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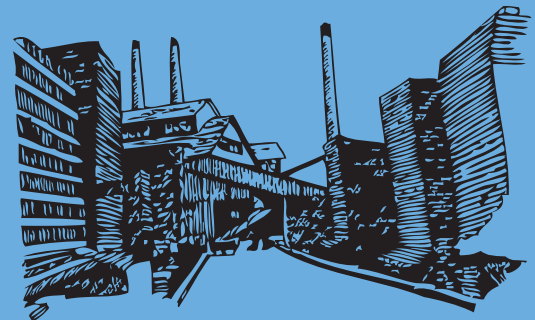
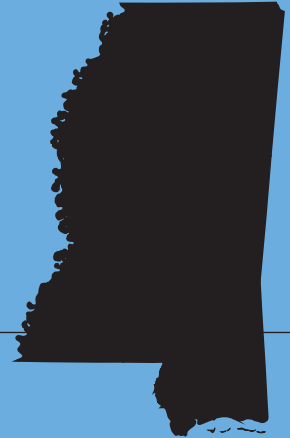


Southern  
Research Station

Resource Bulletin  
SRS-131

# Mississippi's Timber Industry— An Assessment of Timber Product Output and Use, 2005

James W. Bentley,  
Michael Howell, and  
Tony G. Johnson

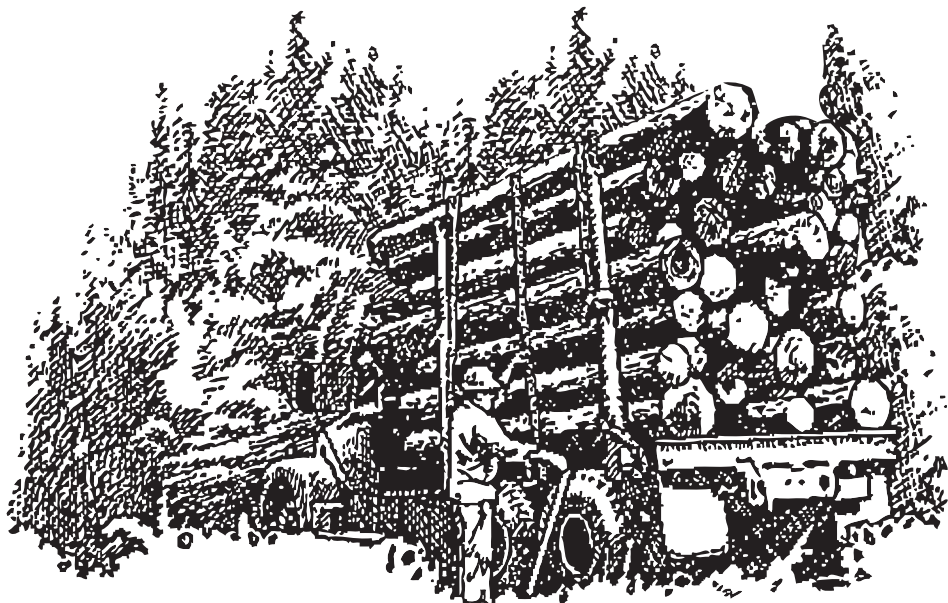


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## Foreword

This report contains the findings of a 2005 canvass of primary wood-using plants in Mississippi, and presents changes in product output and residue use since 2002. It complements the Forest Inventory and Analysis 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 2005 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 all wood processors in Mississippi was conducted in 2006 to obtain information for 2005. In addition, roundwood from out-of-State mills known to be using logs or bolts harvested from Mississippi timberland was incorporated into Mississippi 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 southern pulpmills. Medium density fiberboard, insulating board, and hardboard plants were included in this survey.

## Acknowledgments

The authors thank Patrick Glass and Sonja Oswalt for review and comments; Carolyn Steppleton for her tireless efforts in processing and accuracy of the data; Sonja Oswalt for the mill map; Helen Beresford for timber product output database maintenance and support; Anne Jenkins, Janet Griffin, Sharon Johnson, and Charlene Walker for tables, graphs, and statistical checking; and the Southern Research Station (SRS) Technical Publications Team for editorial review, styling, and publication of this report.

The SRS gratefully acknowledges the cooperation and assistance provided by the Mississippi Forestry Commission in collecting mill data. Appreciation is also extended to forest industry and mill managers for providing timber products information.



## Timber Product Output Database Retrieval System

The Forest Inventory and Analysis (FIA) Research Work Unit of the USDA Forest Service developed the Timber Product Output (TPO) Database Retrieval System to help customers answer questions about timber harvesting and use in the Southern Region. This system acts as an interface to a standard set of consistently coded TPO data for each State and county in the region and Nation. This regional and national set of TPO data consists of 11 variables that describe for each county the roundwood products harvested, logging residues left in the woods, other timber removals (i.e. land clearing and reserved timber removals), and wood and bark residues generated by the county's primary wood-using mills. The system is available through the FIA Web site: <http://srsfia2.fs.fed.us/php/tpo2/tpo.php>.

The database is well documented and easy to use. The retrieval system allows the user to select the TPO variables of interest and generate a standard set of timber products, removals, and mill residue tables for the specified resource area, State, or region. The system has been logically divided into two sections to assist the user in making specific data requests. In section 1, the user will be asked to define the resource area, and section 2 generates tables for the specified area. In each section, the user is asked to supply specific options that will serve to customize the database retrieval.

There are four options available for defining the geographic area of interest. Each option provides an increasing level of detail. The region, subregion, State, or county defines an area. The user selects the option that best suits the level of detail required. Users who select county as an option should be aware that some counties have been combined due to data sensitivity. These combined counties are identified with asterisks in the output tables.

The TPO contacts are listed for each region to provide additional explanation or clarification.

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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 in the format the customer requests. 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.

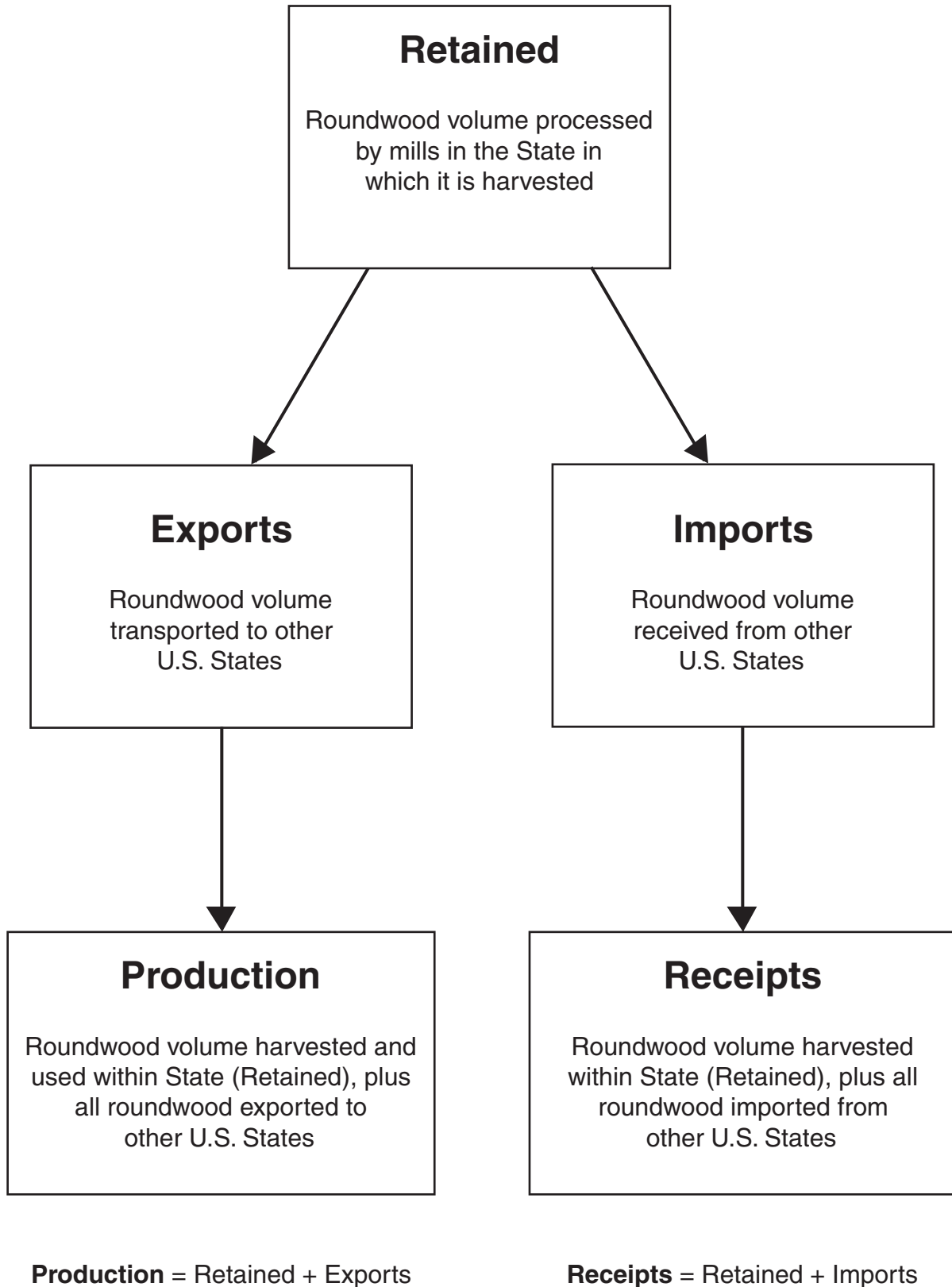


Figure 1—Movement of roundwood exports and imports within the United States.

