

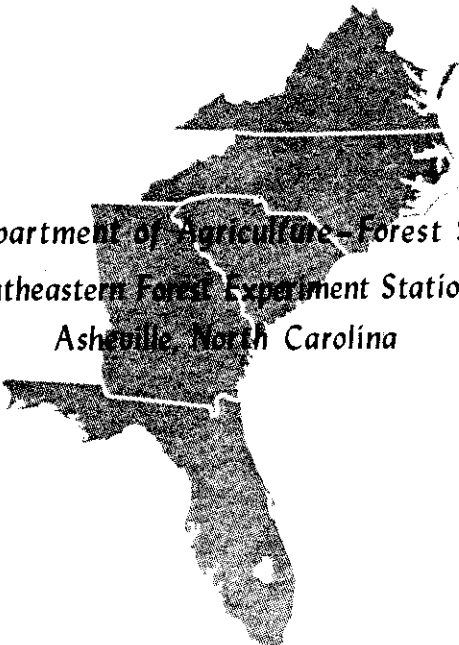
# Changes in Output of Industrial Timber Products in Georgia, 1971-1974

by

Richard L. Welch

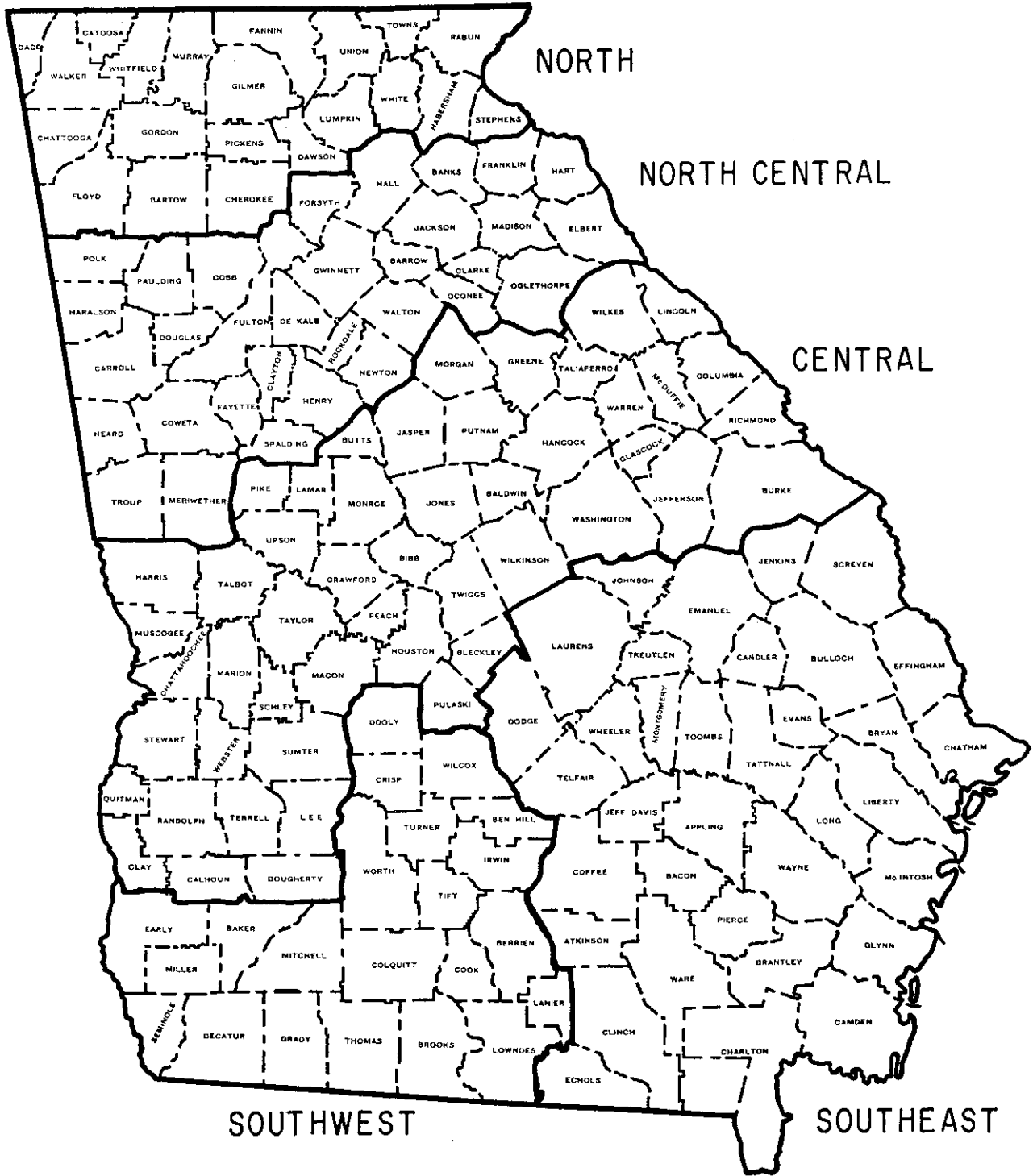
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# GEORGIA



Forest Survey Regions in Georgia.

# Changes in Output of Industrial Timber Products in Georgia, 1971-1974

by

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and  
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Abstract.--The total output of industrial timber products in Georgia amounted to almost 986 million cubic feet in 1974, 7 percent more than in 1971. Production of all major roundwood products and plant byproducts from softwood and hardwood species increased. Of the five Forest Survey Regions in the State, the Southeast Region had the largest total output, the Southwest Region had the greatest percentage increase, and the Central Region had the greatest volume increase. The volume of unused plant residues produced in the State declined by 38 percent between 1971 and 1974, and the volume of unused bark dropped by 35 percent.

Keywords: Roundwood products, plant byproducts, softwood products, hardwood products, unused plant residues, roundwood receipts.

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Between detailed timber surveys, which are made at 10-year intervals in Southeastern States, the easiest way to keep track of timber cutting in a State is to ask forest industries how much wood they are using and where it is coming from. A mill owner is willing to supply these figures because, when compiled, they help him determine how much wood is available to his mill. This Bulletin reports the principal changes in use of Georgia wood by forest industries between 1971 and 1974.

Since one objective was to learn how much wood was being removed from the State's forests, only primary processing plants were considered. A plant that converts boards from a sawmill into furniture, for example, was classed as a secondary processor and was not considered here. Total use of wood by primary processing plants is here called output of industrial timber products. The data reported were obtained by canvassing all such plants that processed Georgia wood during 1971 and 1974. Output was divided into two components--roundwood products and plant byproducts. The second component consists of those initial residues from primary plants that were used as a roundwood substitute.

In some parts of Georgia, utilization of forests for timber products was much heavier than in others. Output of industrial timber products is therefore reported for regions within the State as well as for Georgia as a whole.

In the Southeast Region, where timber was being harvested almost as rapidly as it was growing in 1971, the roundwood harvest declined. The demand for wood remained high in this region, but many of its plants began getting their roundwood from the Southwest or Central Region or from other States. As a result, output of industrial timber products in the Central and Southwest Regions of Georgia was up.

