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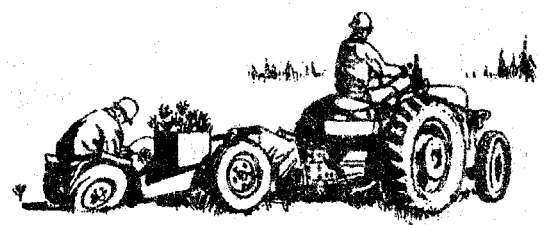
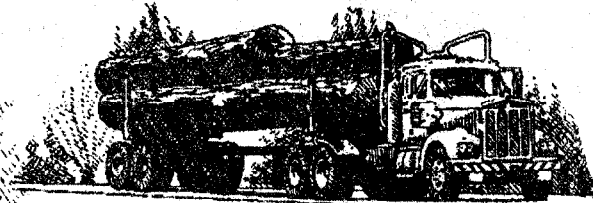
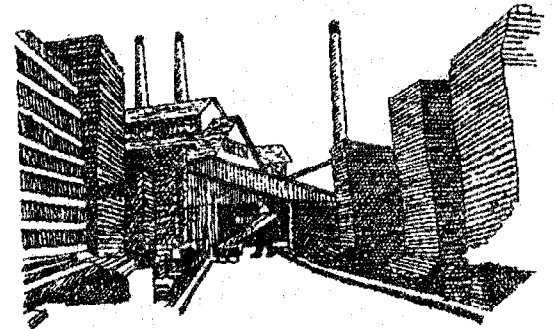
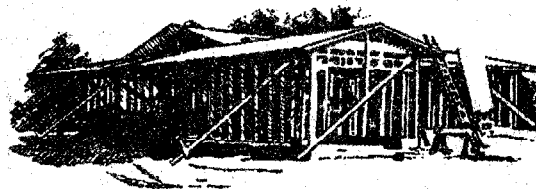


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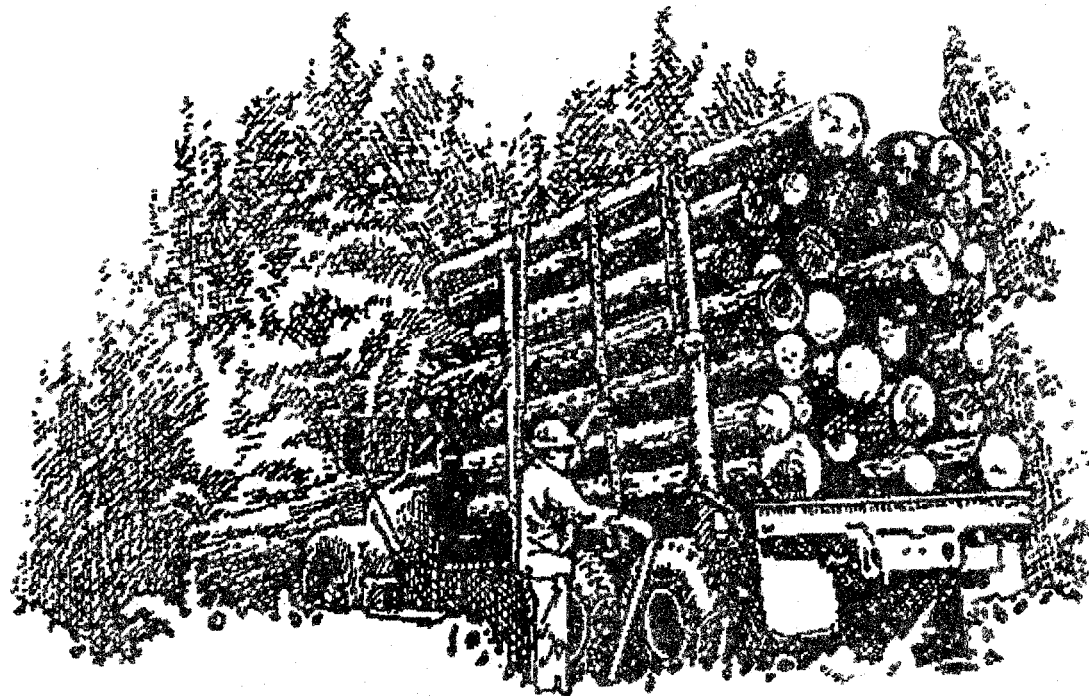
Alabama's Timber Industry—An Assessment of Timber Product Output and Use, 1995

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and J. Stephen Nix



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Foreword

This report contains the findings of a 1995 canvass of primary wood-using plants in Alabama. It complements the Forest Inventory and Analysis (FIA) periodic inventory of volume and removals from the State's timberland. The canvass was conducted to determine the amount and source of wood receipts and annual timber product drain by county in 1995 and to determine interstate and cross-regional movement of industrial roundwood. Only primary wood-using mills were canvassed. Primary mills are those that process roundwood in log or bolt form or as chipped roundwood. Examples of industrial roundwood products are saw logs, pulpwood, veneer logs, poles, and logs used for composite board products. Mills producing products from residues generated at primary and secondary processors were not canvassed. Trees chipped in the woods were included in the estimate of timber drain only if they were delivered to a primary domestic manufacturer.

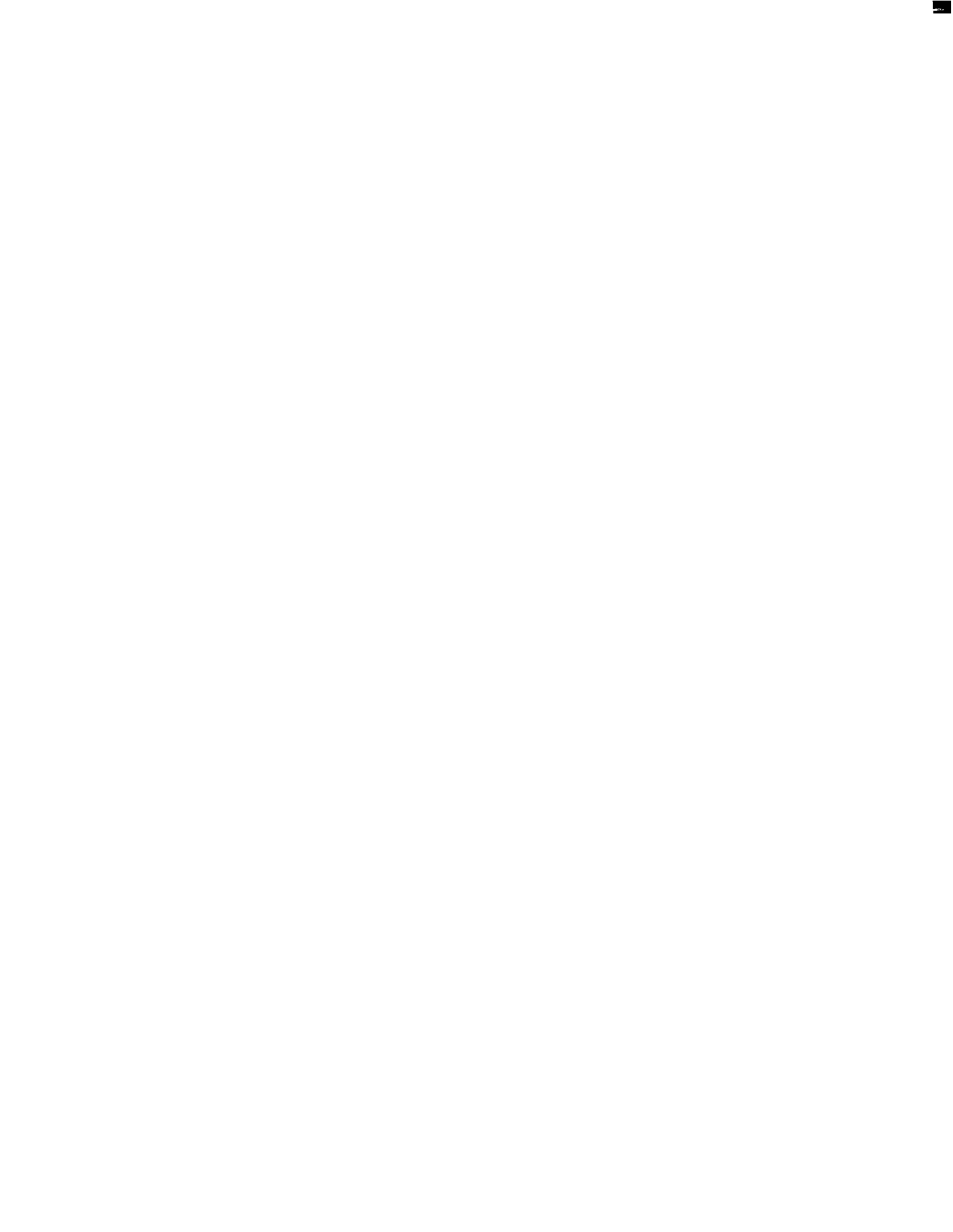
A 100-percent canvass of wood processors in Alabama was conducted in 1996 to obtain information for 1995. In addition, roundwood from out-of-State mills known to be using logs or bolts harvested from Alabama timberland

was incorporated into Alabama production estimates. Each mill was canvassed by mail or through personal contact at plant locations. Telephone contacts followed mailed questionnaire responses when additional information or clarification of response was necessary. Surveys for all timber products other than pulpwood began in 1951, and are currently conducted every 2 years.

Pulpwood production data were taken from an annual canvass of all southeastern pulpmills. Medium density fiberboard, insulating board, and hardboard plants were included in this survey.

The Southern Research Station gratefully acknowledges the cooperation and assistance provided by the Alabama Forestry Commission in collecting mill data. Appreciation is also extended to forest industry and mill managers for providing timber products information. The information in this report is based on responses from 211 mills operating in 1995: 16 pulpmills, 148 sawmills, 23 veneer mills, 1 composite panel mill, and 23 mills manufacturing other industrial products.