# Mississippi's Timber Industry— An Assessment of Timber Product Output and Use, 2005

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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 product output (TPO) (fig. 1).

### All Products

- Between 2002 and 2005, the combined industrial TPO from roundwood and plant byproducts increased 8 percent, from 1.32 to 1.42 billion cubic feet.
- TPO from roundwood was up 105 million cubic feet, or 11 percent, to 1.03 billion cubic feet, while output of plant byproducts declined 5 million cubic feet to 385 million cubic feet.

- Output of softwood roundwood products increased 14 percent, totaling 781 million cubic feet, while output of hardwood roundwood products was up 5 percent to 251 million cubic feet (fig. 2).
- Pulpwood and saw logs were the principal roundwood products in 2005. Combined output of these two products totaled 909 million cubic feet and accounted for 88 percent of the State's total industrial roundwood output (fig. 3).
- Total receipts at Mississippi mills, which included roundwood harvested and retained in the State and roundwood imported from other States, increased 2 percent to 908 million cubic feet. The number of primary roundwood-using plants in 2005 for Mississippi was 116, the same as in 2002 (fig. 4).

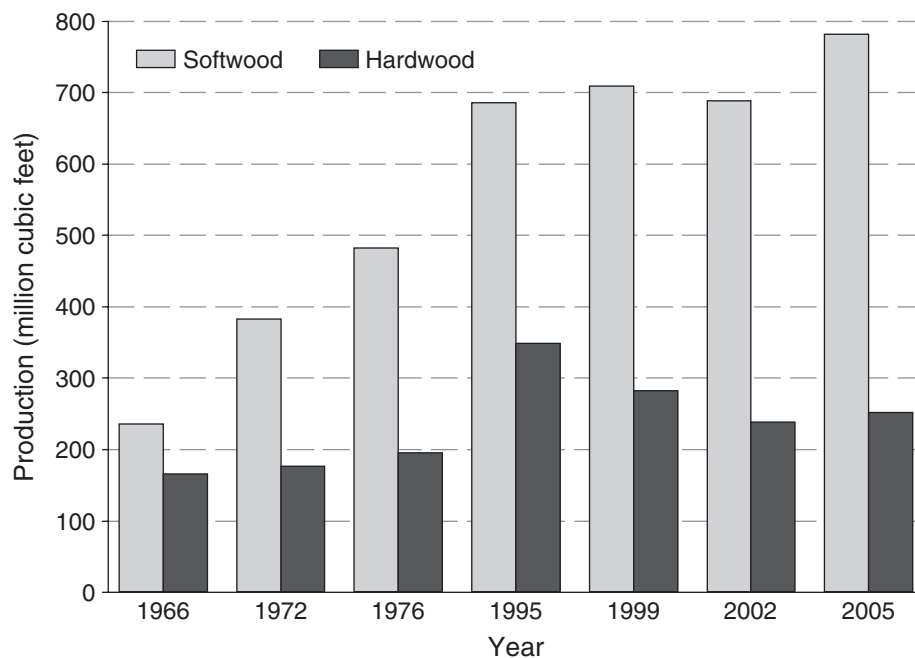


Figure 2—Roundwood production for all products by species group and year (see page 8 for references for individual years).

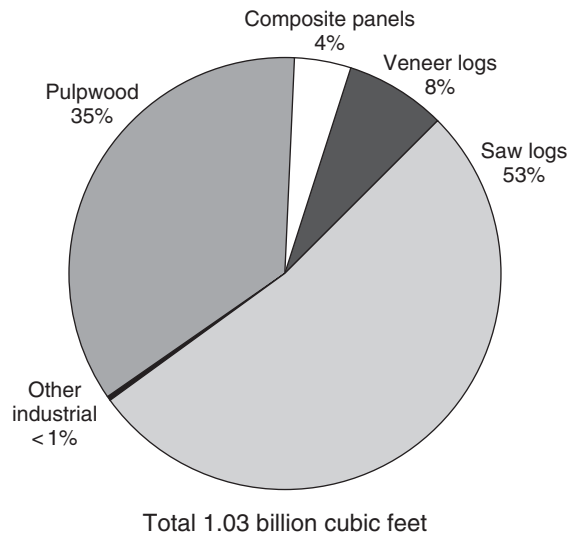


Figure 3—Roundwood production by type of product, 2005.

- Across all products, 76 percent of roundwood harvested was retained for processing at Mississippi mills. Exports of roundwood to other States amounted to 252 million cubic feet, while imports of roundwood amounted to 127 million cubic feet making the State a net exporter of roundwood. Tables A.8 to A.12 show exports to and imports from other States by individual product type.

### Saw Logs

- Saw logs accounted for 53 percent of the State's total roundwood products. Output of softwood saw logs increased 3 percent to 433 million cubic feet (2.37 billion board feet, International 1/4-inch rule), while that of

hardwood saw logs increased 3 percent to 110 million cubic feet (657 million board feet, International 1/4-inch rule) (fig. 5).

- In 2005, Mississippi had 93 sawmills, a gain of 1 mill since 2002. The total number of sawmills does not include the several one-man sawmills in the State. Total saw-log receipts were up 677,000 cubic feet to 560 million cubic feet. Softwood saw-log receipts decreased <1 percent to 445 million cubic feet, while those of hardwoods increased 1 percent to 115 million cubic feet. Of the operating mills in 2005, 20 percent had receipts of <5 million board feet, while 59 percent had receipts >10 million board feet. Those 55 mills, however, accounted for 94 percent of total saw-log receipts.
- Mississippi retained 90 percent of its saw-log production for in-State manufacture, with saw-log imports exceeding exports by 17 million cubic feet in 2002.

### Primary wood-using mills

- |                       |                |
|-----------------------|----------------|
| • Sawmill (0-5 mmbf)  | + Veneer       |
| ● Sawmill (5-20 mmbf) | ■ Pulpmill     |
| ● Sawmill (>20 mmbf)  | ◆ Plywood mill |
| ▲ Composite panel     | ☆ Other mill   |

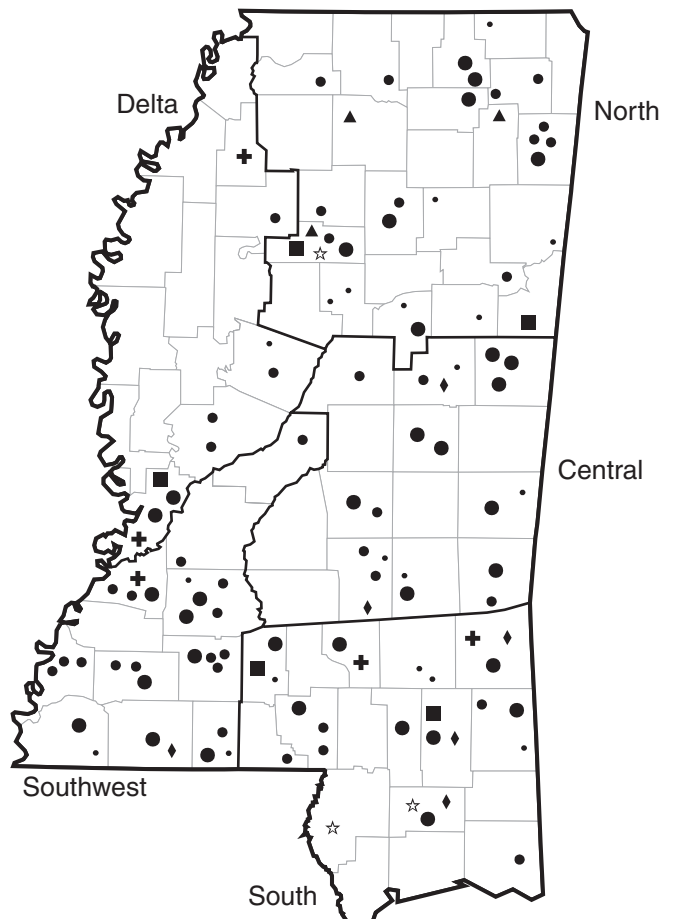


Figure 4—Primary wood-using mills by region, 2005.



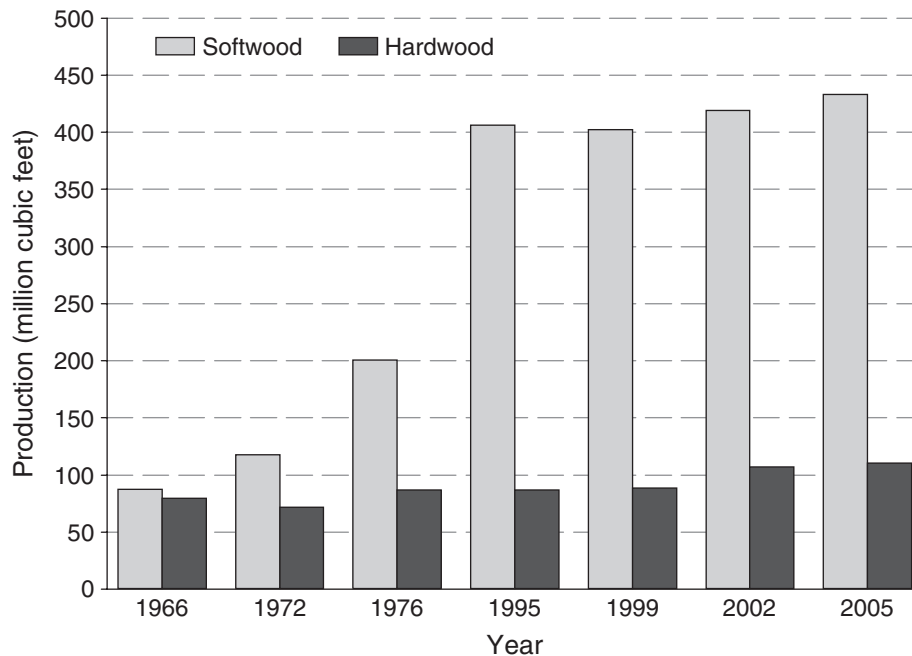


Figure 5—Roundwood saw-log production by species group and year (see page 8 for references for individual years).

