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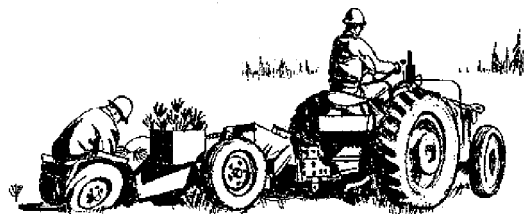
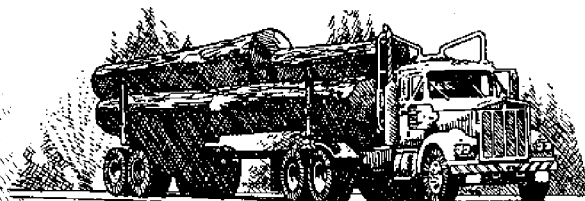
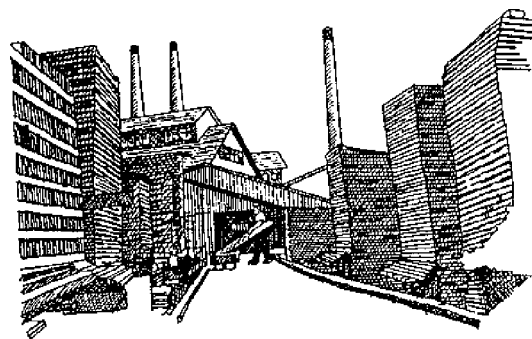
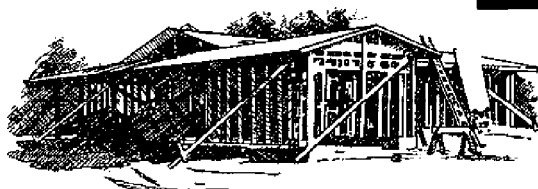


Southern  
Research Station

Resource Bulletin  
SRS-28

# Arkansas' Timber Industry— An Assessment of Timber Product Output and Use, 1996

Michael Howell and Robert Levins



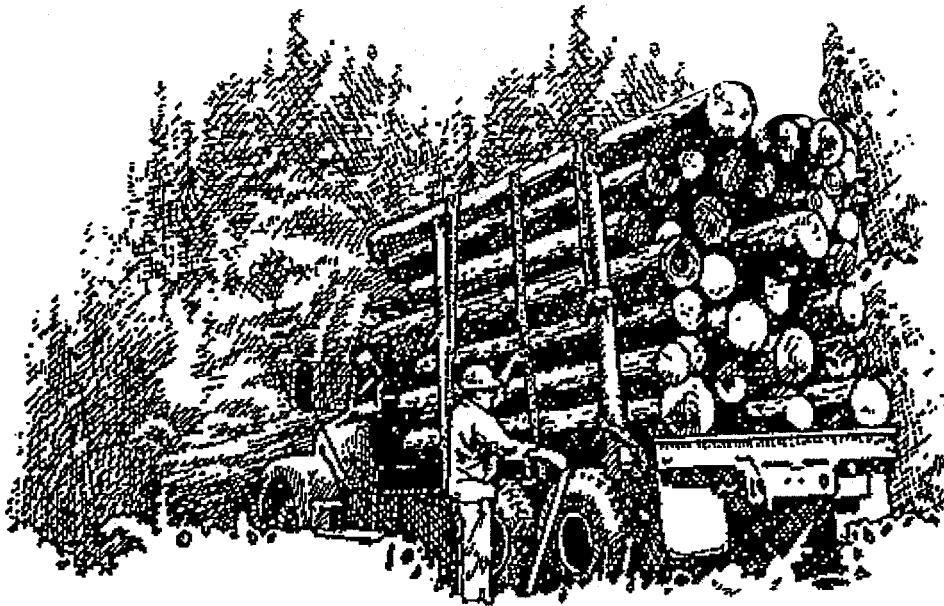
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## Foreword

This report contains the findings of a 1996 canvass of primary wood-using plants in Arkansas. 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 1996 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 canvass of wood processors in Arkansas was conducted in 1997 to obtain information for 1996. In addition, roundwood from out-of-State mills known to be

using logs or bolts harvested from Arkansas timberland was incorporated into Arkansas 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.

Pulpwood production data were taken from an annual canvass of all southeastern pulpmills, conducted in cooperation with the American Pulpwood Association. 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 Arkansas 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 147 mills operating in 1996: 127 sawmills, 8 pulpmills, 10 veneer mills, and 2 mills manufacturing other industrial products.