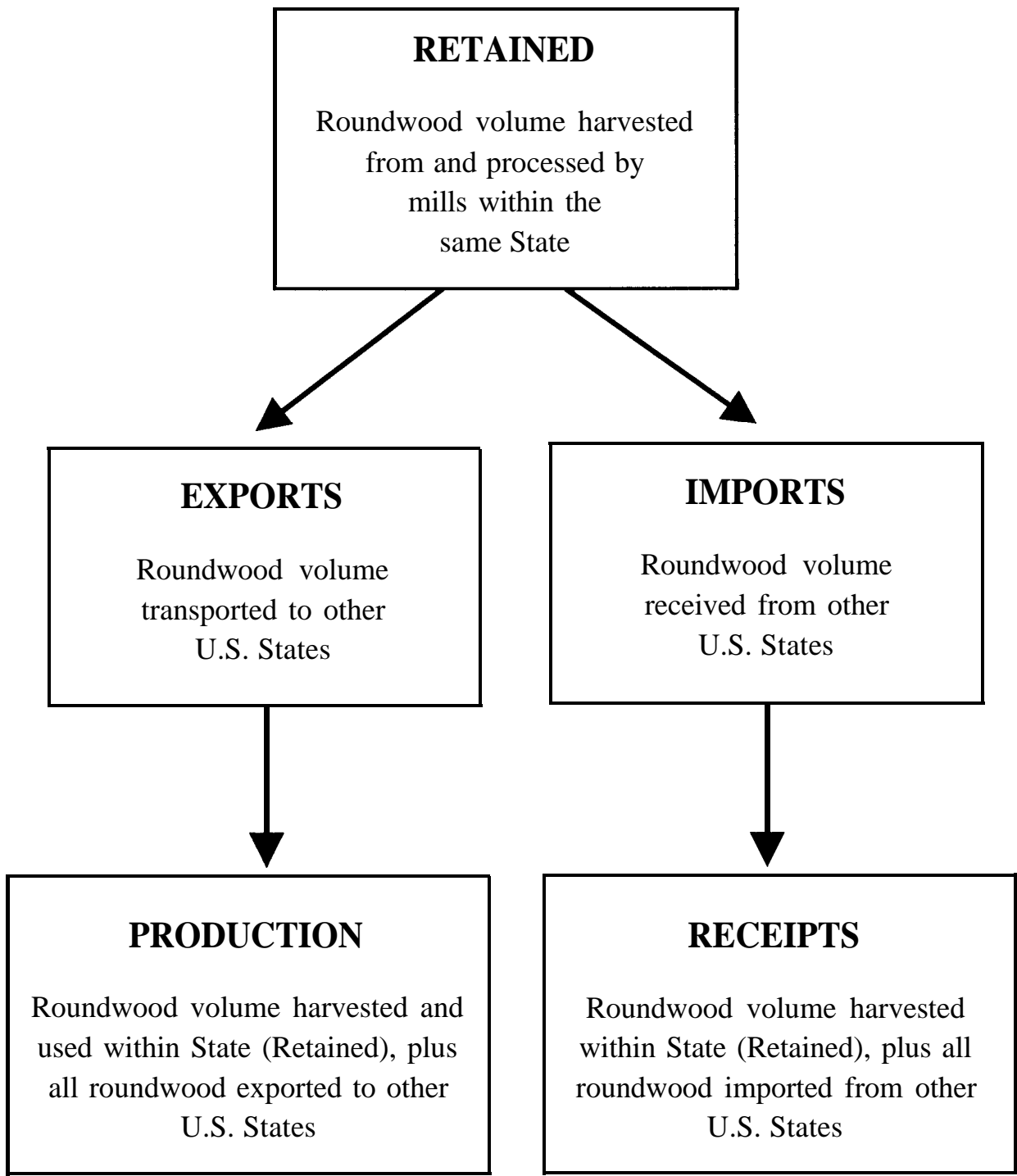


Contents

	<i>Page</i>
Output of Industrial Timber Products	1
Plant Byproducts	4
Regional Observations	5
Total Roundwood Output	7
References	8
Definitions	9
Conversion Factors	10
Index of Tables	11
Tables 1-2 1 ^a	13

^a All tables in this report are available in Microsoft® Excel workbook files. Upon request, these files will be supplied on 3½inch diskettes.

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Production = Retained + Exports

Receipts = Retained + Imports

Figure 1-Movement of roundwood exports and imports within the United States.

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Output of Industrial Timber Products

Note: The reader must understand that certain terms, namely-retained, export, import, production, and receipts-have specialized meanings and relationships unique to the Forest Inventory and Analysis Units across the country that deal with timber products output (fig. 1).

- In 1995, the combined industrial timber products output (TPO) from roundwood and plant byproducts totaled 1.77 billion cubic feet.
- Timber products output from roundwood totaled 1.3 billion cubic feet, while output of plant byproducts was 471 million cubic feet.

- Output of **softwood** roundwood products totaled 924 million cubic feet, while output of **hardwood** roundwood products was 376 million cubic feet (fig. 2).
- Pulpwood and saw logs were the principal roundwood products in 1995. Combined output of these two products totaled 1.17 billion cubic feet and accounted for 90 percent of the State's total roundwood output (fig. 3).
- Total receipts at Alabama mills, which included roundwood harvested and retained in the State and roundwood imported from other States, totaled 1.4 billion cubic feet. The number of primary **roundwood**-using plants in Alabama was 211 in 1995.

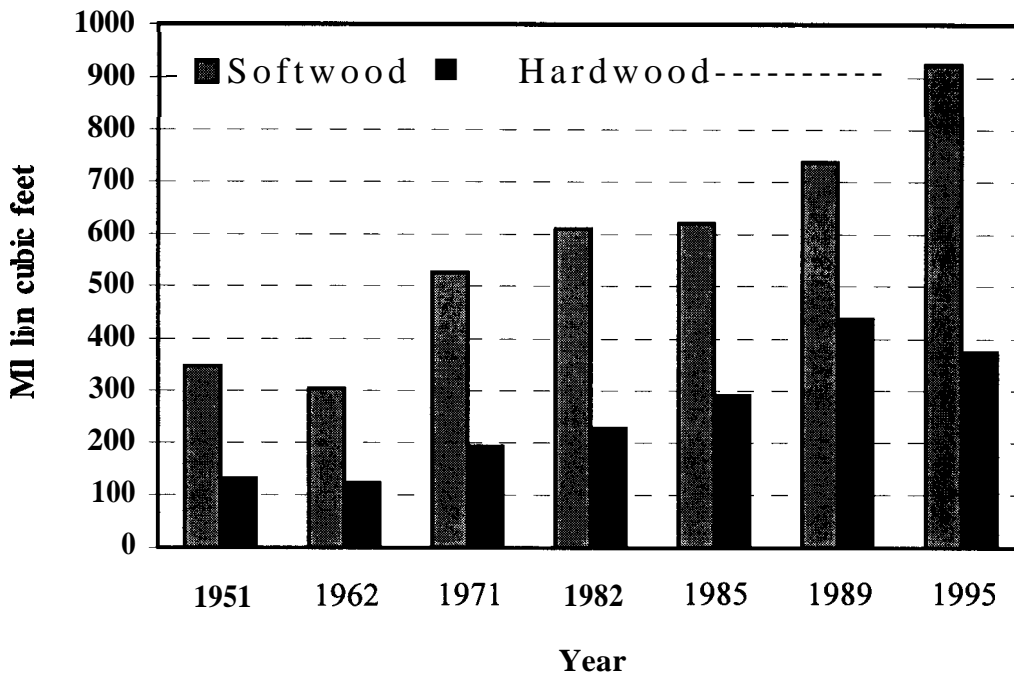


Figure 2-Roundwood production for all products by species group and year (see page 8 for references for individual years).

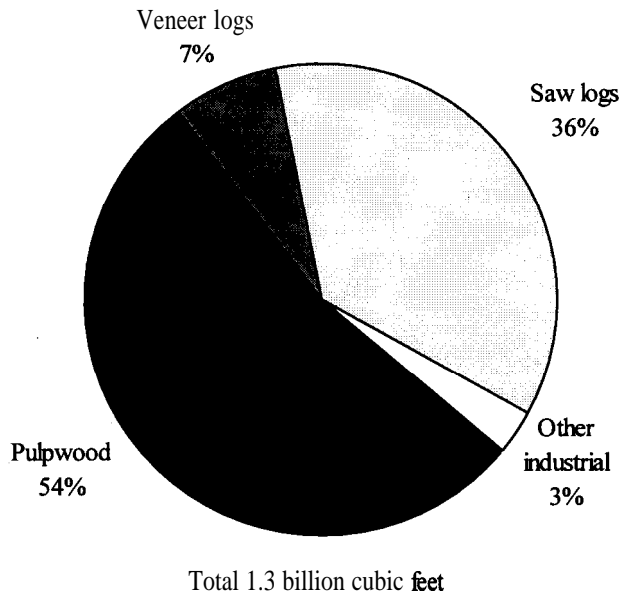


Figure 3—Roundwood production by type of product, 1995.

Pulpwood

- Pulpwood production was 698 million cubic feet (9.4 million cords) and accounted for 54 percent of the State's total roundwood TPO. Softwood output accounted for 416 million cubic feet, while hardwood output was 282 million cubic feet (fig. 4).