Output also increased substantially in the North Central Region (the Georgia Piedmont). Part of the increase here was caused by salvage of trees killed by the southern pine beetle.

In the northernmost part of Georgia, there was a decline in numbers of mills and in production of saw logs. Even so, much of the wood processed in the region was obtained from other regions.

#### STATEWIDE TRENDS

The total output of industrial timber products in Georgia amounted to almost 986 million cubic feet in 1974, 7 percent more than in 1971. Production of saw logs, veneer logs, pulpwood, and plant byproducts from both softwoods and hardwoods increased during this period. Although the number of primary wood-using plants in the State dropped from 368 in 1971 to 366 in 1974 (fig. 1), the total roundwood received by such plants increased slightly--from 828.9 to 829.2 million cubic feet.

The roundwood received from within and outside the State in 1974 was 22 million cubic feet less than the roundwood harvested in Georgia that year. This was a reversal of the situation in 1971, when roundwood receipts exceeded the roundwood harvest by 27 million cubic feet. The downward trend in receipts probably did not develop until 1974. By the end of that year, the number of sawmills in operation had dropped from a maximum of 301 to only 281.

Plant byproducts were increasingly used as a roundwood substitute during the 4-year period. Such byproducts comprised 1 percent more of the total output of timber products in 1974 than in 1971. Over the past 14 years, this trend has resulted in a 68-percent increase in the total supply of Georgia's timber products, while the production of roundwood has increased by only 55 percent.

Although softwoods provided the bulk of Georgia's industrial timber products throughout the 4-year period, the production from hardwoods increased almost 20 percent, while that from softwoods increased only 5 percent. The increase in demand for hardwood products should result in a badly needed improvement in hardwood utilization.

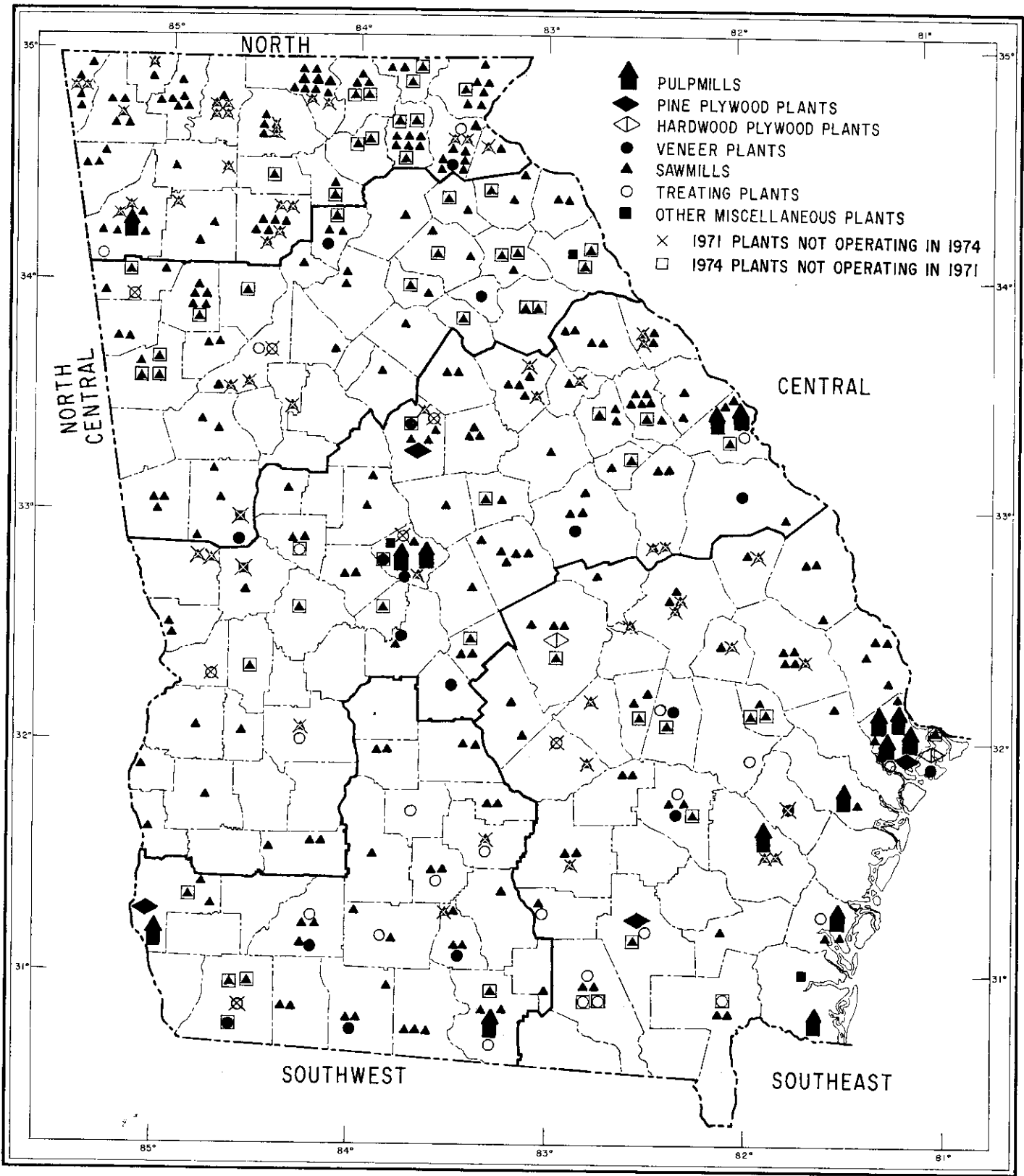


Figure 1. --Location of primary wood-using plants in Georgia, 1974.

The proportions of Georgia's harvest used for the various industrial products changed little between 1971 and 1974. Pulpwood continued to be the leading product, making up over 60 percent of the total output in the latter year. The only decline between 1971 and 1974 was in the use of roundwood for miscellaneous products such as poles, piling, fence posts, and cooperage bolts. Gains in the use of plant byproducts for these miscellaneous products more than offset this reduction in roundwood.

## REGIONAL CHANGES

In 1971, serious problems in timber supply existed within several of Georgia's five Survey Regions. As a result, changes have occurred in the sources of wood used and in production by the primary processing plants in some of these regions.

### Southeast Region

In 1971 and 1974, the Southeast Region had the largest total output of industrial timber products in the State. Regional production of round softwood, however, dropped by over 6 percent between 1971 and 1974. And in the southernmost portion of the region, roundwood production declined from both softwoods and hardwoods (fig. 2). These declines should help to correct a potential imbalance that existed in the regional timber supply in 1971. At that time, net growth of softwoods exceeded total timber removals of this species group by only 8 percent throughout the region, and in the southernmost portion the total timber removals of both species groups exceeded the net growth by 16 percent.

The decline in production of round softwood was partially offset by a 35-percent increase in the output of plant byproducts and a 12-percent increase in production of round hardwood. The net result of these changes was a decline of less than 1 percent in total output of industrial timber products between 1971 and 1974.

