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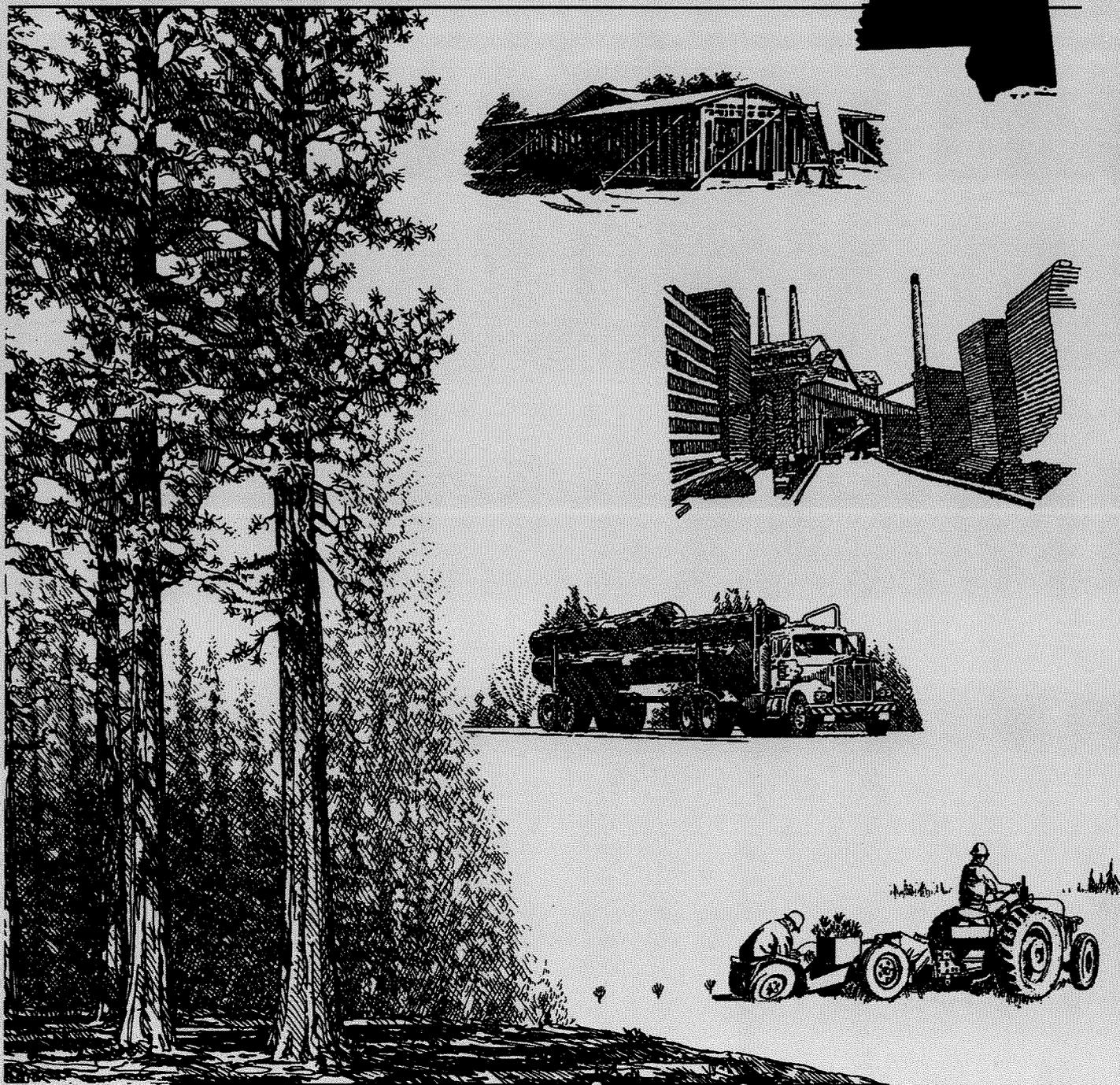


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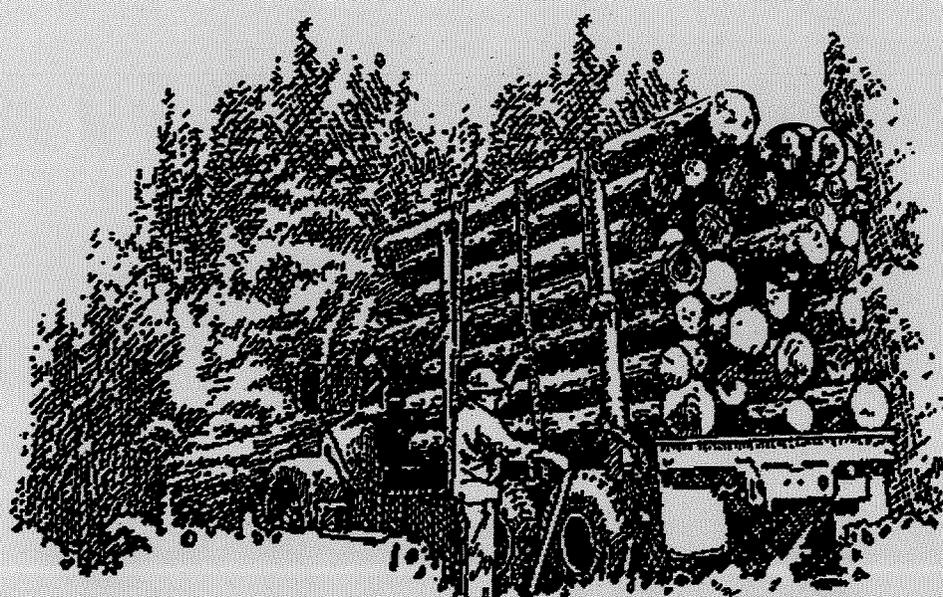
Mississippi's Timber Industry— An Assessment of Timber Product Output and Use, 1999

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



The Authors:

James W. Bentley, Tony G. Johnson, and Michael Howell are Resource Foresters with the Forest Inventory and Analysis Research Work Unit, Southern Research Station, U.S. Department of Agriculture, Forest Service, Knoxville, TN 37919.



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Southern Research Station
P.O. Box 2680
Asheville, NC 28802

Foreword

This report contains the findings of a 1999 canvass of primary wood-using plants in Mississippi, and presents changes in product output and residue use since 1995. It complements the Forest Inventory and Analysis (FIA) periodic inventory of volume and removals from the State's timberland. The canvass was conducted to determine the amount and source of wood receipts and annual timber product drain, by county, in 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 Mississippi 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 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 southeastern pulpmills. Medium density fiberboard, insulating board, and hardboard plants were included in this survey.

Acknowledgments

The authors thank Randal Romedy for review and comments; Dale Gormanson from 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.

The Southern Research Station 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.

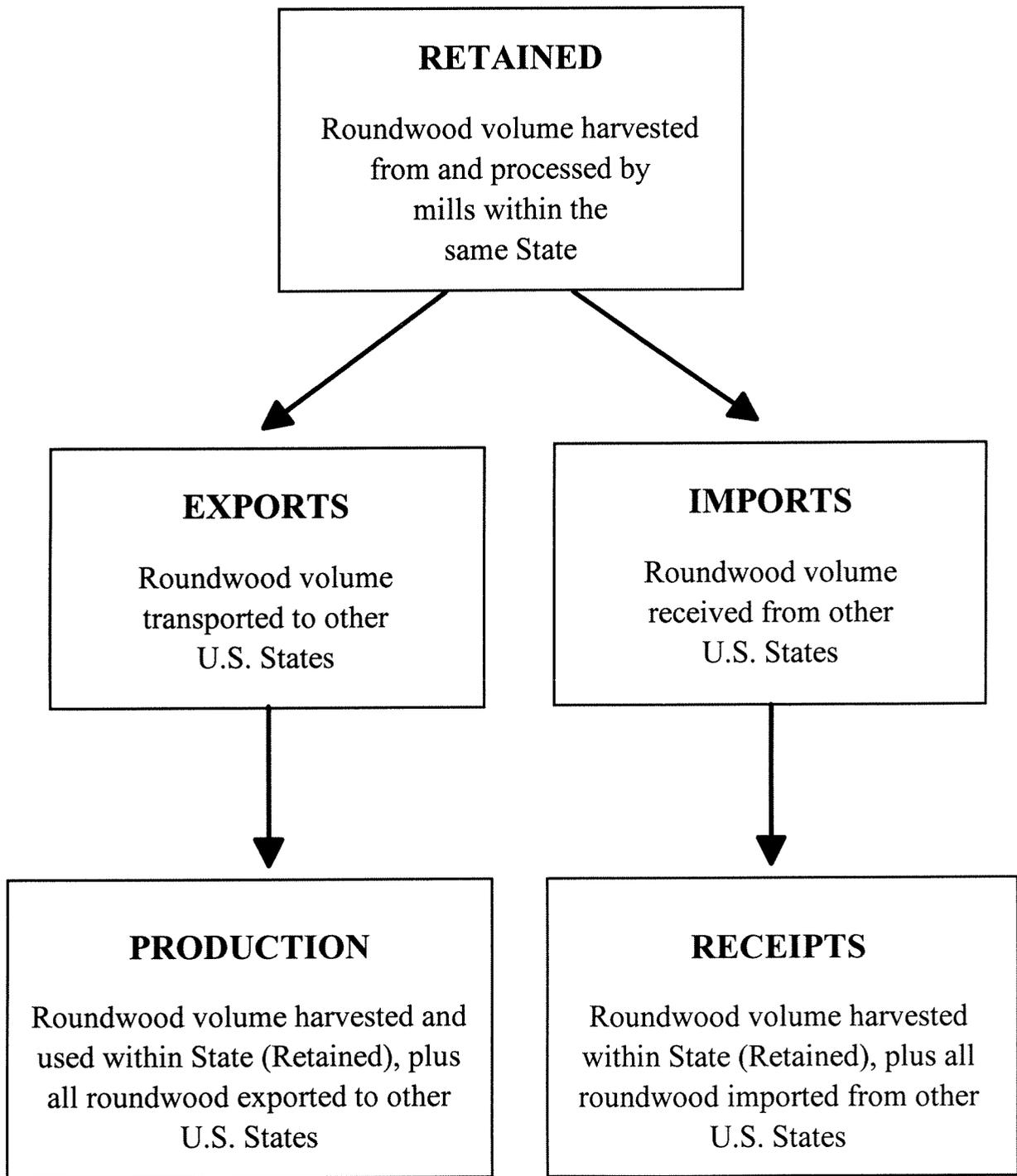


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^a All tables in this report are available in Microsoft® Excel workbook files. Upon request, these files will be supplied on 3½-inch diskettes.

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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 1995 and 1999, the combined industrial timber products output (TPO) from roundwood and plant byproducts declined 3 percent from 1.39 to 1.35 billion cubic feet.
- Timber products output from roundwood was down 43 million cubic feet, or 4 percent, to 991 million cubic feet,

while output of plant byproducts increased 31 thousand cubic feet to 357 million cubic feet.