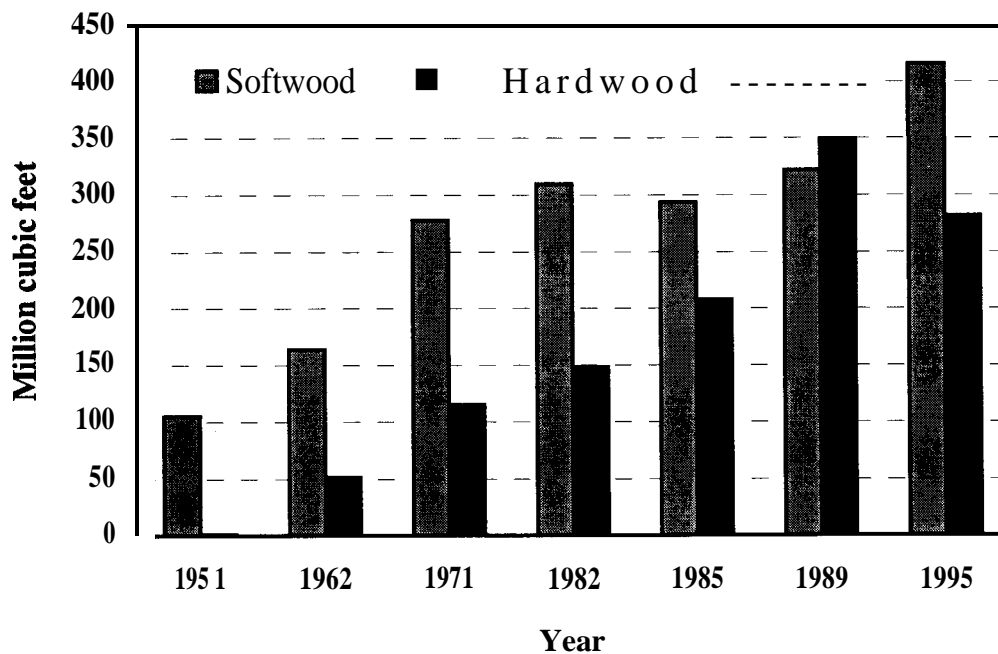


Figure 4—Roundwood pulpwood production by species group and year (see page 8 for references for individual years).

- Sixteen **pulpmill** facilities were operating and receiving roundwood in Alabama in 1995. Total pulpwood receipts for these mills was 805 million cubic feet, accounting for 57 percent of total receipts for all mills.
- More than 82 percent of roundwood cut for pulpwood was retained for processing at Alabama pulpmills. Roundwood pulpwood accounted for 64 percent of total known exports and 77 percent of total imports. Roundwood pulpwood imports amounted to 230 million cubic feet, or 107 million cubic feet more than was exported.

Saw Logs

- Saw logs accounted for 36 percent of the State's total roundwood products. Output of softwood saw logs was 399 million cubic feet (2.2 billion board feet), while that of hardwood saw logs totaled 74 million cubic feet (418 million board feet) (fig. 5).
- Alabama currently has 148 sawmills. Total saw-log receipts was 475 million cubic feet. Softwood saw-log receipts accounted for 399 million cubic feet, while those of hardwoods totaled 76 million cubic feet. Of the operating mills, 20 percent had receipts less than 1 million board feet, while 36 percent had receipts

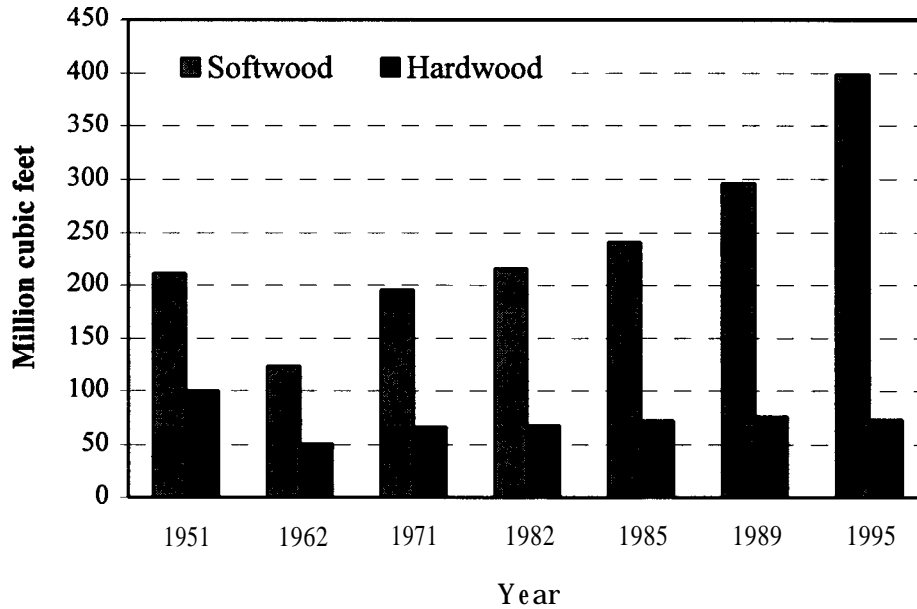


Figure 5—Roundwood saw-log production by species group and year (see page 8 for references for individual years).

greater than 10 million board feet. These mills accounted for 89 percent of saw-log receipts.

- Alabama retained 88 percent of its saw-log production for domestic manufacture, with saw-log imports exceeding exports by nearly 2 million cubic feet in 1995.

Veneer Logs

- Output of veneer logs in 1995 totaled 94 million cubic feet and accounted for 7 percent of the State's total roundwood TPO volume. Softwood veneer production was 75 million cubic feet (459 million board feet); output of hardwood veneer logs totaled 20 million cubic feet (119 million board feet) (fig. 6).

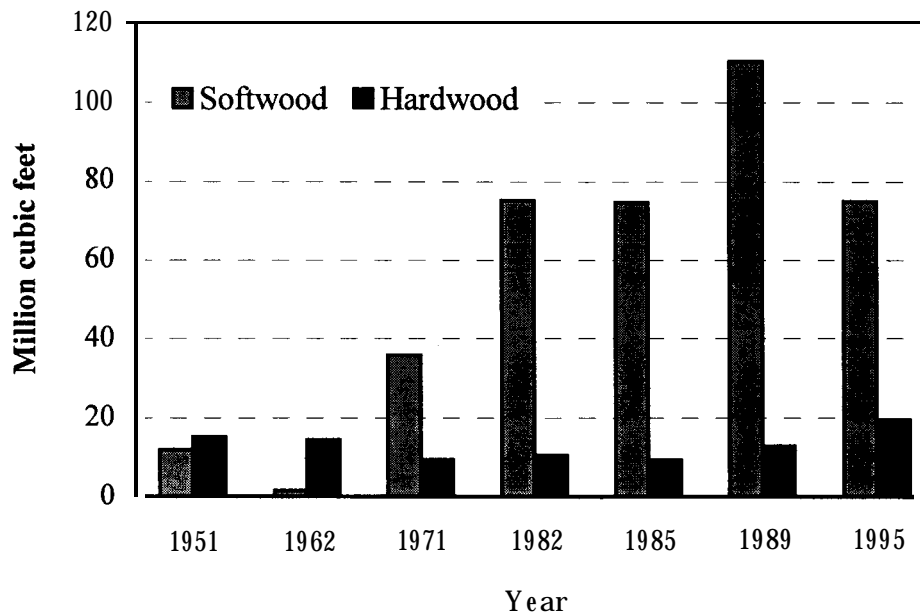


Figure 6—Roundwood veneer-log production by species group and year (see page 8 for references for individual years).

Twenty-three veneer mills were operating in Alabama in 1995. Total receipts of veneer logs was 88 million cubic feet. Softwood veneer receipts of 69 million cubic feet accounted for 78 percent of total veneer receipts.

Alabama retained 89 percent of its veneer-log production for processing at domestic veneer mills. Imports amounted to 4 million cubic feet, while exports totaled 10 million cubic feet, making the State a net exporter of roundwood veneer logs.

Other Industrial Products

Roundwood harvested for other industrial uses such as poles, posts, mulch, firewood, composite panels, and all other industrial products totaled 35 million cubic feet. Other industrial product volume accounted for 3 percent of the State's total TPO volume. Softwood made up 99 percent of the other industrial product volume (fig. 7).

A total of 24 plants produced other industrial products in 1995. Combined receipts of other industrial products from softwood and hardwood totaled 39 million cubic feet.

- Alabama was a net importer of roundwood used for other industrial products; almost all of the 4.8 million cubic feet imported was softwood.

Plant Byproducts

- In 1995, processing of primary products in Alabama mills generated 473 million cubic feet of wood and bark residues. Coarse residues from all primary products was 188 million cubic feet, while bark volume totaled 174 million cubic feet. Collectively, sawdust and shavings make up 23 percent of total residues, or 111 million cubic feet (fig. 8).
- Virtually all of the wood and bark residues were used for a product; less than 1 percent was not used, while 59 percent of the residues were used for industrial fuel (fig. 9). More than 155 million cubic feet, or 83 percent, of the coarse residues were used for fiber products. Most of the bark was used for industrial fuel or other miscellaneous products, while 77 percent of the sawdust and shavings were used for industrial fuel.
- Sawmills generated 269 million cubic feet of mill residues, accounting for 57 percent of the total residues produced (fig. 10).

