9	118.8	386.3	49.8
Florida	2,676.1	2,424.1	252.0	88.5	112.0	51.5
Georgia	5,426.5	4,866.0	560.5	258.1	208.0	94.4
Louisiana	2,200.5	1,653.8	546.7	212.9	187.2	146.6
Mississippi	2,475.3	1,560.3	915.0	429.3	154.7	331.0
North Carolina	2,396.8	1,733.5	663.3	187.7	240.7	234.9
Oklahoma	62.2	15.9	46.3	2.7	10.5	33.1
South Carolina	2,343.5	1,803.4	540.1	211.3	182.5	146.3
Tennessee	327.4	152.1	175.3	12.3	108.3	54.7
Texas	1,374.7	975.1	399.6	168.7	171.3	59.6
Virginia	2,007.6	1,334.3	673.3	84.3	390.5	198.5
All States	27,299.7	20,777.8	6,521.9	2,251.6	2,538.4	1,731.9

39 percent of the hardwood bolts, gums 35 percent, and other hardwoods 26 percent. This was the first year in which the output of oaks exceeded that of gums. Figure 1 shows the changes in production by hardwood species group since 1963. If present trends continue, annual consumption of the gums will soon fall below that of both oaks and other hardwoods. Improved technology, which has facilitated the processing of oaks and other hardwoods, has contributed to the increased consumption of these species.

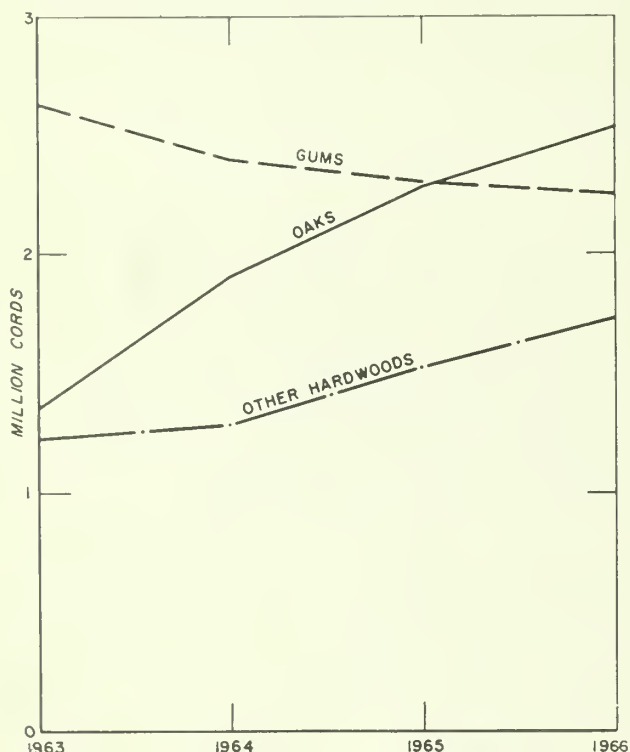


Figure 1. Round pulpwood production of gums, oaks, and other hardwoods in the South, 1963-1966.

About 5.8 million cord equivalents of residues were consumed by the pulping industry in 1966. This was an increase of more than 11 percent over 1965. The bulk of the residues—some 80 percent—were pine chips made primarily from sawmill slabs and edgings.

The proportion of wood that arrives at the mills as chips will increase markedly in future years. One reason is that utilization of residues is expected to rise, but the main reason is that the number of roundwood chipping plants is growing rapidly. Rough roundwood delivered to these plants is converted into chips which are loaded on railroad cars or trucks for ship-

ment to a pulpmill. In 1964, there were only 5 such installations in the entire South; by the end of 1966 there were 13 either in operation or in various stages of construction in Mississippi alone.

Pulp company officials were asked to report chipped residues separately from chipped roundwood. The reported volume of chipped roundwood is included in the roundwood tables of this paper. With use of chips rising rapidly, continued accurate and complete differentiation between chipped residues and chipped roundwood will be needed in future years if roundwood procurement summaries by State and county are to be kept meaningful.

In 1966, five new pulpmills went into operation. They, along with expanded existing facilities, boosted the total daily pulping capacity in the South by nearly 5,500 tons. Georgia, the long-time leader in production capacity, lead the South again with a total capability of more than 12,000 tons per day. Florida was second with a combined daily potential of 8,773 tons, and Alabama was third with 7,893 tons.

At the close of 1966, eleven new pulpmills were being erected in the South and several others were announced. Alabama, Louisiana, Mississippi, and Texas each had two mills under construction, while Arkansas, Georgia, and South Carolina had one. When these mills begin operating, they will increase the daily pulping capacity in the South by 7,835 tons—a 12-percent boost over the 1966 potential. Figure 2 shows what impact the new mills will have on the capacity in each State. The opening of these mills will assure a continued increase in demand for southern pulpwood.

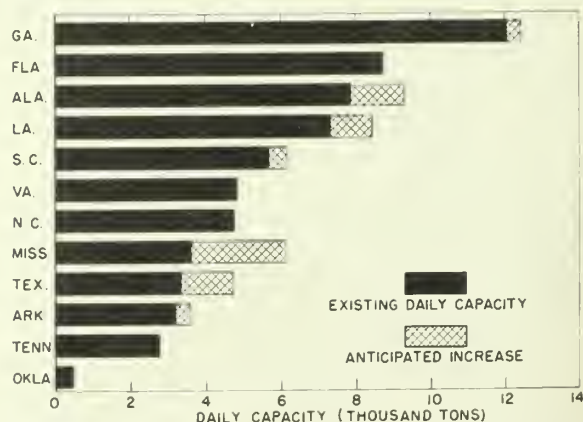


Figure 2. Daily pulping capacity by State, 1966, and increase anticipated from addition of mills under construction.

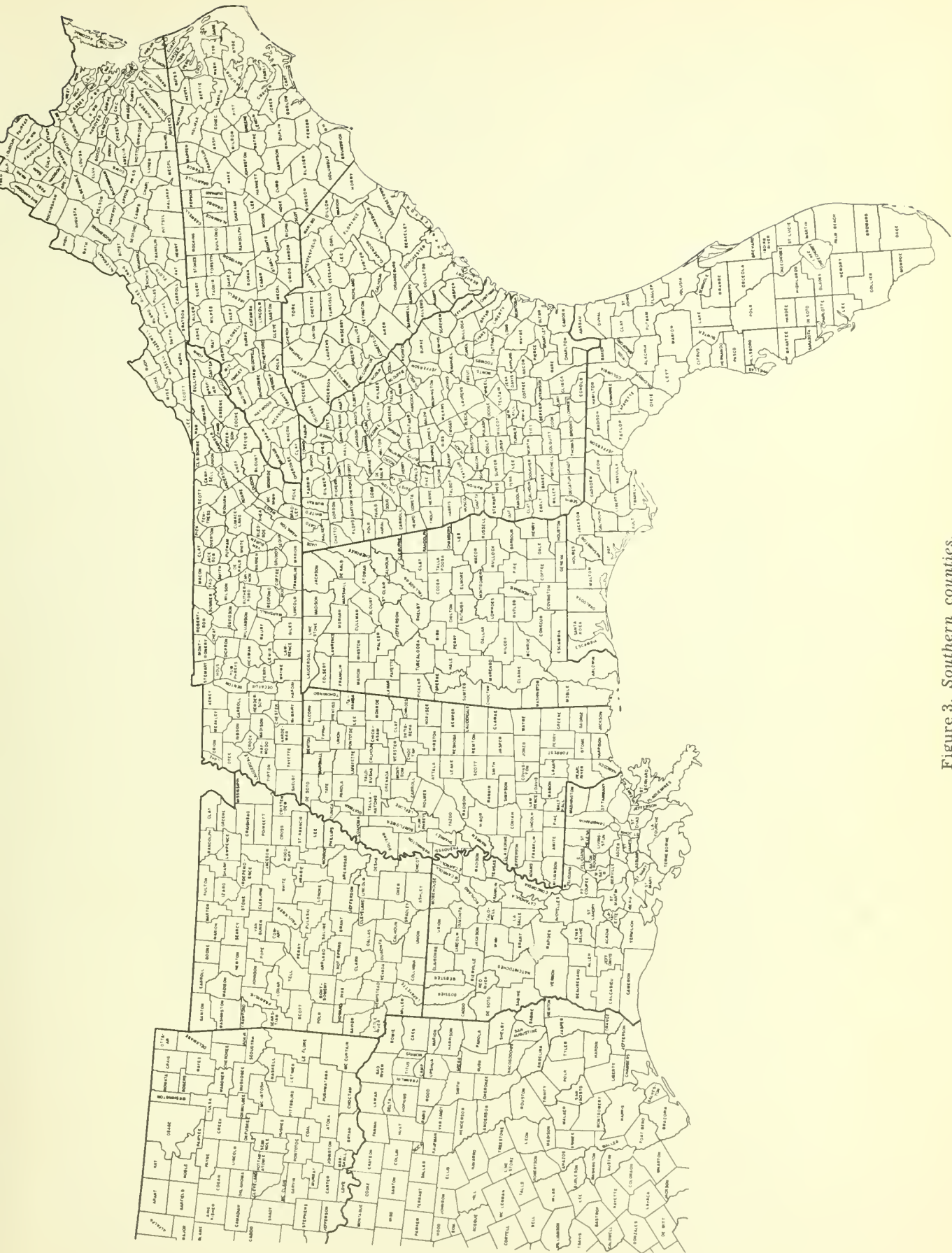
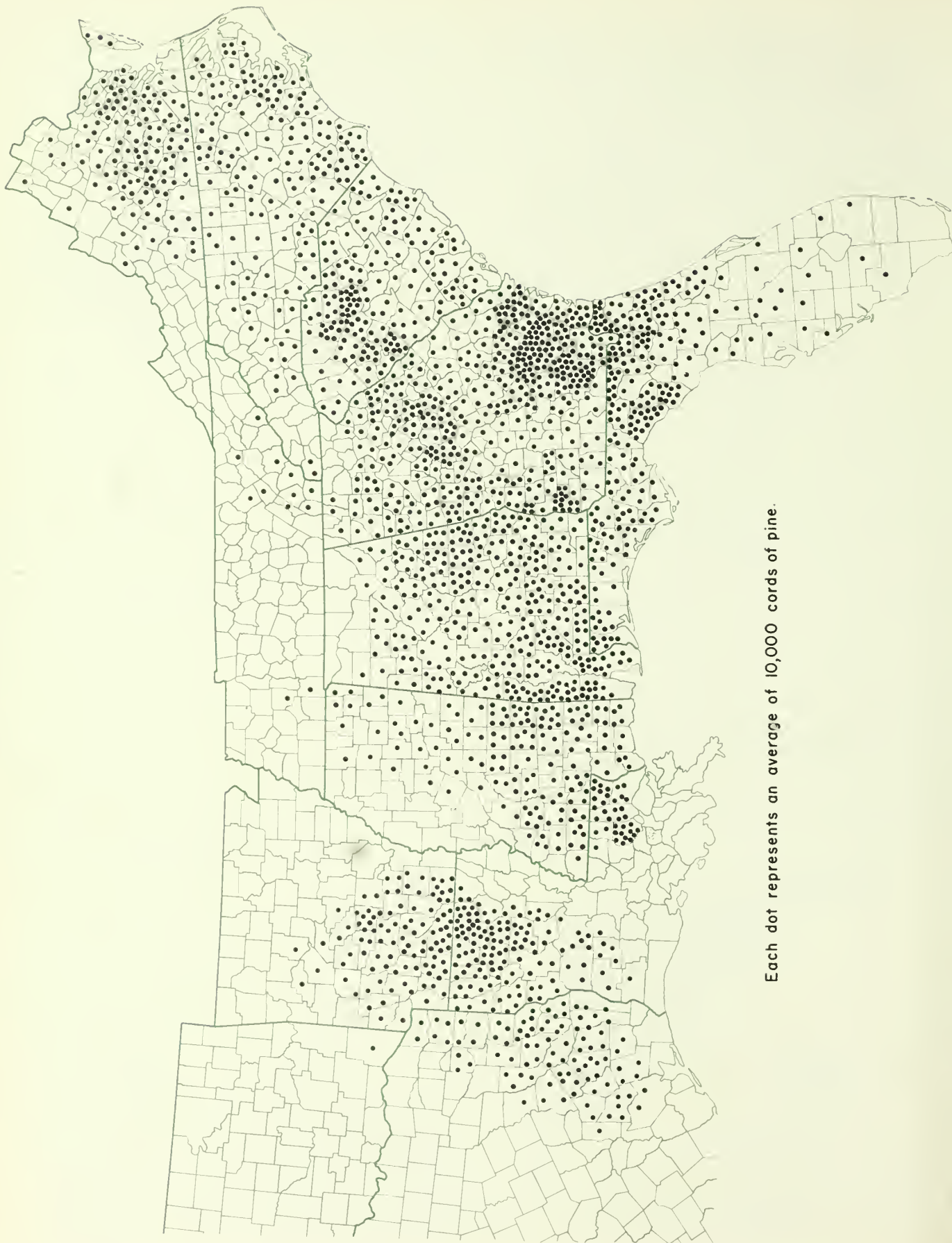
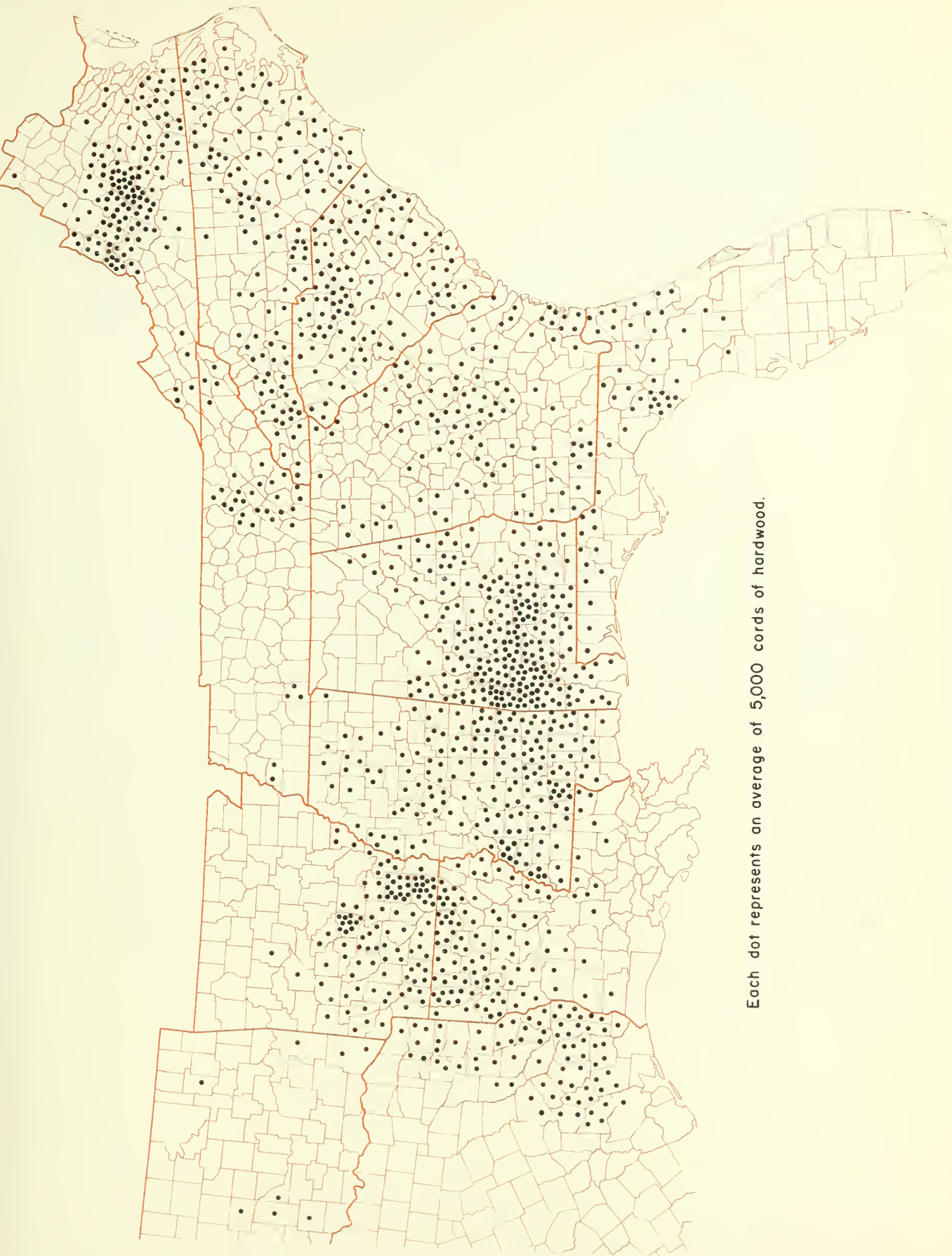


Figure 3. Southern counties.



Each dot represents an average of 10,000 cords of pine.



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

Figure 5. *Hardwood roundwood production by county, 1966.*

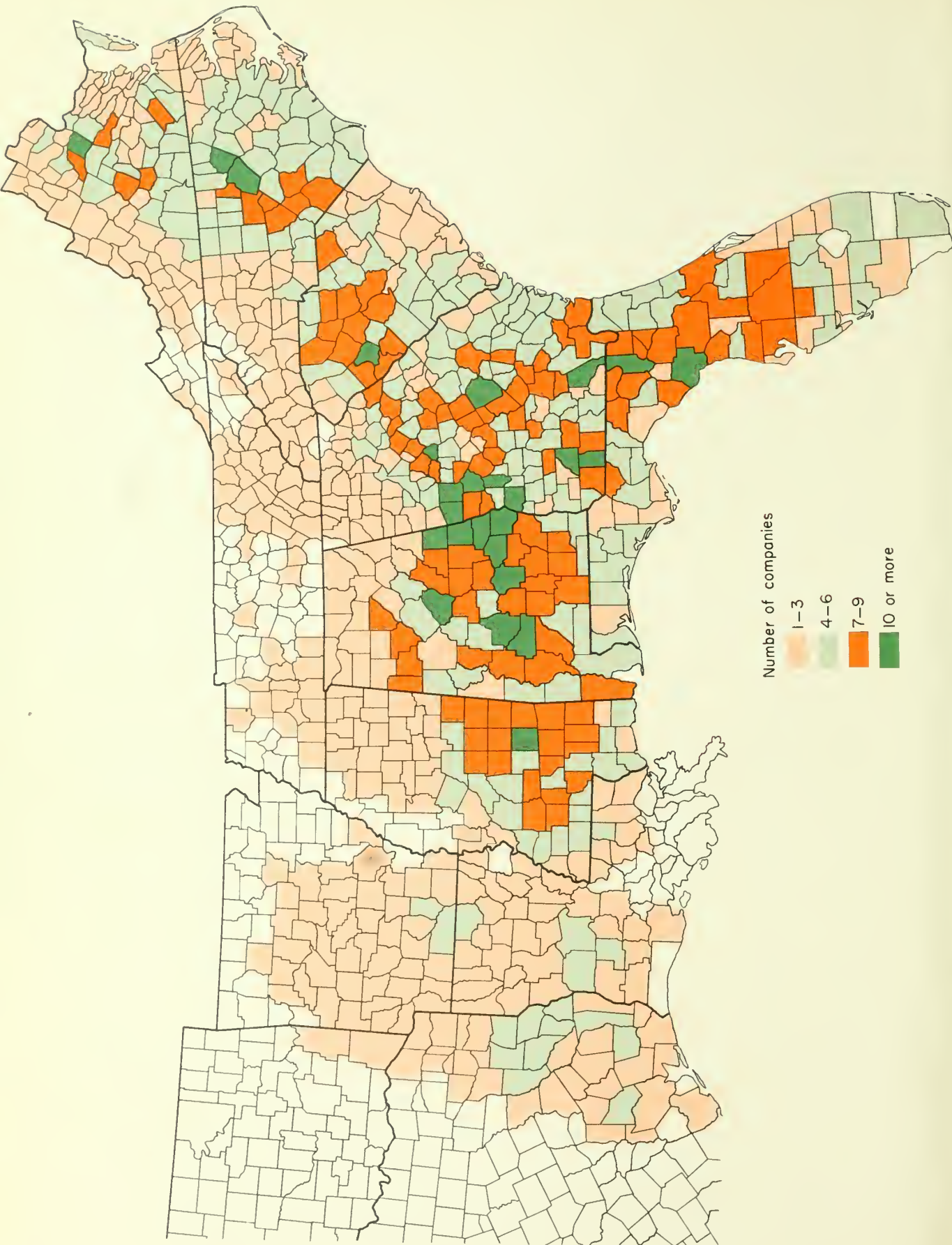


Fig. 3. Number of companies manufacturing by county, 1966

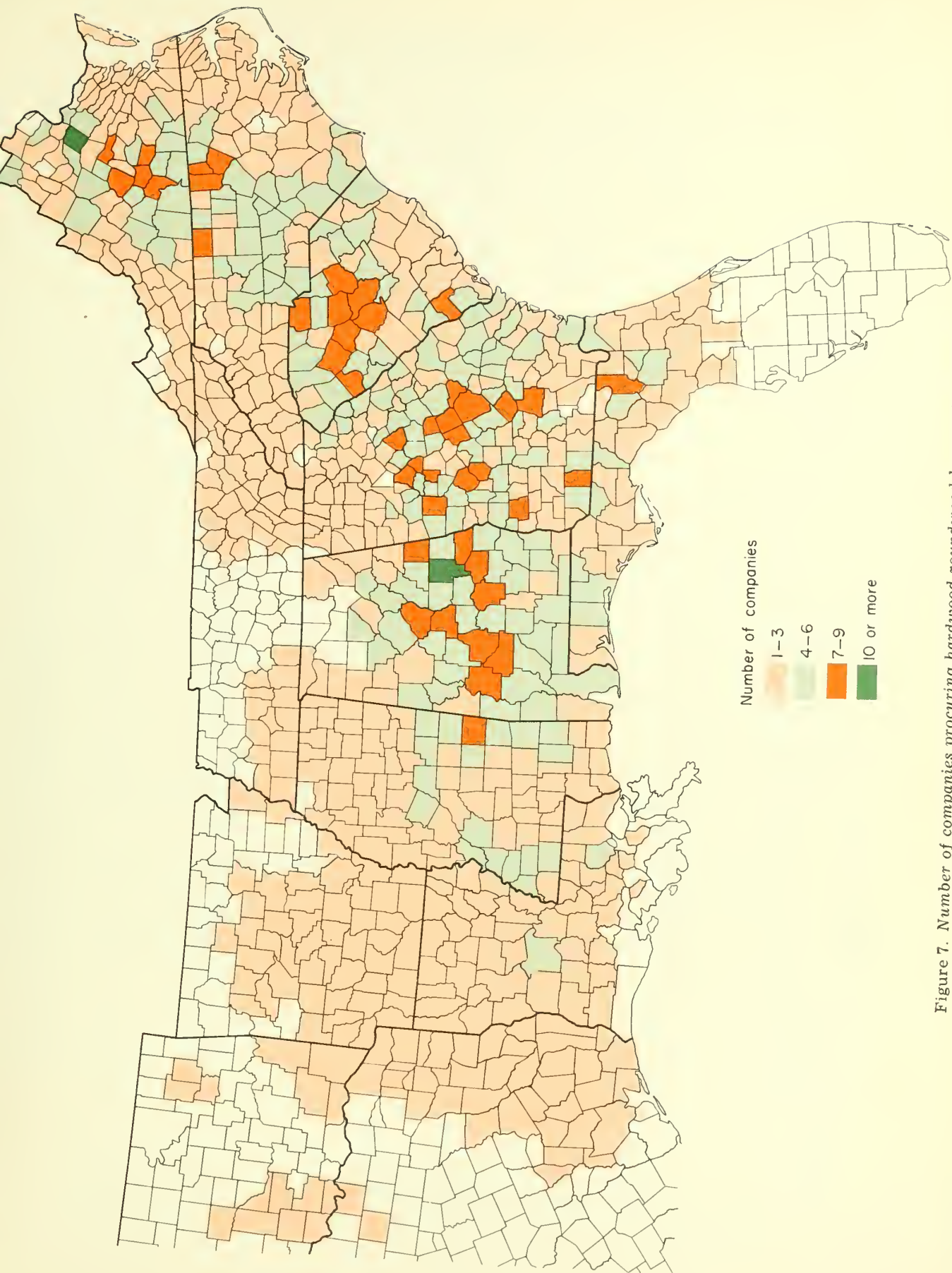


Figure 7. Number of companies procuring hardwood roundwood by county, 1966.

DETAILED TABLES

Table 3. Round pulpwood production in the South by State and species group, 1966 and 1965

State	Change from 1965	1966			1965		
		All species	Pine	Hardwood	All species	Pine	Hardwood
	Percent	Thousand cords					
Alabama	+10	4,464.3	3,269.4	1,194.9	4,068.6	3,033.0	1,035.6
Arkansas	+ 2	1,544.8	989.9	554.9	1,511.1	968.9	542.2
Florida	+ 3	2,676.1	2,424.1	252.0	2,597.3	2,324.9	272.4
Georgia	+ 1	5,426.5	4,866.0	560.5	5,346.8	4,776.5	570.3
Louisiana	+ 5	2,200.5	1,653.8	546.7	2,096.3	1,540.7	555.6
Mississippi	+32	2,475.3	1,560.3	915.0	1,878.8	1,035.5	843.3
North Carolina	+ 6	2,396.8	1,733.5	663.3	2,267.9	1,705.2	562.7
Oklahoma	+62	62.2	15.9	46.3	38.5	8.0	30.5
South Carolina	+ 8	2,343.5	1,803.4	540.1	2,173.6	1,695.0	478.6
Tennessee	-15	327.4	152.1	175.3	384.6	184.3	200.3
Texas	+19	1,374.7	975.1	399.6	1,156.2	789.9	366.3
Virginia	- 4	2,007.6	1,334.3	673.3	2,094.2	1,424.0	670.2
All States	+ 7	27,299.7	20,777.8	6,521.9	25,613.9	19,485.9	6,128.0

Table 4. Southern output of wood residues chipped for pulp manufacture, by State and species group, 1966 and 1965

State	Change from 1965	1966			1965		
		All species	Pine	Hardwood	All species	Pine	Hardwood
	Percent	Thousand cords					
Alabama	+ 4	827.6	605.5	222.1	794.2	600.9	193.3
Arkansas	+12	648.4	614.7	33.7	581.1	563.0	18.1
Florida	+13	313.8	254.8	59.0	277.1	226.6	50.5
Georgia	+ 7	871.6	726.5	145.1	812.8	689.1	123.7
Louisiana	+33	474.7	432.8	41.9	357.5	323.2	34.3
Mississippi	+23	474.2	353.3	120.9	384.5	304.0	80.5
North Carolina	+12	655.7	500.8	154.9	587.8	463.2	124.6
Oklahoma	+ 3	54.8	54.8	.	53.2	53.2	.
South Carolina	+12	510.8	366.3	144.5	457.8	349.6	108.2
Tennessee	+36	42.6	10.0	32.6	31.3	10.1	21.2
Texas	+ 3	529.4	491.6	37.8	512.8	467.5	45.3
Virginia	+10	357.9	217.7	140.2	326.8	226.9	99.9
All States	+11	5,761.5	4,628.8	1,132.7	5,176.9	4,277.3	899.6

Table 5. Southern output of wood residues chipped for pulp manufacture, by State and type of residue, 1966

State	All types	Chips			Other residues ¹		
		All species	Pine	Hardwood	All species	Pine	Hardwood
		Thousand cords					
Alabama	827.6	816.5	601.5	215.0	11.1	4.0	7.1
Arkansas	648.4	646.2	612.5	33.7	2.2	2.2	.
Florida	313.8	312.3	254.8	57.5	1.5	.	1.5
Georgia	871.6	868.0	726.4	141.6	3.6	.1	3.5
Louisiana	474.7	459.6	420.9	38.7	15.1	11.9	3.2
Mississippi	474.2	423.5	329.0	94.5	50.7	24.3	26.4
North Carolina	655.7	622.4	483.7	138.7	33.3	17.1	16.2
Oklahoma	54.8	54.8	54.8	.	.	.	.
South Carolina	510.8	506.9	365.2	141.7	3.9	1.1	2.8
Tennessee	42.6	42.6	10.0	32.6	.	.	.
Texas	529.4	527.6	491.6	36.0	1.8	.	1.8
Virginia	357.9	329.6	193.7	135.9	28.3	24.0	4.3
All States	5,761.5	5,610.0	4,544.1	1,065.9	151.5	84.7	66.8

¹ Veneer cores, pole and piling trim, cull crossties, sawdust, secondary residues.

Table 6. *Southern pulpwood production by Experiment Station territory, 1966*

Station and source of wood	All species	Pine	Hardwood
----- Standard cords -----			
Southeastern			
Roundwood	14,850,509	12,161,353	2,689,156
Residues	2,709,860	2,066,123	643,737
Total	17,560,369	14,227,476	3,332,893
Southern			
Roundwood	12,449,186	8,616,479	3,832,707
Residues	3,051,688	2,562,699	488,989
Total	15,500,874	11,179,178	4,321,696
All States			
Roundwood	27,299,695	20,777,832	6,521,863
Residues	5,761,548	4,628,822	1,132,726
Total	33,061,243	25,406,654	7,654,589

Table 7. *Round pulpwood production in Alabama, 1966*

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Autauga	9,518	6,648	2,870	Houston	28,155	23,208	4,947
Baldwin	189,956	160,189	29,767	Jackson	5,847	4,250	1,597
Barbour	98,972	86,587	12,385	Jefferson	38,967	37,538	1,429
Bibb	49,480	40,406	9,074	Lamar	26,073	24,219	1,854
Blount	16,778	16,767	11	Lauderdale	4,284	3,296	988
Bullock	54,011	47,680	6,331	Lawrence	1,731	1,731	
Butler	140,542	81,556	58,986	Lee	70,845	63,054	7,791
Calhoun	52,179	47,115	5,064	Limestone	3,089	3,089	
Chambers	92,589	77,125	15,464	Lowndes	59,770	37,835	21,935
Cherokee	19,660	15,754	3,906	Macon	41,237	38,968	2,269
Chilton	55,868	37,638	18,230	Madison	1,222	1,222	
Choctaw	201,629	120,940	80,689	Marengo	147,903	76,758	71,145
Clarke	188,558	84,841	103,717	Marion	14,775	14,712	63
Clay	84,854	72,599	12,255	Marshall	12,057	12,057	
Cleburne	46,282	41,278	5,004	Mobile	151,319	113,483	37,836
Coffee	39,658	31,306	8,352	Monroe	165,231	114,016	51,215
Colbert	1,378	1,338	40	Montgomery	98,735	56,676	42,059
Conecuh	95,240	64,409	30,831	Morgan	2,080	2,080	
Coosa	80,684	67,579	13,105	Perry	51,572	24,672	26,900
Covington	128,904	95,306	33,598	Pickens	88,004	57,961	30,043
Crenshaw	80,950	50,039	30,911	Pike	97,878	77,835	20,043
Cullman	27,524	27,065	459	Randolph	69,354	59,386	9,968
Dale	67,402	45,982	21,420	Russell	73,070	71,605	1,465
Dallas	87,052	45,969	41,083	St. Clair	51,347	47,815	3,532
De Kalb	18,127	14,980	3,147	Shelby	62,431	51,152	11,279
Elmore	47,246	42,007	5,239	Sumter	109,490	62,345	47,145
Escambia	118,032	93,123	24,909	Talladega	64,714	58,265	6,449
Etowah	23,715	19,630	4,085	Tallapoosa	104,309	78,789	25,520
Fayette	45,633	43,433	2,200	Tuscaloosa	64,507	56,888	7,619
Franklin	13,352	13,152	200	Walker	49,815	48,673	1,142
Geneva	21,539	15,091	6,448	Washington	181,713	125,133	56,580
Greene	53,521	36,657	16,864	Wilcox	154,117	85,614	68,503
Hale	48,775	28,550	20,225	Winston	28,430	28,430	
Henry	40,627	33,897	6,730	All counties	4,464,306	3,269,391	1,194,915

Table 8. Round pulpwood production in Arkansas, 1966

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Arkansas	9	3	6	Lee			
Ashley	157,243	87,063	70,180	Lincoln	24,565	3,911	20,654
Baxter				Little River	14,644	8,944	5,700
Benton				Logan	10,545	10,091	454
Boone				Lonoke	113	46	67
Bradley	26,891	16,320	10,571	Madison			
Calhoun	46,281	37,683	8,598	Marion			
Carroll				Miller	18,365	13,182	5,183
Chicot	3,975	75	3,900	Mississippi	1,062		1,062
Clark	56,412	42,443	13,969	Monroe			
Clay				Montgomery	30,254	18,078	12,176
Cleburne	276	251	25	Nevada	36,270	29,566	6,704
Cleveland	28,711	19,018	9,693	Newton	144	144	
Columbia	95,534	67,124	28,410	Ouachita	74,767	55,614	19,153
Conway	6,844	4,588	2,256	Perry	6,377	5,553	824
Craighead				Phillips	13,691	605	13,086
Crawford				Pike	31,630	22,987	8,643
Crittenden	266		266	Poinsett			
Cross				Polk	10,307	3,431	6,876
Dallas	81,995	50,298	31,697	Pope	19,253	14,949	4,304
Desha	24,072		24,072	Prairie	6	3	3
Drew	106,887	40,478	66,409	Pulaski	6,377	5,546	831
Faulkner	2,965	2,493	472	Randolph			
Franklin	539	4	535	St. Francis			
Fulton				Saline	35,194	24,280	10,914
Garland	24,956	17,770	7,186	Scott	1,298	1,298	
Grant	141,455	89,408	52,047	Searcy	7		7
Greene				Sebastian			
Hempstead	44,973	28,709	16,264	Sevier	20,748	10,531	10,217
Hot Spring	43,335	33,386	9,949	Sharp			
Howard	32,615	24,357	8,258	Stone			
Independence	103	45	58	Union	161,057	134,626	26,431
Izard				Van Buren	1,987	1,984	3
Jackson				Washington			
Jefferson	29,284	20,725	8,559	White	2,370	504	1,866
Johnson	2,052	1,672	380	Woodruff			
Lafayette	54,352	33,401	20,951	Yell	11,696	6,679	5,017
Lawrence				All counties	1,544,752	989,866	554,886

Table 9. Round pulpwood production in Florida, 1966

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Alachua	56,054	50,606	5,448	Lake	34,468	26,289	8,179
Baker	101,247	101,143	104	Lee	4,892	4,892	
Bay	56,143	55,458	685	Leon	29,813	29,722	91
Bradford	78,883	74,828	4,055	Levy	48,381	44,615	3,766
Brevard	7,542	7,542		Liberty	40,180	37,771	2,409
Broward				Madison	72,662	70,296	2,366
Calhoun	50,390	49,009	1,381	Manatee	5,723	5,723	
Charlotte	1,072	1,072		Marion	86,827	79,573	7,254
Citrus	8,270	8,232	38	Martin	13,168	13,168	
Clay	88,888	82,974	5,914	Monroe			
Collier	6,046	6,046		Nassau	159,007	148,858	10,149
Columbia	85,494	79,778	5,716	Okaloosa	32,037	26,272	5,765
Dade	3,796	3,796		Okeechobee	14,541	14,541	
De Soto	2,640	2,640		Orange	687	687	
Dixie	139,103	96,045	43,058	Osceola	6,232	6,232	
Duval	77,947	63,309	14,638	Palm Beach	7,782	7,782	
Escambia	78,003	73,392	4,611	Pasco	8,772	8,772	
Flagler	47,430	39,719	7,711	Pinellas	891	891	
Franklin	20,184	20,184		Polk	44,095	44,095	
Gadsden	45,339	38,617	6,722	Putnam	68,760	55,947	12,813
Gilchrist	3,657	750	2,907	St. Johns	86,305	80,628	5,677
Glades	3,834	3,834		St. Lucie	1,605	1,605	
Gulf	42,393	42,375	18	Santa Rosa	74,568	71,186	3,382
Hamilton	87,324	81,798	5,526	Sarasota	11,061	11,061	
Hardee	8,049	8,049		Seminole	7,718	7,718	
Hendry	8,217	8,217		Sumter	2,807	2,807	
Hernando	18,954	15,718	3,236	Suwannee	31,407	23,795	7,612
Highlands	6,545	6,545		Taylor	166,779	161,332	5,447
Hillsborough	7,245	7,245		Union	18,121	16,466	1,655
Holmes	59,678	49,251	10,427	Volusia	58,665	56,891	1,774
Indian River	1,745	1,745		Wakulla	43,136	42,091	1,045
Jackson	79,524	59,106	20,418	Walton	41,100	31,634	9,466
Jefferson	42,807	39,994	2,813	Washington	50,570	43,529	7,041
Lafayette	78,953	68,290	10,663	All counties	2,676,156	2,424,176	251,980

Table 10. Round pulpwood production in Georgia, 1966

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Appling	126,288	124,438	1,850	Grady	34,603	29,559	5,044
Atkinson	52,622	52,032	590	Greene	73,361	66,328	7,033
Bacon	54,143	54,067	76	Gwinnett	29,394	28,974	420
Baker	17,165	13,236	3,929	Habersham	15,276	10,273	5,003
Baldwin	42,926	33,675	9,251	Hall	24,516	23,601	915
Banks	15,445	13,849	1,596	Hancock	62,271	57,013	5,258
Barrow	10,264	10,142	122	Haralson	29,920	25,310	4,610
Bartow	26,668	24,865	2,003	Harris	53,209	52,411	798
Ben Hill	41,013	38,879	2,134	Hart	8,457	6,956	1,501
Berrien	48,697	44,091	4,606	Heard	22,600	22,294	306
Bibb	16,767	12,505	4,262	Henry	29,193	26,631	2,562
Bleckley	15,146	7,959	7,187	Houston	29,758	22,061	7,697
Brantley	87,720	83,431	4,289	Irwin	4,159	3,909	250
Brooks	17,953	14,824	3,129	Jackson	17,892	17,554	338
Bryan	106,900	105,876	1,024	Jasper	19,775	17,379	2,396
Bulloch	36,118	29,443	6,675	Jeff Davis	82,876	81,114	1,762
Burke	32,114	26,806	5,308	Jefferson	26,777	23,800	2,977
Butts	53,848	49,417	4,431	Jenkins	14,981	12,880	2,101
Calhoun	21,067	19,809	1,258	Johnson	25,066	13,230	11,836
Camden	131,524	112,379	19,145	Jones	62,131	55,984	6,147
Candler	17,996	14,979	3,017	Lamar	26,249	24,705	1,544
Carroll	32,312	31,573	739	Lanier	9,397	9,397	
Catoosa	3,915	3,573	342	Laurens	55,495	35,913	19,582
Charlton	85,019	82,410	2,609	Lee	3,911	3,736	175
Chatham	27,242	22,531	4,711	Liberty	91,056	76,273	14,783
Chattahoochee	32,631	31,444	1,187	Lincoln	15,965	13,709	2,256
Chattooga	14,081	11,262	2,819	Long	42,099	41,658	441
Cherokee	41,645	39,752	1,893	Lowndes	22,767	20,278	2,489
Clarke	730	730		Lumpkin	2,701	2,660	41
Clay	16,714	13,752	2,962	McDuffie	19,580	16,845	2,735
Clayton	6,249	6,059	190	McIntosh	39,236	37,347	1,889
Clinch	163,314	163,263	51	Macon	20,227	11,212	9,015
Cobb	18,374	17,989	385	Madison	26,562	25,463	1,099
Coffee	77,122	74,239	2,883	Marion	31,600	25,883	5,717
Colquitt	18,192	17,027	1,165	Meriwether	54,407	50,710	3,697
Columbia	33,147	25,552	7,595	Miller	11,597	7,554	4,043
Cook	14,746	13,523	1,223	Mitchell	36,223	33,325	2,898
Coweta	41,521	38,978	2,543	Monroe	65,723	59,055	6,668
Crawford	34,684	30,927	3,757	Montgomery	30,917	30,467	450
Crisp	15,845	12,709	3,136	Morgan	31,583	28,504	3,079
Dade				Murray	15,863	14,940	923
Dawson	6,055	5,931	124	Muscogee	12,974	11,853	1,121
Decatur	32,605	26,772	5,833	Newton	26,513	24,360	2,153
De Kalb	3,074	3,074		Oconee	30,211	26,367	3,844
Dodge	83,745	65,368	18,377	Oglethorpe	40,466	39,091	1,375
Dooly	9,743	7,255	2,488	Paulding	32,942	28,768	4,174
Dougherty	55,258	48,031	7,227	Peach	4,627	3,908	719
Douglas	22,906	21,413	1,493	Fickens	18,338	17,307	1,031
Early	144,391	141,171	3,220	Pierce	57,203	55,872	1,331
Echols	5,253	5,253		Pike	6,122	5,355	767
Effingham	35,161	30,934	4,227	Polk	20,021	15,171	4,850
Elbert	68,974	64,854	4,120	Pulaski	8,689	6,246	2,443
Emanuel	58,354	54,122	4,232	Putnam	51,983	45,262	6,721
Evans	35,190	33,168	2,022	Quitman	38,745	35,320	3,425
Fannin	6,913	4,326	2,587	Rabun	6,655		6,655
Fayette	14,376	13,752	624	Randolph	34,642	30,693	3,949
Floyd	21,791	16,371	5,420	Richmond	4,471	2,859	1,612
Forsyth	10,072	9,946	126	Rockdale	2,751	2,728	23
Franklin	12,325	10,383	1,942	Schley	9,787	6,454	3,333
Fulton	10,690	10,595	95	Screven	18,142	15,684	2,458
Gilmer	5,572	4,777	795	Seminole	10,178	6,006	4,172
Glascocock	6,076	5,080	996				
Glynn	73,655	54,155	19,500				
Gordon	27,095	24,498	2,597				

Table 10. Round pulpwood production in Georgia, 1966 (Continued)

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Spalding	15,485	14,303	1,182	Union	2,383	1,668	715
Stephens	11,560	7,356	4,204	Upson	20,962	20,032	930
Stewart	37,599	36,977	622	Walker	13,260	11,787	1,473
Sumter	16,219	13,166	3,053	Walton	11,742	10,525	1,217
Talbot	61,809	52,238	9,571	Ware	185,826	184,915	911
Taliaferro	4,868	4,600	268	Warren	24,773	21,888	2,885
Tattnall	61,189	56,729	4,460	Washington	56,797	44,687	12,110
Taylor	11,074	9,519	1,555	Wayne	197,154	190,813	6,341
Telfair	60,971	50,094	10,877	Webster	22,165	21,234	931
Terrell	16,181	15,647	534	Wheeler	32,970	29,491	3,479
Thomas	48,847	24,848	23,999	White	2,780	2,701	79
Tift	12,298	10,625	1,673	Whitfield	14,342	13,074	1,268
Toombs	54,823	48,827	5,996	Wilcox	10,534	10,202	332
Towns				Wilkes	54,644	49,803	4,841
Treutlen	22,836	20,261	2,575	Wilkinson	35,087	26,932	8,155
Troup	79,917	70,678	9,239	Worth	24,835	21,846	2,989
Turner	13,304	12,599	705				
Twiggs	33,094	24,471	8,623	All counties	5,426,502	4,865,959	560,543

Table 11. Round pulpwood production in Louisiana, 1966

Parish	All species	Pine	Hardwood	Parish	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Acadia	6,033	4,088	1,945	Madison	13,963		13,963
Allen	42,856	38,885	3,971	Morehouse	68,404	27,872	40,532
Ascension	830	31	799	Natchitoches	60,561	39,897	20,664
Assumption				Orleans			
Avoyelles	1,659	1,403	256	Ouachita	46,944	35,191	11,753
Beauregard	27,822	24,491	3,331	Plaquemines			
Bienville	135,411	107,274	28,137	Pointe Coupee	13,889		13,889
Bossier	97,943	57,812	40,131	Rapides	85,656	72,874	12,782
Caddo	47,485	35,011	12,474	Red River	38,900	22,803	16,097
Calcasieu	10,304	7,012	3,292	Richland	3,422	86	3,336
Caldwell	37,754	27,119	10,635	Sabine	74,810	57,808	17,002
Cameron				St. Bernard			
Catahoula	10,067	4,115	5,952	St. Charles	35		35
Claiborne	91,925	72,598	19,327	St. Helena	17,379	15,925	1,454
Concordia	14,143	194	13,949	St. James	36		36
De Soto	92,299	58,245	34,054	St. John the Baptist			
East Baton Rouge	1,467	131	1,336	St. Landry	7,274	1,035	6,239
East Carroll	3,613	38	3,575	St. Martin	2,053		2,053
East Feliciana	17,383	13,422	3,961	St. Mary			
Evangeline	10,734	9,715	1,019	St. Tammany	54,764	53,301	1,463
Franklin	4,603	3,168	1,435	Tangipahoa	71,394	67,554	3,840
Grant	28,340	21,188	7,152	Tensas	11,443	17	11,426
Iberia				Terrebonne			
Iberville	168		168	Union	213,149	162,803	50,346
Jackson	102,690	90,781	11,909	Vermilion	183	183	
Jefferson				Vernon	45,033	34,207	10,826
Jefferson Davis	682	185	497	Washington	108,224	90,958	17,266
Lafayette				Webster	67,329	45,281	22,048
Lafourche				West Baton Rouge	323		323
La Salle	52,522	37,415	15,107	West Carroll	461	235	226
Lincoln	91,342	74,046	17,296	West Feliciana	4,756	782	3,974
Livingston	127,656	121,916	5,740	Winn	132,349	114,686	17,663
				All parishes	2,200,465	1,653,781	546,684

Table 12. Round pulpwood production in Mississippi, 1966

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Adams	25,687	3,329	22,358	Lincoln	42,543	29,397	13,146
Alcorn	11,069	9,539	1,530	Lowndes	6,068	3,129	2,939
Amite	51,499	46,468	5,031	Madison	15,484	10,976	4,508
Attala	38,455	20,887	17,568	Marion	84,879	51,515	33,364
Benton	7,840	4,181	3,659	Marshall	11,057	7,872	3,185
Bolivar	24,174		24,174	Monroe	8,779	6,351	2,428
Calhoun	11,740	10,201	1,539	Montgomery	13,138	7,256	5,882
Carroll	14,424	5,436	8,988	Neshoba	37,561	21,049	16,512
Chickasaw	22,760	19,282	3,478	Newton	54,677	33,996	20,681
Choctaw	17,098	10,236	6,862	Noxubee	25,685	16,501	9,184
Claiborne	33,384	10,798	22,586	Oktibbeha	8,889	7,389	1,500
Clarke	121,896	89,278	32,618	Panola	7,542	707	6,835
Clay	13,044	9,488	3,556	Pearl River	37,003	22,687	14,316
Coahoma	4,497		4,497	Perry	56,060	41,926	14,134
Copiah	76,013	58,347	17,666	Pike	39,253	27,604	11,649
Covington	33,574	14,384	19,190	Pontotoc	4,963	1,474	3,489
De Soto				Prentiss	13,591	11,540	2,051
Forrest	34,759	22,839	11,920	Quitman	1,106		1,106
Franklin	33,670	23,073	10,597	Rankin	59,591	43,554	16,037
George	46,804	38,891	7,913	Scott	45,697	36,778	8,919
Greene	88,395	55,738	32,657	Sharkey	1,226	60	1,166
Grenada	4,042	1,882	2,160	Simpson	60,872	42,970	17,902
Hancock	34,870	32,718	2,152	Smith	31,704	16,133	15,571
Harrison	21,675	20,580	1,095	Stone	32,275	19,477	12,798
Hinds	45,226	20,032	25,194	Sunflower	1,355		1,355
Holmes	43,365	13,380	29,985	Tallahatchie	1,679	121	1,558
Humphreys	6,965		6,965	Tate	3,895	570	3,325
Issaquena	2,019	363	1,656	Tippah	14,349	13,414	935
Itawamba	21,747	20,561	1,186	Tishomingo	28,292	23,182	5,110
Jackson	46,692	43,213	3,479	Tunica	1,429		1,429
Jasper	83,474	60,640	22,834	Union	8,784	3,533	5,251
Jefferson	45,890	27,448	18,442	Walthall	42,143	25,302	16,841
Jefferson Davis	15,726	7,769	7,957	Warren	11,592	281	11,311
Jones	72,461	37,887	34,574	Washington	11,149		11,149
Kemper	35,085	24,040	11,045	Wayne	115,009	85,884	29,125
Lafayette	24,851	11,382	13,469	Webster	15,008	9,084	5,924
Lamar	28,416	13,145	15,271	Wilkinson	15,290	7,709	7,581
Lauderdale	95,206	63,065	32,141	Winston	40,526	22,807	17,719
Lawrence	36,021	25,085	10,936	Yalobusha	22,683	9,563	13,120
Leake	30,677	19,663	11,014	Yazoo	12,750	472	12,278
Lee	2,290	2,165	125	All counties	2,475,287	1,560,287	915,000
Leflore	22,231	611	21,620				

Table 13. Round pulpwood production in North Carolina, 1966

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Alamance	4,253	2,664	1,589	Lee	21,216	13,109	8,107
Alexander	5,565	5,231	334	Lenoir	20,138	20,138	
Alleghany				Lincoln	12,496	8,453	4,043
Anson	61,514	33,306	28,208	McDowell	19,689	7,296	12,393
Ashe	18		18	Macon	11,544	6	11,538
Avery	693		693	Madison	2,786	1,826	960
Beaufort	111,945	93,881	18,064	Martin	32,433	28,676	3,757
Bertie	50,016	35,096	14,920	Mecklenburg	21,295	15,002	6,293
Bladen	104,910	82,146	22,763	Mitchell	355		355
Brunswick	91,026	79,187	11,839	Montgomery	22,722	14,488	8,234
Buncombe	41,218	15,701	25,517	Moore	25,581	20,606	4,976
Burke	22,423	14,906	7,517	Nash	24,421	18,075	6,346
Cabarrus	6,930	4,986	1,944	New Hanover	8,952	7,198	1,754
Caldwell	12,997	8,695	4,302	Northampton	16,929	11,998	4,931
Camden	2,275	1,500	775	Onslow	71,573	59,503	12,070
Carteret	14,652	13,891	761	Orange	12,905	9,164	3,741
Caswell	6,672	6,164	508	Pamlico	27,860	25,897	1,963
Catawba	4,608	3,095	1,513	Pasquotank	8,665	7,298	1,367
Chatham	58,639	30,401	28,238	Pender	56,290	42,851	13,439
Cherokee	25,349	16,763	8,586	Perquimans	18,364	10,231	8,133
Chowan	13,243	8,093	5,150	Person	3,384	3,315	69
Clay				Pitt	21,280	18,130	3,150
Cleveland	15,323	9,509	5,814	Polk	9,585	3,464	6,121
Columbus	97,066	73,313	23,753	Randolph	18,278	9,994	8,284
Craven	73,530	65,715	7,815	Richmond	34,551	27,874	6,677
Cumberland	40,174	33,259	6,915	Robeson	40,129	27,809	12,320
Currituck	3,886	2,432	1,454	Rockingham	27,814	23,470	4,344
Dare	2,579	1,763	816	Rowan	10,616	7,347	3,269
Davidson	12,059	10,312	1,747	Rutherford	45,896	29,275	16,621
Davie	6,157	5,675	482	Sampson	52,131	41,978	10,153
Duplin	55,179	40,646	14,533	Scotland	11,713	9,785	1,928
Durham	27,463	24,342	3,121	Stanly	6,698	4,637	2,061
Edgecombe	3,031	2,464	567	Stokes	4,558	3,887	671
Forsyth	12,929	10,962	1,967	Surry	14,621	13,593	1,028
Franklin	58,016	35,344	22,672	Swain	7,615	2,473	5,142
Gaston	11,926	8,232	3,694	Transylvania	8,813	1,084	7,729
Gates	20,110	11,636	8,474	Tyrrell	41,040	35,971	5,069
Graham	4,711	1,072	3,639	Union	31,738	19,266	12,472
Granville	17,383	14,168	3,215	Vance	10,200	6,637	3,563
Greene	1,000	1,000		Wake	54,452	39,871	14,581
Guilford	13,235	12,616	619	Warren	47,241	40,848	6,393
Halifax	56,315	41,914	14,401	Washington	13,596	8,179	5,417
Harnett	17,454	12,317	5,137	Watauga			
Haywood	11,600	2,570	9,030	Wayne	14,693	11,770	2,923
Henderson	17,226	5,442	11,784	Wilkes	10,031	8,853	1,178
Hertford	25,014	12,622	12,392	Wilson	16,831	12,446	4,385
Hoke	14,177	12,232	1,945	Yadkin	7,845	7,458	387
Hyde	20,097	18,652	1,445	Yancey	654		654
Iredell	33,138	25,061	8,077	All counties	2,396,803	1,733,504	663,299
Jackson	33,180	2,043	31,137				
Johnston	23,331	15,006	8,325				
Jones	28,351	24,250	4,101				

Table 14. Round pulpwood production in Oklahoma, 1966

County ¹	All species	Pine	Hardwood
----- Standard cords -----			
Canadian	3,522		3,522
Carter	1,387		1,387
Choctaw	1,362		1,362
Garvin	2,406		2,406
Grady	2,623		2,623
Jefferson	72		72
Le Flore	8,099	3,413	4,686
Love	2,247		2,247
McClain	3,224		3,224
McCurtaim	20,866	12,514	8,352
Mayes	2,027		2,027
Pushmataha	58		58
Rogers	6,357		6,357
Stephens	7,166		7,166
Wagoner	829		829
All counties	62,245	15,927	46,318

¹ Counties with no pulpwood production are omitted.

Table 15. Round pulpwood production in South Carolina, 1966

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Abbeville	40,739	33,427	7,312	Horry	74,579	58,846	15,733
Aiken	69,606	60,200	9,406	Jasper	34,089	29,134	4,955
Allendale	30,004	20,495	9,509	Kershaw	95,115	68,810	26,305
Anderson	29,553	18,948	10,605	Lancaster	53,890	38,341	15,549
Bamberg	17,279	11,245	6,034	Laurens	69,434	57,581	11,853
Barnwell	26,114	24,793	1,321	Lee	22,122	19,086	3,036
Beaufort	7,744	6,439	1,305	Lexington	37,015	33,142	3,873
Berkeley	81,329	63,488	17,841	McCormick	34,732	32,652	2,080
Calhoun	10,898	9,042	1,856	Marion	25,487	14,652	10,835
Charleston	40,905	30,391	10,514	Marlboro	23,448	9,778	13,670
Cherokee	12,672	9,579	3,093	Newberry	93,097	76,878	16,219
Chester	68,485	52,616	15,869	Oconee	43,874	27,456	16,418
Chesterfield	56,196	37,353	18,843	Orangeburg	33,592	23,715	9,877
Clarendon	33,534	23,947	9,587	Pickens	8,349	5,936	2,413
Colleton	69,983	51,583	18,400	Richland	38,039	27,940	10,099
Darlington	22,561	14,604	7,957	Saluda	45,233	33,844	11,389
Dillon	21,492	18,698	2,794	Spartanburg	22,657	14,830	7,827
Dorchester	45,201	33,451	11,750	Sumter	33,149	27,563	5,586
Edgefield	104,416	92,799	11,617	Union	104,088	86,543	17,545
Fairfield	204,635	161,201	43,434	Williamsburg	78,649	56,323	22,326
Florence	53,633	33,955	19,678	York	56,365	42,454	13,911
Georgetown	93,431	70,355	23,076	All counties	2,343,512	1,803,443	540,069
Greenville	15,702	10,747	4,955				
Greenwood	79,904	67,023	12,881				
Hampton	80,493	61,560	18,933				

Table 16. Round pulpwood production in Tennessee, 1966

County	All species	Pine	Hardwood	County	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Anderson	6,289	3,574	2,715	Lauderdale	.....	.....	.....
Bedford	.....	.....	.....	Lawrence	255	135	120
Benton	16	16	.....	Lewis	.....	.....	.....
Bledsoe	2,463	2,404	59	Lincoln	.....	.....	.....
Blount	11,795	7,508	4,287	Loudon	6,248	2,849	3,399
Bradley	13,967	10,011	3,956	McMinn	19,353	13,291	6,062
Campbell	5,040	3,930	1,110	McNairy	6,587	4,841	1,746
Cannon	.....	.....	.....	Macon	.....	.....	.....
Carroll	189	189	.....	Madison	254	248	6
Carter	4,494	834	3,660	Marion	.....	.....	.....
Cheatham	.....	.....	.....	Marshall	.....	.....	.....
Chester	898	880	18	Maury	.....	.....	.....
Claiborne	2,673	1,052	1,621	Meigs	10,472	5,839	4,633
Clay	.....	.....	.....	Monroe	21,725	11,390	10,335
Cocke	9,731	7,241	2,490	Montgomery	.....	.....	.....
Coffee	1,236	1,236	.....	Moore	.....	.....	.....
Crockett	.....	.....	.....	Morgan	31,914	5,120	26,794
Cumberland	19,650	4,192	15,458	Obion	.....	.....	.....
Davidson	18	18	.....	Overton	221	.....	221
Decatur	291	135	156	Perry	641	57	584
De Kalb	.....	.....	.....	Pickett	.....	.....	.....
Dickson	.....	.....	.....	Polk	16,167	8,342	7,825
Dyer	.....	.....	.....	Putnam	2,089	1,203	886
Fayette	391	206	185	Rhea	17,115	4,366	12,749
Fentress	4,647	4,148	499	Roane	10,505	5,610	4,895
Franklin	.....	.....	.....	Robertson	.....	.....	.....
Gibson	.....	.....	.....	Rutherford	.....	.....	.....
Giles	.....	.....	.....	Scott	11,927	3,317	8,610
Grainger	368	170	198	Sequatchie	2,091	863	1,228
Greene	541	.....	541	Sevier	3,408	3,337	71
Grundy	1,700	1,700	.....	Shelby	33	.....	33
Hamblen	4	.....	4	Smith	.....	.....	.....
Hamilton	8,507	4,207	4,300	Stewart	.....	.....	.....
Hancock	418	.....	418	Sullivan	7,077	.....	7,077
Hardeman	4,536	3,889	647	Sumner	.....	.....	.....
Hardin	18,868	5,471	13,397	Tipton	7,613	.....	7,613
Hawkins	2,850	.....	2,850	Trousdale	.....	.....	.....
Haywood	3	.....	3	Unicoi	3,241	834	2,407
Henderson	5,882	5,760	122	Union	8,382	6,897	1,485
Henry	.....	.....	.....	Van Buren	.....	.....	.....
Hickman	223	223	.....	Warren	.....	.....	.....
Houston	.....	.....	.....	Washington	5,173	2,503	2,670
Humphreys	.....	.....	.....	Wayne	426	317	109
Jackson	.....	.....	.....	Weakley	62	62	.....
Jefferson	485	400	85	White	193	.....	193
Johnson	2,252	.....	2,252	Williamson	.....	.....	.....
Knox	3,821	1,343	2,478	Wilson	.....	.....	.....
Lake	.....	.....	.....	All counties	327,418	152,158	175,260

Table 17. Round pulpwood production in Texas, 1966

County ¹	All species	Pine	Hardwood
----- Standard cords -----			
Anderson	7,791	5,770	2,021
Angelina	48,875	42,228	6,647
Bowie	20,597	16,922	3,675
Brazoria	5	5	
Brazos	24		24
Camp	2,344	390	1,954
Cass	58,153	41,603	16,550
Chambers	276	210	66
Cherokee	47,208	38,641	8,567
Cooke	23		23
Franklin	750		750
Gregg	4,323	1,099	3,224
Grimes	11,168	9,230	1,938
Hardin	47,027	24,541	22,486
Harris	30,929	24,191	6,738
Harrison	23,926	16,935	6,991
Houston	38,605	31,044	7,561
Jasper	81,993	52,626	29,367
Jefferson	210	65	145
Liberty	56,840	37,164	19,676
Marion	33,813	20,671	13,142
Montgomery	74,379	52,094	22,285
Morris	10,136	1,991	8,145
Nacogdoches	56,990	51,869	5,121
Newton	64,832	30,588	34,244
Orange	7,675	3,369	4,306
Panola	53,207	44,902	8,305
Polk	101,677	80,951	20,726
Red River	941	7	934
Rusk	33,801	20,871	12,930
Sabine	50,158	35,478	14,680
San Augustine	59,831	38,580	21,251
San Jacinto	35,370	17,034	18,336
Shelby	88,705	66,396	22,309
Smith	5,335	4,532	803
Titus	175	23	152
Trinity	59,685	51,064	8,621
Tyler	74,986	50,346	24,640
Upshur	44,130	34,378	9,752
Walker	34,104	24,799	9,305
Waller	494	144	350
Wise	229		229
Wood	2,993	2,318	675
All counties	1,374,713	975,069	399,644

¹ Counties with no pulpwood production are omitted.