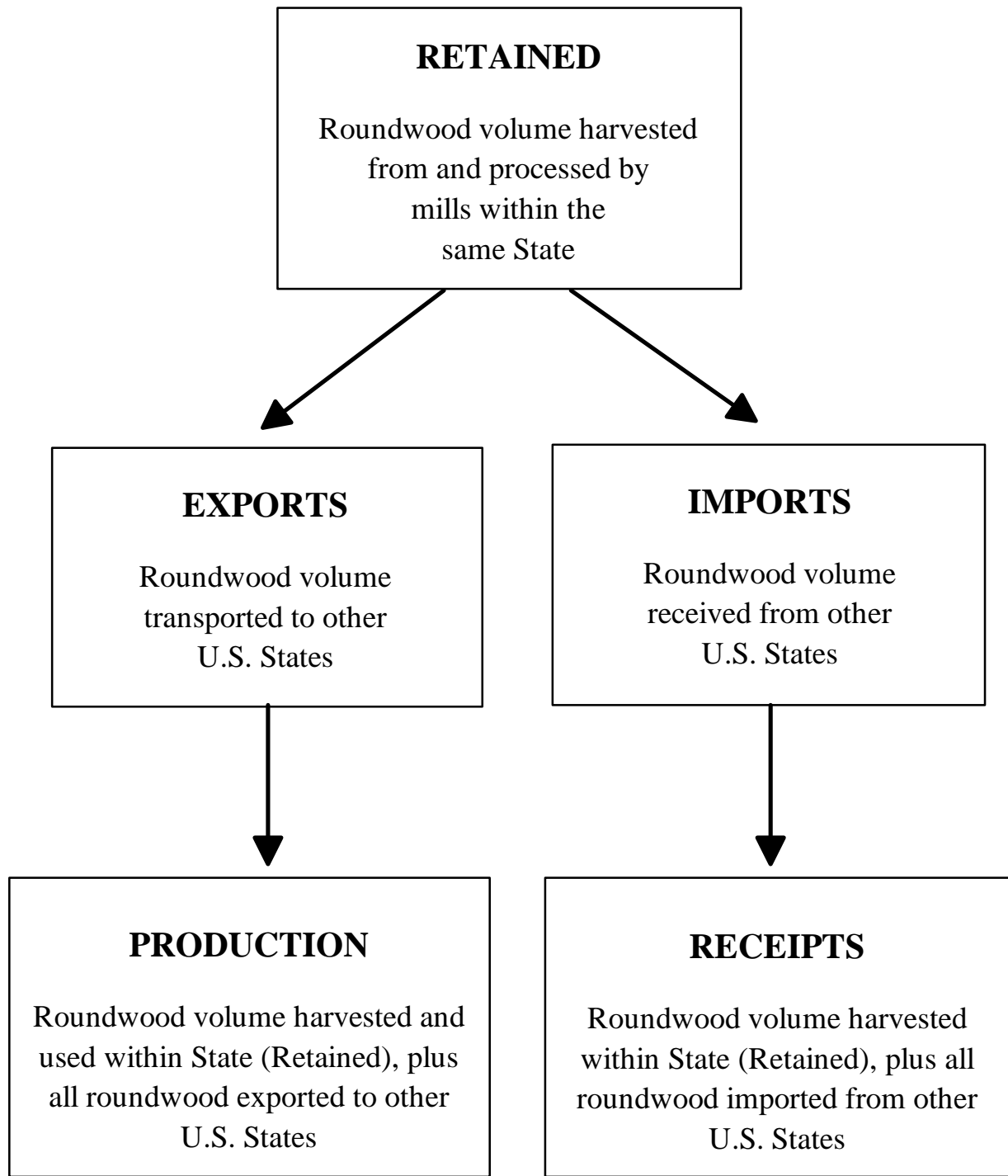


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<sup>a</sup> All tables in this report are available in Microsoft® Excel workbook files. Upon request, these files will be supplied on 3½-inch diskettes.

The use of trade or firm names in this publication is for reader information and does not imply endorsement by the U.S. Department of Agriculture of any product or service.



**Production** = Retained + Exports

**Receipts** = Retained + Imports

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

# Arkansas' Timber Industry— An Assessment of Timber Product Output and Use, 1996

Michael Howell and Robert Levins

## 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).

Ž In 1996, the industrial timber products output (TPO) was 922 million cubic feet, 636 million cubic feet from roundwood, and 286 million cubic feet from plant byproducts.

Ž Output of softwood roundwood products totaled 423 million cubic feet, while output of hardwood roundwood products totaled 213 million cubic feet (fig. 2).

Ž Saw logs and pulpwood were the principal roundwood products in 1996. Combined, they totaled 557 million cubic feet and accounted for 88 percent of the State's total roundwood output (fig. 3).

Ž Total receipts for the reporting Arkansas mills, which included roundwood harvested and retained in the State and roundwood imported from other States, was 661 million cubic feet. The number of primary roundwood-using plants surveyed for this report was 147.

## Saw Logs

Ž Saw logs accounted for 49 percent of the State's total roundwood products. Output of softwood saw logs was 226 million cubic feet (1.2 billion board feet), while that of hardwood saw logs was 89 million cubic feet (537 million board feet) (fig. 4).

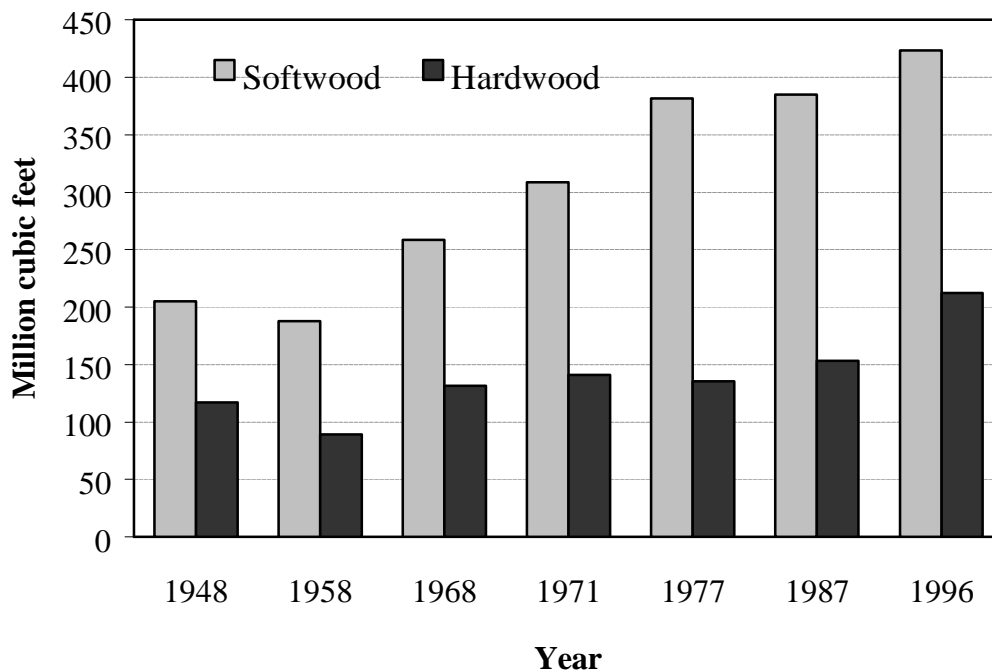


Figure 2—Roundwood production for all products by species group and year (see page 7 for references for individual years).

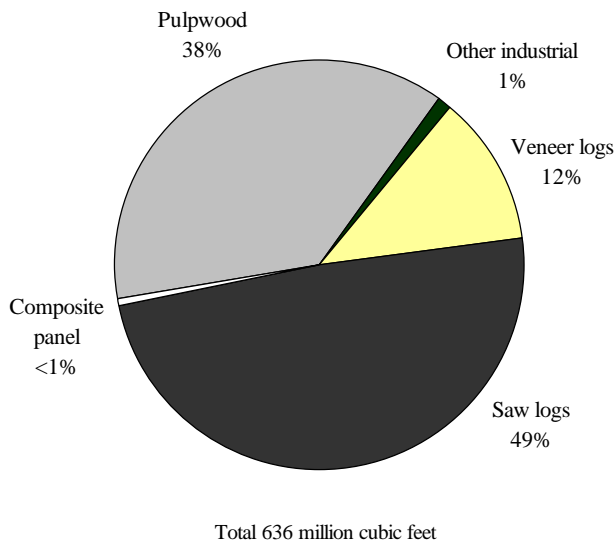


Figure 3—Roundwood production by type of product, 1996.

Ž In 1996, 127 sawmills were canvassed for this report, those mills with production under 1 million board feet were not included. Total saw-log receipts for the reporting mills was 338 million cubic feet. Softwood saw-log receipts were 251 million cubic feet, while those of hardwood were 87 million cubic feet. Of the operating mills, 52 percent had receipts less than 5 million board feet, while 26 percent had receipts greater than 10 million board feet. Only 11 percent of

the mills had receipts greater than 50 million board feet; however, these mills accounted for 62 percent of the sawmill receipts.

Ž Arkansas retained 92 percent of its saw-log production for domestic manufacture, with saw-log imports exceeding exports by 24 million cubic feet in 1996.

### Pulpwood

Ž Pulpwood production, including chipped roundwood, was 242 million cubic feet (3.4 million cords) and accounted for 38 percent of the State’s total roundwood TPO. Softwood output was 125 million cubic feet, while hardwood output was 117 million cubic feet (fig. 5).

