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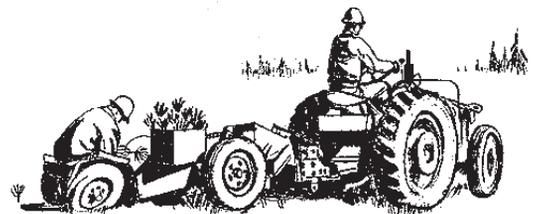
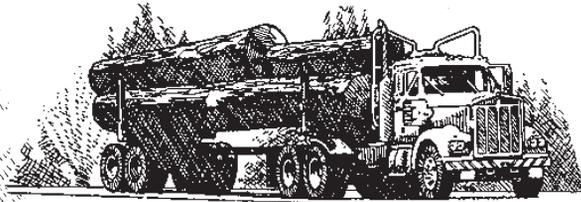
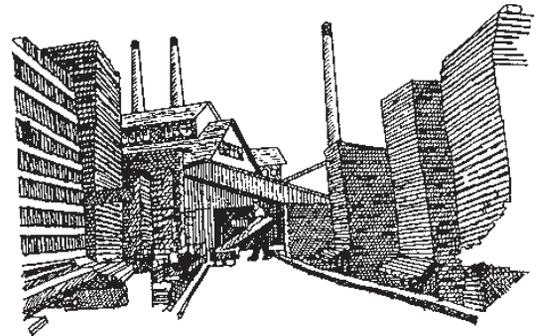
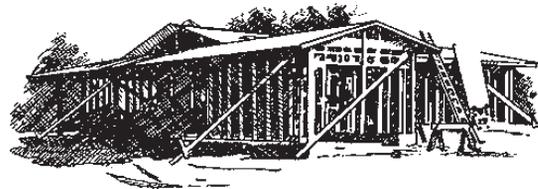


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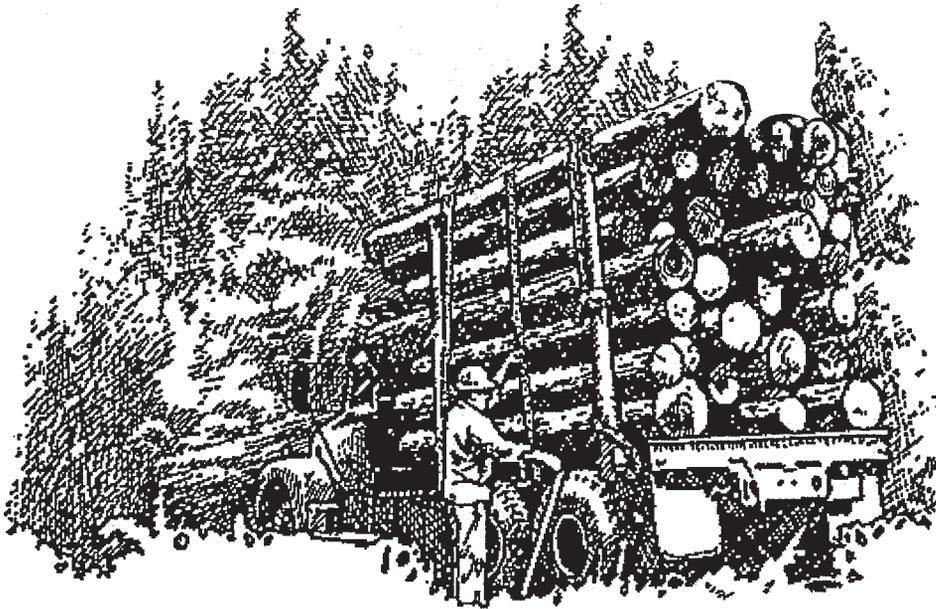
Louisiana's Timber Industry— An Assessment of Timber Product Output and Use, 1999

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Foreword

This report contains the findings of a 1999 canvass of primary wood-using plants in Louisiana, and presents changes in product output and residue use since 1996. 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 parish, in 1999 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 Louisiana was conducted in 2000 to obtain information for 1999. In addition, roundwood from out-of-State mills known to be using logs or bolts harvested from Louisiana timberland was incorporated into Louisiana 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 a response was necessary. In the event of a nonresponse, data collected in previous surveys were updated using current data collected for mills of similar size, product type, and location. Surveys for all timber products other than pulpwood began in 1948, and are currently conducted every 3 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.

Acknowledgments

The authors thank Don Feduccia and Mike Buchart for review and comments; Dale Gormanson with the North Central Research Station for the maps; Anne Jenkins, Susan Bowman, Donna Burnett, and Lyn Thornhill for tables, graphs, and statistical checking; and Paul Smith, Diana Corbin, and Louise Wilde for editorial review, styling, and publication of this report.

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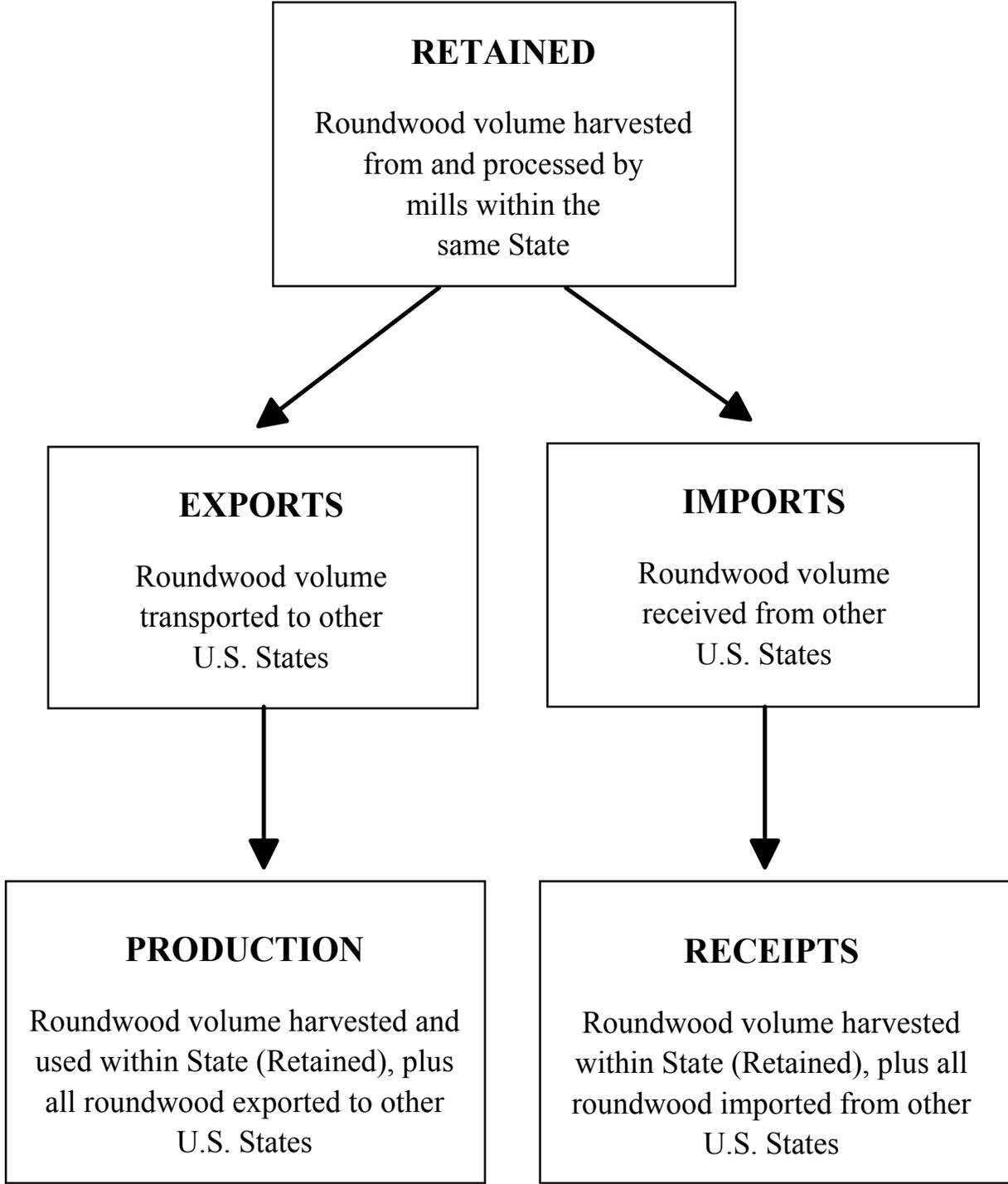


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^aAll tables in this report are available in Microsoft® Excel workbook files. Upon request, these files will be supplied on 3½-inch diskettes.

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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: Certain terms used in this report—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).

All Products

- Between 1996 and 1999, the combined industrial timber products output (TPO) from roundwood and plant byproducts increased 33 percent from 818 million cubic feet to 1.09 billion cubic feet.
- Timber products output from roundwood was up 175 million cubic feet, or 28 percent, to 802 million cubic feet,

while output of plant byproducts increased 94 million cubic feet to 285 million cubic feet.

- Output of softwood roundwood products increased 28 percent, totaling 648 million cubic feet, while output of hardwood roundwood products was up 27 percent to 154 million cubic feet (fig. 2).
- Figures 3 and 4 display softwood and hardwood parish-level intensity of roundwood production for all industrial products across Louisiana. The data are depicted in cubic feet produced per acre of census land area. Parishes with the highest production intensity are depicted in the darker shades. For softwoods the darkest shade represents more than 50 cubic feet of production per acre, while for hardwoods the darkest shade represents more than 15 cubic feet per acre.

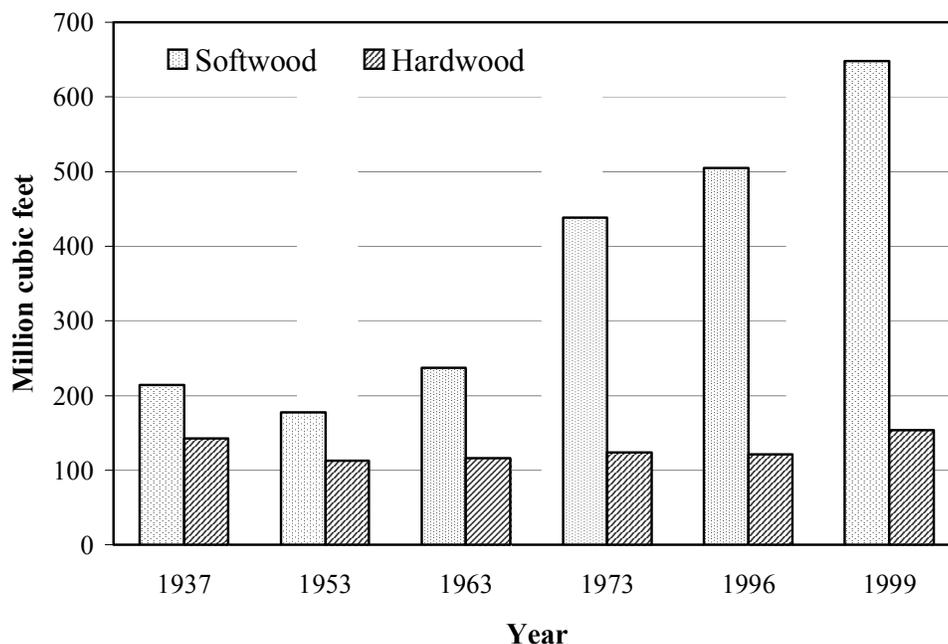


Figure 2—Roundwood production for all products by species group and year (see page 10 for references for individual years).