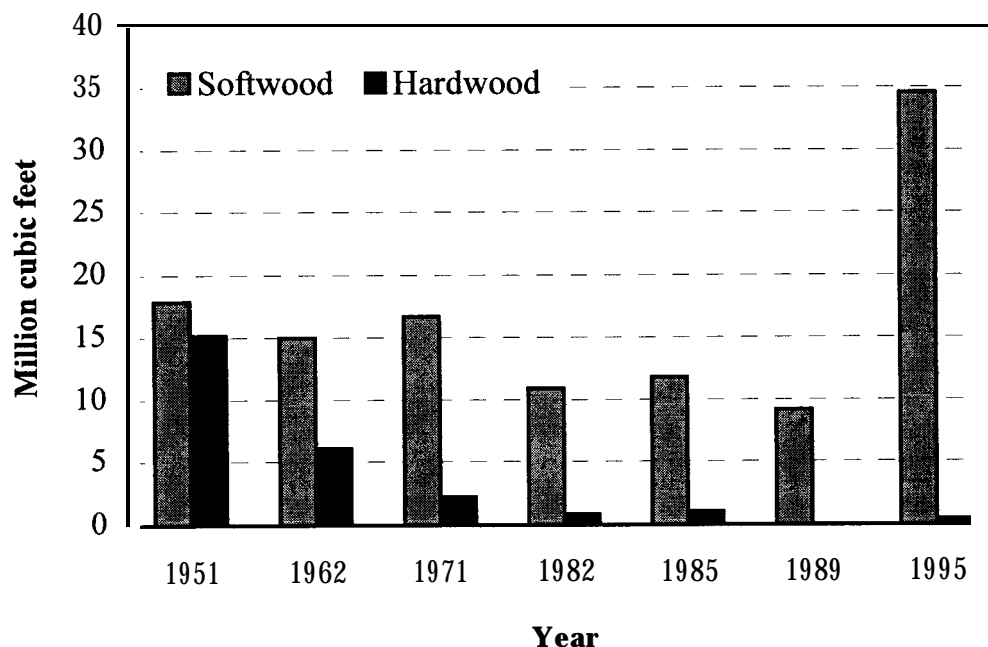


Figure 7—Roundwood production for other industrial products by species group and year (see page 8 for references for individual years).

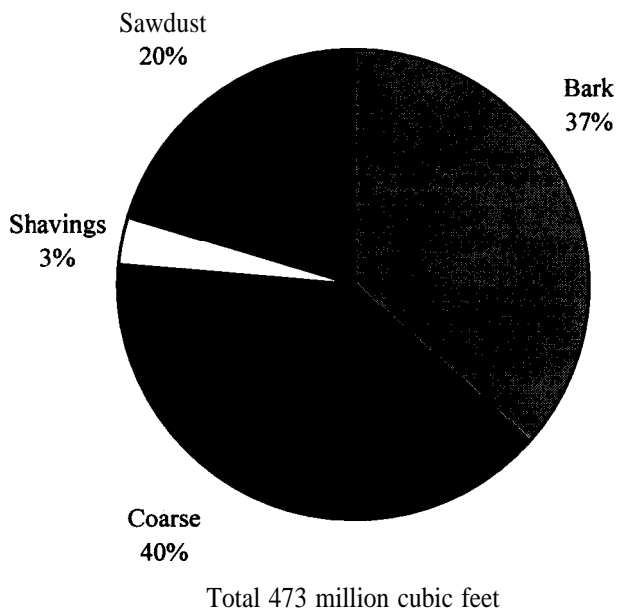


Figure 1-Primary mill residue by residue type, 1995.

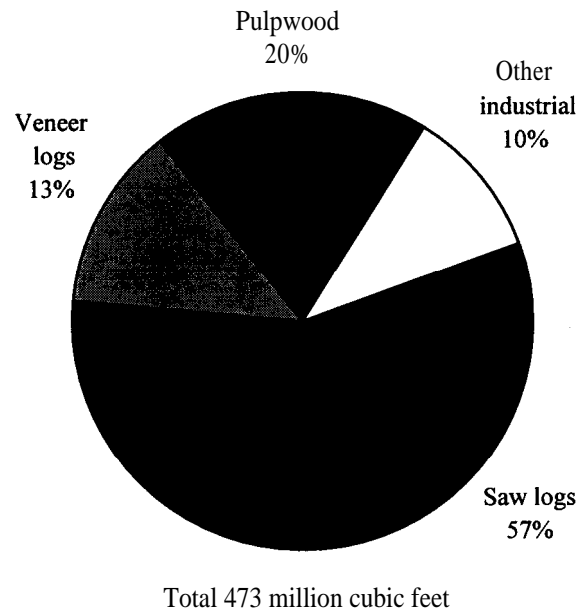


Figure 10—Primary mill residue produced by mill type, 1995.

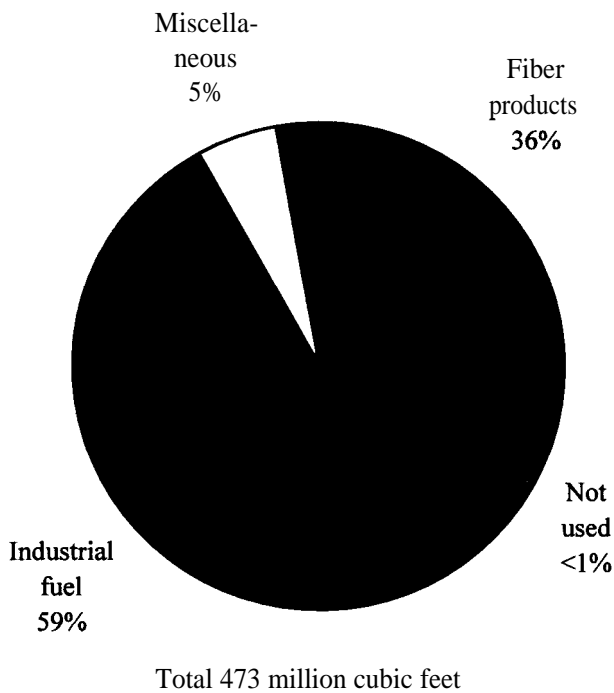


Figure 9-Disposal of residue by product, 1995.

Regional Observations

- Softwood output accounted for at least 67 percent of total output for all regions, except the Northern region, where softwoods accounted for only 49 percent of total output.

Southwest South Region

- Roundwood output from the Southwest South region totaled 154 million cubic feet in 1995.
- Pulpwood accounted for 53 percent of the region's TPO and 12 percent of the State's roundwood pulpwood output. The 53 million cubic feet of saw logs accounted for 35 percent of the total roundwood output for the region.
- In the Southwest South region, 22 primary wood-using plants were operating during 1995: 3 pulpmills, 11 sawmills, and 8 other miscellaneous mills (fig. 11). These mills processed 12 percent of the State's total roundwood output.

Southwest North Region

- Almost 3 11 million cubic feet of roundwood were produced in the Southwest North region.

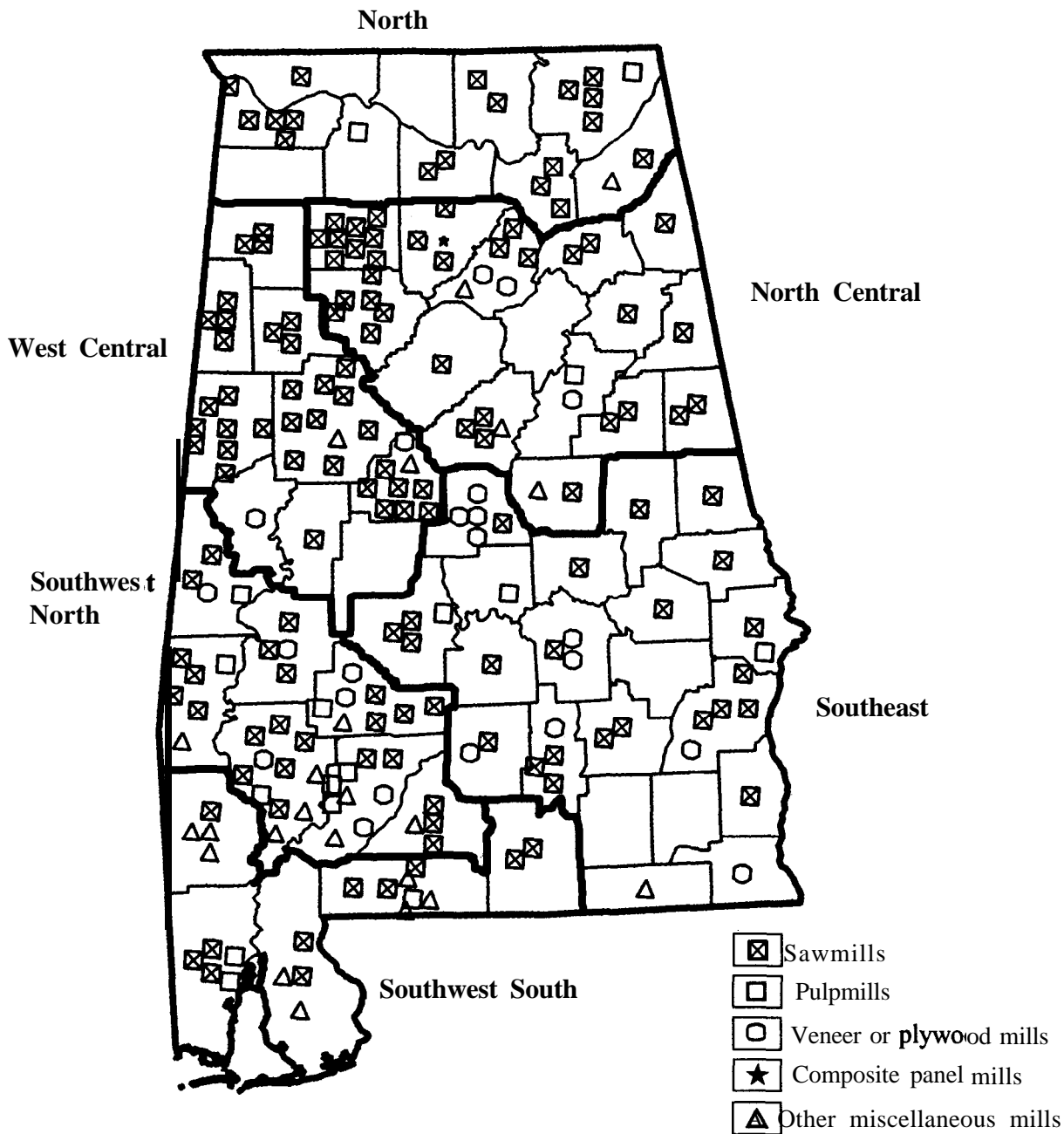


Figure 1 | Primary wood-using mills by region, 1995.