Table 18. Round pulpwood production in Virginia, 1966

County ¹	All species	Pine	Hardwood	County ¹	All species	Pine	Hardwood
----- Standard cords -----				----- Standard cords -----			
Accomack	31,155	30,590	565	King William	30,721	27,570	3,151
Albemarle	32,956	19,218	13,738	Lancaster	6,564	6,285	279
Alleghany	47,147	7,502	39,645	Lee	1,742	2	1,740
Amelia	58,158	51,629	6,529	Loudoun	42	33	9
Amherst	41,684	10,809	30,875	Louisa	31,488	17,488	14,000
Appomattox	56,099	22,839	33,260	Lunenburg	44,203	36,550	7,653
Arlington	15	6	9	Madison	609	492	117
Augusta	13,490	2,003	11,487	Mathews	12,674	11,450	1,224
Bath	24,990	2,545	22,445	Mecklenburg	29,316	23,029	6,287
Bedford	44,594	20,465	24,129	Middlesex	19,800	18,211	1,589
Bland	262	246	16	Montgomery	2,035	1,769	266
Botetourt	23,681	5,960	17,721	Nansemond	20,753	9,698	11,055
Brunswick	55,246	41,503	13,743	Nelson	38,225	15,534	22,691
Buchanan				New Kent	26,111	23,946	2,165
Buckingham	112,874	53,210	59,664	Norfolk	1,968	1,401	567
Campbell	60,033	31,824	28,209	Northampton	200	162	38
Caroline	29,191	26,087	3,104	Northumberland	4,220	3,843	377
Carroll	3,869	3,466	403	Nottoway	34,688	24,978	9,710
Charles City	23,956	18,680	5,276	Orange	12,620	11,347	1,273
Charlotte	46,447	36,876	9,571	Page	1,683	1,532	151
Chesterfield	38,498	31,791	6,707	Patrick	4,843	4,596	247
Clarke	5,385	4,138	1,247	Pittsylvania	50,302	40,763	9,539
Craig	15,526	4,105	11,421	Powhatan	14,656	9,291	5,365
Culpeper	5,577	5,534	43	Prince Edward	63,545	46,583	16,962
Cumberland	26,666	17,885	8,781	Prince George	30,768	24,021	6,747
Dickenson				Prince William	11,942	11,571	371
Dinwiddie	51,744	42,075	9,669	Princess Anne	84	48	36
Elizabeth City	19	19		Pulaski	1,564	1,460	104
Essex	10,309	9,954	355	Rappahannock	300	300	
Fairfax	1,968	1,968		Richmond	13,401	12,926	475
Fauquier	8,901	8,725	176	Roanoke	2,518	1,034	1,484
Floyd	2,060	1,741	319	Rockbridge	37,274	7,262	30,012
Fluvanna	30,678	18,500	12,178	Rockingham	8,736	5,777	2,959
Franklin	22,809	15,393	7,416	Russell	784		784
Frederick	19,032	14,200	4,832	Scott	6,709		6,709
Giles	923	896	27	Shenandoah	6,621	4,205	2,416
Gloucester	22,678	21,158	1,520	Smyth	2,676	18	2,658
Goochland	37,363	28,492	8,871	Southampton	49,550	33,783	15,767
Grayson	272		272	Spotsylvania	22,704	20,550	2,154
Greene	2,213	1,289	924	Stafford	3,944	3,618	326
Greensville	56,675	43,656	13,019	Surry	50,853	40,690	10,163
Halifax	11,120	9,043	2,077	Sussex	58,033	38,252	19,781
Hanover	18,075	15,788	2,287	Tazewell			
Henrico	8,735	7,056	1,679	Warren	2,870	2,396	474
Henry	22,393	20,544	1,849	Warwick	832	636	196
Highland	9,313	855	8,458	Washington	4,656		4,656
Isle of Wight	19,848	10,729	9,119	Westmoreland	8,028	8,028	
James City	6,229	5,629	600	Wise	8,807	10	8,797
King and Queen	52,719	48,752	3,967	Wythe	1,765	731	1,034
King George	820	664	156	York	4,714	4,365	349
				All counties	2,007,536	1,334,271	673,265

¹ Includes independent cities.

Table 19. Mills using southern pulpwood in 1966, by process and capacity

Location	Map code ¹	Company	Pulping capacity, 24 hours ²				
			All processes	Sulfate	Groundwood and other mechanical	Semi- chemical	Soda and sulfite
			-----Tons-----				
ALABAMA							
Cottonton	(1)	Alabama Kraft Co., Div. Ga. Kraft Co.	800	800	..	..	..
Jackson	(2)	Allied Paper Corp.	400	400	..	..	..
Naheola	(3)	American Can Co.	750	750	..	..	..
Brewton	(4)	Container Corp. of America	600	600	..	..	..
Demopolis	(5)	Gulf States Paper Corp.	400	400	..	..	..
Tuscaloosa	(6)	Gulf States Paper Corp.	450	450	..	..	..
Riverdale	(7)	Hammermill Paper Co., Riverdale Div.	400	400	..	..	..
Mobile	(8)	International Paper Co.	1,315	1,015	300	..	..
Coosa Pines	(9)	Kimberly-Clark Corp.	..	..	..	..	..
		Coosa River Newsprint Div.	1,030	390	640	..	..
Mobile	(10)	National Gypsum Co.	300	..	150	150	..
Mobile	(11)	The Ruberoid Co.	48	..	48	..	..
Mobile	(12)	Scott Paper Co.	1,400	1,400	..	..	..
		Total	7,893	6,605	1,138	150	..
ARKANSAS							
Morrilton	(13)	Arkansas Kraft Corp.	200	200	..	..	..
Pine Bluff	(14)	Dierks Paper Co.	150	150	..	..	..
Crossett	(15)	Georgia-Pacific Corp.	..	..	..	..	..
		Crossett Division—Paper	835	835	..	..	..
Camden	(16)	International Paper Co.	688	688	..	..	..
Pine Bluff	(17)	International Paper Co.	1,300	900	400	..	..
		Total	3,173	2,773	400	..	..
FLORIDA							
Jacksonville	(18)	Alton Box Board Co.	625	625	..	..	..
Foley	(19)	The Buckeye Cellulose Corp.	923	923	..	..	..
Fernandina Beach	(20)	Container Corp. of America	800	800	..	..	..
Palatka	(21)	Hudson Pulp and Paper Corp.	850	850	..	..	..
Panama City	(22)	International Paper Co.	1,300	1,300	..	..	..
Fernandina Beach	(23)	Rayonier Inc.	375	..	..	..	375
Port St. Joe	(24)	St. Joe Paper Co.	1,700	1,700	..	..	..
Jacksonville	(25)	St. Regis Paper Co.	1,400	1,400	..	..	..
Pensacola	(26)	St. Regis Paper Co.	800	800	..	..	..
		Total	8,773	8,398	..	..	375
GEORGIA							
Macon	(27)	Armstrong Cork Co.	400	..	400	..	..
Brunswick	(28)	Brunswick Pulp and Paper Co.	1,120	1,120	..	..	..
Savannah	(29)	Certain-teed Products Corp.	65	..	..	65	..
Augusta	(30)	Continental Can Co., Inc.	700	700	..	..	..
Port Wentworth	(31)	Continental Can Co., Inc.	600	600	..	..	..
Augusta	(32)	Cox Newsprint, Inc.	375	..	375	..	..
Macon	(33)	Georgia Kraft Co., Macon Div.	825	825	..	..	..
Rome	(34)	Georgia Kraft Co., Rome Div.	1,500	1,500	..	..	..
St. Marys	(35)	Gilman Paper Co., St. Marys Kraft Div.	1,000	1,000	..	..	..
Cedar Springs	(36)	Great Southern Division of Great Northern Paper Co.	950	950	..	..	..
Valdosta	(37)	Owens-Illinois, Forest Products Div.	815	815	..	..	..
Jesup	(38)	Rayonier Inc.	675	675	..	..	..
Savannah	(39)	The Ruberoid Co.	48	..	48	..	..
Savannah	(40)	Union Camp Corp.	3,000	2,600	..	400	..
		Total	12,073	10,785	823	465	..
ILLINOIS							
East St. Louis	(41)	Certain-teed Products Corp.	85	..	85	..	..
		Total	85	..	85	..	..
LOUISIANA							
Shreveport	(42)	Bird and Son, Inc.	60	..	..	60	..
Elizabeth	(43)	Calcasieu Paper Co., Inc.	240	240	..	..	..
Hodge	(44)	Continental Can Co., Inc.	750	550	..	200	..
Bogalusa	(45)	Crown Zellerbach Corp.	1,435	1,300	..	135	..
St. Francisville	(46)	Crown Zellerbach Corp.	500	500	..	..	..
Bastrop	(47)	International Paper Co. (Bastrop Mill)	485	..	..	485	..
Bastrop	(48)	International Paper Co. (Louisiana Mill)	950	950	..	..	..
Springhill	(49)	International Paper Co.	1,625	1,625	..	..	..
West Monroe	(50)	Olin-Mathieson Chemical Corp.	1,000	1,000	..	..	..
St. Francisville	(51)	St. Francisville Paper Co.	235	..	235	..	..
New Orleans	(52)	Southern Johns-Manville Products Corp.	60	..	60	..	..
		Total	7,340	6,165	295	880	..
MARYLAND							
Luke	(53)	West Virginia Pulp and Paper Co.	758	758	..	..	..
		Total	758	758	..	..	..

Table 19. Mills using southern pulpwood in 1966, by process and capacity (Continued)

Location	Map code	Company	Pulping capacity, 24 hours ²				
			All processes	Sulfate	Groundwood and other mechanical	Semi- chemical	Soda and sulfite
----- Tons -----							
MISSISSIPPI							
Meridian	(54)	The Flintkote Co.	165		165		
Moss Point	(55)	International Paper Co.	660	660			
Natchez	(56)	International Paper Co.	950	950			
Natchez	(57)	Johns-Manville Products Corp.	350		230	120	
Meridian	(58)	Kroehler Mfg. Co. of Miss., Inc.	80		80		
Laurel	(59)	Masonite Corp.	1,200		1,200		
Greenville	(60)	United States Gypsum Co.	200		200		
		Total	3,605	1,610	1,875	120	
MISSOURI							
Kansas City	(61)	The Ruberoid Co.	100		100		
		Total	100		100		
NORTH CAROLINA							
Roanoke Rapids	(62)	Albemarle Paper Co.	890	890			
Sylva	(63)	The Mead Corp.	290			290	
Riegelwood	(64)	Riegel Paper Corp.	1,000	1,000			
Canton	(65)	U. S. Plywood—Champion Papers Inc.	1,100	1,100			
Plymouth	(66)	Weyerhaeuser Co., N. C. Div.	1,500	1,250		250	
		Total	4,780	4,240		540	
OHIO							
Chillicothe	(67)	The Mead Corp.	540	540			
		Total	540	540			
OKLAHOMA							
Craig	(68)	Dierks Forests, Inc.	420		420		
Pryor	(69)	Georgia-Pacific, Bestwall Gypsum Div.	45		45		
		Total	465		465		
PENNSYLVANIA							
Sunbury	(70)	Barrett Div., Allied Chemical Corp.	150			150	
York	(71)	Certain-teed Products Corp.	140			140	
Roaring Spring	(72)	Combined Paper Mills, Inc.	125	125			
Spring Grove	(73)	P. H. Glatfelter Co.	295	295			
Johnsonburg	(74)	New York and Pennsylvania Co., Inc.	270	160			110
Tryone	(75)	West Virginia Pulp and Paper Co.	153	153			
		Total	1,133	733		290	110
SOUTH CAROLINA							
Catawba	(76)	Bowaters Carolina Corp.	700	600	100		
Georgetown	(77)	International Paper Co.	2,130	1,650		480	
Hartsville	(78)	Sonoco Products Co.	375			375	
Florence	(79)	South Carolina Industries, Inc.	600	600			
Charleston	(80)	West Virginia Pulp and Paper Co.	1,879	1,619		260	
		Total	5,684	4,469	100	1,115	
TENNESSEE							
Calhoun	(81)	Bowaters Southern Paper Corp.	1,475	450	850	175	
Harriman	(82)	The Mead Corp.	180			180	
Kingsport	(83)	The Mead Corp.	260				260
Knoxville	(84)	Southern Extract Co.	150			150	
Counce	(85)	Tennessee River Pulp and Paper Co.	700	700			
		Total	2,765	1,150	850	505	260
TEXAS							
Evadale	(86)	EasTex, Inc.	900	900			
Dallas	(87)	The Ruberoid Co.	40		40		
Lufkin	(88)	Southland Paper Mills, Inc.	1,250	400	850		
Diboll	(89)	Temple Industries, Fiber Products Div.	195			195	
Pasadena	(90)	U. S. Plywood—Champion Papers Inc.	930	850	80		
		Total	3,315	2,150	970	195	
VIRGINIA							
West Point	(91)	The Chesapeake Corp. of Virginia	1,050	1,050			
Hopewell	(92)	Continental Can Co., Inc.	1,000	830		170	
Lynchburg	(93)	The Mead Corp.	180			180	
Big Island	(94)	Owens-Illinois, Forest Products Div.	400			400	
Jarratt	(95)	Southern Johns-Manville Products Corp.	200		200		
Franklin	(96)	Union Camp Corp.	690	690			
Covington	(97)	West Virginia Pulp and Paper Co.	1,340	1,060		280	
		Total	4,860	3,630	200	1,030	
		All States	67,342	54,006	7,301	5,290	745

¹ Corresponds to numbers at mill locations in figure 8.² Southern Pulp and Paper Manufacturer, vol. 29, No. 10 (Oct. 1, 1966); and other sources.

Table 20. *Pulpmills under construction in the South*

Location	Map code ¹	Company	Pulp capacity 24 hrs. ²
			Tons
ALABAMA			
Pine Hill	(98)	MacMillan Bloedel United, Inc.	750
Prattville	(99)	Union Camp Corp.	700
ARKANSAS			
Ashdown	(100)	Nekoosa-Edwards Paper Co.	400
GEORGIA			
Riceboro	(101)	Interstate Container Corp.	400
LOUISIANA			
Port Hudson	(102)	Louisiana Forest Products Corp.	400
Pineville	(103)	Pineville Kraft Corp.	750
MISSISSIPPI			
Vicksburg	(104)	International Paper Co.	1,000
Monticello	(105)	St. Regis Paper Co.	1,535
SOUTH CAROLINA			
Beech Island	(106)	Kimberly-Clark Corp.	500
TEXAS			
Orange	(107)	Owens-Illinois	900
Sheldon	(108)	Southland Paper Mills, Inc.	500

¹ Corresponds to numbers at mill locations in figure 8.

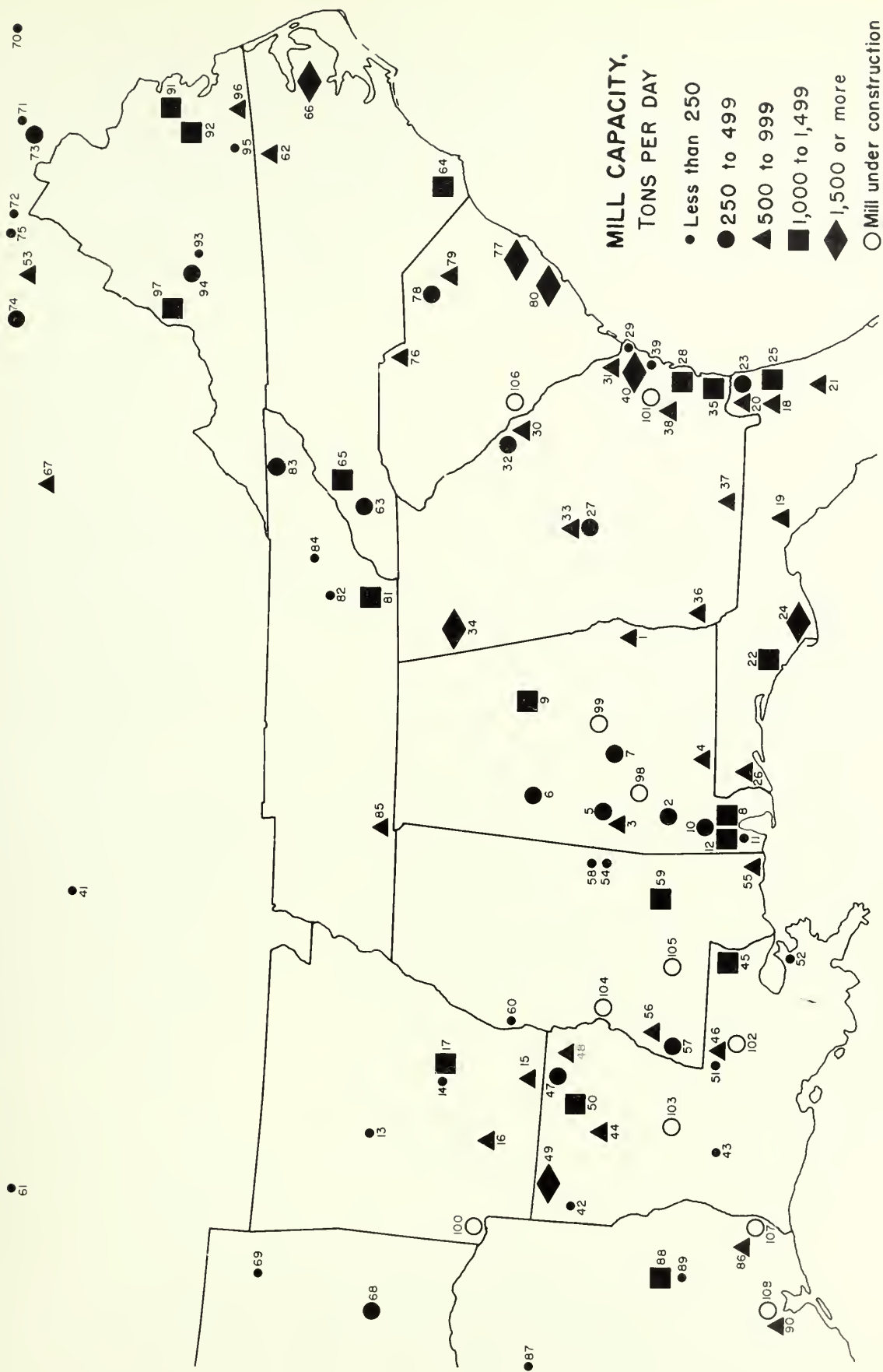


Figure 8. Mills using southern pulpwood in 1966, and those under construction. Numbers at mill locations correspond to numbers in tables 19 and 20.

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SOUTHERN FOREST EXPERIMENT STATION

New Orleans, Louisiana

Forest Service, U.S. Department of Agriculture

1967



EAST TEXAS PINEYWOODS



Foreword

This report presents the principal findings of the latest Forest Survey of the pine-hardwood region of east Texas, completed in 1965 by the Southern Forest Experiment Station. As used here, "east Texas" refers to the 37 counties delineated in the map on page 2.

The survey, which was undertaken as one phase of the continuing nationwide inventory being conducted by the U. S. Forest Service, provides up-to-date information on the kind, amount, and condition of forest resources; the industries they support; and the possibilities for improving wood production. Comparison with the previous survey of 1955 helps to clarify timber trends.

The field work, compilation of data, and preparation of this report represent the combined efforts of many people. Generous assistance from public and private organizations made it possible to keep the field work ahead of the schedule that could have been maintained with regularly allotted funds. The very material aid of the organizations listed below, and of the individuals in them, is gratefully acknowledged:

Texas Forest Service

Texas Forestry Association

Champion Papers, Inc.

W. T. Carter & Brother

International Paper Company

Kirby Lumber Corporation

Southland Paper Mills, Inc.

Southwestern Timber Company

Temple Industries

EAST TEXAS PINEYWOODS

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U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana

1967

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Highlights

Pine timber volume in east Texas has risen sharply since the middle 1950's. The forests now support 6.3 billion cubic feet in softwood growing stock trees at least 5 inches in diameter. This volume—nearly all southern yellow pine but including a little cypress and eastern redcedar—is some 40 percent greater than that recorded in the previous survey of 1955. The volume in softwoods large enough to contain at least one saw log is 25.8 billion board feet, an increase of 46 percent.

Although public and industrial holdings make up only 37 percent of the commercial forest land in east Texas, they encompass two-thirds of the softwood sawtimber. The remaining one-third is on the 63 percent of the area, 7.2 million acres, that is in private nonindustrial ownership.

The gain in softwood sawtimber volume was matched by an improvement in timber quality. On both the 1955 and 1965 surveys, softwood trees were rated by the standard log grades for southern pine. During the intervening decade the volume in upper grade logs—that is, grades 1 and 2—rose some 58 percent. This volume now makes up about one-sixth of the softwood sawtimber inventory. The gain in quality is partly due to the general improvement in tree diameter.

Trends in hardwood contrast greatly with those for pine. The volume of hardwood growing stock now stands at 2.9 billion cubic feet, or 11 percent less than in 1955. Hardwood sawtimber volume totals 7.2 billion board feet—down 17 percent. The decline was especially severe in the large diameters that are generally preferred for factory lumber and veneer.

The total acreage of commercial forest land has changed little in the past decade. Forests still occupy 61 percent of the land area in east Texas. But the distribution of forest land has shifted noticeably. In the northeastern coun-

ties, for example, restocking of open land has increased wooded acreage some 6 percent. In the southeastern counties, forest area has declined about 6 percent. The net result of the shifts in land use is that commercial forest acreage now totals 11.5 million acres, or 1 percent less than in 1955 (fig. 1).

Forests of pine, either pure or in mixture with hardwoods, predominate in east Texas. All together, they occupy 2 of every 3 forest acres. The most widespread of all types is loblolly-shortleaf pine, which is found on 4.9 million acres.

The significance of trends in timber volume is further stressed by present growth-cut relationships. Primary wood-using industries in east Texas depend largely on trees of sawtimber size. For the region as a whole, sawtimber growth exceeded the harvest in 1964, when the latest cutting statistics were compiled.

This comparison, however, conceals marked differences between softwood and hardwood. Whereas the growth of softwood sawtimber was more than double the softwood harvest, the cut of hardwood sawtimber exceeded the growth. Moreover, much of the hardwood growth is taking place on trees that are still too small in diameter to yield high-quality lumber or veneer logs in the immediate future.

The 1964 timber cut in east Texas totaled nearly 300 million cubic feet, of which two-thirds was pine. This timber provided the bulk of the raw material for more than 240 primary wood-using plants in the area. Lumber is still pre-eminent in industrial wood usage. Recent gains in softwood timber inventories, however, have fostered the emergence of a multimillion dollar pine plywood industry in Texas and the current expansion of pulping capacity. These developments are indicative of the industrial expansion that is possible through improving timber productivity.



Figure 1. Forest Survey regions of east Texas pineywoods.

Resource Trends

FOREST AREA

Little Change In Forest Area

East Texas is heavily wooded. Its forests are part of a much larger pine-hardwood region that extends into Louisiana, Arkansas, and Oklahoma. Forests cover 61 percent, 11.5 million acres, of the land in east Texas. Except for some 7,000 acres in public holdings that are reserved from timber cutting, the entire forest area is available for timber production. Although the commercial acreage varies widely in quality, all of it is considered suitable for growing timber crops if managed and protected.

The total acreage of commercial forest land is about the same today as it was a decade ago, when the previous forest survey was made. Encroachments on woodlands have been nearly balanced by conversion of open land to forest through planting and natural reversion. The distribution of forest acreage within east Texas, however, has shifted noticeably (table I).

Table I. Commercial forest land in 1965 and change since 1955

Region	Commercial forest	Change
	Thousand acres	Percent
Southeast	6,590.8	- 6
Northeast	4,865.0	+ 6
Total	11,455.8	- 1

In the northeast, changes in rural land-use continue to increase forest acreage. Between 1935 and 1955, for example, the acreage of commercial forest land increased 14 percent. It has since risen another 6 percent or almost 300,000 acres. The recent acreage gains were widespread; 12 of the 19 northeastern counties have more forest today than they did in 1955. Given essential fire protection, this new acreage provides additional opportunities for augmenting the local timber supply. Overall, the northeastern counties are now 56 percent forested.

Much of the southeast is of minor importance for agriculture. Forests cover 65 percent of the land. Recent land-use shifts in the southeast contrast sharply with changes in the northeastern counties. Forest acreage in the southeast has declined 6 percent, or more than 400,000 acres, since 1955. This is a reversal of earlier trends. Water impoundments, expansion of urban areas, and development of land for other nonforest uses have all contributed to the drop.

Industrial Holdings Important

The development of the timber resource depends to a great extent upon the decisions of thousands of landowners. Privately owned lands make up 93 percent of the commercial forest area in east Texas. Public lands include Federal, State, and county holdings, but most of the public ownership is in national forests.

Southwide, forest industries own about 19 percent of the commercial forest land. In east Texas the proportion is 30 percent; pulp and paper companies are the biggest group of industrial owners. The relatively large share of acreage held by wood-using firms provides a strong base for industrial expansion in east Texas. In turn the activities on these ownerships provide an example for the other private owners whose management programs are generally less developed.

Among the major classes of private forest owners, farmers are the smallest. They hold only 16 percent of the forest area. Even in the northeastern counties, where most of the acreage in this ownership class is located, they own less than one-fourth of the forest. The small proportion of such holdings may be partly associated with a shift in occupation of many landowners who were formerly farm operators but are now classed as wage earners.

Nearly half of the forest land—47 percent of the total—is made up of miscellaneous private holdings. The owners include a wide variety of business and professional people,



housewives, wage earners, oil companies, and other owner groups. They are largely engaged in occupations or enterprises not directly connected with timber growing. Most of the acreage held by these owners is in the northeast region, where it accounts for 3 in every 5 forest acres.

Pine Types Extensive

Stands of pine, either pure or in mixture with hardwood, dominate the forest landscape of east Texas.¹ The most widespread of all forest types is loblolly-shortleaf pine, which is found on some 4.9 million acres. Nearly 0.4 million acres are occupied by the longleaf-slash pine type, largely in the southeastern counties. Oak-pine forests predominate on another 2.3 million acres. Lands on which this latter type occurs are generally better adapted to growing pine than industrial hardwood.

The oak-hickory type, most common in the northeast region, extends across 2.0 million acres of uplands. Bottom-land forests of oak-gum-cypress and elm-ash-cottonwood prevail on almost 1.9 million acres. Reservoir construction may eventually flood a significant proportion of prime hardwood lands in river bottoms. Fragmentation of bottom-land forests is likely to make operations difficult for timber growers and hardwood industries.

Stocking Is Better

Stocking of forest lands has improved during the past decade. The basal area of the average stand is now 71 square feet per acre, up about 10 percent since 1955.

Despite indications of increasing stand density, there is still considerable room for improvement. About 39 percent of the forest land is occupied by desirable trees—the kind of well-formed, sound, vigorous trees that forest managers aim to grow. Another 28 percent is stocked with trees classed as acceptable. That is, they qualify as growing stock but, because of low vigor, rot, excessive forking or limbiness, or other limitations, their yields will not be high in volume and in quality. The remaining forest land is about equally divided between acreage that is encumbered with rough and rotten trees—of little or no com-

mercial value—and areas that are nonstocked with trees. Removal of the poor stems would free considerable growing space for better trees.

TIMBER VOLUME

Pine Has Increased

East Texas has more and better pine timber than it did a decade ago. Softwood volume, nearly all southern pine, has risen 40 percent (table II). It now totals 6.3 billion cubic feet and makes up more than two-thirds of the total growing stock (fig. 2). Most of the inventory is young timber that can be counted on to be markedly responsive to management. Trees 6 to 12 inches in diameter, for example, account for 55 percent of the softwood growing stock.

Table II. Growing stock volume in 1965 and change since 1955

Region	Softwood		Hardwood	
	Volume	Change	Volume	Change
	Million cu. ft.	Per cent	Million cu. ft.	Per cent
Southeast	4,821.1	+ 31	1,677.9	— 18
Northeast	1,505.7	+ 73	1,201.8	+ 1
Total	6,326.8	+ 40	2,879.7	— 11

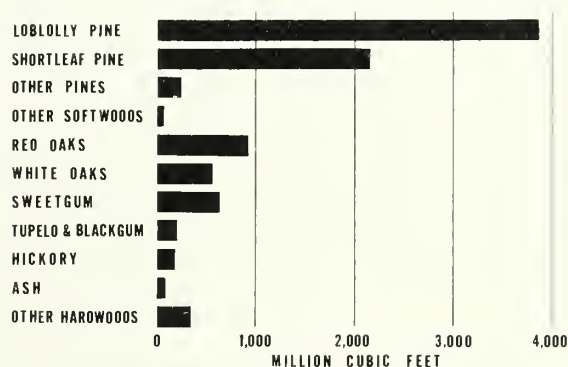


Figure 2. Growing stock by species.

As shown in figure 3, numbers of trees have increased in all size classes charted. Moreover, the distribution of volume has also improved measurably. In 1955, trees above 15 inches in diameter totaled about 1.1 billion cubic feet, or 24 percent of the softwood inventory. Today trees of these sizes make up 29 percent, 1.8 billion cubic feet, of the softwood. This latter volume is largely concentrated in the southeastern counties, but gains in these diameters have taken place in the northeast also.

The buildup in large trees is especially encouraging to the new southern pine plywood

¹ A map detailing the major forest types in the South is available upon request from the Southern Forest Experiment Station. The scale is 40 miles to the inch.

industry. Trees above 15 inches in diameter are expected to provide most of the volume used by plywood plants.

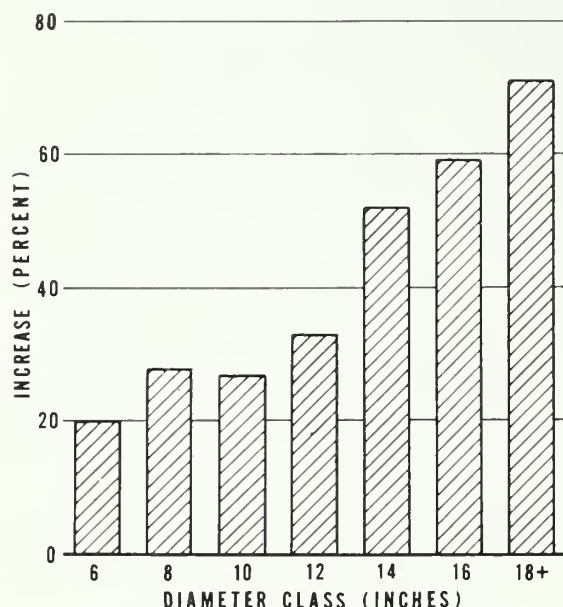


Figure 3. Percentage change in number of softwood growing-stock trees between surveys.

Board-foot volume in softwoods totals 25.8 billion. The gain since 1955 is 46 percent. Half of the present saw log volume is in trees 14 to 18 inches in diameter.

Although public and industrial holdings make up only 37 percent of the commercial forest land in east Texas, they encompass two-thirds of the softwood sawtimber. The remaining one-third is found on the 7.2 million acres that are in private, nonindustrial ownership.

The increase in softwood sawtimber volume was paralleled by a noteworthy improvement in quality. On both the 1955 and 1965 surveys, softwood trees were rated by the standard log grades for southern pine. During the past decade the volume in upper-grade logs—that is, grades 1 and 2—rose some 58 percent. This volume now makes up about one-sixth of the softwood sawtimber inventory. The gain in quality is partly due to the general improvement in tree diameter between surveys. Grade 1 logs, for example, must have a minimum scaling diameter of 17 inches; grade 2 logs, 10 inches. At the same time, the quality enhancement also reflects the efforts of forest managers who have been keeping progressively better stems as growing stock.

Hardwood Has Decreased

Hardwood growing stock now stands at 2.9 billion cubic feet. This is about 11 percent less than in 1955.

There is an additional 1.3 billion cubic feet of sound volume in rough and rotten hardwoods. Although these trees do not meet the standards for growing stock, and hence are unmarketable for sawn products, many of them contain usable amounts of wood fiber. With demand for hardwood pulps rising, it should be increasingly feasible for forest managers to market some of this material as bolt-wood.

Declines in hardwood growing-stock trees have been greatest in the larger diameters that are generally preferred by the lumber and veneer industries (fig. 4). Volume in trees 16 inches and larger now makes up 26 percent of the hardwood growing stock. In 1955, these sizes made up 30 percent.

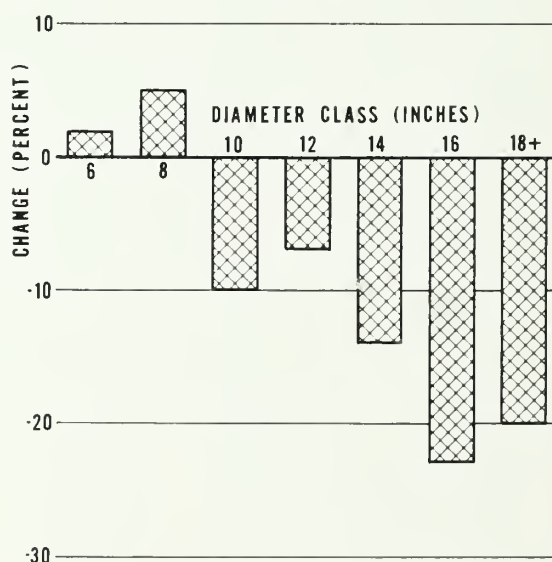


Figure 4. Percentage change in number of hardwood growing-stock trees between surveys.

The sawtimber portion of the current hardwood inventory is 7.2 billion board feet (table III), or some 17 percent less than in 1955. Only one-fifth of the sawtimber is in logs of grades 1 and 2, those normally most in demand for products requiring clear material (table IV).

Improving the timber inventory on areas suitable for growing industrial hardwood will require large-scale efforts to insure prompt

regeneration of favored species after cutting and the reserving of potentially high-quality trees for future growing stock. Moreover, extensive stand improvement work will be needed to reduce excessive numbers of rough and rotten trees. If such reconditioning is instituted reasonably soon, it would alleviate the threat to supplies of quality material.

Table III. Sawtimber volume in 1965 and change since 1955

Region	Softwood		Hardwood	
	Volume	Change	Volume	Change
	Million bd. ft.	Per- cent	Million bd. ft.	Per- cent
Southeast	20,607.0	+ 37	4,326.6	- 24
Northeast	5,207.7	+ 97	2,911.1	- 5
Total	25,814.7	+ 46	7,237.7	- 17

Table IV. Sawtimber volume by log grade and tree diameter, 1965

Species group and d.b.h. class (inches)	All grades	Grade 1 ¹	Grade 2	Grade 3	Lower grades
----- Million board feet -----					
Softwood:					
10 to 12	9,563.6	5.1	239.7	6,167.0	3,151.8
14 to 18	12,752.6	37.3	2,800.5	5,203.3	4,711.5
20 and up	3,498.5	549.9	728.4	999.8	1,220.4
Total	25,814.7	592.3	3,768.6	12,370.1	9,083.7
Hardwood:					
12	1,825.5		36.8	1,116.9	671.8
14 to 18	3,834.7	105.1	701.4	2,070.6	957.6
20 and up	1,577.5	313.3	358.1	719.5	186.6
Total	7,237.7	418.4	1,096.3	3,907.0	1,816.0

¹ All cedar saw logs were graded as No. 1.

Productivity Varies By Ownership

Public and industrial forest lands typically support heavier stands than do private, non-industrial holdings. On public lands, for example, growing stock now averages some 1,360 cubic feet per acre. Forest industry holdings also support a heavy concentration of timber—about 1,070 cubic feet per acre. By contrast, the sizable acreage in private, nonindustrial ownership averages about 610 cubic feet.

The differences between private ownerships may result from variations both in the intensity of sustained management efforts and in the inherent capacity of these forest lands to grow crops of industrial wood. To illustrate, according to available estimates, about two-thirds of the forest industry acreage has the capacity to produce more than 85 cubic feet per acre annually. On private, nonindustrial holdings, however, it is estimated that approximately two-fifths of the acreage has this capability.

Pine Growth Exceeds Cut

Timber mortality ascribed to forest fires, insects, disease, and other natural causes totals about 64 million cubic feet annually, chiefly hardwood. It is equivalent to 13 percent of the net growth of growing stock. The annual growth after allowing for mortality is 406 million cubic feet of softwood and 95 million of hardwood. This volume equals 44 cubic feet per acre, or about 0.6 cord. At this rate, the forests are growing wood at about half of their capacity.

It should be noted that growth and mortality estimates for the latest forest survey are more reliable than those formerly made. On the previous survey, growth was determined from measurements of tree rings and mortality was derived from estimates of trees that died within the past 4 years at sample locations. The new survey utilized direct remeasurements of trees on plots established at the time of the earlier inventory.

The significance of recent trends in timber inventory is further indicated by present growth-cut relationships. Primary wood-using industries in east Texas largely depend upon trees of sawtimber size. For the region as a whole, sawtimber growth exceeded the harvest in 1964, when the latest statistics were compiled.

This comparison, however, conceals critical differences between softwood and hardwood. Whereas the growth of softwood sawtimber was more than double the softwood harvest, the cut of hardwood sawtimber exceeded the growth (fig. 5). Moreover, much of the hardwood growth is taking place on trees that are still too small in diameter to yield high-quality logs in the immediate future. It appears, therefore, that current prospects are most encouraging to pine-oriented industries.

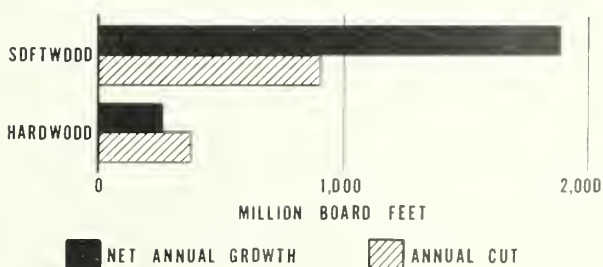


Figure 5. Growth and cut of sawtimber, 1964.



Timber Products Output

In 1964, roundwood products taken from east Texas forests totaled 264 million cubic feet, as compared to about 280 million in 1954. Increases in pulpwood and veneer logs were offset by losses in other items.

Saw logs and pulpwood remain the mainstay of the timber economy. Together, these two items make up about 90 percent of the roundwood. The balance is largely veneer logs, poles, fence posts, and fuelwood.

SAW LOGS LEAD ALL PRODUCTS

Saw logs alone make up more than half of the timber output in east Texas. In 1964 the production of logs for lumber totaled 928 million board feet. Three-fourths of the logs were softwood, mostly pine with some cypress. Oak made up most of the hardwood; the remainder was largely gum. Virtually all of the logs went to sawmills in east Texas.

Saw logs harvested in 1964, nearly equal in total to those produced in 1954, went to fewer mills. Approximately one mill was active for every three that were operating a decade ago. The total number in 1964 was 177 (fig. 6), of which 73 cut more than 3 million board feet apiece. Eight of the mills are very large; together they sawed about two-fifths of all logs harvested in the region.

Mills sawing mainly pine are larger than those sawing mainly hardwood. In 1964, the average pine mill consumed more than 8 million board feet of logs while the average hardwood mill used less than 3 million. Nearly two-thirds of the small sawmills are cutting primarily hardwood. They frequently specialize in making crossties or pallet lumber from low-grade logs.

Use of sawmill residues for pulp chips has risen sharply since the middle 1950's. In 1954, east Texas pulpmills did not report any use

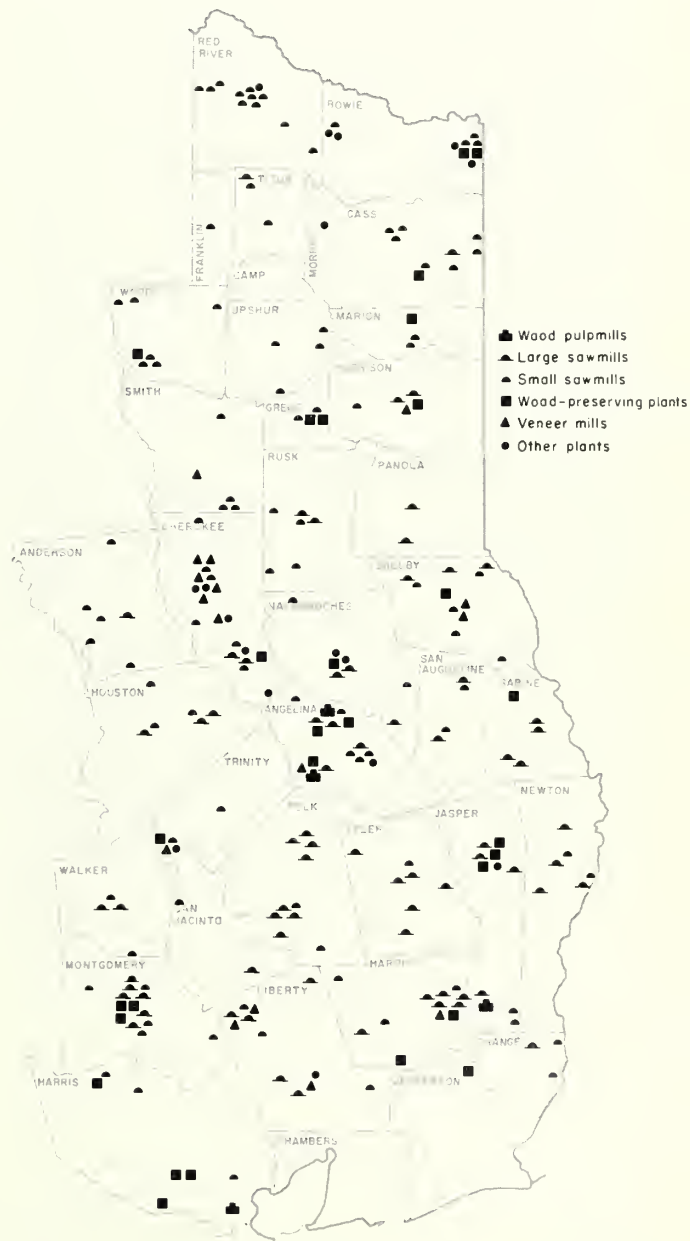


Figure 6. Location of primary wood-using plants.

of such residues. In 1964, 41 sawmills with chipping equipment supplied about one-fourth of the region's pulpwood requirements.

PULPWOOD SETS RECORD

Pulpwood production rose to 1.6 million cords in 1964, of which 446,000 were chips derived largely from sawmill residues. Pulpwood bolts, mainly pine, accounted for a third of the 1964 roundwood output. As in much of the South, the use of hardwood has risen steadily. In 1954, for example, hardwood supplied 5 percent of the round pulpwood cut; in 1964, 25 percent. Soft-textured species, mainly gum, make up some two-thirds of the hardwood bolts.

Expansion of existing facilities and the establishment of a new mill have greatly increased pulping capacity since 1954. In that year, the daily pulping capacity of east Texas mills totaled 1,300 tons. Today their capability totals almost 3,300 tons. The average mill can now manufacture nearly 820 tons of pulp every day, as compared to less than 440 tons in 1954.

Two new pulpmills are now under construction—at Orange and Sheldon. They are expected to have a combined capacity of some 1,400 tons daily, and the added tonnage will boost the industry's daily capability by about 40 percent. The harvest of round pulpwood and the use of chipped residues promise to trend upward in the decade ahead.

VENEER LOGS MAINLY HARDWOOD

Veneer logs made in east Texas totaled nearly 44 million board feet in 1964. Hardwood logs accounted for more than three-fourths of the output. They were about equally divided between firm-textured species, such as oak, and the soft-textured species, such as sweetgum, blackgum, and cottonwood. By contrast, soft hardwoods made up about 90 percent of the production in 1954.

Veneers were produced at 16 east Texas plants in 1964, 8 of which made container veneers. Container plants used one-third of the hardwood veneer logs, almost entirely soft-textured species. The remainder went to plants manufacturing veneers used chiefly for furniture panels and flooring.

In 1964 two plants, at Diboll and Silsbee, began limited production of sheathing-grade plywood from pine veneer. A third mill opened at Keltys in 1965. Together, the capacity of these plants is reported to be about 180 million square feet of 3/8-inch plywood. This is equivalent to more than 70 million board feet of logs.

MISCELLANEOUS PRODUCTS

More than 6 million cubic feet of pine was harvested for poles and piling in 1964. Most of this material is pressure-treated with preservatives. Some of the short construction poles are soaked in preservative not under pressure. Small numbers of untreated pilings are used in the coastal areas. Of the 29 east Texas plants that treat roundwood, all but 5 are of the pressure type.

In 1954, when the previous canvass was made, the volume of roundwood used for fuel was nearly 153,000 cords. By 1964 it had declined to 103,000 cords. Not only had the number of homes using wood for heating and cooking declined, but there were indications that most of the fuelwood users had other sources of fuel. Two-thirds of those contacted had facilities for gas cooking, and more than half were equipped to heat with gas, usually propane or butane.

The combined output of all other products in 1964 was 3.7 million cubic feet. This volume, mainly fence posts, made up about 1 percent of the total roundwood harvest.

The Future

TIMBER SUPPLY OUTLOOK

The timber inventory in east Texas has risen noticeably since the middle 1950's. Though hardwood volume has declined, this loss was overshadowed by the sizable gain in softwood. But what of the future? Any long-term resource projection is subject to many uncertainties, since the future forest situation depends upon numerous man-directed factors. Thus resource projections are not forecasts, for as they reveal potential problems and opportunities they also tend to stimulate needed changes.

Two 30-year projections of timber growth were developed for east Texas. For the first it was assumed that the difference in cut and growth will gradually diminish until growth equals cut in 30 years, and that the current trend in management will continue. The projection is based upon present diameter distributions and recent studies of diameter growth, tree mortality, and timber cut.

Results from this projection indicate that by 1994 growing-stock volume will have increased about 30 percent and net growth about 23 percent; and that the timber harvest will be twice as large as in 1964. The gain in sawtimber will match the gain in growing stock. Although the cubic volume of hardwood will remain about constant, softwood should increase some 46 percent.

In the second projection it was assumed that the timber cut in east Texas during the projection period will follow the trends shown for the South in *Timber Trends in the United States*.²

² U. S. Forest Service. *Timber Trends in the United States*. U. S. Forest Serv. Forest Resource Rep. 17, 235 pp., illus. 1965.

Results from the latter projection show that net annual growth may increase about 40 percent over the next 30 years and that timber cut may rise more than twofold. During the same period, growing stock will increase 55 percent; sawtimber, about 70 percent. While softwood cubic-foot volume will nearly double, hardwood will drop about one-third.

Both projections reinforce the conclusion suggested by current resource trends: the pine resource can apparently sustain heavier cutting and at the same time increase in volume. Further, east Texas forests have the capability of growing far more timber than is envisaged by either of these projections. As noted earlier, it is estimated that they are presently growing wood at about half of their capacity.

MANAGEMENT OPPORTUNITIES

Opportunities to increase timber growth through better management are numerous. Only 1.8 million forest acres are 70 percent or more stocked with desirable trees. Such stands generally do not require any special treatments to insure a high level of growth. Nearly half of these productive acres are among forest industry holdings.

Another 4 million acres are 40 to 70 percent stocked with desirable trees. About one-third of this acreage is expected to attain full stocking without treatment. But 2.5 million acres of the total will require special measures such as cull tree control.

About one-half of the forest acreage, 5.7 million acres, is less than 40 percent stocked with desirable trees. Some 4.6 million of these acres, however, are 40 percent or better stocked with trees that are still acceptable as growing stock. Many of these stands probably



afford opportunities for improvement, especially the 1.5 million that are at least 70 percent stocked. Moreover, planting may be needed on some pine sites.

In their present condition, more than 1 million forest acres are contributing very little timber, since they are less than 40 percent stocked with growing stock. In fact, fully two-fifths of the area is not occupied by any kind of tree cover. Most of the nonproductive forest land is in private, nonindustrial ownership. At least 416,000 of these 1 million acres are pine sites that could be restored to full productivity through site preparation and planting or seedling.

Private, nonindustrial owners hold nearly two-thirds of the forest land in east Texas, as well as half of the present timber inventory. Their land in particular offers many possibilities for improving the timber resource through intensified management. Such effort would attract new wood-using industries and encourage expansion of existing ones. Establishment of a new multimillion dollar pine plywood industry in east Texas and the current expansion of the pulp industry, for example, are largely related to recent gains in inventory. The importance of the forest resource to industrial development in east Texas provides a strong incentive for further improving timber productivity.

Appendix

ACCURACY OF THE SURVEY

The data on forest acreage and timber volume in this report were secured by a systematic sampling method involving a forest-nonforest classification on aerial photographs and on-the-ground measurements of trees at sample locations. The sample locations were at the intersections of a grid of lines spaced 3 miles apart. At each location, 10 small plots were systematically distributed on an area of about 1 acre.

Accuracy of the estimates may be affected by two types of errors. The first stems from the use of a sample to estimate the whole and from variability of the items being sampled. This type is termed sampling error; it is susceptible to a mathematical evaluation of the probability of error. The second type—often referred to as reporting or estimating error—derives from mistakes in measurement, judgment, arithmetic, or recording, and from limitations of method or equipment. Its effects cannot be appraised mathematically, but the Forest Survey constantly attempts to hold it to a minimum by proper training and good supervision, and by emphasis on careful work.

Statistical analysis of the data indicates a sampling error of plus or minus 0.4 percent for the estimate of total forest area, 1.8 percent for total cubic volume, and 2.4 percent for total board-foot volume. As these totals are broken down by forest type, species, tree diameter, and other subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the following tabulation, which shows the sampling error to which the estimates are liable, two chances out of three.

Forest area	Sampling error	Cubic volume	Sampling error	Board-foot volume	Sampling error
Thousand acres	Percent	Million cu. ft.	Percent	Million bd. ft.	Percent
11,462.8	0.4	.	.	.	.
1,834.1	1.0	9,206.5	1.8	.	.
458.5	2.0	7,457.3	2.0	33,052.4	2.4
203.8	3.0	3,314.3	3.0	21,155.5	3.0
114.6	4.0	1,864.3	4.0	11,898.9	4.0
73.4	5.0	1,193.2	5.0	7,615.3	5.0
18.3	10.0	298.3	10.0	1,903.8	10.0
8.2	15.0	132.6	15.0	846.1	15.0
4.6	20.0	74.6	20.0	476.0	20.0
2.9	25.0	47.7	25.0	304.6	25.0
.7	50.0	11.9	50.0	76.2	50.0

Growth estimates were derived from diameter-growth measurements and mortality data taken at sample locations. No attempt was made to calculate sampling error in these estimates.

Estimates of annual timber cut are based on studies conducted during the period of forest inventory. The sampling error to which the estimates are liable, on a probability of two chances out of three, are:

Cubic volume	Sampling error	Board-foot volume	Sampling error
Million cu. ft.	Percent	Million bd. ft.	Percent
299.2	2.0	1,282.2	2.5
48.0	5.0	321.8	5.0
12.0	10.0	80.4	10.0
5.3	15.0	35.8	15.0
3.0	20.0	20.1	20.0
1.9	25.0	12.9	25.0
.5	50.0	3.2	50.0

In computing changes in timber volumes since 1955, data from the earlier survey were adjusted to make them closely comparable to those from the latest survey. This was necessary because of certain basic differences between the two sets of data. In every case, the data from the earlier survey were adjusted to conform to the standards of the latest survey before the change was computed.

DEFINITIONS OF TERMS

Forest Land Class

Forest land.—Land at least 10 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for non-forest use.

Commercial forest land.—Forest land which is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization.

Productive-reserved forest land.—Productive public forest land withdrawn from timber utilization through statute or administrative regulation.

Unproductive forest land.—Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

Tree Species

Commercial species.—Tree species presently or prospectively suitable for industrial wood products; excludes so-called weed species, such as blackjack oak and blue beech.

Hardwoods.—Dicotyledonous trees, usually broad-leaved and deciduous.

Softwoods.—Coniferous trees, usually evergreen, having needle or scale-like leaves.

Forest Type

Longleaf-slash pine.—Forests in which 50 percent or more of the stand is southern yellow pine, and longleaf or slash pine, singly or in combination, predominates. Common associates include oak and gum.

Loblolly-shortleaf pine.—Forests in which 50 percent or more of the stand is southern yellow pine, and loblolly or shortleaf pine, singly or in combination, predominates. Common associates include oak, hickory, and gum.

Oak-pine.—Forests in which 50 percent or more of the stand is hardwoods, usually upland oaks, but in which southern pines make up 25-49 percent of the stand. Common associates include gum, hickory, and yellow-poplar.

Oak-hickory.—Forests in which 50 percent or more of the stand is upland oaks or hickory, singly or in combination, except where pines comprise 25-49 percent, in which case the stand would be classified oak-pine. Common associates include yellow-poplar, clem, maple, and black walnut.

Oak-gum-cypress.—Bottom-land forests in which 50 percent or more of the stand is tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, except where pines comprise 25-49 percent, in which case the stand would be classified oak-pine. Common associates include cottonwood, willow, ash, elm, hackberry, and maple.

Elm-ash-cottonwood.—Forests in which 50 percent or more of the stand is elm, ash, or cottonwood, singly or in combination. Common associates include willow, sycamore, beech, and maple.

Class of Timber

Growing-stock trees.—Sawtimber trees, pole-timber trees, saplings, and seedlings; that is, all live trees except rough and rotten trees.

Desirable trees.—Growing-stock trees that have no serious defects to limit present or prospective use, are of relatively high vigor, and contain no pathogens that may result in death or serious deterioration before rotation age. They comprise the type of trees that forest managers aim to grow; that is, the trees left in silvicultural cutting or favored in cultural operations.

Acceptable trees.—Trees meeting the specifications for growing stock but not qualifying as desirable trees.

Sawtimber trees.—Live trees of commercial species, 9.0 inches and larger in diameter at breast height for softwoods and 11.0 inches and larger for hardwoods, and containing at least one saw log.

Poletimber trees.—Live trees of commercial species, 5.0 to 9.0 inches in d.b.h. for softwoods and 5.0 to 11.0 inches for hardwoods, and of good form and vigor.

Saplings.—Live trees of commercial species, 1.0 inch to 5.0 inches in d.b.h. and of good form and vigor.

Rough and rotten trees.—Live trees that are unmerchantable for saw logs now or prospectively because of defect, rot, or species.

Salvable dead trees.—Standing or down dead trees that are considered currently or potentially merchantable.

Stand-Size Class

Sawtimber stands.—Stands at least 10 percent stocked with growing-stock trees, with half or more of this stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands.—Stands at least 10 percent stocked with growing-stock trees, with half or more of this stocking in sawtimber or poletimber trees, and with poletimber stocking exceeding that of sawtimber stocking.

Sapling-seedling stands.—Stands at least 10 percent stocked with growing-stock trees, with more than half of this stocking in saplings or seedlings.

Nonstocked areas.—Commercial forest lands less than 10 percent stocked with growing-stock trees.

Stocking

A measure of area occupancy by trees of specified classes. Three categories of stocking are considered in the Survey: (1) all live trees, (2) growing-stock trees, and (3) desirable trees. Stocking in terms of all trees is used in the delineation of forest land and forest types. Stocking in terms of growing-stock trees is used in stand-size and age classifications. Stocking in terms of desirable trees is used in delineating area-condition classes.

Volume

Volume of sawtimber.—Net volume of the saw-log portion of live sawtimber trees, in board feet of the International rule, 1/4-inch kerf.

Volume of growing stock.—Volume of sound wood in the bole of sawtimber and poletimber trees from stump to a minimum 4.0-inch top outside bark

or to the point where the central stem breaks into limbs.

Volume of timber.—The volume of sound wood in the bole of growing stock, rough, rotten, and salvable dead trees 5.0 inches and larger in d.b.h. from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

Log Grades

Log grades are based on the standards presented by the U. S. Forest Service in "Interim Log Grades for Southern Pines," issued by the Southern Forest Experiment Station in 1953, and "Hardwood Log Grades for Standard Lumber," issued by the Forest Products Laboratory under the designation D1737 in 1949.

Hardwood log grades include, in addition to the hardwood log grades for standard lumber, a grade-4 tie and timber log. Specifications for tie and timber logs are based chiefly on knot size and log soundness; clear cuttings are not required.

Area-Condition Class

Class 1.—Areas 70% or more stocked with desirable trees.

Class 2.—Areas 40 to 70% stocked with desirable trees, and with 30% or less of the area controlled by acceptable growing-stock trees, rough and rotten trees, inhibiting vegetation, slash, or nonstockable conditions.

Class 3.—Areas 40 to 70% stocked with desirable trees and with more than 30% of the area controlled by other trees or conditions that ordinarily prevent occupancy by desirable trees.

Class 4.—Areas less than 40% stocked with desirable trees, but with 70% or more stocking with growing-stock trees.

Class 5.—Areas less than 40% stocked with desirable trees, but with 40 to 70% stocking with growing-stock trees.

Class 6.—Areas less than 40% stocked with desirable trees and with less than 40% stocking with growing-stock trees.

Miscellaneous Definitions

D.b.h. (Diameter breast high).—Tree diameter in inches, outside bark, measured at 4½ feet above ground.

Diameter classes.—The 2-inch diameter classes extend from 1.0 inch below to 0.9 inch above the stated midpoint. Thus, the 12-inch class includes trees 11.0 inches to and including 12.9 inches d.b.h.

Site classes.—A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

Net annual growth of sawtimber.—The annual change, resulting from natural causes, in net board-foot volume of live sawtimber trees.

Net annual growth of growing stock.—The annual change, resulting from natural causes, in volume of sound wood in live sawtimber and pole-timber trees.

Mortality of sawtimber.—The net board-foot volume of sawtimber trees dying annually from natural causes.

Mortality of growing stock.—The volume of sound wood in live sawtimber and poletimber trees dying annually from natural causes.

Timber cut from sawtimber.—The net board-foot volume of live sawtimber trees cut for forest products during a specified period, including both roundwood products and logging residues.

Timber cut from growing stock.—The volume of sound wood in live sawtimber and poletimber trees cut for forest products during a specified period, including both roundwood products and logging residues.

Timber products.—Roundwood products and by-products of wood manufacturing plants.

STANDARD TABLES

Table 1. *Area by land classes, east Texas, 1965*

Land class	Area
	Thousand acres
Forest:	
Commercial	11,455.8
Unproductive	..
Productive-reserved	7.0
Total forest	11,462.8
Nonforest ¹	7,393.1
All land ²	18,855.9

¹ Includes some acreage of water according to survey standards of area classification but defined by Bureau of the Census as land.

² From U. S. Bureau of the Census, Land and Water Area of the United States, 1960.