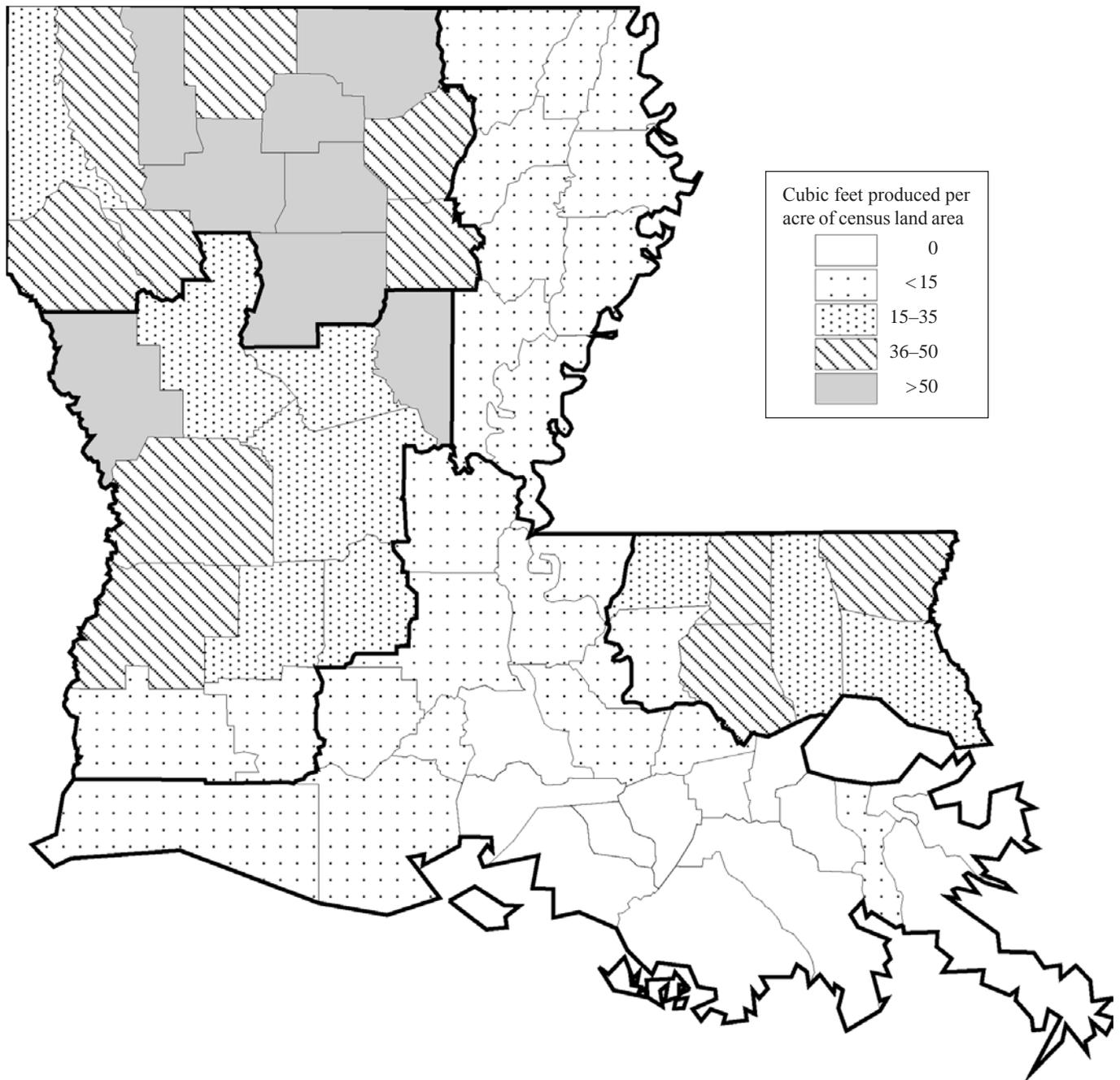


Figure 3—Intensity of roundwood softwood output for all industrial products in Louisiana by parish, 1999.

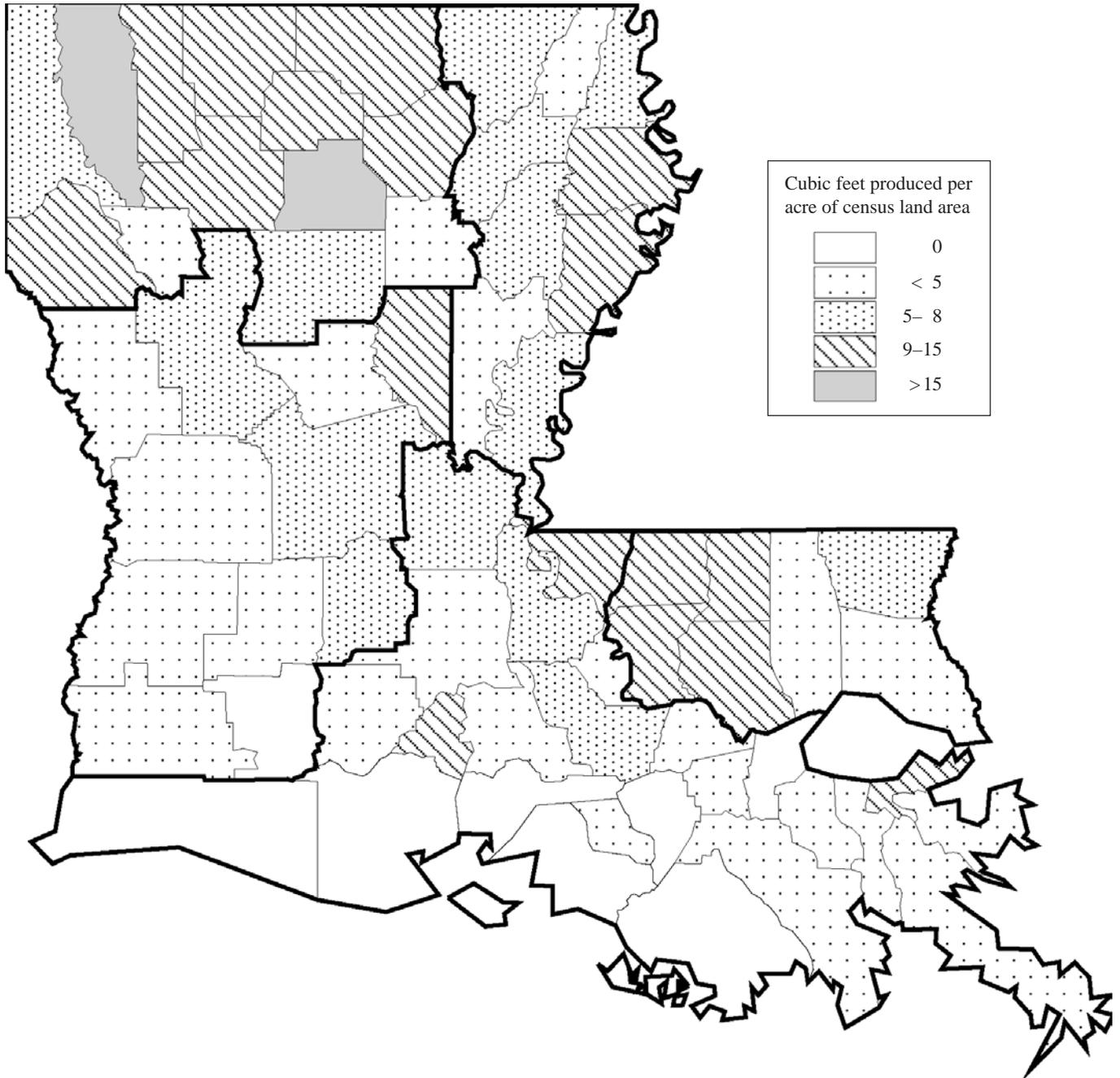


Figure 4—Intensity of roundwood hardwood output for all industrial products in Louisiana by parish, 1999.

- Pulpwood and saw logs were the principal roundwood products in 1999. Combined output of these two products totaled 618 million cubic feet and accounted for 77 percent of the State's total industrial roundwood output (fig. 5).
- Total receipts at Louisiana mills, which included roundwood harvested and retained in the State and roundwood imported from other States, increased 29 percent to 890 million cubic feet. The number of primary roundwood-using plants in Louisiana dropped from 92 in 1996 to 57 in 1999.

Pulpwood

- Total pulpwood production, including chipped roundwood, increased 11 percent to 349 million cubic feet (4.8 million cords) and accounted for 44 percent of the State's total roundwood TPO. Softwood output increased 11 percent to 247 million cubic feet; hardwood output increased 12 percent to 102 million cubic feet (fig. 6).

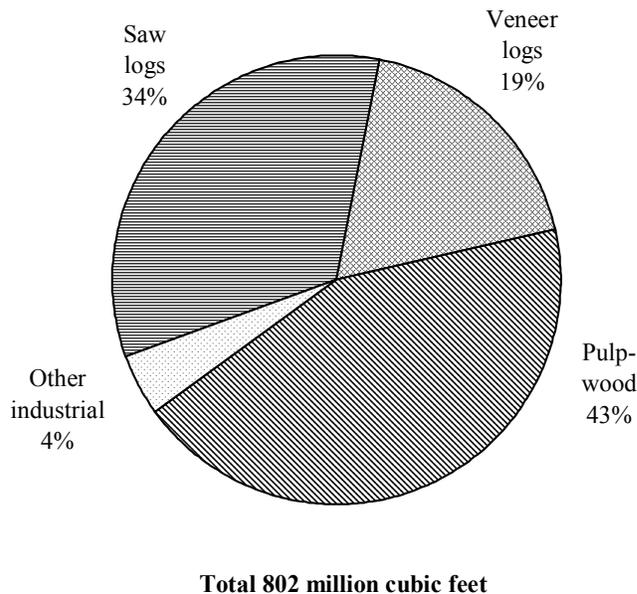


Figure 5—Roundwood production by type of product, 1999.