- Saw-log production of 107 million cubic feet accounted for 34 percent of the region's total roundwood output. Production of pulpwood at 178 million cubic feet accounted for 57 percent of the region's total roundwood output.
- The 46 mills operating in the Southwest North region in 1995 included, 7 pulpmills, 24 sawmills, 7 veneer or plywood mills, and 8 other miscellaneous mills.

Southeast Region

- Roundwood output from the Southeast region totaled 344 million cubic feet in 1995.
- Pulpwood accounted for 57 percent of the region's TPO and 28 percent of the State's roundwood pulpwood output. The 103 million cubic feet of saw logs accounted for 30 percent of the total roundwood output for the region.

- In the Southeast region, 40 primary wood-using plants were operating during 1995: 3 pulpmills, 25 sawmills, 11 veneer or plywood mills, and 1 other miscellaneous mill (fig. 11). These mills processed 26 percent of the State's total roundwood output.

West Central Region

- Roundwood output **from** the West Central region totaled 196 million cubic feet. Roundwood production from this region accounted for 15 percent of the total **roundwood** TPO for the State.
- Pulpwood production of 84 million cubic feet accounted for 43 percent of the region's total TPO. Saw-log production of 101 million cubic feet accounted for another 52 percent of the region's total roundwood output.
- The 39 primary wood-using plants operating in the West Central region included 35 sawmills, 2 veneer or plywood mills, and 2 other miscellaneous mills.

North Central Region

- Roundwood output from the North Central region totaled 237 million cubic feet in 1995.
- Production of pulpwood at 122 million cubic feet accounted for 51 percent of the region's total roundwood output. Saw-log production of 87 million cubic feet accounted for 37 percent of the region's total roundwood output.
- In the North Central region, 43 primary wood-using plants were operating during 1995: 1 pulpmill, 35 sawmills, 3 veneer or plywood mills, 1 composite panel mill, and 3 other miscellaneous mills.

North Region

- Roundwood output from the North region totaled 58 million cubic feet.
- Saw-log production totaled 21 million cubic feet and accounted for 37 percent of the region's total roundwood output. Pulpwood production of 34 million cubic feet accounted for 59 percent of the region's total TPO.
- In the North region, 21 primary wood-using plants were operating during 1995: 2 pulpmills, 18 sawmills, and 1 other miscellaneous mill.

Total Roundwood Output

- Using the most recent inventory data for Alabama, product output by source, ownership, and detailed species group was estimated.

Source

- In addition to the 1.3 billion cubic feet of roundwood output for industrial **roundwood**, an estimated 114 million cubic feet was harvested for domestic **fuelwood** bringing Alabama's total roundwood output to 1.4 billion cubic feet.
- Ninety percent of total roundwood output was considered growing-stock volume from timberland sources, with other sources contributing an estimated 146 million cubic feet, or 10 percent of total roundwood output (fig. 12).

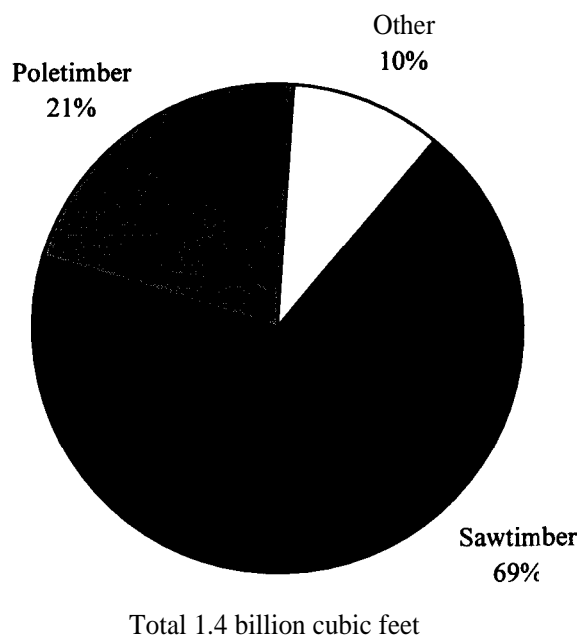


Figure 12-Roundwood output by source, 1995.

Ownership

- An estimated 944 million cubic feet, or 67 percent, of the total roundwood output came from nonindustrial private forest lands (NIPF). Forest industry lands contributed 428 million cubic feet, or 30 percent of the output. Public lands made up the remaining 3 percent, or 42 million cubic feet (fig. 13).

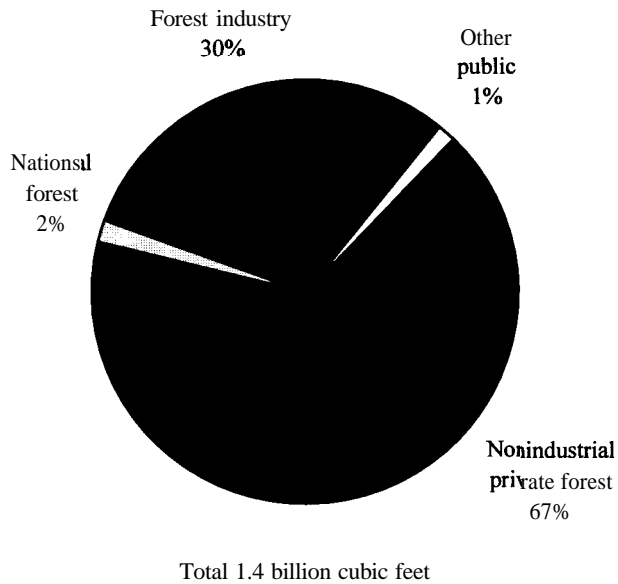


Figure 13—Roundwood output by ownership, 1995.

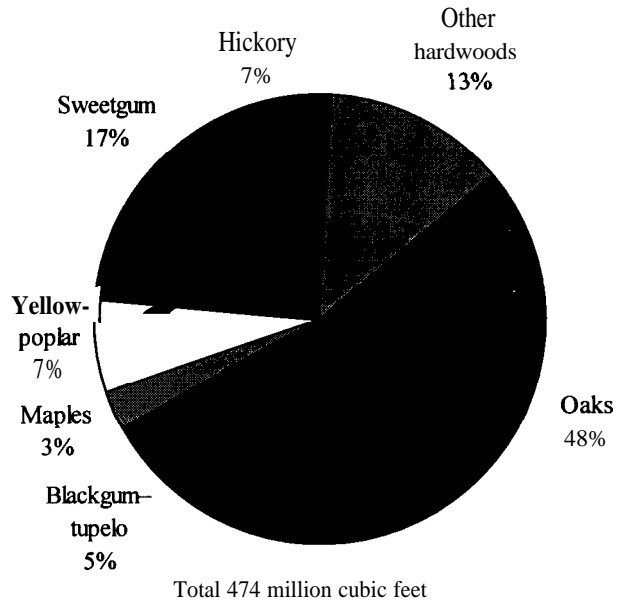


Figure 15—Roundwood output by hardwood species group, 1995.

Species

- The loblolly and shortleaf pine group provided the most volume of any softwood species group, accounting for 77 percent of the total softwood output. Slash and longleaf pine type accounted for 18 percent of the softwood output (fig. 14). In hardwoods, the red oak and white oak groups combined accounted for 228 million cubic feet, or 48 percent of total hardwood output (fig. 15).

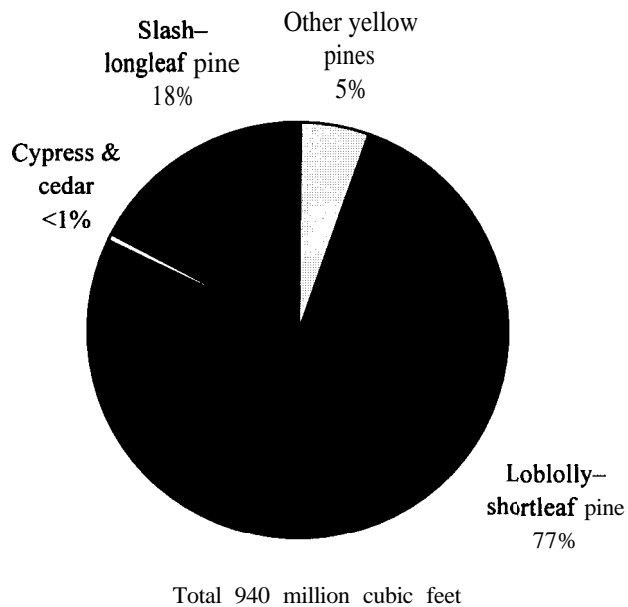


Figure 14—Roundwood output by softwood species group, 1995.

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Definitions

Board foot. Unit of measure applied to roundwood. It relates to lumber that is 1-foot long, 1-foot wide, and 1-inch thick (or its equivalent).

Composite panels. Consists of structural panels (oriented strand board or waferboard) or particleboard (industrial underlayment, thin panelboard).

Consumption. The quantity of a commodity, such as pulpwood, utilized.

Drain. The volume of roundwood removed from any geographic area where timber is grown.

Exports. The volume of roundwood used by mills outside the State where timber was cut.

Imports. The volume of roundwood delivered to a mill or group of mills in a specific State but harvested outside that State.

Industrial fuelwood. A roundwood product, with or without bark, used to generate energy at a manufacturing facility such as a wood-using mill.

Industrial roundwood products. Any primary use of the main stem of a tree, such as saw logs, veneer logs, pulpwood, poles, pilings, or posts.