Ž Eight pulpmill facilities were operating and receiving roundwood in 1996. Pulpwood receipts totaled 235 million cubic feet, accounting for 36 percent of the receipts for all mills.

Ž Seventy-five percent of roundwood cut for pulpwood was retained for processing at Arkansas pulpmills. Roundwood pulpwood accounted for 65 percent of total known exports and 45 percent of total imports. Roundwood pulpwood exports was 60 million cubic feet, or 7 million cubic feet more than was imported.

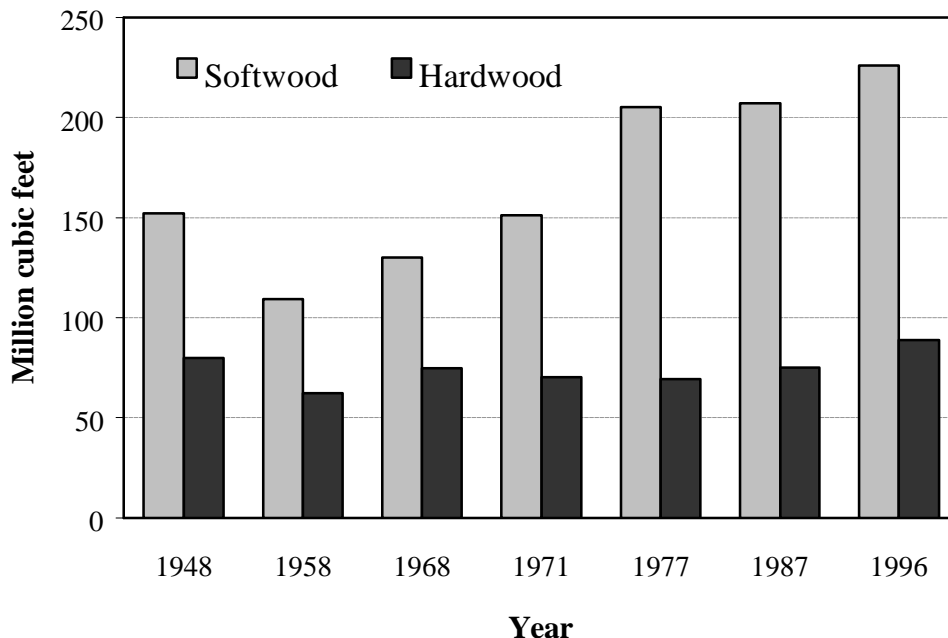


Figure 4—Roundwood saw-log production by species group and year (see page 7 for references for individual years).

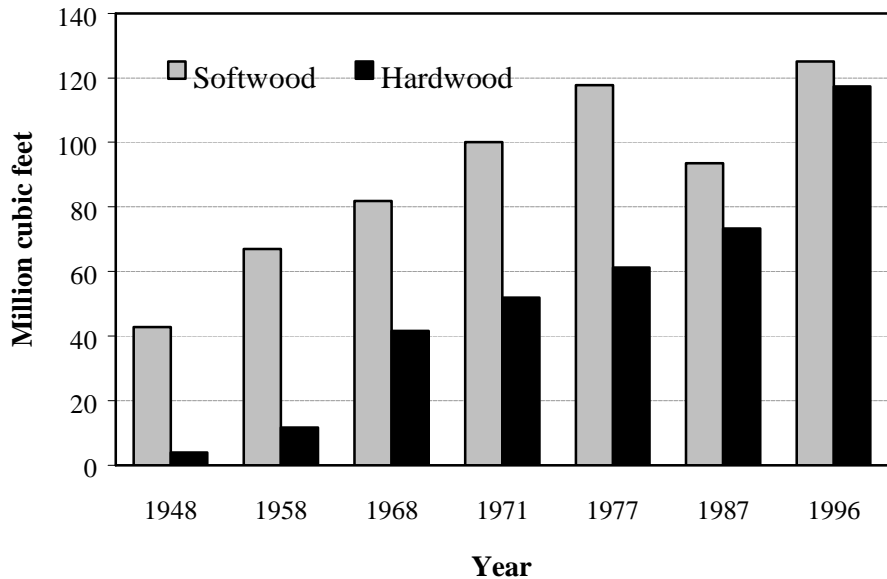


Figure 5—Roundwood pulpwood production by species group and year (see page 7 for references for individual years).

### Veneer Logs

Output of veneer logs in 1996 totaled 74 million cubic feet and accounted for 12 percent of the State’s total roundwood TPO volume. Softwood veneer production was 68 million cubic feet (392 million board feet), while output of hardwood veneer logs was 6 million cubic feet (38 million board feet) (fig. 6).

There were 10 veneer mills operating in Arkansas.

Receipts of veneer logs totaled 85 million cubic feet. Softwood veneer receipts were more than 77 million cubic feet. Hardwood veneer receipts were 7 million cubic feet.

Arkansas retained over 95 percent of its veneer-log production for processing at domestic mills. Imports totaled 13 million cubic feet, while exports totaled 3 million cubic feet, making the State a net importer of roundwood veneer logs.

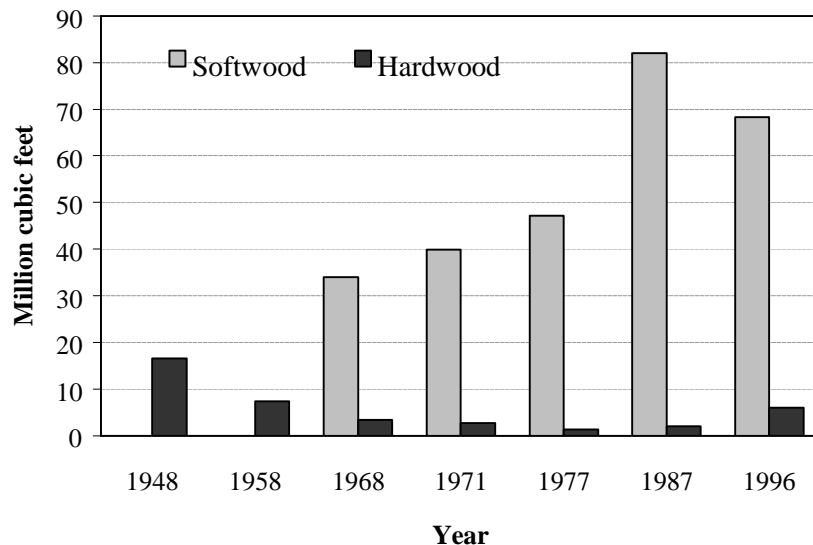


Figure 6—Roundwood veneer-log production by species group and year (see page 7 for references for individual years).



### Composite Panels

Ž There were no composite panel mills operating in 1996. All of the 237 thousand cubic feet of production was exported to other States.

### Other Industrial Products

Ž Roundwood harvested for other industrial uses such as poles, posts, mulch, firewood, logs for log homes, and other industrial products totaled 4 million cubic feet. Softwood constituted 99 percent of the other industrial product volume (fig. 7).