Throughout the 4-year period, the number of primary wood-using plants in the Southeast Region remained at 77, and the demand for timber products from the region remained high. Twelve counties in the region each provided roundwood to 20 or more mills within and beyond their borders (fig. 3). The total roundwood receipts in the region amounted to almost 385 million cubic feet, or 46 percent of the total roundwood receipts in the State. Over 37 percent of the regional receipts came from outside the region.

### Southwest Region

In the Southwest Region, the output of industrial timber products rose almost 15 percent between 1971 and 1974--the largest percentage increase in the State. Over 64 percent of the increase came from hardwoods. Production of round softwood increased by 12 percent, while the utilization of softwood residues as byproducts decreased by 16 percent.

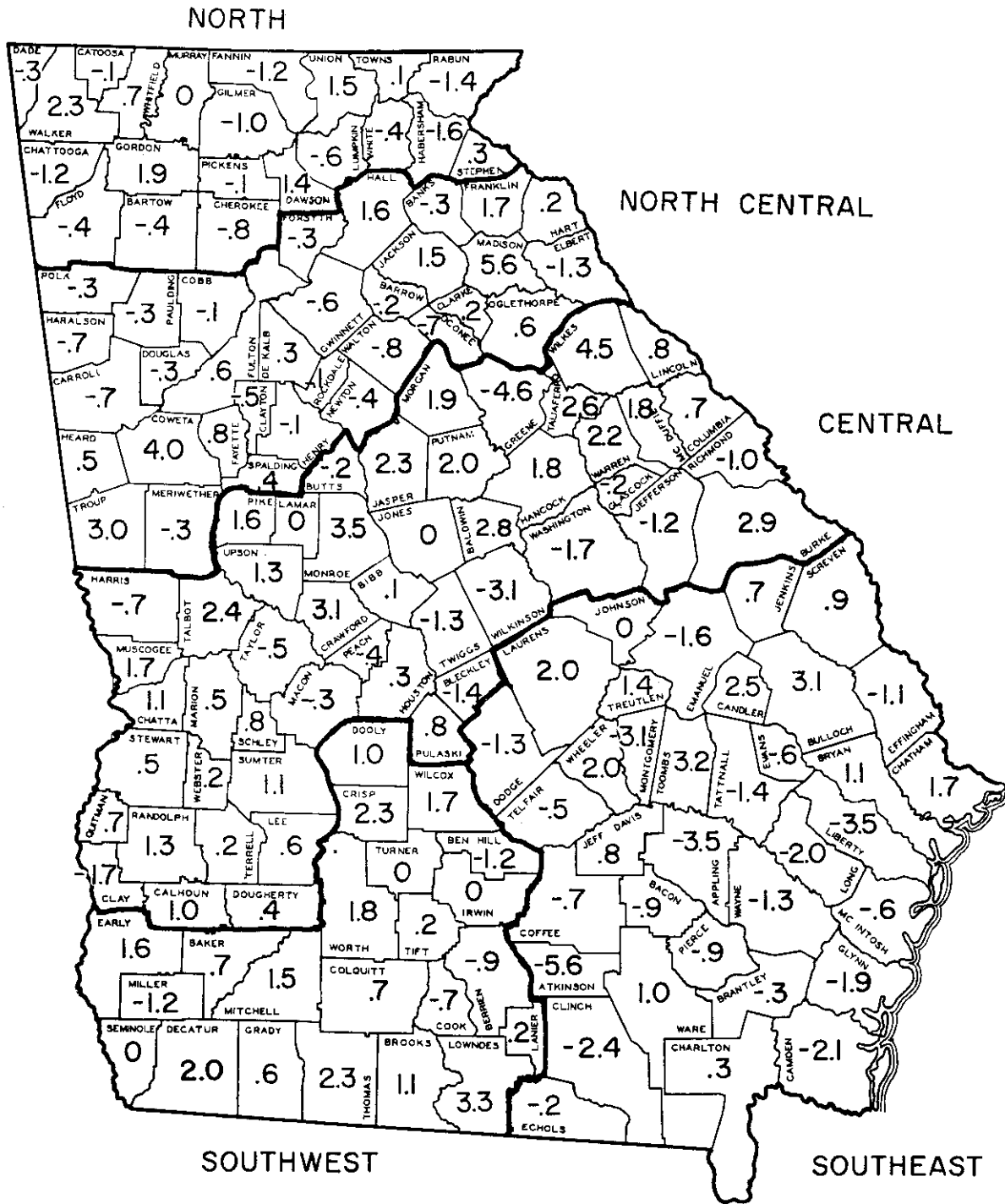
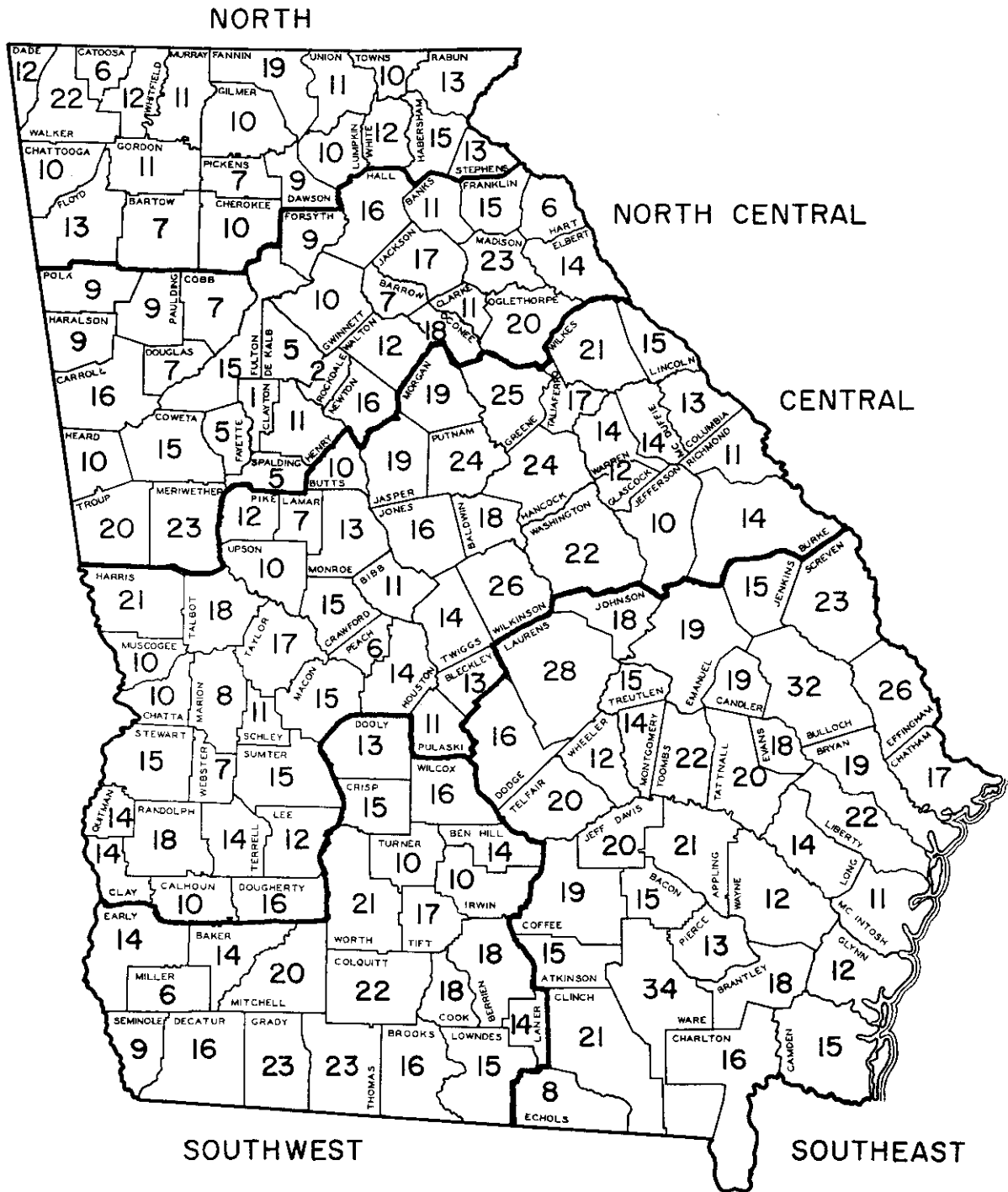


