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

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

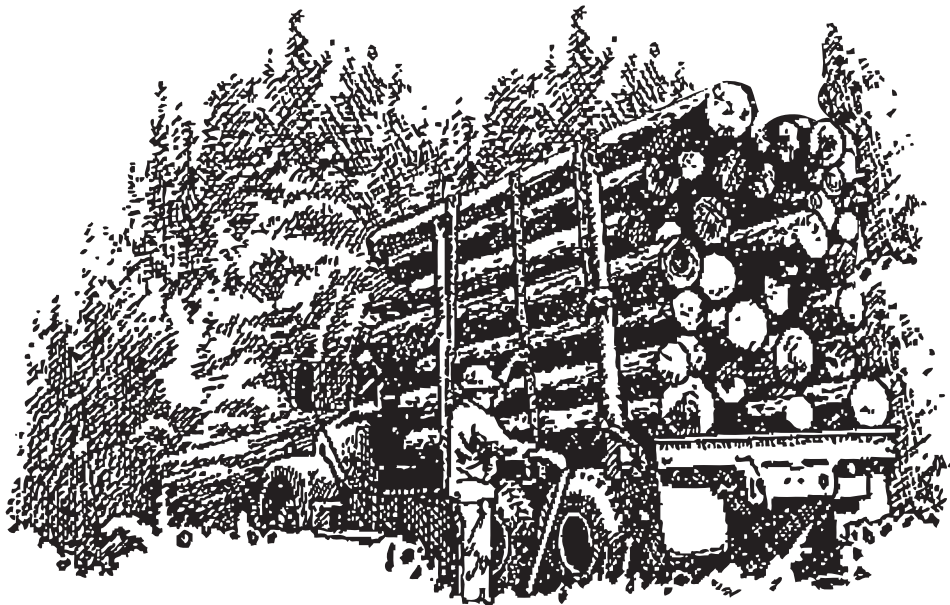


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## The Authors:

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**Tony G. Johnson**, Resource Analyst, **James W. Bentley**, Resource Forester, and **Michael Howell**, Resource Forester, USDA Forest Service, Southern Research Station, Knoxville, TN 37919.



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Southern Research Station  
200 W.T. Weaver Blvd.  
Asheville, NC 28804

## Foreword

This report contains the findings of a 2005 canvass of all primary wood-using plants in Florida, and presents changes in product output and residue use since 2003. 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 100-percent canvass of all wood processors in Florida 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 Florida timberland was incorporated into Florida 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 1958, and are currently conducted every 2 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 Jarek Nowak and Mark Brown 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 Florida Department of Agriculture and Consumer Services, Division of Marketing and Utilization 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.

Tony Johnson  
Southern Research Station  
USDA Forest Service  
4700 Old Kingston Pike  
Knoxville, TN 37919  
tjohnson09@fs.fed.us  
865-862-2042

Helen Beresford  
Southern Research Station  
USDA Forest Service  
4700 Old Kingston Pike  
Knoxville, TN 37919  
hberesford@fs.fed.us  
865-862-2091

James Bentley  
Southern Research Station  
USDA Forest Service  
4700 Old Kingston Pike  
Knoxville, TN 37919  
jbentley@fs.fed.us  
865-862-2056

Carolyn Steppleton  
Southern Research Station  
USDA Forest Service  
200 W.T. Weaver Blvd.  
Asheville, NC 28804  
csteppleton@fs.fed.us  
828-257-4848

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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.