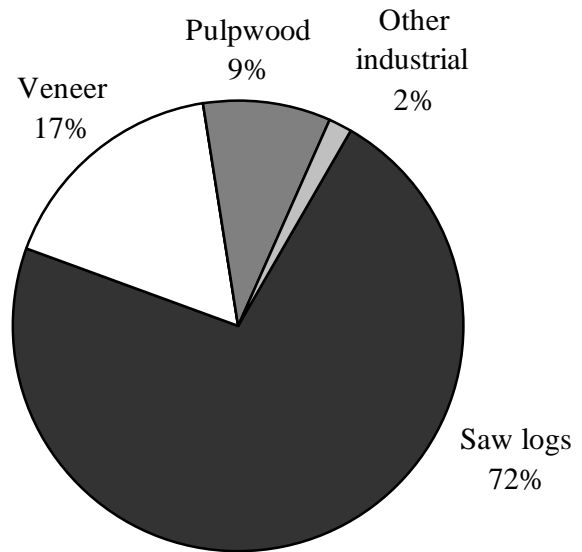
Ž Only two plants manufactured other industrial products. Receipts of other industrial products totaled 2 million cubic feet.

Ž Arkansas exports amounted to 2.7 million cubic feet, while imports totaled 865 thousand cubic feet, making the State a net exporter of roundwood used for other industrial products.

### Plant Byproducts

Ž The manufacture of primary products in Arkansas mills generated 286 million cubic feet of wood and bark residues. Coarse residues from all primary products

amounted to 129 million cubic feet, while bark volume totaled 62 million cubic feet. Sawdust and shavings constituted 33 percent of total residues, or 95 million cubic feet (fig. 8).



Total 286 million cubic feet

Figure 8—Primary mill residue by residue type, 1996.

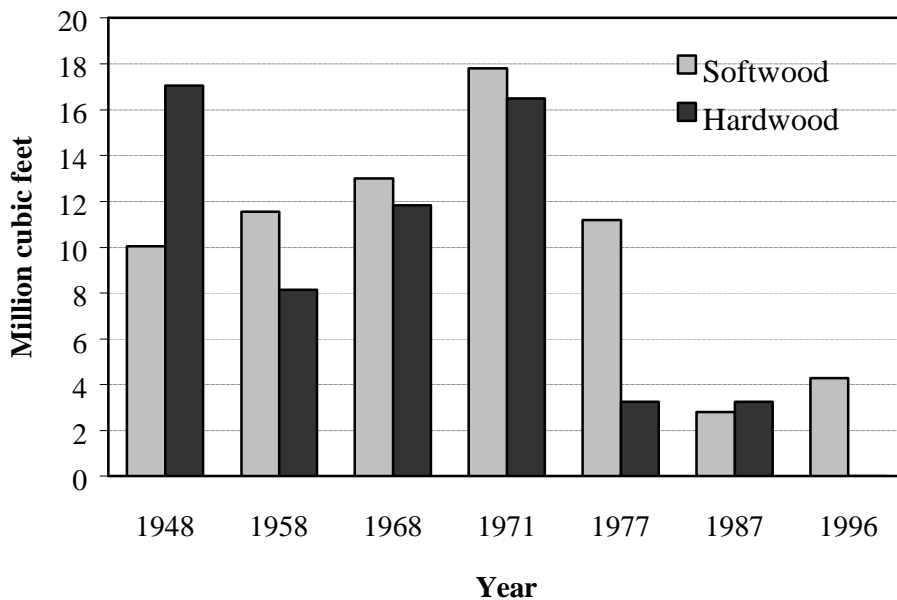


Figure 7—Roundwood production for other industrial products by species group and year (see page 7 for references for individual years).

Ž Less than 1 percent of wood and bark residues was not used in the manufacture of products, while 53 percent of the residues was used as industrial fuel (fig. 9). More than 103 million cubic feet, or 80 percent, of the coarse residues were used for fiber products. Most bark was used as industrial fuel or miscellaneous products, while 79 percent of the sawdust and shavings was used for industrial fuel.

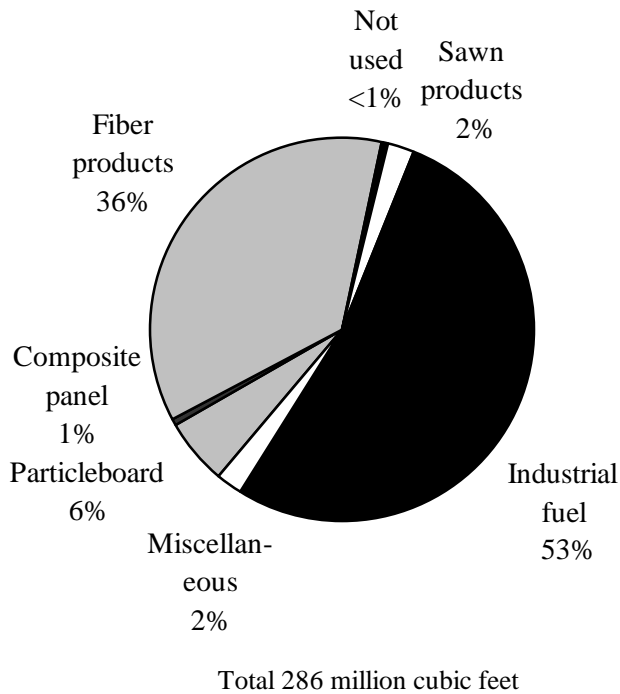


Figure 9—Disposal of residue by product, 1996.

Ž Sawmills generated 206 million cubic feet of residue, accounting for 72 percent of the total residue produced (fig. 10).

## Regional Observations

### South Delta Region

Ž Roundwood output from the South Delta region totaled 38 million cubic feet. Hardwood production made up over 76 percent of that total.

Ž Pulpwood production of 21 million cubic feet accounted for 56 percent of the region’s TPO and 9 percent of the State’s roundwood pulpwood output. Saw-log production of 13 million cubic feet accounted for 33 percent of the total roundwood output for the region.

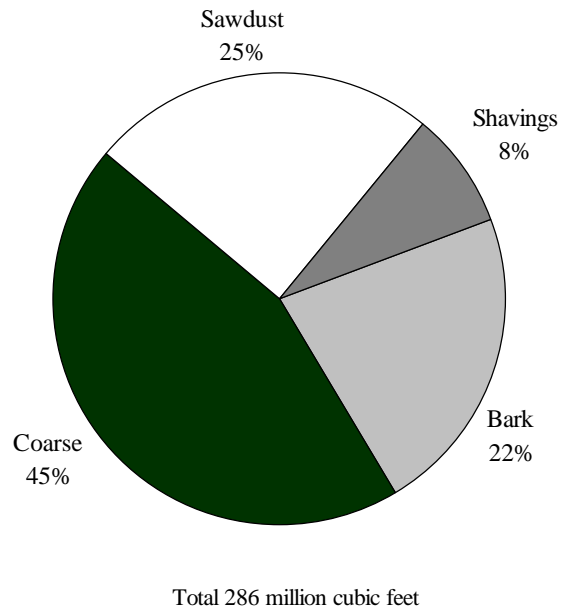


Figure 10—Primary mill residue produced by mill type, 1996.