Figure 2.--Changes in output of roundwood products in each county in Georgia, 1971-1974, in million cubic feet.





Although gains occurred in all major products made from round hardwood, the increase in round softwood was limited to pulpwood and miscellaneous products. The output of softwood saw logs and veneer logs dropped sharply between 1971 and 1974.

Almost half of the 145 million cubic feet of roundwood received in the region during 1974 came from outside its borders. At the same time, over 40 percent of the 125 million cubic feet of harvested roundwood was sent to plants outside the region.

According to the 1971 Forest Survey for the Southwest Region, the increased production of round softwood will not cause any immediate problems to the region's timber resources. However, a major increase in the softwood acreage harvested could result in long-range problems for the region. Unless the natural succession of species is prevented, many of the harvested softwood stands will be converted to hardwoods. If this hardwood encroachment is not controlled, the region will lose the prospective growth on the harvested acres. To avoid this loss, reforestation should be increased in the region to match the increased harvesting.

#### Central Region

In the Central Region, the output of industrial timber products increased by 36 million cubic feet between 1971 and 1974--the largest volume increase in the State. Production rose from both species groups, with softwoods providing more than three-fourths of the total increase.

Although the region's total harvest in 1974 was only slightly below that of the Southeast Region, over 42 percent of its harvested wood was sent to plants outside its borders. Almost 40 percent of this exported wood went to the Southeast Region. Wood receipts at the Central Region's primary plants were only half the amount received in the Southeast.

Production of round softwood in the Central Region increased by 12 percent during the 4-year period. The 1971 Forest Survey for the Central Region indicated that this increase would not cause an immediate resource problem in the region. As in the Southwest Region, however, the need for increased reforestation is evident.

#### North Central Region

In the North Central Region, the total output of industrial timber products increased 14 percent between 1971 and 1974. Softwood roundwood and plant by-products accounted for all of the increase. Production of softwood pulpwood was up by 10 million cubic feet.

There were 15 more sawmills operating in this region in 1974 than in 1971, and the output of softwood saw logs was up by 5 million cubic feet. Most of the new sawmills were in areas where outbreaks of the southern pine beetle were most severe; thus, much of the increase in softwood production could have resulted from salvage operations.

In 1974, the North Central Region had the smallest volume of roundwood receipts in the State. Almost 62 percent of its harvested roundwood was pulpwood, and all of this pulpwood was sent to outside mills.

### North Region

In the North Region, the total output of industrial timber products dropped by over 2 million cubic feet between 1971 and 1974. Production of roundwood and plant byproducts from both species groups was down. The number of sawmills operating in the region dropped from 92 in 1971 to 81 in 1974, and the harvest of saw logs dropped by 18 percent. A 14-percent increase in the production of pulpwood was not enough to offset the loss in saw logs.

In 1974, roundwood receipts in the North Region exceeded the roundwood harvest by 20 percent. Roughly 64 percent of the region's receipts of round pulpwood came from outside the region.

### PLANT RESIDUES

Of the 829.2 million cubic feet of roundwood receipts in the State in 1974, 650.5 million cubic feet were used for principal products. The remaining 178.7 million cubic feet consisted of initial plant residues. Subsequently, 133.9 million cubic feet of the initial residues--primarily the coarse material such as slabs, edgings, and veneer cores--were used as a roundwood substitute and processed as small saw logs, pulpwood, and miscellaneous products; an additional 19.2 million cubic feet were used for fuel. Only 25.5 million cubic feet, or 14 percent, of the initial plant residues were not utilized as a plant byproduct or fuel. These figures represent a decided improvement over those for 1971, when 41.4 million cubic feet, or 26 percent, of the initial plant residues were not used.

Although softwoods made up 84 percent of the roundwood receipts in 1974, they accounted for only 59 percent of the unused plant residues. Most unused plant residues from both species groups were produced at sawmills in the form of sawdust and other fine material. The largest volumes of unused residues were produced in the Southeast and Central Regions.

In addition to wood residues, almost 2.7 million tons of bark were accumulated by primary wood-using industries in Georgia in 1974. Utilization of such bark increased from just over 50 percent in 1971 to over 70 percent in 1974. During both years, most of this bark was used for industrial fuel. Other uses included mulch, fiber products, domestic fuel, and charcoal; the volume of bark used for these products has more than doubled since 1971.

## HOW THE STUDY WAS MADE

Two methods were used to obtain data on Georgia's output of industrial timber products in 1971 and 1974. All pulpmills that drew wood from Georgia during those years were canvassed by mail. Personal interviews were conducted at all other primary wood-using industries that draw wood from Georgia during the two survey years. The pulpmills were canvassed by the Southeastern Forest Experiment Station in cooperation with the American Pulpwood Association. Interviews at the other industries were conducted by the Georgia Forestry Commission, and the data were processed by the Southeastern Station.

Detailed data from these surveys appear in the Appendix in tables 1-13. Some small mills were missed, and some reporting errors exist. Although these omissions and errors have little or no effect on the State or regional figures presented, they could greatly affect some of the county figures. County figures, therefore, should be used only in compiling information on groups of counties.

# APPENDIX

## Definitions of Terms

Coarse residues. --Wood residues suitable for chipping, such as slabs, edgings, and veneer cores.

Fine residues. --Wood residues not suitable for chipping, such as sawdust and shavings.

Growing-stock trees. --Live trees of commercial species that either contain or are capable of producing at least one 12-foot saw log.

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 volume in primary forks is included.)

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

Industrial wood. --All roundwood products except fuelwood.