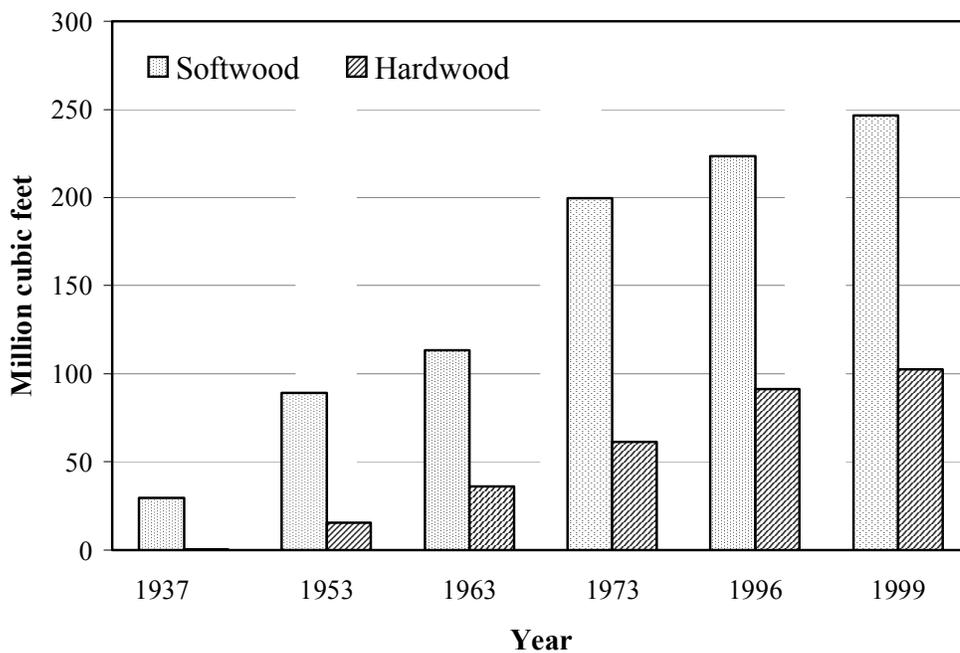


Figure 6—Roundwood pulpwood production by species group and year (see page 11 for references for individual years).

- Eleven pulpmill facilities were operating and receiving roundwood in Louisiana in 1999, the same as in 1996. Total pulpwood receipts for these mills increased 44 million cubic feet to 482 million cubic feet, accounting for 54 percent of total receipts for all mills.
- Ninety-one percent of roundwood cut for pulpwood was retained for processing at Louisiana pulpmills. Roundwood pulpwood accounted for 22 percent of total known exports and 72 percent of total imports. Roundwood pulpwood imports amounted to 163 million cubic feet, while exports amounted to 30 million cubic feet, making the State a net importer of pulpwood.

Saw Logs

- Saw logs accounted for 34 percent of the State’s total roundwood products. Output of softwood saw logs increased 50 percent to 230 million cubic feet (1.3 billion board feet, International ¼-inch rule), while that of hardwood saw logs increased 42 percent to 39 million cubic feet (233 million board feet, International ¼-inch rule) (fig. 7).

- In 1999, Louisiana had 32 sawmills, a net loss of 38 mills since 1996. The total number of sawmills does not include the several one-person sawmills in the State. Total saw-log receipts were up 97 million cubic feet to 232 million cubic feet. Softwood saw-log receipts increased 70 percent to 205 million cubic feet, while those of hardwood increased 98 percent to 27 million cubic feet. Of the operating mills in 1999, 12 percent had receipts of between 1.0 and 4.99 million board feet, 16 percent had receipts of between 5.0 and 9.99 million cubic feet, while 72 percent had receipts greater than 10 million board feet. Those 23 mills, however, accounted for 96 percent of total saw-log receipts.

- Louisiana retained 71 percent of its saw-log production for domestic manufacture, with saw-log exports exceeding imports by 37 million cubic feet in 1999.

Veneer Logs

- Output of veneer logs in 1999 totaled 148 million cubic feet and accounted for 19 percent of the State’s total roundwood TPO volume. Softwood veneer production increased 21 percent to 148 million cubic feet (864 million

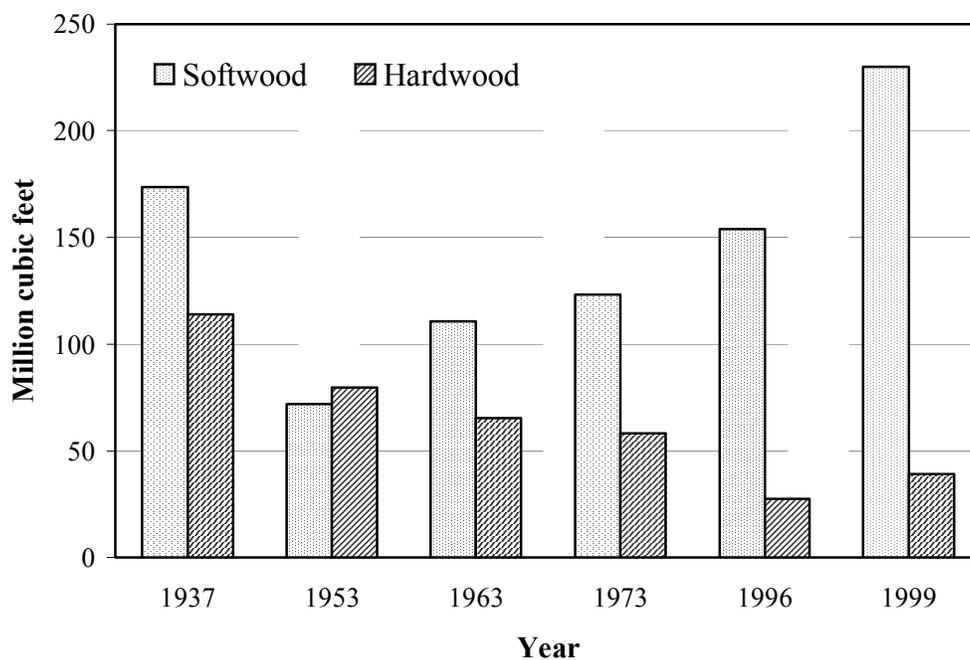


Figure 7—Roundwood saw-log production by species group and year (see page 11 for references for individual years).

board feet, International ¼-inch rule); output of hardwood veneer logs decreased 22 percent to 695 thousand cubic feet (4 million board feet, International ¼-inch rule) (fig. 8).

- The number of veneer mills operating in Louisiana increased from 6 to 10 since 1996. Receipts of veneer logs increased 27 percent to 138 million cubic feet. Softwood veneer receipts were up 29 million cubic feet, while hardwood veneer receipts were up 88 thousand cubic feet.
- Louisiana retained 80 percent of its veneer-log production for processing at domestic veneer mills. Exports amounted to 30 million cubic feet, and imports totaled 19 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, logs for log homes, composite panels, and all other industrial products

totaled 36 million cubic feet, a 27-million-cubic-foot increase from 1996. Softwood output for other industrial products was up 18 million cubic feet to 24 million cubic feet and accounted for 68 percent of the other industrial product volume. At the same time, hardwood output increased 10 million cubic feet to 12 million cubic feet (fig. 9).

- The number of plants producing other industrial products decreased from 5 to 4 since 1996. Combined receipts of other industrial products from softwood and hardwood increased 30 million cubic feet to 38 million cubic feet.
- Louisiana was a net importer of roundwood used for other industrial products; imports amounted to 3 million cubic feet and exports totaled 632 thousand cubic feet.

Plant Byproducts

- In 1999, processing of primary products in Louisiana mills generated 286 million cubic feet of wood and bark residues. Coarse residues from all primary products

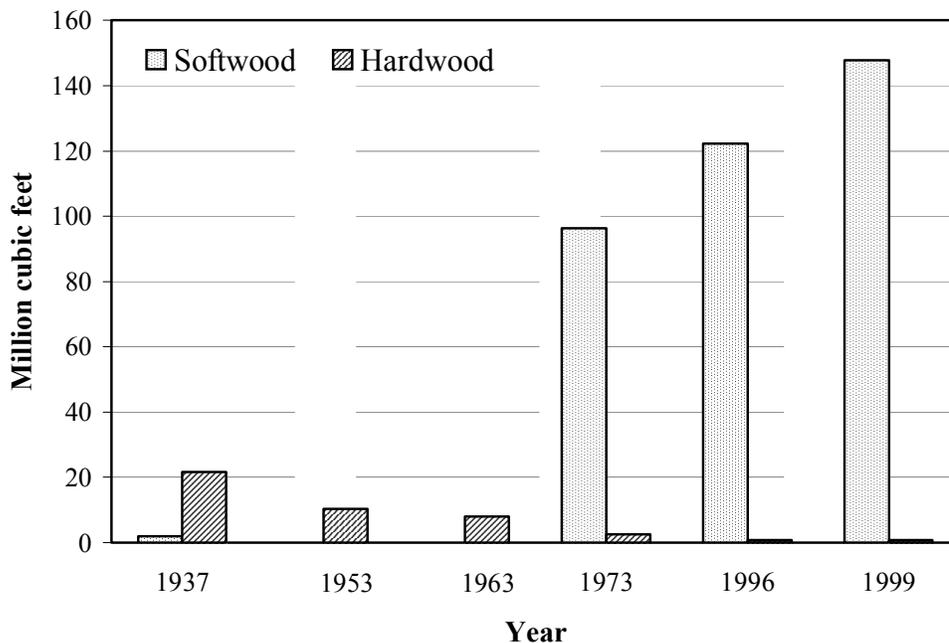


Figure 8—Roundwood veneer-log production by species group and year (see page 11 for references for individual years).

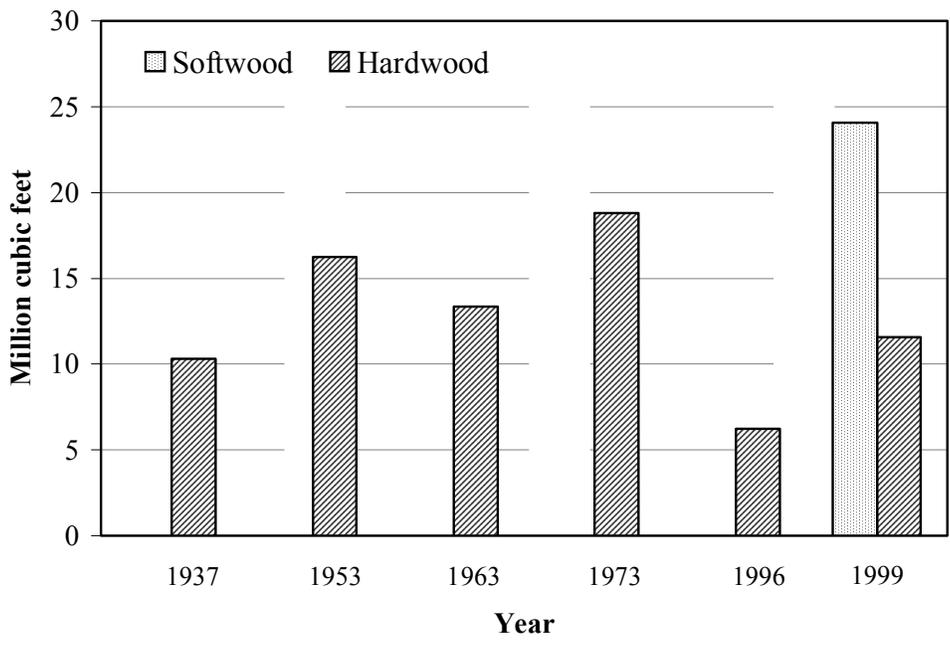


Figure 9—Roundwood production for other industrial products by species group and year (see page 11 for references for individual years).

amounted to 108 million cubic feet, while bark volume totaled 94 million cubic feet. Collectively, sawdust and shavings made up 29 percent of total residues, or 84 million cubic feet (fig. 10).