- Output of softwood roundwood products increased 3 percent, totaling 709 million cubic feet, while output of hardwood roundwood products was down 19 percent to 283 million cubic feet (fig. 2).
- Figures 3 and 4 display softwood and hardwood county-level intensity of roundwood production for all industrial products across Mississippi. The data are depicted in cubic feet produced per acre of census land area. Counties with the highest production intensity are depicted in the darker shades. For softwoods the darkest shade represents more than 40 cubic feet of production per acre, while for hardwoods the darkest shade represents more than 18 cubic feet per acre.

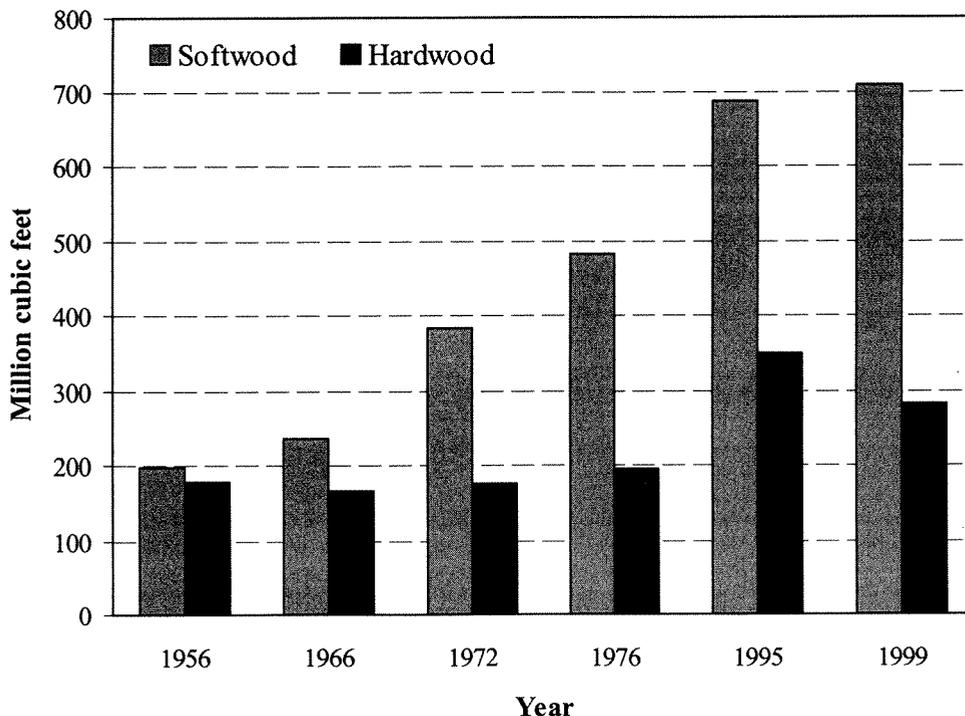


Figure 2—Roundwood production for all products by species group and year (see page 11 for references for individual years).

Cubic feet produced per
acre of census land area

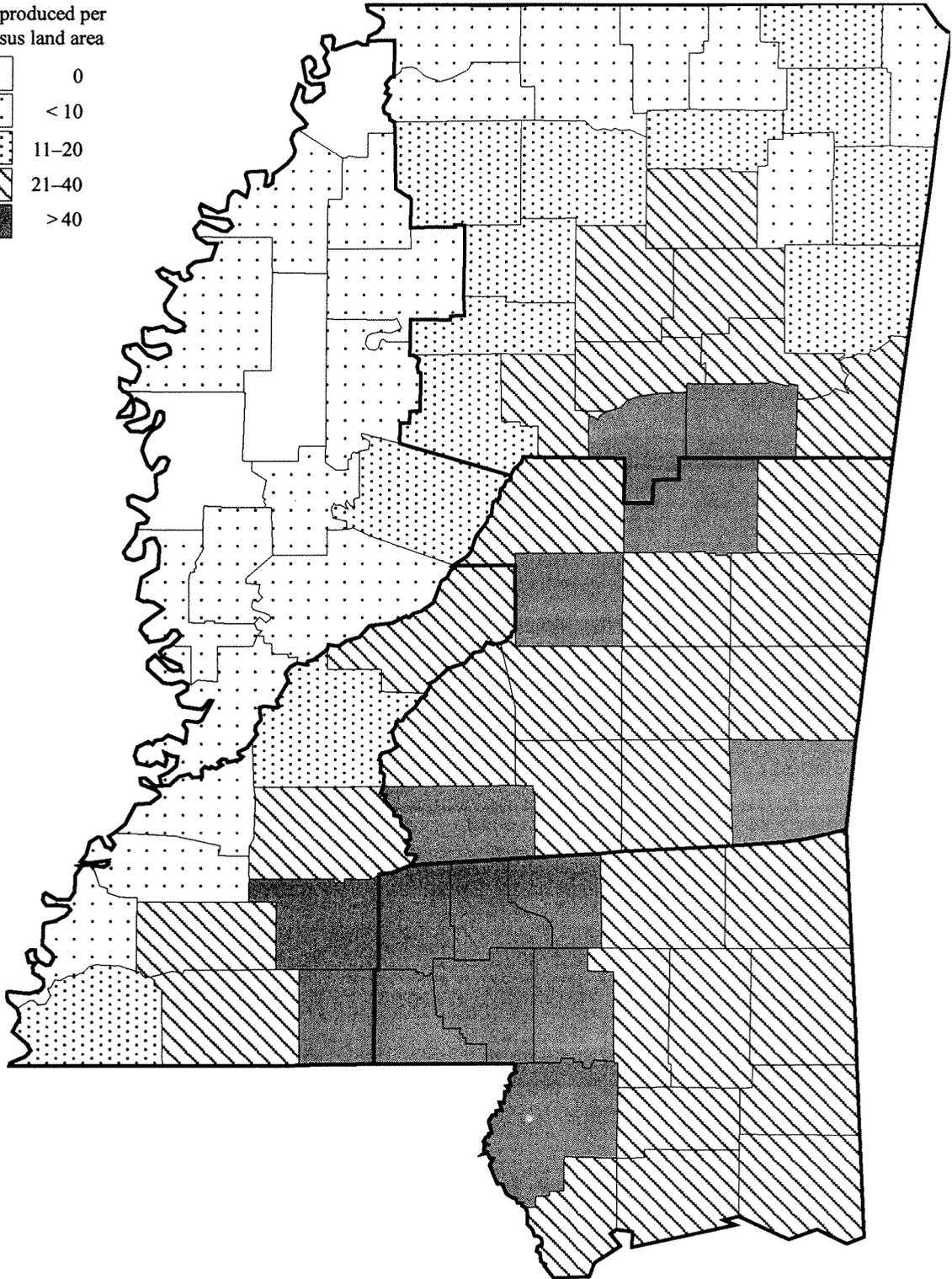
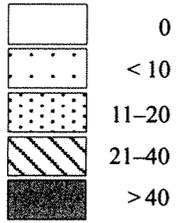


Figure 3—Intensity of roundwood softwood output for all industrial products in Mississippi by county, 1999.

Cubic feet produced per
acre of census land area

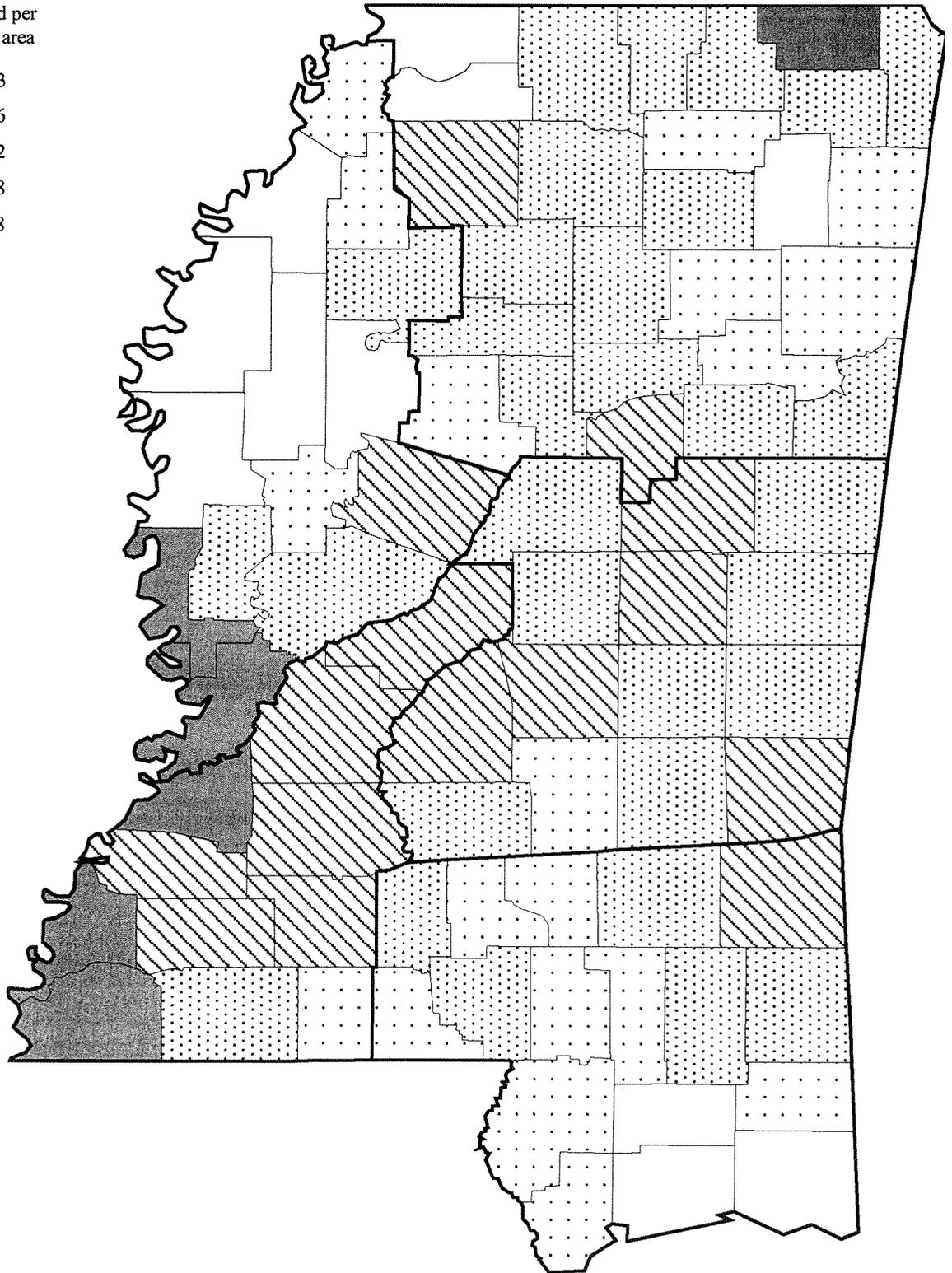
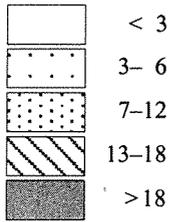


Figure 4—Intensity of roundwood hardwood output for all industrial products in Mississippi by county, 1999.

- Pulpwood and saw logs were the principal roundwood products in 1999. Combined output of these two products totaled 894 million cubic feet and accounted for 90 percent of the State's total industrial roundwood output (fig. 5).
- Total receipts at Mississippi mills, which included roundwood harvested and retained in the State and roundwood imported from other States, declined 3 percent to 855 million cubic feet. The number of primary roundwood-using plants in Mississippi in 1999 was 105, the same as in 1995.