Net annual growth. --The increase in volume for a specific year.

Plant byproducts. --Wood products, such as pulp chips, obtained incidentally to production of other manufactured products.

Primary wood-using plants (industries). --Those plants or industries that utilized roundwood products in the manufacture of their principal products. (Plants that utilize only plant byproducts as a substitute for roundwood are included.)

Roundwood products. --Logs, bolts, or other round sections cut from trees for industrial or consumer uses.

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

Timber products. --Roundwood products and plant byproducts.

Timber removals. --The net volume of growing-stock trees removed from the inventory by harvesting; by cultural operations such as stand improvement; or by land clearing or changes in land use.

Unused plant residues. --Wood material from manufacturing plants not utilized for some product.

Conversion Factors  
Cubic feet of wood per standard unit

Product	Standard unit	Softwood	Hardwood
Saw logs	Thousand board feet <sup>1</sup>	198.005	188.986
Veneer logs	Thousand board feet <sup>1</sup>	177.145	172.005
Pulpwood	Standard cords	74.490	75.600
Other products	Thousand cubic feet	.001	.001

<sup>1</sup> International  $\frac{1}{4}$ -inch rule.

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Table 1.--Output of industrial timber products, by source of material, year, product, and species group, Georgia

Product and species group	Total output		Roundwood output		Byproduct output	
	1971	1974	1971	1974	1971	1974
- - - - - <u>Thousand cubic feet</u> - - - - -						
Saw logs:						
Softwood	241,738	239,181	239,229	236,560	2,509	2,621
Hardwood	57,599	67,323	57,502	67,201	97	122
Total	299,337	306,504	296,731	303,761	2,606	2,743
Veneer logs and bolts:						
Softwood	27,147	28,765	27,147	28,765	--	--
Hardwood	13,200	15,295	13,200	15,295	--	--
Total	40,347	44,060	40,347	44,060	--	--
Pulpwood: <sup>1/</sup>						
Softwood	479,047	515,493	398,001	430,584	81,046	84,909
Hardwood	62,528	76,330	46,966	56,077	15,562	20,253
Total	541,575	591,823	444,967	486,661	96,608	105,162
Miscellaneous:						
Softwood	33,862	38,564	18,171	16,735	15,691	21,829
Hardwood	4,610	4,619	1,590	452	3,020	4,167
Total	38,472	43,183	19,761	17,187	18,711	25,996
All industrial:						
Softwood	781,794	822,003	682,548	712,644	99,246	109,359
Hardwood	137,937	163,567	119,258	139,025	18,679	24,542
Total	919,731	985,570	801,806	851,669	117,925	133,901

<sup>1/</sup> 1971 roundwood figures include 16,870 thousand cubic feet of softwood and 1,278 thousand cubic feet of hardwood roundwood chipped at other primary wood-using plants. 1974 roundwood figures include 19,632 thousand cubic feet of softwood and 3,705 thousand cubic feet of hardwood roundwood chipped at other primary wood-using plants.

Table 2.--Output of industrial timber products, by source of material, year, product, and species group, Southeast Region

Product and species group	Total output		Roundwood output		Byproduct output	
	1971	1974	1971	1974	1971	1974
- - - - - Thousand cubic feet - - - - -						
Saw logs:						
Softwood	72,511	78,519	72,511	75,933	--	2,586
Hardwood	7,735	12,719	7,735	12,719	--	--
Total	80,246	91,238	80,246	88,652	--	2,586
Veneer logs and bolts:						
Softwood	9,285	10,705	9,285	10,705	--	--
Hardwood	3,941	3,232	3,941	3,232	--	--
Total	13,226	13,937	13,226	13,937	--	--
Pulpwood: <sup>1/</sup>						
Softwood	204,624	190,532	178,769	158,479	25,855	32,053
Hardwood	20,109	20,247	16,797	16,036	3,312	4,211
Total	224,733	210,779	195,566	174,515	29,167	36,264
Miscellaneous:						
Softwood	16,557	15,759	13,227	11,284	3,330	4,475
Hardwood	9	715	--	--	9	715
Total	16,566	16,474	13,227	11,284	3,339	5,190
All industrial:						
Softwood	302,977	295,515	273,792	256,401	29,185	39,114
Hardwood	31,794	36,913	28,473	31,987	3,321	4,926
Total	334,771	332,428	302,265	288,388	32,506	44,040

<sup>1/</sup> 1971 roundwood figures include 10,986 thousand cubic feet of softwood and 991 thousand cubic feet of hardwood roundwood chipped at other primary wood-using plants. 1974 roundwood figures include 11,327 thousand cubic feet of softwood and 1,560 thousand cubic feet of hardwood roundwood chipped at other primary wood-using plants.

Table 3.--Output of industrial timber products, by source of material, year, product, and species group, Southwest Region

Product and species group	Total output		Roundwood output		Byproduct output	
	1971	1974	1971	1974	1971	1974
- - - - - Thousand cubic feet - - - - -						
Saw logs:						
Softwood	44,460	35,882	41,992	35,882	2,468	--
Hardwood	4,271	9,571	4,174	9,542	97	29
Total	48,731	45,453	46,166	45,424	2,565	29
Veneer logs and bolts:						
Softwood	3,104	2,966	3,104	2,966	--	--
Hardwood	4,233	6,138	4,233	6,138	--	--
Total	7,337	9,104	7,337	9,104	--	--
Pulpwood: <sup>1/</sup>						
Softwood	63,204	74,816	42,896	59,088	20,308	15,728
Hardwood	7,745	12,649	5,658	7,541	2,087	5,108
Total	70,949	87,465	48,554	66,629	22,395	20,836
Miscellaneous:						
Softwood	6,058	10,162	2,871	4,106	3,187	6,056
Hardwood	103	492	90	5	13	487
Total	6,161	10,654	2,961	4,111	3,200	6,543
All industrial:						
Softwood	116,826	123,826	90,863	102,042	25,963	21,784
Hardwood	16,352	28,850	14,155	23,226	2,197	5,624
Total	133,178	152,676	105,018	125,268	28,160	27,408

<sup>1/</sup> 1971 roundwood figures include 134 thousand cubic feet of softwood roundwood chipped at other primary wood-using plants. 1974 roundwood figures include 3,470 thousand cubic feet of softwood roundwood chipped at other primary wood-using plants.