Log. A primary forest product harvested in long, primarily 1-foot, lengths.

Plant residues. Wood material generated in the production of timber products at primary manufacturing plants.

Coarse residues. Suitable for chipping such as slabs, edgings, trim, veneer cores, and ends.

Fine residues. Not suitable for chipping such as sawdust, shavings, and veneer clippings.

Primary wood-using plants. Industries that receive roundwood or chips from roundwood for the manufacture of products such as lumber, veneer, and pulp.

Production. The total volume of roundwood harvested from land within the specified State, regardless of where consumed. Production is the sum of timber harvested and used within the State, plus all roundwood exported to other States.

Pulpwood. A roundwood product that will be reduced to individual wood fibers by chemical or mechanical means. The fibers are used to make a broad generic group of pulp products that includes paper products as well as chipboard, fiberboard, insulating board, and paperboard.

Receipts. The quantity or volume of industrial roundwood received at a mill or by a group of mills in a State, regardless of the geographic source. Volume of roundwood receipts is equal to the volume of roundwood retained in a State plus roundwood imported from other States in the United States.

Retained. Roundwood volume harvested from and processed by mills within the same State.

Roundwood. Logs, bolts, or other round sections cut from trees for industrial manufacture or consumer use.

Roundwood chipped. Any timber cut primarily for industrial manufacture, delivered to nonpulp mills, chipped, and then sold to pulp mills for use as fiber. Includes tops, jump sections, and whole trees.

Roundwood product drain. That portion of total drain used for a product.

Saw log. A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with minimum diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods.

Standard cord. A unit measure applied to roundwood, usually bolts or split wood. It relates to a stack of wood 4 feet high, 4 feet wide, and 8 feet long encompassing 128 cubic feet of wood, bark, and air space. In the South, this usually translates to approximately 75.0 cubic feet of solid wood for pulpwood, because pulpwood is more uniform.

Timber products output. Roundwood production from an area's forests (equals roundwood product drain).

Timber removals. The merchantable volume of trees removed from the timberland inventory by harvesting, cultural operations such as stand improvement, land clearing, or changes in land use.

Veneer log. A log to be used in the production of plywood, finished panels, or veneer sheets, both rotary cut and sliced.

Conversion Factors^a

Saw logs

Softwood	0.18393 cubic foot = 1 board foot 5.44 board feet = 1 cubic foot
Hardwood	0.17597 cubic foot = 1 board foot 5.68 board feet = 1 cubic foot

Veneer logs

Softwood	0.16260 cubic foot = 1 board foot 6.15 board feet = 1 cubic foot
Hardwood	0.16394 cubic foot = 1 board foot 6.10 board feet = 1 cubic foot

Pulpwood^{*}

Softwood	72.6 cubic feet per cord
Hardwood	76.4 cubic feet per cord

^a Conversion factors vary with stem size (d.b.h.) and species.

^b Cubic feet of solid wood per cord.

Index of Tables

1. Output and receipts of industrial products by product and species group, Alabama, 1995
2. Number of primary wood-using plants by industry, Alabama, 1946- 1995
3. Roundwood receipts by sawmill size, Alabama, 1995
4. Roundwood receipts by species and type of mill, Alabama, 1995
5. Industrial roundwood movement by product and species group, Alabama, 1995
6. Saw-log volume by destination, source, and species group, Alabama, 1995
7. Veneer volume by destination, source, and species group, Alabama, 1995
8. Pulpwood volume by destination, source, and species group, Alabama, 1995
9. Other industrial volume by destination, source, and species group, Alabama, 1995
10. **Primary** mill residue volume by roundwood type, species group, and residue type, Alabama, 1995
11. Disposal of residue at primary wood-using plants by product, species group, and type of residue, Alabama, 1995
12. **Roundwood** timber products output by county, product, and species group, Southwest South Alabama, 1995
13. Roundwood timber products output by county, product, and species group, Southwest North Alabama, 1995
14. Roundwood timber products output by county, product, and species group, Southeast Alabama, 1995
15. Roundwood timber products output by county, product, and species group, West Central Alabama, 1995
16. Roundwood timber products output by county, product, and species group, North Central Alabama, 1995
17. Roundwood timber products output by county, product, and species group, North Alabama, 1995
18. Total rotmdwood output by product, species group, and source of material, Alabama, 1995
19. Total rotmdwood output by species group, survey region, and ownership, Alabama, 1995
20. Total roundwood output by species group, detailed species group, and product, Alabama, 1995
- 2 1. Total roundwood output by species group, detailed species group, and ownership, Alabama, 1995



**Table 1-Output and receipts of industrial products
by product and species group, Alabama, 1995**

Product and species group	Production	Receipts
<i>Thousand cubic feet</i>		
Saw logs		
Softwood	399,291	398,555
Hardwood	73,509	76,068
Total	472,800	474,623
Veneer logs		
softwood	74,873	68,621
Hardwood	19,559	19,663
Total	94,432	88,284
Pulpwood		
Softwood	415,503	395,493
Hardwood	281,998	409,392
Total	697,501	804,885
Other industrial		
Softwood	34,559	38,942
Hardwood	457	462
Total	35,016	39,404
All industrial		
Softwood	924,226	901,611
Hardwood	375,523	505,585
Total	1,299,749	1,407,196
Byproduct output		
Softwood	362,738	
Hardwood	108,680	
Total	471,418	
Total output		
Softwood	1,286,964	
Hardwood	484,203	
Total	1,771,167	

Table 2-Number of primary wood-using plants by industry, Alabama, 1946-1995

Industry	Year						
	1946	1951	1962	1971	1982	1985	1995
Sawmills	3,030	1,450	555	323	239	250	148
Veneer mills	50	42	34	32	28	28	23
Pulpmills	5	7	9	15	16	16	16
Composite panel mills	0	0	0	0	0	0	1
Other mills	90	71	47	36	35	47	23
All plants	3,175	1,570	645	406	318	341	211

Table 3—Roundwood receipts by sawmill size, Alabama, 1995

Sawmill size class ^a	Number of mills	Thousand board feet	Percent of volume
<i>Million boardfeet</i>			
< 1.0	30	8,560	0
1.0 - 4.99	39	102,947	4
5.0 - 9.99	25	170,876	7
10.0 - 49.99	37	909,097	35
> 50	17	1,408,076	54
Total	148	2,599,556	100

^a Based on volume received as opposed to actual capacity.

Table 4—Roundwood receipts by species and type of mill, Alabama, 1995

Species	Type of mill						
	All mills	Veneer mills			OSB and		
		Sawmills	Pine plywood	Other veneer	panels	Pulpmills	Other mills
<i>Thousand cubic feet</i>							
Softwood							
Yellow pine	495,595	388,036	68,621	0	0	NA	38,938
White pine	0	0	0	0	0	NA	0
Cedar	19	15	0	0	0	NA	4
Cypress	75	75	0	0	0	NA	0
Other softwood	10,429	10,429	0	0	0	NA	0
Unclassified	395,493	0	0	0	0	395,493	0
Total softwoods	901,611	398,555	68,621	0	0	395,493	38,942
Hardwood							
Blackgum and tupelo	246	214	32	0	0	NA	0
Soft maple	0	0	0	0	0	NA	0
Sweetgum	3,714	996	132	2,586	0	NA	0
Yellow-poplar	8,394	5,277	0	2,819	0	NA	298
Other soft hardwood	16,149	4,235	8,237	3,677	0	NA	0
Hickory	10,977	10,525	0	452	0	NA	0
Red oak	1,226	1,226	0	0	0	NA	0
White oak	32,931	31,535	132	1,264	0	NA	0
Other hard hardwood	22,556	22,060	19	313	0	NA	164
Unclassified	409,392	0	0	0	0	409,392	0
Total hardwoods	505,585	76,068	8,552	11,111	0	409,392	462
All species	1,407,196	474,623	77,173	11,111	0	804,885	39,404

NA = not applicable.

Table 5-Industrial roundwood movement by product and species group, Alabama, 1995

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	399,291	51,049	348,242	50,313	398,555
Hardwood	73,509	5,829	67,680	8,388	76,068
Total	472,800	56,878	415,922	58,701	474,623
Veneer logs					
Softwood	74,873	8,787	66,086	2,535	68,621
Hardwood	19,559	1,543	18,016	1,647	19,663
Total	94,432	10,330	84,102	4,182	88,284
Pulpwood					
Softwood	415,503	95,634	319,869	75,624	395,493
Hardwood	281,998	27,008	254,990	154,402	409,392
Total	697,501	122,642	574,859	230,026	804,885
Other industrial					
Softwood	34,559	367	34,192	4,750	38,942
Hardwood	457	0	457	5	462
Total	35,016	367	34,649	4,755	39,404
All products					
Softwood	924,226	155,837	768,389	133,222	901,611
Hardwood	375,523	34,380	341,143	164,442	505,585
Total	1,299,749	190,217	1,109,532	297,664	1,407,196

Table 6—Saw-log volume by destination, source, and species group, Alabama, 1995

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Alabama (retained)	415,922	348,242	67,680
Exports to:			
Florida	6,747	6,728	19
Georgia	6,146	5,086	1,060
Mississippi	41,859	39,234	2,625
Tennessee	2,126	1	2,125
Total	56,878	51,049	5,829
Imports from:			
Florida	6,050	6,050	0
Georgia	25,511	21,708	3,803
Louisiana	276	0	276
Mississippi	26,533	22,480	4,053
Tennessee	331	75	256
Total	58,701	50,313	8,388

Table 7-Veneer volume by destination, source, and species group, Alabama, 1995

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Alabama (retained)	84,102	66,086	18,016
Exports to:			
Florida	554	554	0
Georgia	1,590	493	1,097
Indiana	2	2	0
Mississippi	8,184	7,738	446
Total	10,330	8,787	1,543
Imports from:			
Florida	2,633	2,380	253
Georgia	1,355	155	1,200
Louisiana	32	0	32
Mississippi	162	0	162
Total	4,182	2,535	1,647

Table 8—Pulpwood volume by destination, source, and species group, Alabama, 1995

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Alabama (retained)	574,859	3 19,869	254,990
Exports to:			
Arkansas	3	3	0
Florida	29,143	17,516	11,627
Georgia	58,756	50,347	8,409
Kentucky	32	7	25
Louisiana	173	145	28
Mississippi	25,914	22,202	3,712
Tennessee	8,618	5,411	3,207
Texas			
Total	122,642	95,634	27,008
Imports from:			
Florida	9,077	6,613	2,464
Georgia	48,855	26,890	21,965
Kentucky	279	246	33
Louisiana	321	166	155
Mississippi	128,833	35,115	93,718
North Carolina	3	0	3
Tennessee	42,658	6,594	36,064
Total	230,026	75,624	154,402

Table 9—Other industrial volume by destination, source, and species group, Alabama, 1995

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Alabama (retained)	34,649	34,192	457
Exports to:			
Florida	122	122	0
Mississippi	116	116	0
Virginia	129	129	0
Total	367	367	0
Imports from:			
Florida	4,222	4,222	0
Georgia	372	367	5
Mississippi	161	161	0
Total	4,755	4,750	5

^a Includes poles, posts, mulch, firewood, log homes, charcoal, and all other industrial mills.