Saw Logs

- Saw logs accounted for 49 percent of the State's total roundwood products. Output of softwood saw logs decreased 1 percent to 402 million cubic feet (2.2 billion board feet, International ¼-inch rule), while that of hardwood saw logs increased 2 percent to 88 million cubic feet (527 million board feet, International ¼-inch rule) (fig. 6).

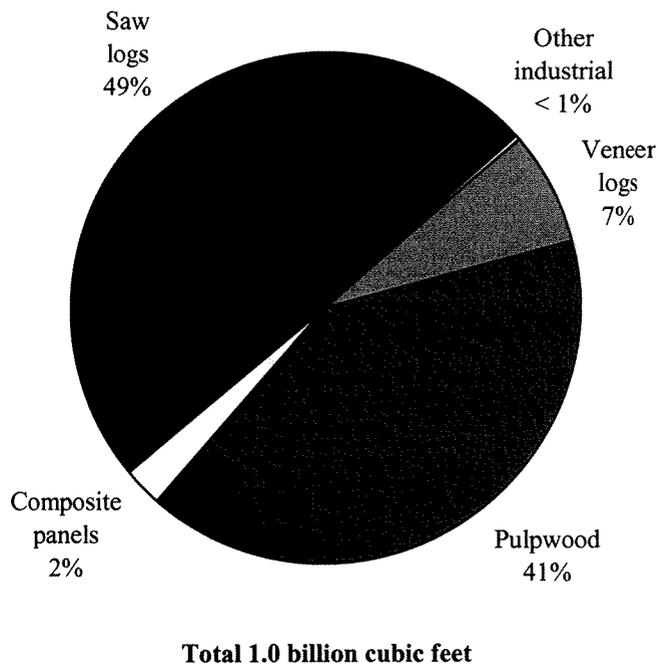


Figure 5—Roundwood production by type of product, 1999.

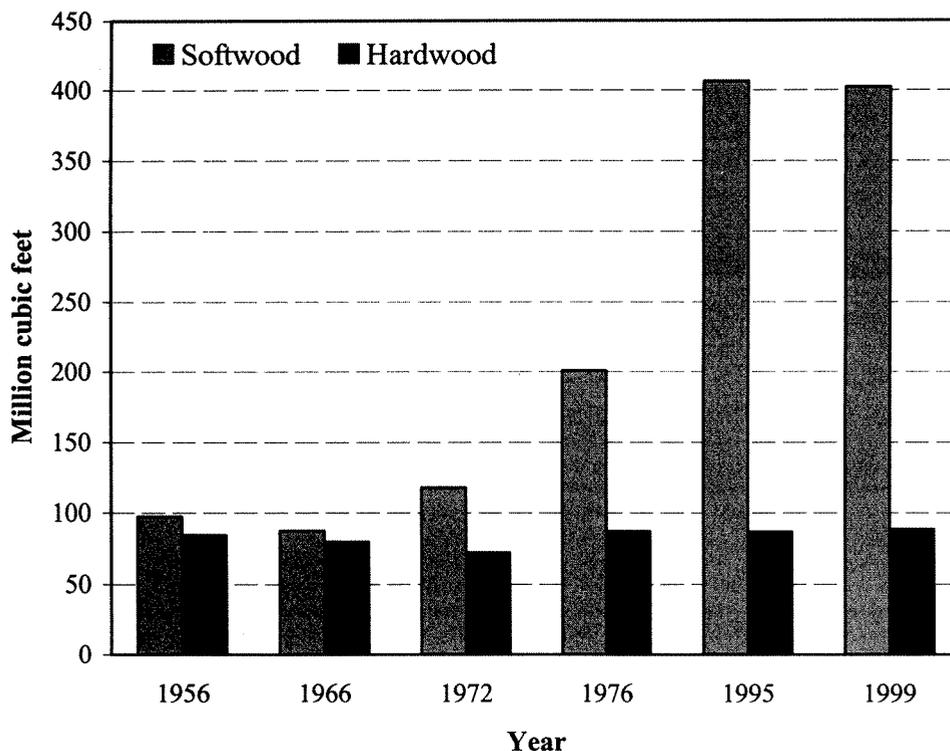


Figure 6—Roundwood saw-log production by species group and year (see page 11 for references for individual years).

- In 1999, Mississippi had 84 sawmills, the same as in 1995. The total number of sawmills does not include the several one-man sawmills in the State. Total saw-log receipts were down 1.5 million cubic feet to 523 million cubic feet. Softwood saw-log receipts declined 1 percent to 428 million cubic feet, while those of hardwoods increased 3 percent to 95 million cubic feet. Of the operating mills in 1999, 2 percent had receipts of less than 1 million board feet, while 64 percent had receipts greater than 10 million board feet. Those 54 mills, however, accounted for 94 percent of total saw-log receipts.
- Mississippi retained 91 percent of its saw-log production for domestic manufacture, with saw-log imports exceeding exports by 33 thousand cubic feet in 1999.

Pulpwood

- Total pulpwood production, including chipped roundwood, declined 11 percent to 404 million cubic feet (5.6 million cords) and accounted for 41 percent of the State's total roundwood TPO. Softwood output increased 9 percent to 227 million cubic feet; hardwood output declined 28 percent to 177 million cubic feet (fig. 7).

- Seven pulpmill facilities were operating and receiving roundwood in Mississippi in 1999, the same as in 1995. Total pulpwood receipts for these mills declined 10 million cubic feet to 229 million cubic feet, accounting for 27 percent of total receipts for all mills.
- Fifty percent of roundwood cut for pulpwood was retained for processing at Mississippi pulpmills. Roundwood pulpwood accounted for 80 percent of total known exports and 23 percent of total imports. Roundwood pulpwood exports amounted to 202 million cubic feet, imports amounted to 27 million cubic feet, making the State a net exporter of roundwood pulpwood.

Veneer Logs

- Output of veneer logs in 1999 totaled 71 million cubic feet and accounted for 7 percent of the State's total roundwood TPO volume. Softwood veneer production was up 13 percent to 65 million cubic feet (380 million board feet, International ¼-inch rule); output of hardwood veneer logs increased 8 percent to 6 million cubic feet (37 million board feet, International ¼-inch rule) (fig. 8).

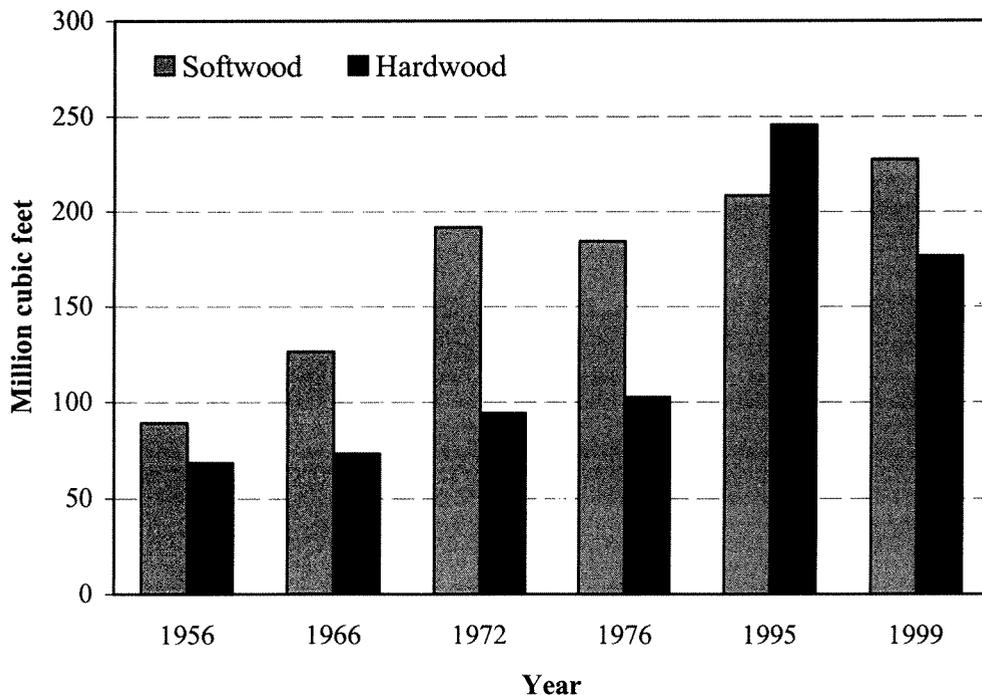


Figure 7—Roundwood pulpwood production by species group and year (see page 11 for references for individual years).

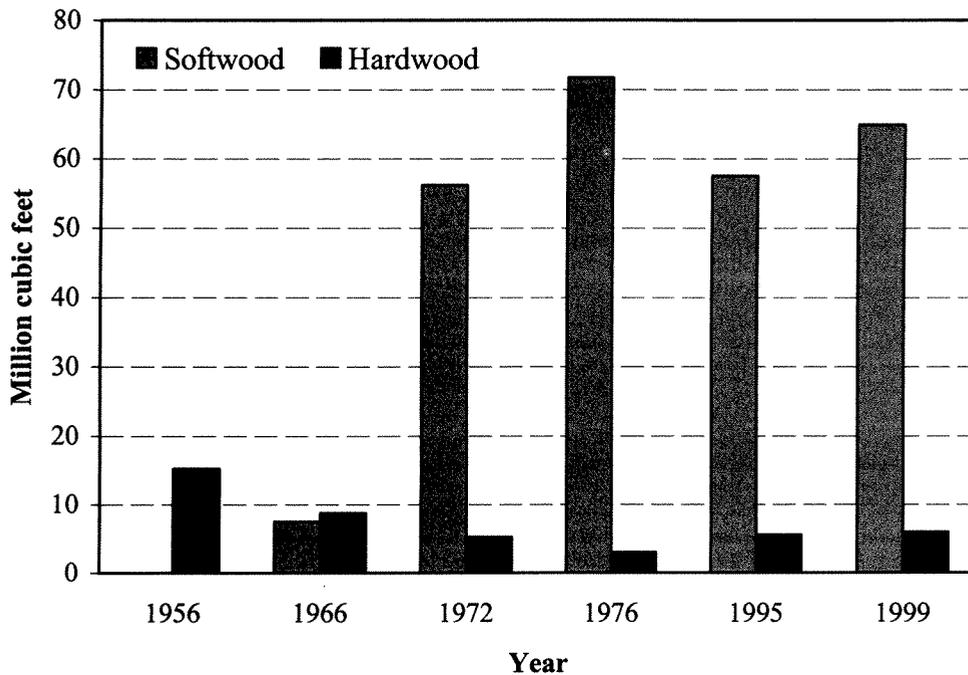


Figure 8—Roundwood veneer-log production by species group and year (see page 11 for references for individual years).

- The number of veneer mills operating in Mississippi in 1999 was 10, the same as in 1995. Receipts of veneer logs increased 5 percent to 79 million cubic feet. Softwood veneer receipts were up 5 million cubic feet to 74 million cubic feet.
- Mississippi retained 91 percent of its veneer-log production for processing at domestic veneer mills. Imports amounted to 14 million cubic feet, and exports totaled 7 million cubic feet, making the State a net importer of roundwood veneer logs.