Ž Eleven primary wood-using plants were operating during 1996: 7 sawmills, 3 pulpmills, and 1 veneer or plywood mill (fig. 11). These mills processed 6 percent of the State’s total roundwood output.

### North Delta Region

Ž More than 13 million cubic feet of roundwood were produced in the North Delta region.

Ž Pulpwood production of 2 million cubic feet accounted for 18 percent of the region’s TPO and 1 percent of the State’s roundwood pulpwood output. Saw-log production of 10 million cubic feet accounted for 75 percent of the total roundwood output for the region.

Ž All 11 mills operating in the North Delta region in 1996 were sawmills. These mills processed 2 percent of the State’s total roundwood output.

### Southwest Region

Ž Roundwood output from the Southwest region of Arkansas totaled 446 million cubic feet. Roundwood production accounted for 70 percent of the total roundwood TPO for the State.

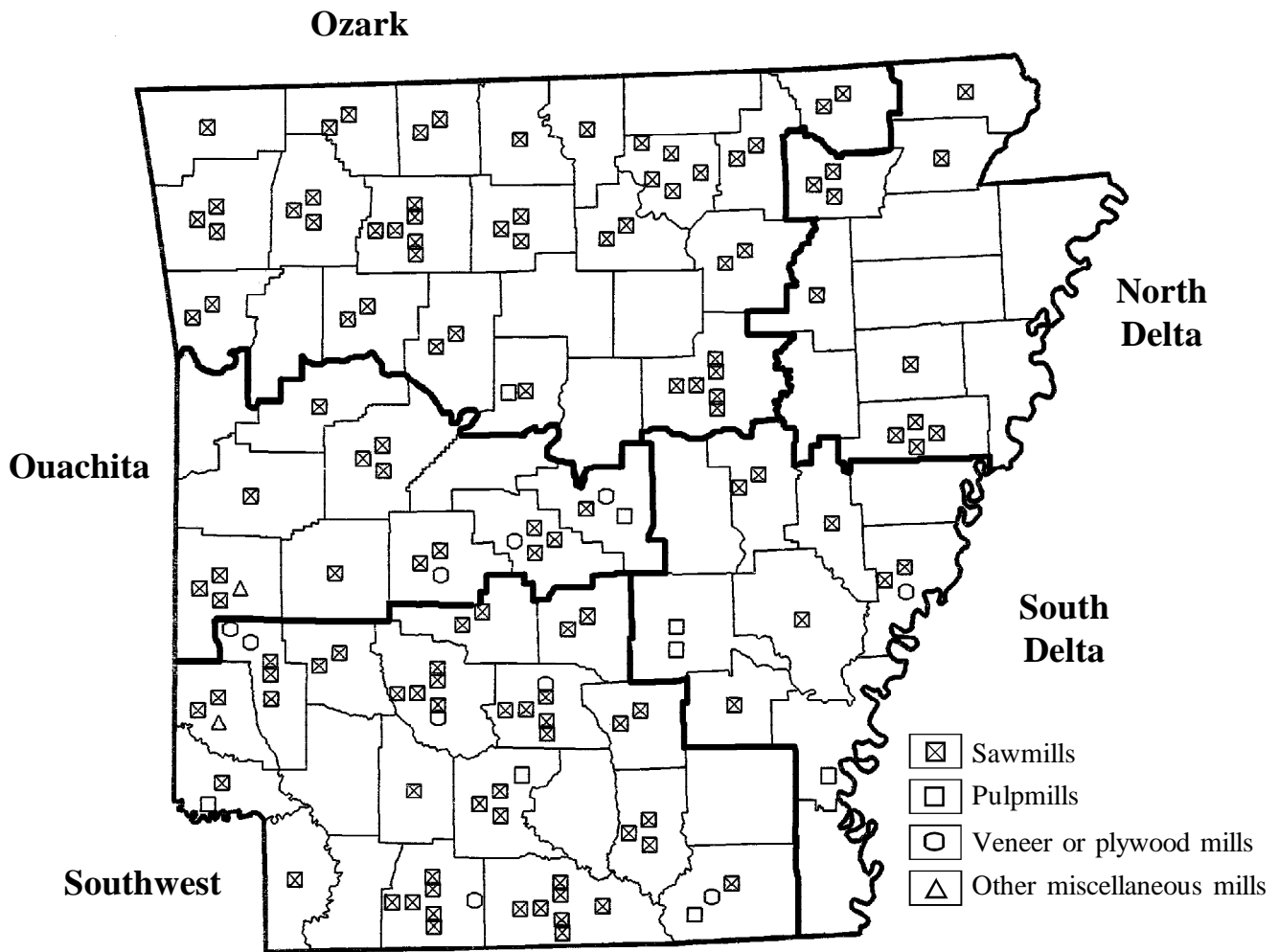


Figure 11—Primary wood-using mills by region, 1996.

Ž Saw-log production of 190 million cubic feet accounted for 43 percent of the region’s total roundwood output. Pulpwood production of 199 million cubic feet accounted for 45 percent of the region’s total TPO.

Ž The 56 primary wood-using plants operating in the Southwest region included: 46 sawmills, 6 veneer or plywood mills, 3 pulpmills, and 1 other miscellaneous mill.

**Ouachita Region**

Ž Roundwood output from the Ouachita region totaled 84 million cubic feet.

Ž Saw-log production of 54 million cubic feet accounted for 65 percent of the region’s total roundwood output. Pulpwood production of 14 million cubic feet accounted for 17 percent of the region’s total TPO.

Ž Twenty primary wood-using plants were operating during 1996: 15 sawmills, 3 veneer or plywood mills, 1 pulpmill, and 1 other miscellaneous mill.

**Ozark Region**

Ž More than 54 million cubic feet of roundwood were produced.

Ž Saw-log production of 48 million cubic feet accounted for 89 percent of the region’s total roundwood output. Pulpwood production of 5 million cubic feet accounted for 10 percent of the region’s total TPO.

Ž Forty-nine primary wood-using plants were operating during 1996: 48 sawmills and 1 pulpmill.

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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 8-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.

**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 nonpulpmills, chipped, and then sold to pulpmills 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<sup>a</sup>**

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### **Saw logs**

Softwood	0.18018 cubic foot = 1 board foot 5.55 board feet = 1 cubic foot
Hardwood	0.16556 cubic foot = 1 board foot 6.04 board feet = 1 cubic foot

### **Veneer logs**

Softwood	0.17391 cubic foot = 1 board foot 5.75 board feet = 1 cubic foot
Hardwood	0.15873 cubic foot = 1 board foot 6.30 board feet = 1 cubic foot

### **Pulpwood<sup>b</sup>**

Softwood	72.5 cubic feet per cord
Hardwood	76.6 cubic feet per cord

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<sup>a</sup> Conversion factors vary with stem size (d.b.h.) and species.

<sup>b</sup> Cubic feet of solid wood per cord.