Table 10—Primary mill residue volume by roundwood type, species group, and residue type, Alabama, 1995

Roundwood type and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	225,152	34,329	118,279	57,131	15,413
Hardwood	44,077	8,073	21,180	14,824	0
Total	269,229	42,402	139,459	71,955	15,413
Veneer logs					
Softwood	47,819	6,669	22,976	18,174	0
Hardwood	13,547	2,182	5,725	5,640	0
Total	61,366	8,851	28,701	23,814	0
Pulpwood					
Softwood	40,787	40,787	0	0	0
Hardwood	51,661	51,661	0	0	0
Total	92,448	92,448	0	0	0
Other industrial^a					
Softwood	49,304	29,907	19,366	31	0
Hardwood	169	95	54	20	0
Total	49,473	30,002	19,420	51	0
Total					
Softwood	363,062	111,692	160,621	75,336	15,413
Hardwood	109,454	62,011	26,959	20,484	0
Total	472,516	173,703	187,580	95,820	15,413

^a Includes poles, pilings, posts, and other industrial products.

Table 1 I-Disposal of residue at primary wood-using plants by product, species group, and type of residue, Alabama, 1995

Product and species group	Ail types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>Thousand cubic feet</i>					
Fiber products					
Softwood	147,986	0	133,700	14,286	0
Hardwood	21,715	0	21,670	45	0
Total	169,701	0	155,370	14,331	0
Particleboard					
Softwood	0	0	0	0	0
Hardwood	0	0	0	0	0
Total	0	0	0	0	0
Composite panels					
Softwood	0	0	0	0	0
Hardwood	0	0	0	0	0
Total	0	0	0	0	0
Sawn products					
Softwood	0	0	0	0	0
Hardwood	0	0	0	0	0
Total	0	0	0	0	0
Fuel					
Softwood	191,204	98,391	26,383	54,776	11,654
Hardwood	85,171	60,927	4,824	19,420	0
Total	276,375	159,318	31,207	74,196	11,654
Miscellaneous					
Softwood	23,548	13,079	437	6,273	3,759
Hardwood	1,794	733	177	884	0
Total	25,342	13,812	614	7,157	3,759
Not used					
Softwood	324	222	101	1	0
Hardwood	774	351	288	135	0
Total	1,098	573	389	136	0
All products					
Softwood	363,062	111,692	160,621	75,336	15,413
Hardwood	109,454	62,011	26,959	20,484	0
Total	472,516	173,703	187,580	95,820	15,413

Table 12—Roundwood timber products output by county, product, and species group, Southwest South Alabama, 1995

County	All products		Saw logs		Veneer logs		Pulpwood		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
<i>Thousand cubic feet</i>										
Baldwin	31,461	7,506	10,597	774	1,171	3	16,634	6,729	3,059	0
Covington	23,191	4,440	9,092	1,153	3,129	502	10,194	2,785	776	0
Escambia	26,928	3,350	9,798	553	1,139	0	11,916	2,797	4,075	0
Mobile	12,335	5,458	5,890	1,226	957	146	5,014	4,086	474	0
Washington	28,538	10,499	11,649	2,353	2,111	392	14,040	7,754	738	0
All counties	122,453	31,253	47,026	6,059	8,507	1,043	57,798	24,151	9,122	0

Table 13—Roundwood timber products output by county, product, and species group, Southwest North Alabama, 1995

County	All products		Saw logs		Veneer logs		Pulpwood		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
<i>Thousand cubic feet</i>										
Choctaw	34,783	14,884	17,519	1,896	3,159	359	13,822	12,629	283	0
Clarke	56,461	15,271	28,715	2,381	2,893	409	23,783	12,481	1,070	0
Conecuh	27,032	6,763	8,237	800	2,417	296	16,232	5,667	146	0
Marengo	18,832	15,573	9,604	6,828	1,766	1,316	7,311	7,429	151	0
Monroe	41,367	15,038	9,479	1,915	4,498	271	26,639	12,847	751	5
Sumter	32,236	7,221	12,436	708	1,124	309	18,630	6,204	46	0
Wilcox	18,366	6,885	5,324	1,135	3,428	416	9,037	5,334	577	0
All counties	229,077	8 1,635	91,314	15,663	19,285	3,376	115,454	62,591	3,024	5

Table 14—Roundwood timber products output by county, product, and species group, Southeast Alabama, 1995

County	All products		Saw logs		Veneer logs		Pulpwood		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
<i>Thousand cubic feet</i>										
Autauga	8,840	3,685	2,237	416	1,538	274	5,065	2,995	0	0
Barbour	20,509	6,285	5,871	1,220	0	624	14,556	4,441	82	0
Bullock	9,864	3,590	2,512	577	262	188	7,056	2,825	34	0
Butler	16,493	7,275	4,293	343	6,014	1,445	5,719	5,487	467	0
Chambers	12,678	3,379	7,765	157	857	830	4,056	2,392	0	0
Chilton	9,168	5,673	4,088	2,150	1,538	606	3,388	2,917	154	0
Coffee	14,439	2,550	3,568	333	349	0	10,440	2,217	82	0
Crenshaw	16,972	6,563	5,721	1,072	4,351	969	6,811	4,522	89	0
Dale	6,920	3,342	2,370	250	0	331	4,485	2,761	65	0
Dallas	12,306	6,721	4,091	917	356	179	7,859	5,625	0	0
Elmore	3,250	4,218	190	630	89	370	2,971	3,218	0	0
Geneva	3,909	1,880	2,426	144	0	0	1,401	1,736	82	0
Henry	10,158	3,428	3,781	201	0	215	6,312	3,012	65	0
Houston	1,612	1,341	177	39	554	446	816	856	65	0
Lee	13,910	3,107	9,908	459	0	0	4,002	2,648	0	0
Lowndes	12,520	4,991	4,021	366	1,203	268	7,257	4,357	39	0
Macon	9,047	3,234	4,984	753	0	67	4,063	2,414	0	0
Montgomery	20,775	8,143	3,464	390	10,344	4,213	6,950	3,540	17	0
Pike	16,092	5,235	2,383	1,132	2,185	695	11,490	3,408	34	0
Russell	12,332	3,875	8,247	162	0	464	4,085	3,249	0	0
Tallapoosa	15,333	8,492	8,120	1,121	728	172	6,485	7,199	0	0
All counties	247,127	97,007	90,217	12,832	30,368	12,356	125,267	71,819	1,275	0

Table 15—Roundwood timber products output by county, product, and species group, West Central Alabama, 1995

County	All products		Saw logs		Veneer logs		Pulpwood		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
<i>Thousand cubic feet</i>										
Bibb	21,313	9,689	9,866	1,898	1,538	517	5,631	7,274	4,278	0
Fayette	11,268	6,824	7,772	1,993	0	0	3,496	4,831	0	0
Greene	12,888	6,099	8,710	1,290	445	415	3,586	4,394	147	0
Hale	10,366	3,118	6,403	641	445	109	3,051	2,368	467	0
Lamar	10,920	8,892	8,062	1,828	445	0	2,413	7,064	0	0
Marion	8,151	3,682	5,476	526	0	0	2,675	3,156	0	0
Perry	9,307	3,993	5,413	722	0	109	3,427	3,162	467	0
Pickens	20,106	13,257	17,089	3,644	0	450	2,921	9,163	96	0
Tuscaloosa	22,736	13,459	16,531	3,280	0	335	5,917	9,844	288	0
All counties	127,055	69,013	85,322	15,822	2,873	1,935	33,117	51,256	5,743	0

Table 16-Roundwood timber products output by county, product, and species group, North Central Alabama, 1995