Composite Panels

- Roundwood harvested from Mississippi's forests for composite panels increased 6 percent and totaled 24 million cubic feet. Softwood output was up 2 percent to 13 million cubic feet (175 thousand cords); hardwood production increased 10 percent to 12 million cubic feet (155 thousand cords) (fig. 9).
- Two oriented strand board (OSB) mills were operating in Mississippi in 1999, the same as in 1995. Total receipts for these mills declined 1 percent to 23 million cubic feet, and accounted for 3 percent of the State's total receipts.

- Ninety-four percent of the roundwood production harvested for composite panels was retained for processing at Mississippi's mills. Exports amounted to 1.5 million cubic feet, and imports totaled 13 thousand 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 13-percent increase from 1995. Softwood made up all of the other industrial products volume (fig. 10).
- The number of plants producing other industrial products remained the same at two since 1995. Total receipts of other industrial products decreased less than 1 percent to 1.4 million cubic feet.
- Mississippi was a net exporter of roundwood used for other industrial products, but only by a small margin; all of the 358 thousand cubic feet exported and 120 thousand cubic feet imported were softwood.

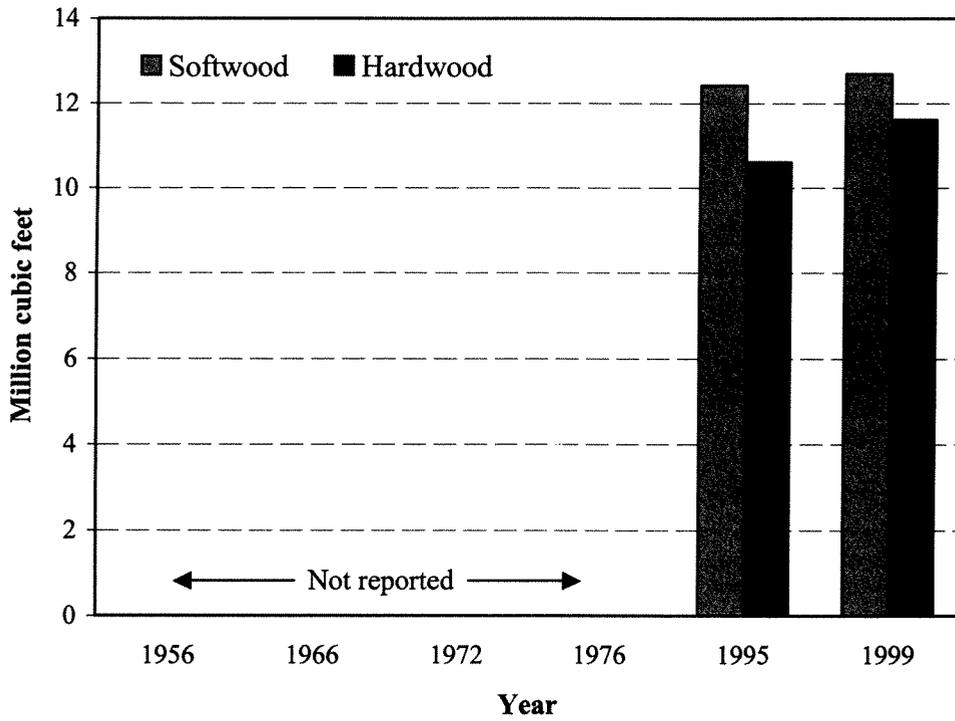


Figure 9—Roundwood for composite panels by species group and year (see page 11 for references for individual years).

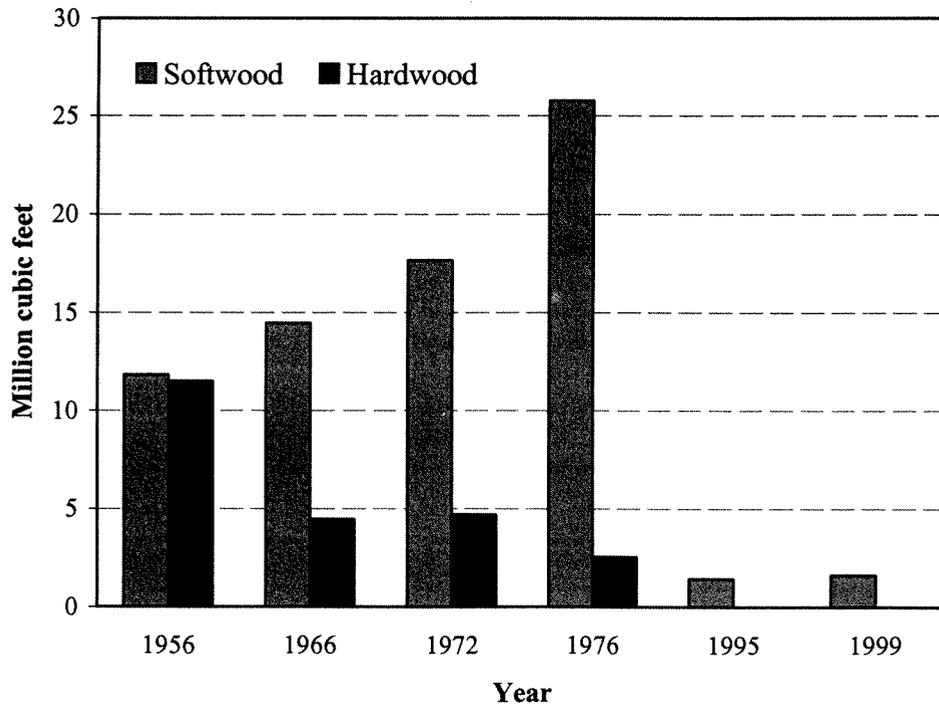


Figure 10—Roundwood for other industrial products by species group and year (see page 11 for references for individual years).

Plant Byproducts

- In 1999, processing of primary products in Mississippi mills generated 364 million cubic feet of wood and bark residues. Coarse residues from all primary products amounted to 139 million cubic feet, while bark volume totaled 88 million cubic feet. Collectively, sawdust and shavings made up 37 percent of total residues, or 136 million cubic feet (fig. 11).
- More than 357 million cubic feet, or 98 percent, of the wood and bark residues were used for a product. While 2 percent of the residues were not used for a product, 50 percent of the residues were used for industrial fuel and 36 percent were used for fiber products (fig. 12). One hundred and thirty million cubic feet, or 93 percent, of the coarse residues were used for fiber products. Most of the bark was used for industrial fuel or other miscellaneous products, while 74 percent of the sawdust and shavings were used for industrial fuel.
- The processing of saw logs generated 284 million cubic feet of mill residues, accounting for 78 percent of the total residues produced (fig. 13).

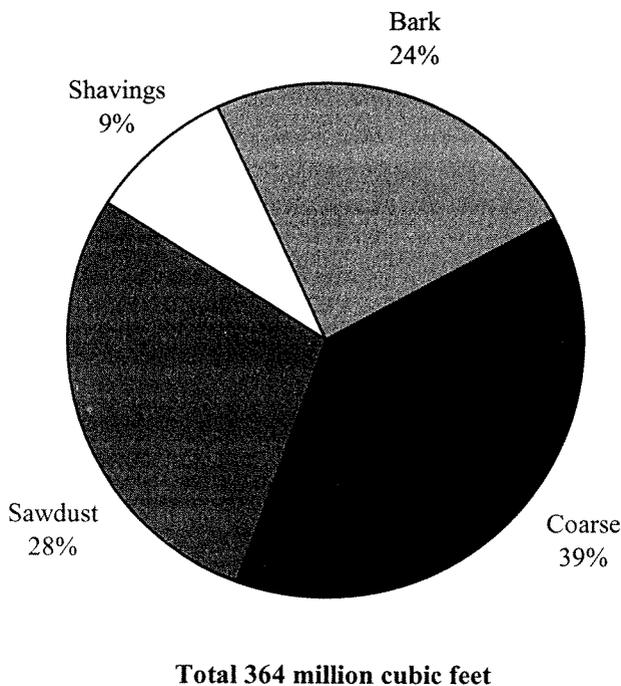


Figure 11—Primary mill residue by residue type, 1999.

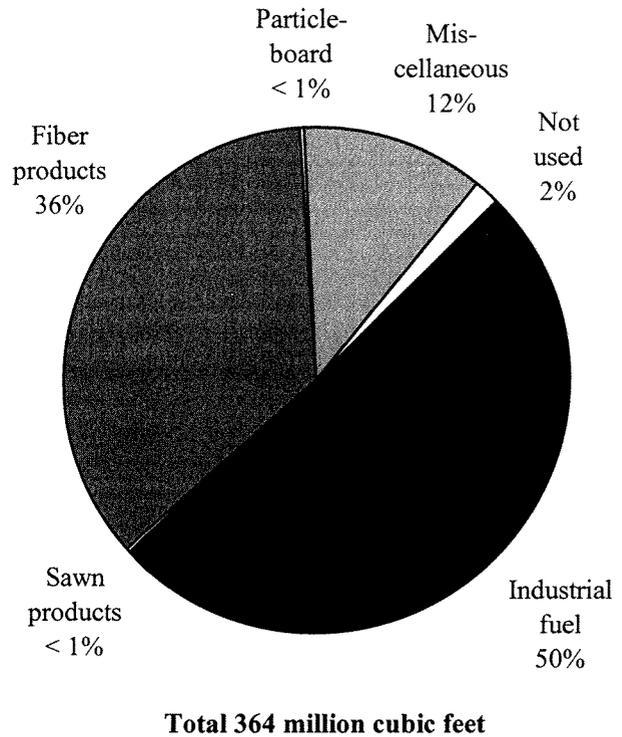


Figure 12—Disposal of residue by product, 1999.

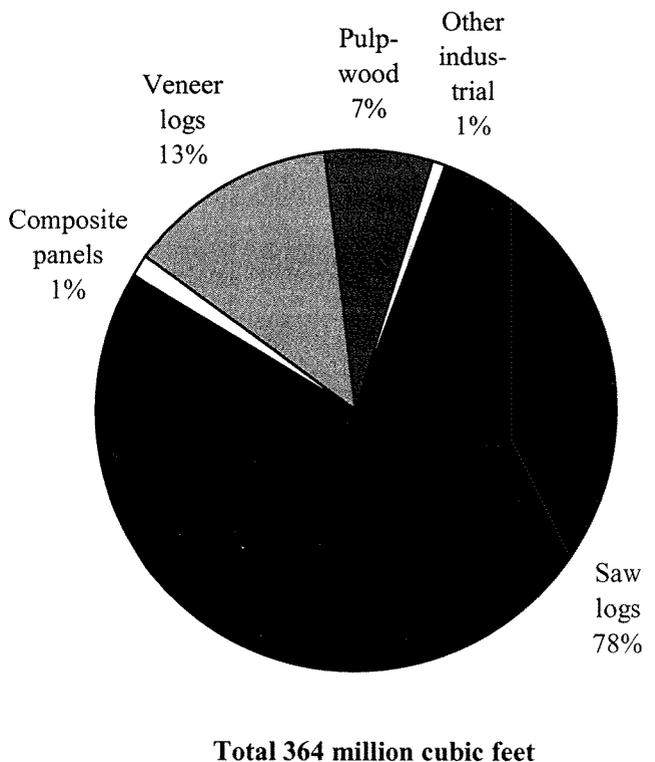


Figure 13—Primary mill residue produced by roundwood type, 1999.