## Pulpwood

- Total pulpwood production, including chipped roundwood, was up 28 percent to 366 million cubic feet (4.99 million cords) and accounted for 35 percent of the State's total roundwood TPO. Softwood output increased 42 percent to 238 million cubic feet; hardwood output increased 8 percent to 128 million cubic feet (fig. 6).
- Five pulpmill facilities were operating and receiving roundwood in Mississippi in 2005, one less than in 2002. Total pulpwood receipts for these mills increased 16 million cubic feet to 219 million cubic feet, accounting for 24 percent of total receipts for all mills.
- Forty-eight percent of roundwood cut for pulpwood was retained for processing at Mississippi pulpmills. Roundwood pulpwood accounted for 76 percent of total known exports and 35 percent of total imports. Roundwood pulpwood exports amounted to 192 million cubic feet, imports amounted to 45 million cubic feet, making the State a net exporter of roundwood pulpwood.

## Veneer Logs

- Output of veneer logs in 2005 totaled 78 million cubic feet and accounted for 8 percent of the State's total roundwood TPO volume. Softwood veneer production was down 4 percent to 69 million cubic feet (406 million board feet, International 1/4-inch rule); output of hardwood veneer logs increased 49 percent to 9 million cubic feet (54 million board feet, International 1/4-inch rule) (fig. 7).
- The number of veneer mills operating in Mississippi for 2005 was 12, the same as in 2002. Receipts of veneer logs decreased 1 percent to 84 million cubic feet.
- Mississippi retained 91 percent of its veneer-log production for processing at in-State veneer mills. Imports amounted to 13 million cubic feet, and exports totaled 7 million cubic feet, making the State a net importer of roundwood veneer logs.

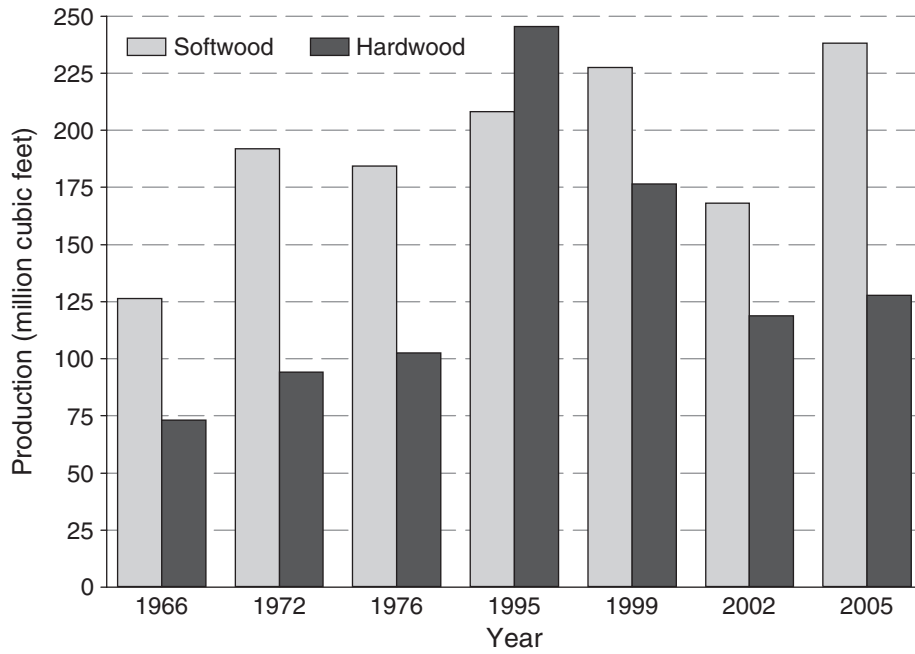


Figure 6—Roundwood pulpwood production by species group and year (see page 8 for references for individual years).

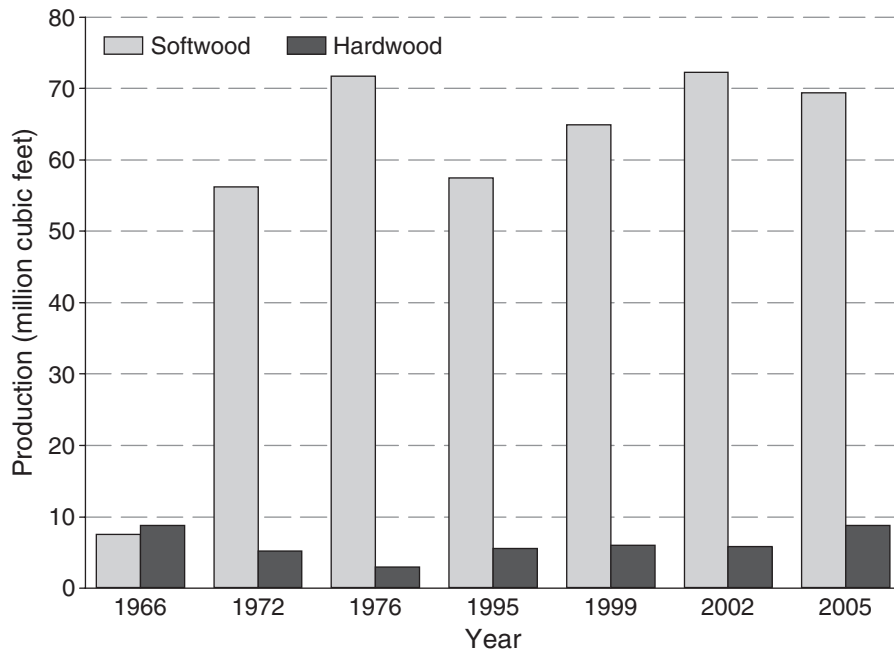


Figure 7—Roundwood veneer-log production by species group and year (see page 8 for references for individual years).

## Composite Panels

- Roundwood harvested from Mississippi’s forests for composite panels increased 27 percent and totaled 44 million cubic feet. Softwood output was up 45 percent to 39 million cubic feet (542,000 cords); hardwood production declined 39 percent to 5 million cubic feet (60,000 cords) (fig. 8).
- Three oriented strand board mills were operating in Mississippi in 2005, the same as in 2002. Total receipts for these mills increased 13 percent to 43 million cubic feet, and accounted for 5 percent of the State’s total receipts.
- Ninety-seven percent of the roundwood production harvested for composite panels was retained for processing at Mississippi’s mills. Exports amounted to 1.2 million cubic feet, and imports totaled 367,000 cubic feet, making the State a net exporter of roundwood used for composite panels.

## Other Industrial Products

- Roundwood harvested for other industrial uses such as poles, posts, mulch, firewood, logs for log homes, and all other industrial products totaled 2 million cubic feet, a

5-percent decline from 2002. Softwood made up all of the other industrial products volume.

## Plant Byproducts

- In 2005, processing of primary products in Mississippi mills generated 391 million cubic feet of wood and bark residues. Coarse residues from all primary products amounted to 150 million cubic feet, while bark volume totaled 94 million cubic feet. Collectively, sawdust and shavings made up 37 percent of total residues, or 146 million cubic feet (fig. 9).
- The processing of saw logs generated 296 million cubic feet of mill residues, accounting for 76 percent of the total residues produced (fig. 10).
- More than 385 million cubic feet, or 99 percent, of the wood and bark residues were used for a product; 1 percent of the residues was not used for a product; 50 percent of the residues were used for industrial fuel; and 34 percent were used for fiber products (fig. 11). One hundred and thirty-one million cubic feet, or 87 percent, of the coarse residues were used for fiber products. Most of the bark was used for industrial fuel or other miscellaneous products, while 71 percent of the sawdust and shavings were used for industrial fuel.

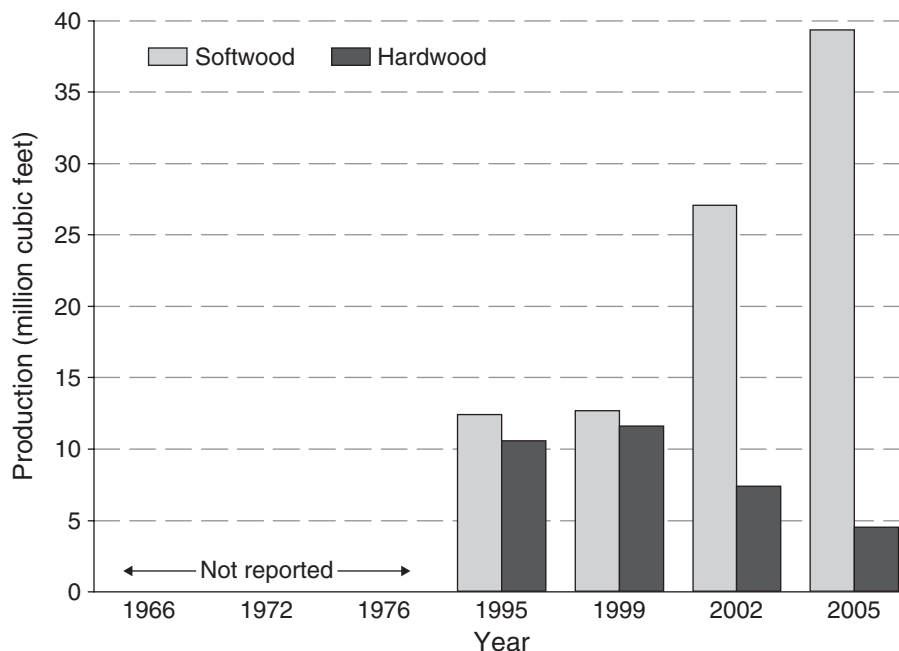


Figure 8—Roundwood production for composite panels by species group and year (see page 8 for references for individual years).