- More than 285 million cubic feet, or 99 percent, of the wood and bark residues were used for a product. While less than 1 percent of the residues were not used for a product, 60 percent of the residues were used for industrial fuel and 32 percent were used for fiber products (fig. 11). Ninety-two million cubic feet, or 85 percent, of the coarse residues were used for fiber products. Most of the bark was used for industrial fuel or other miscellaneous products, while 90 percent of the sawdust and shavings were used for industrial fuel.
- The processing of saw logs generated 132 million cubic feet of mill residues, accounting for 46 percent of the total residues produced (fig. 12).

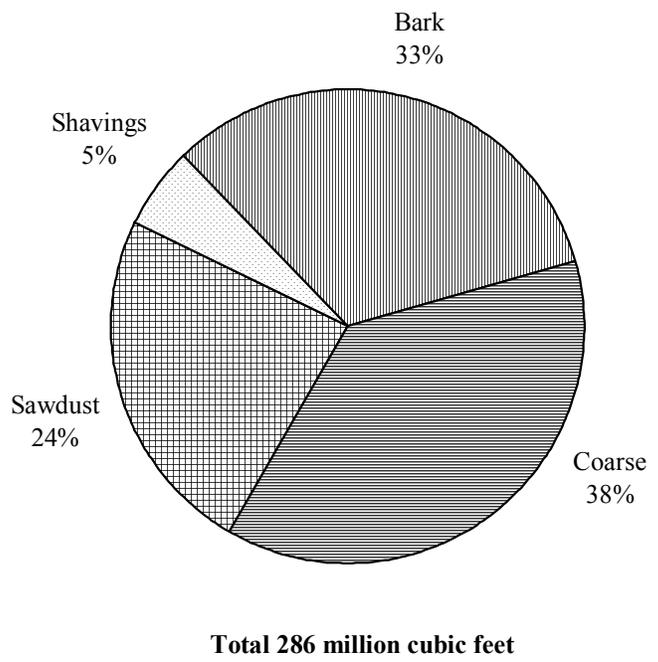
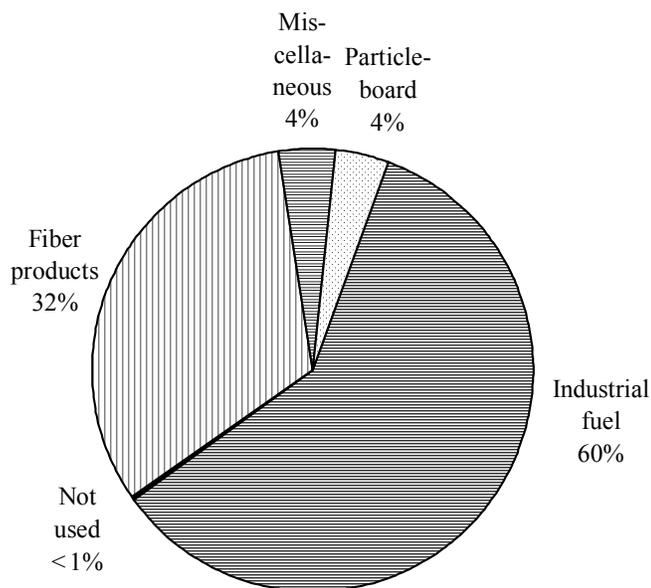
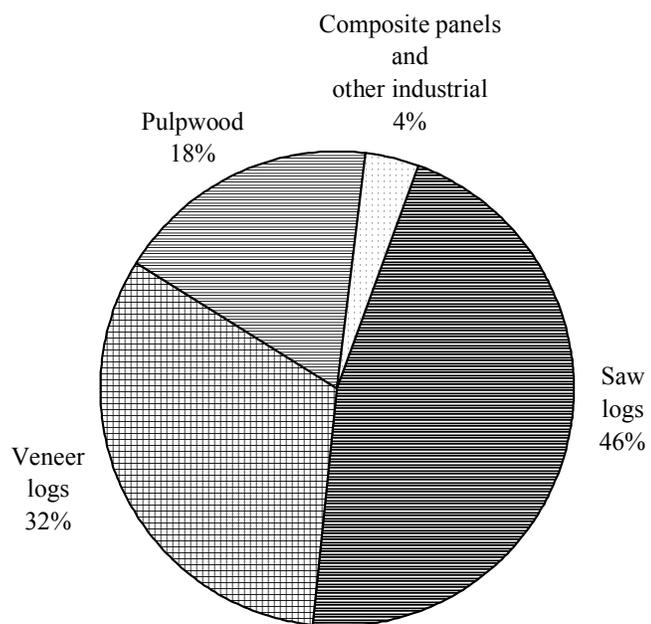


Figure 10—Primary mill residue by residue type, 1999.



Total 286 million cubic feet

Figure 11—Disposal of residue by product, 1999.



Total 286 million cubic feet

Figure 12—Primary mill residue produced by roundwood type, 1999.

Regional Trends

- Output of industrial roundwood products increased in all regions with the exception of the Southwest and South Delta regions. The Southwest region had the largest decline at 87 percent. Most regions experienced significant increases in output.

North Delta Region

- Roundwood output from the North Delta region totaled 45 million cubic feet, up 32 percent since 1996.
- Saw-log production increased 50 percent to 22 million cubic feet, accounting for 50 percent of the region’s TPO. Pulpwood production of 17 million cubic feet accounted for another 38 percent of the region’s total roundwood output.
- In the North Delta region, two primary wood-using plants were operating during 1999: one sawmill and one pulpmill. These mills processed 6 percent of the State’s total roundwood output.

South Delta Region

- Three million cubic feet of roundwood were produced in the South Delta region, an 86-percent decline since 1996.
- Saw-log production of 17 million cubic feet accounted for 60 percent of the region’s total roundwood output. Pulpwood production of 6.1 million cubic feet accounted for another 21 percent of the region’s total roundwood output.
- The six mills operating in the South Delta region in 1999 included three sawmills, two pulpmills, and one other miscellaneous mill. These mills accounted for less than 1 percent of the total roundwood output for the State.

Southwest Region

- Roundwood output from the Southwest region totaled 241 million cubic feet, up 28 percent since 1996. Roundwood production from this region accounted for 30 percent of the total roundwood TPO for the State.

- Pulpwood production increased by 23 percent to 134 million cubic feet, accounting for 55 percent of the region's total TPO. Saw-log production of 48 million cubic feet accounted for another 20 percent of the region's total roundwood output.
- The 15 primary wood-using plants operating in Southwest Louisiana included 3 pulpmills, 5 sawmills, 6 veneer or plywood mills, and 1 other miscellaneous mill.

Southeast Region

- Roundwood output from the Southeast region totaled 101 million cubic feet, a 24-percent increase since 1996. This region accounted for 13 percent of the State's total TPO.
- Saw-log production increased 35 percent to 46 million cubic feet, accounting for 45 percent of the region's total roundwood output. Production of pulpwood dropped 2 percent and accounted for 41 percent of the region's total roundwood output.
- In the Southeast region, 10 primary wood-using plants were operating during 1999: 7 sawmills, 2 pulpmills, and 1 veneer or plywood mill.

Northwest Region

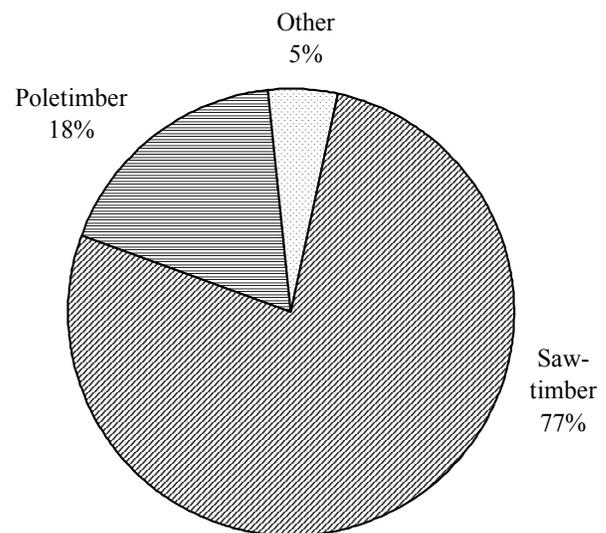
- Roundwood output from the Northwest region totaled 378 million cubic feet, an increase of 25 percent since 1996.
- Pulpwood production of 151 million cubic feet accounted for 40 percent of the region's TPO and 43 percent of the State's total roundwood pulpwood output. The 136 million cubic feet of saw logs accounted for 36 percent of the total roundwood output for the region and 51 percent of the State's total saw-log output. With 71 million cubic feet this region accounted for 47 percent of the State's veneer output.
- In the Northwest region, 24 primary wood-using plants were operating during 1999: 16 sawmills, 3 veneer or plywood mills, 3 pulpmills, and 2 other miscellaneous mills. These mills processed 47 percent of the State's total roundwood output.

Total Roundwood Output

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

Source

- In addition to the 802 million cubic feet of roundwood output for industrial roundwood, an estimated 23 million cubic feet was harvested for domestic fuelwood, bringing Louisiana's total roundwood output to 825 million cubic feet.
- Ninety-five percent of total roundwood output was considered growing-stock volume (sawtimber and poletimber) from timberland sources. Other sources (such as saplings; stumps, tops, and limbs of trees on timberland; and trees on nonforest land) contributed an estimated 42 million cubic feet, or 5 percent of total roundwood output (fig. 13).



Total 825 million cubic feet

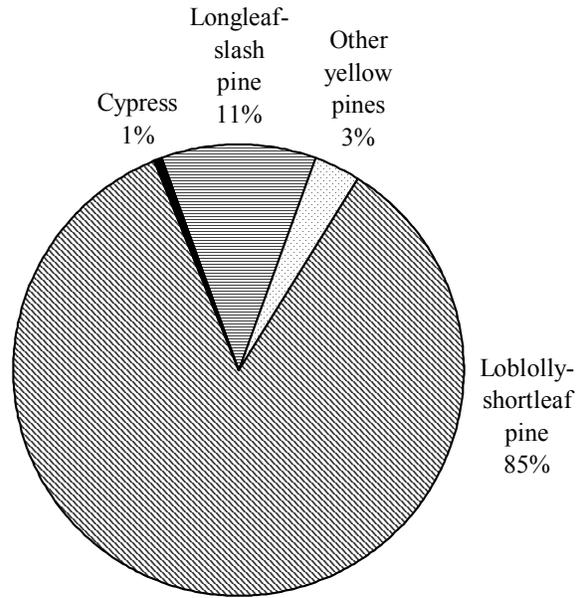
Figure 13—Roundwood output by source, 1999.