Regional Trends

Output of industrial roundwood products declined in all regions with the exception of the South region. The Delta region had the largest decline at 11 percent. Most regions experienced significant drops in hardwood output.

Delta Region

- Roundwood output from the Delta region totaled 57 million cubic feet, down 11 percent since 1995.
- Pulpwood accounted for 47 percent of the region's TPO and 7 percent of the State's roundwood pulpwood output. The 23 million cubic feet of saw logs accounted for 40 percent of the total roundwood output for the region and 5 percent of the State's total saw-log output.
- In the Delta region, eight primary wood-using plants were operating during 1999: six sawmills, one veneer or plywood mill, and one pulpmill. These mills processed 6 percent of the State's total roundwood output.

North Region

- Two hundred and fifteen million cubic feet of roundwood were produced in the North region, a 9-percent decline.
- Saw-log production of 119 million cubic feet accounted for 55 percent of the region's total roundwood output. Production of pulpwood decreased 16 percent and accounted for 36 percent of the region's total roundwood output. Production of composite panels increased 1 percent and accounted for 7 percent of the region's total roundwood output and 62 percent of the State's composite panel output.
- The 23 mills operating in the North region in 1999 included 19 sawmills, 2 pulpmills, and 2 composite panel mills. These mills accounted for 22 percent of the total roundwood output for the State.

Central Region

- Roundwood output from the Central region totaled 270 million cubic feet, down 8 percent. Roundwood production from this region accounted for 27 percent of the total roundwood TPO for the State.
- Saw-log production of 139 million cubic feet accounted for another 51 percent of the region's total roundwood

output and 28 percent of the State's total saw-log output, the highest of any region. Pulpwood production declined by 16 percent to 101 million cubic feet, accounting for 37 percent of the region's total TPO. Veneer-log production increased 13 percent to 27 million cubic feet, accounting for 10 percent of the region's TPO and 39 percent of the State's total veneer-log output.

- The 21 primary wood-using plants operating in the Central region included 19 sawmills and 2 veneer or plywood mills.

South Region

- Roundwood output from the South region totaled 272 million cubic feet, a 7-percent increase since 1995. This region accounted for 27 percent of the State's total TPO, the only region to have an increase in total roundwood output.
- Saw-log production was up 5 percent to 125 million cubic feet, accounting for 46 percent of the region's total roundwood output. Production of pulpwood increased 10 percent and accounted for 44 percent of the region's total roundwood output and 30 percent of the State's pulpwood output, the highest of any region. Veneer-log production was up 5 percent and accounted for 9 percent of the region's TPO.
- In the South region, 26 primary wood-using plants were operating during 1999: 16 sawmills, 5 veneer or plywood mills, 3 pulpmills, and 2 other miscellaneous mills.

Southwest Region

- Roundwood output from the Southwest region totaled 178 million cubic feet, a decrease of 5 percent since 1995.
- Saw-log production increased 9 percent to 85 million cubic feet and accounted for 48 percent of the region's total roundwood output. Pulpwood production was down 20 percent and accounted for 44 percent of the region's total TPO.
- In the Southwest region, 27 primary wood-using plants were operating during 1999: 24 sawmills, 2 veneer or plywood mills, and 1 pulpmill. These mills processed 18 percent of the State's total roundwood 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 991 million cubic feet of roundwood output for industrial roundwood, an estimated 22 million cubic feet were harvested for domestic fuelwood, bringing Mississippi's total roundwood output to 1.0 billion 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 48 million cubic feet, or 5 percent of total roundwood output (fig. 14).

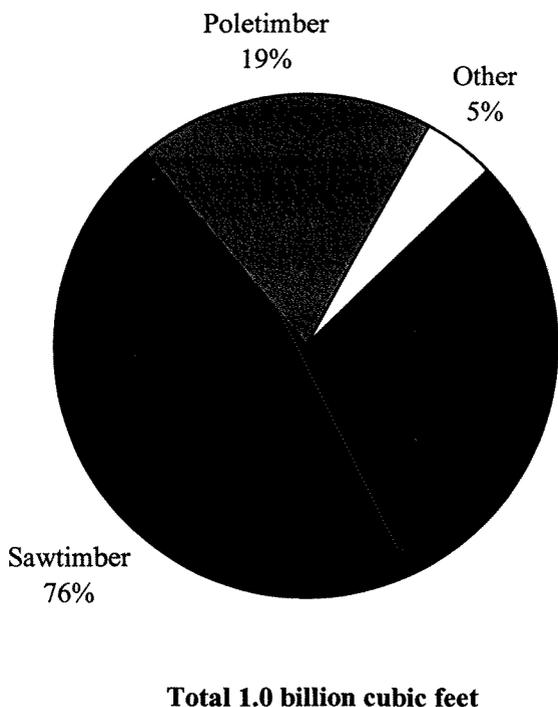


Figure 14—Roundwood output by source, 1999.

Ownership

- An estimated 741 million cubic feet, or 73 percent, of the total roundwood output came from nonindustrial private forest lands. Forest industry lands contributed 220 million cubic feet, or 22 percent of the output. Public lands made up the remaining 5 percent, or 53 million cubic feet (fig. 15).

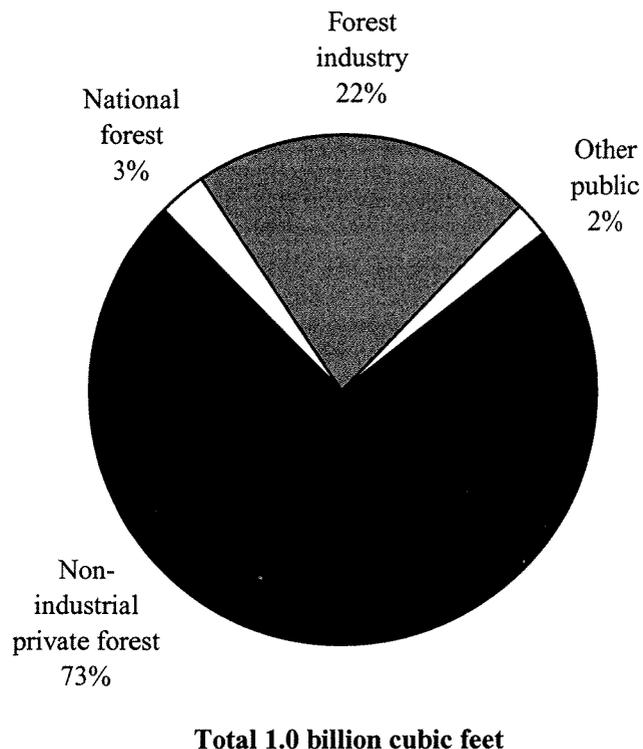
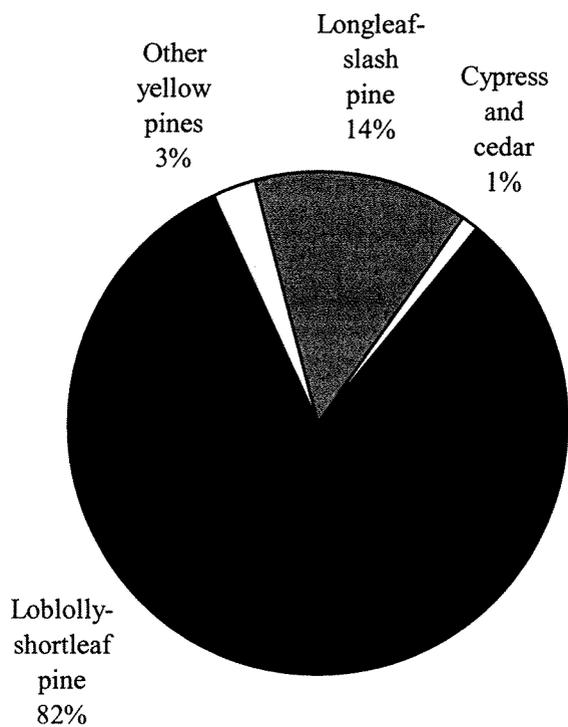


Figure 15—Roundwood output by ownership, 1999.

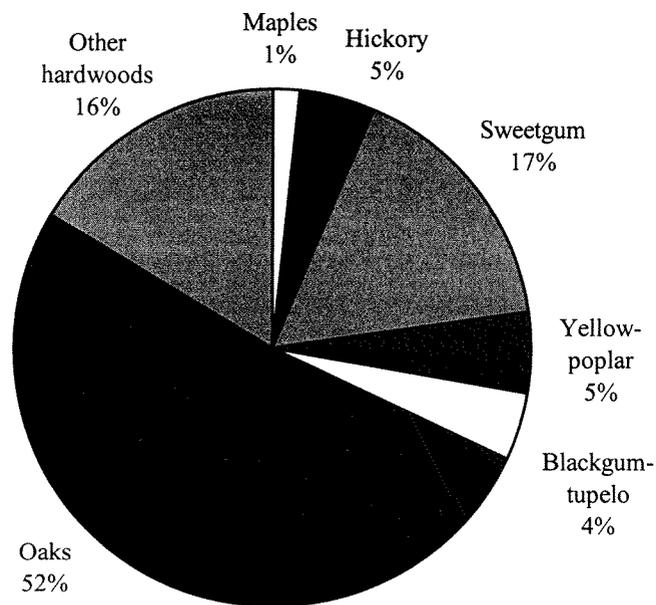
Species

- The loblolly and shortleaf pine group provided the most volume of any softwood species group, accounting for 82 percent of the total softwood output (fig. 16). The longleaf-slash pine type accounted for 14 percent of the softwood output. In hardwoods, the red oak and white oak groups combined accounted for 156 million cubic feet, or 52 percent of total hardwood output (fig. 17).



Total 711 million cubic feet

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



Total 302 million cubic feet

Figure 17—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, 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 saw-timber 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 Mississippi 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, Mississippi, 1995 and 1999

Product and species group	Year		Change	Percent change
	1995	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	406,154	402,071	-4,083	-1.0
Hardwood	86,628	88,495	1,867	2.2
Total	492,782	490,566	-2,216	-0.4
Veneer logs				
Softwood	57,510	64,920	7,410	12.9
Hardwood	5,559	5,983	424	7.6
Total	63,069	70,903	7,834	12.4
Pulpwood^a				
Softwood	208,192	227,311	19,119	9.2
Hardwood	245,523	176,565	-68,958	-28.1
Total	453,715	403,876	-49,839	-11.0
Composite panels				
Softwood	12,415	12,683	268	2.2
Hardwood	10,603	11,611	1,008	9.5
Total	23,018	24,294	1,276	5.5
Other industrial				
Softwood	1,451	1,646	195	13.4
Hardwood	0	0	0	--
Total	1,451	1,646	195	13.4
All industrial				
Softwood	685,722	708,631	22,909	3.3
Hardwood	348,313	282,654	-65,659	-18.9
Total	1,034,035	991,285	-42,750	-4.1
Byproduct output				
Softwood	288,931	288,515	-416	-0.1
Hardwood	68,520	68,967	447	0.7
Total	357,451	357,482	31	0.0
Total output				
Softwood	974,653	997,146	22,493	2.3
Hardwood	416,833	351,621	-65,212	-15.6
Total	1,391,486	1,348,767	-42,719	-3.1

-- = negligible.