Table 4.--Output of industrial timber products, by source of material, year, product, and species group, Central Region

Product and species group	Total output		Roundwood output		Byproduct output	
	1971	1974	1971	1974	1971	1974
----- Thousand cubic feet -----						
Saw logs:						
Softwood	82,882	80,737	82,841	80,702	41	35
Hardwood	25,630	27,419	25,630	27,326	--	93
Total	108,512	108,156	108,471	108,028	41	128
Veneer logs and bolts:						
Softwood	13,669	13,973	13,669	13,973	--	--
Hardwood	3,648	4,304	3,648	4,304	--	--
Total	17,317	18,277	17,317	18,277	--	--
Pulpwood: <sup>1/</sup>						
Softwood	130,899	158,066	102,646	129,297	28,253	28,769
Hardwood	24,434	31,377	17,223	23,190	7,211	8,187
Total	155,333	189,443	119,869	152,487	35,464	36,956
Miscellaneous:						
Softwood	5,753	8,300	1,005	833	4,748	7,467
Hardwood	2,660	1,750	1,274	328	1,386	1,422
Total	8,413	10,050	2,279	1,161	6,134	8,889
All industrial:						
Softwood	233,203	261,076	200,161	224,805	33,042	36,271
Hardwood	56,372	64,850	47,775	55,148	8,597	9,702
Total	289,575	325,926	247,936	279,953	41,639	45,973

<sup>1/</sup> 1971 roundwood figures include 5,750 thousand cubic feet of softwood and 287 thousand cubic feet of hardwood roundwood chipped at other primary wood-using plants. 1974 roundwood figures include 4,835 thousand cubic feet of softwood and 2,145 thousand cubic feet of hardwood roundwood chipped at other primary wood-using plants.

Table 5.--Output of industrial timber products, by source of material, year, product, and species group, North Central Region

Product and species group	Total output		Roundwood output		Byproduct output	
	1971	1974	1971	1974	1971	1974
----- Thousand cubic feet -----						
Saw logs:						
Softwood	21,473	26,743	21,473	26,743	--	--
Hardwood	10,507	10,524	10,507	10,524	--	--
Total	31,980	37,267	31,980	37,267	--	--
Veneer logs and bolts:						
Softwood	1,089	1,121	1,089	1,121	--	--
Hardwood	1,215	1,315	1,215	1,315	--	--
Total	2,304	2,436	2,304	2,436	--	--
Pulpwood:						
Softwood	57,220	67,382	54,061	61,933	3,159	5,449
Hardwood	6,705	6,276	4,365	4,320	2,340	1,956
Total	63,925	73,658	58,426	66,253	5,499	7,405
Miscellaneous:						
Softwood	1,984	1,486	581	229	1,403	1,257
Hardwood	857	771	122	29	735	742
Total	2,841	2,257	703	258	2,138	1,999
All industrial:						
Softwood	81,766	96,732	77,204	90,026	4,562	6,706
Hardwood	19,284	18,886	16,209	16,188	3,075	2,698
Total	101,050	115,618	93,413	106,214	7,637	9,404

Table 6.--Output of industrial timber products, by source of material, year, product, and species group, North Region

Product and species group	Total output		Roundwood output		Byproduct output	
	1971	1974	1971	1974	1971	1974
----- <u>Thousand cubic feet</u> -----						
Saw logs:						
Softwood	20,412	17,300	20,412	17,300	--	--
Hardwood	9,456	7,090	9,456	7,090	--	--
Total	29,868	24,390	29,868	24,390	--	--
Veneer logs and bolts:						
Softwood	--	--	--	--	--	--
Hardwood	163	306	163	306	--	--
Total	163	306	163	306	--	--
Pulpwood:						
Softwood	23,100	24,697	19,629	21,787	3,471	2,910
Hardwood	3,535	5,781	2,923	4,990	612	791
Total	26,635	30,478	22,552	26,777	4,083	3,701
Miscellaneous:						
Softwood	3,510	2,857	487	283	3,023	2,574
Hardwood	981	891	104	90	877	801
Total	4,491	3,748	591	373	3,900	3,375
All industrial:						
Softwood	47,022	44,854	40,528	39,370	6,494	5,484
Hardwood	14,135	14,068	12,646	12,476	1,489	1,592
Total	61,157	58,922	53,174	51,846	7,983	7,076

Table 7.--Number of primary wood-using plants, by Forest Survey Region, year, and industry

Industry	Forest Survey Region											
	Total		Southeast		Southwest		Central		North			
	1971	1974	1971	1974	1971	1974	1971	1974	1971	1974		
	----- Number of plants -----											
Sawmills	301	301	53	50	33	35	81	78	42	57	92	81
Veneer mills	23	24	8	7	5	5	6	8	3	3	1	1
Pulpmills	15	15	8	8	2	2	4	4	--	--	1	1
Other miscellaneous <sup>1/</sup>	29	26	8	12	7	6	7	4	5	2	2	2
All plants	368	366	77	77	47	48	98	94	50	62	96	85

<sup>1/</sup> Includes excelsior plants, handle plants, treating plants, etc.

Table 8.--Industrial roundwood movement,  
by year, and species group, Georgia

Species group :	1971	:	1974
<u>Thousand cubic feet</u>			
<b>Softwoods:</b>			
Output	682,548		712,644
Retained	578,369		586,975
Shipped out	104,179		125,669
Shipped in	112,579		92,054
Receipts	690,948		679,029
<b>Hardwoods:</b>			
Output	119,258		139,025
Retained	109,131		124,928
Shipped out	10,127		14,097
Shipped in	28,774		25,249
Receipts	137,905		150,177
<b>All species:</b>			
Output	801,806		851,669
Retained	687,500		711,903
Shipped out	114,306		139,766
Shipped in	141,353		117,303
Receipts	828,853		829,206



Table 9.--Industrial roundwood movement, by Forest Survey Region, and species group, 1974

Species group	Forest Survey Region				
	Southeast	Southwest	Central	North Central	North
----- Thousand cubic feet -----					
<b>Softwoods:</b>					
Output	256,401	102,042	224,805	90,026	39,370
Retained	213,960	59,019	122,831	20,440	28,524
Shipped out	42,441	43,023	101,974	69,586	10,846
Shipped in	114,203	65,636	25,463	4,079	24,872
Receipts	328,163	124,655	148,294	24,519	53,396
<b>Hardwoods:</b>					
Output	31,987	23,226	55,148	16,188	12,476
Retained	27,808	15,234	38,343	9,832	8,760
Shipped out	4,179	7,992	16,805	6,356	3,716
Shipped in	28,802	4,722	11,974	1,714	2,988
Receipts	56,610	19,956	50,317	11,546	11,748
<b>All species:</b>					
Output	288,388	125,268	279,953	106,214	51,846
Retained	241,768	74,253	161,174	30,272	37,284
Shipped out	46,620	51,015	118,779	75,942	14,562
Shipped in	143,005	70,358	37,437	5,793	27,860
Receipts	384,773	144,611	198,611	36,065	65,144

Table 10.--Volume of unused plant residues at primary wood-using industries, by industry, species group, and type of residue, 1974

Species group and type of residue	All industries	Lumber	Veneer and plywood	Other
- - - - - <u>Thousand cubic feet</u> - - - - -				
Softwoods:				
Coarse	2,320	2,304	2	14
Shavings	735	735	--	--
Other fine	12,061	11,821	170	70
Total	15,116	14,860	172	84
Hardwoods:				
Coarse	2,176	1,996	60	120
Shavings	342	342	--	--
Other fine	7,905	6,501	1,357	47
Total	10,423	8,839	1,417	167
All species:				
Coarse	4,496	4,300	62	134
Shavings	1,077	1,077	--	--
Other fine	19,966	18,322	1,527	117
Total	25,539	23,699	1,589	251