Table 3. *Area of commercial forest land by stand-size and ownership classes, east Texas, 1965*

Stand-size class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
	Thousand acres				
Sawtimber	6,495.4	515.5	102.5	2,484.1	3,393.3
Poletimber	1,777.3	37.5	15.9	314.9	1,409.0
Sapling and seedling	3,108.3	69.3	72.9	647.8	2,318.3
Nonstocked areas	74.8	.	.	17.4	57.4
All classes	11,455.8	622.3	191.3	3,464.2	7,178.0

Table 4. *Area of commercial forest land by stand-volume classes for saw-timber and other stand-size classes, east Texas, 1965*

Stand volume per acre	All stands	Sawtimber stands	Other stands
	Thousand acres		
Less than 1,500 board feet	5,143.6	854.2	4,289.4
1,500 to 5,000 board feet	4,080.7	3,409.7	671.0
More than 5,000 board feet	2,231.5	2,231.5	.
All classes	11,455.8	6,495.4	4,960.4

Table 2. *Area of commercial forest land by ownership classes, east Texas, 1965*

Ownership class	Area
	Thousand acres
Public:	
National forest	622.3
Miscellaneous federal	148.6
State	36.6
County and municipal	6.1
Total public	813.6
Private:	
Forest industry	3,464.2
Farmer	1,770.0
Miscellaneous private	5,408.0
Total private	10,642.2
All ownerships	11,455.8

Table 5. *Area of commercial forest land by stocking classes based on alternative stand components, east Texas, 1965*

Stocking percentage	Stocking classified in terms of		
	All trees	Growing stock trees	Desirable trees
	Thousand acres		
90 to 100	5,370.1	1,699.4	254.2
80 to 90	3,024.5	2,305.4	520.4
70 to 80	1,522.8	2,181.6	1,002.9
60 to 70	748.5	1,883.4	1,080.4
50 to 60	392.3	1,404.0	1,375.1
40 to 50	202.6	929.5	1,524.1
30 to 40	104.6	564.0	1,458.8
20 to 30	34.9	260.5	1,624.8
10 to 20	43.1	153.2	1,431.2
Less than 10	12.4	74.8	1,183.9
All areas	11,455.8	11,455.8	11,455.8

Table 6. *Area of commercial forest land by stocking classes of growing stock trees and by stand-size classes, east Texas, 1965*

Stocking class	All stands	Saw- timber	Pole- timber	Sapling and seedling	Non- stocked
	Thousand acres				
70 percent or more	6,186.4	3,809.2	895.9	1,481.3	.
40 to 70 percent	4,216.9	2,280.5	722.3	1,214.1	.
10 to 40 percent	977.7	405.7	159.1	412.9	.
Less than 10 percent	74.8	.	.	.	74.8
All classes	11,455.8	6,495.4	1,777.3	3,108.3	74.8

Table 7. *Area of commercial forest land by area-condition and ownership classes, east Texas, 1965*

Area-condition class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
----- Thousand acres -----					
1	1,777.5	262.8	24.3	841.3	649.1
2	1,441.4	134.6	16.1	492.4	798.3
3	2,538.2	140.1	32.9	984.1	1,381.1
4	1,527.5	32.0	55.3	328.0	1,112.2
5	3,118.7	48.0	55.0	649.8	2,365.9
6	1,052.5	4.8	7.7	168.6	871.4
All classes	11,455.8	622.3	191.3	3,464.2	7,178.0

Table 8. *Area of commercial forest land by area-condition and stocking classes, east Texas, 1965*

Area-condition class	All classes		Stocking class									
			Growing stock				Rough and rotten trees		Shrubs		Other	
			Desirable		Acceptable							
	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent
1	1,777.5	100.0	1,390.7	78.3	179.5	10.1	82.2	4.6	5.9	0.3	119.2	6.7
2	1,441.4	100.0	796.1	55.2	209.3	14.5	114.6	8.0	11.2	.8	310.2	21.5
3	2,538.2	100.0	1,244.4	49.1	709.0	27.9	351.0	13.8	24.9	1.0	208.9	8.2
4	1,527.5	100.0	343.2	22.5	837.2	54.8	200.7	13.1	9.6	.6	136.8	9.0
5	3,118.7	100.0	615.7	19.7	1,052.1	33.8	770.3	24.7	57.6	1.8	623.0	20.0
6	1,052.5	100.0	101.4	9.6	169.0	16.1	349.3	33.2	43.7	4.2	389.1	36.9
All classes	11,455.8	100.0	4,491.5	39.2	3,156.1	27.6	1,868.1	16.3	152.9	1.3	1,787.2	15.6

Table 9. *Area of commercial forest land by site and ownership classes, east Texas, 1965*

Site class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
----- Thousand acres -----					
120 cu. ft. or more	616.8	62.9	8.3	350.3	195.3
85 to 120 cu. ft.	5,384.1	341.3	80.2	1,987.8	2,974.8
50 to 85 cu. ft.	4,904.0	213.2	102.8	1,049.6	3,538.4
Less than 50 cu. ft.	550.9	4.9	.	76.5	469.5
All classes	11,455.8	622.3	191.3	3,464.2	7,178.0

Table 10. *Area of commercial forest land by forest types and ownership classes, east Texas, 1965*

Type	All ownerships	Public	Private
----- Thousand acres -----			
Longleaf-slash pine	358.5	10.6	347.9
Loblolly-shortleaf pine	4,908.7	593.7	4,315.0
Oak-pine	2,306.1	64.2	2,241.9
Oak-hickory	2,020.6	89.0	1,931.6
Oak-gum-cypress	1,808.2	50.9	1,757.3
Elm-ash-cottonwood	53.7	5.2	48.5
All types	11,455.8	813.6	10,642.2

Table 11. *Area of noncommercial forest land by forest types, east Texas, 1965*

Type	All areas	Productive-reserved areas	Un-productive areas
----- Thousand acres -----			
Longleaf-slash pine	0.1	0.1	
Loblolly-shortleaf pine	3.1	3.1	
Oak-pine	2.6	2.6	
Oak-hickory	1.2	1.2	
All types	7.0	7.0	

Table 12. Number of growing-stock trees on commercial forest land by diameter classes and by softwoods and hardwoods, east Texas, 1965

D.b.h. class (inches)	All species	Softwood	Hardwood
----- Thousand trees -----			
1.0- 2.9	2,718,660	797,233	1,921,427
3.0- 4.9	955,052	443,056	511,996
5.0- 6.9	422,633	236,244	186,389
7.0- 8.9	245,813	147,852	97,961
9.0-10.9	150,211	89,582	60,629
11.0-12.9	91,705	59,065	32,640
13.0-14.9	56,739	37,011	19,728
15.0-16.9	30,179	19,525	10,654
17.0-18.9	15,578	9,595	5,983
19.0 and larger	13,716	7,603	6,113
All classes	4,700,286	1,846,766	2,853,520

Table 13. Number of rough, rotten, and salvable dead trees on commercial forest land by diameter groups and by softwoods and hardwoods, east Texas, 1965

D.b.h. class (inches)	Rough and rotten trees	Salvable dead trees
--- Thousand trees ---		
Softwood:		
5.0- 8.9	5,684	101
9.0-18.9	2,858	13
19.0 and larger	190	10
Total	8,732	124
Hardwood:		
5.0-10.9	185,691	72
11.0-18.9	53,355	54
19.0 and larger	7,946	
Total	246,992	126
All species	255,724	250

Table 14. Volume of timber on commercial forest land by class of timber and by softwoods and hardwoods, east Texas, 1965

Class of timber	All species	Softwood	Hardwood
--- Million cubic feet ---			
Sawtimber trees:			
Saw-log portion	5,509.5	4,275.8	1,233.7
Upper-stem portion	1,040.9	679.0	361.9
Total	6,550.4	4,954.8	1,595.6
Poletimber trees	2,656.1	1,372.0	1,284.1
All growing stock	9,206.5	6,326.8	2,879.7
Rough trees:			
Sawtimber-size	568.1	24.0	544.1
Poletimber-size	333.3	9.3	324.0
Total	901.4	33.3	868.1
Rotten trees:			
Sawtimber-size	392.1	8.4	383.7
Poletimber-size	91.1	.3	90.8
Total	483.2	8.7	474.5
Salvable dead trees:			
Sawtimber-size	2.1	1.3	.8
Poletimber-size	.6	.3	.3
Total	2.7	1.6	1.1
All timber	10,593.8	6,370.4	4,223.4

Table 15. Volume of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, east Texas, 1965

Ownership class	Growing stock			Sawtimber		
	All species	Soft- wood	Hard- wood	All species	Soft- wood	Hard- wood
--- Million cubic feet --- --- Million board feet ---						
Public:						
National forest	942.0	829.2	112.8	4,274.9	3,977.5	297.4
Other public	162.3	108.5	53.8	591.2	440.9	150.3
Total	1,104.3	937.7	166.6	4,866.1	4,418.4	447.7
Private:						
Forest industry	3,698.9	2,802.2	896.7	14,881.8	12,456.1	2,425.7
Farmer and misc. private	4,403.3	2,586.9	1,816.4	13,304.5	8,940.2	4,364.3
Total	8,102.2	5,389.1	2,713.1	28,186.3	21,396.3	6,790.0
All ownerships	9,206.5	6,326.8	2,879.7	33,052.4	25,814.7	7,237.7

Table 16. Volume of growing stock and sawtimber on commercial forest land by stand-size classes and by softwoods and hardwoods, east Texas, 1965

Stand-size class	Growing stock			Sawtimber		
	All species	Soft- wood	Hard- wood	All species	Soft- wood	Hard- wood
--- Million cubic feet --- --- Million board feet ---						
Sawtimber	7,435.8	5,333.8	2,102.0	29,711.4	23,596.1	6,115.3
Poletimber	1,159.8	619.1	540.7	1,780.2	1,121.4	658.8
Sapling and seedling	609.0	373.3	235.7	1,554.9	1,094.2	460.7
Nonstocked areas	1.9	.6	1.3	5.9	3.0	2.9
All classes	9,206.5	6,326.8	2,879.7	33,052.4	25,814.7	7,237.7

Table 17. Volume of growing stock on commercial forest land by species and diameter classes, east Texas, 1965

Species	Diameter class (inches at breast height)								
	All classes	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0 and larger
----- Million cubic feet -----									
Softwood:									
Longleaf and slash pines	232.6	20.6	32.9	29.3	34.3	56.8	36.3	16.3	6.1
Shortleaf and loblolly pines	6,029.7	519.6	785.3	950.9	1,056.7	968.7	716.6	470.6	561.3
Cypress	57.1	4.1	5.3	6.7	5.7	7.6	7.0	7.9	12.8
Other softwoods	7.4	2.1	2.1	1.3	.2	1.1	.6	.	.
Total	6,326.8	546.4	825.6	988.2	1,096.9	1,034.2	760.5	494.8	580.2
Hardwood:									
Select white oaks ¹	184.3	15.2	19.9	25.8	30.7	31.1	23.3	13.4	24.9
Select red oaks ²	117.7	7.5	14.9	12.9	18.5	14.5	10.7	8.3	30.4
Other white oaks	377.1	51.1	71.8	70.0	55.6	39.5	30.8	25.1	33.2
Other red oaks	795.2	106.9	113.5	131.3	115.7	94.4	79.4	60.2	93.8
Hickory	174.7	18.2	29.4	30.2	28.7	15.9	16.6	11.2	24.5
Hard maple	1.4	.6	.2	.2	.	.	.4	.	.
Soft maple	27.1	5.6	6.0	3.6	3.4	3.4	2.7	1.4	1.0
Beech	21.7	1.0	2.5	3.1	3.7	2.8	2.7	2.3	3.6
Sweetgum	633.3	101.6	101.8	104.4	113.5	88.7	47.0	36.3	40.0
Tupelo and blackgum	190.8	18.0	17.7	25.6	33.1	36.7	23.1	12.7	23.9
Ash	72.8	7.7	11.2	13.0	12.2	9.5	9.3	6.2	3.7
Cottonwood	1.3	1.0	.	.	.	.	.	.	.3
Basswood	4.5	.3	.4	1.5	.7	1.1	.5	.	.
Black walnut	.8	.2	.6	.	.	.	.	.	.
Other hardwoods	277.0	41.6	45.8	50.3	43.2	36.0	22.7	13.5	23.9
Total	2,879.7	376.5	435.7	471.9	459.0	373.6	269.2	190.6	303.2
All species	9,206.5	922.9	1,261.3	1,460.1	1,555.9	1,407.8	1,029.7	685.4	883.4

¹ Includes white, swamp chestnut, swamp white, and chinkapin oaks.² Includes cherrybark and Shumard oaks.

Table 18. Volume of sawtimber on commercial forest land by species and diameter classes, east Texas, 1965

Species	Diameter class (inches at breast height)						
	All classes	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0 and larger
----- Million board feet -----							
Softwood:							
Longleaf and slash pines	905.6	117.8	171.1	301.7	194.3	86.2	34.5
Shortleaf and loblolly pines	24,635.2	3,931.3	5,287.7	5,245.3	4,056.3	2,732.3	3,382.3
Cypress	260.3	24.4	26.2	40.7	39.6	47.7	81.7
Other softwoods	13.6	4.4	.7	5.8	2.7	.	.
Total	25,814.7	4,077.9	5,485.7	5,593.5	4,292.9	2,866.2	3,498.5
Hardwood:							
Select white oaks ¹	568.8	.	125.3	138.2	111.8	62.6	130.9
Select red oaks ²	378.1	.	69.9	65.5	46.9	41.6	154.2
Other white oaks	862.2	.	223.2	177.8	152.6	128.9	179.7
Other red oaks	2,024.0	.	450.2	413.2	368.0	297.9	494.7
Hickory	456.9	.	118.3	71.3	78.9	57.7	130.7
Hard maple	2.5	.	.	.	2.5	.	.
Soft maple	51.3	.	14.1	14.0	11.8	6.5	4.9
Beech	66.3	.	13.2	14.0	12.5	12.0	14.6
Sweetgum	1,400.4	.	448.6	372.2	208.1	169.7	201.8
Tupelo and blackgum	572.0	.	127.4	163.7	108.0	56.4	116.5
Ash	191.0	.	54.5	43.5	45.4	28.8	18.8
Cottonwood	2.0	.	.	.	.	.	2.0
Basswood	9.2	.	2.3	4.8	2.1	.	.
Other hardwoods	653.0	.	178.5	168.4	109.4	68.0	128.7
Total	7,237.7	.	1,825.5	1,646.6	1,258.0	930.1	1,577.5
All species	33,052.4	4,077.9	7,311.2	7,240.1	5,550.9	3,796.3	5,076.0

¹ Includes white, swamp white, and chinkapin oaks.² Includes cherrybark and Shumard oaks.

Table 19. *Volume of sawtimber on commercial forest land by species and log grade, east Texas, 1965*

Species	All grades	Grade 1	Grade 2	Grade 3	Lower grades
----- Million board feet -----					
Softwood:					
Yellow pines	25,540.8	553.7	3,717.7	12,251.3	9,018.1
Cypress	260.3	25.0	50.9	118.8	65.6
Other softwoods	13.6	13.6			
Total	25,814.7	592.3	3,768.6	12,370.1	9,083.7
Hardwood:					
Select white and red oaks	946.9	86.9	144.5	487.2	228.3
Other white and red oaks	2,886.2	107.5	382.7	1,536.5	859.5
Hickory	456.9	33.2	63.2	254.1	106.4
Hard maple	2.5			2.2	.3
Sweetgum	1,400.4	92.0	232.0	745.8	330.6
Ash	191.0	13.0	49.7	103.0	25.3
Other hardwoods	1,353.8	85.8	224.2	778.2	265.6
Total	7,237.7	418.4	1,096.3	3,907.0	1,816.0
All species	33,052.4	1,010.7	4,864.9	16,277.1	10,899.7

Table 20. *Volume of salvable dead sawtimber-size trees on commercial forest land by softwoods and hardwoods, east Texas, 1965*

Species group	Volume
----- Million board feet -----	
Softwood	8.4
Hardwood	3.1
All species	11.5

Table 21. *Net annual growth and cut of growing stock on commercial forest land by species, east Texas, 1964*

Species	Net annual growth	Annual timber cut
----- Million cubic feet -----		
Softwood:		
Yellow pines	402.1	198.7
Other softwoods	4.1	.6
Total	406.2	199.3
Hardwood:		
Select white and red oaks	10.0	15.3
Other white and red oaks	38.8	35.6
Hickory	5.8	6.5
Sweetgum	21.0	18.4
Other hardwoods	19.7	24.1
Total	95.3	99.9
All species	501.5	299.2

Table 22. *Net annual growth and cut of growing stock on commercial forest land by ownership classes and by softwoods and hardwoods, east Texas, 1964*

Ownership class	Net annual growth			Annual timber cut		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
----- Million cubic feet -----						
Public	65.7	60.2	5.5	29.6	23.5	6.1
Forest industry	209.6	179.9	29.7	81.1	56.2	24.9
Farmer and misc. private	226.2	166.1	60.1	188.5	119.6	68.9
All ownerships	501.5	406.2	95.3	299.2	199.3	99.9

Table 23. *Net annual growth and cut of sawtimber on commercial forest land by species, east Texas, 1964*

Species	Net annual growth	Annual timber cut
— Million board feet —		
Softwood:		
Yellow pines	1,868.8	908.8
Other softwoods	20.8	2.7
Total	<u>1,889.6</u>	<u>911.5</u>
Hardwood:		
Select white and red oaks	33.9	59.7
Other white and red oaks	103.4	139.0
Hickory	16.3	25.2
Sweetgum	50.3	53.8
Other hardwoods	55.2	93.0
Total	<u>259.1</u>	<u>370.7</u>
All species	<u>2,148.7</u>	<u>1,282.2</u>

Table 24. *Net annual growth and cut of sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, east Texas, 1964*

Ownership class	Net annual growth			Annual timber cut		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
— Million board feet —						
Public	339.4	323.4	16.0	124.2	105.7	18.5
Forest industry	998.6	911.8	86.8	380.0	276.2	103.8
Farmer and misc. private	<u>810.7</u>	<u>654.4</u>	<u>156.3</u>	<u>778.0</u>	<u>529.6</u>	<u>248.4</u>
All ownerships	<u>2,148.7</u>	<u>1,889.6</u>	<u>259.1</u>	<u>1,282.2</u>	<u>911.5</u>	<u>370.7</u>

Table 25. *Annual mortality of growing stock and sawtimber on commercial forest land by species, east Texas, 1964*

Species	Growing stock	Sawtimber
	Million cubic feet	Million board feet
Softwood:		
Yellow pines	29.4	130.3
Other softwoods	.3	1.4
Total	<u>29.7</u>	<u>131.7</u>
Hardwood:		
Select white and red oaks	3.6	12.7
Other white and red oaks	13.8	38.7
Hickory	2.1	6.1
Sweetgum	7.5	18.8
Other hardwoods	7.0	20.7
Total	<u>34.0</u>	<u>97.0</u>
All species	<u>63.7</u>	<u>228.7</u>

Table 26. *Annual mortality of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, east Texas, 1964*

Ownership class	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
— Million cubic feet —			— Million board feet —			
Public	6.4	4.4	2.0	28.5	22.5	6.0
Forest industry	23.8	13.2	10.6	96.1	63.6	32.5
Farmer and misc. private	<u>33.5</u>	<u>12.1</u>	<u>21.4</u>	<u>104.1</u>	<u>45.6</u>	<u>58.5</u>
All ownerships	<u>63.7</u>	<u>29.7</u>	<u>34.0</u>	<u>228.7</u>	<u>131.7</u>	<u>97.0</u>

Table 27. *Annual mortality of growing stock and sawtimber on commercial forest land by causes and by softwoods and hardwoods, east Texas, 1964*

Cause of death	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
	- Million cubic feet -			- Million board feet -		
Fire	6.0	3.2	2.8	26.3	17.8	8.5
Insects	3.5	1.9	1.6	16.8	9.6	7.2
Disease	8.4	5.4	3.0	43.5	34.9	8.6
Other	5.3	2.0	3.3	7.7	2.2	5.5
Unknown	40.5	17.2	23.3	134.4	67.2	67.2
All causes	63.7	29.7	34.0	228.7	131.7	97.0

Table 28. *Total output of timber products by product, by type of material used, and by softwoods and hardwoods, east Texas, 1964*

Product and species group	Total output in standard units		Output from roundwood		Output from plant by-products (standard units)
	Unit	Number	Standard units	M cubic feet	
Saw logs:					
Softwood	M bd. ft. ¹	676,982	676,982	111,364	
Hardwood	M bd. ft. ¹	251,286	251,286	41,889	
Total	M bd. ft. ¹	928,268	928,268	153,253	
Veneer logs and bolts:					
Softwood	M bd. ft.	9,734	9,734	1,601	
Hardwood	M bd. ft.	34,016	34,016	5,709	
Total	M bd. ft.	43,750	43,750	7,310	
Pulpwood:					
Softwood	Std. cords ²	1,252,602	848,595	63,984	404,007
Hardwood	Std. cords ²	323,439	281,345	21,889	42,094
Total	Std. cords ²	1,576,041	1,129,940	85,873	446,101
Piling:					
Softwood	M linear ft.	766	766	633	
Hardwood	M linear ft.				
Total	M linear ft.	766	766	633	
Poles:					
Softwood	M pieces	505	505	5,504	
Hardwood	M pieces				
Total	M pieces	505	505	5,504	
Misc. industrial wood: ³					
Softwood	M cu. ft.	4,423	859	859	3,564
Hardwood	M cu. ft.	1,954	646	646	1,308
Total	M cu. ft.	6,377	1,505	1,505	4,872
Posts (round and split):					
Softwood	M pieces	3,695	3,695	1,679	
Hardwood	M pieces	806	806	516	
Total	M pieces	4,501	4,501	2,195	
Fuelwood:					
Softwood	Std. cords	190,281	12,191	919	⁴ 178,090
Hardwood	Std. cords	120,662	91,235	6,843	⁴ 29,427
Total	Std. cords	310,943	103,426	7,762	⁴ 207,517
All products:					
Softwood	M cu. ft.			186,543	
Hardwood	M cu. ft.			77,492	
Total	M cu. ft.			264,035	

¹ International 1/4-inch rule.

² Rough wood basis (for example, chips converted to equivalent standard cords).

³ Includes cooperage (logs and bolts), chemical wood, handle stock, mine timbers, miscellaneous dimension and other minor industrial products. Additionally, byproducts include material used for livestock bedding, mulch, etc.

⁴ Includes plant byproducts used for industrial and domestic fuel.

Table 29. Total output of roundwood products by source and by softwoods and hardwoods, east Texas, 1964

Source	All species	Softwood	Hardwood
-- Thousand cubic feet --			
Growing stock trees: ¹			
Sawtimber	217,294	159,982	57,312
Poletimber	34,110	22,234	11,876
Total	251,404	182,216	69,188
Rough and rotten trees ¹	4,954	615	4,339
Salvable dead trees ¹	1,647	72	1,575
Other sources ²	6,030	3,640	2,390
All sources	264,035	186,543	77,492

¹ On commercial forest land.

² Includes noncommercial forest land, nonforest land such as fence rows, trees less than 5.0 inches in diameter, and treetops and limbs.

Table 30. Annual timber cut from growing stock on commercial forest land by product and logging residues and by softwoods and hardwoods, east Texas, 1964

Product and residues	All species	Softwood	Hardwood
-- Thousand cubic feet --			
Roundwood products:			
Saw logs	150,950	110,619	40,331
Veneer logs and bolts	7,200	1,591	5,609
Pulpwood	78,513	60,929	17,584
Piling	630	630	
Poles	5,463	5,463	
Miscellaneous industrial wood	1,495	859	636
Posts	1,994	1,528	466
Fuelwood	5,159	597	4,562
All products	251,404	182,216	69,188
Logging residues	47,833	17,117	30,716
Timber cut	299,237	199,333	99,904

Table 31. Annual timber cut from live sawtimber on commercial forest land by product and logging residues and by softwoods and hardwoods, east Texas, 1964

Product and residues	All species	Softwood	Hardwood
-- Thousand board feet --			
Roundwood products:			
Saw logs	904,824	668,791	236,033
Veneer logs and bolts	42,618	9,616	33,002
Pulpwood	205,266	167,003	38,263
Piling	3,738	3,738	
Poles	27,924	27,924	
Miscellaneous industrial wood	6,383	3,067	3,316
Posts	741	216	525
Fuelwood	4,502	488	4,014
All products	1,195,996	880,843	315,153
Logging residues	86,226	30,687	55,539
Timber cut	1,282,222	911,530	370,692

Table 32. Volume of plant residues by industrial source and type of residue and by softwoods and hardwoods, east Texas, 1964

Industrial source	All species			Softwood			Hardwood		
	Total	Coarse ¹	Fine ²	Total	Coarse ¹	Fine ²	Total	Coarse ¹	Fine ²
----- Thousand cubic feet -----									
Lumber industry	22,480	9,790	12,690	9,555	3,605	5,950	12,925	6,185	6,740
Veneer industry	1,024	952	72	41	24	17	983	928	55
Other primary industries	2,247	874	1,373	1,875	699	1,176	372	175	197
All industries	25,751	11,616	14,135	11,471	4,328	7,143	14,280	7,288	6,992

¹ Unused material suitable for chipping, such as slabs, edgings, and veneer cores.

² Unused material not suitable for chipping, such as sawdust and shavings.

Table 33. *Timber growth projections, east Texas, 1964 to 1994*¹

Year	Assumed cut			Projected growth		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
GROWING STOCK						
----- Thousand cubic feet -----						
1964	299,200	199,300	99,900	501,500	406,200	95,300
1974	413,300	307,000	106,300	548,100	444,900	103,200
1984	531,500	421,700	109,800	599,000	490,700	108,300
1994	616,000	504,200	111,800	616,000	504,200	111,800
SAWTIMBER						
----- Thousand board feet -----						
1964	1,282,200	911,500	370,700	2,148,700	1,889,600	259,100
1974	1,691,000	1,391,000	300,000	2,191,000	1,990,000	201,000
1984	2,199,000	1,924,000	275,000	2,444,000	2,251,000	193,000
1994	2,563,000	2,315,000	248,000	2,524,000	2,333,000	191,000

¹ Based on the assumption that cut starting at the 1964 level will be in balance with growth by the year 1994, and that forestry progress will continue at the rate indicated by recent trends.

Table 34. *Basal area per acre by diameter classes and forest types, east Texas, 1965*

Forest type	All trees	Growing stock trees		Rough and rotten trees	
		1.0-4.9 inches	5.0 inches and up	1.0-4.9 inches	5.0 inches and up
----- Square feet -----					
Longleaf-slash pine	40.0	9.9	25.1	1.8	3.2
Loblolly-shortleaf pine	79.6	14.8	54.3	3.4	7.1
Oak-pine	69.2	12.1	39.4	4.8	12.9
Oak-hickory	56.4	10.8	25.5	4.4	15.7
Oak-gum-cypress	75.4	8.7	38.4	5.8	22.5
Elm-ash-cottonwood	60.1	15.3	30.4	2.8	11.6
All types	71.4	12.5	42.6	4.2	12.1

COUNTY TABLES

The tables that follow are intended for use in compiling forest resource estimates for groups of counties. Because the sampling procedure used by the Forest Survey in east Texas was intended primarily to furnish inventory data for the region as a whole, estimates for individual counties have limited and variable accuracy. As county totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the tabulations on page 14.

Table 35. *Land area and commercial forest by county, east Texas, 1965*

County	All land	Commercial forest		County	All land	Commercial forest	
	<i>Thousand acres</i>	<i>Thousand acres</i>	<i>Percent</i>		<i>Thousand acres</i>	<i>Thousand acres</i>	<i>Percent</i>
Anderson	682.9	396.9	58.1	Nacogdoches	597.1	400.4	67.1
Angelina	511.4	359.9	70.4	Newton	602.2	560.0	93.0
Bowie	577.9	300.9	52.1	Orange	227.8	145.0	63.7
Camp	121.6	53.2	43.8	Panola	563.2	353.8	62.8
Cass	608.0	383.4	63.1	Polk	700.2	592.8	84.7
Chambers	394.9	35.4	9.0	Red River	660.5	338.0	51.2
Cherokee	670.7	386.4	57.6	Rusk	601.3	303.8	50.5
Franklin	187.5	74.4	39.7	Sabine	354.6	295.8	83.4
Gregg	180.8	84.0	46.5	San Augustine	352.6	285.2	80.9
Hardin	572.8	501.6	87.6	San Jacinto	396.2	313.5	79.1
Harris	1,105.3	185.0	16.7	Shelby	524.1	363.0	69.3
Harrison	570.9	360.0	63.1	Smith	597.9	237.9	39.8
Houston	788.4	442.4	56.1	Titus	267.2	105.6	39.5
Jasper	600.4	541.8	90.2	Trinity	450.6	347.7	77.2
Jefferson	604.8	54.4	9.0	Tyler	587.5	552.0	94.0
Liberty	750.7	453.6	60.4	Upshur	375.1	220.0	58.7
Marion	240.0	192.0	80.0	Walker	503.0	360.4	71.7
Montgomery	697.6	564.3	80.9	Wood	461.8	226.8	49.1
Morris	166.4	84.5	50.8	All counties	18,855.9	11,455.8	60.8

36. Growing stock volume by species groups and county, east Texas, 1965

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	Pine	Other	Total	Gum	Other	Total	Oak	Other
----- Thousand cords -----										
Anderson	2,485	1,191	1,188	3	237	194	43	1,057	715	342
Angelina	6,314	4,881	4,881		421	361	60	1,012	811	201
Bowie	2,730	945	942	3	345	249	96	1,440	947	493
Camp	603	273	273		131	131		199	141	58
Cass	2,915	1,067	1,028	39	739	694	45	1,109	861	248
Chambers	270	255	255					15	15	
Cherokee	3,668	2,203	2,200	3	549	497	52	916	747	169
Franklin	295	77	73	4	75	75		143	140	3
Gregg	391	84	84		122	73	49	185	79	106
Hardin	6,397	3,884	3,868	16	830	651	179	1,683	1,511	172
Harris	1,460	791	787	4	206	199	7	463	402	61
Harrison	2,408	1,275	1,214	61	527	504	23	606	424	182
Houston	5,276	3,889	3,865	24	439	364	75	948	700	248
Jasper	6,321	4,548	4,456	92	722	655	67	1,051	820	231
Jefferson	717	217	176	41	276	260	16	224	187	37
Liberty	5,277	2,676	2,599	77	887	829	58	1,714	1,117	597
Marion	1,638	1,029	908	121	222	209	13	387	348	39
Montgomery	7,185	5,677	5,677		460	439	21	1,048	861	187
Morris	429	108	108		67	63	4	254	112	142
Nacogdoches	4,049	2,836	2,836		628	588	40	585	445	140
Newton	7,603	5,068	5,040	28	878	718	160	1,657	1,241	416
Orange	2,034	1,240	1,177	63	336	300	36	458	421	37
Panola	3,773	2,457	2,324	133	328	313	15	988	716	272
Polk	9,132	7,541	7,532	9	527	461	66	1,064	819	245
Red River	2,097	483	483		51	42	9	1,563	999	564
Rusk	2,467	1,731	1,727	4	161	154	7	575	445	130
Sabine	4,937	3,623	3,622	1	460	433	27	854	620	234
San Augustine	4,130	2,912	2,907	5	472	446	26	746	622	124
San Jacinto	4,402	3,529	3,440	89	394	378	16	479	327	152
Shelby	3,775	2,409	2,396	13	366	352	14	1,000	715	285
Smith	1,528	611	611		193	188	5	724	536	188
Titus	492	52	47	5	31	27	4	409	285	124
Trinity	4,507	3,848	3,848		210	210		449	364	85
Tyler	8,902	6,181	6,166	15	1,102	876	226	1,619	1,279	340
Upshur	1,248	811	811		131	124	7	306	267	39
Walker	4,460	3,520	3,517	3	139	139		801	595	206
Wood	1,023	435	431	4	104	104		484	371	113
All counties	127,338	84,357	83,497	860	13,766	12,300	1,466	29,215	22,005	7,210

Table 37. Sawtimber volume by species groups and county, east Texas, 1965

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	Pine	Other	Total	Gum	Other	Total	Oak	Other
----- Million board feet -----										
Anderson	551.9	337.4	337.4	.	38.4	32.2	6.2	176.1	117.8	58.3
Angelina	1,938.2	1,723.3	1,723.3	.	61.4	48.8	12.6	153.5	119.9	33.6
Bowie	530.6	241.2	241.2	.	47.1	27.2	19.9	242.3	173.0	69.3
Camp	138.3	61.9	61.9	.	30.7	30.7	.	45.7	33.8	11.9
Cass	522.1	229.3	221.4	7.9	120.9	114.4	6.5	171.9	144.3	27.6
Chambers	54.4	51.0	51.0	.	.	.	.	3.4	3.4	.
Cherokee	833.7	623.8	623.5	.3	57.0	51.7	5.3	152.9	134.8	18.1
Franklin	57.2	16.7	16.7	.	9.0	9.0	.	31.5	31.5	.
Gregg	85.1	24.3	24.3	.	23.6	17.2	6.4	37.2	10.6	26.6
Hardin	1,721.9	1,369.3	1,367.4	1.9	92.1	84.8	7.3	260.5	225.1	35.4
Harris	323.7	201.0	200.0	1.0	35.0	35.0	.	87.7	69.7	18.0
Harrison	419.2	236.7	233.7	3.0	75.1	71.6	3.5	107.4	84.5	22.9
Houston	1,521.9	1,287.5	1,287.0	.5	80.6	73.5	7.1	153.8	120.1	33.7
Jasper	1,762.4	1,407.3	1,368.4	38.9	148.0	137.1	10.9	207.1	158.8	48.3
Jefferson	137.8	53.7	43.1	10.6	38.3	36.4	1.9	45.8	39.5	6.3
Liberty	1,470.4	1,000.2	962.8	37.4	135.3	122.4	12.9	334.9	223.1	111.8
Marion	392.2	288.0	252.5	35.5	39.1	35.2	3.9	65.1	62.4	2.7
Montgomery	1,791.5	1,586.5	1,586.5	.	59.6	54.2	5.4	145.4	121.6	23.8
Morris	93.6	19.8	19.8	.	15.6	15.6	.	58.2	19.8	38.4
Nacogdoches	927.4	781.0	781.0	.	61.4	55.6	5.8	85.0	69.4	15.6
Newton	2,018.4	1,554.1	1,544.6	9.5	190.2	156.3	33.9	274.1	201.1	73.0
Orange	579.4	449.7	429.6	20.1	64.9	61.3	3.6	64.8	56.0	8.8
Panola	826.0	603.8	552.4	51.4	50.0	46.4	3.6	172.2	133.1	39.1
Polk	2,650.3	2,344.8	2,340.2	4.6	93.3	83.1	10.2	212.2	161.7	50.5
Red River	381.3	119.1	119.1	.	8.3	4.4	3.9	253.9	174.6	79.3
Rusk	415.1	337.8	336.8	1.0	14.2	14.2	.	63.1	48.5	14.6
Sabine	1,362.6	1,162.2	1,161.6	.6	59.0	55.4	3.6	141.4	100.2	41.2
San Augustine	1,137.5	927.6	926.7	.9	78.9	74.0	4.9	131.0	100.2	30.8
San Jacinto	1,200.4	1,053.5	1,017.8	35.7	69.9	65.3	4.6	77.0	54.7	22.3
Shelby	967.6	741.1	737.2	3.9	51.9	51.9	.	174.6	133.1	41.5
Smith	356.2	195.4	195.4	.	34.1	34.1	.	126.7	96.1	30.6
Titus	92.8	7.6	7.0	.6	3.8	1.8	2.0	81.4	59.7	21.7
Trinity	1,378.4	1,254.3	1,254.3	.	35.2	35.2	.	88.9	78.2	10.7
Tyler	2,635.0	2,117.5	2,111.3	6.2	200.7	157.4	43.3	316.8	248.8	68.0
Upshur	297.0	217.1	217.1	.	21.9	21.9	.	58.0	50.8	7.2
Walker	1,249.4	1,063.5	1,062.8	.7	29.7	29.7	.	156.2	108.7	47.5
Wood	231.5	125.7	124.0	1.7	27.4	27.4	.	78.4	64.5	13.9
All counties	33,052.4	25,814.7	25,540.8	273.9	2,201.6	1,972.4	229.2	5,036.1	3,833.1	1,203.0

Table 38. *Sawtimber volume by diameter classes and county, east Texas, 1965*

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	9.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up
----- Million board feet -----										
Anderson	551.9	337.4	180.4	157.0	38.4	26.3	12.1	176.1	67.7	108.4
Angelina	1,938.2	1,723.3	848.3	875.0	61.4	30.0	31.4	153.5	50.5	103.0
Bowie	530.6	241.2	191.3	49.9	47.1	27.5	19.6	242.3	118.6	123.7
Camp	138.3	61.9	54.3	7.6	30.7	6.6	24.1	45.7	16.0	29.7
Cass	522.1	229.3	204.0	25.3	120.9	72.6	48.3	171.9	111.3	60.6
Chambers	54.4	51.0	46.4	4.6	.	.	.	3.4	3.4	.
Cherokee	833.7	623.8	470.0	153.8	57.0	38.6	18.4	152.9	77.3	75.6
Franklin	57.2	16.7	8.2	8.5	9.0	6.8	2.2	31.5	18.3	13.2
Gregg	85.1	24.3	14.3	10.0	23.6	9.1	14.5	37.2	6.6	30.6
Hardin	1,721.9	1,369.3	691.4	677.9	92.1	53.0	39.1	260.5	111.6	148.9
Harris	323.7	201.0	108.0	93.0	35.0	17.8	17.2	87.7	39.3	48.4
Harrison	419.2	236.7	190.8	45.9	75.1	39.4	35.7	107.4	49.3	58.1
Houston	1,521.9	1,287.5	669.0	618.5	80.6	35.3	45.3	153.8	79.3	74.5
Jasper	1,762.4	1,407.3	778.6	628.7	148.0	75.6	72.4	207.1	97.1	110.0
Jefferson	137.8	53.7	46.0	7.7	38.3	29.5	8.8	45.8	17.2	28.6
Liberty	1,470.1	1,000.2	476.4	523.8	135.3	78.9	56.4	334.9	126.5	208.4
Marion	392.2	288.0	176.7	111.3	39.1	35.2	3.9	65.1	40.6	24.5
Montgomery	1,791.5	1,586.5	1,072.6	513.9	59.6	31.4	28.2	145.4	56.0	89.4
Morris	93.6	19.8	12.1	7.7	15.6	2.8	12.8	58.2	22.8	35.4
Nacogdoches	927.4	781.0	501.7	279.3	61.4	43.5	17.9	85.0	45.3	39.7
Newton	2,018.4	1,554.1	971.4	582.7	190.2	115.4	74.8	274.1	129.1	145.0
Orange	579.4	449.7	211.1	238.6	64.9	43.0	21.9	64.8	20.7	44.1
Panola	826.0	603.8	425.0	178.8	50.0	24.7	25.3	172.2	70.9	101.3
Polk	2,650.3	2,344.8	1,445.4	899.4	93.3	54.1	39.2	212.2	108.9	103.3
Red River	381.3	119.1	97.4	21.7	8.3	4.4	3.9	253.9	138.3	115.6
Rusk	415.1	337.8	251.8	86.0	14.2	6.4	7.8	63.1	31.8	31.3
Sabine	1,362.6	1,162.2	720.8	441.4	59.0	35.5	23.5	141.4	57.9	83.5
San Augustine	1,137.5	927.6	482.7	444.9	78.9	46.9	32.0	131.0	48.4	82.6
San Jacinto	1,200.4	1,053.5	486.6	566.9	69.9	38.9	31.0	77.0	43.8	33.2
Shelby	967.6	741.1	398.6	342.5	51.9	30.6	21.3	174.6	77.1	97.5
Smith	356.2	195.4	123.4	72.0	34.1	19.4	14.7	126.7	45.9	80.8
Titus	92.8	7.6	3.4	4.2	3.8	.	3.8	81.4	30.6	50.8
Trinity	1,378.4	1,254.3	637.3	617.0	35.2	17.1	18.1	88.9	29.7	59.2
Tyler	2,635.0	2,117.5	1,316.9	800.6	200.7	114.9	85.8	316.8	116.0	200.8
Upshur	297.0	217.1	186.3	30.8	21.9	11.1	10.8	58.0	42.7	15.3
Walker	1,249.4	1,063.5	546.7	516.8	29.7	10.4	19.3	156.2	44.5	111.7
Wood	231.5	125.7	111.8	13.9	27.4	13.4	14.0	78.4	35.0	43.4
All counties	33,052.4	25,814.7	15,157.1	10,657.6	2,201.6	1,246.1	955.5	5,036.1	2,226.0	2,810.1

Table 39. *Annual cut of growing stock and sawtimber by county, east Texas, 1964*

County	Growing stock *			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
	— Million cubic feet —			— Million board feet —		
Anderson	6.8	3.7	3.1	34.4	20.1	14.3
Angelina	20.0	11.0	9.0	78.7	50.3	28.4
Bowie	3.4	1.9	1.5	8.9	6.6	2.3
Camp	.5	.2	.3	2.0	.9	1.1
Cass	5.5	4.4	1.1	20.1	16.4	3.7
Chambers	.3	.2	.1	1.3	1.1	.2
Cherokee	10.6	7.5	3.1	47.7	34.4	13.3
Franklin	.1	(¹)	.1	.5	(¹)	.5
Gregg	1.1	.7	.4	5.2	3.8	1.4
Hardin	15.5	9.6	5.9	72.5	48.9	23.6
Harris	4.7	3.1	1.6	16.3	12.5	3.8
Harrison	5.0	3.2	1.8	21.4	14.4	7.0
Houston	10.9	9.1	1.8	49.9	44.3	5.6
Jasper	17.5	11.9	5.6	77.9	55.8	22.1
Jefferson	.3	.1	.2	.7	.2	.5
Liberty	14.9	7.4	7.5	63.0	31.4	31.6
Marion	2.5	1.4	1.1	7.0	4.4	2.6
Montgomery	16.1	12.3	3.8	69.2	56.6	12.6
Morris	.9	.3	.6	3.5	1.0	2.5
Nacogdoches	9.2	6.8	2.4	37.9	27.2	10.7
Newton	14.6	11.3	3.3	67.8	55.8	12.0
Orange	6.1	5.2	.9	28.9	26.8	2.1
Panola	6.9	4.1	2.8	22.6	14.7	7.9
Polk	30.4	23.3	7.1	141.9	113.3	28.6
Red River	3.1	1.1	2.0	15.5	5.8	9.7
Rusk	5.0	2.6	2.4	23.2	12.2	11.0
Sabine	11.0	6.0	5.0	45.6	24.7	20.9
San Augustine	8.1	5.3	2.8	30.5	22.2	8.3
San Jacinto	8.9	5.3	3.6	39.4	26.3	13.1
Shelby	11.8	7.9	3.9	51.4	34.9	16.5
Smith	1.6	.4	1.2	6.5	1.9	4.6
Titus	1.2	.1	1.1	5.6	.7	4.9
Trinity	12.4	8.8	3.6	46.2	36.6	9.6
Tyler	20.0	14.3	5.7	91.5	68.6	22.9
Upshur	3.9	2.9	1.0	14.8	10.8	4.0
Walker	7.1	5.4	1.7	28.3	24.0	4.3
Wood	1.3	.5	.8	4.4	1.9	2.5
All counties	299.2	199.3	99.9	1,282.2	911.5	370.7

¹ Negligible.



U. S. Forest Service Resource Bulletin SO-10

SOUTHERN FOREST EXPERIMENT STATION

New Orleans, Louisiana

Forest Service, U.S. Department of Agriculture

1967

EAST TEXAS POST OAK REGION

Herbert S. Sternitzke



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U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



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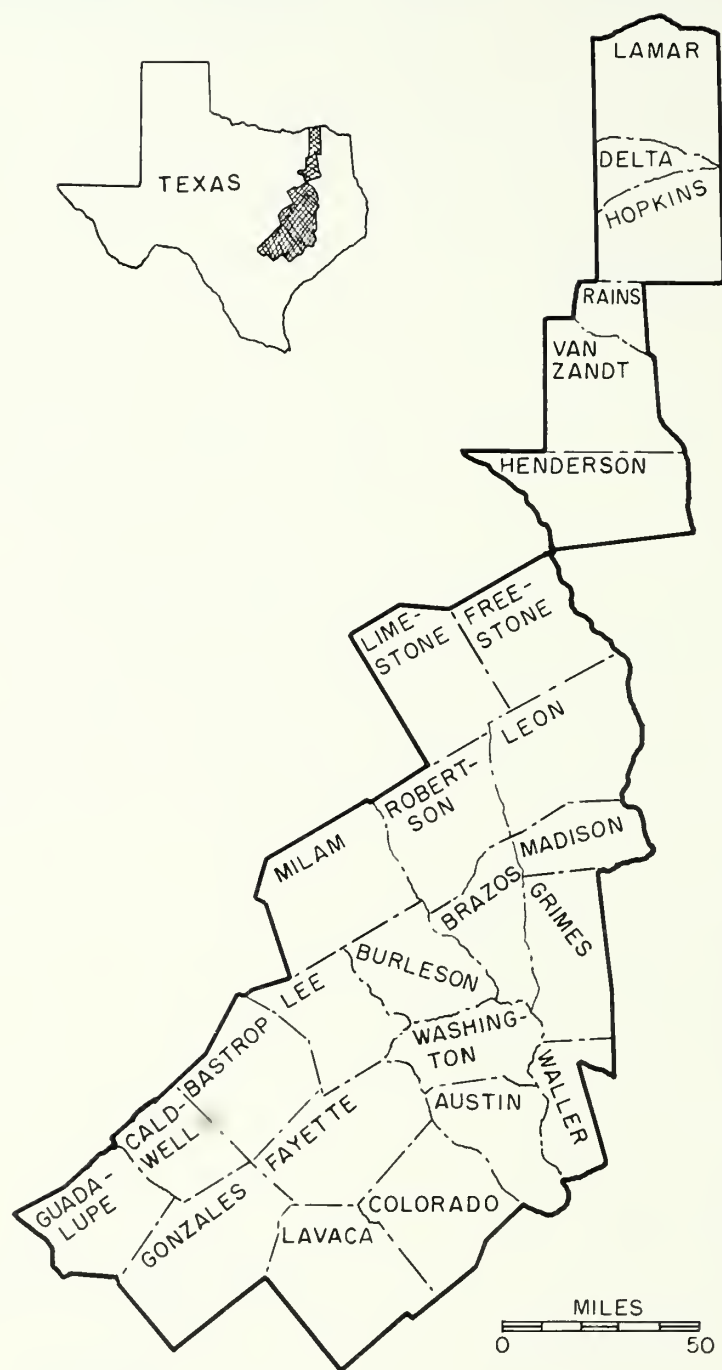


Figure 1.—Counties included in forest survey of east Texas post oak region.

EAST TEXAS POST OAK REGION

This report summarizes information on forest area and timber volume in a 26-county area designated as the post oak region of east Texas (fig. 1). These counties are on the western fringe of lands capable of supporting productive southern forests. The information here is from the first detailed forest inventory of the region, made during 1965 in cooperation with the Texas Forest Service.

From Lamar County on the north the region extends more than 300 miles to Lavaca County in the south. On the east, it is largely bounded by the forests of the Pineywoods; on the west, by the Blackland Prairies. Upland hardwood types dominated by post oak make up three-fourths of the forest.

Although the proportion of land in forest varies from locality to locality, the region as a whole is lightly wooded. Forests occupy a scant 3 million acres, or 24 percent of the total land. About 1.5 million acres are classed as commercial forest land, in the sense that they are estimated to have the capacity to grow crops of industrial wood in excess of 20 cubic feet per acre annually. The rest of the forest area is classed as noncommercial, since it has a lower growth potential and hence is regarded as unsuitable for the sustained production of timber crops.

The noncommercial stands are almost all upland hardwoods; the species are chiefly post oak and blackjack oak.

Hardwood cover types also prevail on most of the commercial forest. Forests in which softwoods, either pine or redcedar, make up at least 25 percent of the stand are limited to 178,000 acres. By contrast, upland hardwoods dominate some 800,000 acres, and along the streams are stands of bottom-land hardwoods that aggregate 490,000 acres.

Three-fourths of the commercial forest land is concentrated in the 11 easternmost counties. The remainder is of sporadic occurrence over the rest of the area.

The volume of growing stock on the commercial forest area is 521 million cubic feet. Hardwoods comprise 80 percent of the total. Post oak alone makes up 20 percent of the total; other oaks, 13 percent; hickory, 11 percent; and other hardwoods, 36 percent. The volume of softwoods is relatively small: loblolly pine is 11 percent of the total; shortleaf pine, 8 percent; and redcedar, 1 percent. Overall, more than two-fifths of the growing stock is in trees below sawtimber size.

The sawtimber portion of the growing stock inventory totals 1.4 billion board feet, of which about half is in trees 16 inches and larger in diameter. Sawtimber volume averages 970 board feet per acre, considerably less than the corresponding average of 2,880 found in the adjacent forests to the east.

Commercial forests have an additional sound volume of 303 million cubic feet in rough and rotten trees. Such trees occupy about 30 percent of the commercial forest area. Although they are unmarketable for sawn products, many contain usable amounts of boltwood.

Because the productive capacity of much of the forest land is low, the task of improving the timber resource in the post oak region is challenging. The findings of this survey suggest that the most favorable opportunities are within the 11 easternmost counties extending from Lamar southward to Waller. These counties encompass the heaviest concentration of commercial forest land in the region, and they are also nearest the major wood-using plants of east Texas. Moreover, it appears that forest management can best be directed towards areas that are capable of supporting pine, and the 11 counties include most of the acreage on which pine occurs now or did occur in the recent past. These pine sites add up to more than a quarter million acres of commercial forest land. Intensification of management would in time enable the region to provide more forest products for expanding wood-using industries of Texas.

ACCURACY OF THE SURVEY

The data on forest acreage and timber volume in this report were secured by a systematic sampling method involving a forest-nonforest classification on aerial photographs and on-the-ground measurement of trees at sample locations. At each location, 10 small plots were systematically distributed on an area of about 1 acre.

Statistical analysis of the data indicates a sampling error of plus or minus 1.0 percent for the estimate of total commercial forest area, 1.2 percent for total unproductive forest area, 8.3 percent for total cubic volume, and 10.3 percent for total board-foot volume. As these totals are broken down by forest type, species, tree diameter, and other subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the following tabulation, which shows the sampling error to which the estimates are liable, two chances out of three.

DEFINITIONS OF TERMS

Forest Land Class

Forest land.—Land at least 10 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for non-forest use.

Commercial forest land.—Forest land which is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization.

Productive-reserved forest land.—Productive public forest land withdrawn from timber utilization through statute or administrative regulation.

Unproductive forest land.—Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

Forest Type

Loblolly-shortleaf pine.—Forests in which 50 percent or more of the stand is southern yellow pine or redcedar, and in which loblolly and shortleaf pines, or redcedar, singly or in combination, predominate.

Oak-pine.—Forests in which 50 percent or more of the stand is hardwoods (usually upland oaks, hickory, or gum), but in which pines or redcedar make up 25-49 percent of the stand.

Oak-hickory.—Forests in which 50 percent or more of the stand is upland hardwoods (usually oaks, hickory, and gum) and in which pines or redcedar comprise less than 25 percent of the stand.

Oak-gum-cypress.—Bottom-land forests in which 50 percent or more of the stand is tupelo, sweetgum, oaks, southern cypress, or associated species, singly or in combination, and pines comprise less than 25 percent of the stand.

Elm-ash-cottonwood.—Forests in which 50 percent or more of the stand is elm, ash, cottonwood, or willow, singly or in combination.

Class of Timber

Growing-stock trees.—Sawtimber trees, poletimber trees, saplings, and seedlings; that is, all live trees except rough and rotten ones.

Desirable trees.—Growing-stock trees that have no serious defects to limit present or prospective use, are of relatively high vigor, and contain no pathogens that may result in death or serious deterioration before rotation age. They comprise the type of trees that forest managers aim to grow; that is, the trees left in silvicultural cutting or favored in cultural operations.

Commercial forest area	Sampling error ¹	Unproductive forest area	Sampling error ¹	Cubic-foot volume ²	Sampling error ¹	Board-foot volume ³	Sampling error ¹
<i>Thousand acres</i>	<i>Percent</i>	<i>Thousand acres</i>	<i>Percent</i>	<i>Million cu. ft.</i>	<i>Percent</i>	<i>Million bd. ft.</i>	<i>Percent</i>
1,468.5	1.0	1,525.1	1.2	...	...	...	...
367.1	2.0	549.0	2.0	...	...	...	...
163.2	3.0	244.0	3.0	...	...	...	...
91.8	4.0	137.3	4.0	...	...	...	...
58.7	5.0	87.8	5.0	521.0	8.3	...	...
14.7	10.0	22.0	10.0	358.9	10.0	1,428.6	10.3
6.5	15.0	9.8	15.0	159.5	15.0	673.6	15.0
3.7	20.0	5.5	20.0	89.7	20.0	378.9	20.0
2.3	25.0	3.5	25.0	57.4	25.0	242.5	25.0

¹ By random-sampling formula.

² Growing stock volume on commercial forest land.

³ Sawtimber volume on commercial forest land.

Acceptable trees.—Trees meeting the specifications for growing stock but not qualifying as desirable trees.

Sawtimber trees.—Live trees of commercial species, 9.0 inches and larger in diameter at breast height for softwoods and 11.0 inches and larger for hardwoods, and containing at least one saw log.

Poletimber trees.—Live trees of commercial species, 5.0 to 9.0 inches in d.b.h. for softwoods and 5.0 to 11.0 inches for hardwoods, and of good form and vigor.

Saplings.—Live trees of commercial species, 1.0 inch to 5.0 inches in d.b.h. and of good form and vigor.

Rough and rotten trees.—Live trees that are unmerchantable for saw logs now or prospectively because of defect, rot, or species.

Stand-Size Class

Sawtimber stands.—Stands at least 10 percent stocked with growing-stock trees, with half or more of this stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands.—Stands at least 10 percent stocked with growing-stock trees, with half or more of this stocking in sawtimber or poletimber trees, and with poletimber stocking exceeding that of sawtimber stocking.

Sapling-seedling stands.—Stands at least 10 percent stocked with growing-stock trees, with more than half of this stocking in saplings or seedlings.

Nonstocked areas.—Commercial forest lands less than 10 percent stocked with growing-stock trees.

Stocking

A measure of area occupancy by trees of specified classes. Three categories of stocking are considered in the Survey: (1) all live trees, (2) growing-stock trees, and (3) desirable trees. Stocking in terms of all trees is used in the delineation of forest land and forest types. Stocking in terms of growing-stock trees is used in stand-size classifications. Stocking in terms of desirable trees is used in delineating area-condition classes.

Volume

Volume of sawtimber.—Net volume of the sawlog portion of live sawtimber trees, in board feet of the International rule, $\frac{1}{4}$ -inch kerf.

Volume of growing stock.—Volume of sound wood in the bole of sawtimber and poletimber trees from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

Volume of timber.—The volume of sound wood in the bole of growing stock, rough, rotten, and salvable dead trees 5.0 inches and larger in d.b.h., from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

Log Grades

Log grades are based on the standards presented by the U. S. Forest Service in "Interim Log Grades for Southern Pines," issued by the Southern Forest Experiment Station in 1953, and "Hardwood Log Grades for Standard Lumber," issued by the Forest Products Laboratory under the designation D1737 in 1949.

Hardwood log grades include, in addition to the grades for standard lumber, a grade 4 tie and timber log. Specifications for tie and timber logs are based chiefly on knot size and log soundness; clear cuttings are not required.

Area-Condition Class

Class 1.—Areas 70% or more stocked with desirable trees.

Class 2.—Areas 40 to 70% stocked with desirable trees, and with 30% or less of the area controlled by acceptable growing-stock trees, rough and rotten trees, inhibiting vegetation, slash, or nonstockable conditions.

Class 3.—Areas 40 to 70% stocked with desirable trees and with more than 30% of the area controlled by other trees or conditions that ordinarily prevent occupancy by desirable trees.

Class 4.—Areas less than 40% stocked with desirable trees, but with 70% or more stocking with growing-stock trees.

Class 5.—Areas less than 40% stocked with desirable trees, but with 40 to 70% stocking with growing-stock trees.

Class 6.—Areas less than 40% stocked with desirable trees and with less than 40% stocking with growing-stock trees.

Miscellaneous Definitions

D.b.h. (Diameter breast high).—Tree diameter in inches, outside bark, measured at 4½ feet above ground.

Diameter classes.—The 2-inch diameter classes extend from 1.0 inch below to 0.9 inch above the stated midpoint. Thus, the 12-inch class includes trees 11.0 inches to and including 12.9 inches d.b.h.

Site classes.—A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

TABLES

Table 1. *Area by land classes, Post Oak Region, Texas, 1965*

Land class	Area
	<i>Thousand acres</i>
Forest:	
Commercial	1,468.5
Unproductive	1,525.1
Productive-reserved	..
Total forest	2,993.6
Nonforest ¹	9,678.5
All land ²	12,672.1

¹ Includes some acreage of water according to survey standards of area classification but defined by Bureau of the Census as land.

² From U. S. Bureau of the Census, Land and Water Area of the United States, 1960.