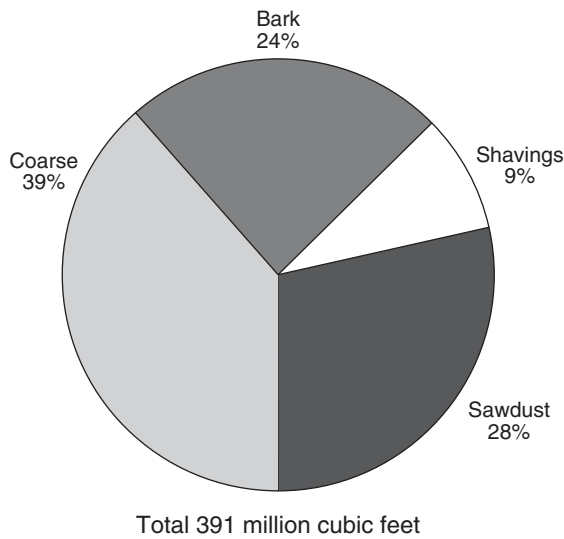


Figure 9—Primary mill residue by residue type, 2005.

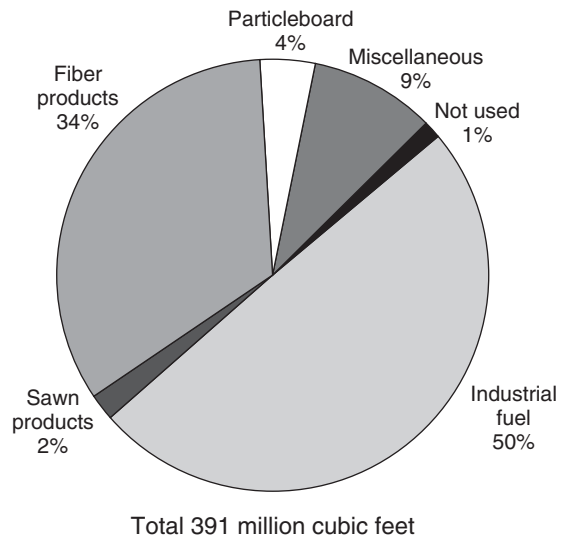


Figure 11—Disposal of residue by product, 2005.

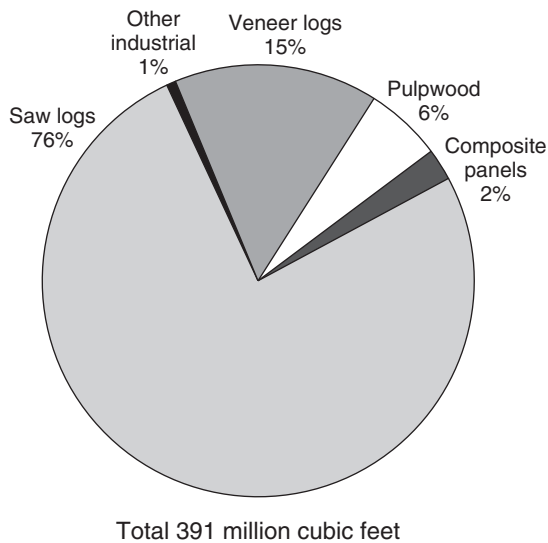


Figure 10—Primary mill residue produced by roundwood type, 2005.

## County Data

- Table A.15 shows softwood and hardwood product output by county and individual product type. All 82 counties in Mississippi had roundwood output. Sixteen counties (Amite, Attala, Clarke, Copiah, Greene, Jones, Kemper, Lamar, Lauderdale, Lincoln, Marion, Monroe, Pearl River, Smith, Wayne, and Winston) had combined softwood and hardwood product output of >20 million cubic feet each. These 16 counties' total product output amounted to nearly 390 million cubic feet and accounted for 38 percent of the State's total product output.

## Total Roundwood Output

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

## Source

- In addition to the 1.03 billion cubic feet of roundwood output for industrial roundwood, an estimated 13 million cubic feet were harvested for domestic fuelwood, bringing Mississippi's total roundwood output to 1.05 billion cubic feet.

- Ninety-five percent of total roundwood output was considered growing-stock volume (sawtimber and pole-timber) from timberland sources. Other sources (such as saplings; stumps, tops, and limbs of trees on timberland; and trees on nonforest land) contributed an estimated 47 million cubic feet, or 5 percent of total roundwood output (fig. 12).

**Ownership**

- An estimated 790 million cubic feet, or 76 percent, of the total roundwood output came from nonindustrial private forest lands. Forest industry lands contributed 224 million

cubic feet, or 21 percent of the output. Public lands made up the remaining 3 percent, or 32 million cubic feet (fig. 13).

**Species**

- The loblolly-shortleaf pine group provided the most volume of any softwood species group, accounting for 82 percent of the total softwood output (fig. 14). The longleaf-slash pine group accounted for 13 percent of the softwood output. In hardwoods, the red oak and white oak groups combined accounted for 131 million cubic feet, or 50 percent of total hardwood output (fig. 15).

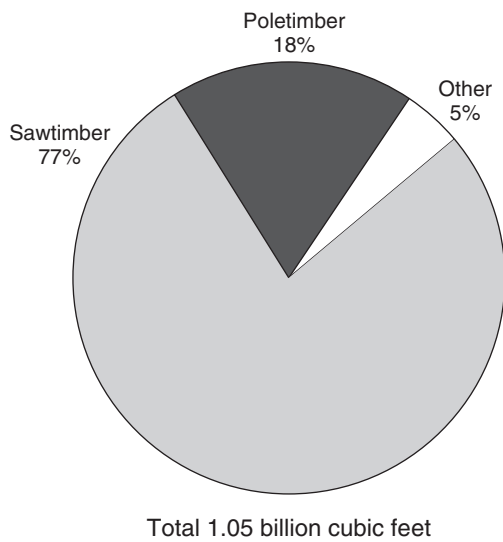


Figure 12—Roundwood output by source, 2005.

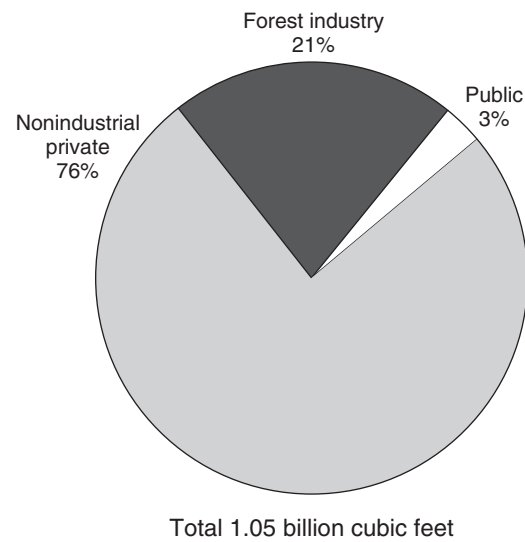


Figure 13—Roundwood output by ownership, 2005.

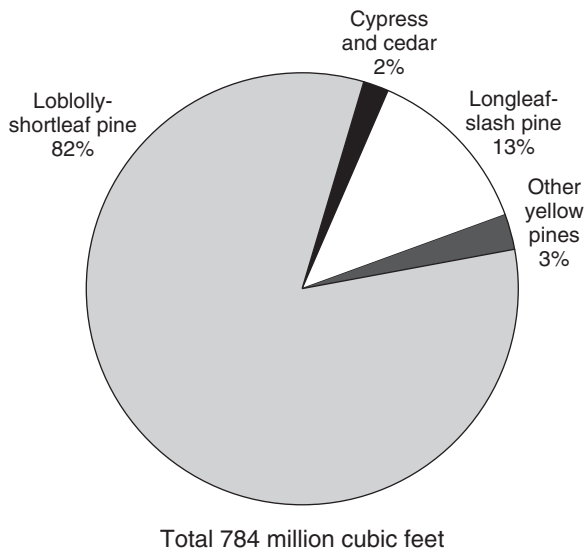


Figure 14—Roundwood output by softwood species group, 2005.

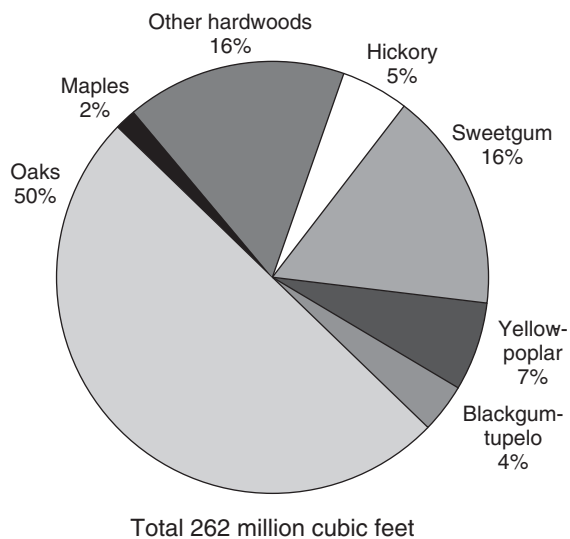


Figure 15—Roundwood output by hardwood species group, 2005.