Ownership

- An estimated 447 million cubic feet, or 54 percent, of the total roundwood output came from nonindustrial private forest lands. Forest industry lands contributed 343 million cubic feet, or 41 percent of the output. Public lands made up the remaining 5 percent, or 35 million cubic feet (fig. 14).

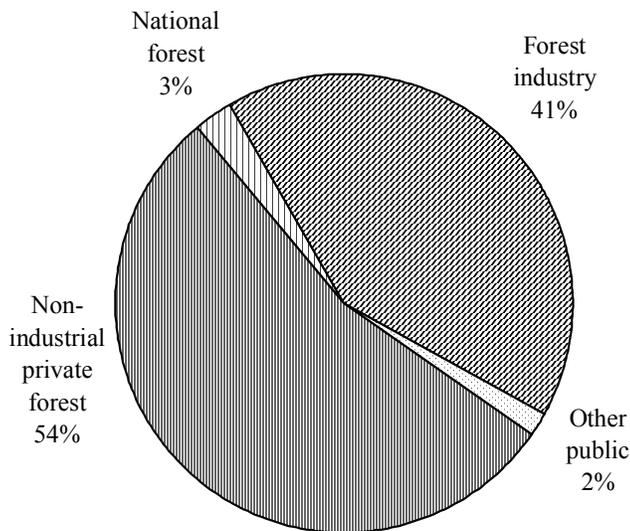
Species

- The loblolly and shortleaf pine group provided the most volume of any softwood species group, accounting for 85 percent of the total softwood output (fig. 15). The longleaf-slash pine type accounted for 11 percent of the softwood output. In hardwoods, the red oak and white oak groups combined accounted for 75 million cubic feet, or 43 percent of total hardwood output (fig. 16).



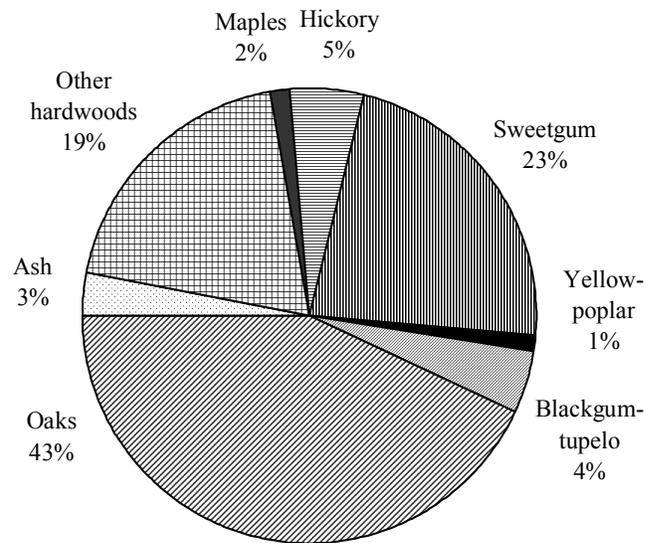
Total 651 million cubic feet

Figure 15—Roundwood output by softwood species group, 1999.



Total 825 million cubic feet

Figure 14—Roundwood output by ownership, 1999.



Total 174 million cubic feet

Figure 16—Roundwood output by hardwood species group, 1999.

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Definition of Terms

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).

Byproducts. Primary wood products, e.g., pulp chips, animal bedding, and fuelwood, recycled from mill residues.

Composite products. Roundwood products manufactured into chips, wafers, strands, flakes, shavings, or sawdust and then reconstituted into a variety of panel and engineered lumber products.

Consumption. The quantity of a commodity, such as pulpwood, utilized by a particular mill or group of mills.

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

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

Fiber products. Byproducts used in the manufacture of pulp, paper, paperboard, and composite products, such as waferboard or chipboard.

Fuelwood production. The volume of roundwood harvested to produce some form of energy, e.g., heat, steam, in residential, industrial, or institutional settings.

Growing-stock removals. The growing-stock volume removed from poletimber and sawtimber trees in the timberland inventory. (Note: Includes volume removed for roundwood products, logging residues, and other removals.)

Growing-stock trees. Living trees of commercial species classified as sawtimber, poletimber, saplings, and seedlings. Growing-stock trees must contain at least one 12-foot or two 8-foot logs in the saw-log portion, currently or potentially (if too small to qualify). The log(s) must meet dimension and merchantability standards and have, currently or potentially, one-third of the gross board-foot volume in sound wood.

Growing-stock volume. The cubic-foot volume of sound wood in growing-stock trees at least 5.0 inches d.b.h. from a 1-foot stump to a minimum 4.0-inch top d.o.b. of the central stem.

Hardwoods. Dicotyledonous trees, usually broadleaf and deciduous.

Soft hardwoods. Hardwood species with an average specific gravity of 0.50 or less, such as gums, yellow-poplar, cottonwoods, red maple, basswoods, and willows.

Hard hardwoods. Hardwood species with an average specific gravity greater than 0.50, such as oaks, hard maples, hickories, and beech.

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, pulpwood, veneer logs, intended to be processed into primary wood products such as lumber, wood pulp, sheathing, at primary wood-using mills.

International ¼-inch rule. A log rule or formula for estimating the board-foot volume of logs, allowing ½-inch of taper for each 4-foot length. The rule appears in a number of forms that allow for kerf. In the form used by FIA, a ¼-inch of kerf is assumed. This rule is used as the USDA Forest Service standard log rule in the Eastern United States.

Log. A primary forest product harvested in long, primarily 8-, 12-, and 16-foot lengths.

Logging residues. The unused merchantable portion of growing-stock trees cut or destroyed during logging operations.

Merchantable portion. That portion of live trees 5.0 inches d.b.h. and larger between a 1-foot stump and a minimum 4.0-inch top d.o.b. on the central stem. That portion of primary forks from the point of occurrence to a minimum 4.0-inch top d.o.b. is included.

Merchantable volume. Solid-wood volume in the merchantable portion of live trees.

Noncommercial species. Tree species of typically small size, poor form, or inferior quality that normally do not develop into trees suitable for industrial wood products.

Nonforest land. Land that has never supported forests and land formerly forested where timber production is precluded by development for other uses.

Nongrowing-stock sources. The net volume removed from the nongrowing-stock portions of poletimber and sawtimber trees (stumps, tops, limbs, cull sections of central stem) and from any portion of a rough, rotten, sapling, dead, or nonforest tree.

Other forest land. Forest land other than timberland and productive reserved forest land. It includes available and reserved forest land that is incapable of producing annually 20 cubic feet per acre of industrial wood under natural conditions because of adverse site conditions such as sterile soils, dry climate, poor drainage, high elevation, steepness, or rockiness.

Other products. A miscellaneous category of roundwood products, e.g., cooperage, excelsior, shingles, and mill residue byproducts (charcoal, bedding, mulch, etc.).

Other removals. The growing-stock volume of trees removed from the inventory by cultural operations such as timber stand improvement, land clearing, and other changes in land use, resulting in the removal of the trees from timberland.

Other sources. (see: Nongrowing-stock sources.)

Ownership. The property owned by one ownership unit, including all parcels of land in the United States.

National forest land. Federal land that has been legally designated as national forests or purchase units, and other land under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III land.

Forest industry land. Land owned by companies or individuals operating primary wood-using plants.

Nonindustrial private forest (NIPF) land. Privately owned land excluding forest industry land.

Corporate. Owned by corporations, including incorporated farm ownerships.

Individual. All lands owned by individuals, including farm operators.

Other public. An ownership class that includes all public lands except national forests.

Miscellaneous Federal land. Federal land other than national forests.

State, county, and municipal land. Land owned by States, counties, and local public agencies or municipalities, or land leased to these governmental units for 50 years or more.

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

Coarse residues. Material, such as slabs, edgings, trim, veneer cores and ends, which is suitable for chipping.

Fine residues. Material, such as sawdust, shavings, and veneer chippings, which is not suitable for chipping.

Plant byproducts. Residues (coarse or fine) used in the further manufacture of industrial products for consumer use or as fuel.

Unused plant residues. Residues (coarse or fine) that are not used for any product, including fuel.

Posts, poles, and pilings. Roundwood products milled (cut or peeled) into standard sizes (lengths and circumferences) to be put in the ground to provide vertical and lateral support in buildings, foundations, utility lines, and fences. May also include nonindustrial (unmilled) products.

Poletimber-size trees. Softwoods 5.0 to 8.9 inches d.b.h. and hardwoods 5.0 to 10.9 inches d.b.h.

Primary wood-using plants. Industries that convert roundwood products (saw logs, veneer logs, pulpwood, etc.) into primary wood products, such as lumber, veneer or sheathing, wood pulp.

Production. The total volume of roundwood harvested from land within a State, regardless of where it is consumed. Production is the sum of timber harvested and used within a State, and 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.

Rotten trees. Live trees of commercial species not containing at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of rot or missing sections, and with less than one-third of the gross board-foot tree volume in sound material.

Rough trees. Live trees of commercial species not containing at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of roughness, poor form, splits, and cracks, and with less than one-third of the gross board-foot tree volume in sound material; and live trees of noncommercial species.

Roundwood (roundwood logs). Logs, bolts, or other round sections cut from trees for industrial manufacture or consumer uses.

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

Roundwood products. Any primary product, such as lumber, poles, pilings, pulp, or fuelwood that is produced from roundwood.

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

Salvable dead trees. Standing or downed dead trees that were formerly growing stock and considered merchantable. Trees must be at least 5.0 inches d.b.h. to qualify.

Saplings. Live trees 1.0 to 5.0 inches d.b.h.

Saw log. A roundwood product, usually 8 feet in length or longer, processed into a variety of sawn products such as lumber, cants, pallets, railroad ties, and timbers.

Saw-log portion. The part of the bole of sawtimber trees between a 1-foot stump and the saw-log top.

Saw-log top. The point on the bole of sawtimber trees above which a conventional saw log cannot be produced. The minimum saw-log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

Sawtimber-size trees. Softwoods 9.0 inches d.b.h. and larger and hardwoods 11.0 inches d.b.h. and larger.

Sawtimber volume. Growing-stock volume in the saw-log portion of sawtimber-sized trees in board feet (International ¼-inch rule).

Seedlings. Trees less than 1.0 inch d.b.h. and greater than 1 foot tall for hardwoods, greater than 6 inches tall for softwood, and greater than 0.5 inch in diameter at ground level for longleaf pine.

Select red oaks. A group of several red oak species composed of cherrybark, Shumard, and northern red oaks. Other red oak species are included in the other red oaks group.

Select white oaks. A group of several white oak species composed of white, swamp chestnut, swamp white, chinkapin, Durand, and bur oaks. Other white oak species are included in the other white oaks group.

Softwoods. Coniferous trees, usually evergreen, having leaves that are needles or scalelike.

Standard cord. A unit of measure applied to roundwood, usually bolts or split wood. It is a stack of wood 4 feet high, 4 feet wide, and 8 feet long encompassing 128 cubic feet of wood, bark, and air space. This usually translates to approximately 75.0 to 81.0 cubic feet of solid wood for pulpwood, because pulpwood is more uniform.