County	All products		Saw logs		Veneer logs		Pulpwood		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
<i>Thousand cubic feet</i>										
Blount	25,766	3,346	21,419	236	364	76	1,271	2,854	2,712	180
Calhoun	5,428	1,661	1,127	123	1,821	0	2,480	1,538	0	0
Cherokee	3,733	2,753	1,195	430	0	0	2,532	2,323	6	0
Clay	12,579	6,242	1,934	3,549	1,821	0	4,077	2,591	4,747	102
Cleburne	8,258	2,655	1,971	535	1,821	0	4,466	2,120	0	0
Coosa	8,996	3,994	2,449	1,439	364	113	6,183	2,442	0	0
Cullman	10,355	2,954	4,535	831	728	0	1,701	2,010	3,391	113
Etowah	6,311	3,731	2,206	887	910	0	3,195	2,844	0	0
Jefferson	11,078	4,728	7,304	389	0	231	2,456	4,094	1,318	14
Randolph	13,601	4,311	3,862	928	728	105	9,011	3,278	0	0
St. Clair	7,420	2,800	2,516	423	910	0	3,994	2,377	0	0
Shelby	14,118	2,316	6,220	610	1,093	206	6,017	1,500	788	0
Talladega	12,996	5,518	2,054	285	1,821	118	9,121	5,115	0	0
Walker	18,195	15,474	9,389	1,672	0	0	8,710	13,802	96	0
Winston	11,216	4,704	5,128	1,498	0	0	4,732	3,177	1,356	29
All counties	170,050	67,187	73,309	13,835	12,381	849	69,946	52,065	14,414	438

Table 17-Roundwood timber products output by county, product, and species group, North Alabama, 1995

County	All products		Saw logs		Veneer logs		Pulpwood		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	soft-wood	Hard-wood	Soft-wood	Hard-wood
<i>Thousand cubic feet</i>										
Colbert	2,986	4,732	1,732	636	0	0	1,254	4,096	0	0
De Kalb	3,084	2,173	207	784	1,093	0	1,546	1,389	238	0
Franklin	6,279	4,711	3,091	587	0	0	3,188	4,124	0	0
Jackson	3,226	4,783	2,052	2,670	2	0	1,107	2,113	65	0
Lauderdale	1,656	2,670	940	973	0	0	716	1,697	0	0
Lawrence	3,131	1,923	1,827	413	0	0	1,304	1,510	0	0
Limestone	1,124	2,760	52	1,523	0	0	1,072	1,237	0	0
Madison	575	2,222	0	1,243	0	0	575	979	0	0
Marshall	2,171	1,398	276	271	364	0	853	1,113	678	14
Morgan	4,232	2,056	1,926	198	0	0	2,306	1,858	0	0
All counties	28,464	29,428	12,103	9,298	1,459	0	13,921	20,116	981	14

Table 18—Total roundwood output by product, species group, and source of material, Alabama, 1995

Product and species group	All sources	Total	Growing-stock trees		Other sources
			Sawtimber	Poletimber	
Thousand cubic <i>feet</i>					
Saw logs					
Softwood	399,291	393,829	374,138	19,691	5,462
Hardwood	73,509	71,787	68,198	3,589	1,722
Total	472,800	465,616	442,336	23,280	7,184
Veneer logs and bolts					
Softwood	74,873	73,353	69,685	3,668	1,520
Hardwood	19,559	19,221	19,221	0	338
Total	94,432	92,574	88,906	3,668	1,858
Pulpwood					
Softwood	415,503	390,303	247,059	143,244	25,200
Hardwood	281,998	248,102	139,503	108,599	33,896
Total	697,501	638,405	386,562	251,843	59,096
Poles and posts					
Softwood	20,731	19,888	19,107	781	843
Hardwood	0	0	0	0	0
Total	20,731	19,888	19,107	781	843
Other miscellaneous					
Softwood	13,828	11,843	4,873	6,970	1,985
Hardwood	457	414	203	211	43
Total	14,285	12,257	5,076	7,181	2,028
Total industrial products					
Softwood	924,226	889,216	714,862	174,354	35,010
Hardwood	375,523	339,524	227,125	112,399	35,999
Total	1,299,749	1,228,740	941,987	286,753	71,009
Fuelwood					
Softwood	15,569	6,629	4,375	2,254	8,940
Hardwood	98,711	32,564	22,795	9,769	66,147
Total	114,280	39,193	27,170	12,023	75,087
All products					
Softwood	939,795	895,845	719,237	176,608	43,950
Hardwood	474,234	372,088	249,920	122,168	102,146
Total	1,414,029	1,267,933	969,157	298,776	146,096

Table 19—Total roundwood output by species group, survey region, and ownership, Alabama, 1995

Species group and survey region	Total	National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand cubic feet</i>					
Softwoods					
Southwest South	124,517	5,305	1,977	56,240	60,995
Southwest North	232,935	0	3,492	95,446	133,997
Southeast	251,289	2,078	4,525	66,131	178,555
West Central	129,196	6,983	1,237	52,902	68,074
North Central	172,914	1,975	2,501	29,834	138,604
North	28,944	550	129	3,536	24,729
Total softwoods	939,795	16,891	13,861	304,089	604,954
Hardwoods					
Southwest South	39,469	163	437	14,663	24,206
Southwest North	103,093	0	100	33,184	69,809
Southeast	122,506	380	2,071	25,329	94,726
West Central	87,155	804	260	33,830	52,261
North Central	84,849	2,956	2,492	14,342	65,059
North	37,162	1,337	239	3,070	32,516
Total hardwoods	474,234	5,640	5,599	124,418	338,577
All species	1,414,029	22,531	19,460	428,507	943,531

Table Z&Total roundwood output by species group, detailed species group, and product, Alabama, 1995

Species group and detailed species group	Product						
	Total	Saw log	Veneer	Pulpwood	Fuelwood	Poles and posts	Other miscellaneous
<i>Thousand cubic feet</i>							
Softwood							
Cedar	2,042	567	170	1,245	34	7	19
Slash-longleaf pine	165,092	58,555	13,852	79,578	2,736	9,310	1,061
Loblolly-shortleafpine	721,810	314,843	57,654	3 16,504	11,957	10,562	10,290
Other yellow pines	50,169	25,013	3,156	17,874	831	837	2,458
Cypress	682	313	41	302	11	15	0
Total softwoods	939,795	399,291	74,873	415,503	15,569	20,731	13,828
Hardwood							
Soft maple	12,061	2,108	581	6,853	2,511	0	8
Hard maple	1,502	453	34	702	313	0	0
Hickory	33,190	4,985	1,144	20,097	6,909	0	55
Beech	6,339	674	667	3,678	1,319	0	1
Ash	8,434	1,196	655	4,826	1,756	0	1
Black walnut	117	33	3	57	24	0	0
Sweetgum	83,542	12,354	3,937	49,796	17,389	0	66
Yellow-poplar	32,007	4,946	1,162	19,219	6,662	0	18
Blackgum-tupelo	23,357	3,295	850	14,318	4,862	0	32
Sycamore	1,027	260	9	544	214	0	0
Cottonwood	1,138	50	400	451	237	0	0
Black cherry	2,423	352	61	1,505	504	0	1
Select white oaks	42,418	7,289	1,207	25,021	8,829	0	72
Select red oaks	12,625	2,375	675	6,923	2,628	0	24
Other white oaks	32,015	5,189	855	19,278	6,664	0	29
Other red oaks	140,450	22,408	5,502	83,193	29,234	0	113
Basswood	1,118	99	18	755	233	0	13
Elm	7,468	994	365	4,540	1,554	0	15
Other Eastern hardwoods	33,003	4,449	1,434	20,242	6,869	0	9
Total hardwoods	474,234	73,509	19,559	281,998	98,711	0	457
All species	1,414,029	472,800	94,432	697,501	114,280	20,731	14,285

Table 21—Total roundwood output by species group, detailed species group, and ownership, Alabama, 1995

Species group and detailed species group	Total	National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand cubic feet</i>					
Softwood					
Cedar	2,042	16	5	499	1,522
Slash-longleaf pine	165,092	5,861	2,736	66,656	89,839
Loblolly-shortleaf pine	721,810	10,049	9,892	221,884	479,985
Other yellow pines	50,169	965	1,202	14,698	33,304
Cypress	682	0	26	352	304
Total softwoods	939,795	16,891	13,861	304,089	604,954
Hardwood					
Soft maple	12,061	154	172	3,457	8,278
Hard maple	1,502	4	0	204	1,294
Hickory	33,190	524	530	8,507	23,629
Beech	6,339	71	39	1,630	4,599
Ash	8,434	32	54	2,384	5,964
Black walnut	117	0	0	25	92
Sweetgum	83,542	965	868	23,135	58,574
Yellow-poplar	32,007	486	329	7,305	23,887
Blackgum-tupelo	23,357	228	309	6,490	16,330
Sycamore	1,027	0	12	259	756
Cottonwood	1,138	0	0	125	1,013
Black cherry	2,423	22	9	510	1,882
Select white oaks	42,418	761	301	9,096	32,260
Select red oaks	12,625	132	130	3,146	9,217
Other white oaks	32,015	535	625	7,562	23,293
Other red oaks	140,450	1,526	1,690	38,769	98,465
Basswood	1,118	0	2	223	893
Elm	7,468	56	101	1,520	5,791
Other Eastern hardwoods	33,003	144	428	10,071	22,360
Total hardwoods	474,234	5,640	5,599	124,418	338,577
All species	1,414,029	22,531	19,460	428,507	943,531



The Forest Service, U.S. Department of Agriculture, is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the States and private forest owners, and management of the National Forests and National Grasslands, it strives—as directed by Congress—to provide increasingly greater service to a growing Nation.

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Johnson, Tony G.; Gober, Jim R.; Nix, J. Stephen. 1998. Alabama's timber industry—an assessment of timber product output and use, 1995. Resour. Bull. SRS-27. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 28 p.

In 1995, roundwood output from Alabama's forests totaled 1.3 billion cubic feet. Mill byproducts generated from primary manufacturers amounted to 471 million cubic feet. Almost all plant residues were used primarily for fuel and fiber products. Pulpwood was the leading roundwood product at 698 million cubic feet; saw logs ranked second at 473 million cubic feet; veneer logs were third with 94 million cubic feet. The number of primary processing plants was 211. Total receipts amounted to 1.4 billion cubic feet.

Keywords: Pulpwood, residues, roundwood, saw logs, veneer logs, wood movement.

United States
Department of Agriculture

Forest Service

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