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## Glossary

**Board foot.** A unit of measure applied to lumber that is 1-foot long, 1-foot wide, and 1-inch thick (or its equivalent) and also associated with roundwood as to its potential yield of such products.

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

**Composite panels.** 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 domestic 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 chipboard.

**Fuelwood production.** The volume of roundwood harvested to produce some form of energy, e.g., heat and 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 >0.50, such as oaks, hard maples, hickories, and beech.

**Imports.** The volume of domestic 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 1/4-inch rule.** A log rule or formula for estimating the board-foot volume of logs, allowing 1/2-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 1/4-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 residue, 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.

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

**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.

**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 known 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 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 nonpulpmills, chipped, and then sold to pulpmills for use as fiber. Includes tops, jump sections, whole trees, and pulpwood sticks.

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

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

**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 for FIA standards.

**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 <1.0 inch d.b.h. and >1 foot tall for hardwoods, >6 inches tall for softwoods, and >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 scale like.

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

**Timber products.** Roundwood products and byproducts.

**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).

## Metric Equivalents

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1 acre = 4046.86 m <sup>2</sup> or 0.404686 ha
1 cubic foot = 0.028317 m <sup>3</sup>
1 inch = 2.54 cm or 0.0254 m
Breast height = 1.4 m above the ground
1 square foot = 929.03 cm <sup>2</sup> or 0.0929 m <sup>2</sup>
1 square foot basal area per acre = 0.229568 m <sup>2</sup> /ha
1 pound = 0.454 kg
1 ton = 0.907 MT

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## Conversion Factors<sup>a</sup>

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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 <sup>b</sup>	
Softwood	72.6 cubic feet per cord
Hardwood	75.0 cubic feet per cord

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

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

## Species List<sup>a</sup>

Common name	Scientific name <sup>b</sup>	Common name	Scientific name <sup>b</sup>
Softwoods		Hardwoods (continued)	
Atlantic white-cedar	<i>Chamaecyparis thyoides</i> (L.) B.S.P.	Southern magnolia	<i>M. grandiflora</i> L.
Southern redcedar	<i>Juniperus silicicola</i> (Small) Bailey	Bigleaf magnolia	<i>M. macrophylla</i> Michx.
Eastern redcedar	<i>J. virginiana</i> L.	Sweetbay	<i>M. virginiana</i> L.
Shortleaf pine	<i>Pinus echinata</i> Mill.	Apple	<i>Malus</i> spp. Mill.
Slash pine	<i>P. elliotii</i> Mill.	Chinaberry	<i>Melia azedarach</i> L.
Spruce pine	<i>P. glabra</i> Walt.	White mulberry	<i>Morus alba</i> L.
Longleaf pine	<i>P. palustris</i> Mill.	Red mulberry	<i>M. rubra</i> L.
Loblolly pine	<i>P. taeda</i> L.	Water tupelo	<i>Nyssa aquatica</i> L.
Virginia pine	<i>P. virginiana</i> Mill.	Blackgum	<i>N. sylvatica</i> Marsh.
Baldcypress	<i>Taxodium distichum</i> L.	Swamp tupelo	<i>N. sylvatica</i> var. <i>biflora</i> (Walt.) Sarg.
Hardwoods		Eastern hophornbeam	<i>Ostrya virginiana</i> (Mill.) K. Koch
Florida maple	<i>Acer barbatum</i> Michx.	Sourwood	<i>Oxydendrum arboreum</i> L.
Boxelder	<i>A. negundo</i> L.	Royal paulownia	<i>Paulownia tomentosa</i> (Thunb.) Sieb. & Zucc. ex Steud.
Red maple	<i>A. rubrum</i> L.	Redbay	<i>Persea borbonia</i> L.
Silver maple	<i>A. saccharinum</i> L.	Water-elm	<i>Planera aquatica</i> J.F. Gmel.
Sugar maple	<i>A. saccharum</i> Marsh.	American sycamore	<i>Platanus occidentalis</i> L.
Ohio buckeye	<i>Aesculus glabra</i> Willd.	Cottonwood	<i>Populus</i> spp. L.
Buckeye	<i>A.</i> spp. L.	Black cherry	<i>Prunus serotina</i> Ehrh.
Ailanthus	<i>Ailanthus altissima</i> Mill.	Plums, cherries (other than black cherry)	<i>P.</i> spp. L.
Tung-oil tree	<i>Aleurites fordii</i> Hemsl.	White oak	<i>Quercus alba</i> L.
Serviceberry	<i>Amelanchier</i> spp. Medic.	Scarlet oak	<i>Q. coccinea</i> Muenchh.
River birch	<i>Betula nigra</i> L.	Durand oak	<i>Q. durandii</i> Buckl.
Chittamwood	<i>Bumelia</i> spp. (Michx.) Pers.	Southern red oak	<i>Q. falcata</i> Michx.
American hornbeam	<i>Carpinus caroliniana</i> Walt.	Cherrybark oak	<i>Q. falcata</i> var. <i>pagodifolia</i> Ell.
Hickory	<i>Carya</i> spp. Nutt.	Bluejack oak	<i>Q. incana</i> Bartr.
Water hickory	<i>C. aquatica</i> Michx.	Turkey oak	<i>Q. laevis</i> Walt.
Bitternut hickory	<i>C. cordiformis</i> (Wangenh.) K. Koch	Laurel oak	<i>Q. laurifolia</i> Michx.
Pignut hickory	<i>C. glabra</i> (Mill.) Sweet	Overcup oak	<i>Q. lyrata</i> Walt.
Pecan	<i>C. illinoensis</i> (Wangenh.) K. Koch	Blackjack oak	<i>Q. marilandica</i> Muenchh.
Shellbark hickory	<i>C. laciniosa</i> (Michx. f.) Loud	Swamp chestnut oak	<i>Q. michauxii</i> Nutt.
Nutmeg hickory	<i>C. myristiciformis</i> (Michx. f.) Nutt.	Chinkapin oak	<i>Q. muehlenbergii</i> Engelm.
Shagbark hickory	<i>C. ovata</i> (Mill.) K. Koch.	Water oak	<i>Q. nigra</i> L.
Mockernut hickory	<i>C. tomentosa</i> Nutt.	Nuttall oak	<i>Q. nuttallii</i> Palmer
Allegheny chinkapin	<i>Castanea pumila</i> Mill.	Pin oak	<i>Q. palustris</i> Muenchh.
Chinkapin	<i>Castanopsis</i> (D. Don) Spach	Willow oak	<i>Q. phellos</i> L.
Catalpa	<i>Catalpa</i> spp. Scop.	Chestnut oak	<i>Q. prinus</i> L.
Sugarberry	<i>Celtis laevigata</i> Willd.	Northern red oak	<i>Q. rubra</i> L.
Hackberry	<i>C. occidentalis</i> L.	Shumard oak	<i>Q. shumardii</i> Buckl.
Eastern redbud	<i>Cercis canadensis</i> L.	Post oak	<i>Q. stellata</i> Wangenh.
Flowering dogwood	<i>Cornus florida</i> L.	Black oak	<i>Q. velutina</i> Lam.
Hawthorn	<i>Crataegus</i> spp. L.	Live oak	<i>Q. virginiana</i> Mill.
Common persimmon	<i>Diospyros virginiana</i> L.	Black locust	<i>Robinia pseudoacacia</i> L.
American beech	<i>Fagus grandifolia</i> Ehrh.	Willow	<i>Salix</i> spp. L.
White ash	<i>Fraxinus americana</i> L.	Chinese tallowtree	<i>Sapium sebiferum</i> (L.) Roxb.
Green ash	<i>F. pennsylvanica</i> Marsh.	Sassafras	<i>Sassafras albidum</i> (Nutt.) Nees
Water locust	<i>Gleditsia aquatica</i> Marsh.	American basswood	<i>Tilia americana</i> L.
Honey locust	<i>G. triacanthus</i> L.	White basswood	<i>T. heterophylla</i> Vent.
American holly	<i>Ilex opaca</i> Ait.	Winged elm	<i>Ulmus alata</i> Michx.
Black walnut	<i>Juglans nigra</i> L.	American elm	<i>U. americana</i> L.
Sweetgum	<i>Liquidambar styraciflua</i> L.	Cedar elm	<i>U. crassifolia</i> Nutt.
Yellow-poplar	<i>Liriodendron tulipifera</i> L.	Slippery elm	<i>U. rubra</i> Muhl.
Osage-orange	<i>Maclura pomifera</i> (Raf.) Schneid.	Sparkleberry	<i>Vaccinium arboreum</i> Marsh.
Cucumbertree	<i>Magnolia acuminata</i> L.		

<sup>a</sup> Common and scientific names of tree species > 1.0 inch d.b.h. occurring in the FIA sample.

<sup>b</sup> Little (1979).



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**Table A.1—Output of industrial products by product and species group, Mississippi, 2002 and 2005**

Product and species group	Year		Change	Change
	2002	2005		
	----- thousand cubic feet -----			percent
Saw logs				
Softwood	419,174	432,908	13,734	3.3
Hardwood	107,028	110,394	3,366	3.1
Total	526,202	543,302	17,100	3.2
Veneer logs				
Softwood	72,261	69,401	-2,860	-4.0
Hardwood	5,865	8,752	2,887	49.2
Total	78,126	78,153	27	0.0
Pulpwood <sup>a</sup>				
Softwood	168,144	238,166	70,022	41.6
Hardwood	118,759	127,761	9,002	7.6
Total	286,903	365,927	79,024	27.5
Composite panels				
Softwood	27,061	39,332	12,271	45.3
Hardwood	7,402	4,524	-2,878	-38.9
Total	34,463	43,856	9,393	27.3
Other industrial				
Softwood	1,595	1,521	-74	-4.6
Hardwood	0	0	0	—
Total	1,595	1,521	-74	-4.6
All industrial				
Softwood	688,235	781,328	93,093	13.5
Hardwood	239,054	251,431	12,377	5.2
Total	927,289	1,032,759	105,470	11.4
Byproduct output				
Softwood	315,985	311,652	-4,333	-1.4
Hardwood	74,540	73,785	-755	-1.0
Total	390,525	385,437	-5,088	-1.3
Total output				
Softwood	1,004,220	1,092,980	88,760	8.8
Hardwood	313,594	325,216	11,622	3.7
Total	1,317,814	1,418,196	100,382	7.6

— = negligible; 0.0 = a value of >0.0 but <0.05 for the cell.