Standard unit. A unit measure applied to roundwood timber products. Board feet (International ¼-inch rule) is the standard unit used for saw logs and veneer; cords are used for pulpwood, composite panel, and fuelwood; hundred pieces for poles; thousand pieces for posts; and thousand cubic feet for all other miscellaneous forest products.

Timberland. Forest land capable of producing 20 cubic feet of industrial wood per acre per year and not withdrawn from timber utilization.

Timber products. Roundwood products and byproducts.

Timber products output. The total volume of roundwood products from all sources plus the volume of byproducts recovered from mill residues (equals roundwood product drain).

Timber removals. The total volume of trees removed from the timberland inventory by harvesting, cultural operations such as stand improvement, land clearing, or changes in land use. (Note: Includes roundwood products, logging residues, and other removals.)

Tree. Woody plants having one erect perennial stem or trunk at least 3 inches d.b.h., a more or less definitely formed crown of foliage, and a height of at least 13 feet (at maturity).

Upper-stem portion. The part of the main stem of sawtimber trees above the saw-log top and the minimum top diameter of 4.0 inches outside bark, or to the point where the main stem breaks into limbs.

Utilization studies. Studies conducted on active logging operations to develop factors for merchantable portions of trees left in the woods (logging residues), logging damage, and utilization of the unmerchantable portion of growing-stock trees and nongrowing stock trees.

Veneer log. A roundwood product either rotary cut, sliced, stamped, or sawn into a variety of veneer products such as plywood, finished panels, veneer sheets, or sheathing.

Weight. A unit of measure for mill residues, expressed as oven-dry tons (2,000 oven-dry pounds).

Conversion Factors^a

Saw logs

Softwood	0.18349 cubic foot = 1 board foot 5.45 board feet = 1 cubic foot
Hardwood	0.16807 cubic foot = 1 board foot 5.95 board feet = 1 cubic foot

Veneer logs

Softwood	0.17094 cubic foot = 1 board foot 5.85 board feet = 1 cubic foot
Hardwood	0.16260 cubic foot = 1 board foot 6.15 board feet = 1 cubic foot

Pulpwood^b

Softwood	72.6 cubic feet per cord
Hardwood	75.0 cubic feet per cord

^a Conversion factors vary with stem size (d.b.h.) and species. The factors shown are for trees of average diameters removed in Louisiana during the most recent survey period.

^b Cubic feet of solid wood per cord.

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Table 1—Output of industrial products by product and species group, Louisiana, 1996 and 1999

Product and species group	Year		Change	Percent change
	1996	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	153,800	229,859	76,059	49.5
Hardwood	27,631	39,201	11,570	41.9
Total	181,431	269,060	87,629	48.3
Veneer logs				
Softwood	122,240	147,777	25,537	20.9
Hardwood	896	695	-201	-22.4
Total	123,136	148,472	25,336	20.6
Pulpwood^a				
Softwood	223,263	246,672	23,409	10.5
Hardwood	91,278	102,436	11,158	12.2
Total	314,541	349,108	34,567	11.0
Other industrial				
Softwood	6,236	24,037	17,801	285.5
Hardwood	1,881	11,557	9,676	514.4
Total	8,117	35,594	27,477	338.5
All industrial				
Softwood	505,539	648,345	142,806	28.2
Hardwood	121,686	153,889	32,203	26.5
Total	627,225	802,234	175,009	27.9
Byproduct output				
Softwood	164,916	247,175	82,259	49.9
Hardwood	25,775	37,899	12,124	47.0
Total	190,691	285,074	94,383	49.5
Total output				
Softwood	670,455	895,520	225,065	33.6
Hardwood	147,461	191,788	44,327	30.1
Total	817,916	1,087,308	269,392	32.9

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (443,000 cubic feet in 1996 and 3,743,000 cubic feet in 1999).

Table 2—Roundwood receipts by product and species group, Louisiana, 1996 and 1999

Product and species group	Year		Change	Percent change
	1996	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	120,625	204,514	83,889	69.5
Hardwood	13,830	27,326	13,496	97.6
Total	134,455	231,840	97,385	72.4
Veneer logs				
Softwood	108,986	137,772	28,786	26.4
Hardwood	0	88	88	--
Total	108,986	137,860	28,874	26.5
Pulpwood^a				
Softwood	302,818	342,477	39,659	13.1
Hardwood	135,241	139,891	4,650	3.4
Total	438,059	482,368	44,309	10.1
Other industrial				
Softwood	5,719	24,598	18,879	330.1
Hardwood	2,074	12,948	10,874	524.3
Total	7,793	37,546	29,753	381.8
Total output				
Softwood	538,148	709,361	171,213	31.8
Hardwood	151,145	180,253	29,108	19.3
Total	689,293	889,614	200,321	29.1

-- = negligible.

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (497,000 cubic feet in 1996 and 5,029,000 cubic feet in 1999).

Table 3—Number of primary wood-using plants by industry, Louisiana, 1937–1999

Industry	Year					
	1937	1953	1962	1963	1996	1999
Sawmills	557	458	160	164	70	32
Veneer or plywood mills	15	15	11	11	6	10
Pulpmills	6	8	10	10	11	11
Composite panel and other mills	65	49	36	38	5	4
All plants	643	530	217	223	92	57

Table 4—Roundwood receipts by sawmill size, Louisiana, 1996 and 1999

Sawmill size class ^a	1996			1999		
	Number of mills	Thousand board feet	Percent of volume	Number of mills	Thousand board feet	Percent of volume
<i>Million board feet</i>						
1.0–4.99	3	12,600	2	4	12,613	1
5.0–9.99	5	35,701	5	5	35,967	3
10.0–49.99	11	277,659	39	13	355,087	28
>50	4	387,955	54	10	849,712	68
Total	23	713,915	100	32	1,253,379	100

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

Table 5—Roundwood receipts by species and type of mill, Louisiana, 1999

Species	Type of mill						
	All mills	Sawmills	Veneer mills		OSB ^a and panels	Pulpmills ^b	Other mills
			Pine plywood	Other veneer			
<i>Thousand cubic feet</i>							
Softwood							
Yellow pine	364,722	204,340	135,784	0	23,752	NA	846
White pine	0	0	0	0	0	NA	0
Cedar	0	0	0	0	0	NA	0
Cypress	174	174	0	0	0	NA	0
Other softwood	1,988	0	1,988	0	0	NA	0
Unclassified	342,477	0	0	0	0	342,477	0
Total softwoods	709,361	204,514	137,772	0	23,752	342,477	846
Hardwood							
Blackgum and tupelo	2,214	1,671	0	0	543	NA	0
Soft maple	848	419	0	0	429	NA	0
Sweetgum	4,553	2,663	88	0	1,802	NA	0
Yellow-poplar	1,458	743	0	0	715	NA	0
Other soft hardwood	2,412	1,654	0	0	758	NA	0
Hickory	1,799	1,473	0	0	326	NA	0
Red oak	13,418	9,611	0	0	3,807	NA	0
White oak	8,789	5,526	0	0	3,263	NA	0
Other hard hardwood	4,871	3,566	0	0	1,305	NA	0
Unclassified	139,891	0	0	0	0	139,891	0
Total hardwoods	180,253	27,326	88	0	12,948	139,891	0
All species	889,614	231,840	137,860	0	36,700	482,368	846

NA = not applicable.

^a OSB = oriented strand board.

^b Collected only by softwood and hardwood and includes roundwood chipped.

Table 6—Industrial roundwood movement by year and species group, Louisiana, 1996 and 1999

Year	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
Softwood					
1996	505,539	98,119	407,420	130,728	538,148
1999	648,345	107,178	541,167	168,194	709,361
Hardwood					
1996	121,686	35,296	86,390	64,755	151,145
1999	153,889	32,457	121,432	58,822	180,253
All species					
1996	627,225	133,415	493,810	195,483	689,293
1999	802,234	139,635	662,599	227,015	889,614

Table 7—Industrial roundwood movement by product and species group, Louisiana, 1999

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	229,859	63,215	166,644	37,870	204,514
Hardwood	39,201	15,609	23,592	3,734	27,326
Total	269,060	78,824	190,236	41,604	231,840
Veneer logs					
Softwood	147,777	29,306	118,471	19,301	137,772
Hardwood	695	641	54	34	88
Total	148,472	29,947	118,525	19,335	137,860
Pulpwood^a					
Softwood	246,672	14,025	232,647	109,830	342,477
Hardwood	102,436	16,207	86,229	53,662	139,891
Total	349,108	30,232	318,876	163,492	482,368
Other industrial					
Softwood	24,037	632	23,405	1,193	24,598
Hardwood	11,557	0	11,557	1,391	12,948
Total	35,594	632	34,962	2,584	37,546
All products					
Softwood	648,345	107,178	541,167	168,194	709,361
Hardwood	153,889	32,457	121,432	58,821	180,253
Total	802,234	139,635	662,599	227,015	889,614

^a Includes roundwood chipped.

Table 8—Saw-log volume by destination, source, and species group, Louisiana, 1999

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Louisiana (retained)	190,236	166,644	23,592
Exports to:			
Alabama	352	0	352
Arkansas	36,029	32,594	3,435
Mississippi	32,396	20,785	11,611
Texas	10,047	9,836	211
Total	78,824	63,215	15,609
Imports from:			
Arkansas	8,243	7,204	1,039
Mississippi	21,827	19,717	2,110
Texas	11,534	10,949	585
Total	41,604	37,870	3,734

Table 9—Veneer volume by destination, source, and species group, Louisiana, 1999

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Louisiana (retained)	118,525	118,471	54
Exports to:			
Arkansas	13,345	13,345	0
Mississippi	5,708	5,067	641
Texas	10,894	10,894	0
Total	29,947	29,306	641
Imports from:			
Arkansas	4,597	4,597	0
Mississippi	1,778	1,744	34
Texas	12,960	12,960	0
Total	19,335	19,301	34

Table 10—Pulpwood volume by destination, source, and species group, Louisiana, 1999^a

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Louisiana (retained)	318,876	232,647	86,229
Exports to:			
Alabama	28	2	26
Arkansas	9,424	1,935	7,489
Florida	126	0	126
Mississippi	5,296	1,462	3,834
Texas	15,358	10,626	4,732
Total	30,232	14,025	16,207
Imports from:			
Alabama	3	0	3
Arkansas	39,323	29,266	10,057
Georgia	1	0	1
Mississippi	88,459	57,643	30,816
Oklahoma	1	1	0
Tennessee	124	0	124
Texas	35,581	22,920	12,661
Total	163,492	109,830	53,662

^a Includes roundwood chipped and delivered to nonpulp mills, then chipped and sold to pulp mills.