Table 2. *Area of commercial forest land by ownership classes, Post Oak Region, Texas, 1965*

Ownership class	Area
	<i>Thousand acres</i>
Public:	
National forest	.
Miscellaneous federal	5.0
State	6.3
County and municipal	.6
Total public	11.9
Private:	
Forest industry	32.3
Farmer	635.8
Miscellaneous private	788.5
Total private	1,456.6
All ownerships	1,468.5

Table 3. *Area of commercial forest land by stand-size and ownership classes, Post Oak Region, Texas, 1965*

Stand-size class	All owner-ships	Public	Forest industry	Farmer and misc. private
	<i>Thousand acres</i>			
Sawtimber	523.1	.	26.8	496.3
Poletimber	408.5	6.1	5.5	396.9
Sapling and seedling	513.8	5.8	.	508.0
Nonstocked areas	23.1	.	.	23.1
All classes	1,468.5	11.9	32.3	1,424.3

Table 4. *Area of commercial forest land by stand-volume classes for sawtimber and other stand-size classes, Post Oak Region, Texas, 1965*

Stand volume per acre	All stands	Sawtimber stands	Other stands
	<i>Thousand acres</i>		
Less than 1,500 board feet	1,180.3	240.0	940.3
1,500 to 5,000 board feet	249.0	243.9	5.1
More than 5,000 board feet	39.2	39.2	.
All classes	1,468.5	523.1	945.4

Table 5. *Area of commercial forest land by stocking classes based on alternative stand components, Post Oak Region, Texas, 1965*

Stocking percentage	Stocking classified in terms of		
	All trees	Growing stock trees	Desirable trees
	<i>Thousand acres</i>		
90 to 100	364.3	26.3	5.5
80 to 90	422.0	46.4	.
70 to 80	346.8	144.8	30.1
60 to 70	122.9	178.1	16.5
50 to 60	108.6	260.1	64.7
40 to 50	88.2	352.3	54.7
30 to 40	10.2	218.6	102.1
20 to 30	..	114.6	177.7
10 to 20	5.5	104.2	367.0
Less than 10	.	23.1	650.2
All areas	1,468.5	1,468.5	1,468.5

Table 6. *Area of commercial forest land by stocking classes of growing stock trees and by stand-size classes, Post Oak Region, Texas, 1965*

Stocking class	All stands	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked
----- Thousand acres -----					
70 percent or more	217.5	84.7	50.0	82.8	.
40 to 70 percent	790.5	290.2	223.4	276.9	..
10 to 40 percent	437.4	148.2	135.1	154.1	....
Less than 10 percent	23.1	..	..	..	23.1
All classes	1,468.5	523.1	408.5	513.8	23.1

Table 7. *Area of commercial forest land, by area-condition and ownership classes, Post Oak Region, Texas, 1965*

Area-condition class	All ownerships	Public	Forest industry	Farmer and misc. private
----- Thousand acres -----				
1	35.6	3.0	11.0	21.6
2	58.0	..	16.2	41.8
3	77.9	..	5.1	72.8
4	92.6	..	..	92.6
5	743.9	6.1	..	737.8
6	460.5	2.8	..	457.7
All classes	1,468.5	11.9	32.3	1,424.3

Table 8. *Area of commercial forest land by area-condition and stocking classes, Post Oak Region, Texas, 1965*

Area-condition class	All classes		Stocking class									
			Growing stock				Rough and rotten trees		Shrubs		Other	
			Desirable		Acceptable							
	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent
1	35.6	100.0	27.1	76.1	3.4	9.6	2.7	7.6	.	..	2.4	6.7
2	58.0	100.0	30.7	53.0	6.0	10.3	6.4	11.0	0.4	0.7	14.5	25.0
3	77.9	100.0	36.3	46.6	18.8	24.1	14.2	18.2	.2	.3	8.4	10.8
4	92.6	100.0	12.3	13.3	57.7	62.3	13.4	14.5	.	.	9.2	9.9
5	743.9	100.0	91.0	12.2	281.8	37.9	212.1	28.5	14.9	2.0	144.1	19.4
6	460.5	100.0	24.2	5.3	85.5	18.6	189.8	41.2	17.9	3.9	143.1	31.0
All classes	1,468.5	100.0	221.6	15.1	453.2	30.8	438.6	29.9	33.4	2.3	321.7	21.9

Table 9. *Area of commercial forest land by site and ownership classes, Post Oak Region, Texas, 1965*

Site class	All ownerships	Public	Forest industry	Farmer and misc. private
----- Thousand acres -----				
85 to 120 cu. ft.	324.3	.	16.2	308.1
50 to 85 cu. ft.	450.5	2.7	10.6	437.2
Less than 50 cu. ft.	693.7	9.2	5.5	679.0
All classes	1,468.5	11.9	32.3	1,424.3

Table 10. *Area of commercial forest land by forest types and ownership classes, Post Oak Region, Texas, 1965*

Type	All ownerships	Public	Private
----- Thousand acres -----			
Loblolly-shortleaf pine	129.7	3.0	126.7
Oak-pine	47.9	.	47.9
Oak-hickory	800.5	5.5	795.0
Oak-gum-cypress	457.1	3.4	453.7
Elm-ash-cottonwood	33.3	.	33.3
All types	1,468.5	11.9	1,456.6

Table 11. *Area of noncommercial forest land by forest types, Post Oak Region, Texas, 1965*

Type	All areas	Productive-reserved areas	Un-productive areas
--- Thousand acres ---			
Loblolly-shortleaf pine	19.0	.	19.0
Oak-pine	19.2	.	19.2
Oak-hickory	1,444.9	..	1,444.9
Oak-gum-cypress	42.0	.	42.0
All types	1,525.1	.	1,525.1

Table 12. *Number of growing-stock trees on commercial forest land by diameter classes and by softwoods and hardwoods, Post Oak Region, Texas, 1965*

D.b.h. class (inches)	All species	Softwood	Hardwood
--- Thousand trees ---			
1.0- 2.9	258,420	73,717	184,703
3.0- 4.9	82,414	15,847	66,567
5.0- 6.9	34,660	7,765	26,895
7.0- 8.9	20,485	3,632	16,853
9.0-10.9	12,559	2,624	9,935
11.0-12.9	5,221	1,217	4,004
13.0-14.9	3,219	836	2,383
15.0-16.9	1,439	167	1,272
17.0-18.9	933	102	831
19.0 and larger	1,496	63	1,433
All classes	420,846	105,970	314,876

Table 13. *Number of rough and rotten trees on commercial forest land by diameter groups and by softwoods and hardwoods, Post Oak Region, Texas, 1965*

D.b.h. class (inches)	Rough and rotten trees
Thousand trees	
Softwood:	
5.0- 8.9	448
9.0-18.9	61
19.0 and larger	7
Total	516
Hardwood:	
5.0-10.9	50,301
11.0-18.9	11,735
19.0 and larger	1,737
Total	63,773
All species	64,289

Table 14. *Volume of timber on commercial forest land by class of timber and by softwoods and hardwoods, Post Oak Region, Texas, 1965*

Class of timber	All species	Softwood	Hardwood
--- Million cubic feet ---			
Sawtimber trees:			
Saw-log portion	241.8	62.5	179.3
Upper-stem portion	50.9	9.2	41.7
Total	292.7	71.7	221.0
Poletimber trees	228.3	34.6	193.7
All growing stock	521.0	106.3	414.7
Rough trees:			
Sawtimber-size	152.3	.3	152.0
Poletimber-size	101.3	.5	100.8
Total	253.6	.8	252.8
Rotten trees:			
Sawtimber-size	37.6	.1	37.5
Poletimber-size	11.7	.	11.7
Total	49.3	.1	49.2
All timber	823.9	107.2	716.7

Table 15. *Volume of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, Post Oak Region, Texas, 1965*

Ownership class	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
	- Million cubic feet -			- Million board feet -		
Public	2.9	0.8	2.1	6.0	2.7	3.3
Forest industry	40.6	38.2	2.4	144.6	142.9	1.7
Farmer and misc. private	477.5	67.3	410.2	1,278.0	193.5	1,084.5
All ownerships	521.0	106.3	414.7	1,428.6	339.1	1,089.5

Table 16. *Volume of growing stock and sawtimber on commercial forest land by stand-size classes and by softwoods and hardwoods, Post Oak Region, Texas, 1965*

Stand-size class	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
	- Million cubic feet -			- Million board feet -		
Sawtimber	307.9	70.4	237.5	1,110.7	263.1	847.6
Poletimber	153.1	27.4	125.7	191.9	50.3	141.6
Sapling and seedling	59.6	8.5	51.1	126.0	25.7	100.3
Nonstocked areas	.4	.	.4	...	.	.
All classes	521.0	106.3	414.7	1,428.6	339.1	1,089.5

Table 17. *Volume of growing stock on commercial forest land by species and diameter classes, Post Oak Region, Texas, 1965*

Species	Diameter class (inches at breast height)								
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0 and larger
	----- Million cubic feet -----								
Softwood:									
Shortleaf pine	43.5	7.7	7.1	6.8	9.4	9.3	1.2	0.6	1.4
Loblolly pine	58.4	8.7	9.3	16.7	8.4	8.3	2.8	2.8	1.4
Other softwoods	4.4	.7	1.1	1.0	.9	.	.	.7	.
Total	106.3	17.1	17.5	24.5	18.7	17.6	4.0	4.1	2.8
Hardwood:									
Post oak	101.6	19.5	23.4	20.5	13.2	9.6	7.1	1.6	6.7
Other white oaks	3.9	.4	.6	.8	.	.3	.4	.5	.9
Red oaks	64.3	5.0	7.3	8.7	6.4	8.4	5.3	6.3	16.9
Hickory	59.6	6.0	10.3	10.5	3.8	2.0	3.9	1.5	21.6
Sweetgum	18.9	1.9	3.6	3.2	4.0	2.1	1.4	1.4	1.3
Blackgum	9.6	.2	.5	1.1	1.9	2.0	.3	.5	3.1
Elm	49.0	5.5	11.2	12.0	5.5	4.5	4.3	2.8	3.2
Ash	43.7	6.8	9.3	6.9	7.0	3.3	3.3	2.6	4.5
Cottonwood	5.0	.	.3	.4	.6	1.7	.	.4	1.1
Other hardwoods	59.1	6.3	5.6	5.4	7.3	8.3	2.3	7.2	16.7
Total	414.7	51.6	72.6	69.5	49.7	42.2	28.3	24.8	76.0
All species	521.0	68.7	90.1	94.0	68.4	59.8	32.3	28.9	78.8

Table 18. Volume of sawtimber on commercial forest land by species and diameter classes, Post Oak Region, Texas, 1965

Species	Diameter class (inches at breast height)						
	All classes	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0 and larger
----- Million board feet -----							
Softwood:							
Shortleaf pine	140.3	27.6	47.4	46.1	7.0	3.9	8.3
Loblolly pine	186.9	66.7	40.7	43.1	13.4	15.6	7.4
Other softwoods	11.9	4.0	3.2	.	.	4.7	.
Total	339.1	98.3	91.3	89.2	20.4	24.2	15.7
Hardwood:							
Post oak	187.6	.	59.1	45.0	37.9	7.5	38.1
Other white oaks	11.3	.	.	.9	1.6	2.8	6.0
Red oaks	210.5	..	23.6	40.3	26.5	32.0	88.1
Hickory	171.7	..	17.5	8.9	19.4	7.5	118.4
Sweetgum	44.0	.	17.0	7.9	6.6	6.4	6.1
Blackgum	34.2	..	7.4	8.0	1.3	2.7	14.8
Elm	95.3	.	22.8	18.3	22.7	13.6	17.9
Ash	101.2	.	29.1	17.6	15.4	13.3	25.8
Cottonwood	17.3	.	3.1	3.9	.	2.5	7.8
Other hardwoods	216.4	.	30.6	42.1	12.2	41.3	90.2
Total	1,089.5	.	210.2	192.9	143.6	129.6	413.2
All species	1,428.6	98.3	301.5	282.1	164.0	153.8	428.9

Table 19. Volume of sawtimber on commercial forest land by species and log grade, Post Oak Region, 1965

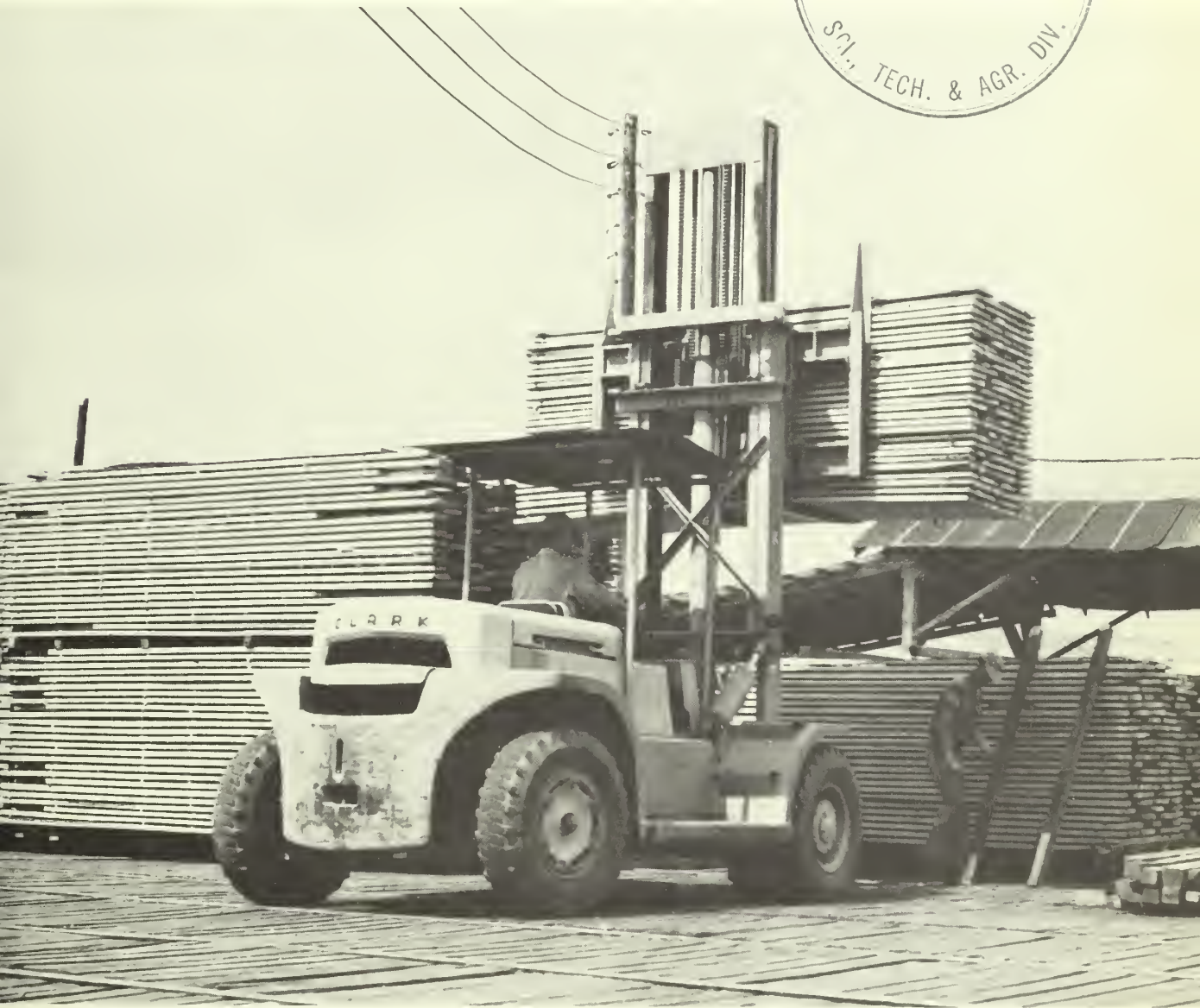
Species	All grades	Grade 1 ¹	Grade 2	Grade 3	Lower grades
----- Million board feet -----					
Softwood:					
Yellow pines	327.2	3.3	30.1	188.2	105.6
Other softwoods	11.9	11.9	.	.	.
Total	339.1	15.2	30.1	188.2	105.6
Hardwood:					
Post oak	187.6	3.0	7.6	126.6	50.4
Other white oaks	11.3	.	8.8	2.5	.
Red oaks	210.5	22.9	36.2	105.8	45.6
Hickory	171.7	49.2	32.1	77.1	13.3
Sweetgum	44.0	1.3	3.2	22.0	17.5
Ash	101.2	20.6	32.4	42.2	6.0
Other hardwoods	363.2	68.8	75.1	183.1	36.2
Total	1,089.5	165.8	195.4	559.3	169.0
All species	1,428.6	181.0	225.5	747.5	274.6

¹ All cedar saw logs were graded as No. 1.



Mississippi Forest Industry

Dwane D. Van Hooser



Mississippi Forest Industry

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U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana

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Foreword

This report is the result of a 100-percent field canvass of the primary forest industries in Mississippi. Similar surveys were made in 1956 and 1962.

To obtain the 1966 information, every known installation in the State was contacted, along with those firms in other States which were known to process roundwood from Mississippi. While reasonable effort was made to locate all active plants, some may have been omitted. Omission of a firm is no reflection upon its activities, nor does inclusion constitute a recommendation.

Mississippi Forest Industry

Nearly 402 million cubic feet of industrial roundwood were harvested in Mississippi in 1966. This was the largest harvest in a decade. Nearly three-fifths was softwood—mainly pine. Altogether, 305 million cubic feet were processed by the State's forest industries. Some 123 million cubic feet were shipped to surrounding States, while 26 million cubic feet were brought into Mississippi.

Pulpwood and saw logs combined accounted for more than 90 percent of the harvest; 200 million cubic feet of pulpwood and 167 million cubic feet of sawtimber were removed.

PULPWOOD

The pulp industry processed 2.5 million cords of round pulpwood from Mississippi forests in 1966 and utilized 474,200 cord-equivalents of residues from other wood-using industries in

the State. Total production is not only a record high, but represents a 30-percent increase over 1965.

With the exception of a few periods of slight decline, the trend of pulpwood production in Mississippi has been upward since 1946 (fig. 1). This trend is very likely to continue upward and could rise sharply in the near future. There are now seven pulpmills operating in the State, and new mills are under construction near Monticello and Vicksburg. These mills will boost the State's pulping capacity from 3,605 to 6,140 tons per day—an increase of 70 percent. They are likely to stimulate an increase in total pulpwood production of more than a million cords per year.

The 474,200 cord-equivalents of residue consumed by pulpmills in 1966 represent a sixfold increase since 1956 and are nearly twice the

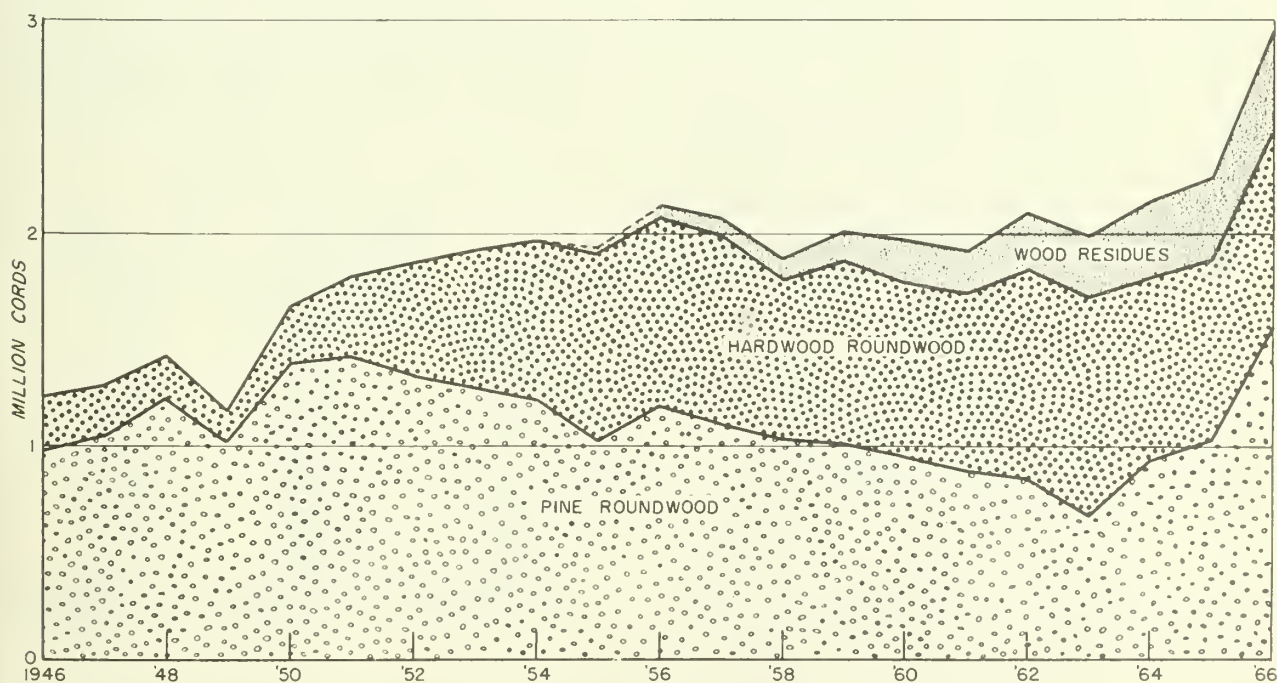


Figure 1.—Pulpwood production trends in Mississippi, 1946 to 1966.

amount consumed in 1962. The increasing number of chipping installations at wood-using plants other than pulpmills indicates that residues will continue to be an important source of supply in Mississippi. In 1956, 13 sawmills were chipping their slabs and edgings; 67 sawmills had chippers in 1962, and at least 85 had them in 1966. In addition, 18 of the State's veneer mills are now chipping plant residues.

In 1966, Mississippi's wood-using industries produced nearly 92 million cubic feet of residue; 59 percent of it was coarse, i.e., slabs, edgings, veneer cores, and the like. Nearly 65 million cubic feet of residue were used, primarily by the pulp and paper industry. The volume of unused residue is gradually decreasing as more and more wood-using mills install chippers to convert their coarse residues to a form acceptable to pulpmills. In addition, the pulp industry has begun using sawdust in the manufacture of some products.

Tree-length chipping installations are another important innovation that will probably influence the pulpwood supply pattern in the near future.

Of the 2.5 million standard cords of round pulpwood produced in 1966, nearly 60 percent were shipped to plants outside the State for processing. Eighty-five percent of the exported material was pine. Incoming shipments from surrounding States totaled 38,900 cords, all of which were hardwood. This is an abrupt change from 1962 when the State exported 502,000 cords while importing nearly 192,000 cords. Since then, exports have increased by 183 percent and imports have decreased by 80 percent.

SAW LOGS

Saw logs accounted for 42 percent of the roundwood produced by Mississippi forest industries in 1966. A total of 350 sawmills cut more than a billion board feet of saw logs, slightly more than half of which were pine.

Both number of sawmills and lumber production increased between 1962 and 1966, reversing a trend that had been evident since the late forties. These increases indicate that the industry may be stabilizing. In 1962, 88 large sawmills (those cutting more than 3 million

board feet per year) and 202 small sawmills (those cutting less than 3 million board feet per year) were operating in Mississippi. There are now 108 large sawmills and 242 small ones in the State. Sixteen of the large mills were classed as small in 1962.

Since 1962 lumber production has increased by 26 percent. Large sawmills processed about 83 percent of the logs sawn in the State in 1966. More than 10 million board feet were cut at each of 22 mills.

More than 52 percent of the saw-log harvest was softwood, which was almost all pine but included some cypress and redcedar. Oaks and sweetgum made up nearly two-thirds of the hardwood cut.

Of the 1,009 million board feet of saw logs harvested, 96 percent were processed within the State. The balance, 43 million board feet, was shipped to Alabama, Arkansas, Louisiana, and Tennessee. Mississippi imported 96 million board feet from these States for processing by resident mills.

VENEER

All veneer manufactured in Mississippi is rotary-cut. Nearly one-third of it goes into containers; the rest is largely commercial veneer which is used in such products as plywood and furniture facing. Commercial veneers require logs of larger minimum diameter and higher quality than do container veneers.

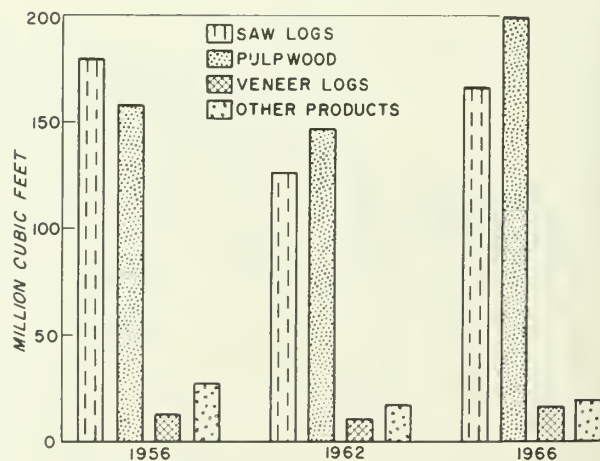


Figure 2.—Roundwood harvest in Mississippi, by product and industrial survey year.

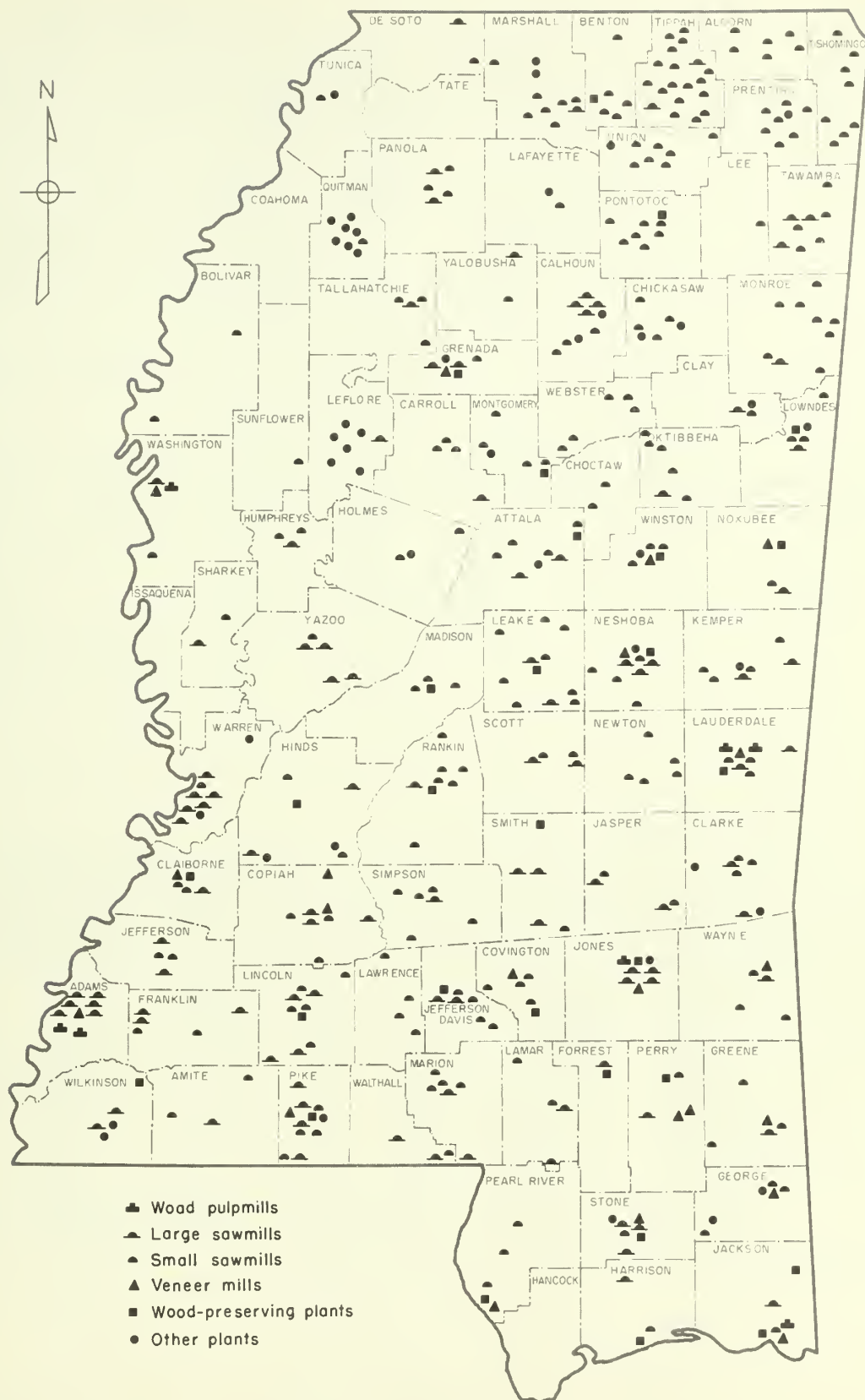


Figure 3.—Location of primary wood-using plants in Mississippi, 1966.

Mississippi's 22 veneer plants obtain about 80 percent of their raw material from within the State. Output of veneer logs in 1966 totaled 98 million board feet, of which 2.5 million were exported. About 25 million board feet were imported. Most of the imports were from Alabama, Arkansas, and Louisiana, but some came from as far away as South America. Mississippi veneer mills consumed 120 million board feet of logs, an average of 5.5 million per plant.

Nearly half of the veneer logs cut in Mississippi in 1966 were pine. In 1956, not one Mississippi pine log was used by the veneer industry, and in 1962 only 437,000 board feet were used. In 1966, however, the industry consumed nearly 45 million board feet of pine. The increase is due primarily to the growth of the southern pine plywood industry.

OTHER PRODUCTS

Mississippi has long been a top-ranking producer of poles and piling. In 1966, nearly 800,000 pines were cut from Mississippi forests for poles, and some 4.9 million linear feet of piling were harvested. Only 11,500 poles were exported to surrounding States. The wood-preserving industry within Mississippi imported nearly 75,000 poles and slightly more than 2 million linear feet of piling. Most of the poles and all of the piling went to pressure-treating plants. A large majority of the commercial posts also went to such plants. There are 18 pressure-treating plants and 11 nonpressure plants in the State.

Products such as cooperage, handle stock, and miscellaneous dimension made up only 1 percent of the product output.

Table 1.—Volume of industrial roundwood

Product	Volume in standard units				Roundwood volume		
	Standard units	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
— — — — — M cu. ft. — — — — —							
Saw logs	M bd. ft. ¹	1,009,445	531,494	477,951	167,105	87,431	79,674
Pulpwood	Std. cords	2,475,287	1,560,287	915,000	199,583	126,383	73,200
Veneer logs	M bd. ft. ¹	98,106	45,752	52,354	16,311	7,526	8,785
Piling	M linear ft.	4,907	4,907	...	3,512	3,512	...
Poles	M pieces	793	793	...	9,235	9,235	...
Posts	M pieces	2,753	2,752	1	1,343	1,342	1
Misc. products ²	M cu. ft.	4,837	368	4,469	4,837	368	4,469
Total					401,926	235,797	166,129

¹ International 1/4-inch rule.

² Includes cooperage, handle stock, furniture stock, miscellaneous dimension, chemical wood, excelsior, and shuttleblocks.

Table 2.—*Industrial roundwood, by species*

Species group	Saw logs	Veneer logs	Pulpwood	Piling	Poles	Posts	Miscellaneous products
	-- M bd. ft. ¹ --	--	Std. cords	M linear ft.	-- M pieces --		M cu. ft.
Softwood:							
Pines	524,836	44,635	1,560,287	4,907	793	2,752	368
Cypress	6,375	1,117	...	...	...	...	...
Other softwoods	283						
Total	531,494	45,752	1,560,287	4,907	793	2,752	368
Hardwood:							
Black and tupelo gums	16,710	5,878	² 429,285	...	...	...	620
Sweetgum	60,941	13,834	...	...	...	...	592
Red oaks	166,418	4,039	³ 154,682	...	...	1	306
White oaks	82,904	844	...	...	...	...	229
Other hardwoods	150,978	27,759	331,033	...	...	...	2,722
Total	477,951	52,354	915,000	...	...	1	4,469
All species	1,009,445	98,106	2,475,287	4,907	793	2,753	4,837

¹ International 1/4-inch rule.² Black and tupelo combined with sweetgum.³ Red and white oaks combined.Table 3.—*Residues, by primary wood-using plants*

Type of industry ¹	All species			Softwoods			Hardwoods		
	Total	Fine ²	Coarse ³	Total	Fine ²	Coarse ³	Total	Fine ²	Coarse ³
	----- M cu. ft. -----								
Lumber	79,226	34,737	44,489	44,281	18,124	26,157	34,945	16,613	18,332
Veneer	7,775	297	7,478	3,150	129	3,021	4,625	168	4,457
Piling, poles, and posts	2,894	1,690	1,204	2,894	1,690	1,204			
Miscellaneous products	2,058	1,140	918	172	104	69	1,885	1,036	849
All products	91,953	37,864	54,089	50,498	20,047	30,451	41,455	17,817	23,638

¹ Excludes woodpulp industry.² Fine residues include sawdust, screenings, and other material generally too small for chipping.³ Coarse residues include slabs, edgings, trimmings, and other material generally suitable for chipping.

Table 4.—Volume of primary plant residues used

Source industry ¹	Type of use	All species	Softwoods	Hardwoods
— — — — — M cu. ft. — — — — —				
Lumber	Fuel ²	19,262	5,198	14,064
	Fiber ³	31,331	25,191	6,140
	Other ⁴	5,141	3,478	1,663
	Total	55,734	33,867	21,867
Veneer	Fuel	518	3	515
	Fiber	6,417	2,955	3,462
	Other	198		198
	Total	7,133	2,958	4,175
Piling, poles, and posts	Fuel	549	549	...
	Fiber	472	472	...
	Other	30	30	...
	Total	1,051	1,051	...
Miscellaneous industries	Fuel	702	62	640
	Fiber	69	...	69
	Other	190	...	190
	Total	961	62	899
All industries	Fuel	21,031	5,812	15,219
	Fiber	38,289	28,618	9,671
	Other	5,559	3,508	2,051
	Total	64,879	37,938	26,941

¹ Excludes woodpulp industry.² Includes all residues used as fuel by industrial plants and domestic fuel either sold or given away.³ Includes all residues used in manufacture of fiber products, such as pulp or hardboard.⁴ Includes residues used as livestock bedding, mulch, floor sweepings, and specialty items.

Table 5.—Movement of industrial roundwood, by product

Product	Unit	Out of State receipts	Logged and remained in State	Logged and shipped out of State	Total receipts	Total production
— — — — — Standard units — — — — —						
Saw logs	M bd. ft. ¹	96,162	966,804	42,641	1,062,966	1,009,445
Veneer	M bd. ft. ¹	24,785	95,640	2,466	120,425	98,106
Pulpwood	Std. cords	38,856	1,055,438	1,419,849	1,094,294	2,475,287
Piling	M linear ft.	2,064	4,530	377	6,594	4,907
Poles	M pieces	75	781	12	856	793
Posts	M pieces	1	2,597	156	2,598	2,753
Misc. products	M cu. ft.	443	4,387	450	4,830	4,837

¹ International 1/4-inch rule.

Table 6.—Saw-log production, by county

County	All species	Softwoods	Hardwoods	County	All species	Softwoods	Hardwoods
----- M bd. ft. ¹ -----				----- M bd. ft. ¹ -----			
Adams	23,929	5,256	18,673	Lincoln	19,180	14,952	4,228
Alcorn	3,452	288	3,164	Lowndes	13,611	4,922	8,689
Amite	20,809	15,826	4,983	Madison	4,905	3,630	1,275
Attala	12,968	5,337	7,631	Marion	10,721	7,306	3,415
Benton	12,868	4,898	7,970	Marshall	5,929	694	5,235
Bolivar	2,894	52	2,842	Monroe	18,882	6,586	12,296
Calhoun	15,214	543	14,671	Montgomery	7,711	1,028	6,683
Carroll	8,418	1,658	6,760	Neshoba	6,197	5,333	864
Chickasaw	5,979	2,258	3,721	Newton	10,795	9,072	1,723
Choctaw	1,971	1,384	587	Noxubee	9,801	8,139	1,662
Claiborne	16,849	3,358	13,491	Oktibbeha	5,884	2,356	3,528
Clarke	31,275	27,146	4,129	Panola	9,881	282	9,599
Clay	17,091	445	16,646	Pearl River	20,661	9,857	10,804
Coahoma	3,147	103	3,044	Perry	9,707	9,048	659
Copiah	16,970	10,902	6,068	Pike	7,096	5,728	1,368
Covington	6,927	4,967	1,960	Pontotoc	5,359	1,372	3,987
De Soto	11,425	32	11,393	Prentiss	3,970	1,287	2,683
Forrest	10,669	8,720	1,949	Quitman	1,710	140	1,570
Franklin	37,810	29,712	8,098	Rankin	16,193	12,490	3,703
George	2,426	1,703	723	Scott	31,795	29,535	2,260
Greene	12,376	11,362	1,014	Sharkey	13,312	351	12,961
Grenada	8,574	982	7,592	Simpson	20,278	15,678	4,600
Hancock	178	66	112	Smith	35,648	33,176	2,472
Harrison	9,009	8,324	685	Stone	18,611	18,421	190
Hinds	9,398	1,263	8,135	Sunflower	2,632	327	2,305
Holmes	16,502	485	16,017	Tallahatchie	9,676	348	9,328
Humphreys	5,128	114	5,014	Tate	1,490		1,490
Issaquena	10,647	61	10,586	Tippah	7,311	2,697	4,614
Itawamba	15,909	4,527	11,382	Tishomingo	5,100	1,602	3,498
Jackson	6,945	3,520	3,425	Tunica	7,230	461	6,769
Jasper	31,921	25,657	6,264	Union	3,198	604	2,594
Jefferson	16,066	5,575	10,491	Walthall	2,903	1,728	1,175
Jefferson Davis	7,857	6,909	948	Warren	17,999	875	17,124
Jones	21,456	15,081	6,375	Washington	4,663	272	4,391
Kemper	25,315	17,245	8,070	Wayne	19,236	15,987	3,249
Lafayette	11,488	6,051	5,437	Webster	1,158	555	603
Lamar	10,733	7,948	2,785	Wilkinson	32,503	11,782	20,721
Lauderdale	24,748	20,242	4,506	Winston	8,513	6,019	2,494
Lawrence	14,401	9,877	4,524	Yalobusha	5,584	820	4,764
Leake	18,161	15,103	3,058	Yazoo	25,639	634	25,005
Lee	1,020	204	816				
Leflore	5,850	216	5,634	Total	1,009,445	531,494	477,951

¹ International ¼-inch rule.

Table 7.—Saw-log movement

County ¹	Logged and remained in county	Outgoing shipments	Incoming receipts	Total log receipts by county
----- M bd. ft. ² -----				
Adams	22,641	1,288	15,201	37,842
Alcorn	3,025	427	286	3,311
Amite	20,440	369	3,060	23,500
Attala	12,968	...	...	12,968
Benton	12,813	55	...	12,813
Calhoun	15,214	...	...	15,214
Carroll	8,418	...	1,257	9,675
Chickasaw	5,979	...	...	5,979
Claiborne	16,849	...	75	16,924

Table 7.—Saw-log movement (Continued)

County ¹	Logged and remained in county	Outgoing shipments	Incoming receipts	Total log receipts by county
----- M bd. ft. ² -----				
Clarke	28,157	3,11	313	28,470
Coahoma		3,147		
Copiah	16,970			16,970
Covington	6,927			6,927
Franklin	37,810		3,492	41,302
George	2,412	14		2,412
Greene	8,936	3,440		8,936
Grenada	7,802	772		7,802
Hancock	13	165		13
Hinds	9,398			9,398
Humphreys	5,128			5,128
Issaquena	10,647			10,647
Itawamba	15,059	850	2,695	17,754
Jasper	31,921			31,921
Jefferson	16,066			16,066
Jefferson Davis	7,857			7,857
Jones	21,456			21,456
Kemper	24,943	372	149	25,092
Lamar	10,733			10,733
Lauderdale	24,533	215	2,737	27,270
Lawrence	14,401			14,401
Leake	18,161			18,161
Lincoln	19,180			19,180
Lowndes	13,245	366	470	13,715
Madison	4,905			4,905
Marion	9,930	791	7,257	17,187
Marshall	5,860	69		5,860
Monroe	16,722	2,160	472	17,194
Montgomery	7,708	3		7,708
Neshoba	6,197			6,197
Newton	10,795			10,795
Oktibbeha	5,884			5,884
Panola	8,605	1,276		8,605
Pearl River	10,835	9,826		10,835
Pike	7,096		18,026	25,122
Pontotoc	5,359			5,359
Prentiss	3,969	1		3,969
Rankin	16,193		145	16,338
Scott	31,119	676		31,119
Simpson	20,278			20,278
Smith	35,648			35,648
Stone	18,332	279		18,332
Tallahatchie	9,639	37		9,639
Tate	1,433	57		1,433
Tippah	7,282	29	2,616	9,898
Tishomingo	3,788	1,312	153	3,941
Union	3,197	1		3,197
Walthall	2,903		11,658	14,561
Warren	17,728	271	18,018	35,746
Wayne	14,334	4,902	165	14,499
Webster	1,158			1,158
Winston	8,513			8,513
Yazoo	25,603	36		25,603
Total	966,804	42,641	96,162	1,062,966

¹ Counties with less than three plants are omitted.² International 1/4-inch rule.³ Totals include omitted counties.

Table 8.—*Veneer-log production, by county*

County ¹	All species	Softwoods	Hardwoods	County ¹	All species	Softwoods	Hardwoods
----- M bd. ft. ² -----				----- M bd. ft. ² -----			
Adams	5,720	1,184	4,536	Madison	1,430	1,419	11
Amite	573	123	450	Marion	904	...	904
Bolivar	34	...	34	Marshall	3	...	3
Chickasaw	698	698	...	Montgomery	205	...	205
Claiborne	2,882	84	2,798	Neshoba	3,590	3,566	24
Clarke	3,211	314	2,897	Newton	715	710	5
Coahoma	725	...	725	Noxubee	5,183	5,029	154
Copiah	2,578	3	2,575	Panola	7	...	7
Covington	794	...	794	Pearl River	1,717	1,064	653
De Soto	148	...	148	Perry	4,933	3,729	1,204
Forrest	3,482	2,486	996	Pike	904	193	711
Franklin	1,299	11	1,288	Quitman	206	...	206
George	2,744	1,243	1,501	Rankin	715	710	5
Greene	4,561	2,486	2,075	Scott	4,275	4,245	30
Grenada	511	...	511	Simpson	822	...	822
Hancock	1,337	355	982	Smith	640	...	640
Harrison	766	...	766	Stone	5,098	2,841	2,257
Hinds	475	6	469	Sunflower	102	...	102
Issaquena	952	...	952	Tallahatchie	828	...	828
Jackson	1,494	...	1,494	Tate	7	...	7
Jasper	640	...	640	Tunica	764	...	764
Jefferson	1,342	20	1,322	Walthall	488	59	429
Jefferson Davis	642	...	642	Warren	323	8	315
Jones	2,516	...	2,516	Washington	1,915	...	1,915
Kemper	3,106	1,374	1,732	Wayne	2,902	...	2,902
Lauderdale	1,814	1,524	290	Webster	5,587	5,587	...
Lawrence	1,048	...	1,048	Wilkinson	595	...	595
Leake	1,430	1,419	11	Winston	4,227	3,262	965
Leflore	621	...	621	Total	98,106	45,752	52,354
Lincoln	878	...	878				

¹ Counties with negligible output are omitted.² International 1/4-inch rule.Table 9.—*Piling production, by county*

County ¹	All species softwoods	County ¹	All species softwoods	County ¹	All species softwoods
M linear ft.		M linear ft.		M linear ft.	
Amite	312	Jasper	97	Oktibbeha	10
Attala	5	Jefferson	33	Pearl River	577
Claiborne	6	Jefferson Davis	9	Perry	180
Clarke	4	Jones	76	Pike	84
Copiah	182	Lafayette	6	Rankin	21
Covington	1	Lamar	308	Simpson	10
Forrest	112	Lawrence	44	Smith	2
Franklin	141	Leake	8	Stone	319
George	38	Lincoln	118	Walthall	90
Greene	61	Madison	4	Wayne	21
Hancock	673	Marion	38	Wilkinson	376
Harrison	466	Monroe	7	Winston	13
Hinds	2	Neshoba	1	Total	4,907
Jackson	440	Noxubee	12		

¹ Counties with negligible output are omitted.

Table 10.—*Pole production, by county*

County ¹	All species softwoods
	<i>M pieces</i>
Amite	21
Attala	2
Clarke	5
Covington	5
Forrest	111
Franklin	21
George	28
Greene	22
Hancock	4
Harrison	60
Jackson	32
Jasper	30
Jefferson Davis	9
Jones	51
Lafayette	1
Lamar	132
Lauderdale	16
Lawrence	1
Leake	2
Lincoln	1
Madison	2
Marion	11
Monroe	1
Newton	1
Noxubee	2
Oktibbeha	2
Pearl River	32
Perry	88
Pike	11
Rankin	5
Simpson	3
Stone	60
Walthall	2
Wayne	6
Wilkinson	11
Winston	2
Total	793

¹ Counties with negligible output are omitted.

Table 11.—*Commercial post production, by county*

County ¹	All species	Softwoods	Hardwoods
	<i>M pieces</i>		
Amite	49	49	...
Attala	13	12	1
Benton	1	1	...
Calhoun	20	20	...
Carroll	20	20	...
Claiborne	16	16	...
Clarke	2	2	...
Covington	73	73	...
Forrest	235	235	...
Franklin	21	21	...
George	7	7	...
Grenada	75	75	...
Hancock	1	1	...
Hinds	105	105	...
Jackson	13	13	...
Jasper	41	41	...
Jefferson Davis	238	238	...
Jones	118	118	...
Kemper	14	14	...
Lafayette	242	242	...
Lamar	98	98	...
Lauderdale	84	84	...
Lawrence	25	25	...
Leake	7	7	...
Lincoln	54	54	...
Marion	89	89	...
Monroe	4	4	...
Montgomery	75	75	...
Neshoba	164	164	...
Newton	56	56	...
Noxubee	18	18	...
Oktibbeha	7	7	...
Panola	5	5	...
Pearl River	118	118	...
Perry	151	151	...
Pike	14	14	...
Pontotoc	5	5	...
Rankin	77	77	...
Simpson	5	5	...
Smith	8	8	...
Stone	258	258	...
Walthall	76	76	...
Webster	21	21	...
Wilkinson	4	4	...
Winston	19	19	...
Yalobusha	7	7	...
Total	2,753	2,752	1

¹ Counties with negligible output are omitted.

Table 12.—Output of miscellaneous products, by county

County ¹	All species	Softwoods	Hardwoods	County ¹	All species	Softwoods	Hardwoods
— — — — M cu. ft. — — — —				— — — — M cu. ft. — — — —			
Adams	1	...	1	Madison	30		30
Alcorn	25	...	25	Marshall	152		152
Amite	1	...	1	Monroe	6		6
Attala	113	...	113	Montgomery	73		73
Benton	44	...	44	Neshoba	54		54
Calhoun	626	...	626	Newton	18		18
Carroll	31	...	31	Noxubee	41		41
Chickasaw	179	...	179	Oktibbeha	58		58
Choctaw	13	...	13	Panola	40		40
Clarke	4	---	4	Perry	3		3
Clay	210	...	210	Pike	1		1
Coahoma	32	...	32	Pontotoc	104		104
Copiah	110	110		Prentiss	42		42
De Soto	78	...	78	Quitman	214		214
Forrest	6	...	6	Rankin	88		88
Franklin	1	...	1	Scott	105		105
George	12	...	12	Smith	17		17
Greene	3	...	3	Stone	12		12
Grenada	223	...	223	Tallahatchie	215		215
Hinds	258	258		Tate	13		13
Holmes	26	...	26	Tippah	24		24
Humphreys	4	...	4	Tishomingo	39		39
Issaquena	41	...	41	Tunica	201		201
Itawamba	1	...	1	Union	31		31
Jackson	5	...	5	Walthall	1		1
Jasper	17	...	17	Warren	290		290
Jones	18	...	18	Washington	23		23
Kemper	15	...	15	Wayne	12		12
Lafayette	56	...	56	Webster	70	---	70
Lauderdale	110	...	110	Wilkinson	142	...	142
Leake	30	...	30	Winston	165	...	165
Leflore	203	...	203	Yalobusha	33		33
Lowndes	14	...	14	Yazoo	10		10
				Total	4,837	368	4,469

¹ Counties with negligible output are omitted.

Table 13.—Industrial roundwood production, by county

County	All species	Softwoods	Hardwoods	County	All species	Softwoods	Hardwoods
----- M cu. ft. -----				----- M cu. ft. -----			
Adams	6,988	1,330	5,658	Lincoln	6,872	4,961	1,911
Alcorn	1,495	820	675	Lowndes	2,763	1,064	1,699
Amite	8,200	6,884	1,316	Madison	2,348	1,739	609
Attala	5,379	2,598	2,781	Marion	8,964	5,575	3,389
Benton	2,817	1,145	1,672	Marshall	2,039	752	1,287
Bolivar	2,418	9	2,409	Monroe	3,871	1,618	2,253
Calhoun	4,119	926	3,193	Montgomery	2,484	794	1,690
Carroll	2,597	721	1,876	Neshoba	4,772	3,250	1,522
Chickasaw	3,127	2,049	1,078	Newton	6,355	4,398	1,957
Choctaw	1,717	1,058	659	Noxubee	4,621	3,544	1,077
Claiborne	5,975	1,453	4,522	Oktibbeha	1,785	1,017	768
Clarke	15,590	11,806	3,784	Panola	2,290	105	2,185
Clay	4,109	843	3,266	Pearl River	7,523	4,474	3,049
Coahoma	1,043	17	1,026	Perry	8,177	6,734	1,443
Copiah	9,623	6,759	2,864	Pike	4,680	3,400	1,280
Covington	4,067	2,075	1,992	Pontotoc	1,395	347	1,048
De Soto	2,008	5	2,003	Prentiss	1,805	1,146	659
Forrest	6,652	5,198	1,454	Quitman	621	23	598
Franklin	9,529	7,114	2,415	Rankin	7,797	5,808	1,989
George	5,001	3,987	1,014	Scott	9,737	8,534	1,203
Greene	10,221	7,097	3,124	Sharkey	2,316	63	2,253
Grenada	2,101	350	1,751	Simpson	8,436	6,098	2,338
Hancock	3,600	3,246	354	Smith	8,555	6,772	1,783
Harrison	4,396	4,067	329	Stone	7,574	6,132	1,442
Hinds	5,594	2,142	3,452	Sunflower	564	54	510
Holmes	6,257	1,162	5,095	Tallahatchie	2,100	68	2,032
Humphreys	1,412	18	1,394	Tate	574	46	528
Issaquena	2,136	39	2,097	Tippah	2,410	1,531	879
Itawamba	4,405	2,409	1,996	Tishomingo	3,175	2,143	1,032
Jackson	5,878	4,769	1,109	Tunica	1,648	76	1,572
Jasper	12,558	9,565	2,993	Union	1,272	386	886
Jefferson	6,616	3,167	3,449	Walthall	4,093	2,472	1,621
Jefferson Davis	2,899	1,997	902	Warren	4,274	167	4,107
Jones	10,527	6,260	4,267	Washington	2,014	45	1,969
Kemper	7,548	5,015	2,533	Wayne	13,033	9,671	3,362
Lafayette	4,086	2,052	2,034	Webster	2,404	1,756	648
Lamar	5,870	4,188	1,682	Wilkinson	7,266	2,966	4,300
Lauderdale	12,387	8,909	3,478	Winston	5,574	3,417	2,157
Lawrence	5,520	3,710	1,810	Yalobusha	2,792	912	1,880
Leake	5,771	4,345	1,426	Yazoo	5,301	141	5,160
Lee	356	209	147	Total	401,926	235,797	166,129
Leflore	3,060	85	2,975				

Table 14.—*Plant residues used, by county*

County ¹	All species		Softwoods		Hardwoods	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
----- M cu. ft. -----						
Adams	1,142	2,195	72	179	1,070	2,016
Alcorn	26	92	...	7	26	85
Amite	321	487	321	487	...	...
Attala	234	504	88	244	146	260
Benton	...	4	...	1	...	3
Calhoun	1,298	1,832	46	78	1,252	1,754
Carroll	...	28	...	8	...	20
Chickasaw	63	78	...	1	63	77
Choctaw	2	11	...	2	2	9
Claiborne	222	926	222	460	...	466
Clarke	578	872	549	837	29	35
Clay	...	219	...	39	...	180
Copiah	888	1,838	600	1,087	288	751
Covington	147	263	102	43	45	220
Franklin	35	1,583	35	1,580	...	3
George	1	314	...	64	1	250
Greene	144	410	140	322	4	88
Grenada	412	981	...	325	412	656
Harrison	147	234	133	234	14	...
Hinds	345	492	23	105	322	387
Holmes	31	98	13	35	18	63
Humphreys	192	215	2	2	190	213
Itawamba	...	228	...	180	...	48
Jackson	103	1,158	48	263	55	895
Jasper	676	1,033	649	986	27	47
Jefferson	120	203	8	16	112	187
Jefferson Davis	321	584	317	572	4	12
Jones	1,512	2,080	999	1,493	513	587
Kemper	...	443	...	380	...	63
Lamar	283	683	161	555	122	128
Lauderdale	166	1,695	158	1,320	8	375
Lawrence	16	169	...	1	16	168
Leake	325	696	297	649	28	47
Leflore	288	347	12	18	276	329
Lincoln	634	1,475	583	1,280	51	195
Lowndes	69	544	...	241	69	303
Madison	46	81	46	53	...	28
Marion	256	778	256	778	...	...
Marshall	15	248	1	3	14	245
Monroe	...	153	...	14	...	139
Montgomery	...	44	...	13	...	31
Neshoba	485	2,607	344	2,369	141	238
Newton	29	50	20	35	9	15
Noxubee	...	599	...	395	...	204
Oktibbeha	469	744	469	715	...	29
Panola	222	455	...	11	222	444
Pearl River	1	331	1	225	...	106
Perry	13	1,336	5	1,136	8	200
Pike	669	1,401	668	1,372	1	29
Pontotoc	6	40	4	15	2	25
Prentiss	7	96	6	21	1	75

Table 14.—*Plant residues used, by county (Continued)*

County ¹	All species		Softwoods		Hardwoods	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
----- M cu. ft. -----						
Quitman	...	28	...	...	...	28
Rankin	121	485	90	415	31	70
Scott	506	1,028	498	1,021	8	7
Simpson	294	337	185	279	109	58
Smith	615	755	586	755	29	...
Stone	625	1,501	617	1,288	8	213
Tallahatchie	...	81	...	12	...	69
Tippah	...	21	...	2	...	19
Tishomingo	...	12	...	3	...	9
Union	...	147	...	38	...	109
Walthall	321	573	321	488	...	85
Warren	1,656	1,701	28	37	1,628	1,664
Washington	329	526	7	14	322	512
Wayne	329	836	298	351	31	485
Webster	...	1	...	1	...	...
Wilkinson	278	468	76	152	202	316
Winston	12	968	...	968	12	...
Yazoo	595	1,123	28	39	567	1,084
Total ²	19,093	45,786	10,354	27,584	8,739	18,202

¹ Omitted counties have either negligible volume or less than three plants.² Totals include production from omitted counties.Table 15.—*Unused plant residues, by county*

County ¹	All species		Softwoods		Hardwoods	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
----- M cu. ft. -----						
Adams	393	145	4	9	389	136
Alcorn	77	36	9	5	68	31
Amite	44	43	...	...	44	43
Attala	200	41	94	20	106	21
Benton	183	171	72	68	111	103
Calhoun	722	316	7	1	715	315
Carroll	209	165	15	9	194	156
Chickasaw	227	127	20	17	207	110
Choctaw	10	5	2	1	8	4
Claiborne	168	...	75	...	93	...
Clarke	156	117	62	27	94	90
Clay	300	87	27	1	273	86
Copiah	224	133	139	25	85	108
Covington	4	107	3	73	1	34
Franklin	1,162	134	1,014	11	148	123
George	114	14	93	7	21	7
Greene	114	8	79	5	35	3
Grenada	402	82	227	5	175	77
Harrison	240	103	224	78	16	25
Hinds	178	58	107	7	71	51
Holmes	38	...	10	...	28	...

Table 15.—*Unused plant residues, by county (Continued)*

County ¹	All species		Softwoods		Hardwoods	
	Fine	Coarse	Fine	Coarse	Fine	Coarse
----- M cu. ft. -----						
Itawamba	776	526	261	139	515	387
Jackson	110	35	73	5	37	30
Jasper	21	10	..	..	21	10
Jefferson	438	319	26	24	412	295
Jefferson Davis	93	6	84	3	9	3
Jones	956	931	769	773	187	158
Kemper	465	151	264	12	201	139
Lamar	225	30	209	7	16	23
Lauderdale	1,015	97	824	64	191	33
Lawrence	136	114	9	8	127	106
Leake	252	105	208	72	44	33
Leflore	54	14	..	..	54	14
Lincoln	598	164	398	100	200	64
Lowndes	562	141	235	43	327	98
Madison	107	56	28	..	79	56
Marion	327	69	255	1	72	68
Marshall	327	135	29	28	298	107
Monroe	448	303	113	100	335	203
Montgomery	85	39	41	31	44	8
Neshoba	770	32	666	20	104	12
Newton	41	35	24	21	17	14
Noxubee	294	2	231	1	63	1
Oktibbeha	153	125	38	36	115	89
Panola	230	52	19	11	211	41
Pearl River	258	179	190	89	68	90
Perry	354	47	354	47	..	..
Pike	310	404	185	79	125	325
Pontotoc	139	114	37	30	102	84
Prentiss	114	47	37	26	77	21
Quitman	84	28	..	..	84	28
Rankin	310	84	272	79	38	5
Scott	231	57	206	29	25	28
Simpson	15	71	10	10	5	61
Smith	34	144	29	116	5	28
Stone	374	43	370	43	4	..
Tallahatchie	237	141	10	3	227	138
Tippah	544	488	185	177	359	311
Tishomingo	76	65	18	16	58	49
Union	156	47	30	3	126	44
Walthall	85	9	1	1	84	8
Warren	5	150	..	3	5	147
Washington	15	..	2	..	13	..
Wayne	47	117	46	109	1	8
Webster	35	34	22	22	13	12
Wilkinson	510	284	72	15	438	269
Winston	264	119	148	23	116	96
Yazoo	2	73	..	3	2	70
Total ²	18,771	8,303	9,693	2,867	9,078	5,436

¹ Omitted counties have either negligible volume or less than three plants.² Totals include production from omitted counties.

Table 16.—*Large sawmills*¹

County	Firm	Location	Address ²
Adams	Benbuck Lumber Co.	Natchez	Box 89
	T. B. Buckles Lumber Co.	Natchez	Box 89
	J. M. Jones Lumber Co., Inc.	Natchez	Box 1219
	McGehee Lumber Co.	Natchez	Box 1403
	Natchez Hardwood Co.	Natchez	Box 354
Amite	Ricks Lumber Co., Inc.	Natchez	Box 1323
	Sam Mabry Lumber Co.	Liberty	Box 323
Attala	Attala Lumber Co.	Ethel	Box 236
	Harold Evans Lumber Co.	Kosciusko	Box 313
Calhoun	E. L. Bruce Co., Inc.	Bruce	Box 337
	James Fergusson	Pittsboro	Box 74, Bruce
	Joe Grist	Bruce	
	T. W. Plunk	Bruce	
Carroll	G. W. Fisackerly	Vaiden	710 Shirley, Winona
Claiborne	Claiborne County Lumber Co.	Hermanville	Box 188
Clarke	Jones Brothers Lumber Co.	Shubuta	
	Quitman Lumber Co.	Quitman	
Clay	J. E. Seitz Lumber Co.	West Point	Box 7
Copiah	Graves Lumber Co.	Hazlehurst	Box 548
	Hutchison Lumber Co.	Georgetown	
	R. C. Owen Co.	Hazlehurst	
De Soto	K. R. Tranium	Olive Branch	
Forrest	Richton Tie and Timber Co.	Petal	Box 616
Franklin	Haltom Lumber Co.	Roxie	
	Southern Pine Superior Stud Inc.	Roxie	Box 87
	W. A. and R. B. Wallace Lumber Co.	McCall Creek	
Greene	Dickerson Sawmill	Leaksville	Rt. 4, Box 78, Lucedale
Grenada	Hankins Lumber Co.	Grenada	Drawer H
	Memphis Hardwood Flooring Co.	Grenada	Box 837
Harrison	West Creek Lumber Co.	Saucier	Hwy. 67
Hinds	C. M. Gooch Lumber Co.	Jackson	331 Mayes
	Kitchens Brothers Manufacturing Co.	Utica	
Humphreys	Cathey-Williford-Jones Co.	Belzoni	Box 329
Itawamba	Dura Crates Inc.	Fulton	Box 278
	T. F. Evans Lumber Co., Inc.	Dorsey	Rt. 2
	E. W. Riley Lumber Co.	Fulton	
Jackson	R. O. Cumbest Manufacturing Co.	Three Rivers	Rt. 2, Box 150, Pascagoula
Jasper	McClellan Lumber Co.	Heidelberg	
	Sims Enterprises	Bay Springs	Star Route
Jefferson	Fayette Hardwood Co.	Fayette	Box 95
	Pickens Brothers Lumber Co.	Lorman	
Jefferson Davis	Reardon Lumber Co.	Prentiss	Box 371
	Stamps and Sons Lumber Co.	Prentiss	Box 123
Jones	Bailey Lumber Co.	Laurel	Box 125
	Donald-Trash Lumber Corp.	Laurel	Box 488
	James M. Fuller Hickory Mill	Laurel	
	Gatlin Lumber Co.	Laurel	Box 2703
Kemper	Barnett Sawmill	De Kalb	Rt. 5
	J. A. McDade Lumber Co.	Electric Mills	
Lamar	Joe N. Miles and Sons, Inc.	Lumberton	Box 92
	Purvis Hardwood Lumber Co.	Purvis	
Lauderdale	Paul O'Leary Lumber Co.	Toomsaba	
	Sanders Lumber Co., Inc.	Meridian	Box 2171
Leake	W. C. Croft, Jr. Lumber Co., Inc.	Walnut Grove	Box 191
	Neese Lumber Co.	Carthage	Box 249
Leflore	E. L. Bruce Co.	Greenwood	Box 194

Table 16.—*Large sawmills*¹ (Continued)

County	Firm	Location	Address ²
Lincoln	W. L. Byrd Lumber Co. ¹	Auburn	Rt. 5, Brookhaven
	Columbus Lumber Co. ³	Brookhaven	
	Z. M. Redd	Norfield	Box 133, Summit
	Smith Brothers Lumber Co. ¹	Brookhaven	Rt. 1
Lowndes	Airline Manufacturing Co. ³	Columbus	Box 2087
Marion	Jack Forbes Lumber Co. ¹	Sandy Hook	
	Rogers Lumber Co., Inc. ³	Columbia	Box 91
Marshall	Memphis Hardwood Flooring Co.	Potts Camp	Box 38
Monroe	Nickles Lumber Co.	Aberdeen	Box 9
Neshoba	Deemer Lumber Co. ³	Philadelphia	Rt. 4
	Weyerhaeuser Co.—DeWeese Operations	Philadelphia	
	Molpus Lumber Co. ⁴	Philadelphia	
Noxubee	R. E. Prince Lumber Co. ¹	Shuqualak	Box 65
Oktibbeha	Sturgis Lumber Co. ³	Sturgis	Box 68
Panola	D. B. Floyd Lumber Co.	Batesville	Box 486
	D. B. Floyd Lumber Co.	Sardis	Box 99
Perry	Addikson Brothers Lumber Co. ³	New Augusta	Newton
Pike	M. D. Hayles Lumber Inc. ³	Fernwood	Box 80
	Guy Holland Lumber Co., Inc. ⁴	Osyka	Box 158
	Lamb Lumber Co.	Summit	Box G
	Seago Lumber Co. ³	McComb	Box 606
Rankin	Price Paschal Lumber Co. ³	Brandon	Box 127
Scott	Hankins and Eubanks Lumber Co. ³	Lake	
	King Lumber Co. ¹	Forest	
Sharkey	Bellgrade Lumber Co. ³	Cary	Box 437, Memphis, Tenn.
Simpson	Broadhead Lumber and Manufacturing Co. ³	Mendenhall	
Smith	T. H. Luckey Lumber Co. ³	Mize	Rt. 1
	Raleigh Stud Mill ¹	Raleigh	Hwy. 18 West
	L. Vanderford Mill ³	Raleigh	Rt. 1, Mendenhall
Stone	McHenry Lumber Co. ¹	McHenry	Box 70
	N. E. Neely Lumber Co. ³	Wiggins	Box 101
	Wiggins Lumber Co.	Wiggins	Box 788
Tallahatchie	A. P. DeMange Lumber Co., Inc.	Charleston	Box 368
Tippah	V. L. McElwain and Son	Falkner	Box 4
	Taylor and Son Lumber Co.	Blue Mountain	
Walthall	William Brent Lumber Co. ³	Tylertown	Rt. 6
	Jones Lumber Co. ⁴	Sandy Hook	Rt. 2
Warren	Anderson-Tully Co. ¹	Vicksburg	Box 38
	Anderson-Tully Co. ⁴	Vicksburg	Box 38
	Anderson-Tully Co. ¹	Vicksburg	Box 38
	Houston Brothers Lumber Co.	Vicksburg	
	Vicksburg Hardwood Co.	Vicksburg	Box 247
Washington	Vicksburg Hardwood Co.	Vicksburg	Box 247
	Chicago Mill and Lumber Co.	Greenville	Box 1019
Wayne	Gatlin Lumber Co. ³	Waynesboro	Box 407
Wilkinson	Laurel Hill Lumber Co., Inc.	Woodville	Box 246
	Fred Netterville Lumber Co. ³	Woodville	Rt. 1, Box 161
Yalobusha	Riley Lumber Co.	Water Valley	
Yazoo	Bentonina Hardwood Co.	Bentonina	Box 125
	Cathey-Williford-Jones Co.	Bentonina	Box 82
	Gooch Brothers Lumber Co.	Yazoo City	Box 586
	McGraw-Curran Lumber Co. ³	Yazoo City	Box 450

¹ Output of 3 million board feet or more.² Specified only if different from plant location.

Produced chips for sale to pulpmills.