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (2,964,000 cubic feet in 2002 and 2,801,000 cubic feet in 2005).



**Table A.2—Roundwood receipts by product and species group, Mississippi, 2002 and 2005**

Product and species group	Year		Change	Change
	2002	2005		
	<i>----- thousand cubic feet -----</i>			<i>percent</i>
Saw logs				
Softwood	445,640	445,252	-388	-0.1
Hardwood	113,863	114,928	1,065	0.9
Total	559,503	560,180	677	0.1
Veneer logs				
Softwood	79,871	77,239	-2,632	-3.3
Hardwood	5,058	6,854	1,796	35.5
Total	84,929	84,093	-836	-1.0
Pulpwood <sup>a</sup>				
Softwood	149,327	206,014	56,687	38.0
Hardwood	53,912	12,810	-41,102	-76.2
Total	203,239	218,824	15,585	7.7
Composite panels				
Softwood	31,917	39,699	7,782	24.4
Hardwood	6,339	3,328	-3,011	-47.5
Total	38,256	43,027	4,771	12.5
Other industrial				
Softwood	1,816	1,813	-3	-0.2
Hardwood	0	0	0	—
Total	1,816	1,813	-3	-0.2
Total output				
Softwood	708,571	770,017	61,446	8.7
Hardwood	179,172	137,920	-41,252	-23.0
Total	887,743	907,937	20,194	2.3

— = negligible.

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (3,574,000 cubic feet in 2002 and 3,323,000 cubic feet in 2005).

**Table A.3—Number of primary wood-using plants by industry, Mississippi, 1962 to 2005**

Industry	Year							
	1962	1966	1972	1976	1995	1999	2002	2005
	<i>number</i>							
Sawmills	290	305	241	218	84	84	92	93
Veneer mills	24	22	16	13	10	10	12	12
Pulpmills	6	7	8	7	7	7	6	5
Composite panel mills	0	0	0	0	2	2	3	3
Other mills	64	74	50	55	2	2	3	3
All plants	384	408	315	293	105	105	116	116

**Table A.4—Roundwood receipts by sawmill size, Mississippi, 2002 and 2005**

Sawmill size class <sup>a</sup> <i>mmbf</i>	2002			2005		
	Mills	Volume		Mills	Volume	
	<i>number</i>	<i>mbf</i>	<i>percent</i>	<i>number</i>	<i>mbf</i>	<i>percent</i>
<1.0	2	1,537	0	2	1,537	0
1.0–4.99	17	51,581	2	17	50,436	2
5.0–9.99	19	147,979	5	19	146,941	5
10.0–49.99	35	749,124	24	36	734,982	23
>50	19	2,163,485	69	19	2,183,432	70
Total	92	3,113,706	100	93	3,117,328	100

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

**Table A.5—Roundwood receipts by species and type of mill, Mississippi, 2005**

Species	Type of mill						
	All mills	Sawmills	Veneer type		OSB and panels	Pulpmills <sup>a</sup>	Other mills
			Pine plywood	Other veneer			
<i>thousand cubic feet</i>							
<b>Softwood</b>							
Yellow pine	561,824	443,073	77,239	0	39,699	NA	1,813
Eastern white pine	0	0	0	0	0	NA	0
Cedar	0	0	0	0	0	NA	0
Cypress	1,999	1,999	0	0	0	NA	0
Other softwood	180	180	0	0	0	NA	0
Unclassified	206,014	0	0	0	0	206,014	0
Total softwoods	770,017	445,252	77,239	0	39,699	206,014	1,813
<b>Hardwood</b>							
Blackgum and tupelo	485	485	0	0	0	NA	0
Soft maple	83	83	0	0	0	NA	0
Sweetgum	11,970	7,064	1,235	1,202	2,469	NA	0
Yellow-poplar	13,004	11,161	702	1,141	0	NA	0
Other soft hardwood	6,567	5,757	0	238	572	NA	0
Hickory	2,256	1,888	0	368	0	NA	0
Red oak	52,837	51,129	0	1,708	0	NA	0
White oak	21,195	21,027	0	168	0	NA	0
Other hard hardwood	16,713	16,334	0	92	287	NA	0
Unclassified	12,810	0	0	0	0	12,810	0
Total hardwoods	137,920	114,928	1,937	4,917	3,328	12,810	0
All species	907,937	560,180	79,176	4,917	43,027	218,824	1,813

OSB = oriented strand board; NA = not applicable.

<sup>a</sup> Collected only by softwood and hardwood and includes roundwood chipped.

**Table A.6—Industrial roundwood movement by year and species group, Mississippi, 2002 and 2005**

Year	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>thousand cubic feet</i>					
<b>Softwood</b>					
2002	688,235	118,707	569,528	139,043	708,571
2005	781,328	119,992	661,336	108,681	770,017
<b>Hardwood</b>					
2002	239,054	87,396	151,658	27,514	179,172
2005	251,431	131,562	119,869	18,051	137,920
<b>All species</b>					
2002	927,289	206,103	721,186	166,557	887,743
2005	1,032,759	251,554	781,205	126,732	907,937

**Table A.7—Industrial roundwood movement by product and species group, Mississippi, 2005**

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>thousand cubic feet</i>					
Saw logs					
Softwood	432,908	39,666	393,242	52,010	445,252
Hardwood	110,394	12,182	98,212	16,716	114,928
Total	543,302	51,848	491,454	68,726	560,180
Veneer logs					
Softwood	69,401	3,699	65,702	11,537	77,239
Hardwood	8,752	3,010	5,742	1,112	6,854
Total	78,153	6,709	71,444	12,649	84,093
Pulpwood <sup>a</sup>					
Softwood	238,166	76,495	161,671	44,343	206,014
Hardwood	127,761	115,174	12,587	223	12,810
Total	365,927	191,669	174,258	44,566	218,824
Composite panels					
Softwood	39,332	0	39,332	367	39,699
Hardwood	4,524	1,196	3,328	0	3,328
Total	43,856	1,196	42,660	367	43,027
Other industrial					
Softwood	1,521	132	1,389	424	1,813
Hardwood	0	0	0	0	0
Total	1,521	132	1,389	424	1,813
All products					
Softwood	781,328	119,992	661,336	108,681	770,017
Hardwood	251,431	131,562	119,869	18,051	137,920
Total	1,032,759	251,554	781,205	126,732	907,937

<sup>a</sup>Includes roundwood chipped.

**Table A.8—Saw-log volume by destination, source, and species group, Mississippi, 2005**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Mississippi (retained)	491,454	393,242	98,212
Exports to			
Alabama	27,864	20,743	7,121
Arkansas	528	0	528
Louisiana	21,916	18,923	2,993
Tennessee	1,540	0	1,540
Total	51,848	39,666	12,182
Imports from			
Alabama	32,423	27,328	5,095
Arkansas	785	0	785
Louisiana	25,235	16,156	9,079
Tennessee	10,283	8,526	1,757
Total	68,726	52,010	16,716

**Table A.9—Veneer volume by destination, source, and species group, Mississippi, 2005**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Mississippi (retained)	71,444	65,702	5,742
Exports to			
Alabama	2,648	1,160	1,488
Arkansas	2,716	1,194	1,522
Louisiana	1,345	1,345	0
Total	6,709	3,699	3,010
Imports from			
Alabama	9,743	9,282	461
Louisiana	2,906	2,255	651
Total	12,649	11,537	1,112

**Table A.10—Pulpwood volume by destination, source, and species group, Mississippi, 2005<sup>a</sup>**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Mississippi (retained)	174,258	161,671	12,587
Exports to			
Alabama	44,575	6,377	38,198
Arkansas	18,362	714	17,648
Florida	219	219	0
Kentucky	13,651	0	13,651
Louisiana	89,545	47,583	41,962
South Carolina	32	0	32
Tennessee	25,253	21,602	3,651
Texas	32	0	32
Total	191,669	76,495	115,174
Imports from			
Alabama	42,486	42,461	25
Florida	72	72	0
Louisiana	1,818	1,810	8
Tennessee	190	0	190
Total	44,566	44,343	223

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills.