Table 11—Other industrial volume by destination, source, and species group, Louisiana, 1999

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Louisiana (retained)	34,962	23,405	11,557
Exports to:			
Arkansas	440	440	0
Texas	192	192	0
Total	632	632	0
Imports from:			
Arkansas	614	429	185
Mississippi	1,206	0	1,206
Texas	764	764	0
Total	2,584	1,193	1,391

Table 12—Primary mill residue volume by roundwood type, species group, and residue type, Louisiana, 1999

Roundwood type and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	114,556	16,991	54,444	28,275	14,846
Hardwood	17,206	3,120	7,765	5,729	592
Total	131,762	20,111	62,209	34,004	15,438
Veneer logs					
Softwood	92,667	12,710	45,317	34,640	0
Hardwood	67	11	29	27	0
Total	92,734	12,721	45,346	34,667	0
Pulpwood					
Softwood	34,239	34,239	0	0	0
Hardwood	17,314	17,314	0	0	0
Total	51,553	51,553	0	0	0
Other industrial^a					
Softwood	6,807	6,180	627	0	0
Hardwood	3,312	3,312	0	0	0
Total	10,119	9,492	627	0	0
Total					
Softwood	248,269	70,120	100,388	62,915	14,846
Hardwood	37,899	23,757	7,794	5,756	592
Total	286,168	93,877	108,182	68,671	15,438

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

Table 13—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Louisiana, 1996 and 1999

Product and species group	All types		Bark		Coarse		Sawdust		Shavings	
	1996	1999	1996	1999	1996	1999	1996	1999	1996	1999
<i>Thousand cubic feet</i>										
Fiber products										
Softwood	58,663	86,834	0	0	58,350	86,360	0	0	313	474
Hardwood	4,038	5,449	0	0	4,038	5,449	0	0	0	0
Total	62,701	92,283	0	0	62,388	91,809	0	0	313	474
Particleboard										
Softwood	8,794	9,111	0	0	0	2,143	4,772	2,690	4,022	4,278
Hardwood	0	2,316	0	0	0	2,316	0	0	0	0
Total	8,794	11,427	0	0	0	4,459	4,772	2,690	4,022	4,278
Sawn products										
Softwood	5,962	9,081	0	0	5,962	9,081	0	0	0	0
Hardwood	0	29	0	0	0	29	0	0	0	0
Total	5,962	9,110	0	0	5,962	9,110	0	0	0	0
Fuel										
Softwood	90,951	139,679	50,475	68,036	675	2,055	37,159	59,852	2,642	9,736
Hardwood	21,732	30,094	18,831	23,746	0	0	2,901	5,756	0	592
Total	112,683	169,773	69,306	91,782	675	2,055	40,060	65,608	2,642	10,328
Miscellaneous										
Softwood	546	2,470	533	1,123	9	749	4	373	0	225
Hardwood	5	11	5	11	0	0	0	0	0	0
Total	551	2,481	538	1,134	9	749	4	373	0	225
Not used										
Softwood	3,753	1,094	1,607	961	0	0	2,146	0	0	133
Hardwood	56	0	56	0	0	0	0	0	0	0
Total	3,809	1,094	1,663	961	0	0	2,146	0	0	133
All products										
Softwood	168,669	248,269	52,615	70,120	64,996	100,388	44,081	62,915	6,977	14,846
Hardwood	25,831	37,899	18,892	23,757	4,038	7,794	2,901	5,756	0	592
Total	194,500	286,168	71,507	93,877	69,034	108,182	46,982	68,671	6,977	15,438

Table 14—Roundwood timber products output by product and species group, North Delta Region of Louisiana, 1996 and 1999

Product and species group	Year		Change	Percent change
	1996	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	7,758	11,024	3,266	42.1
Hardwood	7,116	11,226	4,110	57.8
Total	14,874	22,250	7,376	49.6
Veneer logs				
Softwood	3,084	4,780	1,696	55.0
Hardwood	865	641	-224	-25.9
Total	3,949	5,421	1,472	37.3
Pulpwood^a				
Softwood	4,849	4,694	-155	-3.2
Hardwood	10,308	12,323	2,015	19.5
Total	15,157	17,017	1,860	12.3
Other industrial				
Softwood	0	189	189	--
Hardwood	0	0	0	--
Total	0	189	189	--
All industrial				
Softwood	15,691	20,687	4,996	31.8
Hardwood	18,289	24,190	5,901	32.3
Total	33,980	44,877	10,897	32.1

-- = negligible.

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (0 cubic feet in 1996 and 0 cubic feet in 1999).

Table 15—Roundwood timber products output by parish, product, and species group, North Delta Region of Louisiana, 1999

Parish	All products		Saw logs		Veneer logs		Pulpwood ^a		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>									
Catahoula	5,673	1,559	1,125	1,063	1,565	0	2,983	496	0	0
Concordia	265	3,477	264	1,113	0	0	1	2,364	0	0
East Carroll	61	1,431	61	1,050	0	0	0	381	0	0
Franklin	2,911	2,527	2,186	1,394	380	0	156	1,133	189	0
Madison	605	3,647	605	1,883	0	341	0	1,423	0	0
Morehouse	6,970	3,699	3,635	1,027	2,099	0	1,236	2,672	0	0
Richland	1,488	2,345	1,434	990	0	0	54	1,355	0	0
Tensas	120	4,493	119	1,985	0	300	1	2,208	0	0
West Carroll	2,594	1,012	1,595	721	736	0	263	291	0	0
All parishes	20,687	24,190	11,024	11,226	4,780	641	4,694	12,323	189	0

^a Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills.

Table 16—Roundwood timber products output by product and species group, South Delta Region of Louisiana, 1996 and 1999

Product and species group	Year		Change	Percent change
	1996	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	1,904	7,915	6,011	315.7
Hardwood	4,323	9,109	4,786	110.7
Total	6,227	17,024	10,797	173.4
Veneer logs				
Softwood	1,081	1,705	624	57.7
Hardwood	0	12	12	--
Total	1,081	1,866	785	72.6
Pulpwood^a				
Softwood	3,436	1,866	-1,570	-45.7
Hardwood	11,248	4,228	-7,020	-62.4
Total	14,684	6,094	-8,590	-58.5
Other industrial				
Softwood	0	0	0	--
Hardwood	0	3,626	3,626	--
Total	0	3,626	3,626	--
All industrial				
Softwood	6,421	11,486	5,065	78.9
Hardwood	15,571	16,975	1,404	9.0
Total	21,992	28,461	6,469	29.4

-- = negligible.

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (0 cubic feet in 1996 and 508,000 cubic feet in 1999).

Table 17—Roundwood timber products output by parish, product, and species group, South Delta Region of Louisiana, 1999

Parish	All products		Saw logs		Veneer logs		Pulpwood ^a		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>									
Acadia	1,369	695	480	198	677	0	212	0	0	497
Ascension	1,048	623	787	248	227	6	34	121	0	248
Avoyelles	1,011	1,730	480	1,703	141	0	390	27	0	0
Cameron	35	20	0	0	0	0	35	0	0	20
Iberville	1,542	1,993	1,430	582	0	0	112	1,142	0	269
Jefferson	3	8	0	0	0	0	3	8	0	0
Lafayette	2	949	0	599	0	0	2	18	0	332
Lafourche	0	9	0	0	0	0	0	9	0	0
Orleans	0	1,963	0	749	0	0	0	127	0	1,087
Plaquemines	0	67	0	0	0	0	0	67	0	0
Pointe Coupee	1,889	2,107	1,740	776	0	0	149	1,103	0	228
St. Bernard	0	3	0	0	0	0	0	3	0	0
St. Charles	0	139	0	0	0	0	0	139	0	0
St. James	0	3	0	0	0	0	0	3	0	0
St. Landry	2,010	1,220	1,740	1,138	0	0	270	0	0	82
St. Martin	0	1,433	0	657	0	0	0	15	0	761
Vermilion	104	20	0	0	0	0	104	0	0	20
West Baton Rouge	268	602	248	292	0	0	20	228	0	82
West Feliciana	2,205	3,391	1,010	2,167	660	6	535	1,218	0	0
All parishes	11,486	16,975	7,915	9,109	1,705	12	1,866	4,228	0	3,626

^a Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (508,000 cubic feet in 1999).

Table 18—Roundwood timber products output by product and species group, Southwest Region of Louisiana, 1996 and 1999

Product and species group	Year		Change	Percent change
	1996	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	31,860	42,251	10,391	32.6
Hardwood	3,557	5,653	2,096	58.9
Total	35,417	47,904	12,487	35.3
Veneer logs				
Softwood	42,123	58,824	16,701	39.6
Hardwood	0	0	0	--
Total	42,123	58,824	16,701	39.6
Pulpwood^a				
Softwood	94,747	119,459	24,712	26.1
Hardwood	13,722	14,114	392	2.9
Total	108,469	133,573	25,104	23.1
Other industrial				
Softwood	1,860	4,715	2,855	153.5
Hardwood	0	3,044	3,044	--
Total	1,860	7,759	5,899	317.2
All industrial				
Softwood	170,590	225,249	54,659	32.0
Hardwood	17,279	22,811	5,532	32.0
Total	187,869	248,060	60,191	32.0

-- = negligible.

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (380,000 cubic feet in 1996 and 1,669,000 cubic feet in 1999).

Table 19—Roundwood timber products output by parish, product, and species group, Southwest Region of Louisiana, 1999

Parish	All products		Saw logs		Veneer logs		Pulpwood ^a		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>										
Allen	16,892	2,422	1,553	848	4,112	0	10,766	596	461	978
Beauregard	26,428	422	4,564	410	6,102	0	15,728	12	34	0
Calcasieu	5,041	15	214	0	1,008	0	3,819	15	0	0
Evangeline	9,125	2,199	2,070	740	3,178	0	3,197	589	680	870
Grant	12,489	1,051	3,725	273	4,277	0	3,987	778	500	0
Jefferson Davis	582	0	0	0	275	0	307	0	0	0
La Salle	23,907	3,382	2,386	260	7,412	0	13,965	3,122	144	0
Natchitoches	28,534	4,887	6,976	402	5,349	0	15,319	4,485	890	0
Rapides	18,871	4,509	2,164	1,659	6,735	0	9,506	1,654	466	1,196
Sabine	46,634	2,066	9,192	211	14,542	0	21,761	1,855	1,139	0
Vernon	36,746	1,858	9,407	850	5,834	0	21,104	1,008	401	0
All parishes	225,249	22,811	42,251	5,653	58,824	0	119,459	14,114	4,715	3,044

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (1,669,000 cubic feet in 1999).

Table 20—Roundwood timber products output by product and species group, Southeast Region of Louisiana, 1996 and 1999

Product and species group	Year		Change	Percent change
	1996	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	28,915	39,510	10,595	36.6
Hardwood	5,028	6,324	1,296	25.8
Total	33,943	45,834	11,891	35.0
Veneer logs				
Softwood	4,556	11,951	7,395	162.3
Hardwood	31	42	11	35.5
Total	4,587	11,993	7,406	161.5
Pulpwood^a				
Softwood	30,041	29,072	-969	-3.2
Hardwood	12,686	12,767	81	0.6
Total	42,727	41,839	-888	-2.1
Other industrial				
Softwood	0	0	0	--
Hardwood	0	1,366	1,366	--
Total	0	1,366	1,366	--
All industrial				
Softwood	63,512	80,533	17,021	26.8
Hardwood	17,745	20,499	2,754	15.5
Total	81,257	101,032	19,775	24.3

-- = negligible.