Table 11.--Volume of unused plant residues, by Forest Survey Region, species group, and industry, 1974

Species group and industry	Forest Survey Region					
	Total	Southeast	Southwest	Central	North Central	North
----- Thousand cubic feet -----						
Softwood:						
Lumber	14,860	3,782	1,848	4,006	2,998	2,226
Veneer and plywood	172	30	138	4	--	--
Other	84	76	--	8	--	--
Total	15,116	3,888	1,986	4,018	2,998	2,226
Hardwood:						
Lumber	8,839	1,447	829	3,719	1,425	1,419
Veneer and plywood	1,417	756	234	197	230	--
Other	167	--	--	167	--	--
Total	10,423	2,203	1,063	4,083	1,655	1,419
All species:						
Lumber	23,699	5,229	2,677	7,725	4,423	3,645
Veneer and plywood	1,589	786	372	201	230	--
Other	251	76	--	175	--	--
Total	25,539	6,091	3,049	8,101	4,653	3,645

Table 12.--Disposal of bark at primary wood-using industries, by species group, year, and disposition

Disposition	All species		Softwood		Hardwood	
	1971	1974	1971	1974	1971	1974
----- Thousand green tons -----						
Fiber products	27.1	40.2	18.9	21.9	8.2	18.3
Charcoal	1.0	5.2	0.2	2.2	0.8	3.0
Industrial fuel	1,308.3	1,742.5	1,084.3	1,459.9	224.0	282.6
Domestic fuel	9.6	11.1	5.7	5.4	3.9	5.7
Miscellaneous	28.8	98.2	25.0	91.5	3.8	6.7
Not used	1,265.4	828.3	1,026.1	582.5	239.3	245.8
Total	2,640.2	2,725.5	2,160.2	2,163.4	480.0	562.1

Table 13.--Roundwood products output,<sup>1/</sup> by species group, year, and county, in Georgia

Survey unit and county	All species		Softwood		Hardwood	
	1971	1974	1971	1974	1971	1974
----- Thousand cubic feet -----						
<b>Southeast:</b>						
Appling	14,448	10,913	12,595	9,723	1,853	1,190
Atkinson	13,315	7,717	13,274	7,669	41	48
Bacon	6,265	5,400	6,011	4,794	254	606
Brantley	10,524	10,258	9,617	9,248	907	1,010
Bryan	8,586	9,733	7,778	8,681	808	1,052
Bulloch	9,609	12,691	9,218	11,760	391	931
Camden	10,233	8,119	9,010	7,005	1,223	1,114
Candler	2,769	5,256	2,389	4,780	380	476
Charlton	11,445	11,713	11,074	11,083	371	630
Chatman	2,193	3,899	1,913	3,395	280	504
Clinch	17,004	14,624	16,821	14,539	183	85
Coffee	14,360	13,617	13,986	12,328	374	1,289
Dodge	9,740	8,442	8,580	7,660	1,160	782
Echols	4,707	4,547	4,707	4,547	--	--
Effingham	8,745	7,608	7,227	5,778	1,518	1,830
Emanuel	9,885	8,334	9,113	6,310	772	2,024
Evans	3,704	3,096	3,471	2,701	233	395
Glynn	7,079	5,153	5,681	3,736	1,398	1,417
Jeff Davis	5,979	6,767	5,304	5,196	675	1,571
Jenkins	3,882	4,600	3,215	3,874	667	726
Johnson	4,470	4,456	3,508	3,457	962	999
Laurens	9,640	11,629	6,984	9,072	2,656	2,557
Liberty	12,776	9,232	9,735	7,163	3,041	2,069
Long	6,340	4,314	5,159	3,670	1,181	644
McIntosh	4,773	4,203	4,171	3,964	602	239
Montgomery	6,684	3,538	6,461	3,107	223	431
Pierce	5,481	4,562	5,323	4,327	158	235
Screven	6,739	7,650	5,016	6,206	1,723	1,444
Tattnall	7,548	6,159	7,102	6,016	446	143
Telfair	8,610	8,153	7,699	6,986	911	1,167
Toombs	5,784	8,942	5,497	8,034	287	908
Treutlen	3,491	4,935	3,163	4,554	328	381
Ware	15,653	16,669	15,580	16,355	73	314
Wayne	12,436	11,132	11,485	10,781	951	351
Wheeler	5,391	7,440	4,939	6,575	452	865
<b>Total</b>	<b>290,288</b>	<b>275,501</b>	<b>262,806</b>	<b>245,074</b>	<b>27,482</b>	<b>30,427</b>
<b>Southwest:</b>						
Baker	2,636	3,300	2,190	3,040	446	260
Ben Hill	6,978	5,818	6,755	5,136	223	682
Berrien	6,359	5,492	5,692	4,865	667	627
Brooks	7,657	8,758	6,279	5,316	1,378	3,442
Colquitt	9,088	9,769	8,375	8,532	713	1,237
Cook	5,545	4,830	3,818	4,103	1,727	727
Crisp	1,865	4,116	1,760	3,683	105	433
Decatur	6,074	8,050	4,911	6,720	1,163	1,330
Dooly	2,951	3,930	1,977	3,151	974	779
Early	3,381	5,009	2,296	3,188	1,085	1,821
Grady	5,557	6,128	3,818	4,182	1,739	1,946
Irwin	2,007	2,019	2,007	1,894	--	125
Lanier	4,418	4,615	4,285	2,836	133	1,779
Lowndes	4,144	7,415	3,721	5,518	423	1,897
Miller	2,614	1,406	2,097	1,284	517	122
Mitchell	5,906	7,371	5,661	6,898	245	473
Seminole	2,117	2,067	1,851	1,748	266	319
Thomas	9,918	12,257	8,428	10,241	1,490	2,016
Tift	3,802	4,049	3,414	3,016	388	1,033
Turner	2,020	2,003	2,017	1,920	3	83
Wilcox	4,478	6,221	4,142	4,703	336	1,518
Worth	5,369	7,175	5,235	6,598	134	577
<b>Total</b>	<b>104,884</b>	<b>121,798</b>	<b>90,729</b>	<b>98,572</b>	<b>14,155</b>	<b>23,226</b>

Table 13.--Roundwood products output,<sup>1/</sup> by species group, year, and county, in Georgia (continued)