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**Table 1—Output and receipts of industrial products  
by product and species group, Arkansas, 1996**

Product and species group	Production	Receipts
<i>Thousand cubic feet</i>		
<b>Saw logs</b>		
Softwood	225,807	251,001
Hardwood	<u>88,965</u>	<u>87,308</u>
Total	314,772	338,309
<b>Veneer logs</b>		
Softwood	68,257	77,593
Hardwood	<u>6,047</u>	<u>7,185</u>
Total	74,304	84,778
<b>Pulpwood</b>		
Softwood	125,131	101,937
Hardwood	<u>117,344</u>	<u>133,076</u>
Total	242,475 <sup>a</sup>	235,013 <sup>b</sup>
<b>Composite panel</b>		
Softwood	50	0
Hardwood	<u>187</u>	<u>0</u>
Total	237	0
<b>Other industrial</b>		
Softwood	4,279	2,460
Hardwood	<u>11</u>	<u>0</u>
Total	4,290	2,460
<b>All industrial</b>		
Softwood	423,524	432,991
Hardwood	<u>212,554</u>	<u>227,569</u>
Total	<u>636,078</u>	<u>660,560</u>
<b>Byproduct output</b>		
Softwood	208,534	
Hardwood	<u>77,180</u>	
Total	<u>285,714</u>	
<b>Total output</b>		
Softwood	632,058	
Hardwood	<u>289,734</u>	
Total	<u>921,792</u>	

<sup>a</sup> Includes roundwood that was delivered to nonpulpmills and then chipped and sold to pulpmills (5,083,000 cubic feet in 1996).

<sup>b</sup> Includes roundwood that was delivered to nonpulpmills and then chipped and sold to pulpmills (5,685,000 cubic feet in 1996).



**Table 2—Number of primary wood-using plants by industry, Arkansas, 1948-1996**

Industry	Year						
	1948	1958	1968	1971	1977	1987	1996
Sawmills	1,736	974	448	278	384	274	286
Veneer or plywood mills	23	11	12	13	8	8	10
Pulpmills	2	4	7	7	8	8	8
Composite panel mills	0	0	0	0	0	0	0
Other mills	146	79	104	108	72	35	15
All plants	1,761	989	467	298	400	290	319

**Table 3—Roundwood receipts by sawmill size, Arkansas, 1996**

Sawmill size class <sup>a</sup>	Number of mills <sup>b</sup>	Thousand board feet	Percent of volume
<i>Million board feet</i>			
1.0 - 4.99	66	204,764	11
5.0 - 9.99	28	193,616	10
10.0 - 49.99	19	334,231	17
> 50	14	1,187,816	62
Total	127	1,920,427	100

<sup>a</sup> Based on volume received as opposed to actual capacity.

<sup>b</sup> Mills less than 1.0 million board feet were not included.

**Table 4—Roundwood receipts by species and type of mill, Arkansas, 1996**

Species	Type of mill						
	All mills	Sawmills	Veneer mills		OSB	Pulpmills	Other mills
			Plywood	Other veneer			
<i>Thousand cubic feet</i>							
<b>Softwood</b>							
Yellow pine	331,054	251,001	77,593	0	0	NA	2,460
White pine	0	0	0	0	0	NA	0
Cedar	0	0	0	0	0	NA	0
Cypress	0	0	0	0	0	NA	0
Other softwood	0	0	0	0	0	NA	0
Unclassified	101,937	0	0	0	0	101,937	0
Total softwoods	<u>432,991</u>	<u>251,001</u>	<u>77,593</u>	<u>0</u>	<u>0</u>	<u>101,937</u>	<u>2,460</u>
<b>Hardwood</b>							
Blackgum and tupelo	1,979	1,379	450	150	0	NA	0
Soft maple	225	0	225	0	0	NA	0
Sweetgum	9,310	8,345	450	515	0	NA	0
Yellow-poplar	9,218	8,353	450	415	0	NA	0
Other soft hardwood	7,602	6,064	901	637	0	NA	0
Hickory	7,797	7,279	450	68	0	NA	0
Red oak	29,258	28,324	450	484	0	NA	0
White oak	23,455	22,727	450	278	0	NA	0
Other hard hardwood	5,649	4,837	676	136	0	NA	0
Unclassified	<u>133,076</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>133,076</u>	<u>0</u>
Total hardwoods	<u>227,569</u>	<u>87,308</u>	<u>4,502</u>	<u>2,683</u>	<u>0</u>	<u>133,076</u>	<u>0</u>
<b>All species</b>	<u>660,560</u>	<u>338,309</u>	<u>82,095</u>	<u>2,683</u>	<u>0</u>	<u>235,013</u>	<u>2,460</u>

NA = not applicable.

**Table 5—Industrial roundwood movement by product and species group, Arkansas, 1996**

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
<b>Saw logs</b>					
Softwood	225,807	18,556	207,251	43,750	251,001
Hardwood	88,965	6,919	82,046	5,262	87,308
Total	314,772	25,475	289,297	49,012	338,309
<b>Veneer logs</b>					
Softwood	68,257	3,217	65,040	12,553	77,593
Hardwood	6,047	122	5,925	1,260	7,185
Total	74,304	3,339	70,965	13,813	84,778
<b>Pulpwood</b>					
Softwood	125,131	39,231	85,900	16,037	101,937
Hardwood	117,344	20,696	96,648	36,428	133,076
Total	242,475	59,927	182,548	52,465	235,013
<b>Composite panels</b>					
Softwood	50	50	0	0	0
Hardwood	187	187	0	0	0
Total	237	237	0	0	0
<b>Other industrial</b>					
Softwood	4,279	2,684	1,595	865	2,460
Hardwood	11	11	0	0	0
Total	4,290	2,695	1,595	865	2,460
<b>All products</b>					
Softwood	423,524	63,738	359,786	73,205	432,991
Hardwood	212,554	27,935	184,619	42,950	227,569
Total	636,078	91,673	544,405	116,155	660,560

**Table 6—Saw-log volume by destination, source, and species group, Arkansas, 1996**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
<b>Arkansas (retained)</b>	289,297	207,251	82,046
<b>Exports to:</b>			
Louisiana	6,192	5,741	451
Mississippi	176	9	167
Missouri	2,148	367	1,781
North Carolina	4	0	4
Oklahoma	4,639	3,111	1,528
Tennessee	2,988	0	2,988
Texas	<u>9,328</u>	<u>9,328</u>	<u>0</u>
Total	25,475	18,556	6,919
<b>Imports from:</b>			
Louisiana	32,561	29,180	3,381
Mississippi	489	0	489
Missouri	938	72	866
Oklahoma	5,693	5,167	526
Texas	<u>9,331</u>	<u>9,331</u>	<u>0</u>
Total	49,012	43,750	5,262