^a Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (63,000 cubic feet in 1996 and 1,341,000 cubic feet in 1999).

Table 21—Roundwood timber products output by parish, product, and species group, Southeast Region of Louisiana, 1999

Parish	All products		Saw logs		Veneer logs		Pulpwood ^a		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>										
East Baton Rouge	3,850	3,182	2,503	1,056	1,038	6	309	1,623	0	497
East Feliciana	8,790	4,413	4,014	2,202	1,038	6	3,738	1,957	0	248
Livingston	16,397	3,781	5,518	386	4,780	6	6,099	3,389	0	0
St. Helena	12,234	3,228	5,846	1,429	2,141	6	4,247	1,773	0	20
St. Tammany	8,653	1,178	4,264	624	448	6	3,941	279	0	269
Tangipahoa	14,369	2,071	8,694	257	1,699	6	3,976	1,808	0	0
Washington	16,240	2,646	8,671	370	807	6	6,762	1,938	0	332
All parishes	80,533	20,499	39,510	6,324	11,951	42	29,072	12,767	0	1,366

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (1,341,000 cubic feet in 1999).

Table 22—Roundwood timber products output by product and species group, Northwest Region of Louisiana, 1996 and 1999

Product and species group	Year		Change	Percent change
	1996	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	83,363	129,159	45,796	54.9
Hardwood	7,607	6,889	-718	-9.4
Total	90,970	136,048	45,078	49.6
Veneer logs				
Softwood	71,396	70,517	-879	-1.2
Hardwood	0	0	0	--
Total	71,396	70,517	-879	-1.2
Pulpwood^a				
Softwood	90,190	91,581	1,391	1.5
Hardwood	43,314	59,004	15,690	36.2
Total	133,504	150,585	17,081	12.8
Other industrial				
Softwood	4,376	19,006	14,630	334.3
Hardwood	1,881	1,881	0	--
Total	6,257	20,887	14,630	233.8
All industrial				
Softwood	249,325	310,263	60,938	24.4
Hardwood	52,802	67,774	14,972	28.4
Total	302,127	378,037	75,910	25.1

-- = negligible.

^a Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (0 cubic feet in 1996 and 225,000 cubic feet in 1999).

Table 23—Roundwood timber products output by parish, product, and species group, Northwest Region of Louisiana, 1999

Parish	All products		Saw logs		Veneer logs		Pulpwood ^a		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>										
Bienville	38,688	4,563	17,780	152	9,974	0	6,730	3,914	4,204	497
Bossier	24,969	9,095	11,954	534	5,655	0	6,173	8,313	1,187	248
Caddo	12,490	4,111	6,320	218	3,848	0	2,102	3,893	220	0
Caldwell	16,475	1,686	2,863	453	2,243	0	11,132	1,213	237	20
Claiborne	23,005	5,520	11,257	1,346	5,396	0	5,071	3,905	1,281	269
De Soto	27,299	6,709	8,250	0	7,336	0	10,014	6,709	1,699	0
Jackson	30,376	10,528	11,836	504	6,510	0	9,228	9,692	2,802	332
Lincoln	19,163	4,136	9,465	241	3,717	0	3,796	3,667	2,185	228
Ouachita	16,798	4,337	7,897	706	2,367	0	5,918	3,549	616	82
Red River	10,570	1,031	6,603	0	1,758	0	1,757	1,011	452	20
Union	30,762	6,849	11,589	907	4,477	0	13,785	5,860	911	82
Webster	26,798	4,599	15,156	1,327	7,783	0	2,355	3,169	1,504	103
Winn	32,870	4,610	8,189	501	9,453	0	13,520	4,109	1,708	0
All parishes	310,263	67,774	129,159	6,889	70,517	0	91,581	59,004	19,006	1,881

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (225,000 cubic feet in 1999).

Table 24—Total roundwood output by product, species group, and source of material, Louisiana, 1999

Product and species group	All sources	Total	Growing-stock trees		Other sources
			Sawtimber	Poletimber	
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	229,859	226,715	201,776	24,939	3,144
Hardwood	39,201	38,283	37,085	1,198	918
Total	269,060	264,998	238,861	26,137	4,062
Veneer logs and bolts					
Softwood	147,777	144,776	138,985	5,791	3,001
Hardwood	695	683	683	0	12
Total	148,472	145,459	139,668	5,791	3,013
Pulpwood					
Softwood	246,672	231,709	168,722	62,987	14,963
Hardwood	102,436	90,124	62,466	27,658	12,312
Total	349,108	321,833	231,188	90,645	27,275
Other industrial					
Softwood	22,751	20,876	6,199	14,677	1,875
Hardwood	11,557	9,155	6,101	3,055	2,402
Total	34,308	30,031	12,299	17,731	4,277
Poles and posts					
Softwood	1,286	1,206	926	280	80
Hardwood	0	0	0	0	0
Total	1,286	1,206	926	280	80
Total industrial products					
Softwood	648,345	625,281	516,608	108,674	23,064
Hardwood	153,889	138,245	106,334	31,910	15,644
Total	802,234	763,526	622,942	140,584	38,708
Fuelwood					
Softwood	2,576	2,329	1,504	825	247
Hardwood	20,383	17,707	12,395	5,312	2,676
Total	22,959	20,036	13,899	6,137	2,923
All products					
Softwood	650,921	627,610	518,112	109,498	23,311
Hardwood	174,272	155,951	118,729	37,222	18,321
Total	825,193	783,562	636,841	146,720	41,631

Numbers in rows and columns may not sum to totals due to rounding.

Table 25—Total roundwood output by species group, survey region, and ownership class, Louisiana, 1999

Species group and survey region	Total	Ownership class			
		National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand cubic feet</i>					
Softwoods					
North Delta	20,764	0	0	11,139	9,625
South Delta	11,531	0	0	0	11,531
Southwest	226,149	12,328	1,595	128,856	83,370
Southeast	80,846	0	2,477	24,301	54,068
Northwest	311,631	7,661	5,692	128,475	169,804
Total softwoods	650,921	19,989	9,764	292,771	328,398
Hardwoods					
North Delta	27,395	0	2,698	5,321	19,376
South Delta	22,627	0	578	2,227	19,822
Southwest	25,832	1,340	58	13,247	11,187
Southeast	21,667	0	524	5,137	16,006
Northwest	76,751	491	47	24,036	52,176
Total hardwoods	174,272	1,832	3,905	49,969	118,567
All species	825,193	21,821	13,669	342,739	446,965

Numbers in rows and columns may not sum to totals due to rounding.

Table 26—Total roundwood output by species group, detailed species group, and product, Louisiana, 1999

Species group and detailed species group	Total	Product					
		Saw log	Veneer	Pulpwood	Other industrial	Poles and posts	Fuelwood
<i>Thousand cubic feet</i>							
Softwood							
Longleaf-slash pine	71,629	18,494	15,706	35,969	1,039	139	283
Loblolly-shortleaf pine	553,322	194,019	128,116	206,342	21,502	1,147	2,197
Other yellow pines	22,642	15,025	3,507	3,839	189	0	83
Cypress	3,327	2,321	448	523	21	1	13
Total softwoods	650,921	229,859	147,777	246,672	22,751	1,286	2,576
Hardwood							
Soft maple	2,445	575	4	1,304	276	0	286
Hard maple	104	7	0	85	0	0	12
Hickory	9,255	1,433	24	6,240	476	0	1,082
Beech	1,870	355	0	1,101	195	0	219
Ash	5,025	1,456	75	2,233	674	0	588
Black walnut	104	5	0	81	5	0	12
Sweetgum	38,822	7,431	79	24,958	1,812	0	4,541
Yellow-poplar	2,234	826	4	1,143	0	0	261
Blackgum-tupelo	7,628	1,550	4	4,112	1,070	0	892
Sycamore	2,110	759	83	824	196	0	247
Cottonwood	3,524	1,696	104	1,264	47	0	412
Black cherry	1,723	558	1	899	64	0	202
Select white oaks	8,903	1,600	2	6,039	221	0	1,041
Other white oaks	11,803	1,935	20	7,952	515	0	1,380
Select red oaks	9,095	2,117	2	5,215	697	0	1,064
Other red oaks	45,315	8,539	111	28,593	2,772	0	5,300
Elm	4,310	1,167	56	2,192	390	0	504
Other Eastern hardwoods	20,002	7,190	124	8,202	2,147	0	2,339
Total hardwoods	174,272	39,201	695	102,436	11,557	0	20,383
All species	825,193	269,060	148,472	349,108	34,308	1,286	22,959

Numbers in rows and columns may not sum to totals due to rounding.

Table 27—Total roundwood output by species group, detailed species group, and ownership class, Louisiana, 1999

Species group and detailed species group	Total	Ownership class			
		National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand cubic feet</i>					
Softwood					
Longleaf-slash pine	71,629	1,797	1,262	36,869	31,702
Loblolly-shortleaf pine	553,322	18,192	8,387	253,346	273,398
Other yellow pines	22,642	0	109	2,077	20,456
Cypress	3,327	0	6	480	2,841
Total softwoods	650,921	19,989	9,764	292,771	328,398
Hardwood					
Soft maple	2,445	34	47	471	1,893
Hard maple	104	3	0	31	70
Hickory	9,255	79	225	2,925	6,025
Beech	1,870	58	5	1,036	771
Ash	5,025	32	265	1,424	3,305
Black walnut	104	0	0	0	104
Sweetgum	38,822	355	781	10,544	27,143
Yellow-poplar	2,234	0	0	478	1,757
Blackgum-tupelo	7,628	18	94	2,374	5,142
Sycamore	2,110	7	57	309	1,737
Cottonwood	3,524	0	41	430	3,053
Black cherry	1,723	7	3	530	1,183
Select white oaks	8,903	102	9	3,116	5,676
Other white oaks	11,803	222	582	4,165	6,834
Select red oaks	9,095	106	199	3,240	5,551
Other red oaks	45,315	665	587	13,186	30,877
Elm	4,310	37	72	734	3,467
Other Eastern hardwoods	20,002	108	939	4,976	13,979
Total hardwoods	174,272	1,832	3,905	49,969	118,567
All species	825,193	21,821	13,669	342,739	446,965

Numbers in rows and columns may not sum to totals due to rounding.



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In 1999, industrial roundwood output from Louisiana's forests totaled 802 million cubic feet, 28 percent more than in 1996. Mill byproducts generated from primary manufacturers increased 50 percent to 285 million cubic feet. Almost all plant residues were used primarily for fuel and fiber products. Pulpwood was the leading roundwood product at 349 million cubic feet; saw logs ranked second at 269 million cubic feet; veneer logs were third at 148 million cubic feet. The number of primary processing plants decreased from 92 in 1996 to 57 in 1999. Total receipts increased 29 percent to 890 million cubic feet.

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

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