**Table A.11—Composite panel volume by destination, source, and species group, Mississippi, 2005**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Mississippi (retained)	42,660	39,332	3,328
Exports to			
Louisiana	1,196	0	1,196
Total	1,196	0	1,196
Imports from			
Alabama	367	367	0
Total	367	367	0

**Table A.12—Other industrial volume by destination, source, and species group, Mississippi, 2005<sup>a</sup>**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Mississippi (retained)	1,389	1,389	0
Exports to			
Alabama	132	132	0
Total	132	132	0
Imports from			
Alabama	114	114	0
Arkansas	205	205	0
Louisiana	21	21	0
Tennessee	84	84	0
Total	424	424	0

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

**Table A.13—Primary mill residue volume by roundwood type, species group, and residue type, Mississippi, 2005**

Roundwood type and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>thousand cubic feet</i>					
Saw logs					
Softwood	231,734	39,437	93,971	65,206	33,120
Hardwood	64,686	13,124	25,891	24,102	1,569
Total	296,420	52,561	119,862	89,308	34,689
Veneer logs					
Softwood	51,636	7,326	24,345	19,965	0
Hardwood	7,985	810	5,082	2,093	0
Total	59,621	8,136	29,427	22,058	0
Pulpwood					
Softwood	21,055	21,055	0	0	0
Hardwood	1,468	1,468	0	0	0
Total	22,523	22,523	0	0	0
Composite panels					
Softwood	8,436	8,436	0	0	0
Hardwood	855	855	0	0	0
Total	9,291	9,291	0	0	0
Other industrial <sup>a</sup>					
Softwood	2,673	1,554	1,119	0	0
Hardwood	0	0	0	0	0
Total	2,673	1,554	1,119	0	0
Total					
Softwood	315,534	77,808	119,435	85,171	33,120
Hardwood	74,994	16,257	30,973	26,195	1,569
Total	390,528	94,065	150,408	111,366	34,689

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

**Table A.14—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Mississippi, 2002 and 2005**

Product and species group	All types		Bark		Coarse		Sawdust		Shavings	
	2002	2005	2002	2005	2002	2005	2002	2005	2002	2005
	<i>thousand cubic feet</i>									
Fiber products										
Softwood	110,429	104,568	0	0	110,429	104,568	0	0	0	0
Hardwood	25,111	26,397	0	0	25,111	26,397	0	0	0	0
Total	135,540	130,965	0	0	135,540	130,965	0	0	0	0
Particleboard										
Softwood	11,254	15,810	0	0	0	3,982	10,884	5,277	370	6,551
Hardwood	0	265	0	0	0	0	0	200	0	65
Total	11,254	16,075	0	0	0	3,982	10,884	5,477	370	6,616
Sawn products										
Softwood	14,642	4,547	0	0	14,642	4,547	0	0	0	0
Hardwood	246	3,221	0	0	246	3,221	0	0	0	0
Total	14,888	7,768	0	0	14,888	7,768	0	0	0	0
Fuel										
Softwood	155,132	155,208	63,369	70,626	4,971	4,971	61,009	59,294	25,783	20,317
Hardwood	43,827	38,669	19,637	13,841	644	787	22,379	23,012	1,167	1,029
Total	198,959	193,877	83,006	84,467	5,615	5,758	83,388	82,306	26,950	21,346
Miscellaneous										
Softwood	24,528	31,519	6,595	6,679	391	610	10,780	18,027	6,762	6,203
Hardwood	5,356	5,233	1,946	2,116	296	297	2,429	2,345	685	475
Total	29,884	36,752	8,541	8,795	687	907	13,209	20,372	7,447	6,678
Not used										
Softwood	4,536	3,882	503	503	757	757	3,227	2,573	49	49
Hardwood	1,227	1,209	300	300	271	271	638	638	18	0
Total	5,763	5,091	803	803	1,028	1,028	3,865	3,211	67	49
All products										
Softwood	320,521	315,534	70,467	77,808	131,190	119,435	85,900	85,171	32,964	33,120
Hardwood	75,767	74,994	21,883	16,257	26,568	30,973	25,446	26,195	1,870	1,569
Total	396,288	390,528	92,350	94,065	157,758	150,408	111,346	111,366	34,834	34,689



**Table A.15—Roundwood timber product output by county, product, and species group, Mississippi, 2005**

County	All products		Saw logs		Veneer logs		Pulpwood <sup>a</sup>		Composite panels		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>											
Adams	868	5,901	49	2,253	0	0	819	2,990	0	658	0	0
Alcorn	2,982	2,321	1,058	1,632	0	0	1,741	689	183	0	0	0
Amite	20,216	4,809	10,559	1,228	2,631	17	7,026	3,564	0	0	0	0
Attala	18,363	2,432	12,440	1,282	1,992	52	1,992	826	1,939	272	0	0
Benton	1,306	2,427	467	1,697	0	0	461	644	378	86	0	0
Bolivar	19	4,608	19	3,849	0	74	0	636	0	49	0	0
Calhoun	8,373	1,289	3,940	1,167	0	0	1,842	55	2,567	67	24	0
Carroll	10,204	4,350	3,547	933	386	0	4,720	3,145	1,551	272	0	0
Chickasaw	9,156	1,416	6,082	1,364	0	0	1,488	1	1,586	51	0	0
Choctaw	16,447	2,000	8,324	1,037	1,494	26	5,282	863	1,347	74	0	0
Claiborne	1,376	5,560	922	3,760	0	344	454	1,456	0	0	0	0
Clarke	14,598	6,569	7,194	2,641	1,780	514	5,042	3,414	582	0	0	0
Clay	5,906	1,064	3,396	1,056	166	6	1,426	2	918	0	0	0
Coahoma	24	4,751	22	3,903	0	441	2	234	0	173	0	0
Copiah	15,511	5,825	9,805	3,582	2,485	373	3,221	1,870	0	0	0	0
Covington	17,013	2,004	10,447	468	2,319	150	4,181	1,386	0	0	66	0
De Soto	412	261	0	251	0	0	218	10	194	0	0	0
Forrest	10,417	497	3,209	429	1,866	28	5,267	40	0	0	75	0
Franklin	9,053	5,233	7,021	1,089	0	149	2,032	3,995	0	0	0	0
George	10,483	569	4,845	490	1,692	4	3,880	75	0	0	66	0
Greene	20,342	2,158	8,158	1,732	780	4	11,314	422	0	0	90	0
Grenada	6,613	1,520	3,536	625	0	0	721	524	2,327	371	29	0
Hancock	6,222	339	2,992	313	1,200	6	1,924	20	0	0	106	0
Harrison	7,006	385	3,656	376	1,303	7	1,931	2	0	0	116	0
Hinds	4,450	4,431	3,341	1,791	190	325	919	2,315	0	0	0	0
Holmes	7,341	4,184	4,040	1,743	498	0	864	2,243	1,939	198	0	0
Humphreys	177	495	177	188	0	0	0	258	0	49	0	0
Issaquena	0	3,148	0	1,748	0	119	0	1,281	0	0	0	0
Itawamba	7,301	5,998	3,410	1,158	0	0	2,054	4,840	1,837	0	0	0
Jackson	6,851	482	4,798	444	1,303	7	702	31	0	0	48	0
Jasper	15,894	1,983	9,872	1,465	4,573	93	1,449	425	0	0	0	0
Jefferson	795	1,608	55	1,028	0	0	740	580	0	0	0	0
Jefferson Davis	10,661	524	5,730	520	763	0	4,112	4	0	0	56	0
Jones	19,185	3,438	9,894	1,649	3,751	85	5,474	1,704	0	0	66	0
Kemper	20,006	2,021	16,747	618	2,408	646	851	757	0	0	0	0
Lafayette	8,967	2,529	5,522	2,246	0	0	1,071	129	2,374	154	0	0
Lamar	20,833	1,052	8,819	506	1,467	17	9,167	529	1,286	0	94	0
Lauderdale	11,350	13,560	6,487	2,833	664	228	4,139	10,499	0	0	60	0
Lawrence	13,833	2,204	8,264	1,259	763	0	4,806	945	0	0	0	0
Leake	15,959	3,793	7,513	2,613	2,241	77	6,011	1,079	194	24	0	0
Lee	6,108	273	3,373	160	0	0	1,449	113	1,286	0	0	0
Leflore	1,921	331	1,921	214	0	0	0	93	0	24	0	0
Lincoln	24,242	10,726	10,387	2,052	1,511	4	12,344	8,670	0	0	0	0
Lowndes	7,402	7,467	5,673	1,069	0	0	1,546	6,398	183	0	0	0