**Table 7—Veneer volume by destination, source, and species group, Arkansas, 1996**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
<b>Arkansas (retained)</b>	70,965	65,040	5,925
<b>Exports to:</b>			
Louisiana	3,216	3,216	0
Missouri	<u>123</u>	<u>1</u>	<u>122</u>
Total	3,339	3,217	122
<b>Imports from:</b>			
Louisiana	11,527	11,527	0
Mississippi	1,260	0	1,260
Oklahoma	<u>1,026</u>	<u>1,026</u>	<u>0</u>
Total	13,813	12,553	1,260

**Table 8—Pulpwood volume by destination, source, and species group, Arkansas, 1996**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
<b>Arkansas (retained)</b>	182,548	85,900	96,648
<b>Exports to:</b>			
Alabama	1	0	1
Georgia	64	64	0
Louisiana	35,008	23,757	11,251
Mississippi	818	2	816
Oklahoma	11,758	10,976	782
Texas	<u>12,278</u>	<u>4,432</u>	<u>7,846</u>
Total	59,927	39,231	20,696
<b>Imports from:</b>			
Alabama	28	28	0
Louisiana	8,631	1,872	6,759
Mississippi	1,221	0	1,221
Missouri	790	0	790
Oklahoma	15,639	5,908	9,731
Texas	<u>26,156</u>	<u>8,229</u>	<u>17,927</u>
Total	52,465	16,037	36,428

**Table 9—Composite panel volume by destination, source, and species group, Arkansas, 1996**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
<b>Arkansas (retained)</b>	0	0	0
<b>Exports to:</b>			
Louisiana	237	50	187
Total	237	50	187

**Table 10—Other industrial volume by destination, source, and species group, Arkansas, 1996<sup>a</sup>**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
<b>Arkansas (retained)</b>	1,595	1,595	0
<b>Exports to:</b>			
Missouri	235	224	11
Oklahoma	2,029	2,029	0
Texas	431	431	0
Total	2,695	2,684	11
<b>Imports from:</b>			
Louisiana	119	119	0
Oklahoma	130	130	0
Texas	432	432	0
Total	865	865	0

<sup>a</sup> Includes poles, posts, mulch, firewood, log homes, charcoal, and all other industrial mills.

**Table 11—Primary mill residue volume by roundwood type, species group, and residue type, Arkansas, 1996**

Roundwood type and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>Thousand cubic feet</i>					
<b>Saw logs</b>					
Softwood	148,282	16,809	65,681	44,409	21,383
Hardwood	57,988	8,874	29,430	17,574	2,110
Total	206,270	25,683	95,111	61,983	23,493
<b>Veneer logs</b>					
Softwood	45,632	5,388	31,318	8,926	0
Hardwood	2,668	779	1,246	643	0
Total	48,300	6,167	32,564	9,569	0
<b>Pulpwood</b>					
Softwood	10,056	10,056	0	0	0
Hardwood	16,694	16,694	0	0	0
Total	26,750	26,750	0	0	0
<b>Composite panels</b>					
Softwood	0	0	0	0	0
Hardwood	0	0	0	0	0
Total	0	0	0	0	0
<b>Other industrial<sup>a</sup></b>					
Softwood	4,564	3,780	784	0	0
Hardwood	0	0	0	0	0
Total	4,564	3,780	784	0	0
<b>Total</b>					
Softwood	208,534	36,033	97,783	53,335	21,383
Hardwood	77,350	26,347	30,676	18,217	2,110
Total	285,884	62,380	128,459	71,552	23,493

<sup>a</sup> Includes poles, pilings, posts, and other industrial products.

**Table 12—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Arkansas, 1996**

Product and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>Thousand cubic feet</i>					
<b>Fiber products</b>					
Softwood	85,310	0	84,814	0	496
Hardwood	18,273	12	18,261	0	0
Total	103,583	12	103,075	0	496
<b>Particleboard</b>					
Softwood	15,600	0	0	0	15,600
Hardwood	0	0	0	0	0
Total	15,600	0	0	0	15,600
<b>Composite panels</b>					
Softwood	2,065	0	2,065	0	0
Hardwood	0	0	0	0	0
Total	2,065	0	2,065	0	0
<b>Sawn products</b>					
Softwood	6,810	0	6,810	0	0
Hardwood	0	0	0	0	0
Total	6,810	0	6,810	0	0
<b>Fuel</b>					
Softwood	93,532	34,486	4,094	51,829	3,123
Hardwood	58,034	26,083	12,055	17,897	1,999
Total	151,566	60,569	16,149	69,726	5,122
<b>Miscellaneous</b>					
Softwood	5,217	1,547	0	1,506	2,164
Hardwood	873	225	270	267	111
Total	6,090	1,772	270	1,773	2,275
<b>Not used</b>					
Softwood	0	0	0	0	0
Hardwood	170	27	90	53	0
Total	170	27	90	53	0
<b>All products</b>					
Softwood	208,534	36,033	97,783	53,335	21,383
Hardwood	77,350	26,347	30,676	18,217	2,110
Total	285,884	62,380	128,459	71,552	23,493



**Table 13—Roundwood timber products output by county, product, and species group,  
South Delta Region of Arkansas, 1996**

County	All products		Saw logs		Veneer logs		Pulpwood		Composite panel		Other industrial	
	Soft-wood	Hard-wood	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>												
Arkansas	107	2,351	84	1,416	0	691	23	244	0	0	0	0
Chicot	45	3,094	0	0	0	0	45	3,094	0	0	0	0
Desha	76	2,211	0	455	0	496	76	1,260	0	0	0	0
Jefferson	5,847	3,345	970	1,194	1,585	164	3,292	1,987	0	0	14	0
Lee	6	3,332	4	2,476	0	675	2	181	0	0	0	0
Lincoln	2,250	8,512	0	741	0	0	2,250	7,771	0	0	14	0
Lonoke	490	1,482	490	1,155	0	112	0	215	0	0	0	0
Monroe	123	1,852	99	1,371	0	0	24	481	0	0	0	0
Phillips	1	1,705	0	735	0	586	1	384	0	0	0	0
Prairie	94	1,359	94	1,287	0	0	0	72	0	0	0	0
<b>All counties</b>	<b>8,944</b>	<b>26,179</b>	<b>1,647</b>	<b>8,808</b>	<b>1,585</b>	<b>2,138</b>	<b>5,712</b>	<b>15,233</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>0</b>

**Table 14—Roundwood timber products output by county, product, and species group,  
North Delta Region of Arkansas, 1996**

County	All products		Saw logs		Veneer logs		Pulpwood		Composite panel		Other industrial	
	Soft-wood	Hard-wood	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>												
Clay	96	451	96	276	0	21	0	154	0	0	0	0
Crittenden	0	630	0	589	0	0	0	41	0	0	0	0
Cross	0	993	0	453	0	540	0	0	0	0	0	0
Greene	79	311	72	288	0	0	7	23	0	0	0	0
Jackson	0	1,214	0	1,153	0	0	0	61	0	0	0	0
Lawrence	1,090	1,535	1,080	1,514	0	21	10	0	0	0	0	0
Mississippi	0	782	0	782	0	0	0	0	0	0	0	0
Poinsett	902	6	0	0	0	0	902	6	0	0	0	0
St. Francis	12	3,781	4	2,221	0	405	8	1,155	0	0	0	0
Woodruff	0	1,490	0	1,481	0	0	0	9	0	0	0	0
<b>All counties</b>	<b>2,179</b>	<b>11,193</b>	<b>1,252</b>	<b>8,757</b>	<b>0</b>	<b>987</b>	<b>927</b>	<b>1,449</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Table 15—Roundwood timber products output by county, product, and species group, Southwest Region of Arkansas, 1996**