Table 17.—*Small sawmills*¹

County	Firm	Location	Address ²
Alcorn	Leroy Burcham Sawmill	Glens	Rt. 1
	E. M. Cochran Lumber Co.	Corinth	Box 308
	Ray Crow Sawmill	Kossuth	Rt. 5, Corinth
	Forsythe Brothers Sawmill	Walnut	Rt. 3
	W. C. Shipman Sawmill	Biggersville	Rt. 1, Corinth
Amite	Claude Wilbanks Sawmill	Cuba	Rt. 3, Walnut
	R. A. Seal and Son Lumber Co.	Gloster	Box 344
	O. R. and R. E. Williams Lumber Co.	Smithdale	
	Wiley Clifton	Ethel	Box 192
	C. A. Eakin	McCool	Rt. 3, Box 3
Attala	Roy Pettit	Kosciusko	Rt. 4
	Jim Walderman	Kosciusko	Rt. 4
	R. C. Davis	Hickory Flat	Box 24
	Dickerson and Peeler Lumber Co.	Hickory Flat	Rt. 1, Ripley
	Roy Newson Sawmill	Potts Camp	Box 143
Benton	Otis Norris Sawmill	Ashland	Rt. 1
	Rowell Brothers Sawmill	Hickory Flat	Rt. 4, Ripley
	Harold Hargrove	Scott	
	D. A. Yarborough and Son	Merigold	Box 164
	Buchanan Timber Contractors	Bruce	
Bolivar	S. B. Denton	Slate Springs	
	Robert Scarbrough Sawmill	Big Creek	Rt. 4, Eupora
	Charles Cain	Carrollton	Banner
	R. A. McDowell	Carrollton	Box 257
	Williams Lumber Co.	Carrollton	Box 137
Calhoun	Raymond Bailey	Calhoun City	
	James Carter Sawmill	Pyland	Houston
	P. J. Pettit Sawmill	Thorn	Houston
	J. H. Tabb and Co.	Houston	Box 146
	J. E. Crimm Sawmill	Williams	Ackerman
Choctaw	Power Sawmill	Weir	Rt. 1, Box 2
	J. D. Dunigan	Hermanville	Rt. 2, Port Gibson
	Port Gibson Veneer and Box Co. ³	Port Gibson	
	R. J. Jones Sawmill	Quitman	
	Mayo Brothers Sawmill	Quitman	
Claiborne	Percy Thompson Sawmill	Carmichael	Rt. 4, Quitman
	Trulove Brothers	West Point	Rt. 1, Box 77B
	O. H. Davis	Hazlehurst	Rt. 4
	Foster Tie and Timber Co.	Wesson	
	Harris Sawmill	Gallman	Rt. 3, Hazlehurst
Copiah	William R. Culpepper	Collins	Box 155
	Forest Hardwoods, Inc.	Seminary	Box 602, Collins
	Hudson Sawmill	Williamsburg	Rt. 1, Collins
	Rutland Lumber Co. ³	Collins	Box 393
	H. L. Strickland	Byhalia	Rt. 2
Covington	Homochitto Lumber Co. ³	Bude	Box 147
	Koppers Co., Inc.	Roxie	Memphis, Tenn.
	A. F. Holcomb Lumber Co. ³	Lucedale	
	J. M. Rogers and Sons, Inc.	Lucedale	Box 531
	K. E. Whittington	Ruble	Perkinston

¹ Output of less than 3 million board feet.² Specified only if different from plant location.

Produced chips for sale to pulpmills.

Table 17.—*Small sawmills* ¹ (Continued)

County	Firm	Location	Address ²
Greene	M. W. Hicks ³ Hilton Jones Sawmill McLain Lumber Co., Inc. ³	Leaksville Bothwell Mc Lain	Rt. 5, Lucedale Rt. 4, Richton Box 142
Grenada	J. D. Vaughn	Grenada	833 W. Govan St.
Harrison	Murry Boyette	Success	Rt. 1, Box 88, Gulfport
Hinds	Brunt and Mullins Sawmill Quinn Brothers Sawmill	Terry Edwards	Mendenhall Ridgeland
Holmes	Allen Lumber Co. John W. Fisher and Sons Lumber Co.	Lexington West	Rt. 5, Box 100 Rt. 1
Humphreys	Leo Green J. R. Griffin	Midnight Isola	Rt. 1, Box 257, Louise
Itawamba	Dura Crates Inc. Delmer Gullick E. W. Harbor F. J. Horn Sawmill Chester/Russell	Fulton Tremont Tilden Belmont Tremont	Box 278 Rt. 1 Tremont Rt. 1, Golden Rt. 1, Box 100, Red Bay
Jackson	Pascagoula Lumber Co.	Moss Point	1513 Elder St.
Jasper	B and T Handle Co. Heidelberg Lumber Co. ³	Bay Springs Heidelberg	401 West Cedar, Eldorado, Ark. Drawer 280
Jefferson	Koppers Co., Inc. C. M. Mangum Cedar Lumber Co.	Harriston Fayette	Box 58, Memphis, Tenn.
Jefferson Davis	Willie Andie Howard Davis A. J. Lowry L. B. Mann	Prentiss Bassfield Bassfield Prentiss	Rt. 1, Sumrall Rt. 1, Sumrall Box 90
Kemper	T. E. Darnell Sawmill Monroe Dean Sawmill ³ Fisher Brothers Lumber Co. Nolan Martin Sawmill	Moscow Cleveland De Kalb Scooba	Rt. 1, De Kalb Rt. 2, De Kalb Box 308
Lafayette	W. E. "Pat" Gandy	Paris	
Lamar	T. V. Lott and Son Lumber Co. Williamson and Williamson Lumber Co.	Purvis Sumrall	
Lauderdale	Cornish Lumber Co. ³ Covington Sawmill Scruggs Sawmill	Meridian Meridian Meridian	Box 21, Marion Rt. 4 Rt. 6
Lawrence	J. R. Acy Hartzog Lumber Co. Koppers Co., Inc. Moss-American, Inc.	Oma Silver Creek Monticello Oak Vale	Box 5953, Jackson Security Bldg., St. Louis, Mo.
Leake	Thomas Altmann W. M. Bell Jesse Biggert W. W. Dendy ³ Easom Lumber Co. Mule Lake Farm Mondell Rushing W. O. Sessums and Sons, Inc.	Dossville Lena Thomastown Marydell Walnut Grove Carthage Walnut Grove Lena	Rt. 5, Carthage 205 Hwy. 35 North Rt. 4, Forest Box 142
Lee	D. C. Mitchell Sawmill	Mooreville	Rt. 1

Table 17.—*Small sawmills* ¹ (Continued)

County	Firm	Location	Address ²
Lincoln	Beeson Mill	Brookhaven	Rt. 1
	Bob Cupit Sawmill	Brookhaven	
	Pink Gilborne	Sontag	
	J. J. Meyers	Bogue Chitto	
	Bert Parnell Lumber Co.	Brookhaven	
Lowndes	Dean B. Brock	Kolola Springs	Caledonia
	Davis Lumber Co.	Columbus	Box 1104
	N. P. Swendburg Lumber Co.	Columbus	Box 2101
Madison	Canton Casket Co.	Canton	
	W. O. Garrett	Millville	Rt. 4, Box 88, Canton
	Penn Lumber Co.	Canton	Box 169
Marion	J. Earl Dale	Goss	
	W. F. Foxworth and Son Sawmill	Kokoma	Box 53, Foxworth
	Industrial Lumber and Pallet Co.	Columbia	1556 Lincrest
	Wesley Lumber Co.	Columbia	Box 5
Marshall	R. S. Bates	Potts Camp	Box 67
	R. G. Churchill	Potts Camp	Rt. 1
	Coffer Sawmill	New Albany	
	Edward Colston	Holly Springs	Rt. 1
	Daniels and Hughes	Byhalia	Rt. 2
	George G. Gray	Waterford	Box 2, Hickory Flat
	Lemly Hudgons	Hudsonville	Rt. 1, Hickory Flat
Monroe	Derwood Boyd Sawmill	Quincy	Rt. 2, Aberdeen
	F. O. Boyd Sawmill	Quincy	Rt. 2, Aberdeen
	Dow Brewer Sawmill	Smithville	Tremont
	Eugene Coleman Sawmill	Barttahatchie	Caledonia
	Dura Crates, Inc.	Aberdeen	Box 278, Fulton
	Grover Evans Sawmill	Greenwood Springs	Rt. 2, Aberdeen
	Hall-Inzer Lumber Co. ³	Amory	Drawer 210
	F. S. Reeves Lumber Co.	Amory	Box 327
Montgomery	Charlie Ballard	Kilmichael	Rt. 2
	Elbert Land	Winona	Rt. 2
	McCrary Brothers Sawmill	Duck Hill	McCarley
	Everett Pearson	Duck Hill	Rt. 2, Stewart
Neshoba	W. P. Bates	Philadelphia	Rt. 5
	E. H. Nester	Dixon	Rt. 5, Philadelphia
	S. E. Welsh Lumber Co. ³	Union	
	Odel Wilcher Sawmill	Laurel Hill	Carthage
Newton	E. D. and H. G. Chapman	Newton	Rt. 2, Box 47
	R. D. Davis	Hickory	
	Decatur Lumber Co.	Decatur	Box 307
	Erskon Pool	Newton	Collinsville
	R. C. White	Hickory	
Noxubee	Richard Culwell Sawmill	Mashulaville	
Oktibbeha	John W. Barten Sawmill ³	Longview	Box 44
	James Dewberry Sawmill	Maben	Rt. 1
	Dot Johnson Sawmill	Adaton	Starkville
	C. G. McBride Sawmill	Maben	
	R. and S. Sawmill	Maben	Box 219
Panola	Claud Beeler	Sardis	Rt. 1
	Stroupe Sawmill	Ripley	
	Yount Lumber Co.	Ashew	

Table 17.—*Small sawmills* ¹ (Continued)

County	Firm	Location	Address ²
Pearl River	McNeill Hardwood Co. Joe H. Reyer and Son John Thompson	McNeill Poplarville Ozona	Box 116 Rt. 3 Rt. 2, Box 268
Perry	Cooper Lumber Co.	Richton	Box 231
Pike	J. R. Lea and Sons W. G. Sellers Forest Products Aubrey Williams Iley M. Williams	Osyka McComb Magnolia Magnolia	Rt. 2, Box 207 Box 821 Rt. 4, Box 207 Rt. 3, Box 87
Pontotoc	Thomas Bowen M. G. Duncan Sawmill Jackson Lumber Co. Thamon Stelle Billy Todd Lumber Co. Henry Todd Joe Todd Lumber Co.	Randolph Randolph Pontotoc Ervile Pontotoc Thaxton Pontotoc	 Star Route Rt. 1, Belden Rt. 5
Prentiss	Lee Chase Warren G. Cole Sawmill Hollis E. Davis Sawmill Jackson Manufacturers Ernest C. Lambert Robert Smith Sawmill Waldon Sawmill	Altitude Marietta Altitude Altitude Booneville Burtens Booneville	Rt. 6, Booneville Rt. 5, Booneville Rt. 1, Booneville Rt. 6, Booneville Rt. 6 Box 255, Belmont Rt. 5
Quitman	Parchman State Farm	Lambert	Parchman
Rankin	R. M. Hogan Dan Loflin Erlin Meyers George Rhodes Brooks Vance ³ J. M. Vance	Brandon Star Johns Pelahatchie Sand Hill Brandon	 Pelahatchie 6106 Whitestone Rd., Jackson Hwy. 80 E., Box 135A, Jackson
Scott	Linford Williams J. B. Wolf Sawmill	Forest Lake	
Sharkey	M. D. Meeks	Anguilla	Rt. 1
Simpson	M. L. Brown Sawmill D'Lo Lumber and Pallet Co. J. B. Fortenderry Enoch Grantham Reynolds Lumber Co. ³	D'Lo D'Lo Shivers Harrisville Magee	 Box 208 Rt. 1, Box 15 Box 755
Smith	Taylorsville Lumber Co. ³	Taylorsville	Box 536
Stone	J. F. Miller Lumber Co., Inc. ³	Wiggins	Box 335
Sunflower	Brown Lumber Co.	Moorhead	Box 487
Tallahatchie	L. V. Bevil F. D. Mullen Rice Pritchard Lumber Co.	Charleston Cascilla Charleston	 Rt. 1 Box 283
Tippah	C. C. Childs Sawmill H. Childs Sawmill Davis Brothers Lumber Co. Edward Dees Robert Fryar Sawmill J. P. Godwin Sawmill L. J. Grisham Sawmill J. E. Hodum Sawmill H. A. Hopper	Jumpertown Jumpertown Ripley Ripley Pinegrove Blue Mountain Dumas Walnut Faulkner	Rt. 3, Ripley Ripley Dumas Rt. 2 Rt. 2, Ripley Rt. 2 Box 92

Table 17.—*Small sawmills*¹ (Continued)

County	Firm	Location	Address ²
Tippah	Johnson Lumber Co.	Walnut	Box 153
	A. Z. Nails Sawmill	Walnut	Rt. 3
	North Ripley Lumber Co.	Ripley	Box 339
	Johnny Null	Walnut	Rt. 3
	Cleve Pannell	Ripley	Rt. 2
	Bud Rotan	Ripley	
	Ward Brothers Lumber Co.	Ripley	Rt. 1
	Jeff Young Sawmill	Ripley	
Tishomingo	Charles Brown	Burnsville	Rt. 2, Iuka
	C. N. Dawson	Midway	Rt. 1, Tishomingo
	Sam Derrick Sawmill	Dennis	Rt. 2, New Site
	L. O. Enlow	Maud	Rt. 1, Tishomingo
	Jack Grisham Sawmill	Iuka	Rt. 2
	Millard Nagle Sawmill	Tishomingo	
	Lenard Sims Sawmill	Glens	Rt. 1, Burnsville
	George Waddell Sawmill	Belmont	
Tunica	F. J. Jacks Lumber Co.	Tunica	Box 149
Union	Donald Grantham ³	Etta	
	C. B. Hall Sawmill	Graham	Rt. 1, Baldwin
	O. T. Hill Lumber Co.	Myrtle	
	Clyde Langford Lumber Co.	New Albany	Rt. 1
	J. E. Nichols	Blue Springs	
	Babe Scott	Myrtle	Hickory Flat
	Tal Williams	Pleasant Ridge	Jackson, Tenn.
Walthall	Henry Jones	Sandy Hook	Rt. 2
Warren	Anderson-Tully Co.	Vicksburg	Box 38
Washington	E. G. Nelson, Inc.	Chatham	
Wayne	Cooley Lumber Co.	Waynesboro	Box 348
	Clyde Dobson Lumber	Buckatunna	
	Utsey Sawmill	Clara	
Webster	J. T. Fowler Sawmill	Stewart	
	Waymond Fondren Sawmill	Clarkson	Maben
	J. G. Hendricks Sawmill	Clarkson	Rt. 2, Maben
	Jimmy Lucius Sawmill	Monte Vista	Rt. 4, Eupora
	M. L. Orr Sawmill	Tomnolen	
Winston	Louisville Hardwood Lumber Co.	Louisville	Box 123
	Meeks and Barrier	Noxapater	Box 21
	Bill Rives Lumber Co.	Louisville	
Yalobusha	M. R. Johnson and Son Lumber Co.	Coffeeville	Box 37
Yazoo	Oliver Chisolm	Yazoo City	Box 144

Table 18.—Wood pulpmills

County	Firm	Location
Adams	International Paper Co. Johns-Manville Products Corp.	Natchez Natchez
Jackson	International Paper Co.	Moss Point
Jones	Masonite Corp.	Laurel
Lauderdale	The Flintkote Co. Kroehler Manufacturing Co. of Mississippi, Inc.	Meridian Meridian
Lawrence	St. Regis Paper Co. ¹	Monticello
Washington	United States Gypsum Co.	Greenville
Warren	International Paper Co. ¹	Vicksburg

¹ Under construction.

Table 19.—Wood preserving plants

County	Firm	Location	Address	Type ¹
Attala	Attala Wood Preservers	McCool		N
Benton	D. L. Lester	Ashland		N
Claiborne	Claiborne Post Co.	Hermanville	Port Gibson	N
Covington	Ray Blackwill Creosote Co.	Seminary		N
Forrest	C and S Wood Treating Corp.	Petal	Box 267	P
Grenada	Koppers Co.	Grenada	Box 160, Grenada	P
Harrison	Gulfport Creosoting Co.	Gulfport	Box 1510	P
Hinds	Hinds Wood Preserving Co., Inc.	Learned	Box 41	P
Jackson	Delta Creosoting Co., Inc. Hurley Creosoting Co.	Gautier Hurley	Box 7	P N
Jefferson Davis	Prentiss Creosote Materials, Inc.	Prentiss	Box 828, Brookhaven	N
Jones	Laurel Lumber Treating Co.	Laurel		N
Lauderdale	Moss-American, Inc.	Meridian	Box 789	P
Leake	Walter Lee Gilmer	Carthage	Rt. 1	P
Lincoln	Mississippi Wood Preserving Co.	Brookhaven		P
Lowndes	Moss-American, Inc.	Columbus		P
Madison	Dickson Treating Co.	Canton	Box 61	P
Montgomery	Curtis Post Co.	Stewart	Box 34, Grenada	N
Neshoba	Weyerhaeuser Co.—DeWeese Operation	Philadelphia		P
Noxubee	Woody Jones Treating Plant	Macon		P
Pearl River	Crosby Wood Preserving Co.	Picayune	Box 1037	P
Perry	Perry Timber Co.	Richton	1511½ Hardy St., Hattiesburg	P
Pike	Fernwood Industries	Fernwood		P
Pontotoc	Jackson Lumber Co.	Pontotoc		N
Rankin	R. D. Morrow and Sons	Johns	Brandon	N
Smith	Henderson and Henderson Post Plant	Homewood	Rt. 2, Forest	N
Stone	Southern Pine Wood Preserving, Inc.	Wiggins	Box 636	P
Wilkinson	Crosby Lumber Co.	Crosby	Box 608	P
Winston	American Creosote Works	Louisville		P

¹ "P" indicates pressure treating.

"N" indicates nonpressure treating.

Table 20.—*Veneer plants*

County	Firm	Location	Address	Type ¹
Adams	Natchez Veneer and Lumber Co. ²	Natchez		O
Claiborne	Port Gibson Veneer and Box Co. ²	Port Gibson		C
Copiah	Central Box Co.	Crystal Springs		O
	Hazlehurst Box Co.	Hazlehurst		C
Covington	Rhyme Veneer, Inc. ²	Collins	Box 345	O
George	Lucedale Veneer Co., Inc. ²	Lucedale	Box 207	O
Greene	Leaksville Forest Products, Inc. ²	Leaksville	Box 256	C
Grenada	Grenada Veneer Co.	Elliott	Grenada	O
Jackson	Pascagoula Veneer Co. ²	Pascagoula	Box 612	O
Jones	United States Plywood Corp.	Laurel		O
Lauderdale	Tuscaloosa Veneer Co. ²	Meridian		O
Lawrence	Monticello Veneer and Plywood Box Co. ³	Monticello	Bankers Trust Plaza Bldg., Jackson	O
Neshoba	Weyerhaeuser Co.—DeWeese Operations ²	Philadelphia		O
Noxubee	Noxubee Veneer Co. ²	Macon		C
Pearl River	St. Regis Paper Co., Wirebound Box Division ²	Picayune	Box 818	C
Perry	Delta Pine Plywood Co. ²	Beaumont	Box 247	O
	Perry County Plywood Corp. ²	Beaumont	Box 306	O
Pike	American Box Co. ²	Fernwood		C
Stone	Wiggins Veneer Co., Inc. ²	Wiggins	Box 98	O
Washington	Chicago Mill and Lumber Co. ²	Greenville	Box 1019	C
Wayne	Consumers Veneer Co. ²	Waynesboro	Box 151	C
Winston	Georgia-Pacific, Plywood Division ²	Louisville	Box 309	O

¹ "C" indicates plants producing chiefly container veneer.² "O" indicates plants producing chiefly commercial and other veneers.³ Produced chips for sale to pulp industry.⁴ Burned in July 1966.

Table 21.—*Miscellaneous plants*

County	Firm	Location	Address
Attala	Attala Land and Wood Products Co. ¹	Kosciusko	
Calhoun	Blackjack Charcoal Co., Inc. ¹	Bruce	Box 84
	Schoffield Furniture Manufacturers ⁵	Calhoun City	Box 53
Chickasaw	Chickasaw Handle Co., Inc. ⁴	Houston	Box 429
	E. F. Dyer Handle Co. ^{4 5}	Pyland	
Clarke	Dizzy Dean Enterprises ¹	Pachuta	Box 38
	Bud Logan Dogwood Mill ³	Shubuta	
Clay	Winters Dimension Co., Inc. ⁵	West Point	
George	Jim Havens Shuttleblock Mill ³	Benndale	
	U. B. Wilson ³	Lucedale	Box 508
Grenada	Grenada Stave Co. ²	Grenada	
Hinds	Atlas Roof Deck Co., Inc. ⁶	Terry	Box 111
	V. A. Taylor Dogwood Mill ³	Utica	
Holmes	Black Creek Charcoal Co. ¹	Lexington	Box 325
Jones	Hartwell Brothers Handle Co. ⁴	Laurel	Box 26
Kemper	Kemper Manufacturing Co. ⁷	De Kalb	Box 206
Lafayette	Arbuckle Brothers ⁴	Oxford	Rt. 2
Leflore	James E. Bassfield ⁵	Sidon	Belzoni
	Emmitt and Alton Gosa ⁵	Schlater	
	Joe Smith ⁵	Morgan	Box 269, Marvell, Ark.
	Bobby Sparks ⁵	Schlater	
	Whittenton Mill ⁵	Sidon	
	D. E. Wilkison ⁵	Schlater	
Lowndes	Columbus Handle Co. ⁴	Columbus	2046 East End Station
Marshall	James E. Champion, Inc. ²	Holly Springs	Box 702
	James E. Champion, Inc. ⁴	Holly Springs	Box 702
Montgomery	Winona Handle Co. ⁵	Winona	Box 470
Neshoba	Weyerhaeuser Co.—DeWeese Operations ⁵	Philadelphia	
Pike	Charles D. Roberts Co. ³	McComb	Box 3033 Greensboro, N. C.
Prentiss	Godwin Brothers Lumber Co.	Booneville	Box 148
Quitman	Earl Bartlett ⁵	Lambert	
	Robert Howell ⁵	Belen	Box 173, Black Oaks, Ark.
	Irwin Brothers ⁵	Lambert	Box 251
	Willey Kimbal ⁵	Lambert	
	J. E. McElvain ⁵	Lambert	
	B. J. Moss ⁵	Marks	Star Route, Houston
	B. J. Moss ⁵	Marks	Star Route, Houston
Stone	Fairley Dogwood Mill	Bond	Box 55
Tunica	Paul Stroud, Jr. ⁵	Tunica	Rt. 2
Union	McCall-Bright Inc. ²	New Albany	
Warren	Budley L. Keen ³	Redwood	
	Kings Stave Co. ²	Vicksburg	
Wilkinson	Sigmon Dimension Sawmill ³	Woodville	Rt. 1, Box 852
	Hardwood Dimension Co. ⁴	Woodville	Box 27
Winston	Louisville Hickory Plant ⁴	Louisville	Box 559

¹ Charcoal.
² Cooperage.
³ Shuttleblock mill.
⁴ Handle stock.
⁵ Miscellaneous dimension mill.
⁶ Excelsior.
⁷ Tree-length chipping installation.

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New Orleans, Louisiana

Forest Service, U.S. Department of Agriculture

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POLE AND PILING PRODUCTION IN THE MIDSOUTH



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Roy C. Beltz
and
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U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana



Pole and Piling Production in the Midsouth

In 1964, nearly 53 million cubic feet of poles and piling were produced in the Midsouth—Alabama, Arkansas, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas. Virtually all the volume was southern pine.

In 1964, over half of the Nation's treated poles and piling was harvested in the Midsouth. The region's production was centered in Alabama, Mississippi, Louisiana, and Arkansas (fig. 1), where about 85 percent of the volume was harvested. Alabama alone supplied 12.6 million cubic feet.

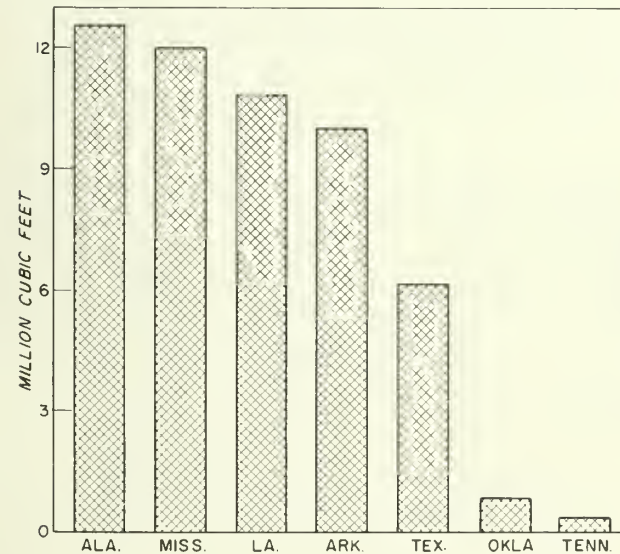


Figure 1.—Midsouth pole and piling output by State, 1964.

About 75 percent of the poles harvested in the Nation, and all of those cut in the Midsouth, were southern pine. Minor amounts of oak, hickory, and cypress were cut in the region for piling.

Utility poles were the most important product, comprising three-fourths of the area's output (fig. 2). Almost three-fourths of the utility-pole volume was in 30- to 45-foot lengths. The most common utility pole was class 5 and 35

feet long.¹ Alabama and Mississippi were the top producers, jointly furnishing over half the utility-pole volume.

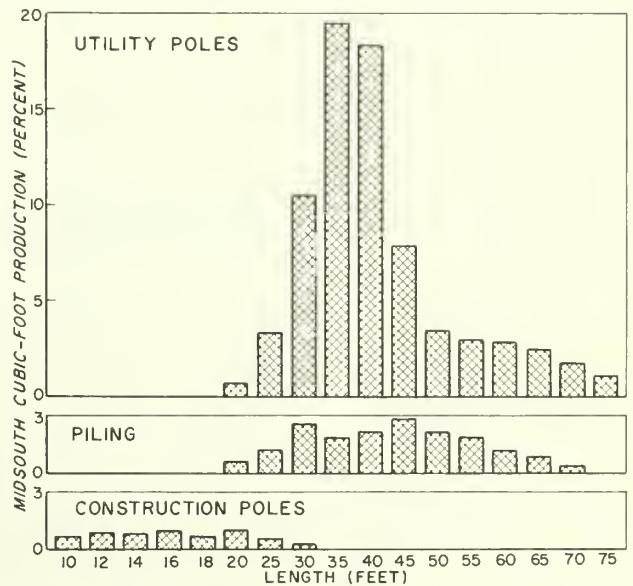


Figure 2.—Distribution of Midsouth pole and piling output by length.

Six percent of the output—3 million cubic feet—was for construction or "barn" poles. The average construction pole was 14 feet long and contained less than 3 cubic feet. Top diameters were generally 4 or 5 inches. Poles of 5-inch top diameters comprised the greatest volume. The most common construction pole was 10 feet long with a 4-inch top diameter.

For utility and construction types combined, Louisiana had the largest average pole—33 feet long and 15 cubic feet. Oklahoma had the smallest—17 feet long and 4 cubic feet. Varia-

¹ For explanation of pole classes see American Standards Association, Inc. American standard specifications and dimensions for wood poles. 15 pp. New York. 1963.

tion in average size by State reflects the proportion of output for construction and the difference in timber size by State.

Piling volume totaled almost 10 million cubic feet. Louisiana was the leading producer, with a piling output of 4.2 million cubic feet. Mississippi was second, with 2.3 million cubic feet. Together, these States produced two-thirds of the region's piling. More volume was in 45-foot piles than any other length. The average length and volume of piles varied by State; Alabama's average pile was largest.

Nearly 13 million cubic feet of Midsouth poles and piling, roughly one-fourth of the total production, moved interstate in 1964. Some 8 million cubic feet were shipped out of the region. Alabama was the major exporter; Illinois, Missouri, and Florida were the principal recipients. Georgia, Indiana, Kentucky, Minnesota, New Hampshire, Ohio, South Carolina, and Virginia also received Midsouth products (fig. 3).

All poles from the Midsouth were treated with preservatives. The 1.4 million cubic feet

of untreated piling included all of the cypress, oak, and hickory, and 12 percent of the pine. More than 80 percent of the untreated pine was cut in Arkansas, while the bulk of the cypress came from Louisiana.

All untreated piling shipped out of the Midsouth—40 percent of the total—went to Missouri. Tennessee, which produced mainly untreated oak, was the biggest consumer of untreated piling in the region.

Less than 1 percent of the poles and piling treated in the Midsouth came from outside the region.

The pole and piling industry has been fairly stable since 1950, with output gradually increasing (fig. 4). There were 287 treating plants in the United States in 1950. Since then, a consistent three-fourths of the poles and piling treated in the United States has been southern pine.

By 1964, when the number of plants in the United States had increased to 402, the Midsouth alone had 121. Of these, 105 treated

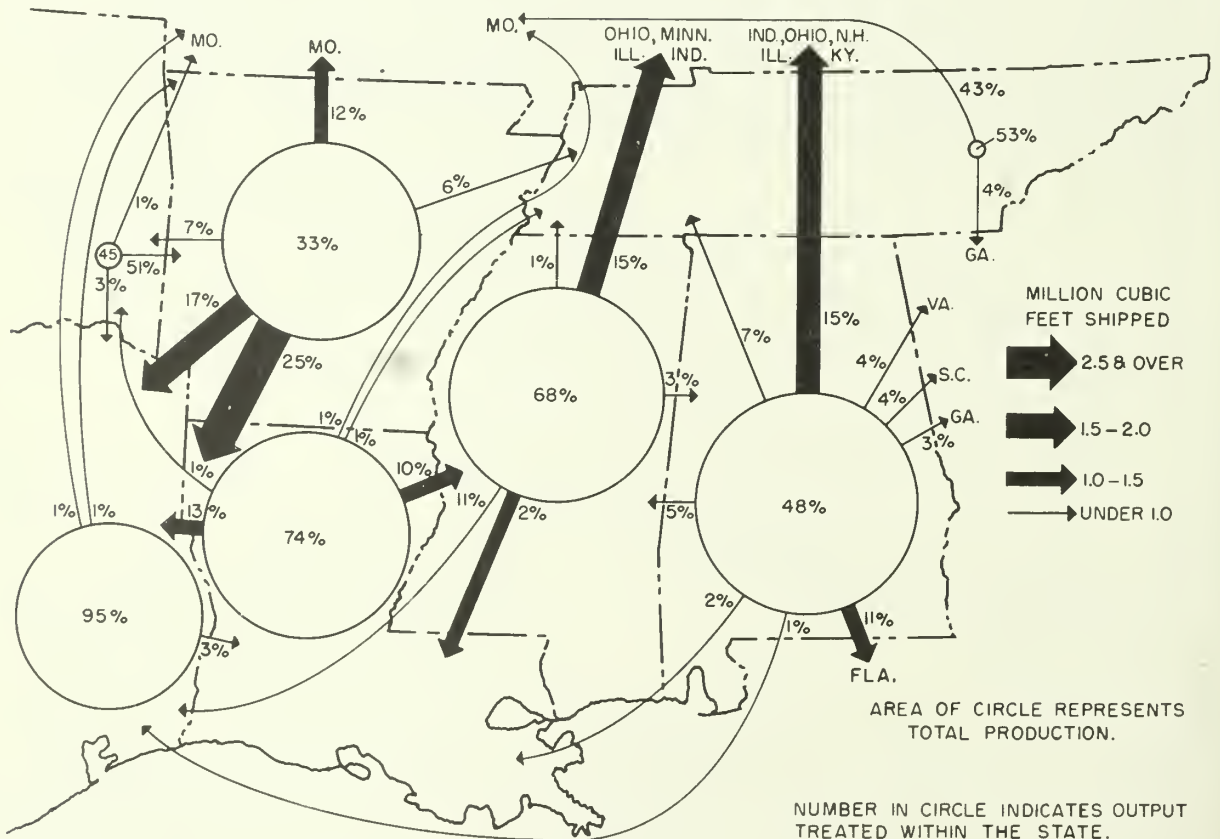


Figure 3.—Out-of-State pole and piling shipments.

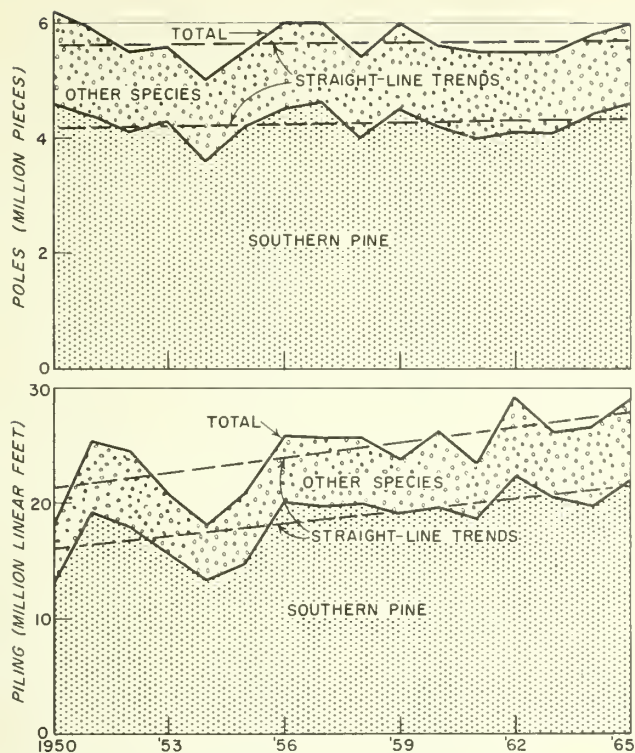


Figure 4.—Poles and piling treated with preservatives, 1950-1965.

poles and piling (fig. 5). They processed 12 million linear feet of piling and 3.7 million poles in addition to other products, including posts, lumber, and crossties. Although fifth in production of poles and piling, Texas had the greatest number of treating plants.

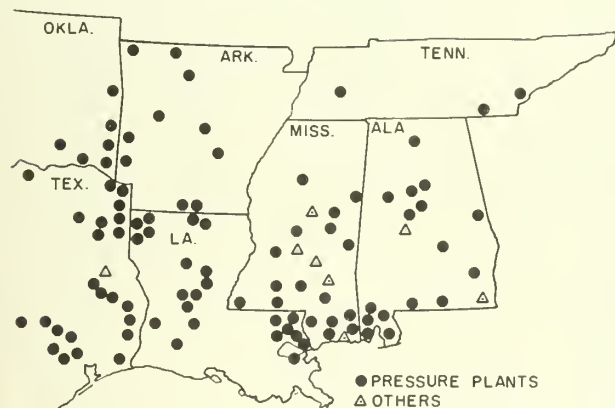


Figure 5.—Location of wood-preserving plants that treat poles and piling.

More than 9 out of 10 Midsouth plants use a pressure-treating process for poles and piling.

Before treatment, over 85 percent of the plants steam the timbers in treating cylinders, then draw a vacuum on them to remove excess moisture. Almost half air-season the timbers before the steam and vacuum process.

Treating plants buy most of their poles and piling from independent logging contractors. In 1964, the average procurement distance was 75 miles. The maximum for 85 percent of the plants was 250 miles or less. Poles and piling are usually purchased by the piece and hauled to plants by truck. Poles usually have the bark on when delivered, but nearly half the piles are peeled in the woods.

Based on Louisiana prices,² the Midsouth's 1964 harvest of class 5, 35-foot utility poles alone was worth nearly \$2 million. The value of utility poles of all classes and lengths was over \$17 million. Construction poles delivered to treating plants were valued at nearly \$1 million; piling at more than \$3 million. Thus, the aggregate value of poles and piling harvested in the Midsouth and delivered to plants exceeded \$21 million.

Stumpage prices for poles and piling have been and should continue to be favorable. A recent study in loblolly pine stands near Crossett, Arkansas, indicates that returns from stands managed for pulpwood and sawtimber alone were only 62 percent of returns from the same stands managed for pulpwood, sawtimber, and poles.³ According to the 1962 "Timber Trends in the United States," pole and piling requirements for replacements and new construction are expected to increase over the next several decades.⁴

In 1964, some 4 million Midsouth softwood trees were cut for poles and piling. By contrast, an estimated 430 million softwoods in the region are suitable, and the number is increasing. For example, the most recent Forest Surveys in Alabama and Louisiana indicate softwood volume increases of 28 and 43 percent in 10 years. These increases are largely in trees of sizes commonly used for poles and piling. Thus, in the Midsouth, the possibility of a shortage of timber suitable for poles and piling is remote.

² Louisiana Department of Agriculture and Immigration. Louisiana timber products. Quart. Market Rep. 10(4): 1-4. 1965.

³ Bassett, J. R. Pole production in natural loblolly pine stands near Crossett, Arkansas. U. S. Dep. Agr. Forest Serv. Res. Note SO-58, 5 pp. Southern Forest Exp. Sta., New Orleans, La. 1967.

⁴ U. S. Dep. Agr. Forest Service. Timber trends in the United States. Forest Resource Rep. 17, 225 pp. Washington, D.C. 1965.

Table 1.—Cubic feet of poles and piling produced in the Midsouth, 1964

State	Total	Utility poles	Construction poles	Piling
----- Cubic feet -----				
Alabama	12,573,053	11,409,923	461,033	702,097
Arkansas	10,035,398	7,505,219	971,966	1,558,213
Louisiana	10,882,094	6,615,888	116,078	4,150,128
Mississippi	12,021,814	9,170,814	505,068	2,345,932
Oklahoma	847,427	318,809	467,582	61,036
Tennessee	379,997	76,736	120,088	183,173
Texas	6,137,266	5,114,461	389,784	633,021
Total	52,877,049	40,211,850	3,031,599	9,633,600

Table 2.—Poles and piling treated with wood preservatives in the Midsouth, 1964

State	Total	Utility poles	Construction poles	Piling
----- Cubic feet -----				
Alabama	6,589,881	5,941,347	369,780	278,754
Arkansas	3,853,865	2,744,375	587,758	521,732
Louisiana	12,334,860	8,317,078	114,256	3,903,526
Mississippi	9,865,875	7,302,372	450,769	2,112,734
Oklahoma	1,172,653	462,415	661,300	48,938
Tennessee	1,119,476	974,107	127,153	18,216
Texas	9,294,640	8,292,337	346,697	655,606
Total	44,231,250	34,034,031	2,657,713	7,539,506

Table 3.—Poles produced in the Midsouth in 1964, by State and length

Length (feet)	All States	Alabama	Arkansas	Louisiana	Mississippi	Oklahoma	Tennessee	Texas
----- Pieces -----								
10-16	910,793	120,500	319,198	37,351	131,211	128,856	22,797	150,880
18	102,236	18,324	31,119	2,280	19,488	13,717	4,982	12,326
20	202,698	35,058	61,665	16,896	42,362	18,552	5,577	22,588
25	309,765	72,705	63,341	39,618	73,688	15,469	6,144	38,800
30	614,007	163,681	68,685	119,414	193,938	9,105	3,096	56,088
35	727,921	176,941	106,418	108,975	201,686	11,491	1,363	121,047
40	483,084	147,781	72,944	71,416	116,270	3,728	219	70,726
45	156,450	52,538	20,785	31,201	30,092	852	83	20,899
50	54,007	13,810	12,707	11,843	9,966	...	...	5,681
55	37,674	9,844	12,787	7,205	4,967	...	2	2,869
60	31,305	8,128	13,669	5,304	2,718	10	...	1,476
65	22,954	7,530	8,699	4,153	1,800	...	...	772
70	13,860	4,231	5,717	2,300	1,104	15	...	493
75	7,959	2,218	3,538	1,138	832	...	...	233
80	3,548	1,274	1,489	315	278	...	...	192
85	1,548	606	643	203	94	...	...	2
90	736	392	201	98	45	...	...	...
95	187	93	58	29	7	...	...	...
100	84	49	19	11	5	...	...	...
105	25	19	5	1	...	...	...	...
110	6	5	1	...	...	...	...	...
Total	3,680,847	835,727	803,688	459,751	830,551	201,795	44,263	505,072

Table 4.—Piling produced in the Midsouth in 1964, by State and length

Length (feet)	All States	Alabama	Arkansas	Louisiana	Mississippi	Oklahoma	Tennessee	Texas
<i>Linear feet</i>								
10-16	231,156	5,023	66,827	57,299	51,132	33,224		17,651
18	47,255	3,564	17,442	6,758	6,009	4,788		8,694
20	440,984	27,102	81,163	112,179	163,043	11,452		46,045
25	845,555	30,422	121,563	312,854	316,577	22,150		41,989
30	2,108,971	43,470	161,496	435,276	1,342,330	24,030	2,910	99,459
35	1,214,389	54,650	120,436	304,548	633,742	12,005	2,170	86,838
40	1,379,669	62,543	244,788	731,555	172,539	13,164	5,040	150,040
45	1,865,263	35,325	763,483	549,756	176,454	3,600	240,390	96,255
50	1,351,961	127,292	265,396	721,216	139,757		1,600	96,700
55	1,099,778	195,078	137,549	609,634	114,287		1,870	41,360
60	732,528	146,906	66,166	354,336	116,100			49,020
65	514,943	43,095	19,968	398,385	32,890			20,605
70	216,110	28,144	11,986	155,750	8,540		560	11,130
75	84,900	42,000	300	39,525	3,075			
80	35,209	23,926	960	9,603	720			
85	7,186	6,845		341				
90	2,970	990	1,080	810	90			
95								
100	200	200						
Total	12,179,027	876,575	2,080,603	4,799,825	3,277,285	124,413	254,540	765,786

Table 5.—Cubic feet of poles and piling produced in the Midsouth in 1964, by length

Length (feet)	Total	Poles	Piling
<i>Cubic feet</i>			
10-16	1,898,462	1,752,873	145,589
18	401,520	373,429	28,091
20	1,221,032	900,408	320,624
25	2,705,188	2,049,071	656,117
30	6,989,321	5,654,877	1,334,444
35	11,359,505	10,382,552	976,953
40	10,850,847	9,685,439	1,165,408
45	5,648,702	4,171,896	1,476,806
50	3,000,577	1,840,484	1,160,093
55	2,540,762	1,558,233	982,529
60	2,128,939	1,509,020	619,919
65	1,760,257	1,295,413	464,844
70	1,102,893	910,682	192,211
75	661,085	588,293	72,792
80	332,700	303,712	28,988
85	156,403	150,826	5,577
90	81,700	79,238	2,462
95	22,221	22,221	
100	11,412	11,259	153
105	2,551	2,551	
110	972	972	
Total	52,877,049	43,243,449	9,633,600

Table 6.—Distribution of utility poles produced in the Midsouth in 1964, by class and length

Length (feet)	All classes	Pole class								
		1	2	3	4	5	6	7	9	10
----- Percent ¹ -----										
10-16	0.81	(²)	(²)	0.09	0.18	0.17	0.06	0.05	0.11	0.15
18	.48	(²)	(²)	.02	.01	.03	.04	.04	.10	.24
20	3.63	(²)	(²)	.04	.13	.21	.35	1.36	1.26	.28
25	10.54	0.01	0.06	.12	.31	1.13	2.05	4.04	2.33	.49
30	23.79	.03	.11	.38	1.03	4.01	6.06	5.02	7.15	(²)
35	28.57	.04	.18	.74	3.89	12.04	8.61	2.82	.25	...
40	19.10	.12	.48	1.81	6.89	7.90	1.70	.20	(²)	...
45	6.19	.10	.40	1.83	2.35	1.44	.07	(²)	...	...
50	2.14	.08	.30	.93	.66	.17	(²)	(²)	..	...
55	1.49	.09	.37	.58	.40	.05	...	...	...	...
60	1.24	.09	.31	.52	.30	.02	...	...	...	...
65	.91	.10	.27	.37	.16	.01	...	...	...	...
70	.55	.07	.24	.17	.07	(²)	...	(²)	...	...
75	.32	.06	.13	.10	.03	(²)	...	...	...	...
80	.14	.04	.06	.03	.01	...	...	...	...	...
85	.06	.03	.02	.01	(²)	...	...	...	...	...
90	.03	.01	.01	.01	(²)	...	...	...	...	...
95	.01	.01	(²)	(²)	...	...	...	...	...	...
100	(²)	(²)	(²)	(²)	...	...	...	...	...	...
105	(²)	(²)	(²)	...	...	...	...	...	...	...
110	(²)	(²)	(²)	...	...	...	...	...	...	...
Total by length	100.00	.88	2.94	7.75	16.42	27.18	18.94	13.53	11.20	1.16

¹ Based on number of pieces.

² Negligible.

Table 7.—Distribution of construction poles produced in the Midsouth in 1964, by length and small-end diameter

Length (feet)	All diameters	Small-end diameter (inches)								
		3	4	5	6	7	8	9	10	14
----- Percent ¹ -----										
10-14	62.78	6.81	32.53	20.04	2.97	0.34	0.06	0.02	0.01	...
16	14.34	.05	5.09	7.45	1.55	.10	.06	.02	.02	(²)
18	7.81	.04	1.98	4.38	1.26	.06	.04	.02	.03	...
20	9.61	.05	2.03	5.45	1.84	.09	.10	.03	.02	...
25	3.76	.08	.54	1.79	1.16	.07	.06	.04	.02	...
30	1.13	.02	.01	.40	.50	.16	.02	.01	.01	...
35	.53	.01	.01	.17	.23	.03	.06	.01	.01	...
40	.04	...	...	(²)	.01	.03	(²)	...	...	...
45	(²)	...	...	...	(²)	(²)	(²)	...	...	...
50	...	...	...	...	...	...	...	...	...	...
55	...	...	...	...	...	...	...	...	...	...
60	(²)	...	...	(²)	...	...	...	...	...	...
65	...	...	...	...	...	...	...	...	...	...
70	(²)	...	(²)	...	...	...	...	...	...	...
Total	100.00	7.06	42.19	39.68	9.52	.88	.40	.15	.12	(²)

¹ Based on number of pieces.

² Negligible.

Table 8.—*Distribution of piling produced in the Midsouth in 1964, by State and length*

Length (feet)	Midsouth	Ala.	Ark.	La.	Miss.	Okla.	Tenn.	Texas
----- Percent ¹ -----								
10-16	1.90	0.04	0.55	0.48	0.42	0.27	...	0.14
18	.39	.03	.14	.06	.05	.04	...	.07
20	3.62	.22	.67	.92	1.34	.09	..	.38
25	6.94	.25	1.00	2.57	2.60	.18	...	.34
30	17.32	.36	1.33	3.57	11.02	.20	0.02	.82
35	9.97	.45	.99	2.50	5.20	.10	.02	.71
40	11.33	.51	2.01	6.01	1.42	.11	.04	1.23
45	15.32	.29	6.27	4.52	1.45	.03	1.97	.79
50	11.10	1.05	2.18	5.92	1.15	...	.01	.79
55	9.03	1.60	1.13	5.00	.94	...	.02	.34
60	6.01	1.21	.54	2.91	.95	...	...	.40
65	4.23	.35	.16	3.28	.27	...	...	.17
70	1.77	.23	.10	1.28	.07	...	(²)	.09
75	.70	.35	(²)	.32	.03	...	...	...
80	.29	.19	.01	.08	.01	...	...	...
85	.06	.06	...	(²)	...	...	...	...
90	.02	.01	(²)	.01	(²)	...	...	...
95	...	...	...	...	...	...	...	...
100	(²)	(²)	...	...	...	...	...	...
Total	100.00	7.20	17.08	39.43	26.92	1.02	2.08	6.27

¹ Based on linear feet.

² Negligible.

Table 9.—*Utility poles produced in Alabama in 1964, by class and length*

Length (feet)	All classes	Pole class								
		1	2	3	4	5	6	7	9	10
----- Pieces -----										
10-16	7,841	...	...	1,288	2,714	883	479	3	880	1,594
18	2,029	...	...	...	120	110	242	8	188	1,361
20	13,746	5	...	40	212	379	1,744	3,362	6,060	1,944
25	67,990	134	199	302	1,049	4,820	7,265	32,620	18,541	3,060
30	161,614	211	684	2,160	6,376	29,453	37,147	51,016	34,567	.
35	176,600	423	1,977	5,863	23,340	76,868	47,087	21,022	20	.
40	147,745	1,414	5,819	13,084	54,331	56,758	14,258	2,081	...	...
45	52,535	1,438	4,873	15,237	18,450	11,744	783	10	...	...
50	13,810	1,266	2,670	5,507	3,856	511	...	...	...	...
55	9,844	1,274	2,259	3,989	2,189	133	...	...	...	...
60	8,128	1,018	2,377	2,712	1,962	59	...	...	...	...
65	7,530	1,428	2,080	2,594	1,382	46	...	...	...	...
70	4,231	1,030	1,938	808	437	18	...	...	...	...
75	2,218	799	794	512	103	10	...	...	...	...
80	1,274	484	473	184	133	...	...	...	...	...
85	606	249	200	114	43	..	...	...	...	...
90	392	185	129	45	33	...	...	...	...	...
95	93	51	24	18	...	...	...	...	...	...
100	49	31	18	..	...	...	...	...	...	...
105	19	12	7	...	...	...	...	...	...	...
110	5	5	..	...	...	...	...	...	...	...
Total	678,299	11,457	26,521	54,457	116,730	181,792	109,005	110,122	60,256	7,959

Table 10.—Construction poles produced in Alabama in 1964, by length and small-end diameter

Length (feet)	All diameters	Small-end diameter (inches)								
		3	4	5	6	7	8	9	10	14
----- Pieces -----										
10-16	112,659	3,233	39,182	63,492	6,255	142	273	51	25	6
18	16,295	...	2,573	10,748	2,875	40	59	...	...	...
20	21,312	...	1,900	15,876	3,222	179	106	29	...	...
25	4,715	...	192	3,046	1,330	95	19	33	...	...
30	2,067	159	...	681	1,190	...	36	...	1	...
35	341	...	...	88	243	10	...	...	...	...
40	36	...	...	14	22	...	...	...	...	...
45	3	...	...	...	1	2	...	...	...	...
Total	157,428	3,392	43,847	93,945	15,138	468	493	113	26	6

Table 11.—Utility poles produced in Arkansas in 1964, by class and length

Length (feet)	All classes	Pole class								
		1	2	3	4	5	6	7	9	10
----- Pieces -----										
10-16	4,751	...	...	713	985	552	321	641	708	831
18	4,299	...	...	329	1	462	20	176	704	2,607
20	27,947	...	...	299	895	2,602	1,793	12,723	7,749	1,886
25	50,132	2	95	49	274	3,246	10,053	20,595	11,289	4,529
30	64,100	103	105	258	1,952	13,612	26,707	13,930	7,433	...
35	104,775	7	393	1,014	14,708	41,487	39,342	7,729	95	...
40	72,649	188	799	5,451	27,688	33,601	4,734	181	7	...
45	20,785	296	920	6,433	8,664	4,363	91	18	...	...
50	12,707	99	1,649	6,071	3,361	1,521	6	...	...	...
55	12,787	247	4,163	4,691	3,088	598	...	...	...	...
60	13,669	430	3,355	6,741	2,936	207	...	...	...	...
65	8,699	333	2,819	4,269	1,264	14	...	...	...	...
70	5,717	268	2,551	2,203	695	...	...	...	...	...
75	3,538	278	1,382	1,297	474	107	...	...	...	...
80	1,489	215	739	451	84	...	...	...	...	...
85	643	255	221	160	7	...	...	...	...	...
90	201	83	71	47	...	...	...	...	...	...
95	58	24	18	16	...	...	...	...	...	...
100	19	13	3	3	...	...	...	...	...	...
105	5	4	1	...	...	...	...	...	...	...
110	1	1	...	...	...	...	...	...	...	...
Total	408,971	2,846	19,284	40,495	67,076	102,372	83,067	55,993	27,985	9,853

Table 12.—Construction poles produced in Arkansas in 1964, by length and small-end diameter

Length (feet)	All diameters	Small-end diameter (inches)							
		3	4	5	6	7	8	9	10
----- Pieces -----									
10-16	314,447	33,623	174,448	91,424	12,769	1,694	89	200	200
18	26,820	467	7,648	13,905	3,922	277	1	200	400
20	33,718	602	8,119	17,882	6,319	392		200	204
25	13,209	876	2,214	5,400	3,833	384	40	262	200
30	4,585	100	102	1,241	1,252	1,690		100	100
35	1,643	100	100	142	208	286	607	100	100
40	295				4	291			
Total	394,717	35,768	192,631	129,994	28,307	5,014	737	1,062	1,204

Table 13.—Utility poles produced in Louisiana in 1964, by class and length

Length (feet)	All classes	Pole class								
		1	2	3	4	5	6	7	9	10
----- Pieces -----										
10-16	2,415	7	...	12	861	1,091	38	132	140	134
18	379	1	...	...	...	...	9	6	333	30
20	13,265	7	...	51	60	409	385	6,423	5,388	542
25	36,861	20	277	1,532	986	7,831	11,948	8,296	5,208	763
30	119,097	28	975	2,044	4,246	18,022	23,570	11,089	59,123	
35	108,863	107	534	1,580	14,490	48,051	36,893	7,201	7	
40	71,409	378	1,548	7,481	22,902	31,387	7,388	325		
45	31,201	277	1,385	10,550	9,806	8,994	177	12		
50	11,843	113	1,017	6,311	3,366	1,023	1	12		
55	7,205	102	1,005	3,218	2,477	403	...	...		
60	5,304	270	981	2,069	1,833	151	...	...		
65	4,153	269	1,140	1,627	1,061	56	...	...		
70	2,300	132	880	756	526	2	...	4		
75	1,138	182	530	364	62	...	...	...		
80	315	75	168	68	4	...	...	...		
85	203	77	83	43	...	...	...	...		
90	98	30	52	16	...	...	...	...		
95	29	11	14	4	...	...	...	...		
100	11	6	2	3	...	...	...	...		
105	1	...	1	...	...	...	...	...		
Total	416,090	2,092	10,592	37,729	62,680	117,420	80,409	33,500	70,199	1,469

Table 14.—Construction poles produced in Louisiana in 1964, by length and small-end diameter

Length (feet)	All diameters	Small-end diameter (inches)							
		3	4	5	6	7	8	9	10
----- Pieces -----									
10-16	34,936	4,575	15,576	12,356	1,836	365	226		2
18	1,901	1	392	1,206	295	4	3		
20	3,631	3	356	2,023	824	119	306		
25	2,757		52	1,231	965	113	396		
30	317			32	191	54	40		
35	112			52	19	16	25		
40	7					7			
Total	43,661	4,579	16,376	16,900	4,130	678	996		2

Table 15.—Utility poles produced in Mississippi in 1964, by class and length

Length (feet)	All classes	Pole class								
		1	2	3	4	5	6	7	9	10
----- Pieces -----										
10-16	3,409	...	...	1	50	599	563	387	675	1,134
18	4,069	...	...	...	50	174	759	617	920	1,549
20	22,359	1	3	543	1,683	954	3,173	7,149	8,343	510
25	65,509	57	663	819	4,550	6,499	8,550	26,721	16,947	703
30	191,744	363	610	4,117	8,069	25,495	37,758	39,445	75,855	32
35	200,893	216	1,211	7,437	27,211	83,663	47,420	27,416	6,319	...
40	116,163	550	1,514	12,258	41,338	47,335	10,694	2,474	...	...
45	30,084	161	1,178	8,574	13,856	5,994	291	30	...	...
50	9,966	349	1,107	3,919	4,176	414	1	...	...	...
55	4,967	381	1,161	1,756	1,653	16	...	...	...	...
60	2,718	356	812	1,049	457	44	...	...	...	...
65	1,800	369	564	643	199	25	...	...	...	...
70	1,104	281	476	310	37	...	...	...	...	...
75	832	201	374	215	42	...	...	...	...	...
80	278	173	58	47	...	...	...	...	...	...
85	94	50	26	18	...	...	...	...	...	...
90	45	19	20	6	...	...	...	...	...	...
95	7	4	2	1	...	...	...	...	...	...
100	5	3	1	1	...	...	...	...	...	...
Total	656,046	3,534	9,780	41,714	103,371	171,212	109,209	104,239	109,059	3,928

Table 16.—Construction poles produced in Mississippi in 1964, by length and small-end diameter

Length (feet)	All diameters	Small-end diameter (inches)							
		3	4	5	6	7	8	9	10
----- Pieces -----									
10-16	127,802	7,457	52,803	59,694	7,353	51	213	156	75
18	15,419	...	2,070	10,254	2,878	5	212	...	...
20	20,003	...	1,384	12,420	5,820	154	139	86	...
25	8,179	...	60	4,893	2,893	209	22	100	2
30	2,194	8	27	833	1,236	60	27	...	3
35	793	...	15	166	560	52	...	...	...
40	107	...	...	43	64	...	...	...	...
45	8	...	...	...	4	4	...	...	...
Total	174,505	7,465	56,359	88,303	20,808	535	613	342	80

Table 17.—Utility poles produced in Oklahoma in 1964, by class and length

Length (feet)	All classes	Pole class								
		1	2	3	4	5	6	7	9	10
----- Pieces -----										
10-16	794	...	...	178	...	137	70	42	168	199
18	813	...	...	82	...	13	...	20	112	586
20	2,308	...	...	70	8	4	16	878	1,140	192
25	6,416	...	2	10	9	252	1,678	2,576	1,155	734
30	5,529	22	6	25	127	886	3,103	968	392	...
35	8,340		14	48	612	3,285	3,487	887	7	...
40	3,719	19	37	153	1,294	1,833	376	6	1	...
45	851	18	19	191	402	213	4	4	...	...
Total	28,770	59	78	757	2,452	6,623	8,734	5,381	2,975	1,711

Table 18.—Construction poles produced in Oklahoma in 1964, by length and small-end diameter

Length (feet)	All diameters	Small-end diameter (inches)						
		2	4	5	6	7	8	9
----- Pieces -----								
10-16	128,062	9,037	75,691	38,775	4,529	10	20	...
18	12,904	...	5,063	6,279	1,552	10	...	...
20	16,244	...	6,953	8,136	1,155	...	...	...
25	9,053	...	2,846	3,761	2,408	13	10	15
30	3,576	...	...	1,818	1,745	13	...	...
35	3,151	...	1	1,564	1,586	...	...	...
40	9	...	...	...	...	1	8	...
45	1	...	...	...	...	...	1	...
50	...	...	...	...	...	...	...	...
55	...	...	...	...	...	...	...	...
60	10	...	...	10	...	...	...	...
65	...	...	...	...	...	...	...	...
70	15	...	15	...	...	...	...	...
Total	173,025	9,037	90,569	60,343	12,975	47	39	15

Table 19.—Utility poles produced in Tennessee in 1964, by class and length

Length (feet)	All classes	Pole class								
		1	2	3	4	5	6	7	9	10
----- Pieces -----										
10-16	79	...	...	...	1	1	1	...	49	27
18	75	...	...	...	1	9	1	...	26	38
20	572	1	...	4	4	11	75	167	230	80
25	3,550	2	3	4	71	242	667	977	1,074	510
30	3,075	...	5	38	112	285	647	1,225	763	...
35	1,363	...	13	20	48	171	1,048	63	...	...
40	219	...	20	37	101	56	5	...	...	...
45	83	...	9	35	34	5	...	...	...	...
50	...	...	...	...	...	...	...	...	...	...
55	2	2	...	...	...	...	...	...	...	...
Total	9,018	5	50	138	372	780	2,444	2,432	2,142	655

Table 20.—Construction poles produced in Tennessee in 1964, by length and small-end diameter

Length (feet)	All diameters	Small-end diameter (inches)				
		4	5	6	7	8
----- Pieces -----						
10-16	22,718	7,831	11,418	3,267	193	9
18	4,907	1,396	2,406	1,063	42	.
20	5,005	1,302	2,330	1,278	90	5
25	2,594	118	1,476	987		13
30	21	.	20	1		
Total	35,245	10,647	17,650	6,596	325	27

Table 21.—*Utility poles produced in Texas in 1964, by class and length*

Length (feet)	All classes	Pole class								
		1	2	3	4	5	6	7	9	10
----- Pieces -----										
10-16	1,359	...	...	...	...	861	31	139	273	55
18	426	...	...	...	...	21	44	107	123	131
20	11,545	...	...	53	451	902	1,708	3,514	2,928	1,989
25	35,848	1	284	387	932	5,729	11,520	10,365	4,638	1,992
30	55,822	21	461	1,041	5,117	13,654	24,053	9,195	2,255	25
35	121,024	150	419	2,671	17,879	50,698	42,205	7,002	...	...
40	70,719	518	2,268	7,334	26,442	28,619	5,516	22	...	...
45	20,899	390	1,793	5,184	8,086	5,054	392	...	...	...
50	5,681	150	1,114	1,799	1,859	759	...	...	...	...
55	2,869	146	805	1,097	766	55	...	...	...	...
60	1,476	126	376	588	356	30	...	...	...	...
65	772	99	224	264	179	6	...	...	...	...
70	493	97	151	124	121	...	...	...	...	...
75	233	47	68	70	48	...	...	...	...	...
80	192	44	55	49	44	...	...	...	...	...
85	2	...	1	1	...	...	...	...	...	...
Total	329,360	1,789	8,019	20,662	62,280	106,388	85,469	30,344	10,217	4,192

Table 22.—*Construction poles produced in Texas in 1964, by length and small-end diameter*

Length (feet)	All diameters	Small-end diameter (inches)							
		3	4	5	6	7	8	9	10
----- Pieces -----									
10-16	149,521	21,285	68,697	40,311	16,107	2,573	542	4	2
18	11,900	1	3,722	5,703	1,949	325	200	...	...
20	11,043		3,494	4,261	2,570	158	560	...	...
25	2,952		704	948	1,058	42	200	...	...
30	266		1	37	99	41	88	...	...
35	23	...	...	...	5	3	15	...	...
40	7	...	...	...	...	7	...	...	...
Total	175,712	21,286	76,618	51,260	21,788	3,149	1,605	4	2

Table 23.—*Utility pole movement for treatment in 1964, by State*

State	Logged and treated in State	Outgoing shipments	Incoming receipts	Total receipts
----- Pieces -----				
Alabama	354,992	323,307	29,676	384,668
Arkansas	163,748	245,223	32,681	196,429
Louisiana	289,047	127,043	202,080	491,127
Mississippi	415,587	240,459	65,325	480,912
Oklahoma	...	28,770	32,436	32,436
Tennessee	7,896	1,122	54,352	62,248
Texas	314,491	14,869	188,632	503,123
Total	1,545,761	980,793	605,182	2,150,943

Table 24.—Construction pole movement for treatment in 1964, by State

State	Logged and treated in State	Outgoing shipments	Incoming receipts	Total receipts
<i>Pieces</i>				
Alabama	116,516	40,912	22,857	139,373
Arkansas	227,734	166,983	38,012	265,746
Louisiana	42,970	691	898	43,868
Mississippi	138,122	36,383	13,435	151,557
Oklahoma	122,050	50,975	134,239	256,289
Tennessee	35,245		2,270	37,515
Texas	147,572	28,140	11,728	159,300
Total	830,209	324,084	223,439	1,053,648

Table 25.—Piling movement in 1964, by State

State	Logged and remained in State	Outgoing shipments	Incoming receipts	Total receipts
<i>Linear feet</i>				
For treatment:				
Alabama	308,518	568,057	57,612	366,130
Arkansas	721,870	260,408	90,055	811,925
Louisiana	3,946,348	447,791	670,239	4,616,587
Mississippi	2,261,913	972,562	562,115	2,824,028
Oklahoma	34,358	90,055	45,995	80,353
Tennessee	570		33,379	33,949
Texas	724,273	36,513	71,608	795,881
Total	7,997,850	2,375,386	1,531,003	9,528,853
For use untreated:				
Alabama	.	.	.	.
Arkansas	..	1,098,325	..	.
Louisiana	...	405,686	.	.
Mississippi	35,680	7,130	.	35,680
Oklahoma	...	...	..	..
Tennessee	19,070	234,900	714,115	733,185
Texas	5,000	...	152,206	157,206
Total	59,750	1,746,041	866,321	926,071

Table 26.—*Plants that treat wooden poles and piling in Alabama*

County	Firm	Address	Type ¹
Baldwin	Alabama Wood Preserving Co.	Robertsdale	P
	Baldwin Pole and Piling Co.	Box 768, Bay Minette	P
Barbour	Loftin's Post Co.	Clio	P
Bibb	W. E. Belcher Lumber Co.	Centreville	P
Chambers	Alabama-Georgia Wood Preserving Co.	Lafayette	P
Covington	Lockhart Lumber Co., Inc.	Lockhart	P
Escambia	T. R. Miller Mill Co.	Brewton	P
Houston	Dothan Creosoting Co.	Dothan	N
Jefferson	Birmingham Wood Preserving Co.	Box 7040, Birmingham	P
	Tennessee Coal and Iron Division of U. S. Steel Corp.	Box 599, Fairfield	P
Mobile	Gulfport Creosoting Co.	Box 449, Mobile	P
	Republic Creosoting Co.	Box 310, Mobile	P
	Horace S. Turner, Jr., Inc.	Mobile	P
Montgomery	Koppers Co., Inc.	1551 Louisville St., Montgomery	P
Morgan	Gobble-Fite Lumber Co.	300 Market St., N. W., Decatur	P
Perry	Cahaba Wood Preserving Co.	Suttle	N
Shelby	Seaman Timber Co.	Box 372, Montevallo	P
Tuscaloosa	Brown Wood Preserving Co.	Brownville	P

¹ "P" indicates pressure treating.