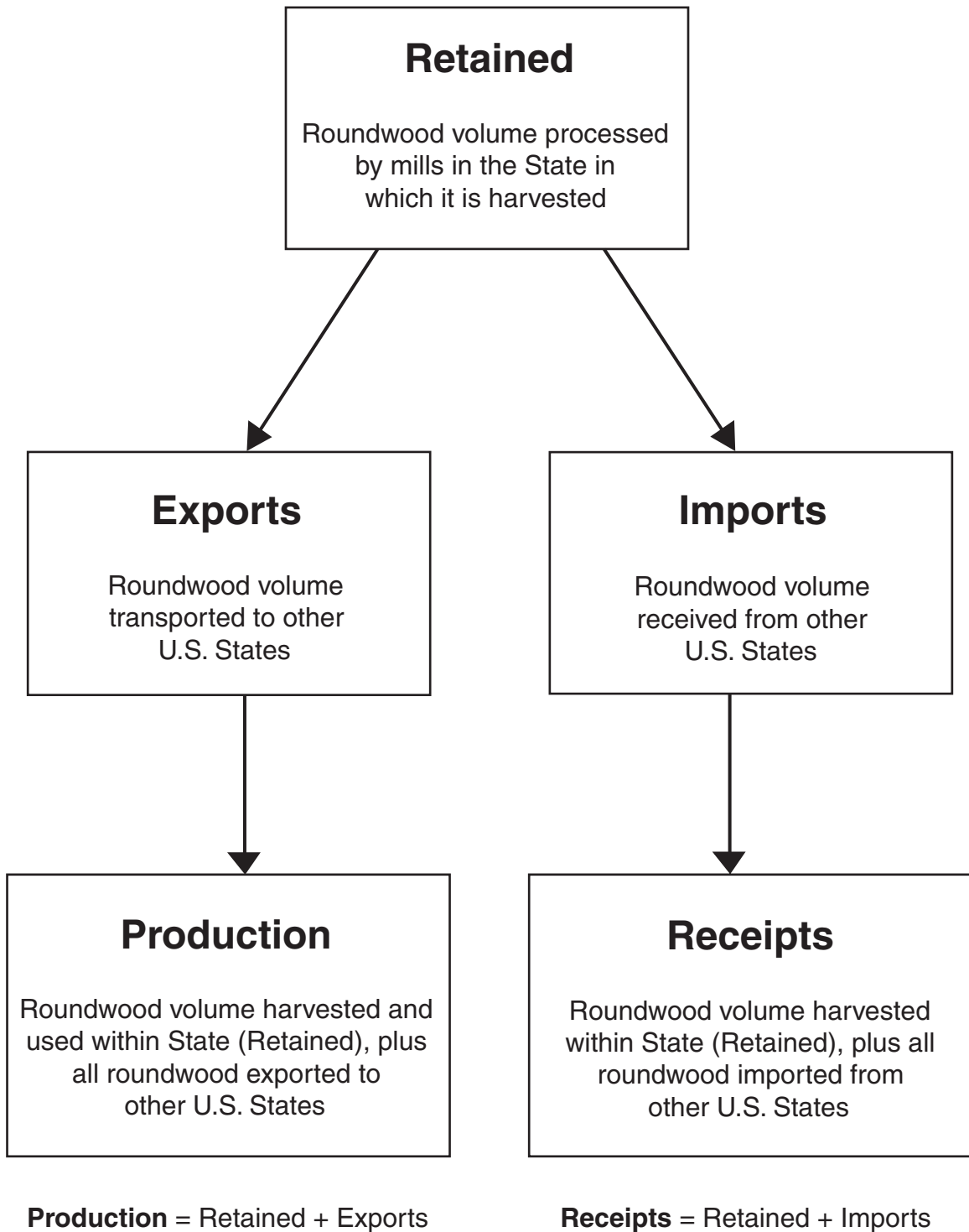


Figure 1—Movement of roundwood exports and imports within the United States.

# Florida'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 2003 and 2005, the combined industrial TPO from roundwood and plant byproducts declined 10 percent, from 659 to 591 million cubic feet.
- TPO from roundwood dropped 64 million cubic feet, or 13 percent, while output of plant byproducts was down 4.3 million cubic feet, or 3 percent.
- Output of softwood roundwood products was down 11 percent to 417 million cubic feet, while hardwood

roundwood products declined 29 percent to 28 million cubic feet (fig. 2).

- Pulpwood and saw logs were the principal roundwood products in 2005. Combined output of these products totaled 381 million cubic feet and accounted for 85 percent of Florida's total roundwood output (fig. 3).
- Total receipts at Florida mills, which included roundwood harvested and retained in the State, and roundwood imported from other States, declined 5 percent to 460 million cubic feet. Ninety-three primary roundwood-using plants operated in Florida in 2005 (fig. 4).
- Across all products, 85 percent of roundwood harvested was retained for processing at Florida mills. Exports of roundwood to other States amounted to 67 million cubic feet, while imports of roundwood amounted to 82 million cubic feet making the State a net importer of roundwood. Tables A.8 to A.11 show exports to and imports from other States by individual product type.