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (3,443,000 cubic feet in 1995 and 3,257,000 cubic feet in 1999).

Table 2—Roundwood receipts by product and species group, Mississippi, 1995 and 1999

Product and species group	Year		Change	Percent change
	1995	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	432,205	427,955	-4,250	-1.0
Hardwood	92,491	95,241	2,750	3.0
Total	524,696	523,196	-1,500	-0.3
Veneer logs				
Softwood	70,069	73,507	3,438	4.9
Hardwood	5,192	5,161	-31	-0.6
Total	75,261	78,668	3,407	4.5
Pulpwood^a				
Softwood	147,817	153,644	5,827	3.9
Hardwood	105,479	75,451	-30,028	-28.5
Total	253,296	229,095	-24,201	-9.6
Composite panels				
Softwood	12,421	12,421	0	--
Hardwood	10,610	10,417	-193	-1.8
Total	23,031	22,838	-193	-0.8
Other industrial				
Softwood	1,412	1,408	-4	-0.3
Hardwood	0	0	0	--
Total	1,412	1,408	-4	-0.3
Total output				
Softwood	663,924	668,935	5,011	0.8
Hardwood	213,772	186,270	-27,502	-12.9
Total	877,696	855,205	-22,491	-2.6

-- = negligible.

^a Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (4,501,000 cubic feet in 1995 and 4,261,000 cubic feet in 1999).

Table 3—Number of primary wood-using plants by industry, Mississippi, 1946–1999

Industry	Year							
	1946	1956	1962	1966	1972	1976	1995	1999
Sawmills	>2,000	>1,000	290	305	241	218	84	84
Veneer mills	30	28	24	22	16	13	10	10
Pulpmills	6	6	6	7	8	7	7	7
Composite panel mills	0	0	0	0	0	0	2	2
Other mills	60	54	64	74	50	55	2	2
All plants	2,096	1,088	384	408	315	293	105	105

Table 4—Roundwood receipts by sawmill size, Mississippi, 1995 and 1999

Sawmill size class ^a	1995			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	2	1,247	0	2	1,247	0
1.0–4.99	13	44,732	2	11	36,857	1
5.0–9.99	17	123,017	4	17	126,173	5
10.0–49.99	37	885,418	31	37	845,335	29
>50	15	1,820,077	63	17	1,896,457	65
Total	84	2,874,491	100	84	2,906,069	100

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

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

Species	Type of mill						
	All mills	Veneer mills			OSB ^a and panels	Pulpmills ^b	Other mills
		Sawmills	Pine plywood	Other veneer			
<i>Thousand cubic feet</i>							
Softwood							
Yellow pine	513,904	426,568	73,507	0	12,421	NA	1,408
Eastern white pine	0	0	0	0	0	NA	0
Cedar	0	0	0	0	0	NA	0
Cypress	1,387	1,387	0	0	0	NA	0
Other softwood	0	0	0	0	0	NA	0
Unclassified	153,644	0	0	0	0	153,644	0
Total softwoods	668,935	427,955	73,507	0	12,421	153,644	1,408
Hardwood							
Blackgum and tupelo	13	13	0	0	0	NA	0
Soft maple	0	0	0	0	0	NA	0
Sweetgum	16,023	7,616	0	1,206	7,201	NA	0
Yellow-poplar	10,539	8,609	899	1,031	0	NA	0
Other soft hardwood	13,313	11,274	0	239	1,800	NA	0
Hickory	2,068	2,068	0	0	0	NA	0
Red oak	46,203	44,131	0	1,600	472	NA	0
White oak	16,831	16,191	0	168	472	NA	0
Other hard hardwood	5,829	5,339	0	18	472	NA	0
Unclassified	75,451	0	0	0	0	75,451	0
Total hardwoods	186,270	95,241	899	4,262	10,417	75,451	0
All species	855,205	523,196	74,406	4,262	22,838	229,095	1,408

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, Mississippi, 1995 and 1999

Year	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
Softwood					
1995	685,722	125,066	560,656	103,268	663,924
1999	708,632	135,079	368,963	95,382	668,935
Hardwood					
1995	348,313	164,817	183,496	30,276	213,772
1999	282,654	118,206	78,828	21,822	186,270
All species					
1995	1,034,035	289,883	744,152	133,544	877,696
1999	991,286	253,285	447,791	117,204	855,205

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

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	402,072	33,109	368,963	58,992	427,955
Hardwood	88,495	9,667	78,828	16,413	95,241
Total	490,567	42,776	447,791	75,405	523,196
Veneer logs					
Softwood	64,920	4,584	60,336	13,171	73,507
Hardwood	5,983	1,939	4,044	1,117	5,161
Total	70,903	6,523	64,380	14,288	78,668
Pulpwood^a					
Softwood	227,311	96,760	130,551	23,093	153,644
Hardwood	176,565	105,399	71,166	4,285	75,451
Total	403,876	202,159	201,717	27,378	229,095
Composite panels					
Softwood	12,683	268	12,415	6	12,421
Hardwood	11,611	1,201	10,410	7	10,417
Total	24,294	1,469	22,825	13	22,838
Other industrial					
Softwood	1,646	358	1,288	120	1,408
Hardwood	0	0	0	0	0
Total	1,646	358	1,288	120	1,408
All products					
Softwood	708,632	135,079	573,553	95,382	668,935
Hardwood	282,654	118,206	164,448	21,822	186,270
Total	991,286	253,285	738,001	117,204	855,205

^a Includes roundwood chipped.

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

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Mississippi (retained)	447,791	368,963	78,828
Exports to:			
Alabama	18,865	14,093	4,772
Arkansas	493	0	493
Kentucky	0	0	0
Louisiana	20,973	18,881	2,092
Tennessee	2,445	135	2,310
Total	42,776	33,109	9,667
Imports from:			
Alabama	40,285	37,751	2,534
Arkansas	178	10	168
Louisiana	31,532	19,915	11,617
Tennessee	3,410	1,316	2,094
Total	75,405	58,992	16,413

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

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Mississippi (retained)	64,380	60,336	4,044
Exports to:			
Alabama	3,466	2,853	613
Arkansas	1,295	0	1,295
Louisiana	1,762	1,731	31
Total	6,523	4,584	1,939
Imports from:			
Alabama	8,578	8,127	451
Louisiana	5,710	5,044	666
Total	14,288	13,171	1,117

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

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Mississippi (retained)	201,717	130,551	71,166
Exports to:			
Alabama	92,212	21,081	71,131
Arkansas	1,303	3	1,300
Louisiana	89,757	58,937	30,820
Tennessee	18,886	16,739	2,147
Texas	1	0	1
Total	202,159	96,760	105,399
Imports from:			
Alabama	21,445	21,364	81
Arkansas	537	234	303
Georgia	4	0	4
Louisiana	5,330	1,495	3,835
Tennessee	62	0	62
Total	27,378	23,093	4,285

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

Table 11—Composite panel volume by destination, source, and species group, Mississippi, 1999

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Mississippi (retained)	22,825	12,415	10,410
Exports to:			
Alabama	273	268	5
Louisiana	1,196	0	1,196
Total	1,469	268	1,201
Imports from:			
Alabama	13	6	7

Table 12—Other industrial volume by destination, source, and species group, Mississippi, 1999^a

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
Mississippi (retained)	1,288	1,288	0
Exports to:			
Alabama	207	207	0
Georgia	151	151	0
Total	358	358	0
Imports from:			
Alabama	120	120	0

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

Table 13—Primary mill residue volume by roundwood type, species group, and residue type, Mississippi, 1999

Roundwood type and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	230,150	37,918	98,573	62,678	30,981
Hardwood	53,875	10,888	21,132	19,995	1,860
Total	284,025	48,806	119,705	82,673	32,841
Veneer logs					
Softwood	42,986	6,970	17,020	18,996	0
Hardwood	3,707	608	1,528	1,571	0
Total	46,693	7,578	18,548	20,567	0
Pulpwood					
Softwood	15,672	15,672	0	0	0
Hardwood	9,344	9,344	0	0	0
Total	25,016	25,016	0	0	0
Composite panels					
Softwood	2,774	2,774	0	0	0
Hardwood	2,665	2,665	0	0	0
Total	5,439	5,439	0	0	0
Other industrial^a					
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	294,255	64,888	116,712	81,674	30,981
Hardwood	69,591	23,505	22,660	21,566	1,860
Total	363,846	88,393	139,372	103,240	32,841

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

Table 14—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Mississippi, 1995 and 1999

Product and species group	All types		Bark		Coarse		Sawdust		Shavings	
	1995	1999	1995	1999	1995	1999	1995	1999	1995	1999
<i>Thousand cubic feet</i>										
Fiber products										
Softwood	109,819	108,854	0	0	109,819	108,854	0	0	0	0
Hardwood	19,915	20,865	0	0	19,915	20,865	0	0	0	0
Total	129,734	129,719	0	0	129,734	129,719	0	0	0	0
Particleboard										
Softwood	679	679	0	0	679	679	0	0	0	0
Hardwood	244	239	0	0	244	239	0	0	0	0
Total	923	918	0	0	923	918	0	0	0	0
Sawn products										
Softwood	883	883	0	0	883	883	0	0	0	0
Hardwood	39	38	0	0	39	38	0	0	0	0
Total	922	921	0	0	922	921	0	0	0	0
Fuel										
Softwood	140,572	140,850	53,206	53,887	5,116	5,116	64,827	64,655	17,423	17,192
Hardwood	44,166	42,848	25,468	22,232	684	1,518	17,066	18,151	948	947
Total	184,738	183,698	78,674	76,119	5,800	6,634	81,893	82,806	18,371	18,139
Miscellaneous										
Softwood	36,978	37,249	10,493	10,498	423	353	12,129	12,658	13,933	13,740
Hardwood	4,156	4,977	998	1,205	0	0	2,353	2,859	805	913
Total	41,134	42,226	11,491	11,703	423	353	14,482	15,517	14,738	14,653
Not used										
Softwood	6,606	5,740	711	503	757	827	5,014	4,361	124	49
Hardwood	1,181	624	152	68	0	0	1,029	556	0	0
Total	7,787	6,364	863	571	757	827	6,043	4,917	124	49
All products										
Softwood	295,537	294,255	64,410	64,888	117,677	116,712	81,970	81,674	31,480	30,981
Hardwood	69,701	69,591	26,618	23,505	20,882	22,660	20,448	21,566	1,753	1,860
Total	365,238	363,846	91,028	88,393	138,559	139,372	102,418	103,240	33,233	32,841

Table 15—Roundwood timber products output by product and species group, Delta Region, Mississippi, 1995 and 1999

Product and species group	Year		Change	Percent change
	1995	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	11,635	11,677	42	0.4
Hardwood	10,629	11,024	395	3.7
Total	22,264	22,701	437	2.0
Veneer logs				
Softwood	0	0	0	--
Hardwood	1,929	2,012	83	4.3
Total	1,929	2,012	83	4.3
Pulpwood^a				
Softwood	3,633	3,436	-197	-5.4
Hardwood	30,698	23,561	-7,137	-23.2
Total	34,331	26,997	-7,334	-21.4
Composite panels				
Softwood	2,700	2,700	0	--
Hardwood	2,841	2,790	-51	-1.8
Total	5,541	5,490	-51	-0.9
Other industrial				
Softwood	0	22	22	--
Hardwood	0	0	0	--
Total	0	22	22	--
All industrial				
Softwood	17,968	17,835	-133	-0.7
Hardwood	46,097	39,387	-6,710	-14.6
Total	64,065	57,222	-6,843	-10.7

-- = negligible.