"N" indicates nonpressure treating.

Table 27.—*Plants that treat wooden poles and piling in Arkansas*

County	Firm	Address	Type ¹
Benton	Timber Treated Products, Inc.	Box 147, Rogers	P
Boone	Arkwood Treating Co.	Box 145, Omaha	P
Jefferson	Dixie Wood Preserving Co. of Arkansas, Inc.	Box 653, Pine Bluff	P
Polk	Three States Lumber Co.	Box 70, Mena	P
Pulaski	Koppers Co., Inc.	Box 3185, N. Little Rock	P
Searcy	Searcy County Creosote Co.	St. Joe	P
Sevier	Dierks Forests, Inc.	Box 387, DeQueen	P
Union	El Dorado Pole and Piling Co., Inc.	Box 7, El Dorado	P
	Southern Wood Treating, Inc.	Box 407, El Dorado	P
Yell	Morris Mill Co.	Ola	P

¹ "P" indicates pressure treating.

Table 28.—*Plants that treat wooden poles and piling in Louisiana*

Parish	Firm	Address	Type ¹
Beauregard	International Paper Co., Wood Preserving Division	Box 231, De Ridder	P
Bossier	Benton Creosoting Co.	Box 87, Benton	P
	Joslyn Manufacturing and Supply Co.	Box 21, Shreveport	P
Caddo	Olin Mathieson Chemical Corp.	Box 1125, Shreveport	P
	Standard Wood Preservers of Shreveport, Inc.	Drawer S, Shreveport	P
Evangeline	Reddell Creosote Co., Inc.	Reddell	P
Jefferson Davis	EvR-Wood Treating Co., Inc.	Box 726, Jennings	P
La Salle	La Salle Creosoting Co., Inc.	Jena	P
	The Urania Lumber Co., Ltd.	Urania	P
Orleans	Joslyn Manufacturing and Supply Co.	6141 Jefferson Hwy., New Orleans	P
Rapides	Colfax Creosoting Co.	Pineville	P
	Glenmora Creosote Co.	Box 338, Glenmora	P
	Koppers Co., Inc.	Box 1926, Alexandria	P
St. Tammany	American Creosote Works, Inc.	Slidell	P
	Madisonville Creosote Works	Box 125, Madisonville	P
	Pearl River Wood Preserving Corp.	Box 468, Pearl River	P
Tangipahoa	Oliver Treated Products Co., Inc.	Box 640, Hammond	P
	R and K Creosoting Co., Inc.	Natalbany	P
Union	Marion Pressure Treating Co.	Marion	P
	Union Creosoting Co.	Box 519, Farmerville	P
Washington	Angie Wood Preserving Co., Inc.	Box 583, Angie	P
Winn	American Creosote Works, Inc.	Box 110, Winnfield	P

¹ "P" indicates pressure treating.

Table 29.—*Plants that treat wooden poles and piling in Mississippi*

County	Firm	Address	Type ¹
Attala	Attala Wood Preservers	McCool	N
Forrest	C & S Wood Treating Corp.	Box 267, Petal	P
George	Buchanan Mfg. Co., Inc.	Lucedale	P
Grenada	Koppers Co., Inc.	Box 983, Grenada	P
Harrison	Gulfport Creosoting Co.	Box 995, Gulfport	P
Hinds	Hinds Wood Preserving Co.	Box 41, Learned	P
Jackson	Delta Creosoting Co.	Gautier	P
	Hurley Creosoting Co.	Hurley	N
Jefferson Davis	Prentiss Creosote Material	Prentiss	P
Jones	Laurel Lumber Treating Co.	Laurel	N
Lauderdale	Moss-American Creosoting Corp.	Box 789, Meridian	P
Lincoln	Mississippi Wood Preserving Co.	Box 766, Brookhaven	P
Lowndes	Moss-American Creosoting Corp.	Box 906, Columbus	P
Madison	Canton Treating Co.	Box 411, Canton	P
Neshoba	Weyerhaeuser Co., DeWeese Operations	Philadelphia	P
Pearl River	Crosby Wood Preserving Co.	Picayune	P
Pike	Fernwood Industries	Drawer D, Fernwood	P
Rankin	R. D. Morrow and Sons	Box 168, Brandon	N
Smith	Henderson and Gatewood Post Plant	Lorena	N
Stone	Southern Pine Post Co.	Wiggins	P
Wilkinson	Crosby Lumber and Manufacturing Co.	Crosby	P
Winston	American Creosote Works, Inc.	Box 311, Louisville	P

¹ "P" indicates pressure treating.

"N" indicates nonpressure treating.

Table 30.—*Plants that treat wooden poles and piling in Oklahoma*

County	Firm	Address	Type ¹
Atoka	Fugate Lumber Co.	Stringtown	P
Choctaw	R. M. Fry Creosoting Co.	Box 472, Hugo	P
Le Flore	Midwest Creosoted Products Co.	Box 575, Panama	P
McCurtain	Huffman and Kendrick Wood Preserving Co.	Drawer A, Broken Bow	P
	Mixon Brothers Wood Preserving Co.	Idabel	P
Sequoyah	Southwestern Wood Preserving Co.	Box 827, Muskogee	P

¹ "P" indicates pressure treating.

Table 31.—*Plants that treat wooden poles and piling in Tennessee*

County	Firm	Address	Type ¹
Hamilton	Southern Wood Preserving Co.	Chattanooga	P
Madison	American Creosote Works	Jackson	P
Monroe	The Langdale Co.	Box 108, Sweetwater	P

¹ "P" indicates pressure treating.

Table 32.—*Plants that treat wooden poles and piling in Texas*

County	Firm	Address	Type ¹
Angelina	Higgins Creosoting, Inc.	Box 1388, Lufkin	P
	Lufkin Creosoting Co.	Box 1207, Lufkin	P
	Temple Industries	Diboll	P
Bowie	International Creosoting & Construction Co.	Box 688, Galveston	P
	Texarkana Wood Preserving Co.	Box 156, Texarkana	P
Burleson	Santa Fe Tie and Timber Preserving Co.	Box 488, Somerville	P
Cass	Cass County Treating Co.	Drawer C, Linden	P
Grayson	Texas Tie & Timber Co.	Box 703, Denison	P
Gregg	Garland Creosoting Co.	Box 589, Longview	P
	Longview Creosoting Co.	Box 2202, Longview	P
Grimes	International Paper Co., Wood Preserving Division	Box 788, Navasota	P
Harris	Houston Chemical Service	Rt. 3, Box 451, Houston	P
	Koppers Co., Inc.	Box 16188, Houston	P
	Southern Pacific Railroad	Box 1319, Houston	P
Harrison	Marshall Wood Preserving Co.	Box 846, Marshall	P
Jasper	Hart Creosoting Co.	Box 300, Jasper	P
	Jasper Creosoting Co.	Box 6021, Jasper	P
	Texas Electric Cooperatives, Inc.	Box 510, Jasper	P
Jefferson	International Creosoting & Construction Co.	Box 688, Galveston	P
Marion	Texas Wood Preserving Co.	Box 550, Jefferson	P
Montgomery	Conroe Creosoting Co.	Box 109, Conroe	P
	Grogan Brothers Lumber Co.	Conroe	P
Nacogdoches	East Texas Wood Treating Co.	Box 972, Nacogdoches	N
Wood	Texas Creosoting Pole and Post Co.	Star Route, Mineola	P

¹ "P" indicates pressure treating.

"N" indicates nonpressure treating.

EAST OKLAHOMA FORESTS



Foreword

This report presents the principal findings of the latest Forest Survey of east Oklahoma, completed in 1966 by the Southern Forest Experiment Station. The survey, which was undertaken as one phase of the continuing nationwide inventory being conducted by the USDA Forest Service, provides up-to-date information on the kind, amount, and condition of forest resources; the industries they support; and the possibilities for improving wood production. Comparison with the previous survey of 1956 helps to clarify timber trends.

The field work, compilation of data, and preparation of this report represent the combined efforts of many people. Generous assistance from the Oklahoma Division of Forestry and from Dierks Forests, Inc., made it possible to keep the field work ahead of the schedule that could have been maintained with regularly allotted funds. The very material aid of these organizations, and of the individuals in them, is gratefully acknowledged

EAST OKLAHOMA FORESTS

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U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana

1968

*Photos by
Oklahoma Division of Forestry*

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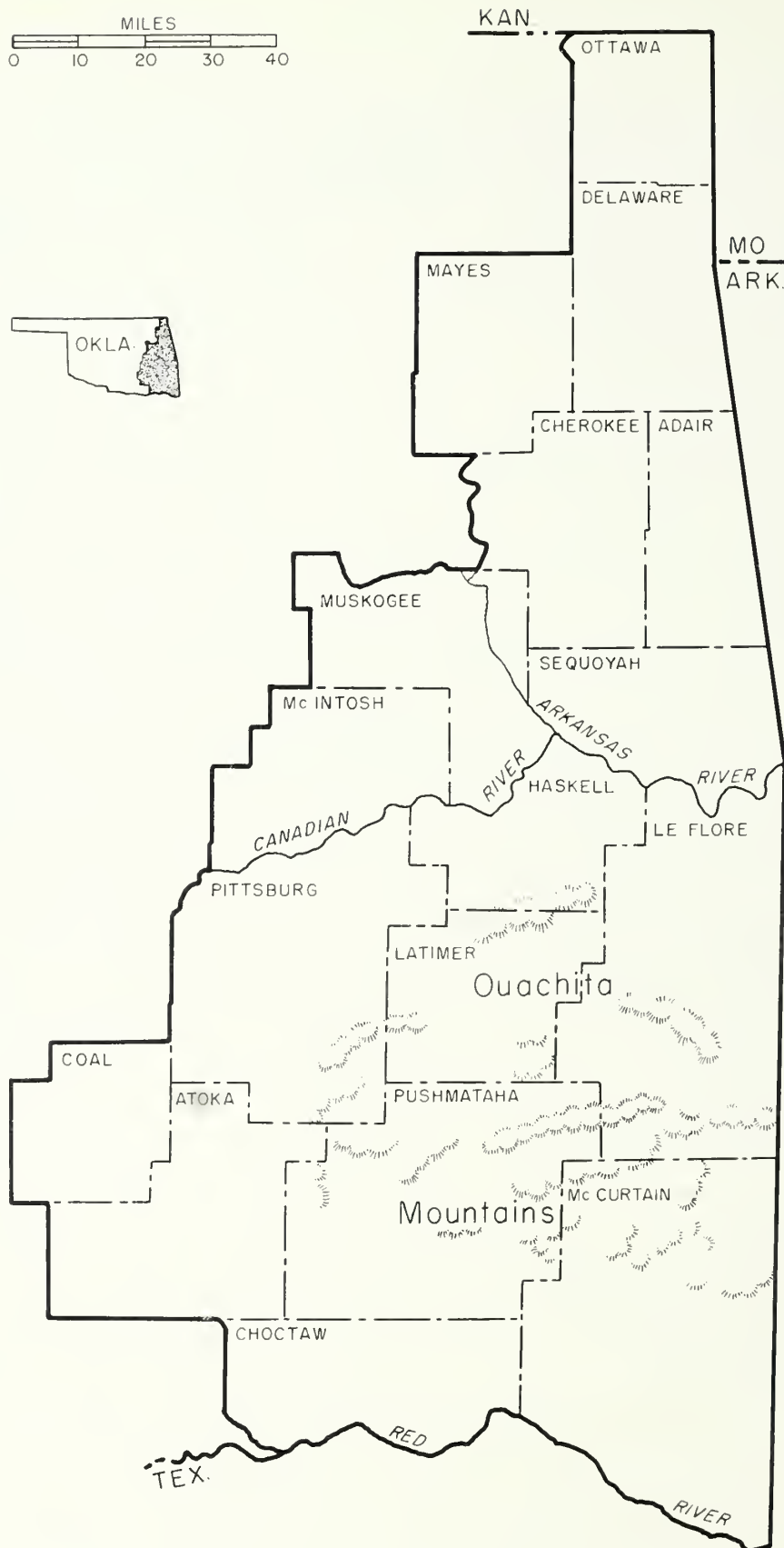


Figure 1.—Counties included in Forest Survey of east Oklahoma.

Highlights

The 17 counties designated as east Oklahoma in this report encompass the main belt of commercial timberland in the State (fig. 1). Forests occupy 5.5 million acres or some 57 percent of the total land area. During the decade that elapsed between the 1956 and 1966 surveys, the acreage of forest land declined about 5 percent. The modest drop in forest area was largely due to land clearing for agriculture. About 4.8 million acres of the total forest area is commercial forest land. The remaining 13 percent is classified as noncommercial. Most of the latter acreage consists of land that is simply incapable of yielding crops of industrial wood.

There has been little change in the general pattern of forest landownership during the past decade. Public and forest industry lands still comprise some 30 percent of the commercial forest area. The rest is held by farmers and miscellaneous private owners who are generally engaged in occupations or enterprises not directly connected with timber growing.

Stocking of commercial forest land has increased noticeably since 1956, when the previous inventory was made. Average basal area per acre in growing stock trees has risen from 27 to 32 square feet, a 19 percent gain. Pine accounted for most of the gain. Despite this encouraging trend, much of the available growing space is not being used effectively. Rough and rotten trees that have little or no commercial value occupy one-third of the available growing space.

Pine timber volume has risen 31 percent since 1956. East Oklahoma forests now support 754 million cubic feet in softwood growing stock trees, nearly all shortleaf and loblolly pine. Volume in softwoods large enough to contain at least one saw log is 2.5 billion board feet, an increase of 32 percent. Because east Oklahoma's timber economy is saw-log oriented, demand is heavy for large trees. The distribution of tree size classes in softwoods, however, was adequate to supply the demand and

still leave some growth to improve the forest inventory.

Trends in hardwood differ greatly from those for pine. The volume of hardwood growing stock on commercial forest land totals 824 million cubic feet, or about 1 percent less than in 1956. Hardwood sawtimber volume stands at 1.8 billion board feet, a decline of 7 percent. The drop in hardwood volume was chiefly in trees of large diameter that are usually preferred for making lumber.

Roundwood products harvested in east Oklahoma totaled 30 million cubic feet in 1965—17 percent less than was reported in 1955. Increases in saw logs, charcoal wood, poles, piling, and pine posts were offset by losses in other items. Most of the decline is attributable to fuelwood.

The net growth of growing stock trees exceeded the volume of timber removed from commercial forest land by 20 million cubic feet in 1965. Growth and cut relationships, however, differ for softwood and hardwood. Softwood growth—41 million cubic feet—was more than double the volume removed in 1965. By contrast, the volume of hardwood removed was slightly greater than the 21 million cubic feet of hardwood growth.

The forests of east Oklahoma are capable of producing far more timber than they are currently growing. Net annual growth presently totals only 13 cubic feet per acre. Yet it is estimated that the commercial forest area is inherently capable of growing nearly 50 cubic feet per acre. Regeneration and stand improvement efforts must be greatly intensified in order to narrow the gap between current and potential growth. The need for such effort is most evident on private, nonindustrial holdings that make up more than two-thirds of the commercial forest land. Improving timber productivity on such holdings would strongly enhance the possibilities for expansion of basic forest industries.



The Forest Resource

LESS FOREST AREA

Forests occupy 5.5 million acres or 57 percent of the land in east Oklahoma. This is about 5 percent less acreage than there was in 1956. The reduction was widespread. Twelve of the 17 counties in east Oklahoma have less forest area today than they did in 1956.

Some 4.8 million acres are presently classed as commercial forest land. The other 0.7 million are regarded as noncommercial, either because they are in some kind of public ownership on which the timber is reserved from cutting or because the timber-growing capacity is extremely low.

Present standards for commercial forest land are more demanding than those used on the 1956 forest survey, for they include the requirement that the land must be capable of at least 20 cubic feet per acre of annual growth. By this new definition, 588,000 acres classified as commercial in 1956 would have been reported as noncommercial. After this acreage is discounted, the estimate of commercial forest land for 1956 is 5.0 million acres.

Since 1956, 396,000 acres of commercial forest land have been diverted to agriculture and other uses, while 169,000 acres reverted to commercial forest. The net result of these shifts in land use is that commercial forest area has declined 227,000 acres or 4 percent.

STABLE OWNERSHIP PATTERN

The general pattern of forest landownership in east Oklahoma has been remarkably stable over the past decade. Public and forest-industry holdings, characteristically the most intensively managed lands, still account for some 30 percent of the commercial forest area. The 566,000 acres of public lands are divided among Federal, State, county, and municipal ownership. Among the public holdings, a decline of 153,000 acres in Indian ownership was large-

ly offset by additions to forest lands held by other public agencies. All of the 869,000 acres in industrial ownership is made up of lumber company holdings. Both the industrial and public ownerships are concentrated in the counties south of the Arkansas River.

The bulk of the commercial forest land—3.4 million acres—is held by farmers and miscellaneous private owners. Average stand conditions are poorer on lands held by these groups than on public and industry lands. Although the holdings of farmers and miscellaneous private owners make up 70 percent of the commercial forest land, they presently support only 50 percent of the growing stock and 43 percent of the sawtimber. The extensive area in these ownerships makes them of prime importance as a source of future timber supplies.

HARDWOOD TYPES PREDOMINATE

Hardwood cover types occupy most of the commercial forest land in east Oklahoma.¹ In the uplands, oak-hickory is the predominant type on 2.9 million acres or 60 percent of the forest area. Bottom land forests of oak-gum-cypress and elm-ash-cottonwood are found on nearly 0.5 million acres.

Forests in which pine makes up at least 25 percent of the stand prevail on some 1.5 million acres. Shortleaf pine is the leading softwood and is found mainly in the Ouachita Mountains.

Differences between specifications in the 1956 and 1966 surveys limit meaningful comparison of shifts in forest type acreage. The decline of more than 200,000 acres in oak-hickory stands since the previous survey, however, can be largely ascribed to the concentration of land clearing in this type.

¹A map detailing the major forest types in the South is available upon request from the Southern Forest Experiment Station. The scale is 40 miles to the inch.

STOCKING IMPROVING

Stocking of commercial forest land has improved noticeably. Since 1956, the average basal area per acre of all live trees 5.0 inches d.b.h. and larger has increased from 38 to 42 square feet. At the same time, the pine component of the basal area rose from 18 to 23 percent.

The gain in stocking is also evident in the smaller tree sizes. Planting and natural regeneration have contributed to a 17-percent increase in numbers of 2- and 4-inch trees since 1956. The average stand now has 444 trees per acre of sapling size. Many of these young trees can be expected to contribute to the development of more productive timber stands in the future.

Despite these encouraging trends, there is still considerable opportunity for improvement. Only 1 acre in 4, for example, is at least 70 percent stocked in terms of trees that qualify as growing stock—that is, trees whose quality is such that now or in the future they will yield at least one saw log. Much of the available growing space is occupied by rough and rotten trees of little or no commercial value. All together, such trees encumber about one-third of the forest area.

SLIGHTLY LESS HARDWOOD

Hardwood growing stock on commercial forest land totals 824 million cubic feet. Post oak—a low-value hardwood—is the most common species and makes up 23 percent of the volume. All other oaks add up to 33 percent, hickory to 14 percent, and other hardwoods to 30 percent.

Growing stock volume now is about 1 percent less than in 1956.² During the interval between surveys, volume losses in trees 10 inches and larger in diameter were partly offset by gains in smaller trees (fig. 2). Most of the decline in growing stock was in large sawtimber—that is, trees 16 inches and larger in d.b.h. Today trees of these sizes make up about 20 percent of the growing stock. In 1956, they made up some 22 percent of an even larger hardwood inventory.

² In order to permit comparison of current volumes with earlier estimates, the previous estimates have been adjusted in accordance with present standards for classification of commercial forest land and for tree measurement.

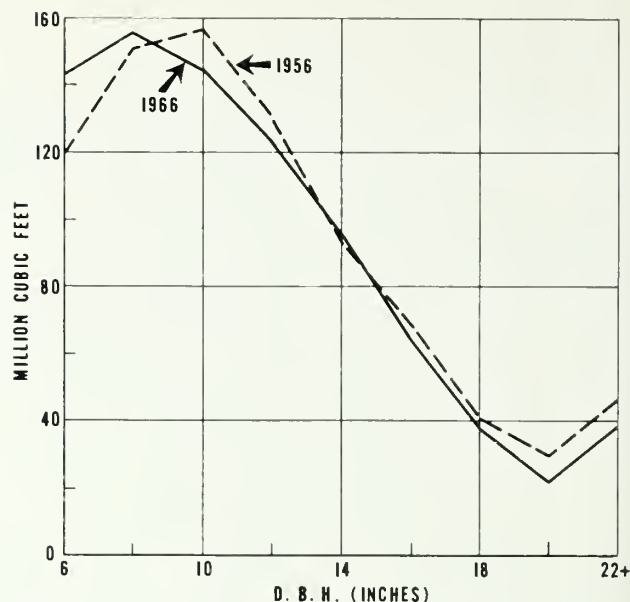


Figure 2.—Hardwood growing stock volume by tree diameter, 1956 and 1966.

The sawtimber component of the hardwood inventory totals 1.8 billion board feet. This volume represents a 7-percent decline since 1956. By definition, sawtimber excludes hardwoods less than 11.0 inches in diameter. Thus, the increase in smaller trees, which helped to offset growing stock losses, is not included in the sawtimber change.

Some 28 percent of the sawtimber volume is in logs of grades 1 and 2. These are the logs normally most in demand for factory lumber and other products requiring clear material. About 50 percent of the hardwood sawtimber is made up of grade 3, which is the lowest or marginal log grade suitable for standard factory lumber. The remaining volume is in tie and timber logs that are presently suited only to low-value end uses such as crating and cross-ties (table I).

Table I. Sawtimber volume by log grade and tree diameter, 1966

Species group and d.b.h. class (inches)	All grades	Grade 1 ¹	Grade 2	Grade 3	Lower grades
----- Million board feet -----					
Softwood:					
10 to 12	1,233.1	5.5	49.3	824.1	354.2
14 to 18	1,152.5	12.2	275.1	457.2	408.0
20 and up	123.0	10.2	38.2	32.7	41.9
Total	2,508.6	27.9	362.6	1,314.0	804.1
Hardwood:					
12	503.4		18.0	326.8	158.6
14 to 18	961.4	64.6	244.6	463.3	188.9
20 and up	335.8	109.0	64.2	122.0	40.6
Total	1,800.6	173.6	326.8	912.1	388.1

¹ All cedar saw logs were graded as No. 1.

In addition to growing stock trees, east Oklahoma forests support 777 million cubic feet of sound volume in rough and rotten hardwoods. Although these trees do not meet growing stock specifications, and hence are unsuitable for sawn products, many of them contain usable amounts of boltwood.

BIG GAIN IN PINE

Softwood comprises nearly half of the total growing stock; the volume now stands at 754 million cubic feet, of which 90 percent is in Le Flore, McCurtain, and Pushmataha Counties.

Shortleaf pine makes up 92 percent of the softwood (fig. 3). The rest is largely loblolly pine, but includes some cypress and redcedar.

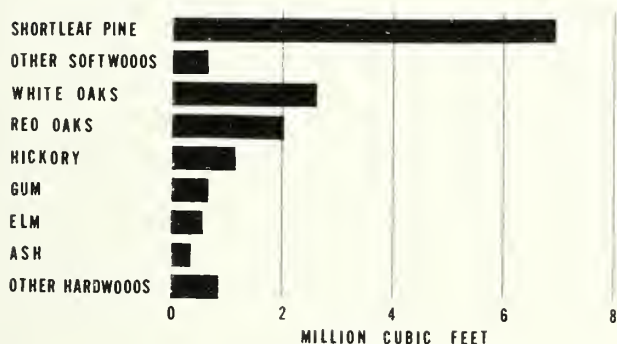


Figure 3.—Growing stock by species.

Since 1956, the volume of softwood growing stock has increased 31 percent and sawtimber volume has risen 32 percent.² These percentage gains were achieved on relatively small bases. The softwood volume in the loblolly-shortleaf pine and oak-pine types averages only 482 cubic feet per acre, including 1,610 board feet of sawtimber. Almost all the pine is found in these two types.

More than four-fifths of the recent gain in softwood growing stock volume occurred in trees 6 to 14 inches in diameter (fig. 4). The rest was in trees of larger size. Additionally, numbers of sapling-size softwoods—2 to 4 inches in diameter—have increased a third. These young trees can be counted on to further improve the growing stock as they attain merchantable size.

Although public and industrial ownerships make up only 30 percent of the commercial for-

est land, they support three-fourths of the softwood growing stock. The management programs on these holdings account for a sizable portion of the softwood gain. Moreover, these ownerships provide a firm foundation on which future gains can be realized.

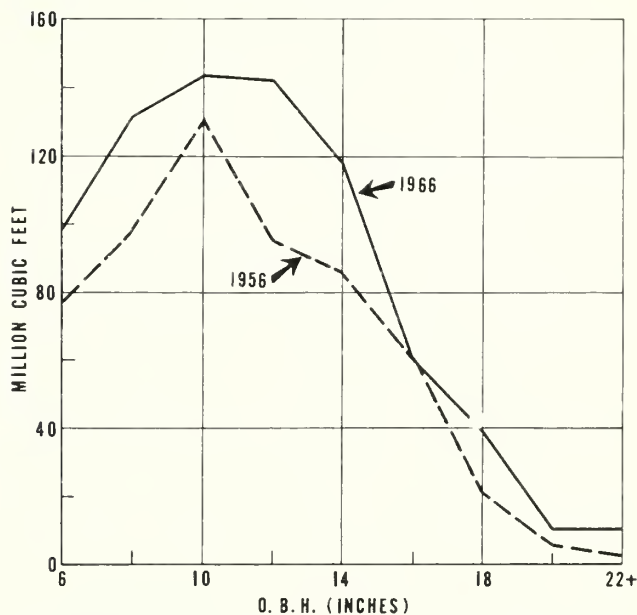


Figure 4.—Softwood growing-stock volume by tree diameter, 1956 and 1966.

Softwood volume has also risen on private, nonindustrial holdings, but here softwood is frequently a minor component of the forest. Altogether, for example, softwoods account for only one-fourth of the volume in these ownerships. Public protection of forest land generally has permitted pine to become established and survive on farm and miscellaneous holdings. Additionally, the increase in softwood on these holdings appears to derive in part from lack of industrial cutting opportunities.

The potential acreage of pine type greatly exceeds the 1.5 million acres classed as loblolly-shortleaf pine or oak-pine. In all there are some 2.7 million acres of commercial forest land capable of growing pine—as evidenced by pine's present or former occurrence.

PINE GROWTH EXCEEDS REMOVALS

East Oklahoma's growing stock inventory increased by 20.3 million cubic feet in 1965.

A slight loss in hardwood volume was offset by a substantial gain in softwood.

Softwood growth exceeded mortality and removals by 21.6 million cubic feet. Timber mortality attributable to fires, insects, disease, and other natural causes amounted to 5 percent of the gross growth. Timber removed for products, land clearing, and the like offset 44 percent of the gross growth. The remaining 51 percent was the indicated increase in softwood growing stock (fig. 5).

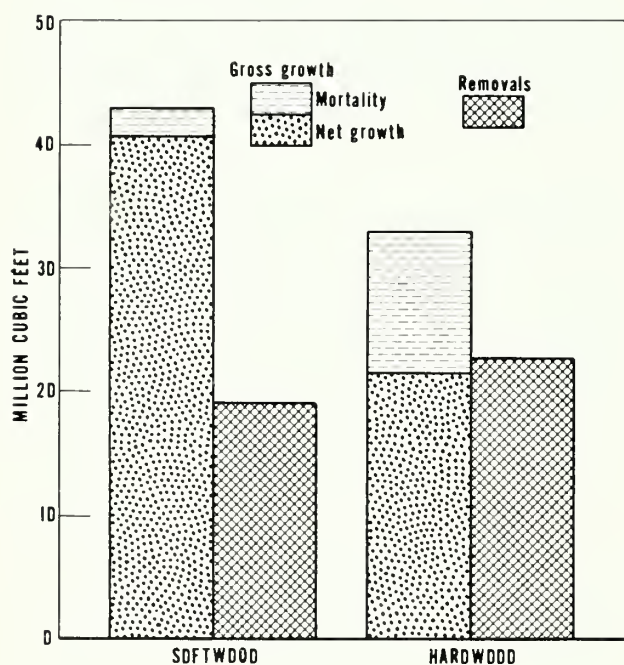


Figure 5.—Growth, mortality, and removals of growing stock, 1965.

Nearly all of the 19.1 million cubic feet of softwood removals were used for products. Because east Oklahoma's timber economy is saw-log oriented, demand is heavy for large trees. However, the distribution of size classes in the softwood inventory was adequate to supply the demand and still leave some growth to improve the stand.

In hardwoods, gross growth was less than the sum of removals and mortality. The hardwood loss was 1.3 million cubic feet. Gross growth was 32.9 million cubic feet, but mortality amounted to 35 percent of this volume and removals were equivalent to 69 percent. Taken together, these items resulted in a small loss of inventory.

Hardwood removals totaled 22.7 million cubic feet of growing stock. Of this, half was used for products. The rest was made up of growing stock deadened or destroyed in land clearing, harvesting, or cultural operations.

Although sawtimber volume in east Oklahoma is also rising, it is not gaining as rapidly as growing stock. Softwoods account for all of the increase in sawtimber. For these species, net growth exceeded removals by more than 50 percent in 1965. For hardwoods, sawtimber removals were in excess of growth by 40 percent.

Long-term resource trends are discussed in another section of this report. For the immediate future, however, it appears that the softwood growing stock volume will continue increasing at the present rate of almost 3 percent per year. But the hardwood inventory will remain at about its present level.

Timber Products Output

Roundwood products harvested from east Oklahoma forests totaled 30 million cubic feet in 1965. More than half was pine; the rest was hardwood. McCurtain County was the major producer, followed by Pushmataha and Le Flore. These counties accounted for virtually all of the pine timber harvested and for 40 percent of the hardwood.

Total roundwood output in 1965 was about 17 percent less than was reported in 1955. Increases in saw logs, charcoal wood, poles, piling, and pine posts were offset by losses in other items. Most of the decline was in fuelwood.

Saw logs totaled 104 million board feet in 1965, more than half the total roundwood output. Nearly four-fifths were pine. Most of the hardwood was oak; the remainder was largely gum. All but 7 percent of the logs were sawn by east Oklahoma mills.

At least 110 sawmills were active in east Oklahoma during 1965 (fig. 6). Eighty percent of the logs sawn went to the seven largest sawmills. Most of these mills saw mainly pine. Of the smaller sawmills in east Oklahoma, a few are active throughout the year. But the majority are part-time ventures. Some of the part-time operators are farmers who saw to order for local consumption. Others are cross-tie producers who work when demand for ties is high. Operating a sawmill on an intermittent basis is largely made possible by using machinery long since depreciated to a nominal value.

Fuelwood ranks second among all roundwood products in terms of volume. Nearly all of it is hardwood. Estimated annual consumption of roundwood for domestic fuel dwindled from 198,000 cords to less than 82,000 in the last decade. The decline is largely due to the

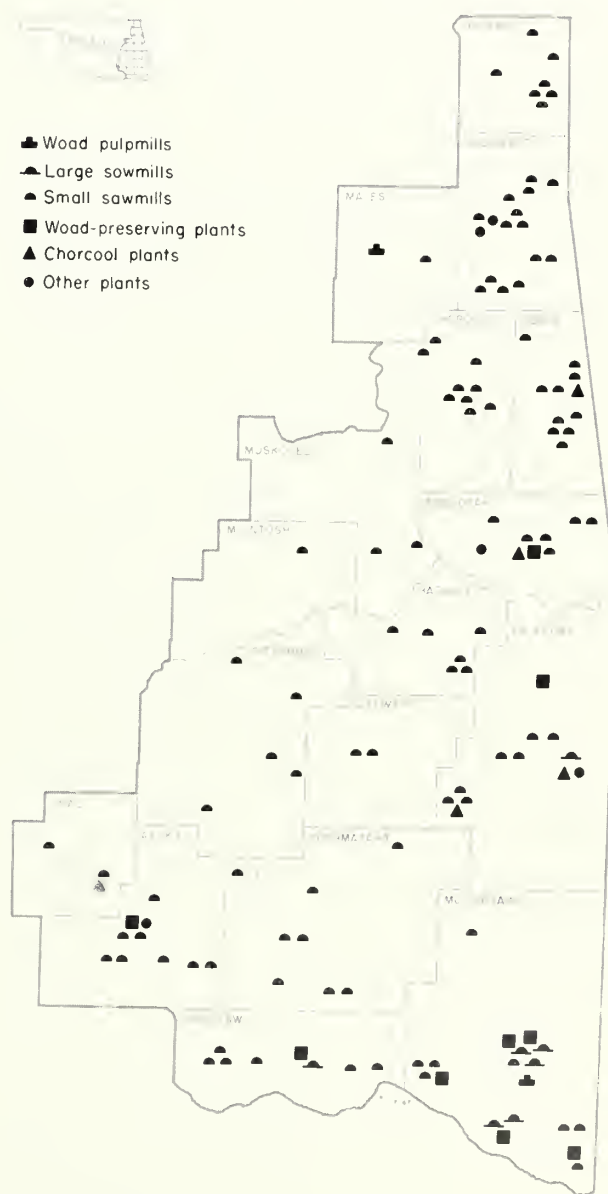


Figure 6. —Location of primary wood-using plants.



substitution of more convenient fuels for heating and cooking in rural areas. Rising urbanization and per capita income are expected to further reduce domestic fuelwood consumption. An additional 22,000 cord equivalents of fuelwood were salvaged from mill residues in 1965; most of the volume was pine used for industrial fuel.

The 4.2 million fence posts harvested in 1965 made up 9 percent of the roundwood output. Although fewer hardwoods are now being cut for posts than in 1955, there is still a lively market for pine posts. Nearly all of the 3.4 million pine posts cut in 1965 were treated at wood-preserving plants in east Oklahoma. These plants also imported an additional 2.8 million pine posts. Cedar and hardwood are used untreated.

East Oklahoma produced 20,000 cords of pulpwood bolts in 1965. Most of the bolts were hardwood. Another 53,000 cord equivalents were manufactured from pine sawmill chips. The total, which is almost double the 1955 out-

put, reflects recent gains in the region's pulping capacity. Construction of new facilities in neighboring States is likely to stimulate Oklahoma bolt markets in the next few years.

All other roundwood products made up 2.9 million cubic feet or 9 percent of the 1965 harvest. Of the total, 1.8 million cubic feet was hardwood cut for charcoal. Pine poles and piling made up an additional 0.5 million cubic feet. The remainder was hardwood, primarily furniture stock and handle stock.

The processing of roundwood by east Oklahoma wood-using industries resulted in 9.8 million cubic feet of wood residues in 1965. Two-thirds of this material was converted into products. The greatest part of the used portion was chips for the pulp industry. Other uses included fuel, both industrial and domestic, livestock bedding, and soil mulch. Of the 3.4 million cubic feet of unused residues, two-fifths was fine material unsuitable for chipping, such as sawdust and shavings.



Timber Supply Outlook

Long-term resource projections are subject to many uncertainties, since the future forest situation depends upon numerous man-directed factors. Nevertheless, it is often useful to determine the volume of timber that might be available in the future under a reasonable set of assumptions. One set of assumptions is that current trends in forest management will continue, and a projection on this basis is shown here as prospective available cut. Present levels of management, however, are far from ideal. Hence a second projection was made to represent an upward trend in management. The latter projection assumes that by the end of a specified planning period a desirable distribution of tree size-classes can be maintained. This projection is referred to as potential available cut.

PROSPECTIVE AVAILABLE CUT

The projection of prospective cut shows the volume of timber that will be available if the growth and cut of growing stock are gradually brought into balance at the end of 30 years. The difference between growth and cut was reduced by an equal amount during each year of the period. Moreover, it was assumed that radial growth, mortality rates, and the distribution of cut by diameter classes would remain unchanged. The results of this projection are shown in figures 7 and 8.

In 1965, the margin of softwood growth over timber removals was quite favorable. This situation permits removals to increase greatly in the next 30 years. In fact, the available cut of growing stock in 1995 will be four times the present harvest.

Although the growth and cut of softwood growing stock will be equal in 1995, the sawtimber cut will exceed growth by a significant

amount. As shown in figure 7, softwood sawtimber growth does not change appreciably during the projection period. The reason for this is that the distribution of cutting within the stand is heavily weighted toward trees of large diameter. Thus, timber stands at the end of the period will contain few large trees but many small ones (fig. 9). This situation cannot continue if saw logs are to remain the primary timber product in Oklahoma. But if a greater proportion of the harvest is taken from trees of small diameter, the projected cut of growing stock can be maintained without depleting the sawtimber inventory.

In 1965, growth and removals of hardwood growing stock were nearly equal. As growth and cut are brought into balance, little change takes place in the total volume of hardwood growing stock. Meanwhile, both growth and removals gradually increase to twice their initial volume. This condition results from the distribution of timber cut. Because the cut exceeds growth for large trees, the inventory in such trees is eventually reduced (fig. 10). The growth, therefore, is concentrated on the faster growing trees of small diameter.

As with softwoods, the hardwood projection uncovers an imbalance between growing stock and sawtimber. The shift in tree sizes is largely responsible. Also important, however, is the heavy concentration of rough and rotten trees. At present, two-thirds of the sawtimber-size trees do not possess the attributes necessary for saw logs. Consequently, much of the volume growth in this portion of the stand occurs on trees that do not contribute to the sawtimber inventory. Unless this situation is remedied, it is likely that customary harvesting practices will further intensify an already undesirable condition.

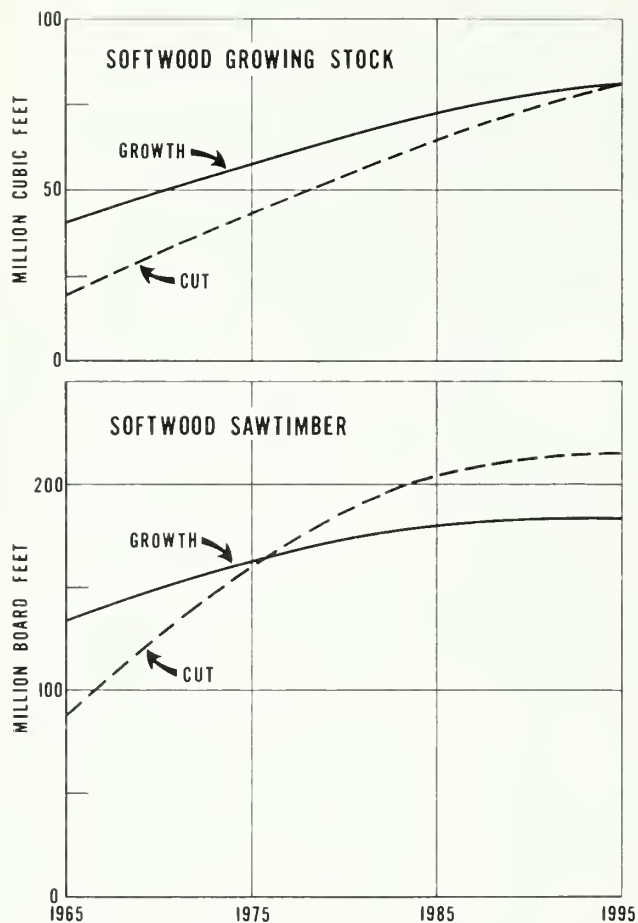


Figure 7.—Prospective growth and cut of softwood, 1965-1995, east Oklahoma.

POTENTIAL AVAILABLE CUT

The projection of potential cut indicates the volume of timber that might be available in 50 years if management efforts are intensified. To provide the potential cut of timber would require the development of well-stocked stands that contain a higher proportion of large trees than currently exist. The inventory needed to support the potential cut is shown in figures 9 and 10.

In this projection it was assumed that the area of commercial forest would remain constant but that the acreage currently occupied by oak-pine forest types will eventually be converted to pure pine. This area, together with the acreage already in pine, would provide 1.5 million acres of pinelands.

Another important assumption is that the proportion of growing stock trees in the hardwood inventory can be increased. Nearly three-fifths of the hardwood stand in trees 5 inches

in d.b.h. and larger consists of rough and rotten trees. To attain the potential cut, it will be essential for forest managers to accelerate timber stand improvement in order to make more space available for thrifty trees. For this projection, it was assumed that measures would be taken to increase the proportion of hardwood growing stock trees to 50 percent of the stand in all size classes.

It was found that east Oklahoma forests might be expected to yield 120 million cubic feet of growing stock annually. About two-thirds of the volume would be softwood. The total is slightly less than the 126 million cubic feet that would be available under the projection of prospective cut. The important difference is in the kinds of timber that would be available. The resource could sustain a much larger harvest of sawtimber-size trees with the intensified management envisaged under the potential-cut projection. The prospective avail-

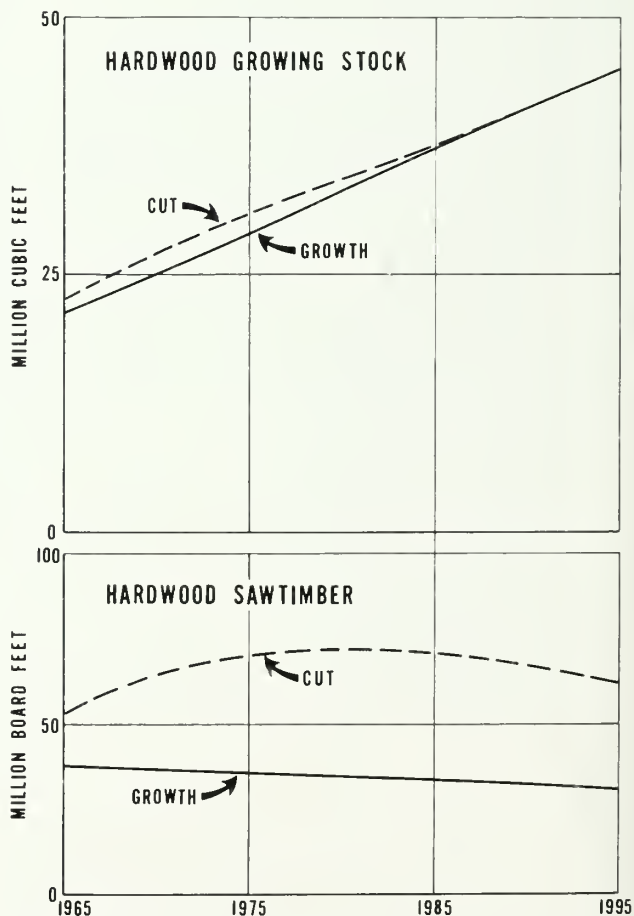


Figure 8.—Prospective growth and cut of hardwood, 1965-1995, east Oklahoma.

able cut of sawtimber is only 214 million board feet annually, while the potential harvest could be 345 million board feet. The marked difference between the prospective and the potential

sawtimber cut provides one indication of the opportunity that is available for improving Oklahoma's timber situation.

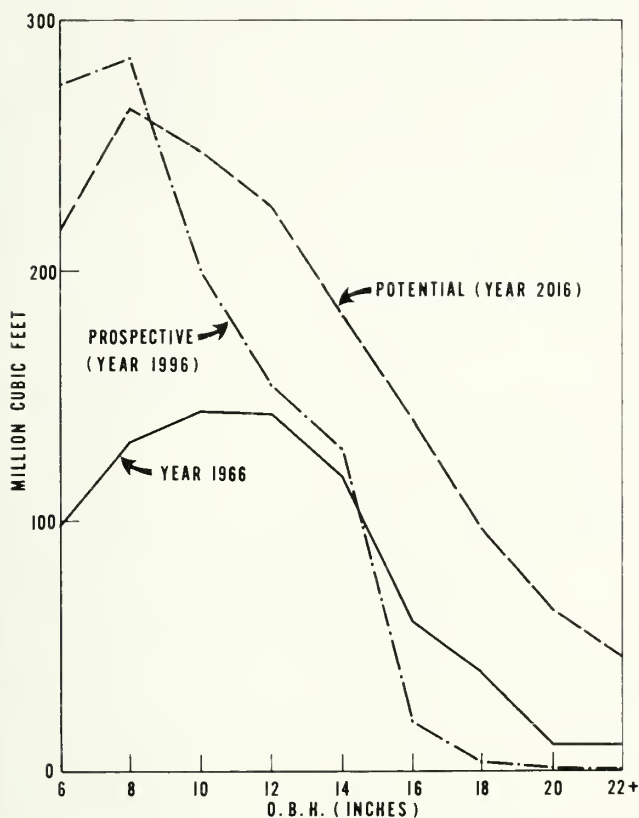


Figure 9.—Comparison of 1966 softwood growing stock with prospective and potential inventories.

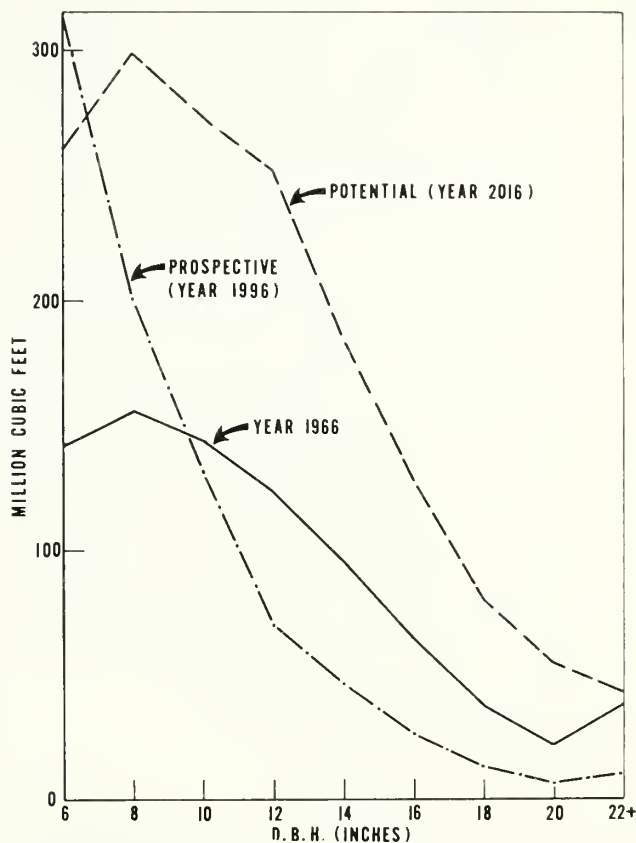


Figure 10.—Comparison of 1966 hardwood growing stock with prospective and potential inventories.



Management Opportunities

Timber growth in east Oklahoma is far below its potential. About one-third of the commercial forest land is inherently capable of growing in excess of 50 cubic feet per acre annually. The rest can grow between 20 and 50 cubic feet. For all commercial sites combined, average growth potential is 49 cubic feet per acre. By contrast, current net annual growth is only 13 cubic feet. There are numerous opportunities to increase timber growth.

STAND TREATMENTS

Of the commercial forest land, 165,000 acres are 70 percent or more stocked with desirable trees. Such stands generally do not require any special treatments to insure a high level of growth. Three-fifths of this productive acreage is in forest industry holdings.

Another 736,000 acres are 40 to 70 percent stocked with desirable trees. About one-fourth of this area is expected to attain full stocking without treatment. But 560,000 acres of the total will require special measures such as cull-tree control.

About four-fifths of the commercial forest acreage, 3.9 million acres, is less than 40 percent stocked with desirable trees. Some 2.5 million of these acres, however, are 40 percent or better stocked with trees that are still acceptable as growing stock. Many of these stands probably afford opportunities for improvement, especially the 446,000 acres that are at least 70 percent stocked. Moreover, planting may be needed on some pine sites.

About 1.5 million acres of commercial forest land are presently contributing very little timber. This acreage does not even support 40

percent stocking in trees good enough to be accepted as growing stock. In fact, rough and rotten trees plus nonstocked areas make up three-fourths of this acreage. Regeneration will be required to bring these acres into production. Most of this nonproductive land is in private, nonindustrial ownership. At least 425,000 of these 1.5 million acres are pine sites that could be restored to full productivity through site preparation and planting or seeding.

PROTECTION

Reducing timber losses from fire, insects, disease, and other natural agents represents another important means of increasing future timber supplies. Total mortality of growing stock in 1965 was equivalent to more than two-fifths of the volume cut for timber products. In addition, an unknown volume of growth was lost as a result of damage to trees that were not actually killed. Destructive agents can also cause defects that reduce the grade and value of standing timber.

UTILIZATION

Improvements in timber utilization afford another means of extending available wood supplies in east Oklahoma. Logging and plant residues together totaled 8.4 million cubic feet in 1965. An additional 9.9 million cubic feet of unused material resulted from land clearing and cultural operations. Although full use of this 18.3 million cubic feet is not presently feasible, advances are possible. The very limited use for the 786 million cubic feet of rough and rotten trees in the standing inventory, however, dwarfs other utilization problems.

CONDITIONS IN GENERAL

The reinventory of east Oklahoma found forest conditions noticeably changed since the earlier survey of 1956. The level of softwood growth has been high enough to support forest industry's need for timber and at the same time permit a sizable buildup in the pine inventory. Moreover, the immediate outlook is for further gains in pine volume.

The hardwood situation is much less encouraging. The inventory of hardwood sawtimber is less now than it was a decade ago. In the absence of more intensive management, prospects appear to be dim for any substantial improvement in the quantity and quality of hardwoods. Improving hardwood resources

will require large-scale efforts to insure both the prompt regeneration of favored species after cutting and the reserving of potentially high-quality trees for future growing stock. It is also evident that extensive stand improvement work will be needed to rid the forest of excessive numbers of rough and rotten hardwoods.

The extent to which timber management will be intensified in the future depends largely upon the thousands of owners of farm and other private, nonindustrial woodlands. All together, these owners control more than two-thirds of the commercial forest land. Greatly intensified efforts to improve timber productivity on their holdings can open new opportunities for forest industry in Oklahoma.

Appendix

ACCURACY OF THE SURVEY

The data on forest acreage and timber volume in this report were secured by a systematic sampling method involving a forest-nonforest classification on aerial photographs and on-the-ground measurements of trees at sample locations. The sample locations were at the intersections of a grid of lines spaced 3 miles apart. At each location, 10 small plots were systematically distributed on an area of about 1 acre.

Accuracy of the estimates may be affected by two types of errors. The first stems from the use of a sample to estimate the whole and from variability of the items being sampled. This type is termed sampling error; it is susceptible to a mathematical evaluation of the probability of error. The second type—often referred to as reporting or estimating error—derives from mistakes in measurement, judgment, arithmetic, or recording, and from limitations of method or equipment. Its effects cannot be appraised mathematically, but the Forest Survey constantly attempts to hold it to a minimum by proper training and good supervision, and by emphasis on careful work.

Statistical analysis of the data indicates a sampling error of plus or minus 0.3 percent for the estimate of total commercial forest area, 0.6 percent for total unproductive forest area, 4.2 percent for total cubic volume, and 5.8 percent for total board-

foot volume. As these totals are broken down by forest type, species, tree diameter, and other subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the tabulation at bottom of page, which shows the sampling error to which the estimates are liable, two chances out of three.

Growth estimates were derived from diameter-growth measurements and mortality data taken at sample locations. No attempt was made to calculate sampling error in these estimates.

Estimates of timber removals are based on studies conducted during the period of forest inventory. The sampling error to which the estimates are liable, on a probability of two chances out of three, are:

Cubic volume	Sampling error ¹	Board-foot volume	Sampling error ¹
Million cu. ft.	Percent	Million bd. ft.	Percent
..	...	141.0	3.4
...	...	101.9	4.0
41.8	5.9	65.2	5.0
14.6	10.0	16.3	10.0
6.5	15.0	7.2	15.0
3.6	20.0	4.1	20.0
2.3	25.0	2.6	25.0

¹ By random-sampling formula.

Commercial forest area	Sampling error ¹	Unproductive forest area	Sampling error ¹	Cubic-foot volume ²	Sampling error ¹	Board-foot volume ³	Sampling error ¹
Thousand acres	Percent	Thousand acres	Percent	Million cu. ft.	Percent	Million bd. ft.	Percent
4,817.4	0.8	..	..	...	...	...	...
3,083.1	1.0	617.7	1.8	..	...	...	...
770.8	2.0	500.3	2.0	...	...	..	...
342.6	3.0	222.4	3.0	...	...	..	...
192.7	4.0	125.1	4.0	1,578.3	4.2	...	..
123.3	5.0	80.1	5.0	1,113.6	5.0	4,309.2	5.8
30.8	10.0	20.0	10.0	278.4	10.0	1,449.6	10.0
13.7	15.0	8.9	15.0	123.7	15.0	644.3	15.0
7.7	20.0	5.0	20.0	69.6	20.0	362.4	20.0
4.9	25.0	3.2	25.0	44.5	25.0	231.9	25.0

¹ By random-sampling formula.

² Growing-stock volume on commercial forest land.

³ Sawtimber volume on commercial forest land.

In computing changes in timber volumes since 1956, data from the earlier survey were adjusted to make them closely comparable to those from the latest survey. This was necessary because of certain basic differences between the two sets of data. In every case, the data from the earlier survey were adjusted to conform to the standards of the latest survey before the change was computed.

DEFINITIONS OF TERMS

Forest Land Class

Forest land.—Land at least 10 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for non-forest use.

Commercial forest land.—Forest land which is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization.

Productive-reserved forest land.—Productive public forest land withdrawn from timber utilization through statute or administrative regulation.

Unproductive forest land.—Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

Tree Species

Commercial species.—Tree species presently or prospectively suitable for industrial wood products; excludes so-called weed species, such as blackjack oak and blue beech.

Hardwoods.—Dicotyledonous trees, usually broad-leaved and deciduous.

Softwoods.—Coniferous trees, usually evergreen, having needle or scale-like leaves.

Forest Type

Loblolly-shortleaf pine.—Forests in which 50 percent or more of the stand is southern yellow pine, and loblolly or shortleaf pine, singly or in combination, predominates. Common associates include oak, hickory, and gum.

Oak-pine.—Forests in which 50 percent or more of the stand is hardwoods, usually upland oaks, but in which southern pines make up 25-49 percent of the stand. Common associates include gum, hickory, and yellow-poplar.

Oak-hickory.—Forests in which 50 percent or more of the stand is upland oaks or hickory, singly or in combination, except where pines comprise 25-49 percent, in which case the stand would be classified oak-pine. Common associates include yellow-poplar, elm, maple, and black walnut.

Oak-gum-cypress.—Bottom-land forests in which 50 percent or more of the stand is tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, except where pines comprise 25-49

percent, in which case the stand would be classified oak-pine. Common associates include cottonwood, willow, ash, elm, hackberry, and maple.

Elm-ash-cottonwood.—Forests in which 50 percent or more of the stand is elm, ash, or cottonwood, singly or in combination. Common associates include willow, sycamore, beech, and maple.

Class of Timber

Growing-stock trees.—Sawtimber trees, poletimber trees, saplings, and seedlings; that is, all live trees except rough and rotten trees.

Desirable trees.—Growing-stock trees that have no serious defects to limit present or prospective use, are of relatively high vigor, and contain no pathogens that may result in death or serious deterioration before rotation age. They comprise the type of trees that forest managers aim to grow; that is, the trees left in silvicultural cutting or favored in cultural operations.

Acceptable trees.—Trees meeting the specifications for growing stock but not qualifying as desirable trees.

Sawtimber trees.—Live trees of commercial species, 9.0 inches and larger in diameter at breast height for softwoods and 11.0 inches and larger for hardwoods, and containing at least one saw log.

Poletimber trees.—Live trees of commercial species, 5.0 to 9.0 inches in d.b.h. for softwoods and 5.0 to 11.0 inches for hardwoods, and of good form and vigor.

Saplings.—Live trees of commercial species, 1.0 inch to 5.0 inches in d.b.h. and of good form and vigor.

Rough and rotten trees.—Live trees that are unmerchantable for saw logs now or prospectively because of defect, rot, or species.

Salvable dead trees.—Standing or down dead trees that are considered currently or potentially merchantable.

Stand-Size Class

Sawtimber stands.—Stands at least 10 percent stocked with growing-stock trees, with half or more of this stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands.—Stands at least 10 percent stocked with growing-stock trees, with half or more of this stocking in sawtimber or poletimber trees, and with poletimber stocking exceeding that of sawtimber stocking.