*continued*

**Table A.15—Roundwood timber product output by county, product, and species group, Mississippi, 2005 (continued)**

County	All products		Saw logs		Veneer logs		Pulpwood <sup>a</sup>		Composite panels		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>											
Madison	8,215	2,524	5,825	1,982	1,411	159	785	309	194	74	0	0
Marion	23,315	6,032	12,808	1,044	1,679	5	7,992	4,983	734	0	102	0
Marshall	4,575	2,098	3,041	1,693	0	0	962	319	572	86	0	0
Monroe	10,709	14,915	6,331	2,319	0	13	2,358	12,583	2,020	0	0	0
Montgomery	9,142	2,146	5,823	505	166	98	1,578	1,271	1,551	272	24	0
Neshoba	15,886	3,475	12,057	1,522	1,411	395	1,836	1,558	582	0	0	0
Newton	11,156	2,549	7,806	1,326	1,519	32	1,831	1,191	0	0	0	0
Noxubee	16,392	1,235	12,677	1,106	2,075	65	1,640	64	0	0	0	0
Oktibbeha	10,758	902	7,672	814	581	19	1,934	69	571	0	0	0
Panola	4,545	3,398	2,834	1,027	0	561	887	1,624	824	186	0	0
Pearl River	20,353	1,732	8,969	322	2,009	20	9,247	1,390	0	0	128	0
Perry	16,226	948	6,457	216	562	3	9,123	729	0	0	84	0
Pike	13,261	1,745	9,592	705	988	3	2,681	1,037	0	0	0	0
Pontotoc	10,561	1,776	5,812	1,469	0	91	2,204	156	2,545	60	0	0
Prentiss	4,979	3,518	1,964	1,549	0	0	2,097	1,969	918	0	0	0
Quitman	0	341	0	228	0	87	0	2	0	24	0	0
Rankin	14,081	5,482	7,991	3,427	3,177	406	2,913	1,649	0	0	0	0
Scott	8,407	1,711	3,649	833	938	12	3,820	866	0	0	0	0
Sharkey	247	1,237	247	1,102	0	119	0	16	0	0	0	0
Simpson	14,782	2,987	8,750	1,750	2,178	148	3,854	1,089	0	0	0	0
Smith	20,741	1,732	8,647	817	3,298	804	8,796	111	0	0	0	0
Stone	10,486	2	4,970	0	802	2	4,612	0	0	0	102	0
Sunflower	0	242	0	189	0	0	0	53	0	0	0	0
Tallahatchie	2,928	1,132	1,921	571	0	148	425	290	582	123	0	0
Tate	631	1,073	0	808	0	120	204	17	427	128	0	0
Tippah	6,400	2,875	2,405	2,010	0	0	3,250	779	745	86	0	0
Tishomingo	7,206	2,031	3,237	514	0	0	3,786	1,517	183	0	0	0
Tunica	0	1,223	0	584	0	639	0	0	0	0	0	0
Union	6,168	1,886	2,905	1,542	0	0	1,444	275	1,819	69	0	0
Walthall	17,773	1,319	11,977	954	802	0	4,946	365	0	0	48	0
Warren	406	6,359	241	3,616	0	302	165	2,441	0	0	0	0
Washington	23	3,156	0	2,103	0	0	23	1,053	0	0	0	0
Wayne	15,670	7,737	7,518	1,554	1,934	62	6,105	6,121	0	0	113	0
Webster	8,690	948	6,070	559	166	6	1,277	309	1,153	74	24	0
Wilkinson	7,918	7,109	4,291	1,892	159	34	3,468	4,645	0	538	0	0
Winston	24,025	5,307	13,376	1,270	3,320	197	7,329	3,840	0	0	0	0
Yalobusha	6,444	1,853	3,536	1,070	0	0	1,667	501	1,241	282	0	0
Yazoo	12,043	6,161	3,798	2,941	0	406	8,245	2,814	0	0	0	0
All counties	781,328	251,431	432,908	110,394	69,401	8,752	238,166	127,761	39,332	4,524	1,521	0

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (2,801,000 cubic feet in 2005).

**Table A.16—Total roundwood output by product, species group, and source of material, Mississippi, 2005**

Product and species group	All sources	Total	Growing-stock trees		Other sources
			Sawtimber	Poletimber	
<i>thousand cubic feet</i>					
Saw logs					
Softwood	432,908	426,987	397,098	29,889	5,921
Hardwood	110,394	107,808	100,262	7,547	2,586
Total	543,302	534,795	497,360	37,436	8,507
Veneer logs and bolts					
Softwood	69,401	67,991	63,912	4,079	1,410
Hardwood	8,752	8,601	8,601	0	151
Total	78,153	76,592	72,513	4,079	1,561
Pulpwood					
Softwood	238,166	223,720	130,401	93,318	14,446
Hardwood	127,761	112,404	75,599	36,805	15,357
Total	365,927	336,124	206,001	130,123	29,803
Composite panels					
Softwood	39,332	33,662	19,929	13,733	5,670
Hardwood	4,524	4,142	2,325	1,816	382
Total	43,856	37,803	22,254	15,549	6,053
Poles and posts					
Softwood	1,521	1,459	1,402	57	62
Hardwood	0	0	0	0	0
Total	1,521	1,459	1,402	57	62
Total industrial products					
Softwood	781,328	753,819	612,742	141,077	27,509
Hardwood	251,431	232,955	186,787	46,168	18,476
Total	1,032,759	986,774	799,529	187,245	45,985
Fuelwood					
Softwood	2,253	2,063	1,466	598	190
Hardwood	10,974	10,254	6,853	3,402	720
Total	13,227	12,318	8,318	4,000	909
All products					
Softwood	783,581	755,883	614,208	141,675	27,698
Hardwood	262,405	243,209	193,640	49,569	19,196
Total	1,045,986	999,092	807,847	191,245	46,894

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

**Table A.17—Total roundwood output by species group, survey region, and ownership class, Mississippi, 2005**

Species group and survey region	Total	Ownership class		
		Public	Forest industry	Nonindustrial private
<i>thousand cubic feet</i>				
Softwood				
Delta	25,202	0	336	24,866
North	182,508	4,748	32,514	145,246
Central	222,280	5,338	48,564	168,378
South	247,380	10,946	74,182	162,252
Southwest	106,211	5,000	18,265	82,946
Total softwoods	783,581	26,033	173,861	583,687
Hardwood				
Delta	38,999	1,172	7,730	30,097
North	75,490	1,111	6,878	67,501
Central	57,231	1,253	12,233	43,745
South	32,794	281	13,027	19,486
Southwest	57,891	1,867	10,532	45,492
Total hardwoods	262,405	5,684	50,400	206,321
All species	1,045,986	31,717	224,261	790,008

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

**Table A.18—Total roundwood output by species group, detailed species group, and product, Mississippi, 2005**

Species group and detailed species group	Total	Product					Fuel-wood
		Saw logs	Veneer logs	Pulpwood	Composite panels	Poles and posts	
<i>thousand cubic feet</i>							
<b>Softwood</b>							
Cedar	9,432	3,450	100	5,681	173	1	27
Longleaf-slash pine	101,444	48,244	11,979	39,468	831	629	292
Loblolly-shortleaf pine	646,638	367,055	54,838	184,034	38,000	853	1,858
Other yellow pines	20,653	12,294	2,345	5,790	130	33	60
Cypress	5,414	1,865	139	3,192	198	5	16
Total softwoods	783,581	432,908	69,401	238,166	39,332	1,521	2,253
<b>Hardwood</b>							
Soft maple	4,127	1,480	166	2,271	38	0	173
Hard maple	128	58	8	56	0	0	5
Other birch	708	487	0	168	23	0	30
Hickory	13,315	5,899	427	6,178	255	0	557
Beech	2,594	977	66	1,417	25	0	108
Ash	4,388	2,522	208	1,336	139	0	184
Black walnut	49	25	0	15	7	0	2
Sweetgum	43,202	17,766	1,311	21,554	764	0	1,806
Yellow-poplar	17,421	5,808	304	10,339	241	0	729
Blackgum-tupelo	9,675	3,492	262	5,447	68	0	405
Sycamore	5,313	3,181	223	1,494	192	0	222
Cottonwood	5,876	2,684	405	2,356	184	0	246
Black cherry	2,297	1,014	76	1,090	21	0	96
Select white oaks	25,249	10,551	609	12,615	419	0	1,056
Other white oaks	14,023	6,297	475	6,380	285	0	586
Select red oaks	17,131	7,690	609	7,741	374	0	716
Other red oaks	74,905	30,339	2,701	37,566	1,166	0	3,133
Basswood	333	145	13	160	2	0	14
Elm	5,716	2,919	203	2,243	113	0	239
Other eastern hardwoods	15,955	7,060	685	7,336	207	0	668
Total hardwoods	262,405	110,394	8,752	127,761	4,524	0	10,974
All species	1,045,986	543,302	78,153	365,927	43,856	1,521	13,227

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

**Table A.19—Total roundwood output by species group, detailed species group, and ownership class, Mississippi, 2005**

Species group and detailed species group	Total	Ownership class		
		Public	Forest industry	Nonindustrial private
<i>thousand cubic feet</i>				
<b>Softwood</b>				
Cedar	9,432	59	256	9,118
Longleaf-slash pine	101,444	6,923	31,576	62,944
Loblolly-shortleaf pine	646,638	18,131	136,046	492,461
Other yellow pines	20,653	294	5,541	14,818
Cypress	5,414	626	442	4,347
<b>Total softwoods</b>	<b>783,581</b>	<b>26,033</b>	<b>173,861</b>	<b>583,687</b>
<b>Hardwood</b>				
Soft maple	4,127	74	649	3,404
Hard maple	128	0	3	125
Other birch	708	12	10	687
Hickory	13,315	216	2,642	10,457
Beech	2,594	46	606	1,941
Ash	4,388	84	1,830	2,475
Black walnut	49	13	3	33
Sweetgum	43,202	942	6,948	35,312
Yellow-poplar	17,421	209	3,083	14,129
Blackgum-tupelo	9,675	107	3,371	6,197
Sycamore	5,313	49	1,732	3,532
Cottonwood	5,876	229	845	4,802
Black cherry	2,297	76	354	1,867
Select white oaks	25,249	399	4,517	20,333
Other white oaks	14,023	386	2,435	11,202
Select red oaks	17,131	594	3,205	13,332
Other red oaks	74,905	1,738	13,232	59,934
Basswood	333	3	72	258
Elm	5,716	77	1,343	4,297
Other eastern hardwoods	15,955	429	3,521	12,005
<b>Total hardwoods</b>	<b>262,405</b>	<b>5,684</b>	<b>50,400</b>	<b>206,321</b>
<b>All species</b>	<b>1,045,986</b>	<b>31,717</b>	<b>224,261</b>	<b>790,008</b>

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

**Bentley, James W.; Howell, Michael; Johnson, Tony G.** 2008. Mississippi's timber industry—an assessment of timber product output and use, 2005. Resour. Bull. SRS-131. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 32 p.

In 2005, industrial roundwood output from Mississippi's forests totaled 1.03 billion cubic feet, 11 percent more than in 2002. Mill byproducts generated from primary manufacturers decreased 1 percent to 385 million cubic feet. Almost all plant residues were used primarily for fuel and fiber products. Saw logs were the leading roundwood product at 543 million cubic feet; pulpwood ranked second at 366 million cubic feet; veneer logs were third at 78 million cubic feet. The number of primary processing plants remained at 116 in 2005. Total receipts increased 2 percent to 908 million cubic feet.

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



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