^a Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (0 cubic feet in 1995 and 0 cubic feet in 1999).

Table 16—Roundwood timber products output by county, product, and species group, Delta Region, Mississippi, 1999

County	All products		Saw logs		Veneer logs		Pulpwood ^a		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>												
Bolivar	19	602	19	157	0	0	0	445	0	0	0	0
Coahoma	22	611	22	185	0	374	0	52	0	0	0	0
Holmes	6,650	6,141	3,873	1,252	0	0	2,516	4,619	261	270	0	0
Humphreys	69	1,019	69	254	0	0	0	765	0	0	0	0
Issaquena	16	6,373	0	1,178	0	119	16	5,076	0	0	0	0
Leflore	2,705	1,116	1,921	0	0	0	0	306	784	810	0	0
Quitman	698	950	0	228	0	0	1	2	697	720	0	0
Sharkey	136	3,115	129	1,656	0	119	7	1,340	0	0	0	0
Sunflower	0	136	0	0	0	0	0	136	0	0	0	0
Tallahatchie	2,937	2,593	1,926	983	0	119	53	501	958	990	0	0
Tunica	0	1,124	0	494	0	556	0	74	0	0	0	0
Warren	283	9,146	64	846	0	325	219	7,975	0	0	0	0
Washington	22	324	0	245	0	0	0	79	0	0	22	0
Yazoo	4,278	6,137	3,654	3,546	0	400	624	2,191	0	0	0	0
All counties	17,835	39,387	11,677	11,024	0	2,012	3,436	23,561	2,700	2,790	22	0

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

Table 17—Roundwood timber products output by product and species group, North Region, Mississippi, 1995 and 1999

Product and species group	Year		Change	Percent change
	1995	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	97,613	91,308	-6,305	-6.5
Hardwood	29,453	27,249	-2,204	-7.5
Total	127,066	118,557	-8,509	-6.7
Veneer logs				
Softwood	1,399	2,608	1,209	86.4
Hardwood	396	496	100	25.3
Total	1,795	3,104	1,309	72.9
Pulpwood^a				
Softwood	39,492	44,116	4,624	11.7
Hardwood	53,365	33,771	-19,594	-36.7
Total	92,857	77,887	-14,970	-16.1
Composite panels				
Softwood	8,410	8,678	268	3.2
Hardwood	6,388	6,275	-113	-1.8
Total	14,798	14,953	155	1.0
Other industrial				
Softwood	0	0	0	--
Hardwood	0	0	0	--
Total	0	0	0	--
All industrial				
Softwood	146,914	146,710	-204	-0.1
Hardwood	89,602	67,791	-21,811	-24.3
Total	236,516	214,501	-22,015	-9.3

-- = negligible.

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (1,033,000 cubic feet in 1995 and 863,000 cubic feet in 1999).

Table 18—Roundwood timber products output by county, product, and species group, North Region, Mississippi, 1999

County	All products		Saw logs		Veneer logs		Pulpwood ^a		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>											
Alcorn	3,392	11,246	1,047	1,233	0	0	2,345	10,013	0	0	0	0
Benton	1,512	1,975	706	1,472	0	0	435	362	371	141	0	0
Calhoun	7,613	2,485	3,946	1,239	0	0	2,512	295	1,155	951	0	0
Carroll	5,241	1,946	3,280	716	386	0	1,401	1,050	174	180	0	0
Chickasaw	10,411	1,894	4,663	1,565	105	12	5,643	317	0	0	0	0
Choctaw	13,117	4,784	7,551	1,690	665	0	4,553	2,734	348	360	0	0
Clay	7,152	1,329	5,187	555	211	25	1,754	749	0	0	0	0
De Soto	8	324	8	281	0	0	0	43	0	0	0	0
Grenada	5,235	1,928	3,655	315	0	0	600	842	980	771	0	0
Itawamba	4,085	1,183	1,789	946	211	25	1,817	207	268	5	0	0
Lafayette	7,914	2,697	5,678	1,661	0	0	1,169	175	1,067	861	0	0
Lee	2,687	835	1,430	823	0	0	1,257	12	0	0	0	0
Lowndes	7,222	2,363	5,119	1,356	193	22	1,910	985	0	0	0	0
Marshall	3,361	3,875	2,788	1,065	0	0	202	2,669	371	141	0	0
Monroe	9,846	2,604	5,239	1,107	211	25	4,396	1,472	0	0	0	0
Montgomery	8,254	2,325	5,288	431	0	0	2,269	1,174	697	720	0	0
Oktibbeha	12,387	3,222	9,213	873	626	25	2,548	2,324	0	0	0	0
Panola	6,205	6,604	4,808	435	0	362	591	5,216	806	591	0	0
Pontotoc	7,259	1,948	5,274	1,561	0	0	1,614	246	371	141	0	0
Prentiss	2,835	1,713	1,681	1,525	0	0	1,154	188	0	0	0	0
Tate	424	215	0	48	0	0	53	26	371	141	0	0
Tippah	2,445	1,924	681	1,214	0	0	1,764	710	0	0	0	0
Tishomingo	2,400	2,010	928	1,277	0	0	1,472	733	0	0	0	0
Union	4,082	1,390	3,363	1,142	0	0	348	107	371	141	0	0
Webster	5,953	3,025	4,042	1,881	0	0	1,476	694	435	450	0	0
Yalobusha	5,670	1,947	3,944	838	0	0	833	428	893	681	0	0
All counties	146,710	67,791	91,308	27,249	2,608	496	44,116	33,771	8,678	6,275	0	0

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (863,000 cubic feet in 1999).

Table 19—Roundwood timber products output by product and species group, Central Region, Mississippi, 1995 and 1999

Product and species group	Year		Change	Percent change
	1995	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	130,516	120,842	-9,674	-7.4
Hardwood	16,079	18,045	1,966	12.2
Total	146,595	138,887	-7,708	-5.3
Veneer logs				
Softwood	23,040	25,883	2,843	12.3
Hardwood	1,320	1,546	226	17.1
Total	24,360	27,429	3,069	12.6
Pulpwood^a				
Softwood	54,535	54,600	65	0.1
Hardwood	65,038	46,019	-19,019	-29.2
Total	119,573	100,619	-18,954	-15.9
Composite panels				
Softwood	1,305	1,305	0	--
Hardwood	1,374	1,350	-24	-1.7
Total	2,679	2,655	-24	-0.9
Other industrial				
Softwood	73	222	149	204.1
Hardwood	0	0	0	--
Total	73	222	149	204.1
All industrial				
Softwood	209,469	202,852	-6,617	-3.2
Hardwood	83,811	66,960	-16,851	-20.1
Total	293,280	269,812	-23,468	-8.0

-- = negligible.

^a Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (444,000 cubic feet in 1995 and 435,000 cubic feet in 1999).

Table 20—Roundwood timber products output by county, product, and species group, Central Region, Mississippi, 1999

County	All products		Saw logs		Veneer logs		Pulpwood ^a		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>												
Attala	14,994	5,281	8,886	1,712	665	0	4,921	3,029	522	540	0	0
Clarke	18,030	7,652	6,993	458	3,659	97	7,268	7,097	0	0	110	0
Jasper	12,534	3,637	6,178	1,230	3,702	120	2,654	2,287	0	0	0	0
Kemper	15,343	3,896	10,515	661	1,800	43	2,972	3,192	0	0	56	0
Lauderdale	11,763	5,398	6,589	767	1,608	381	3,518	4,250	0	0	48	0
Leake	15,136	4,274	8,589	1,447	1,557	38	4,990	2,789	0	0	0	0
Neshoba	14,024	5,394	8,848	554	1,947	54	3,229	4,786	0	0	0	0
Newton	9,870	3,437	4,608	348	1,863	54	3,399	3,035	0	0	0	0
Noxubee	16,839	3,700	13,481	1,399	959	25	2,043	1,916	348	360	8	0
Rankin	17,694	8,092	9,417	4,197	1,614	443	6,663	3,452	0	0	0	0
Scott	10,327	5,512	6,286	909	1,390	38	2,651	4,565	0	0	0	0
Simpson	16,899	4,351	9,365	2,198	2,439	181	5,095	1,972	0	0	0	0
Smith	12,997	1,518	8,376	692	1,988	50	2,633	776	0	0	0	0
Winston	16,402	4,818	12,711	1,473	692	22	2,564	2,873	435	450	0	0
All counties	202,852	66,960	120,842	18,045	25,883	1,546	54,600	46,019	1,305	1,350	222	0

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (435,000 cubic feet in 1999).

Table 21—Roundwood timber products output by product and species group, South Region, Mississippi, 1995 and 1999

Product and species group	Year		Change	Percent change
	1995	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	108,884	114,825	5,941	5.5
Hardwood	9,841	10,333	492	5.0
Total	118,725	125,158	6,433	5.4
Veneer logs				
Softwood	23,000	24,260	1,260	5.5
Hardwood	523	524	1	0.2
Total	23,523	24,784	1,261	5.4
Pulpwood^a				
Softwood	71,109	92,819	21,710	30.5
Hardwood	38,491	27,718	-10,773	-28.0
Total	109,600	120,537	10,937	10.0
Composite panels				
Softwood	0	0	0	--
Hardwood	0	0	0	--
Total	0	0	0	--
Other industrial				
Softwood	1,378	1,402	24	1.7
Hardwood	0	0	0	--
Total	1,378	1,402	24	1.7
All industrial				
Softwood	204,371	233,306	28,935	14.2
Hardwood	48,855	38,575	-10,280	-21.0
Total	253,226	271,881	18,655	7.4

-- = negligible.

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (1,472,000 cubic feet in 1995 and 1,469,000 cubic feet in 1999).

Table 22—Roundwood timber products output by county, product, and species group, South Region, Mississippi, 1999

County	All products		Saw logs		Veneer logs		Pulpwood ^a		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>											
Covington	14,939	1,303	10,230	552	2,409	168	2,234	583	0	0	66	0
Forrest	8,245	1,682	3,138	478	957	4	4,075	1,200	0	0	75	0
George	11,843	1,727	4,497	543	868	4	6,412	1,180	0	0	66	0
Greene	14,924	2,839	6,458	711	780	4	7,596	2,124	0	0	90	0
Hancock	10,671	1,087	3,440	313	1,086	6	6,039	768	0	0	106	0
Harrison	9,129	898	3,599	376	1,303	7	4,111	515	0	0	116	0
Jackson	9,731	1,057	4,694	444	1,303	7	3,686	606	0	0	48	0
Jefferson Davis	12,833	827	6,524	480	585	23	5,668	324	0	0	56	0
Jones	15,517	3,915	8,933	666	2,623	93	3,895	3,156	0	0	66	0
Lamar	15,955	1,611	7,537	506	2,646	29	5,678	1,076	0	0	94	0
Lawrence	17,492	2,996	9,435	1,802	780	31	7,277	1,163	0	0	0	0
Marion	17,897	2,848	11,006	1,333	2,047	23	4,742	1,492	0	0	102	0
Pearl River	21,355	2,773	8,911	313	2,593	31	9,723	2,429	0	0	128	0
Perry	10,805	3,881	3,540	325	562	3	6,609	3,553	0	0	94	0
Stone	10,138	630	4,686	0	611	2	4,739	628	0	0	102	0
Walthall	14,753	1,294	11,224	767	779	4	2,702	523	0	0	48	0
Wayne	17,079	7,207	6,973	724	2,328	85	7,633	6,398	0	0	145	0
All counties	233,306	38,575	114,825	10,333	24,260	524	92,819	27,718	0	0	1,402	0

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (1,469,000 cubic feet in 1999).