Sapling-seedling stands.—Stands at least 10 percent stocked with growing-stock trees, with more than half of this stocking in saplings or seedlings.

Nonstocked areas.—Commercial forest lands less than 10 percent stocked with growing-stock trees.

Stocking

A measure of area occupancy by trees of specified classes. Three categories of stocking are considered in the Survey: (1) all live trees, (2) growing-stock trees, and (3) desirable trees. Stocking in terms of all trees is used in the delineation of forest land and forest types. Stocking in terms of growing-stock trees is used in stand-size and age classifications. Stocking in terms of desirable trees is used in delineating area-condition classes.

Volume

Volume of sawtimber.—Net volume of the saw-log portion of live sawtimber trees, in board feet of the International rule, 1/4-inch kerf.

Volume of growing stock.—Volume of sound wood in the bole of sawtimber and poletimber trees from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

Volume of timber.—The volume of sound wood in the bole of growing stock, rough, rotten, and salvable dead trees 5.0 inches and larger in d.b.h. from stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs.

Log Grades

Log grades are based on the standards presented by the USDA Forest Service in "Interim Log Grades for Southern Pines," issued by the Southern Forest Experiment Station in 1953, and "Hardwood Log Grades for Standard Lumber," issued by the Forest Products Laboratory under the designation D1737 in 1949.

Hardwood log grades include, in addition to the hardwood log grades for standard lumber, a grade-4 tie and timber log. Specifications for tie and timber logs are based chiefly on knot size and log soundness; clear cuttings are not required.

Area-Condition Class

Class 1.—Areas 70% or more stocked with desirable trees.

Class 2.—Areas 40 to 70% stocked with desirable trees, and with 30% or less of the area controlled by acceptable growing-stock trees, rough and rotten trees, inhibiting vegetation, slash, or nonstockable conditions.

Class 3.—Areas 40 to 70% stocked with desirable trees and with more than 30% of the area controlled by other trees or conditions that ordinarily prevent occupancy by desirable trees.

Class 4.—Areas less than 40% stocked with desirable trees, but with 70% or more stocking with growing-stock trees.

Class 5.—Areas less than 40% stocked with desirable trees, but with 40 to 70% stocking with growing-stock trees.

Class 6.—Areas less than 40% stocked with desirable trees and with less than 40% stocking with growing-stock trees.

Miscellaneous Definitions

D.b.h. (Diameter breast high).—Tree diameter in inches, outside bark, measured at 4½ feet above ground.

Diameter classes.—The 2-inch diameter classes extend from 1.0 inch below to 0.9 inch above the stated midpoint. Thus, the 12-inch class includes trees 11.0 inches to and including 12.9 inches d.b.h.

Site classes.—A classification of forest land in terms of inherent capacity to grow crops of industrial wood.

Net annual growth of sawtimber.—The annual change, resulting from natural causes, in net board-foot volume of live sawtimber trees.

Net annual growth of growing stock.—The annual change, resulting from natural causes, in volume of sound wood in live sawtimber and poletimber trees.

Mortality of sawtimber.—The net board-foot volume of sawtimber trees dying annually from natural causes.

Mortality of growing stock.—The volume of sound wood in live sawtimber and poletimber trees dying annually from natural causes.

Timber removals from sawtimber.—The net board-foot volume of live sawtimber trees removed from the inventory by harvesting; cultural operations, such as timber-stand improvement; land clearing; or changes in land use.

Timber removals from growing stock.—The volume of sound wood in live sawtimber and poletimber trees removed from the inventory by harvesting; cultural operations, such as timber-stand improvement; land clearing; or changes in land use.

Timber products.—Roundwood products and by-products of wood manufacturing plants.

STANDARD TABLES

Table 1. *Area by land classes, east Oklahoma, 1966*

Land class	Area
	<i>Thousand acres</i>
Forest:	
Commercial	4,817.4
Productive-reserved	34.4
Unproductive	617.7
Total	5,469.5
Nonforest:	
Cropland ¹	1,257.7
Pasture and range ¹	2,436.1
Other ²	492.3
Total	4,186.1
All land ³	9,655.6

¹ Source: 1964 Census of Agriculture.

² Includes swampland, industrial and urban areas, other nonforest land, and 22,285 acres, classed as water by Forest Survey standards, but defined by the Bureau of the Census as land.

Source: United States Bureau of the Census, Land and Water Area of the United States, 1960.

Table 2. *Area of commercial forest land by ownership classes, east Oklahoma, 1966*

Ownership class	Area
	<i>Thousand acres</i>
Public:	
National forest	221.9
Miscellaneous federal	248.2
State	86.4
County and municipal	9.3
Total public	565.8
Private:	
Forest industry	868.7
Farmer	1,410.8
Miscellaneous private	1,972.1
Total private	4,251.6
All ownerships	4,817.4

Table 3. *Area of commercial forest land by stand-size and ownership classes, east Oklahoma, 1966*

Stand-size class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
	<i>Thousand acres</i>				
Sawtimber	1,261.9	106.4	72.9	408.6	674.0
Poletimber	943.4	43.6	75.0	193.3	631.5
Sapling and seedling	2,497.7	71.9	191.3	261.4	1,973.1
Nonstocked areas	114.4	.	4.7	5.4	104.3
All classes	4,817.4	221.9	343.9	868.7	3,382.9

Table 4. *Area of commercial forest land by stand-volume and ownership classes, east Oklahoma, 1966*

Stand volume per acre	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
	<i>Thousand acres</i>				
Less than 1,500 board feet	3,900.5	137.3	295.9	427.8	3,039.5
1,500 to 5,000 board feet	755.9	71.3	32.3	350.3	302.0
More than 5,000 board feet	161.0	13.3	15.7	90.6	41.4
All classes	4,817.4	221.9	343.9	868.7	3,382.9

Table 5. Area of commercial forest land by stocking classes based on selected stand components, east Oklahoma, 1966

Stocking percentage	Stocking classified in terms of					
	All trees	Growing-stock trees			Rough and rotten trees	Inhibiting vegetation
		Total	Desirable	Acceptable		
	----- Thousand acres -----					
90 to 100	2,197.3	213.9	11.0	5.8	30.2	...
80 to 90	1,362.7	332.8	54.9	11.7	64.4	...
70 to 80	764.4	611.1	99.1	71.5	193.6	...
60 to 70	263.9	612.3	216.1	241.6	370.0	...
50 to 60	170.1	775.9	260.1	359.2	612.9	...
40 to 50	35.0	821.1	259.7	699.4	678.0	...
30 to 40	24.0	620.8	436.5	1,134.1	839.2	...
20 to 30	...	442.3	653.2	1,160.3	969.6	10.6
10 to 20	...	272.8	985.4	768.3	694.4	69.6
Less than 10	...	114.4	1,841.4	365.5	365.1	4,737.2
All areas	4,817.4	4,817.4	4,817.4	4,817.4	4,817.4	4,817.4

Table 6. Area of commercial forest land by stocking classes of growing stock trees and by stand-size classes, east Oklahoma, 1966

Stocking class	All stands	Saw-timber	Pole-timber	Sapling and seedling	Non-stocked
----- Thousand acres -----					
70 percent or more	1,157.8	488.8	168.7	500.3	.
40 to 70 percent	2,209.3	515.1	510.3	1,183.9	.
10 to 40 percent	1,335.9	258.0	264.4	813.5	.
Less than 10 percent	114.4	..	.	..	114.4
All classes	4,817.4	1,261.9	943.4	2,497.7	114.4

Table 7. Area of commercial forest land by area-condition and ownership classes, east Oklahoma, 1966

Area-condition class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
----- Thousand acres -----					
1	165.0	6.6	4.7	101.9	51.8
2	175.5	21.2	5.4	107.3	41.6
3	560.4	63.4	37.8	266.1	193.1
4	445.6	7.3	25.3	80.1	332.9
5	2,020.6	94.3	116.0	270.8	1,539.5
6	1,450.3	29.1	154.7	42.5	1,224.0
All classes	4,817.4	221.9	343.9	868.7	3,382.9

Table 8. Area of commercial forest land by area-condition and stocking classes, east Oklahoma, 1966

Area-condition class	All classes		Stocking class									
			Growing stock				Rough and rotten trees		Shrubs		Other	
			Desirable		Acceptable							
	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent	Thousand acres	Percent
1	165.0	100.0	126.9	77.0	14.6	8.8	10.1	6.1	...	..	13.4	8.1
2	175.5	100.0	103.5	58.9	26.3	15.0	19.6	11.2	.	.	26.1	14.9
3	560.4	100.0	277.8	49.6	143.6	25.6	96.9	17.3	0.8	0.1	41.3	7.4
4	445.6	100.0	79.9	17.9	255.8	57.4	77.9	17.5	2.8	.6	29.2	6.6
5	2,020.6	100.0	297.8	14.7	727.5	36.1	656.8	32.5	8.5	.4	330.0	16.3
6	1,450.3	100.0	70.7	4.9	269.1	18.6	789.4	54.4	4.5	.3	316.6	21.8
All classes	4,817.4	100.0	956.6	19.9	1,436.9	29.8	1,650.7	34.3	16.6	.3	756.6	15.7

Table 9. *Area of commercial forest land by site and ownership classes, east Oklahoma, 1966*

Site class	All ownerships	National forest	Other public	Forest industry	Farmer and misc. private
----- Thousand acres -----					
120 cu. ft. or more	17.4	.	4.7	.	12.7
85 to 120 cu. ft.	319.0	13.3	40.7	68.6	196.4
50 to 85 cu. ft.	1,330.7	78.0	73.5	386.8	792.4
Less than 50 cu. ft.	3,150.3	130.6	225.0	413.3	2,381.4
All classes	4,817.4	221.9	343.9	868.7	3,382.9

Table 10. *Area of commercial forest land by forest types and ownership classes, east Oklahoma, 1966*

Type	All ownerships	Public	Private
----- Thousand acres -----			
Loblolly-shortleaf pine	795.3	119.7	675.6
Oak-pine	664.3	96.1	568.2
Oak-hickory	2,891.3	301.1	2,590.2
Oak-gum-cypress	349.6	38.3	311.3
Elm-ash-cottonwood	116.9	10.6	106.3
All types	4,817.4	565.8	4,251.6

Table 11. *Area of noncommercial forest land by forest types, east Oklahoma, 1966*

Type	All areas	Productive- reserved areas	Un- productive areas
----- Thousand acres -----			
Loblolly-shortleaf pine	13.6	13.6	...
Oak-pine	5.2	5.2	...
Oak-hickory	633.3	15.6	617.7
All types	652.1	34.4	617.7

Table 12. *Number of growing-stock trees on commercial forest land by species and diameter classes, east Oklahoma, 1966*

Species	Diameter class (inches at breast height)								
	All classes	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0 and larger
----- Thousand trees -----									
Softwood:									
Loblolly pine	4,090	1,642	746	377	352	276	253	242	202
Shortleaf pine	102,293	44,375	25,817	15,841	9,103	4,863	1,504	668	122
Cypress	22					18			4
Redcedar	1,522	1,204	166	72	47	18	15		
Total	107,927	47,221	26,729	16,290	9,502	5,175	1,772	910	328
Hardwood:									
Select white oaks ¹	14,014	7,679	2,877	2,086	520	476	177	115	84
Select red oaks ²	5,129	2,656	1,373	412	275	120	108	78	107
Other white oaks	45,716	24,905	10,821	4,975	2,532	1,310	582	344	247
Other red oaks	28,156	11,700	7,780	4,016	2,366	1,208	590	258	238
Hickory	23,200	11,861	5,271	3,240	1,393	726	367	179	163
Hard maple	362	90	128	79	26	18	13		8
Soft maple	890	324	322	171	54	19			
Sweetgum	6,482	2,659	1,681	1,174	453	295	142	24	54
Tupelo and blackgum	2,600	1,357	275	232	258	271	117	64	26
Ash	6,675	3,170	1,893	858	331	170	154	48	51
Cottonwood	1,067	184	213	290	288	60		26	6
Basswood	166	89	62				15		...
Black walnut	438	130	85	129		47	34	13	...
Other hardwoods	17,564	7,664	4,596	2,329	1,228	731	473	207	336
Total	152,459	74,468	37,377	19,991	9,724	5,451	2,772	1,356	1,320
All species	260,386	121,689	64,106	36,281	19,226	10,626	4,544	2,266	1,648

¹ Includes white, swamp chestnut, chinkapin, and bur oaks.

² Includes cherrybark, Shumard, and northern red oaks.

Table 13. Number of rough, rotten, and salvable dead trees on commercial forest land by diameter groups and by softwoods and hardwoods, east Oklahoma, 1966

D.b.h. class (inches)	Rough and rotten trees	Salvable dead trees
--- Thousand trees ---		
Softwood:		
5.0- 8.9	1,628	
9.0-18.9	1,012	
19.0 and larger	19	
Total	2,659	
Hardwood:		
5.0-10.9	156,052	388
11.0-18.9	38,811	267
19.0 and larger	3,140	
Total	198,003	655
All species	200,662	655

Table 14. Volume of timber on commercial forest land by class of timber and by softwoods and hardwoods, east Oklahoma, 1966

Class of timber	All species	Softwood	Hardwood
--- Million cubic feet ---			
Sawtimber trees:			
Saw-log portion	759.6	452.6	307.0
Upper-stem portion	146.1	72.4	73.7
Total	905.7	525.0	380.7
Poletimber trees	672.6	229.5	443.1
All growing stock	1,578.3	754.5	823.8
Rough trees:			
Sawtimber-size	337.8	4.5	333.3
Poletimber-size	276.3	2.4	273.9
Total	614.1	6.9	607.2
Rotten trees:			
Sawtimber-size	118.5	2.4	116.1
Poletimber-size	53.9	.4	53.5
Total	172.4	2.8	169.6
Salvable dead trees:			
Sawtimber-size	2.9		2.9
Poletimber-size	.9		.9
Total	3.8		3.8
All timber	2,368.6	764.2	1,604.4

Table 15. Volume of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, east Oklahoma, 1966

Ownership class	Growing stock			Sawtimber		
	All species	Soft- wood	Hard- wood	All species	Soft- wood	Hard- wood
--- Million cubic feet --- --- Million board feet ---						
Public:						
National forest	111.8	90.6	21.2	378.8	345.3	33.5
Other public	96.1	23.3	72.8	242.8	91.3	151.5
Total	207.9	113.9	94.0	621.6	436.6	185.0
Private:						
Forest industry	585.1	444.8	140.3	1,825.5	1,543.2	282.3
Farmer and misc. private	785.3	195.8	589.5	1,862.1	528.8	1,333.3
Total	1,370.4	640.6	729.8	3,687.6	2,072.0	1,615.6
All ownerships	1,578.3	754.5	823.8	4,309.2	2,508.6	1,800.6

Table 16. Volume of growing stock and sawtimber on commercial forest land by stand-size classes and by softwoods and hardwoods, east Oklahoma, 1966

Stand-size class	Growing stock			Sawtimber		
	All species	Soft- wood	Hard- wood	All species	Soft- wood	Hard- wood
--- Million cubic feet --- --- Million board feet ---						
Sawtimber	914.6	525.3	389.3	3,194.0	1,991.8	1,202.2
Poletimber	370.1	113.4	256.7	470.5	194.4	276.1
Sapling and seedling	292.3	115.3	177.0	642.5	321.2	321.3
Nonstocked areas	1.3	.5	.8	2.2	1.2	1.0
All classes	1,578.3	754.5	823.8	4,309.2	2,508.6	1,800.6

Table 17. *Volume of growing stock on commercial forest land by species and diameter classes, east Oklahoma, 1966*

Species	Diameter class (inches at breast height)								
	All classes	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0 and larger
----- Million cubic feet -----									
Softwood:									
Loblolly pine	58.7	3.7	3.8	3.7	4.8	7.6	10.0	11.5	13.6
Shortleaf pine	690.9	92.7	127.1	139.2	136.8	109.8	49.6	28.1	7.6
Cypress	.9	.	.	.	.	.3	.	.	.6
Redcedar	4.0	1.7	.5	.5	.5	.3	.5	.	.
Total	754.5	98.1	131.4	143.4	142.1	118.0	60.1	39.6	21.8
Hardwood:									
Select white oaks ¹	68.2	15.2	12.6	15.1	6.7	8.4	4.0	2.7	3.5
Select red oaks ²	30.4	4.7	6.5	2.9	3.4	2.2	2.7	2.1	5.9
Other white oaks	192.8	45.8	41.2	32.2	27.3	20.1	10.4	7.9	7.9
Other red oaks	171.3	24.5	33.6	31.1	31.3	21.3	13.8	6.4	9.3
Hickory	116.9	21.3	21.3	21.6	16.3	12.5	8.7	5.6	9.6
Hard maple	3.1	.3	.6	.5	.4	.4	.5	.	.4
Soft maple	5.3	.6	1.8	1.7	.7	.5	.	.	.
Sweetgum	46.2	5.8	8.2	10.3	7.0	6.7	4.3	1.0	2.9
Tupelo and blackgum	19.9	2.6	1.0	1.9	3.3	4.6	3.3	1.9	1.3
Ash	34.9	6.1	7.7	6.5	3.8	3.5	3.6	1.1	2.6
Cottonwood	16.9	.6	1.5	4.3	6.9	2.3	.	1.1	.2
Basswood	.8	.2	.3	.	.	.	.3	.	.
Black walnut	3.4	.2	.4	.7	.	.5	.9	.7	.
Other hardwoods	113.7	14.7	19.1	15.9	16.1	12.7	11.8	6.9	16.5
Total	823.8	142.6	155.8	144.7	123.2	95.7	64.3	37.4	60.1
All species	1,578.3	240.7	287.2	288.1	265.3	213.7	124.4	77.0	81.9

¹ Includes white, swamp chestnut, chinkapin, and bur oaks.

² Includes cherrybark, Shumard, and northern red oaks.

Table 18. *Volume of sawtimber on commercial forest land by species and diameter classes, east Oklahoma, 1966*

Species	Diameter class (inches at breast height)						
	All classes	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0 and larger
----- Million board feet -----							
Softwood:							
Loblolly pine	274.1	13.2	19.8	40.7	56.1	65.7	78.6
Shortleaf pine	2,224.0	542.1	654.1	563.9	267.8	152.9	43.2
Cypress	2.6	.	.	1.4	.	.	1.2
Redcedar	7.9	2.0	1.9	1.4	2.6	...	...
Total	2,508.6	557.3	675.8	607.4	326.5	218.6	123.0
Hardwood:							
Select white oaks ¹	123.1	.	27.8	40.1	20.0	15.7	19.5
Select red oaks ²	84.7	.	13.5	11.6	13.9	10.9	34.8
Other white oaks	350.1	.	117.3	97.2	52.2	39.1	44.3
Other red oaks	375.7	.	123.7	98.5	67.7	31.5	54.3
Hickory	254.7	.	70.8	59.0	46.5	23.8	54.6
Hard maple	7.5	.	1.5	2.1	2.2	..	1.7
Soft maple	5.2	.	2.7	2.5	.	..	..
Sweetgum	99.0	.	28.1	30.8	21.7	4.8	13.6
Tupelo and blackgum	63.0	.	10.9	19.2	15.6	9.8	7.5
Ash	69.9	.	16.2	16.1	19.0	5.8	12.8
Cottonwood	39.8	.	22.6	10.5	.	5.2	1.5
Basswood	1.9	.	..	..	1.9	..	..
Black walnut	10.7	.	.	2.3	4.9	3.5	..
Other hardwoods	315.3	.	68.3	62.8	58.7	34.3	91.2
Total	1,800.6	..	503.4	452.7	324.3	184.4	335.8
All species	4,309.2	557.3	1,179.2	1,060.1	650.8	403.0	458.8

¹ Includes white, swamp chestnut, chinkapin, and bur oaks.

² Includes cherrybark, Shumard, and northern red oaks.

Table 19. Volume of sawtimber on commercial forest land by species and log grade, east Oklahoma, 1966

Species	All grades	Grade 1	Grade 2	Grade 3	Lower grades
----- Million board feet -----					
Softwood:					
Yellow pines	2,498.1	20.0	361.4	1,312.6	804.1
Cypress	2.6	..	1.2	1.4	.
Other softwoods	7.9	7.9	.	.	.
Total	2,508.6	27.9	362.6	1,314.0	804.1
Hardwood:					
Select white and red oaks	207.8	34.0	41.0	94.0	38.8
Other white and red oaks	725.8	29.9	105.8	413.4	176.7
Hickory	254.7	32.0	46.1	125.0	51.6
Hard maple	7.5	..	.	3.6	3.9
Sweetgum	99.0	7.1	18.7	45.9	27.3
Ash and black walnut	80.6	21.3	27.1	29.3	2.9
Other hardwoods	425.2	49.3	88.1	200.9	86.9
Total	1,800.6	173.6	326.8	912.1	388.1
All species	4,309.2	201.5	689.4	2,226.1	1,192.2

Table 20. Volume of salvable dead sawtimber-size trees on commercial forest land by softwoods and hardwoods, east Oklahoma, 1966

Species group	Volume
	Million board feet
Softwood	...
Hardwood	16.2
All species	16.2

Table 21. Net annual growth and removals of growing stock on commercial forest land by species, east Oklahoma, 1965

Species	Net annual growth	Annual removals
Million cubic feet		
Softwood:		
Yellow pines	40.5	19.0
Other softwoods	.2	.1
Total	40.7	19.1
Hardwood:		
Select white and red oaks	2.6	2.3
Other white and red oaks	9.4	10.3
Hickory	3.0	3.2
Sweetgum	1.2	.6
Ash and black walnut	1.0	.9
Other hardwoods	4.2	5.4
Total	21.4	22.7
All species	62.1	41.8

Table 22. Net annual growth and removals of growing stock on commercial forest land by ownership classes and by softwoods and hardwoods, east Oklahoma, 1965

Ownership class	Net annual growth			Annual removals		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood
----- Million cubic feet -----						
Public	8.5	6.1	2.4	3.9	2.4	1.5
Forest industry	27.6	24.0	3.6	14.5	11.4	3.1
Farmer and misc. private	26.0	10.6	15.4	23.4	5.3	18.1
All ownerships	62.1	40.7	21.4	41.8	19.1	22.7

Table 23. Net annual growth and removals of sawtimber on commercial forest land by species, east Oklahoma, 1965

Species	Net annual growth	Annual removal
- Million board feet -		
Softwood:		
Yellow pines	133.5	88.0
Other softwoods	.5	...
Total	134.0	88.0
Hardwood:		
Select white and red oaks	4.4	6.5
Other white and red oaks	15.3	22.2
Hickory	5.4	7.3
Sweetgum	2.1	1.1
Ash and black walnut	1.7	2.4
Other hardwoods	9.1	13.5
Total	38.0	53.0
All species	172.0	141.0

Table 24. Net annual growth and removals of sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, east Oklahoma, 1965

Ownership class	Net annual growth			Annual removals		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
- - - - - Million board feet - - - - -						
Public	27.2	23.3	3.9	16.9	13.7	3.2
Forest industry	88.4	82.4	6.0	63.9	55.4	8.5
Farmer and misc. private	56.4	28.3	28.1	60.2	18.9	41.3
All ownerships	172.0	134.0	38.0	141.0	88.0	53.0

Table 25. Annual mortality of growing stock and sawtimber on commercial forest land by species, east Oklahoma, 1965

Species	Growing stock	Sawtimber
	Million cubic feet	Million board feet
Softwood:		
Yellow pines	2.3	7.5
Other softwoods	(¹)	(¹)
Total	2.3	7.5
Hardwood:		
Select white and red oaks	1.4	3.7
Other white and red oaks	5.1	12.9
Hickory	1.6	4.5
Sweetgum	.6	1.8
Ash and black walnut	.6	1.4
Other hardwoods	2.2	7.7
Total	11.5	32.0
All species	13.8	39.5

¹ Negligible.

Table 26. Annual mortality of growing stock and sawtimber on commercial forest land by ownership classes and by softwoods and hardwoods, east Oklahoma, 1965

Ownership class	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
- Million cubic feet -						
Public	1.7	0.3	1.3	4.6	1.3	3.3
Forest industry	3.3	1.4	2.0	9.6	4.6	5.0
Farmer and misc. private	8.8	.6	8.2	25.3	1.6	23.7
All ownerships	13.8	2.3	11.5	39.5	7.5	32.0

Table 27. Annual mortality of growing stock and sawtimber on commercial forest land by causes and by softwoods and hardwoods, east Oklahoma, 1965

Cause of death	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
	- Million cubic feet -			- Million board feet -		
Fire	1.3	0.4	0.9	2.4	1.4	1.0
Insects	.3	.2	.1	.9	.9	.
Disease	.5	..	.5	1.4	..	1.4
Other	1.2	.2	1.0	4.1	.7	3.4
Unknown	10.5	1.5	9.0	30.7	4.5	26.2
All causes	13.8	2.3	11.5	39.5	7.5	32.0

Table 28. Total output of timber products by product, by type of material used, and by softwoods and hardwoods, east Oklahoma, 1965

Product and species group	Total output in standard units		Output from roundwood		Output from plant by-products (standard units)
	Unit	Number	Standard units	M cubic feet	
Saw logs:					
Softwood	M bd. ft. ¹	81,417	81,417	13,393	..
Hardwood	M bd. ft. ¹	22,520	22,520	3,754	..
Total	M bd. ft. ¹	103,937	103,937	17,147	...
Veneer logs and bolts:					
Softwood	M bd. ft.	...	...	...	...
Hardwood	M bd. ft.	420	420	70	...
Total	M bd. ft.	420	420	70	...
Pulpwood:					
Softwood	Std. cords ²	61,178	8,019	605	53,159
Hardwood	Std. cords ²	12,106	12,106	942	...
Total	Std. cords ²	73,284	20,125	1,547	53,159
Piling:					
Softwood	M linear ft.	144	144	71	...
Hardwood	M linear ft.	...	...	...	...
Total	M linear ft.	144	144	71	...
Poles:					
Softwood	M pieces	114	114	443	...
Hardwood	M pieces	...	...	...	...
Total	M pieces	114	114	443	...
Misc. industrial wood: ³					
Softwood	M cu. ft.	580	..	..	580
Hardwood	M cu. ft.	2,429	2,292	2,292	137
Total	M cu. ft.	3,009	2,292	2,292	717
Posts (round and split):					
Softwood	M pieces	3,411	3,411	2,108	..
Hardwood	M pieces	780	780	499	..
Total	M pieces	4,191	4,191	2,607	...
Fuelwood:					
Softwood	Std. cords	18,050	..	...	* 18,050
Hardwood	Std. cords	85,794	81,630	6,122	* 4,164
Total	Std. cords	103,844	81,630	6,122	* 22,214
All products:					
Softwood	M cu. ft.	...	...	16,620	...
Hardwood	M cu. ft.	...	...	13,679	...
Total	M cu. ft.	...	...	30,299	...

¹ International 1/4-inch rule.

² Rough wood basis (for example, chips converted to equivalent standard cords).

³ Includes chemical wood, furniture stock, handle stock, miscellaneous dimension, cooperage (logs and bolts), and other minor industrial products. Additionally, byproducts include material used for livestock bedding, mulch, etc.

* Includes plant byproducts used for industrial and domestic fuel.

Table 29. *Output of roundwood products by source, and softwoods and hardwoods, east Oklahoma, 1965*

Product and species group	All sources	Growing-stock trees ¹			Rough and rotten trees ¹	Salvable dead trees ¹	Other sources ²
		Total	Sawtimber	Poletimber			
----- Thousand cubic feet -----							
Saw logs:							
Softwood	13,393	13,304	13,255	49	16		73
Hardwood	3,754	3,614	3,610	4	50	88	2
Total	17,147	16,918	16,865	53	66	88	75
Veneer logs and bolts:							
Softwood							
Hardwood	70	69	69		1		
Total	70	69	69		1		
Pulpwood:							
Softwood	605	576	397	179	4		25
Hardwood	942	757	425	332	143	2	40
Total	1,547	1,333	822	511	147	2	65
Piling:							
Softwood	71	71	71				
Hardwood							
Total	71	71	71				
Poles:							
Softwood	443	440	389	51			3
Hardwood							
Total	443	440	389	51			3
Misc. industrial wood:							
Softwood							
Hardwood	2,292	1,668	761	907	250	124	250
Total	2,292	1,668	761	907	250	124	250
Posts (round and split):							
Softwood	2,108	1,921	4	1,917			187
Hardwood	499	450	131	319	22		27
Total	2,607	2,371	135	2,236	22		214
Fuelwood:							
Softwood							
Hardwood	6,122	4,082	735	3,347	326	482	1,232
Total	6,122	4,082	735	3,347	326	482	1,232
All products:							
Softwood	16,620	16,312	14,116	2,196	20		288
Hardwood	13,679	10,640	5,731	4,909	792	696	1,551
Total	30,299	26,952	19,847	7,105	812	696	1,839

¹ On commercial forest land.

² Includes noncommercial forest land, nonforest land such as fence rows, trees less than 5.0 inches in diameter, and treetops and limbs.

Table 30. *Timber removals from growing stock on commercial forest land, by items, and by softwoods and hardwoods, east Oklahoma, 1965*

Item	All species	Softwood	Hardwood
-- Thousand cubic feet --			
Roundwood products:			
Saw logs	16,918	13,304	3,614
Veneer logs and bolts	69		69
Pulpwood	1,333	576	757
Piling	71	71	
Poles	440	440	
Miscellaneous industrial wood	1,668		1,668
Posts	2,371	1,921	450
Fuelwood	4,082		4,082
All products	26,952	16,312	10,640
Logging residues	4,980	2,051	2,929
Other removals	9,868	737	9,131
Total removals	41,800	19,100	22,700

Table 31. *Timber removals from live sawtimber on commercial forest land, by items, and by softwoods and hardwoods, east Oklahoma, 1965*

Item	All species	Softwood	Hardwood
-- Thousand board feet --			
Roundwood products:			
Saw logs	101,583	80,431	21,152
Veneer logs and bolts	408		408
Pulpwood	3,225	1,578	1,647
Piling	418	418	
Poles	2,247	2,247	
Miscellaneous industrial wood	4,012		4,012
Posts	523	16	507
Fuelwood	3,592		3,592
All products	116,008	84,690	31,318
Logging residues	9,774	3,310	6,464
Other removals	15,218		15,218
Total removals	141,000	88,000	53,000

Table 32. *Volume of plant residues by industrial source and type of residue, and by softwoods and hardwoods, east Oklahoma, 1965*

Industrial source	All species			Softwood			Hardwood		
	Total	Coarse ¹	Fine ²	Total	Coarse ¹	Fine ²	Total	Coarse ¹	Fine ²
----- Thousand cubic feet -----									
Lumber industry	2,544	1,365	1,179	1,386	840	546	1,158	525	633
Other primary industries	876	623	253	518	392	126	358	231	127
All industries	3,420	1,988	1,432	1,904	1,232	672	1,516	756	760

¹ Unused material suitable for chipping, such as slabs and edgings.

² Unused material not suitable for chipping, such as sawdust and shavings.

Table 33. *Projections of net annual growth, available cut, and inventory of growing stock and sawtimber on commercial forest land, east Oklahoma, 1965 to 1995 ¹*

Species group	Growing stock				Sawtimber			
	1965	1975	1985	1995	1965	1975	1985	1995
----- Thousand cubic feet -----								
Softwood:								
Cut	19,100	43,000	64,900	81,100	88,000	161,000	205,000	215,000
Growth	40,700	57,300	72,100	81,100	134,000	163,000	180,000	183,000
Inventory ²	754,500	930,700	1,035,000	1,067,200	2,503,600	2,757,000	2,606,000	2,310,000
Hardwood:								
Cut	22,700	29,300	37,200	45,000	53,000	70,000	71,000	62,000
Growth	21,400	29,000	37,400	45,000	38,000	36,000	34,000	31,000
Inventory ²	823,800	815,600	816,600	819,000	1,800,600	1,508,000	1,144,000	800,000
Total:								
Cut	41,800	72,300	102,100	126,100	141,000	231,000	276,000	277,000
Growth	62,100	86,300	109,500	126,100	172,000	199,000	214,000	214,000
Inventory ²	1,578,300	1,746,300	1,851,600	1,886,200	4,309,200	4,265,000	3,750,000	3,110,000

¹ Based on the assumption that the cut of growing stock will be in balance with growth by the year 1995, and that forestry progress will continue at the rate indicated by recent trends.

² Inventory as of January 1 of the following year.

COUNTY TABLES

The tables that follow are intended for use in compiling forest resource estimates for groups of counties. Because the sampling procedure used by the Forest Survey in east Oklahoma was intended primarily to furnish inventory data for the region as a whole, estimates for individual counties have limited and variable accuracy. As county totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the tabulations on page 17.

Table 34. *Land area and commercial forest by county, east Oklahoma, 1966*

County	All land		Commercial forest		County	All land		Commercial forest	
	Thousand acres	Thousand acres	Percent			Thousand acres	Thousand acres	Percent	
Adair	364.8	237.9	65.2		McCurtain	1,183.5	874.5	73.9	
Atoka	629.0	328.3	52.2		McIntosh	406.1	102.6	25.3	
Cherokee	483.5	256.2	53.0		Mayes	424.3	118.0	27.8	
Choctaw	499.5	261.0	52.3		Muskogee	523.6	77.9	14.9	
Coal	336.6	108.0	32.1		Ottawa	297.1	78.4	26.4	
Delaware	452.7	254.2	56.2		Pittsburg	834.4	217.6	26.1	
Haskell	388.9	127.6	32.8		Pushmataha	910.7	693.0	76.1	
Latimer	471.3	305.0	64.7		Sequoyah	445.6	116.0	26.0	
Le Flore	1,004.0	661.2	65.9		All counties	9,655.6	4,817.4	49.9	

Table 35. *Growing-stock volume by species groups and county, east Oklahoma, 1966*

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	Pine	Other	Total	Gum	Other	Total	Oak	Other
----- Thousand cords -----										
Adair	736	76	76	...	48	38	10	612	461	151
Atoka	814	179	179	...	57	...	57	578	273	305
Cherokee	882	44	44	...	78	17	61	760	415	345
Choctaw	1,103	29	29	...	296	218	78	778	453	325
Coal	383	...	...	...	25	...	25	358	133	225
Delaware	617	11	11	...	10	10	...	596	512	84
Haskell	590	43	43	...	269	...	269	278	109	169
Latimer	721	394	394	...	...	...	...	327	246	81
Le Flore	2,967	1,628	1,605	23	161	140	21	1,178	724	454
McCurtain	8,309	5,148	5,133	15	551	464	87	2,610	1,851	759
McIntosh	153	...	...	...	34	...	34	119	74	45
Mayes	388	51	51	...	61	15	46	276	194	82
Muskogee	192	3	3	...	4	...	4	185	91	94
Ottawa	334	...	...	...	...	...	...	334	283	51
Pittsburg	466	60	57	3	...	...	...	406	212	194
Pushmataha	3,403	2,245	2,220	25	106	85	21	1,052	772	280
Sequoyah	298	149	149	...	12	...	12	137	103	34
All counties	22,356	10,060	9,994	66	1,712	987	725	10,584	6,906	3,678

Table 36. Sawtimber volume by species groups and county, east Oklahoma, 1966

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	Pine	Other	Total	Gum	Other	Total	Oak	Other
----- Million board feet -----										
Adair	70.7	14.0	14.0	..	7.7	7.7	..	49.0	27.2	21.8
Atoka	140.1	33.0	33.0	.	20.2	.	20.2	86.9	45.7	41.2
Cherokee	144.5	8.7	8.7	.	10.1	4.5	5.6	125.7	63.8	61.9
Choctaw	187.4	4.8	4.8	.	40.5	25.5	15.0	142.1	70.7	71.4
Coal	96.0	.	..	..	3.7	.	3.7	92.3	30.2	62.1
Delaware	106.4	4.2	4.2	.	3.3	3.3	..	98.9	85.1	13.8
Haskell	96.8	6.6	6.6	...	48.7	.	48.7	41.5	13.6	27.9
Latimer	101.2	64.4	64.4	.	..	.	.	36.8	30.8	6.0
Le Flore	547.8	402.1	401.0	1.1	32.8	25.9	6.9	112.9	78.1	34.8
McCurtain	1,843.4	1,397.5	1,394.1	3.4	92.0	77.6	14.4	353.9	248.3	105.6
McIntosh	29.9	.	..	...	6.9	.	6.9	23.0	14.7	8.3
Mayes	75.8	13.4	13.4	...	16.0	2.3	13.7	46.4	23.0	23.4
Muskogee	13.4	1.1	1.1	..	...	.	..	12.3	3.4	8.9
Ottawa	53.9	.	.	...	.	.	...	53.9	42.9	11.0
Pittsburg	80.8	8.8	8.8	...	..	.	..	72.0	40.7	31.3
Pushmataha	679.6	517.8	511.8	6.0	16.4	15.2	1.2	145.4	110.5	34.9
Sequoyah	41.5	32.2	32.2	.	..	..	..	9.3	4.9	4.4
All counties	4,309.2	2,508.6	2,498.1	10.5	298.3	162.0	136.3	1,502.3	933.6	568.7

Table 37. Sawtimber volume by diameter classes and county, east Oklahoma, 1966

County	All species	Softwood			Soft hardwood			Hard hardwood		
		Total	9.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up
----- Million board feet -----										
Adair	70.7	14.0	14.0	..	7.7	7.7	...	49.0	39.5	9.5
Atoka	140.1	33.0	30.9	2.1	20.2	6.0	14.2	86.9	45.9	41.0
Cherokee	144.5	8.7	8.7	..	10.1	2.5	7.6	125.7	55.3	70.4
Choctaw	187.4	4.8	3.9	.9	40.5	25.8	14.7	142.1	63.5	78.6
Coal	96.0	...	...	..	3.7	1.5	2.2	92.3	34.2	58.1
Delaware	106.4	4.2	4.2	...	3.3	1.1	2.2	98.9	54.5	44.4
Haskell	96.8	6.6	4.5	2.1	48.7	33.1	15.6	41.5	24.5	17.0
Latimer	101.2	64.4	56.0	8.4	..	.	...	36.8	25.6	11.2
Le Flore	547.8	402.1	323.7	78.4	32.8	7.8	25.0	112.9	66.2	46.7
McCurtain	1,843.4	1,397.5	949.0	448.5	92.0	57.0	35.0	353.9	218.0	135.9
McIntosh	29.9	...	...	.	6.9	2.4	4.5	23.0	13.7	9.3
Mayes	75.8	13.4	12.3	1.1	16.0	3.3	12.7	46.4	20.8	25.6
Muskogee	13.4	1.1	...	1.1	...	.	...	12.3	7.8	4.5
Ottawa	53.9	..	...	...	...	...	...	53.9	32.3	21.6
Pittsburg	80.8	8.8	6.7	2.1	...	.	...	72.0	19.7	52.3
Pushmataha	679.6	517.8	397.4	120.4	16.4	4.7	11.7	145.4	77.1	68.3
Sequoyah	41.5	32.2	29.2	3.0	...	...	...	9.3	4.6	4.7
All counties	4,309.2	2,508.6	1,840.5	668.1	298.3	152.9	145.4	1,502.3	803.2	699.1

Table 38. *Timber removals from growing stock and sawtimber by county, east Oklahoma, 1965*

County	Growing stock			Sawtimber		
	All species	Soft-wood	Hard-wood	All species	Soft-wood	Hard-wood
	- Million cubic feet -			- Million board feet -		
Adair	0.5	(¹)	0.5	0.7	(¹)	0.7
Atoka	1.4	0.2	1.2	3.9	0.7	3.2
Cherokee	1.5	(¹)	1.5	2.9	(¹)	2.9
Choctaw	1.3	.2	1.1	3.1	.3	2.8
Coal	.5	(¹)	.5	1.7	...	1.7
Delaware	1.1	(¹)	1.1	2.7	(¹)	2.7
Haskell	.4	...	.4	1.4	...	1.4
Latimer	.9	(¹)	.9	1.3	.2	1.1
Le Flore	5.4	2.2	3.2	12.8	6.2	6.6
McCurtain	18.5	12.0	6.5	78.5	59.0	19.5
McIntosh	.6	..	.6	.4	...	.4
Mayes	.4	...	.4	1.2	(¹)	1.2
Muskogee	.7	..	.7	1.0	...	1.0
Ottawa	.8	..	.8	1.8	...	1.8
Pittsburg	.9	.1	.8	1.2	.4	.8
Pushmataha	6.3	4.4	1.9	25.1	21.2	3.9
Sequoyah	.6	(¹)	.6	1.3	..	1.3
All counties	41.8	19.1	22.7	141.0	88.0	53.0

¹ Negligible.

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Forest Service, U.S. Department of Agriculture

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Forest Statistics for Mississippi Counties

*Arnold Hedlund
and
J. M. Earles*



SOUTHERN FOREST EXPERIMENT STATION
New Orleans, Louisiana
Forest Service, U. S. Department of Agriculture

Mississippi Forest Survey Regions

NORTH: Alcorn, Benton, Calhoun, Carroll, Chickasaw, Choctaw, Clay, De Soto, Grenada, Itawamba, Lafayette, Lee, Lowndes, Marshall, Monroe, Montgomery, Oktibbeha, Panola, Pontotoc, Prentiss, Tate, Tippah, Tishomingo, Union, Webster, Yalobusha

CENTRAL: Attala, Clarke, Jasper, Kemper, Lauderdale, Leake, Neshoba, Newton, Noxubee, Rankin, Scott, Simpson, Smith, Winston

SOUTHWEST: Adams, Amite, Claiborne, Copiah, Franklin, Hinds, Jefferson, Lincoln, Madison, Pike, Wilkinson

SOUTH: Covington, Forrest, George, Greene, Hancock, Harrison, Jackson, Jefferson Davis, Jones, Lamar, Lawrence, Marion, Pearl River, Perry, Stone, Walthall, Wayne

DELTA: Bolivar, Coahoma, Holmes, Humphreys, Issaquena, Leflore, Quitman, Sharkey, Sunflower, Tallahatchie, Tunica, Warren, Washington, Yazoo

FOREST STATISTICS FOR MISSISSIPPI COUNTIES

Arnold Hedlund and J. M. Earles

This report tabulates information from a new forest survey of Mississippi, completed in 1967 by the Southern Forest Experiment Station. The tables are intended for use as source data in compiling estimates for groups of counties. Because the sampling procedure used in Mississippi was intended primarily to furnish inventory data for the State as a whole, estimates for individual counties have limited and variable accuracy.

The data on forest acreage and timber volume were secured by a systematic sampling method involving a forest-nonforest classification on aerial photographs and on-the-ground measurements of trees at sample locations. The sample locations were at the intersections of a grid of lines spaced 3 miles apart. At each forested location, 10 small plots were uniformly distributed on an area of about 1 acre.

Estimates of growth are based on remeasurement of permanent plots at sample locations. Timber removals were determined from special studies conducted during the period of forest inventory.

Computations of the data were programmed on electronic computer facilities of the National Aeronautics and Space Administration.

As data for the entire State are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase is suggested in the following tabulation, which shows the sampling error to which the estimates of forest area, growing-stock volume, and sawtimber volume are liable (on a probability of two chances out of three):

Commercial forest area	Sampling error ¹	Cubic volume ²	Sampling error ¹	Board-foot volume ³	Sampling error ¹
<i>Thousand acres</i>	<i>Percent</i>	<i>Million cubic feet</i>	<i>Percent</i>	<i>Million board feet</i>	<i>Percent</i>
16,891.9	0.3	.	.	.	.
1,520.3	1.0	13,034.6	1.6	.	.
380.1	2.0	8,342.1	2.0	42,235.5	2.3
168.9	3.0	3,707.6	3.0	24,825.1	3.0
95.0	4.0	2,085.5	4.0	13,964.1	4.0
60.8	5.0	1,334.7	5.0	8,937.0	5.0
15.2	10.0	333.7	10.0	2,234.0	10.0
6.8	15.0	148.3	15.0	993.0	15.0
3.8	20.0	83.4	20.0	558.6	20.0
2.4	25.0	53.4	25.0	357.5	25.0

¹ By random-sampling formula.

² Growing-stock volume on commercial forest land.

³ Sawtimber volume on commercial forest land.

The sampling error to which the estimates of growth and removals are liable, two chances out of three, are:

Net annual growth				Annual removals			
Cubic volume	Sampling error ¹	Board-foot volume	Sampling error ¹	Cubic volume	Sampling error ¹	Board-foot volume	Sampling error ¹
<i>Million cubic feet</i>	<i>Percent</i>	<i>Million board feet</i>	<i>Percent</i>	<i>Million cubic feet</i>	<i>Percent</i>	<i>Million board feet</i>	<i>Percent</i>
873.5	1.6	.	.	538.5	1.9	.	.
559.0	2.0	2,834.5	2.4	486.0	2.0	.	.
248.5	3.0	1,814.1	3.0	216.0	3.0	1,962.1	3.2
139.8	4.0	1,020.4	4.0	121.5	4.0	1,225.7	4.0
89.4	5.0	653.1	5.0	77.8	5.0	803.7	5.0
22.4	10.0	163.3	10.0	19.4	10.0	200.9	10.0
9.9	15.0	72.6	15.0	8.6	15.0	89.3	15.0
5.6	20.0	40.8	20.0	4.9	20.0	50.2	20.0
3.6	25.0	26.1	25.0	3.1	25.0	32.1	25.0

¹ By random-sampling formula.

Sampling errors for individual counties are available on request.

Because of differences in standards of tree measurement, meaningful comparisons cannot be made between the volume estimates in this report and those contained in earlier publications on Mississippi. An interpretive report on Mississippi forests is now in preparation and will include an evaluation of timber trends since the previous Statewide survey of 1957.

DEFINITIONS OF TERMS

Acceptable trees.—Growing-stock trees that are of commercial species and meet specified standards of size and quality, but do not qualify as desirable trees.

Commercial forest land.—Forest land producing or capable of producing crops of industrial wood and not withdrawn from commercial timber production.

Desirable trees.—Growing-stock trees that are of commercial species, have no defects in quality for timber products, are of relatively high vigor, and contain no pathogens that may result in death or serious deterioration before rotation age.

Forest type.—A classification of forest land based upon the species forming a plurality of live-tree stocking.

Growing-stock trees.—Live trees that are of commercial species and qualify as desirable or acceptable trees.

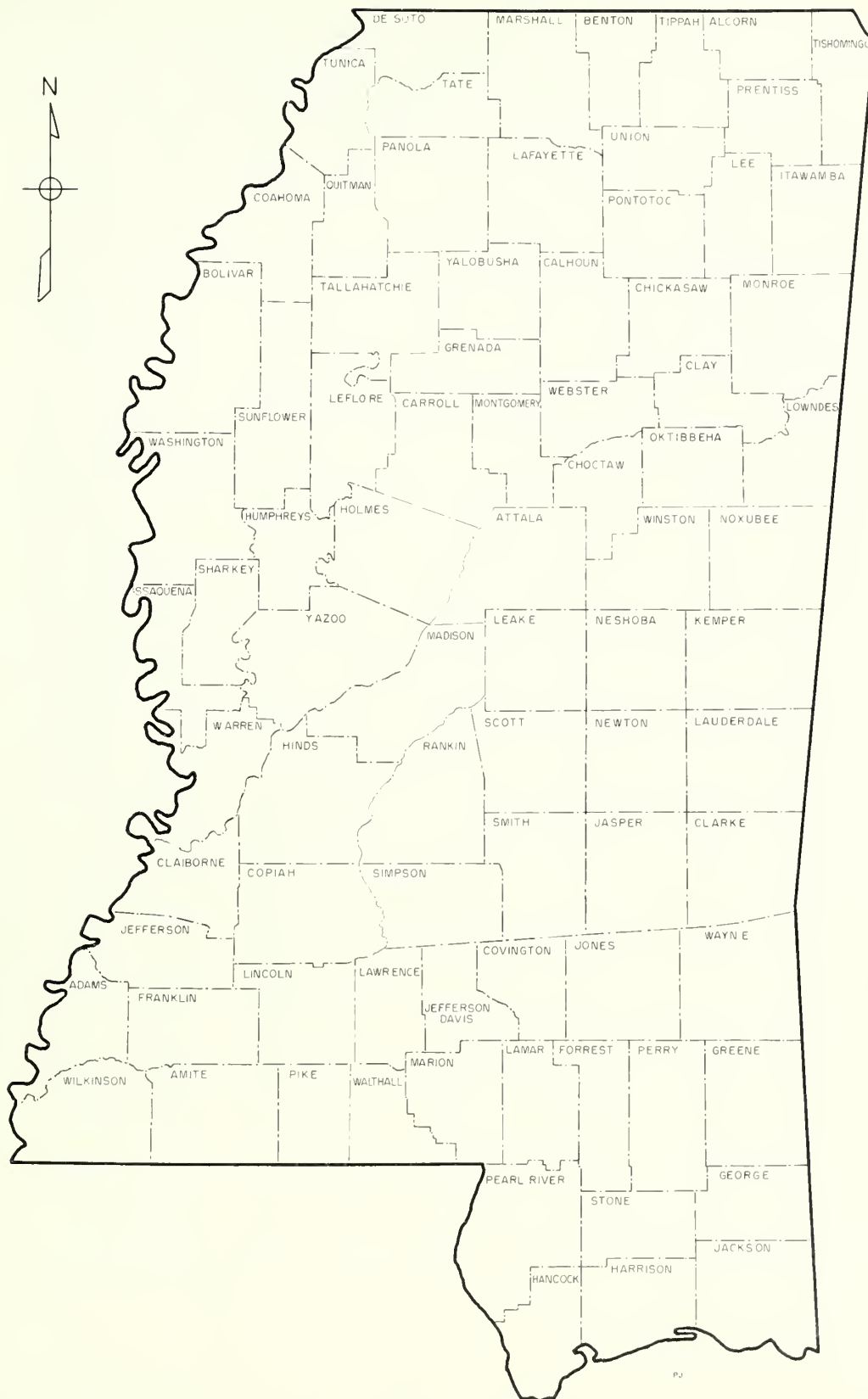
Growing-stock volume.—Net volume in cubic feet of growing-stock trees 5.0 inches d.b.h. and over from a 1-foot stump to a minimum 4.0-inch top diameter outside bark of the central stem, or to the point where the central stem breaks into limbs.

Net annual growth.—The increase in volume of a specified size class for a specific year.

Sawtimber trees.—Live trees that are of commercial species, contain at least a 12-foot saw log, and meet Regional specifications for freedom from defect. Softwoods must be at least 9.0 inches in diameter at breast height and hardwoods at least 11.0 inches.

Sawtimber volume.—Net volume of the saw-log portion of live sawtimber in board feet International $\frac{1}{4}$ -inch rule.

Timber removals.—The net volume of growing-stock trees removed from the inventory by harvesting; cultural operations, such as timber-stand improvement; land clearing; or changes in land use.



Mississippi counties.

Table 1.—Commercial forest land by ownership class and county, Mississippi, 1967

County	All ownerships	National forest	Other public	Forest industry	Farmer	Misc. private
----- Thousand acres -----						
Adams	209.0	15.0	8.0	5.5	82.6	97.9
Alcorn	126.0	.	.	3.6	67.9	54.5
Amite	319.0	34.5	8.6	33.1	99.1	143.7
Attala	313.2	.	4.5	26.2	110.2	172.3
Benton	167.0	50.5	.	.	95.0	21.5
Bolivar	75.6	.	2.5	12.2	20.6	40.3
Calhoun	210.8	.	9.2	94.3	94.7	12.6
Carroll	217.8	.	5.6	10.7	131.7	69.8
Chickasaw	132.2	25.1	.	6.2	47.9	53.0
Choctaw	188.7	11.0	3.1	15.2	76.0	83.4
Claiborne	221.0	.	7.4	32.5	104.1	77.0
Clarke	347.2	.	11.6	92.5	59.8	183.3
Clay	112.0	.	1.3	22.2	38.9	49.6
Coahoma	68.6	.	3.9	23.3	41.4	.
Copiah	345.0	7.1	16.5	30.0	140.2	151.2
Covington	151.2	.	4.7	10.7	90.7	45.1
De Soto	75.8	.	3.4	.	62.9	9.5
Forrest	216.2	49.7	10.1	18.6	27.9	109.9
Franklin	300.0	93.7	8.8	48.1	84.1	65.3
George	235.2	8.8	12.2	66.4	60.9	86.9
Greene	408.0	33.2	13.5	146.2	105.8	109.3
Grenada	161.4	.	21.6	17.0	56.6	66.2
Hancock	236.8	.	20.7	50.6	63.2	102.3
Harrison	285.6	60.5	7.5	75.6	70.6	71.4
Hinds	208.8	.	7.2	5.8	133.6	62.2
Holmes	214.7	.	6.2	15.9	151.6	41.0
Humphreys	68.0	.	2.2	6.6	33.4	25.8
Issaquena	128.0	.	5.2	68.3	12.6	41.9
Itawamba	225.6	.	.1	42.9	114.4	68.2
Jackson	378.0	19.0	13.6	100.8	53.4	191.2
Jasper	308.0	16.9	7.4	65.3	59.8	158.6
Jefferson	239.4	7.8	5.3	28.5	125.5	72.3
Jefferson Davis	135.0	.	3.9	39.5	54.3	37.3
Jones	297.6	32.7	5.4	12.3	73.5	173.7
Kemper	347.7	.	10.0	83.1	177.3	77.3
Lafayette	259.2	35.5	18.6	10.5	139.1	55.5
Lamar	235.2	.	5.0	55.3	71.9	103.0
Lauderdale	345.6	.	17.1	42.0	178.4	108.1
Lawrence	187.0	.	3.4	65.2	81.5	36.9
Lcake	230.0	.	7.7	29.1	97.2	96.0
Lee	75.4	.	.4	.	40.3	34.7
Leflore	66.0	.	3.7	.	62.3	.
Lincoln	249.6	7.7	6.8	12.8	121.7	100.6
Lowndes	130.0	.	4.7	5.0	89.4	30.9

Table 1.—Commercial forest land by ownership class and county, Mississippi, 1967
(Continued)

County	All ownerships	National forest	Other public	Forest industry	Farmer	Misc. private
----- Thousand acres -----						
Madison	189.0	.	7.4	16.2	102.7	62.7
Marion	214.5	(¹)	13.7	38.0	65.2	97.6
Marshall	212.2	19.6	16.2	..	104.0	72.4
Monroe	254.2	.	4.6	30.8	12.3	206.5
Montgomery	159.7	.	4.3	11.5	78.7	65.2
Neshoba	202.4	.	12.0	25.7	59.8	104.9
Newton	245.0	3.1	7.6	24.3	77.7	132.3
Noxubee	225.5	.	13.5	32.1	106.9	73.0
Oktibbeha	148.8	.1	23.1	14.3	23.8	87.5
Panola	147.1	..	15.4	20.6	79.5	31.6
Pearl River	359.6	5.2	11.7	67.4	42.9	232.4
Perry	347.2	158.9	10.1	44.3	49.8	84.1
Pike	144.9	.	6.4	6.9	82.9	48.7
Pontotoc	143.5	.5	.4	4.4	112.4	25.8
Prentiss	133.4	.	..	9.1	59.4	64.9
Quitman	42.7	..	5.9	.	36.8	...
Rankin	353.8	...	13.8	22.5	146.5	171.0
Scott	261.0	85.9	8.0	11.3	95.8	60.0
Sharkey	95.4	57.8	4.0	..	20.8	12.8
Simpson	248.0	.	6.3	60.2	78.3	103.2
Smith	278.4	67.8	7.4	28.2	56.4	118.6
Stone	243.0	39.4	20.6	57.8	17.8	107.4
Sunflower	36.9	..	1.5	...	35.4	..
Tallahatchie	127.5	..	5.1	...	106.6	15.8
Tate	86.4	.	3.4	7.0	59.6	16.4
Tippah	161.1	7.6	.2	.	97.3	56.0
Tishomingo	188.1	.	7.6	34.0	22.6	123.9
Tunica	72.0	.	1.8	17.5	31.0	21.7
Union	128.7	7.8	(¹)	...	52.2	68.7
Walthall	122.4	..	3.4	..	53.8	65.2
Warren	193.2	..	10.1	35.6	81.4	66.1
Washington	70.8	.	13.4	11.5	29.1	16.8
Wayne	436.6	89.2	12.8	119.5	77.7	137.4
Webster	165.2	.	2.3	22.7	92.2	48.0
Wilkinson	329.0	20.6	9.5	140.2	49.1	109.6
Winston	253.7	27.7	22.9	40.1	97.4	65.6
Yalobusha	184.5	18.9	18.2	8.9	98.3	40.2
Yazoo	234.4	.	8.2	12.9	6.5	206.8
All counties	16,891.9	1,118.8	651.4	2,505.1	6,204.6	6,412.0

¹ Negligible.

Table 2.—Commercial forest land by forest type and county, Mississippi, 1967

County	All types	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cotton-wood
----- Thousand acres -----							
Adams	209.0	.	16.5	33.0	93.5	27.5	38.5
Alcorn	126.0	.	28.8	18.0	57.6	21.6	.
Amite	319.0	5.5	165.0	88.0	27.5	33.0	.
Attala	313.2	.	91.8	37.8	108.0	75.6	.
Benton	167.0	.	38.5	48.3	66.3	4.1	9.8
Bolivar	75.6	.	.	.	.	21.0	54.6
Calhoun	210.8	.	81.6	61.2	61.2	6.8	...
Carroll	217.8	.	42.9	42.6	96.6	30.6	5.1
Chickasaw	132.2	.	25.3	53.7	50.1	3.1	.
Choctaw	188.7	.	81.6	66.3	30.6	10.2	.
Claiborne	221.0	.	32.5	13.0	84.5	91.0	.
Clarke	347.2	5.6	162.4	44.8	78.4	50.4	5.6
Clay	112.0	.	28.0	.	33.6	50.4	...
Coahoma	68.6	.	.	.	.	39.2	29.4
Copiah	345.0	.	110.0	90.0	75.0	70.0	..
Covington	151.2	5.4	37.8	32.4	37.8	37.8	.
De Soto	75.8	.	.	7.5	32.5	33.3	2.5
Forrest	216.2	98.7	47.0	32.9	14.1	23.5	.
Franklin	300.0	..	162.0	54.0	48.0	36.0	...
George	235.2	67.2	44.8	44.8	16.8	61.6	.
Greene	408.0	56.1	102.0	96.9	76.5	76.5	.
Grenada	161.4	.	39.9	22.8	62.7	36.0	.
Hancock	236.8	128.0	19.2	25.6	.	64.0	.
Harrison	285.6	183.6	20.4	45.9	10.2	25.5	.
Hinds	208.8	.	52.2	34.8	75.4	46.4	.
Holmes	214.7	.	16.4	58.7	83.5	45.9	10.2
Humphreys	68.0	...	.	..	...	68.0	...
Issaquena	128.0	.	.	.	6.4	108.8	12.8
Itawamba	225.6	.	48.0	57.6	76.8	38.4	4.8
Jackson	378.0	192.0	18.0	54.0	.	114.0	.
Jasper	308.0	.	140.0	39.2	89.6	39.2	..
Jefferson	239.4	.	34.2	39.9	108.3	34.2	22.8
Jefferson Davis	135.0	..	55.0	20.0	45.0	15.0	..
Jones	297.6	55.8	105.4	68.2	43.4	24.8	.
Kemper	347.7	.	119.7	102.6	57.0	68.4	.
Lafayette	259.2	.	75.2	27.1	135.3	21.6	.
Lamar	235.2	112.0	39.2	39.2	28.0	16.8	..
Lauderdale	345.6	5.4	172.8	48.6	70.2	48.6	..
Lawrence	187.0	5.5	77.0	38.5	16.5	49.5	..
Leake	230.0	.	90.0	60.0	55.0	25.0	..
Lee	75.4	.	11.6	23.2	29.0	11.6	.
Leflore	66.0	.	.	.	11.0	55.0	.