Survey unit and county	All species		Softwood		Hardwood	
	1971	1974	1971	1974	1971	1974
----- Thousand cubic feet -----						
Central:						
Baldwin	4,016	6,775	3,088	5,772	928	1,003
Bibb	2,277	2,418	1,675	1,813	602	605
Bleckley	2,917	1,538	2,082	833	835	705
Burke	6,230	9,090	3,620	6,876	2,610	2,214
Butts	2,841	2,663	2,401	2,063	440	600
Calhoun	2,753	3,748	1,944	3,244	809	504
Chattahoochee	3,556	4,691	2,835	3,970	721	721
Clay	4,113	2,397	3,365	1,683	748	714
Columbia	5,073	5,752	4,276	4,817	797	935
Crawford	5,999	9,067	5,166	6,868	833	2,199
Dougherty	4,813	5,208	4,163	4,555	650	653
Glascock	1,965	1,739	1,150	997	815	742
Greene	13,482	8,884	11,318	7,409	2,164	1,475
Hancock	8,303	10,072	6,962	8,619	1,341	1,453
Harris	9,015	8,361	7,986	6,963	1,029	1,398
Houston	4,893	5,155	3,535	4,020	1,358	1,135
Jasper	6,528	8,791	5,297	6,567	1,231	2,224
Jefferson	4,940	3,746	3,624	2,785	1,316	961
Jones	7,627	7,662	6,429	6,745	1,198	917
Lamar	2,772	2,817	2,410	2,561	362	256
Lee	1,272	1,826	1,096	1,665	176	161
Lincoln	5,717	6,513	4,802	5,840	915	673
Central:						
McDuffie	2,847	4,599	2,412	3,990	435	609
Macon	3,435	3,176	2,188	2,467	1,247	709
Marion	2,349	2,826	2,047	2,326	302	500
Monroe	6,591	10,121	5,298	7,629	1,293	2,492
Morgan	4,944	6,870	4,122	5,676	822	1,194
Muscogee	1,743	3,442	1,557	2,887	186	555
Peach	1,327	919	1,104	768	223	151
Pike	1,354	2,940	1,147	2,732	207	208
Pulaski	2,148	2,993	1,630	2,168	518	825
Putnam	9,241	11,253	8,110	10,579	1,131	674
Quitman	2,428	3,080	2,087	2,612	341	468
Randolph	6,974	8,289	5,686	6,531	1,288	1,758
Richmond	6,459	5,451	4,555	2,996	1,904	2,455
Schley	1,980	2,774	1,811	2,551	169	223
Stewart	10,183	10,728	9,003	9,331	1,180	1,397
Sumter	1,997	3,086	1,743	2,871	254	215
Talbot	5,840	8,221	5,126	6,758	714	1,463
Taliaferro	3,663	6,278	3,002	5,139	661	1,139
Taylor	3,265	2,745	2,373	2,332	892	413
Terrell	2,931	3,166	2,774	2,968	157	198
Twiggs	5,689	4,391	4,517	2,854	1,172	1,537
Upson	3,413	4,703	2,950	3,999	463	704
Warren	2,667	4,833	1,916	3,958	751	875
Washington	10,735	9,058	7,721	7,500	3,014	1,558
Webster	2,766	2,928	2,324	2,123	442	805
Wilkes	11,869	16,364	10,436	11,953	1,433	4,411
Wilkinson	11,959	8,826	7,548	5,607	4,411	3,219
Total	241,899	272,973	194,411	219,970	47,488	53,003

Table 13.--Roundwood products output,<sup>1/</sup> by species group, year, and county, in Georgia (continued)

Survey unit and county	All species		Softwood		Hardwood	
	1971	1974	1971	1974	1971	1974
----- Thousand cubic feet -----						
<b>North Central:</b>						
Banks	1,653	1,354	1,427	1,240	226	114
Barrow	2,665	2,415	2,098	2,094	567	321
Carroll	7,040	6,302	5,962	5,179	1,078	1,123
Clarke	933	1,138	804	977	129	161
Clayton	692	223	671	223	21	--
Cobb	1,914	1,776	1,704	1,715	210	61
Coweta	6,271	10,288	4,752	8,449	1,519	1,839
DeKalb	307	646	274	614	33	32
Douglas	1,632	1,328	1,494	1,237	138	91
Elbert	5,234	3,965	4,648	3,132	586	833
Fayette	627	1,382	499	1,272	128	110
Forsyth	2,052	1,749	1,336	1,354	716	395
Franklin	2,211	3,878	1,575	3,007	636	871
Fulton	3,004	3,633	2,688	2,959	316	674
Gwinnett	2,600	1,979	2,341	1,711	259	268
Hall	1,912	3,530	1,785	3,134	127	396
Haralson	3,931	3,271	3,064	2,599	867	672
Hart	638	803	549	651	89	152
Heard	3,650	4,103	3,078	3,474	572	629
Henry	2,785	2,648	2,385	2,051	400	597
Jackson	2,291	3,796	1,976	3,368	315	428
Madison	1,414	7,010	1,255	6,551	159	459
Meriwether	8,084	7,813	6,174	7,067	1,910	746
Newton	2,961	2,596	2,433	2,146	528	450
Oconee	3,518	2,777	2,994	2,433	524	344
Oglethorpe	6,608	7,175	5,613	5,681	995	1,494
Paulding	3,338	2,993	2,735	2,490	603	503
Polk	2,871	2,544	2,252	1,790	619	754
Rockdale	209	154	170	140	39	14
Spalding	916	1,281	861	1,147	55	134
Troup	7,007	10,050	5,610	8,737	1,397	1,313
Walton	2,445	1,614	1,997	1,404	448	210
Total	93,413	106,214	77,204	90,026	16,209	16,188
<b>North:</b>						
Bartow	3,426	3,021	3,121	2,788	305	233
Catoosa	518	466	373	366	145	100
Chattooga	3,735	2,568	3,119	1,716	616	852
Cherokee	6,965	6,160	6,296	5,055	669	1,105
Dade	1,070	752	627	458	443	294
Dawson	913	2,288	769	2,092	144	196
Fannin	3,979	2,741	1,729	1,681	2,250	1,060
Floyd	3,347	2,897	2,676	2,145	671	752
Gilmer	3,867	2,854	2,565	2,148	1,302	706
Gordon	2,633	4,533	2,304	4,000	329	533
Habersham	3,985	2,418	2,979	1,950	1,006	468
Lumpkin	1,755	1,173	1,419	816	336	357
Murray	3,055	3,044	2,629	2,638	426	406
Pickens	1,786	1,646	1,493	1,477	293	169
Rabun	2,992	1,575	2,032	750	960	825
Stephens	2,237	2,559	1,609	1,652	628	907
Towns	369	423	112	297	257	126
Union	1,172	2,691	592	1,340	580	1,351
Walker	2,499	4,848	1,811	3,462	688	1,386
White	1,073	723	706	484	367	239
Whitefield	1,798	2,466	1,567	2,055	231	411
Total	53,174	51,846	40,528	39,370	12,646	12,476
All counties	783,658	828,332	665,678	693,012	117,980	135,320

<sup>1/</sup> Excludes round pulpwood chipped at other primary wood-using industries.

Welch, Richard L., and Thomas R. Bellamy

1976. Changes in output of industrial timber products in Georgia, 1971-1974. USDA For. Serv. Resour. Bull. SE-36, 28 p. Southeast. For. Exp. Stn., Asheville, N.C.

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Keywords: Roundwood products, plant byproducts, softwood products, hardwood products, unused plant residues, roundwood receipts.

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