Table 23—Roundwood timber products output by product and species group, Southwest Region, Mississippi, 1995 and 1999

Product and species group	Year		Change	Percent change
	1995	1999		
<i>Thousand cubic feet</i>				
Saw logs				
Softwood	57,506	63,419	5,913	10.3
Hardwood	20,626	21,844	1,218	5.9
Total	78,132	85,263	7,131	9.1
Veneer logs				
Softwood	10,071	12,169	2,098	20.8
Hardwood	1,391	1,405	14	1.0
Total	11,462	13,574	2,112	18.4
Pulpwood^a				
Softwood	39,423	32,340	-7,083	-18.0
Hardwood	57,931	45,496	-12,435	-21.5
Total	97,354	77,836	-19,518	-20.0
Composite panels				
Softwood	0	0	0	--
Hardwood	0	1,196	1,196	--
Total	0	1,196	1,196	--
Other industrial				
Softwood	0	0	0	--
Hardwood	0	0	0	--
Total	0	0	0	--
All industrial				
Softwood	107,000	107,928	928	0.9
Hardwood	79,948	69,941	-10,007	-12.5
Total	186,948	177,869	-9,079	-4.9

-- = negligible.

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (494,000 cubic feet in 1995 and 490,000 cubic feet in 1999).

Table 24—Roundwood timber products output by county, product, and species group, Southwest Region, Mississippi, 1999

County	All products		Saw logs		Veneer logs		Pulpwood ^a		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	625	5,964	24	2,014	150	6	451	3,286	0	658	0	0
Amite	15,934	4,672	9,564	734	1,499	4	4,871	3,934	0	0	0	0
Claiborne	2,266	6,488	900	3,061	0	344	1,366	3,083	0	0	0	0
Copiah	19,426	8,247	10,084	3,665	2,461	398	6,881	4,184	0	0	0	0
Franklin	9,961	5,286	6,756	1,077	1,300	149	1,905	4,060	0	0	0	0
Hinds	6,734	7,290	4,264	2,922	0	325	2,470	4,043	0	0	0	0
Jefferson	2,656	5,626	24	962	465	0	2,167	4,664	0	0	0	0
Lincoln	17,959	5,890	11,412	2,012	3,218	48	3,329	3,830	0	0	0	0
Madison	9,735	6,847	6,142	3,373	249	119	3,344	3,355	0	0	0	0
Pike	14,559	1,116	10,189	269	2,211	8	2,159	839	0	0	0	0
Wilkinson	8,073	12,515	4,060	1,755	616	4	3,397	10,218	0	538	0	0
All counties	107,928	69,941	63,419	21,844	12,169	1,405	32,340	45,496 #	0	1,196 #	0	0

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (490,000 cubic feet in 1999).

Table 25—Total roundwood output by product, species group, and source or material, Mississippi, 1999

Product and species group	All sources	Total	Growing-stock trees		Other sources
			Sawtimber	Poletimber	
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	402,072	396,573	368,813	27,760	5,499
Hardwood	88,495	86,422	80,373	6,050	2,073
Total	490,567	482,995	449,185	33,810	7,572
Veneer logs and bolts					
Softwood	64,920	63,602	59,785	3,816	1,318
Hardwood	5,983	5,880	5,880	0	103
Total	70,903	69,481	65,665	3,816	1,422
Pulpwood					
Softwood	227,311	213,523	124,458	89,065	13,788
Hardwood	176,565	155,342	104,478	50,864	21,223
Total	403,876	368,865	228,936	139,929	35,011
Composite panels					
Softwood	12,683	10,855	6,426	4,428	1,828
Hardwood	11,611	10,629	5,968	4,662	982
Total	24,294	21,484	12,394	9,090	2,810
Poles and posts					
Softwood	1,494	1,433	1,377	56	61
Hardwood	0	0	0	0	0
Total	1,494	1,433	1,377	56	61
Other miscellaneous					
Softwood	152	148	111	37	4
Hardwood	0	0	0	0	0
Total	152	148	111	37	4
Total industrial products					
Softwood	708,632	686,134	560,971	125,163	22,498
Hardwood	282,654	258,273	196,698	61,575	24,381
Total	991,286	944,407	757,668	186,738	46,879
Fuelwood					
Softwood	2,865	2,624	1,864	760	241
Hardwood	19,369	18,099	12,095	6,004	1,270
Total	22,234	20,723	13,959	6,764	1,511
All products					
Softwood	711,497	688,758	562,834	125,923	22,739
Hardwood	302,023	276,372	208,793	67,579	25,651
Total	1,013,520	965,130	771,627	193,503	48,390

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

Table 26—Total roundwood output by species group, survey unit, and ownership class, Mississippi, 1999

Species group and survey unit	Total	Ownership class			
		National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand cubic feet</i>					
Softwood					
Delta	17,885	0	0	305	17,580
North	147,299	2,011	3,491	26,002	115,795
Central	203,673	5,707	2,609	44,773	150,584
South	234,274	12,292	6,645	72,052	143,285
Southwest	108,366	3,430	3,423	18,828	82,685
Total softwoods	711,497	23,439	16,169	161,961	509,928
Hardwood					
Delta	42,091	3,329	883	6,354	31,526
North	72,433	608	1,215	4,827	65,783
Central	71,530	1,519	976	15,900	53,136
South	41,225	1,917	162	15,821	23,325
Southwest	74,744	1,191	1,684	14,891	56,977
Total hardwoods	302,023	8,564	4,921	57,793	230,746
All species	1,013,520	32,003	21,090	219,753	740,674

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 product, Mississippi, 1999

Species group and detailed species group	Total	Product						
		Saw log	Veneer	Pulpwood	Composite panel	Poles and posts	Other miscellaneous	Fuelwood
<i>Thousand cubic feet</i>								
Softwood								
Cedar	4,203	3,248	49	830	59	0	0	17
Longleaf-slash pine	98,393	44,658	10,988	41,641	54	650	4	397
Loblolly-shortleaf pine	585,219	340,210	51,324	179,287	11,089	808	144	2,356
Other yellow pines	20,339	12,144	2,417	4,879	784	30	4	82
Cypress	3,343	1,811	141	675	697	5	0	13
Total softwoods	711,497	402,072	64,920	227,311	12,683	1,494	152	2,865
Hardwood								
Soft maple	4,500	1,219	122	2,766	106	0	0	288
Hard maple	130	70	8	44	0	0	0	8
Other birch	1,273	406	0	747	38	0	0	82
Hickory	14,476	4,881	285	7,740	643	0	0	927
Beech	2,682	775	75	1,608	52	0	0	172
Ash	4,746	1,229	170	2,895	147	0	0	305
Black walnut	54	18	0	18	15	0	0	3
Sweetgum	50,086	14,031	777	30,418	1,647	0	0	3,213
Yellow-poplar	14,812	4,578	270	8,465	550	0	0	949
Blackgum-tupelo	12,100	3,041	154	8,008	120	0	0	777
Sycamore	3,420	1,050	166	1,756	229	0	0	220
Cottonwood	7,098	1,268	362	4,827	185	0	0	456
Black cherry	3,076	819	57	1,963	40	0	0	197
Select white oaks	27,531	8,568	400	15,483	1,315	0	0	1,765
Other white oaks	18,672	6,190	256	10,158	871	0	0	1,197
Select red oaks	22,477	7,043	527	12,552	914	0	0	1,442
Other red oaks	87,336	26,243	1,631	50,258	3,607	0	0	5,597
Basswood	327	116	14	174	2	0	0	21
Elm	7,501	2,298	175	4,385	161	0	0	482
Other Eastern hardwoods	19,726	4,651	535	12,303	969	0	0	1,267
Total hardwoods	302,023	88,495	5,983	176,565	11,611	0	0	19,369
All species	1,013,520	490,567	70,903	403,876	24,294	1,494	152	22,234

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

Table 28—Total roundwood output by species group, detailed species group, and ownership class, Mississippi, 1999

Species group and detailed species group	Total	Ownership class			Nonindustrial private
		National forest	Other public	Forest industry	
<i>Thousand cubic feet</i>					
Softwood					
Cedar	4,203	2	56	224	3,921
Longleaf-slash pine	98,393	6,831	4,942	31,083	55,536
Loblolly-shortleaf pine	585,219	16,104	10,768	124,743	433,604
Other yellow pines	20,339	502	94	5,288	14,455
Cypress	3,343	0	309	622	2,412
Total softwoods	711,497	23,439	16,169	161,961	509,928
Hardwood					
Soft maple	4,500	48	67	740	3,645
Hard maple	130	0	0	3	127
Other birch	1,273	59	0	10	1,204
Hickory	14,476	168	191	2,590	11,527
Beech	2,682	19	48	666	1,949
Ash	4,746	372	33	774	3,567
Black walnut	54	2	16	3	33
Sweetgum	50,086	928	924	8,882	39,352
Yellow-poplar	14,812	326	147	2,704	11,635
Blackgum-tupelo	12,100	347	84	4,048	7,620
Sycamore	3,420	88	26	585	2,721
Cottonwood	7,098	57	253	1,452	5,336
Black cherry	3,076	162	68	493	2,353
Select white oaks	27,531	377	312	5,166	21,676
Other white oaks	18,672	1,529	180	3,063	13,900
Select red oaks	22,477	342	644	4,418	17,072
Other red oaks	87,336	3,254	1,372	16,259	66,451
Basswood	327	0	2	75	250
Elm	7,501	76	79	1,273	6,072
Other Eastern hardwoods	19,726	409	476	4,586	14,255
Total hardwoods	302,023	8,564	4,921	57,793	230,746
All species	1,013,520	32,003	21,090	219,753	740,674

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



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

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Mississippi's timber industry—an assessment of timber product output and use, 1999. Resour. Bull. SRS-80. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 40 p.

In 1999, industrial roundwood output from Mississippi's forests totaled 991 million cubic feet, 4 percent less than in 1995. Mill byproducts generated from primary manufacturers remained the same at 357 million cubic feet. Almost all plant residues were used primarily for fuel and fiber products. Saw logs were the leading roundwood product at 491 million cubic feet; pulpwood ranked second at 404 million cubic feet; veneer logs were third at 71 million cubic feet. The number of primary processing plants remained at 105 in 1999. Total receipts declined 3 percent to 855 million cubic feet.

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

United States
Department of Agriculture

Forest Service

**Southern
Research Station**
P.O. Box 2680
200 Weaver Blvd.
Asheville, NC 28802

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