Table 2.—Commercial forest land by forest type and county, Mississippi, 1967
(Continued)

County	All types	Longleaf-slash pine	Loblolly-shortleaf pine	Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cotton-wood
----- Thousand acres -----							
Lincoln	249.6	6.4	115.2	32.0	76.8	19.2	..
Lowndes	130.0	.	10.0	35.0	25.0	60.0	..
Madison	189.0	5.4	59.4	32.4	37.8	54.0	..
Marion	214.5	11.0	27.5	71.5	55.0	49.5	..
Marshall	212.2	.	34.9	20.2	103.8	53.3	..
Monroe	254.2	.	31.0	18.6	117.8	86.8	..
Montgomery	159.7	.	38.4	53.6	57.2	10.5	..
Neshoba	202.4	.	70.4	44.0	52.8	35.2	..
Newton	245.0	5.0	100.0	50.0	65.0	25.0	..
Noxubee	225.5	.	49.5	55.0	55.0	66.0	..
Oktibbeha	148.8	4.8	38.4	24.0	57.6	24.0	..
Panola	147.1	.	17.8	5.3	93.7	17.8	12.5
Pearl River	359.6	130.2	43.4	80.6	24.8	80.6	..
Perry	347.2	84.0	78.4	89.6	56.0	39.2	..
Pike	144.9	.	48.3	62.1	13.8	20.7	..
Pontotoc	143.5	.	32.5	29.8	66.6	14.6	..
Prentiss	133.4	.	41.4	36.8	41.4	9.2	4.6
Quitman	42.7	..	..	..	..	36.6	6.1
Rankin	353.8	.	110.2	121.8	63.8	58.0	..
Scott	261.0	5.8	116.0	63.8	58.0	17.4	..
Sharkey	95.4	.	..	..	5.3	90.1	..
Simpson	248.0	.	80.6	74.4	49.6	43.4	..
Smith	278.4	5.8	116.0	87.0	63.8	5.8	..
Stone	243.0	94.5	31.5	63.0	13.5	40.5	..
Sunflower	36.9	.	..	..	..	24.6	12.3
Tallahatchie	127.5	.	4.3	12.9	43.0	67.3	..
Tate	86.4	.	3.4	..	67.0	8.0	8.0
Tippah	161.1	.	49.7	32.5	70.3	8.6	..
Tishomingo	188.1	.	51.3	51.3	51.3	34.2	..
Tunica	72.0	..	..	..	..	31.5	40.5
Union	128.7	.	24.6	22.4	63.8	17.9	..
Walthall	122.4	20.4	27.2	20.4	20.4	34.0	..
Warren	193.2	..	..	..	105.8	55.2	32.2
Washington	70.8	..	..	..	..	53.1	17.7
Wayne	436.6	35.4	100.3	182.9	82.6	35.4	..
Webster	165.2	.	59.4	26.0	73.0	6.8	..
Wilkinson	329.0	.	98.0	56.0	91.0	77.0	7.0
Winston	253.7	5.9	64.9	94.4	70.8	17.7	..
Yalobusha	184.5	.	36.0	45.0	94.5	9.0	..
Yazoo	234.4	..	.	6.6	126.8	85.8	15.2
All counties	16,891.9	1,335.4	4,242.6	3,372.0	4,306.3	3,283.4	352.2

Table 3.—*Cordage of growing-stock on commercial forest land by species group and county, Mississippi, 1967*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Thousand cords -----								
Adams	2,196	605	600	5	1,591	357	276	958
Alcorn	950	240	240		710	443	91	176
Amite	4,215	2,828	2,828		1,387	778	300	309
Attala	3,031	1,328	1,303	25	1,703	762	469	472
Benton	2,129	533	522	11	1,596	778	339	479
Bolivar	1,511	45		45	1,466	110	169	1,187
Calhoun	2,039	1,339	1,335	4	700	451	125	124
Carroll	1,604	283	275	8	1,321	625	330	366
Chickasaw	1,193	351	348	3	842	539	175	128
Choctaw	1,658	892	892		766	499	145	122
Claiborne	2,772	551	544	7	2,221	513	594	1,114
Clarke	4,408	2,539	2,534	5	1,869	958	457	454
Clay	1,250	125	125		1,125	624	131	370
Coahoma	837	68		68	769	93	48	628
Copiah	4,533	2,378	2,357	21	2,155	1,061	561	533
Covington	1,942	811	790	21	1,131	579	303	249
De Soto	944	35	1	34	909	251	216	442
Forrest	1,900	1,601	1,601		299	100	132	67
Franklin	5,217	4,019	4,016	3	1,198	582	300	316
George	2,109	1,321	1,192	129	788	221	258	309
Greene	3,271	2,087	2,087		1,184	493	370	321
Grenada	1,327	308	300	8	1,019	646	148	225
Hancock	1,894	1,360	1,331	29	534	64	248	222
Harrison	3,349	2,698	2,693	5	651	87	239	325
Hinds	1,696	521	502	19	1,175	544	230	401
Holmes	1,239	312	289	23	927	334	281	312
Humphreys	688				688	375	113	200
Issaquena	2,015	37		37	1,978	563	279	1,136
Itawamba	1,965	644	631	13	1,321	569	331	421
Jackson	4,350	2,305	2,193	112	2,045	267	1,404	374
Jasper	4,005	2,495	2,478	17	1,510	618	516	376
Jefferson	3,107	1,752	947	805	1,355	451	293	611
Jefferson Davis	1,402	857	857		545	224	187	134
Jones	3,787	2,720	2,717	3	1,067	500	301	266
Kemper	4,157	2,224	2,204	20	1,933	964	579	390
Lafayette	2,017	792	785	7	1,225	846	176	203
Lamar	1,841	1,289	1,289		552	90	261	201
Lauderdale	4,923	2,856	2,856		2,067	1,064	500	503
Lawrence	2,162	1,320	1,297	23	842	433	207	202
Leake	3,255	1,676	1,665	11	1,579	931	373	275
Lee	335	56	53	3	279	119	48	112
Leflore	748				748	377	134	237

Table 3.—*Cordage of growing-stock on commercial forest land by species group and county, Mississippi, 1967 (Continued)*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Thousand cords -----								
Lincoln	2,865	1,659	1,655	4	1,206	495	296	415
Lowndes	1,036	267	180	87	769	359	222	188
Madison	1,676	564	532	32	1,112	574	287	251
Marion	2,043	1,028	1,028		1,015	434	290	291
Marshall	1,521	364	324	40	1,157	378	255	524
Monroe	2,361	663	663		1,698	788	513	397
Montgomery	1,579	679	676	3	900	512	164	224
Neshoba	2,873	1,467	1,462	5	1,406	686	445	275
Newton	2,970	1,400	1,400		1,570	833	324	413
Noxubee	2,757	1,205	1,168	37	1,552	775	216	561
Oktibbeha	1,463	500	499	1	963	639	127	197
Panola	1,029	41	34	7	988	518	164	306
Pearl River	2,894	1,755	1,740	15	1,139	179	544	416
Perry	3,508	2,548	2,540	8	960	303	418	239
Pike	1,427	664	664		763	294	360	109
Pontotoc	1,176	476	475	1	700	445	88	167
Prentiss	1,064	363	360	3	701	352	155	194
Quitman	414	7		7	407	156	94	157
Rankin	4,587	2,348	2,343	5	2,239	1,309	440	490
Scott	3,225	1,953	1,953		1,272	782	230	260
Sharkey	1,208	7		7	1,201	679	210	312
Simpson	2,434	1,277	1,273	4	1,157	560	240	357
Smith	4,397	2,852	2,848	4	1,545	588	421	536
Stone	2,548	1,924	1,912	12	624	166	288	170
Sunflower	460	132		132	328	87		241
Tallahatchie	1,600	219	54	165	1,381	419	421	541
Tate	871	4		4	867	239	187	441
Tippah	1,262	355	354	1	907	517	130	260
Tishomingo	1,667	749	746	3	918	333	292	293
Tunica	715	11		11	704	115	24	565
Union	858	209	206	3	649	255	179	215
Walthall	1,525	607	598	9	918	79	606	233
Warren	2,871	52	36	16	2,819	682	454	1,683
Washington	610				610	149	85	376
Wayne	4,661	2,937	2,936	1	1,724	946	354	424
Webster	1,758	849	844	5	909	620	146	143
Wilkinson	5,010	3,016	2,949	67	1,994	749	565	680
Winston	2,708	1,420	1,417	3	1,288	807	182	299
Yalobusha	1,360	591	586	5	769	460	145	164
Yazoo	3,150	35		35	3,115	1,130	551	1,434
All counties	184,112	87,398	85,132	2,266	96,714	41,274	23,749	31,691

Table 4.—Cubic feet of growing-stock on commercial forest land by species group and county, Mississippi, 1967

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million cubic feet -----								
Adams	152.0	45.4	45.0	0.4	106.6	23.9	18.5	64.2
Alcorn	65.6	18.0	18.0	.	47.6	29.7	6.1	11.8
Amite	305.0	212.1	212.1	.	92.9	52.1	20.1	20.7
Attala	213.7	99.6	97.7	1.9	114.1	51.1	31.4	31.6
Benton	146.9	40.0	39.2	.8	106.9	52.1	22.7	32.1
Bolivar	101.6	3.4	...	3.4	98.2	7.4	11.3	79.5
Calhoun	147.3	100.4	100.1	.3	46.9	30.2	8.4	8.3
Carroll	109.7	21.2	20.6	.6	88.5	41.9	22.1	24.5
Chickasaw	82.7	26.3	26.1	.2	56.4	36.1	11.7	8.6
Choctaw	118.2	66.9	66.9	.	51.3	33.4	9.7	8.2
Claiborne	190.1	41.3	40.8	.5	148.8	34.4	39.8	74.6
Clarke	315.6	190.4	190.0	.4	125.2	64.2	30.6	30.4
Clay	84.8	9.4	9.4	.	75.4	41.8	8.8	24.8
Coahoma	56.6	5.1	.	5.1	51.5	6.2	3.2	42.1
Copiah	322.8	178.4	176.8	1.6	144.4	71.1	37.6	35.7
Covington	136.6	60.8	59.2	1.6	75.8	38.8	20.3	16.7
De Soto	63.5	2.6	.1	2.5	60.9	16.8	14.5	29.6
Forrest	140.1	120.1	120.1	.	20.0	6.7	8.8	4.5
Franklin	381.7	301.4	301.2	.2	80.3	39.0	20.1	21.2
George	151.9	99.1	89.4	9.7	52.8	14.8	17.3	20.7
Greene	235.8	156.5	156.5	.	79.3	33.0	24.8	21.5
Grenada	91.4	23.1	22.5	.6	68.3	43.3	9.9	15.1
Hancock	137.8	102.0	99.8	2.2	35.8	4.3	16.6	14.9
Harrison	246.0	202.4	202.0	.4	43.6	5.8	16.0	21.8
Hinds	117.8	39.1	37.7	1.4	78.7	36.4	15.4	26.9
Holmes	85.5	23.4	21.7	1.7	62.1	22.4	18.8	20.9
Humphreys	46.1	...	..	.	46.1	25.1	7.6	13.4
Issaquena	135.3	2.8	.	2.8	132.5	37.7	18.7	76.1
Itawamba	136.8	48.3	47.3	1.0	88.5	38.1	22.2	28.2
Jackson	309.9	172.9	164.5	8.4	137.0	17.9	94.1	25.0
Jasper	288.3	187.1	185.8	1.3	101.2	41.4	34.6	25.2
Jefferson	222.2	131.4	71.0	60.4	90.8	30.2	19.6	41.0
Jefferson Davis	100.8	64.3	64.3	.	36.5	15.0	12.5	9.0
Jones	275.5	204.0	203.8	.2	71.5	33.5	20.2	17.8
Kemper	296.3	166.8	165.3	1.5	129.5	64.6	38.8	26.1
Lafayette	141.5	59.4	58.9	.5	82.1	56.7	11.8	13.6
Lamar	133.7	96.7	96.7	.	37.0	6.0	17.5	13.5
Lauderdale	352.7	214.2	214.2	.	138.5	71.3	33.5	33.7
Lawrence	155.4	99.0	97.3	1.7	56.4	29.0	13.9	13.5
Leake	231.5	125.7	124.9	.8	105.8	62.4	25.0	18.4
Lee	22.9	4.2	4.0	.2	18.7	8.0	3.2	7.5
Leflore	50.1	.	.	.	50.1	25.2	9.0	15.9

Table 4.—Cubic feet of growing-stock on commercial forest land by species group and county, Mississippi, 1967 (Continued)

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million cubic feet -----								
Lincoln	205.2	124.4	124.1	.3	80.8	33.2	19.8	27.8
Lowndes	71.5	20.0	13.5	6.5	51.5	24.0	14.9	12.6
Madison	116.8	42.3	39.9	2.4	74.5	38.5	19.2	16.8
Marion	145.1	77.1	77.1	.	68.0	29.1	19.4	19.5
Marshall	104.8	27.3	24.3	3.0	77.5	25.3	17.1	35.1
Monroe	163.5	49.7	49.7	.	113.8	52.8	34.4	26.6
Montgomery	111.2	50.9	50.7	.2	60.3	34.3	11.0	15.0
Neshoba	204.2	110.0	109.6	.4	94.2	46.0	29.8	18.4
Newton	210.2	105.0	105.0	.	105.2	55.8	21.7	27.7
Noxubee	194.4	90.4	87.6	2.8	104.0	51.9	14.5	37.6
Oktibbeha	102.0	37.5	37.4	.1	64.5	42.8	8.5	13.2
Panola	69.3	3.1	2.6	.5	66.2	34.7	11.0	20.5
Pearl River	207.9	131.6	130.5	1.1	76.3	12.0	36.4	27.9
Perry	255.4	191.1	190.5	.6	64.3	20.3	28.0	16.0
Pike	100.9	49.8	49.8	.	51.1	19.7	24.1	7.3
Pontotoc	82.6	35.7	35.6	.1	46.9	29.8	5.9	11.2
Prentiss	74.2	27.2	27.0	.2	47.0	23.6	10.4	13.0
Quitman	27.8	.5	.	.5	27.3	10.5	6.3	10.5
Rankin	326.1	176.1	175.7	.4	150.0	87.7	29.5	32.8
Scott	231.7	146.5	146.5	..	85.2	52.4	15.4	17.4
Sharkey	81.0	.5	.	.5	80.5	45.5	14.1	20.9
Simpson	173.3	95.8	95.5	.3	77.5	37.5	16.1	23.9
Smith	317.4	213.9	213.6	.3	103.5	39.4	28.2	35.9
Stone	186.1	144.3	143.4	.9	41.8	11.1	19.3	11.4
Sunflower	31.9	9.9	.	9.9	22.0	5.8	.	16.2
Tallahatchie	108.9	16.4	4.0	12.4	92.5	28.1	28.2	36.2
Tate	58.4	.3	.	.3	58.1	16.0	12.5	29.6
Tippah	87.4	26.6	26.5	.1	60.8	34.7	8.7	17.4
Tishomingo	117.7	56.2	56.0	.2	61.5	22.3	19.6	19.6
Tunica	48.0	.8	...	.8	47.2	7.7	1.6	37.9
Union	59.2	15.7	15.5	.2	43.5	17.1	12.0	14.4
Walthall	107.0	45.5	44.8	.7	61.5	5.3	40.6	15.6
Warren	192.8	3.9	2.7	1.2	188.9	45.7	30.4	112.8
Washington	40.9	.	.	...	40.9	10.0	5.7	25.2
Wayne	335.8	220.3	220.2	.1	115.5	63.4	23.7	28.4
Webster	124.6	63.7	63.3	.4	60.9	41.5	9.8	9.6
Wilkinson	359.8	226.2	221.2	5.0	133.6	50.2	37.9	45.5
Winston	192.8	106.5	106.3	.2	86.3	54.1	12.2	20.0
Yalobusha	95.8	44.3	43.9	.4	51.5	30.8	9.7	11.0
Yazoo	211.3	2.6	.	2.6	208.7	75.7	36.9	96.1
All counties	13,034.6	6,554.8	6,384.9	169.9	6,479.8	2,765.3	1,591.2	2,123.3

Table 5.—Sawtimber volume on commercial forest land by species group and county, Mississippi, 1967

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million board feet -----								
Adams	564.4	231.2	229.6	1.6	333.2	81.9	35.1	216.2
Alcorn	139.5	41.5	41.5	.	98.0	67.4	9.1	21.5
Amite	1,052.4	813.8	813.8	.	238.6	136.8	37.4	64.4
Attala	531.8	306.7	303.4	3.3	225.1	120.9	52.3	51.9
Benton	401.8	135.1	131.5	3.6	266.7	134.3	43.3	89.1
Bolivar	349.6	23.3	.	23.3	326.3	18.0	39.0	269.3
Calhoun	387.7	306.0	306.0	.	81.7	56.0	10.6	15.1
Carroll	305.4	39.6	39.3	.3	265.8	150.1	43.4	72.3
Chickasaw	211.1	87.3	87.3	.	123.8	94.1	10.6	19.1
Choctaw	307.4	228.0	228.0	.	79.4	52.5	12.7	14.2
Claiborne	586.0	152.6	151.1	1.5	433.4	107.5	113.4	212.5
Clarke	980.2	723.3	723.3	.	256.9	118.5	56.2	82.2
Clay	262.8	38.1	38.1	.	224.7	117.9	28.1	78.7
Coahoma	193.3	26.9	.	26.9	166.4	13.7	1.6	151.1
Copiah	1,135.5	737.5	727.7	9.8	398.0	207.6	95.3	95.1
Covington	468.6	264.6	257.3	7.3	204.0	105.3	54.9	43.8
De Soto	171.7	12.9	.	12.9	158.8	44.4	41.6	72.8
Forrest	486.1	430.6	430.6	.	55.5	15.8	23.4	16.3
Franklin	1,733.9	1,507.3	1,506.1	1.2	226.6	104.3	34.2	88.1
George	533.7	386.5	327.1	59.4	147.2	34.4	69.3	43.5
Greene	827.4	634.2	634.2	.	193.2	87.1	58.9	47.2
Grenada	246.6	57.5	57.5	.	189.1	118.2	36.4	34.5
Hancock	479.6	383.5	377.5	6.0	96.1	11.0	42.8	42.3
Harrison	806.8	707.7	707.7	.	99.1	11.4	35.9	51.8
Hinds	289.9	136.6	128.9	7.7	153.3	87.3	26.0	40.0
Holmes	211.1	71.2	64.3	6.9	139.9	63.3	24.1	52.5
Humphreys	162.5	.	.	.	162.5	98.5	22.5	41.5
Issaquena	549.7	20.7	.	20.7	529.0	139.2	70.3	319.5
Itawamba	296.5	101.9	95.8	6.1	194.6	72.0	35.4	87.2
Jackson	1,004.0	630.4	599.1	31.3	373.6	56.8	255.0	61.8
Jasper	953.5	748.0	740.1	7.9	205.5	83.9	61.1	60.5
Jefferson	944.5	702.3	355.1	347.2	242.2	91.0	38.7	112.5
Jefferson Davis	339.5	258.5	258.5	.	81.0	31.6	28.7	20.7
Jones	1,190.3	982.2	982.2	.	208.1	90.2	58.5	59.4
Kemper	799.0	567.5	566.5	1.0	231.5	117.8	55.3	58.4
Lafayette	444.7	251.2	250.3	.9	193.5	134.7	18.7	40.1
Lamar	514.8	400.5	400.5	.	114.3	10.0	54.9	49.4
Lauderdale	1,076.4	794.1	794.1	.	282.3	142.8	64.1	75.4
Lawrence	544.6	386.6	375.8	10.8	153.0	77.4	45.8	34.8
Leake	712.1	421.6	419.4	2.2	290.5	179.9	50.0	60.6
Lee	42.9	10.3	10.3	.	32.6	16.1	2.2	14.3
Leflore	100.0	.	.	.	100.0	67.1	5.2	27.7

Table 5.—Sawtimber volume on commercial forest land by species group and county, Mississippi, 1967 (Continued)

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million board feet -----								
Lincoln	682.0	440.0	437.6	2.4	242.0	103.1	50.8	88.1
Lowndes	148.4	76.4	49.5	26.9	72.0	33.8	18.3	19.9
Madison	314.7	150.0	137.2	12.8	164.7	98.9	43.0	22.8
Marion	541.5	345.8	345.8	.	195.7	79.7	54.3	61.7
Marshall	227.7	73.0	63.9	9.1	154.7	69.5	35.5	49.7
Monroe	324.7	135.4	135.4	.	189.3	95.9	44.3	49.1
Montgomery	312.9	144.2	144.2	.	168.7	103.4	23.1	42.2
Neshoba	680.6	453.4	453.1	.3	227.2	103.1	67.1	57.0
Newton	651.2	350.1	350.1	.	301.1	165.0	54.0	82.1
Noxubee	628.3	404.2	394.6	9.6	224.1	117.3	33.0	73.8
Oktibbeha	297.8	127.3	127.3	.	170.5	110.8	21.5	38.2
Panola	120.2	3.2	2.3	.9	117.0	78.0	12.2	26.8
Pearl River	697.5	511.0	504.1	6.9	186.5	36.4	89.6	60.5
Perry	970.9	817.1	813.9	3.2	153.8	43.6	80.0	30.2
Pike	344.1	186.8	186.8	.	157.3	61.2	68.8	27.3
Pontotoc	193.1	116.8	116.8	.	76.3	52.2	6.0	18.1
Prentiss	157.8	58.6	58.6	..	99.2	62.8	12.2	24.2
Quitman	61.9	1.3	.	1.3	60.6	21.6	11.2	27.8
Rankin	1,011.1	623.4	620.7	2.7	387.7	237.3	43.7	106.7
Scott	763.1	525.0	525.0	..	238.1	160.2	34.9	43.0
Sharkey	372.6	4.0	.	4.0	368.6	233.1	57.3	78.2
Simpson	482.9	314.4	314.4	.	168.5	91.9	29.6	47.0
Smith	1,130.6	919.5	919.5	.	211.1	73.1	49.2	88.8
Stone	672.9	572.0	571.4	.6	100.9	23.1	49.7	28.1
Sunflower	125.8	62.2	..	62.2	63.6	19.0	.	44.6
Tallahatchie	236.4	23.4	8.1	15.3	213.0	80.3	47.0	85.7
Tate	104.1	1.3	.	1.3	102.8	29.7	25.7	47.4
Tippah	162.9	51.4	51.4	.	111.5	62.9	13.2	35.4
Tishomingo	282.1	162.8	162.8	.	119.3	26.9	49.7	42.7
Tunica	198.8	4.8	..	4.8	194.0	15.6	8.7	169.7
Union	105.4	28.7	28.3	.4	76.7	31.3	15.8	29.6
Walthall	399.1	185.4	181.9	3.5	213.7	8.9	159.9	44.9
Warren	707.4	23.9	18.1	5.8	683.5	175.6	101.0	406.9
Washington	127.5	.	.	.	127.5	24.3	19.0	84.2
Wayne	1,208.7	939.4	939.4	..	269.3	158.0	48.4	62.9
Webster	323.1	169.6	169.6	.	153.5	117.2	15.1	21.2
Wilkinson	1,605.2	1,175.8	1,147.2	28.6	429.4	144.7	121.3	163.4
Winston	596.8	371.8	371.8	..	225.0	148.2	32.0	44.8
Yalobusha	249.9	118.8	118.5	.3	131.1	87.1	15.5	28.5
Yazoo	674.5	5.4	.	5.4	669.1	261.2	107.9	300.0
All counties	42,235.5	25,436.9	24,628.8	808.1	16,798.6	7,214.6	3,671.5	5,912.5

Table 6.—*Sawtimber volume on commercial forest land by species group, diameter class and county, Mississippi, 1967*

County	All species	Softwood			Hardwood		
		Total	9.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up
----- Million board feet -----							
Adams	564.4	231.2	65.9	165.3	333.2	112.7	220.5
Alcorn	139.5	14.5	37.0	4.5	98.0	41.9	56.1
Amite	1,052.4	813.8	407.9	405.9	238.6	143.0	95.6
Attala	531.8	306.7	214.7	92.0	225.1	104.4	120.7
Benton	401.8	135.1	101.5	33.6	266.7	140.6	126.1
Bolivar	349.6	23.3	1.2	22.1	326.3	68.0	258.3
Calhoun	387.7	306.0	242.0	64.0	81.7	63.5	18.2
Carroll	305.4	39.6	33.1	6.5	265.8	110.0	155.8
Chickasaw	211.1	87.3	53.2	34.1	123.8	61.1	62.7
Choctaw	307.4	228.0	150.1	77.9	79.4	51.6	27.8
Claiborne	586.0	152.6	108.7	43.9	433.4	192.2	241.2
Clarke	980.2	723.3	431.6	291.7	256.9	136.6	120.3
Clay	262.8	38.1	33.3	4.8	224.7	138.9	85.8
Coahoma	193.3	26.9	.	26.9	166.4	56.7	109.7
Copiah	1,135.5	737.5	329.1	408.4	398.0	165.2	232.8
Covington	468.6	264.6	142.6	122.0	204.0	107.9	96.1
De Soto	171.7	12.9	2.6	10.3	158.8	66.8	92.0
Forrest	486.1	430.6	340.5	90.1	55.5	36.3	19.2
Franklin	1,733.9	1,507.3	685.7	821.6	226.6	97.2	129.4
George	533.7	386.5	246.1	140.4	147.2	70.7	76.5
Greene	827.4	634.2	350.2	284.0	193.2	100.7	92.5
Grenada	246.6	57.5	33.5	24.0	189.1	57.7	131.4
Hancock	479.6	383.5	259.2	124.3	96.1	53.9	42.2
Harrison	806.8	707.7	514.5	193.2	99.1	51.6	47.5
Hinds	289.9	136.6	69.9	66.7	153.3	73.1	80.2
Holmes	211.1	71.2	55.8	15.4	139.9	55.7	84.2
Humphreys	162.5	.	.	.	162.5	48.2	114.3
Issaquena	549.7	20.7	.	20.7	529.0	111.4	417.6
Itawamba	296.5	101.9	86.8	15.1	194.6	108.0	86.6
Jackson	1,004.0	630.4	447.5	182.9	373.6	118.4	255.2
Jasper	953.5	748.0	365.3	382.7	205.5	90.9	114.6
Jefferson	944.5	702.3	339.5	362.8	242.2	111.6	130.6
Jefferson Davis	339.5	258.5	125.0	133.5	81.0	44.8	36.2
Jones	1,190.3	982.2	454.8	527.4	208.1	112.7	95.4
Kemper	799.0	567.5	324.0	243.5	231.5	115.6	115.9
Lafayette	444.7	251.2	164.9	86.3	193.5	94.4	99.1
Lamar	514.8	400.5	271.9	128.6	114.3	69.0	45.3
Lauderdale	1,076.4	794.1	554.9	239.2	282.3	170.0	112.3
Lawrence	544.6	386.6	233.2	153.4	158.0	69.8	88.2
Leake	712.1	421.6	343.1	78.5	290.5	135.7	154.8
Lee	42.9	10.3	7.5	2.8	32.6	19.4	13.2
Leflore	100.0	.	.	.	100.0	54.6	45.4

Table 6.—*Sawtimber volume on commercial forest land by species group, diameter class and county, Mississippi, 1967 (Continued)*

County	All species	Softwood			Hardwood		
		Total	9.0-14.9 inches	15.0 inches and up	Total	11.0-14.9 inches	15.0 inches and up
----- Million board feet -----							
Lincoln	682.0	440.0	209.9	230.1	242.0	110.8	131.2
Lowndes	148.4	76.4	45.6	30.8	72.0	43.5	28.5
Madison	314.7	150.0	80.0	70.0	164.7	64.1	100.6
Marion	541.5	345.8	218.9	126.9	195.7	85.0	110.7
Marshall	227.7	73.0	54.8	18.2	154.7	75.6	79.1
Monroe	324.7	135.4	117.9	17.5	189.3	131.6	57.7
Montgomery	312.9	144.2	88.5	55.7	168.7	83.6	85.1
Neshoba	680.6	453.4	299.6	153.8	227.2	116.3	110.9
Newton	651.2	350.1	244.4	105.7	301.1	131.4	169.7
Noxubee	628.3	404.2	256.1	148.1	224.1	113.9	110.2
Oktibbeha	297.8	127.3	71.4	55.9	170.5	86.1	84.4
Panola	120.2	3.2	.	3.2	117.0	41.7	75.3
Pearl River	697.5	511.0	362.7	148.3	186.5	116.3	70.2
Perry	970.9	817.1	616.6	200.5	153.8	97.2	56.6
Pike	344.1	186.8	150.3	36.5	157.3	66.8	90.5
Pontotoc	193.1	116.8	92.7	24.1	76.3	48.3	28.0
Prentiss	157.8	58.6	52.4	6.2	99.2	59.4	39.8
Quitman	61.9	1.3	1.3	.	60.6	24.7	35.9
Rankin	1,011.1	623.4	438.5	184.9	387.7	201.5	186.2
Scott	763.1	525.0	350.2	174.8	238.1	114.3	123.8
Sharkey	372.6	4.0	.	4.0	368.6	64.3	304.3
Simpson	482.9	314.4	170.4	144.0	168.5	100.1	68.4
Smith	1,130.6	919.5	591.3	328.2	211.1	122.8	88.3
Stone	672.9	572.0	415.5	156.5	100.9	67.6	33.3
Sunflower	125.8	62.2	7.5	54.7	63.6	33.4	30.2
Tallahatchie	236.4	23.4	23.4	.	213.0	117.9	95.1
Tate	104.1	1.3	.	1.3	102.8	72.9	29.9
Tippah	162.9	51.4	44.7	6.7	111.5	75.6	35.9
Tishomingo	282.1	162.8	119.9	42.9	119.3	63.4	55.9
Tunica	198.8	4.8	.	4.8	194.0	39.8	154.2
Union	105.4	28.7	21.8	6.9	76.7	46.5	30.2
Walthall	399.1	185.4	152.6	32.8	213.7	90.7	123.0
Warren	707.4	23.9	4.1	19.8	683.5	246.2	437.3
Washington	127.5	.	.	.	127.5	53.6	73.9
Wayne	1,208.7	939.4	576.1	363.3	269.3	172.2	97.1
Webster	323.1	169.6	146.6	23.0	153.5	90.4	63.1
Wilkinson	1,605.2	1,175.8	519.1	656.7	429.4	176.2	253.2
Winston	596.8	371.8	240.5	131.3	225.0	108.3	116.7
Yalobusha	249.9	118.8	79.9	38.9	131.1	66.4	64.7
Yazoo	674.5	5.4	4.5	.9	669.1	256.5	412.6
All counties	42,235.5	25,436.9	15,498.0	9,938.9	16,798.6	7,709.4	9,089.2

Table 7.—*Net annual growth of growing stock on commercial forest land by species group and county, Mississippi, 1966*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million cubic feet -----								
Adams	7.7	2.3	2.3	(¹)	5.4	1.5	1.1	2.8
Alcorn	4.6	1.6	1.6	(¹)	3.0	2.1	.3	.6
Amite	24.8	20.0	20.0	.	4.8	2.5	1.4	.9
Attala	17.4	9.9	9.7	.2	7.5	3.3	2.0	2.2
Benton	9.3	4.0	4.0	(¹)	5.3	3.0	.9	1.4
Bolivar	5.6	.1	(¹)	.1	5.5	.6	.4	4.5
Calhoun	9.7	7.4	7.2	.2	2.3	1.6	.3	.4
Carroll	7.8	3.4	3.4	(¹)	4.4	2.1	1.1	1.2
Chickasaw	6.6	2.8	2.8	(¹)	3.8	2.6	.7	.5
Choctaw	9.2	5.8	5.8	.	3.4	2.4	.4	.6
Claiborne	10.7	3.9	3.9	(¹)	6.8	1.7	1.2	3.9
Clarke	22.7	16.3	16.3	(¹)	6.4	3.7	1.5	1.2
Clay	4.8	.7	.7	.	4.1	2.4	.3	1.4
Coahoma	3.0	.1	.	.1	2.9	.5	.2	2.2
Copiah	19.9	13.2	13.2	(¹)	6.7	3.5	1.5	1.7
Covington	7.9	4.6	4.5	.1	3.3	1.9	.8	.6
De Soto	3.4	.1	.	.1	3.3	1.2	.4	1.7
Forrest	10.2	9.4	9.4	.	.8	.4	.3	.1
Franklin	26.4	21.4	21.4	(¹)	5.0	3.0	.9	1.1
George	9.8	7.7	7.4	.3	2.1	.7	.4	1.0
Greene	15.9	11.8	11.8	.	4.1	2.1	1.1	.9
Grenada	6.2	2.2	2.1	.1	4.0	3.0	.3	.7
Hancock	8.9	7.2	6.9	.3	1.7	.2	.4	1.1
Harrison	16.7	14.6	14.4	.2	2.1	.3	.4	1.4
Hinds	9.0	4.0	4.0	(¹)	5.0	2.5	.6	1.9
Holmes	7.6	2.2	2.1	.1	5.4	2.2	1.7	1.5
Humphreys	3.0	(¹)	.	(¹)	3.0	1.2	.4	1.4
Issaquena	6.1	(¹)	.	(¹)	6.1	2.0	.6	3.5
Itawamba	10.3	5.5	5.5	(¹)	4.8	2.5	1.0	1.3
Jackson	17.3	12.9	12.5	.4	4.4	.8	2.3	1.3
Jasper	20.0	14.9	14.9	(¹)	5.1	2.4	1.6	1.1
Jefferson	12.7	7.6	5.1	2.5	5.1	2.3	.8	2.0
Jefferson Davis	7.6	5.4	5.4	.	2.2	.9	.9	.4
Jones	16.7	13.4	13.4	(¹)	3.3	1.6	1.0	.7
Kemper	21.0	13.4	13.3	.1	7.6	4.2	2.2	1.2
Lafayette	8.4	3.6	3.6	(¹)	4.8	3.3	.9	.6
Lamar	7.8	6.0	6.0	.	1.8	.4	.4	1.0
Lauderdale	25.0	16.9	16.9	.	8.1	5.0	1.7	1.4
Lawrence	10.7	8.1	8.0	.1	2.6	1.4	.4	.8
Leake	16.6	10.8	10.7	.1	5.8	4.0	1.2	.6
Lee	2.1	.5	.3	.2	1.6	.4	.8	.4
Leflore	4.5	(¹)	(¹)	(¹)	4.5	3.0	.4	1.1

Table 7.—*Net annual growth of growing stock on commercial forest land by species group and county, Mississippi, 1966 (Continued)*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million cubic feet -----								
Lincoln	15.9	11.9	11.9	(¹)	4.0	1.8	1.1	1.1
Lowndes	5.2	1.4	1.0	.4	3.8	2.2	1.0	.6
Madison	8.9	4.5	4.2	.3	4.4	2.4	.6	1.4
Marion	8.5	5.2	5.2	.	3.3	1.5	1.0	.8
Marshall	6.8	2.2	2.0	.2	4.6	1.5	.6	2.5
Monroe	11.1	4.7	4.7	.	6.4	3.5	1.2	1.7
Montgomery	7.7	4.6	4.6	(¹)	3.1	1.9	.6	.6
Neshoba	14.8	9.1	8.9	.2	5.7	3.8	1.3	.6
Newton	14.5	9.9	9.9	.	4.6	2.6	.8	1.2
Noxubee	11.4	6.6	6.5	.1	4.8	3.0	.5	1.3
Oktibbeha	6.7	3.6	3.5	.1	3.1	2.1	.3	.7
Panola	4.2	.5	.5	(¹)	3.7	2.2	.4	1.1
Pearl River	12.3	9.6	9.6	(¹)	2.7	.7	.9	1.1
Perry	14.5	11.9	11.9	(¹)	2.6	1.0	1.0	.6
Pike	6.8	4.6	4.6	.	2.2	.8	1.1	.3
Pontotoc	5.9	2.8	2.8	(¹)	3.1	2.3	.3	.5
Prentiss	6.0	3.1	2.9	.2	2.9	1.7	.4	.8
Quitman	2.6	(¹)	..	(¹)	2.6	1.2	.4	1.0
Rankin	26.7	17.8	17.8	(¹)	8.9	4.8	2.7	1.4
Scott	18.3	13.5	13.5	..	4.8	3.5	.6	.7
Sharkey	2.8	(¹)	.	(¹)	2.8	1.4	.5	.9
Simpson	14.2	9.8	9.8	(¹)	4.4	1.9	.7	1.8
Smith	23.0	16.8	16.8	(¹)	6.2	2.4	1.9	1.9
Stone	11.3	9.3	9.2	.1	2.0	.5	.8	.7
Sunflower	3.3	.3	(¹)	.3	3.0	.3	...	2.7
Tallahatchie	7.2	1.2	.4	.8	6.0	1.7	2.3	2.0
Tate	4.7	(¹)	(¹)	(¹)	4.7	1.6	.6	2.5
Tippah	6.8	2.6	2.6	(¹)	4.2	2.9	.3	1.0
Tishomingo	9.6	5.5	5.5	(¹)	4.1	2.2	.7	1.2
Tunica	2.3	(¹)	..	(¹)	2.3	.7	.1	1.5
Union	4.7	1.8	1.8	(¹)	2.9	1.0	.6	1.3
Walthall	4.8	3.2	3.2	(¹)	1.6	.3	.8	.5
Warren	9.3	.1	.1	(¹)	9.2	2.4	1.2	5.6
Washington	2.4	(¹)	.	(¹)	2.4	.8	.3	1.3
Wayne	20.2	15.3	15.3	(¹)	4.9	2.9	.8	1.2
Webster	8.6	5.7	5.6	.1	2.9	1.9	.6	.4
Wilkinson	20.5	14.1	13.9	.2	6.4	2.8	1.1	2.5
Winston	14.5	10.3	10.3	(¹)	4.2	3.0	.6	.6
Yalobusha	8.0	4.4	4.3	.1	3.6	2.4	.6	.6
Yazoo	10.9	.2	..	.2	10.7	4.2	1.7	4.8
All counties	873.5	523.8	515.3	8.5	349.7	168.2	70.2	111.3

¹ Negligible.

Table 8.—*Net annual growth of sawtimber on commercial forest land by species group and county, Mississippi, 1966*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million board feet -----								
Adams	30.9	12.8	12.7	0.1	18.1	4.1	5.9	8.1
Alcorn	13.4	4.6	4.6	(¹)	8.8	4.5	1.1	3.2
Amite	74.8	66.0	66.0	.	8.8	4.6	1.0	3.2
Attala	43.3	26.2	25.9	.3	17.1	10.5	2.7	3.9
Benton	21.3	9.1	9.0	.1	12.2	6.1	3.0	3.1
Bolivar	18.4	.5	(¹)	.5	17.9	1.6	1.2	15.1
Calhoun	30.0	24.3	24.3	.	5.7	4.7	.4	.6
Carroll	14.2	4.5	4.5	(¹)	9.7	6.6	1.0	2.1
Chickasaw	12.1	6.3	6.3	(¹)	5.8	3.5	.9	1.4
Choctaw	22.8	18.1	18.1	(¹)	4.7	2.0	.4	2.3
Claiborne	26.5	11.8	11.6	.2	14.7	3.7	2.9	8.1
Clarke	63.0	50.9	50.9	(¹)	12.1	8.0	1.7	2.4
Clay	14.9	3.3	3.3	(¹)	11.6	8.3	.8	2.5
Coahoma	8.6	.6	.	.6	8.0	.7	.1	7.2
Copiah	67.4	50.8	50.4	.4	16.6	9.2	2.3	5.1
Covington	26.7	18.9	18.6	.3	7.8	5.3	1.4	1.1
De Soto	7.1	.6	(¹)	.6	6.5	1.4	1.5	3.6
Forrest	43.0	41.3	41.3	.	1.7	.7	.6	.4
Franklin	112.0	104.9	104.8	.1	7.1	3.6	.9	2.6
George	36.8	30.5	28.4	2.1	6.3	1.1	1.3	3.9
Greene	46.1	37.0	37.0	.	9.1	2.8	1.2	5.1
Grenada	11.6	4.2	4.2	.	7.4	5.5	.9	1.0
Hancock	30.2	27.8	27.6	.2	2.4	.4	.8	1.2
Harrison	63.4	57.0	57.0	.	6.4	.5	3.3	2.6
Hinds	32.4	12.1	11.8	.3	20.3	5.9	.8	13.6
Holmes	14.2	6.6	6.3	.3	7.6	4.3	1.2	2.1
Humphreys	6.2	(¹)	.	(¹)	6.2	3.7	.8	1.7
Issaquena	23.1	.3	.	.3	22.8	6.3	1.7	14.8
Itawamba	23.6	12.2	12.0	.2	11.4	5.1	1.0	5.3
Jackson	53.7	44.8	42.4	2.4	8.9	2.8	4.6	1.5
Jasper	71.4	60.0	59.8	.2	11.4	5.5	2.7	3.2
Jefferson	48.8	38.0	21.7	16.3	10.8	3.4	3.2	4.2
Jefferson Davis	19.6	15.3	15.3	.	4.3	2.3	.6	1.4
Jones	73.4	61.8	61.8	.	11.6	5.7	1.5	4.4
Kemper	56.0	43.4	43.3	.1	12.6	9.3	1.9	1.4
Lafayette	31.2	17.0	16.9	.1	14.2	9.4	.6	4.2
Lamar	43.3	37.0	37.0	.	6.3	.4	1.1	4.8
Lauderdale	80.4	64.5	64.5	.	15.9	8.9	1.8	5.2
Lawrence	37.0	27.9	27.5	.4	9.1	3.6	2.3	3.2
Leake	51.3	39.5	39.3	.2	11.8	8.8	1.4	1.6
Lee	2.2	1.2	1.2	...	1.0	.6	.	.4
Leflore	8.3	(¹)	(¹)	(¹)	8.3	3.7	.3	4.3

Table 8.—*Net annual growth of sawtimber on commercial forest land by species group and county, Mississippi, 1966 (Continued)*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million board feet -----								
Lincoln	47.3	34.2	34.1	.1	13.1	6.7	1.2	5.2
Lowndes	11.8	4.5	3.1	1.4	7.3	4.2	.5	2.6
Madison	21.4	12.7	11.4	1.3	8.7	6.9	1.1	.7
Marion	30.7	21.7	21.7	.	9.0	2.6	2.8	3.6
Marshall	15.4	6.1	5.6	.5	9.3	4.4	.9	4.0
Monroe	32.9	16.2	16.2	.	16.7	7.8	2.6	6.3
Montgomery	20.7	9.7	9.7	.	11.0	7.7	.6	2.7
Neshoba	43.0	35.1	35.1	(¹)	7.9	4.3	1.9	1.7
Newton	44.4	33.0	33.0	.	11.4	7.9	1.4	2.1
Noxubee	39.1	31.9	31.5	.4	7.1	4.1	1.0	2.0
Oktibbeha	18.8	10.3	10.3	(¹)	8.5	6.9	.5	1.1
Panola	6.2	.1	.1	(¹)	6.1	2.8	1.1	2.2
Pearl River	41.6	35.7	35.4	.3	5.9	2.1	2.0	1.8
Perry	65.5	61.4	61.3	.1	4.1	1.5	1.8	.8
Pike	23.3	18.7	18.7	..	4.6	2.0	1.6	1.0
Pontotoc	17.7	11.3	11.3	.	6.4	5.6	.2	.6
Prentiss	12.5	5.4	5.4	..	7.1	6.0	.3	.8
Quitman	4.6	.1	...	.1	4.5	1.4	.7	2.4
Rankin	67.8	50.2	50.0	.2	17.6	13.5	1.3	2.8
Scott	74.2	58.4	58.4	.	15.8	10.1	1.1	4.6
Sharkey	14.2	.1	.	.1	14.1	7.1	3.5	3.5
Simpson	39.5	27.5	27.5	.	12.1	10.0	.8	1.3
Smith	93.1	81.8	81.8	.	11.3	5.0	1.3	5.0
Stone	49.5	40.4	40.4	(¹)	9.1	3.4	1.1	4.6
Sunflower	4.8	1.9	(¹)	1.9	2.9	.8	..	2.1
Tallahatchie	18.8	1.5	.6	.9	17.3	5.1	3.2	9.0
Tate	5.3	(¹)	(¹)	(¹)	5.3	1.9	.7	2.7
Tippah	19.4	7.6	7.6	.	11.8	6.8	.4	4.6
Tishomingo	16.4	11.7	11.7	...	4.7	1.2	2.3	1.2
Tunica	7.9	.1	...	.1	7.8	.9	.3	6.6
Union	9.5	3.2	3.1	.1	6.3	3.6	.4	2.3
Walthall	18.0	13.9	13.7	.2	4.1	.4	2.7	1.0
Warren	52.3	.9	.6	.3	51.4	12.3	7.6	31.5
Washington	6.2	(¹)	..	(¹)	6.2	1.1	.8	4.3
Wayne	86.0	69.1	69.1	..	16.9	11.4	2.8	2.7
Webster	22.2	16.0	16.0	...	6.2	3.6	1.5	1.1
Wilkinson	117.6	92.7	92.0	.7	24.9	6.6	6.5	11.8
Winston	41.0	30.1	30.1	..	10.9	9.1	.7	1.1
Yalobusha	15.4	6.5	6.3	.2	8.9	6.5	1.5	.9
Yazoo	43.9	.3	.	.3	43.6	16.5	4.2	22.9
All counties	2,834.5	1,955.6	1,920.1	35.5	878.9	410.9	131.7	336.3

¹ Negligible.

Table 9.—*Timber removals from growing stock on commercial forest land by species group and county, Mississippi, 1966*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million cubic feet -----								
Adams	8.7	1.5	1.5	.	7.2	2.0	1.1	4.1
Alcorn	2.0	.9	.8	.1	1.1	.3	.3	.5
Amite	9.6	7.3	7.3	.	2.3	1.4	.7	.2
Attala	6.2	2.7	2.7	.	3.5	.8	2.1	.6
Benton	3.6	1.3	1.2	.1	2.3	1.3	.5	.5
Bolivar	3.3	.1	.	.1	3.2	1.1	.2	1.9
Calhoun	5.8	1.0	1.0	..	4.8	2.5	1.5	.8
Carroll	6.6	.8	.8	..	5.8	3.3	1.0	1.5
Chickasaw	3.9	2.1	2.1	.	1.8	.9	.4	.5
Choctaw	1.9	1.1	1.1	.	.8	.2	.5	.1
Claiborne	6.9	1.5	.9	.6	5.4	1.0	1.7	2.7
Clarke	18.3	12.3	12.1	.2	6.0	2.9	2.1	1.0
Clay	5.5	.9	.9	..	4.6	3.5	.3	.8
Coahoma	3.1	.1	..	.1	3.0	1.1	.7	1.2
Copiah	10.7	7.1	7.1	.	3.6	1.8	.9	.9
Covington	4.5	2.2	2.2	.	2.3	.5	.9	.9
De Soto	3.4	.1	.	.1	3.3	.9	.5	1.9
Forrest	7.4	5.6	5.6	..	1.8	.6	1.1	.1
Franklin	11.1	7.9	7.9	..	3.2	1.1	1.2	.9
George	5.3	4.1	4.1	.	1.2	.1	.5	.6
Greene	10.4	7.3	7.3	.	3.1	1.3	1.2	.6
Grenada	3.0	.4	.3	.1	2.6	1.1	.6	.9
Hancock	3.9	3.3	3.3	...	.6	.1	.2	.3
Harrison	5.4	4.4	4.4	..	1.0	.	.4	.6
Hinds	6.8	2.3	2.3	.	4.5	1.3	2.2	1.0
Holmes	9.8	1.2	1.2	.	8.6	4.5	2.8	1.3
Humphreys	4.2	.1	.	.1	4.1	2.8	.7	.6
Issaquena	11.3	.1	..	.1	11.2	3.4	.3	7.5
Itawamba	5.9	2.5	2.4	.1	3.4	1.7	.6	1.1
Jackson	6.7	4.9	4.5	.4	1.8	1.1	.5	.2
Jasper	13.9	10.1	10.1	.	3.8	.7	1.5	1.6
Jefferson	8.0	3.3	3.3	...	4.7	1.3	1.3	2.1
Jefferson Davis	3.5	2.2	2.2	..	1.3	.2	.7	.4
Jones	11.8	6.6	6.6	...	5.2	.8	1.5	2.9
Kemper	9.3	5.4	5.4	.	3.9	1.4	2.3	.2
Lafayette	4.9	2.1	2.1	..	2.8	1.4	.9	.5
Lamar	7.2	4.6	4.6	.	2.6	1.1	.5	1.0
Lauderdale	13.3	9.3	9.3	..	4.0	1.4	2.4	.2
Lawrence	6.2	3.9	3.9	..	2.3	1.8	.2	.3
Leake	6.9	4.7	4.7	.	2.2	1.4	.7	.1
Lee	1.0	.3	.3	..	.7	.7	.	..
Leflore	4.0	.2	.1	.1	3.8	1.5	.8	1.5

Table 9.—*Timber removals from growing stock on commercial forest land by species group and county, Mississippi, 1966 (Continued)*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million cubic feet -----								
Lincoln	7.8	5.3	5.3	..	2.5	1.3	.5	.7
Lowndes	3.9	1.2	.4	.8	2.7	1.9	.4	.4
Madison	3.2	1.9	1.5	.4	1.3	.6	.5	.2
Marion	9.4	5.7	5.7	.	3.7	1.5	.8	1.4
Marshall	3.3	.8	.3	.5	2.5	1.1	.5	.9
Monroe	5.6	1.8	1.8	.	3.8	2.5	.5	.8
Montgomery	3.9	.8	.8	...	3.1	1.3	1.5	.3
Neshoba	5.3	3.4	3.4	...	1.9	1.1	.6	.2
Newton	7.1	4.6	4.6	...	2.5	1.6	.8	.1
Noxubee	5.6	3.9	3.9	..	1.7	1.0	.2	.5
Oktibbeha	3.5	1.1	.9	.2	2.4	1.4	.3	.7
Panola	3.5	.2	.2	..	3.3	.8	1.6	.9
Pearl River	8.6	4.8	4.8	...	3.8	.7	1.2	1.9
Perry	8.7	7.1	7.1	...	1.6	.4	.9	.3
Pike	5.4	3.6	3.6	...	1.8	1.0	.6	.2
Pontotoc	2.2	.4	.4	..	1.8	.4	.1	1.3
Prentiss	3.1	1.2	1.2	...	1.9	1.0	.7	.2
Quitman	6.4	.1	..	.1	6.3	2.0	2.6	1.7
Rankin	9.7	6.2	5.8	.4	3.5	1.9	1.1	.5
Scott	11.1	9.2	9.2	...	1.9	1.1	.3	.5
Sharkey	3.3	.1	.	.1	3.2	1.5	1.1	.6
Simpson	10.1	6.4	6.4	.	3.7	1.7	1.5	.5
Smith	10.0	7.5	7.5	...	2.5	1.4	1.0	.1
Stone	8.5	6.7	6.7	...	1.8	.9	.6	.3
Sunflower	1.6	.2	.1	.1	1.4	1.1	...	.3
Tallahatchie	7.1	.1	.	.1	7.0	4.0	1.8	1.2
Tate	1.1	.1	...	.1	1.0	.1	.3	.6
Tippah	3.1	1.6	1.6	..	1.5	.9	.4	.2
Tishomingo	3.8	2.2	2.2	...	1.6	1.4	..	.2
Tunica	3.7	.1	..	.1	3.6	1.3	.9	1.4
Union	1.8	.4	.4	...	1.4	.7	.3	.4
Walthall	4.4	2.5	2.5	...	1.9	.8	1.1	..
Warren	8.1	.2	.1	.1	7.9	2.3	2.3	3.3
Washington	6.8	.1	...	.1	6.7	1.9	2.3	2.5
Wayne	13.6	9.9	9.9	.	3.7	1.9	1.0	.8
Webster	2.9	1.9	1.9	..	1.0	.6	.2	.2
Wilkinson	14.3	3.3	3.1	.2	11.0	4.0	2.2	4.8
Winston	6.8	3.6	3.6	...	3.2	1.5	1.2	.5
Yalobusha	4.1	1.0	.8	.2	3.1	2.0	.9	.2
Yazoo	20.9	.2	...	.2	20.7	9.0	4.6	7.1
All counties	538.5	251.2	245.3	5.9	287.3	121.9	79.9	85.5

Table 10.—*Timber removals from sawtimber on commercial forest land by species group and county, Mississippi, 1966*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million board feet -----								
Adams	37.2	7.4	7.4	.	29.8	9.0	5.1	15.7
Alcorn	6.5	2.4	1.8	0.6	4.1	1.3	1.2	1.6
Amite	36.7	29.5	29.5	.	7.2	4.2	2.3	.7
Attala	22.0	10.1	10.1	.	11.9	3.7	5.3	2.9
Benton	15.5	6.0	6.0	.	9.5	7.0	2.5	.
Bolivar	7.6	.2	.1	.1	7.4	.7	.5	6.2
Calhoun	21.9	2.8	2.8	.	19.1	9.2	6.2	3.7
Carroll	23.8	2.9	2.9	.	20.9	13.5	2.5	4.9
Chickasaw	13.5	7.2	7.2	..	6.3	2.9	1.2	2.2
Choctaw	5.6	3.7	3.7	..	1.9	.1	1.3	.5
Claiborne	26.9	5.9	3.4	2.5	21.0	3.5	6.7	10.8
Clarke	63.0	47.6	46.9	.7	15.4	9.7	2.4	3.3
Clay	22.8	2.5	2.5	.	20.3	18.5	1.0	.8
Coahoma	7.2	.2	.	.2	7.0	1.8	2.0	3.2
Copiah	37.5	25.1	25.1	.	12.4	6.7	2.7	3.0
Covington	14.6	8.5	8.5	..	6.1	1.1	2.1	2.9
De Soto	13.5	.1	..	.1	13.4	3.4	1.8	8.2
Forrest	29.2	24.0	24.0	.	5.2	2.4	2.8	.
Franklin	50.2	37.9	37.9	.	12.3	4.5	2.4	5.4
George	17.1	13.3	13.3	.	3.8	.4	1.5	1.9
Greene	36.1	27.8	27.8	..	8.3	3.6	3.7	1.0
Grenada	12.4	1.5	1.5	.	10.9	4.6	2.7	3.6
Hancock	12.3	10.6	10.6	.	1.7	.2	.7	.8
Harrison	21.0	18.8	18.8	.	2.2	.	.7	1.5
Hinds	20.1	6.3	6.3	.	13.8	4.4	6.1	3.3
Holmes	35.5	3.4	3.4	.	32.1	17.4	9.5	5.2
Humphreys	14.0	.2	.	.2	13.8	9.8	1.7	2.3
Issaquena	44.1	.2	..	.2	43.9	11.7	1.3	30.9
Itawamba	22.4	9.0	8.2	.8	13.4	4.3	2.4	6.7
Jackson	23.0	16.8	14.9	1.9	6.2	4.2	1.5	.5
Jasper	53.1	41.7	41.7	.	11.4	1.8	4.6	5.0
Jefferson	27.7	12.1	12.1	.	15.6	4.1	3.8	7.7
Jefferson Davis	12.6	9.4	9.4	.	3.2	.2	1.6	1.4
Jones	43.4	27.2	27.2	.	16.2	5.5	4.5	6.2
Kemper	37.2	24.3	24.3	.	12.9	5.0	7.9	.
Lafayette	18.0	8.8	8.8	.	9.2	4.8	3.0	1.4
Lamar	26.5	20.7	20.7	.	5.8	1.4	1.3	3.1
Lauderdale	48.0	36.9	36.9	.	11.1	4.8	5.8	.5
Lawrence	23.6	15.8	15.8	.	7.8	6.4	.	1.4
Leake	27.3	21.4	21.4	..	5.9	3.9	2.0	.
Lee	2.1	.7	.7	..	1.4	1.4	..	..
Leflore	12.4	.4	.1	.3	12.0	1.5	5.6	4.9

Table 10.—*Timber removals from sawtimber on commercial forest land by species group and county, Mississippi, 1966 (Continued)*

County	All species	Softwood			Hardwood			
		Total	Pine	Other	Total	Oak	Gum	Other
----- Million board feet -----								
Lincoln	30.4	22.6	22.6	.	7.8	3.1	1.6	3.1
Lowndes	16.1	5.8	2.4	3.4	10.3	6.7	2.2	1.4
Madison	10.6	7.8	6.4	1.4	2.8	1.3	1.0	.5
Marion	29.4	19.5	19.5	.	9.9	4.2	2.4	3.3
Marshall	10.5	2.5	.7	1.8	8.0	3.6	1.5	2.9
Monroe	22.6	8.3	8.3	.	14.3	10.3	2.1	1.9
Montgomery	11.7	2.7	2.7	..	9.0	4.3	2.5	2.2
Neshoba	17.9	13.7	13.7	..	4.2	2.4	1.1	.7
Newton	23.6	17.4	17.4	..	6.2	3.6	2.2	.4
Noxubee	21.4	17.3	17.3	..	4.1	2.3	.4	1.4
Oktibbeha	9.3	4.2	3.4	.8	5.1	3.9	.	1.2
Panola	12.7	.6	..	.6	12.1	4.1	3.8	4.2
Pearl River	35.3	20.6	20.6	.	14.7	1.6	5.8	7.3
Perry	32.8	28.5	28.5	..	4.3	1.4	2.0	.9
Pike	17.5	13.1	13.1	..	4.4	2.2	1.7	.5
Pontotoc	7.5	1.8	1.8	..	5.7	.7	.9	4.1
Prentiss	8.7	3.8	3.8	..	4.9	2.5	1.9	.5
Quitman	28.9	.2	...	.2	28.7	9.8	11.7	7.2
Rankin	31.7	23.7	21.6	2.1	8.0	4.3	2.3	1.4
Scott	48.0	42.7	42.7	..	5.3	2.7	..	2.6
Sharkey	14.6	.4	..	.4	14.2	8.3	4.7	1.2
Simpson	36.4	25.6	25.6	..	10.8	5.2	3.9	1.7
Smith	44.3	37.7	37.7	..	6.6	3.3	3.3	...
Stone	35.9	31.2	31.2	..	4.7	2.9	1.1	.7
Sunflower	3.9	.4	.1	.3	3.5	..	..	3.5
Tallahatchie	23.6	.4	.1	.3	23.2	10.5	6.6	6.1
Tate	2.7	.2	.1	.1	2.5	.2	1.2	1.1
Tippah	11.2	5.7	5.7	..	5.5	4.5	1.0	.
Tishomingo	12.0	6.7	6.7	...	5.3	4.8	.	.5
Tunica	15.9	.5	.	.5	15.4	4.3	4.9	6.2
Union	5.5	1.4	1.4	..	4.1	1.9	.4	1.8
Walthall	12.4	7.9	7.9	...	4.5	2.0	2.5	..
Warren	36.4	1.0	.5	.5	35.4	11.2	9.2	15.0
Washington	20.7	.4	.	.4	20.3	5.6	7.3	7.4
Wayne	46.5	35.2	35.2	.	11.3	4.2	3.8	3.3
Webster	10.6	8.3	8.3	...	2.3	1.8	.5	...
Wilkinson	45.3	16.2	15.0	1.2	29.1	12.3	4.9	11.9
Winston	23.7	14.7	14.7	..	9.0	3.3	3.7	2.0
Yalobusha	12.0	2.9	..	2.9	9.1	6.8	.7	1.6
Yazoo	76.8	.8	..	.8	76.0	30.5	17.1	28.4
All counties	1,962.1	1,005.7	980.4	25.3	956.4	403.2	247.8	305.4

Table 11.—Average volume per acre of growing stock and sawtimber on commercial forest land by species group, ownership class and Survey region, Mississippi, 1967

Ownership class	Growing stock			Sawtimber		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood
----- Cubic feet -----						
----- Board feet -----						
STATE OF MISSISSIPPI						
National forest	1,171	875	296	4,973	4,157	816
Other public	1,021	522	499	3,609	2,051	1,558
Forest industry	865	500	365	3,216	2,155	1,061
Farmer	670	289	381	1,904	1,005	899
Misc. private	739	342	397	2,254	1,219	1,035
All ownerships	772	388	384	2,500	1,506	994
NORTH						
National forest	900	536	364	3,118	2,243	875
Other public	874	288	586	2,889	1,094	1,795
Forest industry	689	287	402	1,825	863	962
Farmer	523	153	370	1,134	391	743
Misc. private	622	215	407	1,506	595	911
All ownerships	604	209	395	1,484	614	870
CENTRAL						
National forest	1,569	1,249	320	6,548	5,931	617
Other public	1,380	901	479	4,498	3,395	1,103
Forest industry	1,027	636	391	3,773	2,820	953
Farmer	771	387	384	2,106	1,236	870
Misc. private	829	449	380	2,373	1,505	868
All ownerships	896	512	384	2,778	1,900	878
SOUTHWEST						
National forest	1,877	1,474	403	9,122	8,076	1,046
Other public	912	402	510	2,989	1,280	1,709
Forest industry	1,118	772	346	5,119	4,054	1,065
Farmer	755	385	370	2,465	1,497	968
Misc. private	795	372	423	2,686	1,481	1,205
All ownerships	898	505	393	3,359	2,263	1,096
SOUTH						
National forest	879	721	158	3,517	3,124	393
Other public	794	694	100	3,367	3,017	350
Forest industry	719	506	213	2,556	2,017	539
Farmer	718	441	277	2,495	1,766	729
Misc. private	686	420	266	2,365	1,640	725
All ownerships	726	487	239	2,603	1,968	635
DELTA						
National forest	856	7	849	4,289	59	4,230
Other public	1,292	23	1,269	4,735	145	4,590
Forest industry	983	8	975	4,066	33	4,033
Farmer	657	73	584	1,840	273	1,567
Misc. private	885	34	851	2,892	130	2,762
All ownerships	815	46	769	2,726	179	2,547