County	All products		Saw logs		Veneer logs		Pulpwood		Composite panel		Other industrial	
	Soft-wood	Hard-wood	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>												
Ashley	22,544	8,161	6,724	1,310	1,248	0	14,572	6,851	0	0	14	0
Bradley	11,916	12,865	5,168	2,143	1,566	0	5,182	10,722	0	0	16	0
Calhoun	17,440	5,877	7,691	2,120	2,887	0	6,862	3,757	0	0	0	0
Clark	19,085	13,584	11,185	1,536	2,602	0	5,298	12,048	0	0	30	0
Cleveland	14,755	5,033	8,073	1,686	3,735	0	2,947	3,347	0	0	14	0
Columbia	22,468	5,395	12,216	2,314	4,824	0	5,428	3,040	0	41	172	0
Dallas	21,759	2,477	9,058	1,395	3,544	0	9,157	1,082	0	0	0	0
Drew	7,333	9,787	1,032	1,076	1,603	0	4,698	8,711	0	0	16	0
Grant	18,933	4,634	9,042	1,789	2,889	109	7,002	2,736	0	0	0	0
Hempstead	18,393	3,515	11,227	959	3,969	85	3,197	2,471	0	0	190	0
Hot Spring	12,704	1,800	7,762	1,176	2,459	164	2,483	460	0	0	0	0
Howard	13,195	2,304	4,038	1,085	529	153	8,628	1,066	0	0	618	0
Lafayette	12,242	1,898	7,330	889	2,547	0	2,365	947	0	62	129	0
Little River	8,365	5,012	3,382	590	0	96	4,983	4,326	0	0	920	0
Miller	8,746	3,736	4,834	447	2,250	0	1,662	3,289	0	0	108	0
Nevada	16,394	5,025	10,458	1,079	2,425	0	3,511	3,882	0	64	108	0
Ouachita	24,174	4,994	13,696	2,907	4,580	0	5,898	2,087	0	0	0	0
Pike	12,242	3,674	8,299	1,451	2,044	102	1,899	2,121	0	0	129	0
Sevier	13,534	2,559	6,213	1,277	1,026	130	6,295	1,152	0	0	1,441	0
Union	27,564	16,208	12,098	2,966	5,661	0	9,755	13,222	50	20	14	0
All counties	323,786	118,538	93,216	18,589	31,855	511	75,454	56,291	0	41	1,070	0

**Table 16—Roundwood timber products output by county, product, and species group,  
Ouachita Region of Arkansas, 1996**

County	All products		Saw logs		Veneer logs		Pulpwood		Composite panel		Other industrial	
	Soft-wood	Hard-wood	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>												
Garland	13,466	1,572	9,167	1,213	4,139	205	160	154	0	0	0	0
Logan	3,063	617	2,966	608	0	0	97	9	0	0	0	0
Montgomery	9,356	1,798	5,435	1,691	2,516	0	1,405	107	0	0	0	0
Perry	3,279	664	2,566	408	683	205	30	51	0	0	0	0
Polk	10,316	7,142	7,175	1,867	1,282	0	1,859	5,275	0	0	77	0
Pulaski	2,302	2,254	1,145	490	1,031	297	126	1,467	0	0	0	0
Saline	9,955	1,850	6,473	793	1,566	308	1,916	749	0	0	0	0
Scott	4,648	544	3,602	506	683	0	363	38	0	0	30	0
Sebastian	306	0	297	0	0	0	9	0	0	0	0	0
Yell	9,424	1,099	6,980	691	2,384	178	60	230	0	0	0	0
<b>All counties</b>	<b>66,115</b>	<b>17,540</b>	<b>45,806</b>	<b>8,267</b>	<b>14,284</b>	<b>1,193</b>	<b>6,025</b>	<b>8,080</b>	<b>0</b>	<b>0</b>	<b>107</b>	<b>0</b>

**Table 17—Roundwood timber products output by county, product, and species group,  
Ozark Region of Arkansas, 1996**

County	All products		Saw logs		Veneer logs		Pulpwood		Composite panel		Other industrial	
	Soft-wood	Hard-wood	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>												
Baxter	412	662	388	645	0	13	0	4	0	0	24	0
Benton	0	1,865	0	1,863	0	2	0	0	0	0	0	0
Boone	82	847	82	840	0	0	0	7	0	0	0	0
Carroll	153	1,223	153	1,223	0	0	0	0	0	0	0	0
Cleburne	170	1,991	139	870	0	0	31	1,121	0	0	0	0
Conway	2,897	249	2,764	0	0	0	133	249	0	0	0	0
Crawford	65	1,540	65	1,540	0	0	0	0	0	0	0	0
Faulkner	1,418	241	1,417	0	0	150	1	91	0	0	0	0
Franklin	1,678	1,488	1,672	1,487	0	0	6	1	0	0	0	0
Fulton	554	1,297	353	1,275	0	11	0	0	0	0	201	11
Independence	391	3,093	349	1,725	0	0	42	1,368	0	0	0	0
Izard	447	1,415	447	1,415	0	0	0	0	0	0	0	0
Johnson	3,339	1,008	3,175	1,005	0	0	164	3	0	0	0	0
Madison	79	2,074	79	2,074	0	0	0	0	0	0	0	0
Marion	318	936	317	902	0	10	1	24	0	0	0	0
Newton	318	2,341	318	2,326	0	0	0	15	0	0	0	0
Pope	3,335	1,484	3,194	1,457	0	0	141	27	0	0	0	0
Randolph	203	1,103	203	1,060	0	43	0	0	0	0	0	0
Searcy	298	1,423	298	1,328	0	0	0	95	0	0	0	0
Sharp	218	1,695	218	1,695	0	0	0	0	0	0	0	0
Stone	463	1,837	463	1,775	0	0	0	62	0	0	0	0
Van Buren	1,198	1,219	1,107	557	0	0	91	662	0	0	0	0
Washington	65	1,833	65	1,778	0	0	0	55	0	0	0	0
White	250	3,176	216	2,076	0	75	34	1,025	0	0	0	0
All counties	18,351	36,040	17,482	30,916	0	304	644	4,809	0	0	225	11



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In 1996, roundwood output from Arkansas' forests totaled 636 million cubic feet. Mill byproducts generated from primary manufacturers was 286 million cubic feet. Almost all plant residues were used primarily for fuel and fiber products. Saw logs were the leading roundwood product at 315 million cubic feet; pulpwood ranked second at 242 million cubic feet; veneer logs were third at 74 million cubic feet. The number of primary processing plants was 147 in 1996. Total receipts were 661 million cubic feet.

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

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