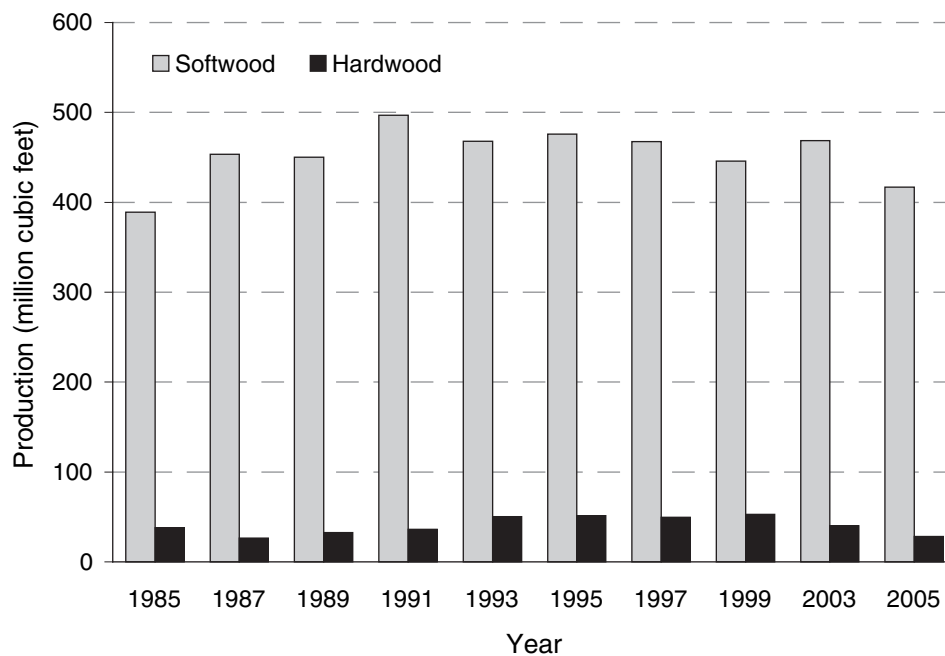


Figure 2—Roundwood production for all products by species group and year (see page 8 for references for individual years).

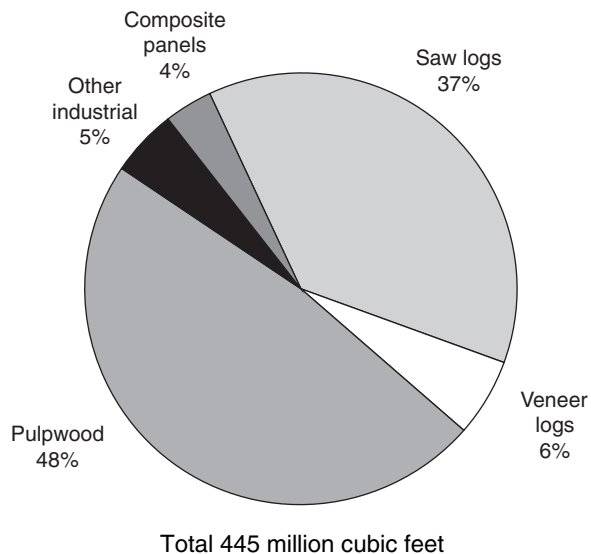


Figure 3—Roundwood production by type of product, 2005.

### Pulpwood

- Total pulpwood production, including chipped roundwood, dropped 57 million cubic feet, or 21 percent, to 214 million cubic feet and accounted for 48 percent of the State’s total roundwood TPO. Softwood output declined 21 percent to 193 million cubic feet (2.7 million cords); hardwood output declined 25 percent to 20 million cubic feet (268,000 cords) (fig. 5).
- Six pulpmills were operating and receiving roundwood in Florida in 2005, the same as in 2003. Total pulpwood receipts for these mills declined 37 million cubic feet to 236 million cubic feet, accounting for 51 percent of total receipts for all mills.
- Eighty-one percent of roundwood cut for pulpwood was retained for processing at Florida pulpmills. Roundwood pulpwood accounted for 62 percent of total known exports and 78 percent of total imports. Roundwood pulpwood

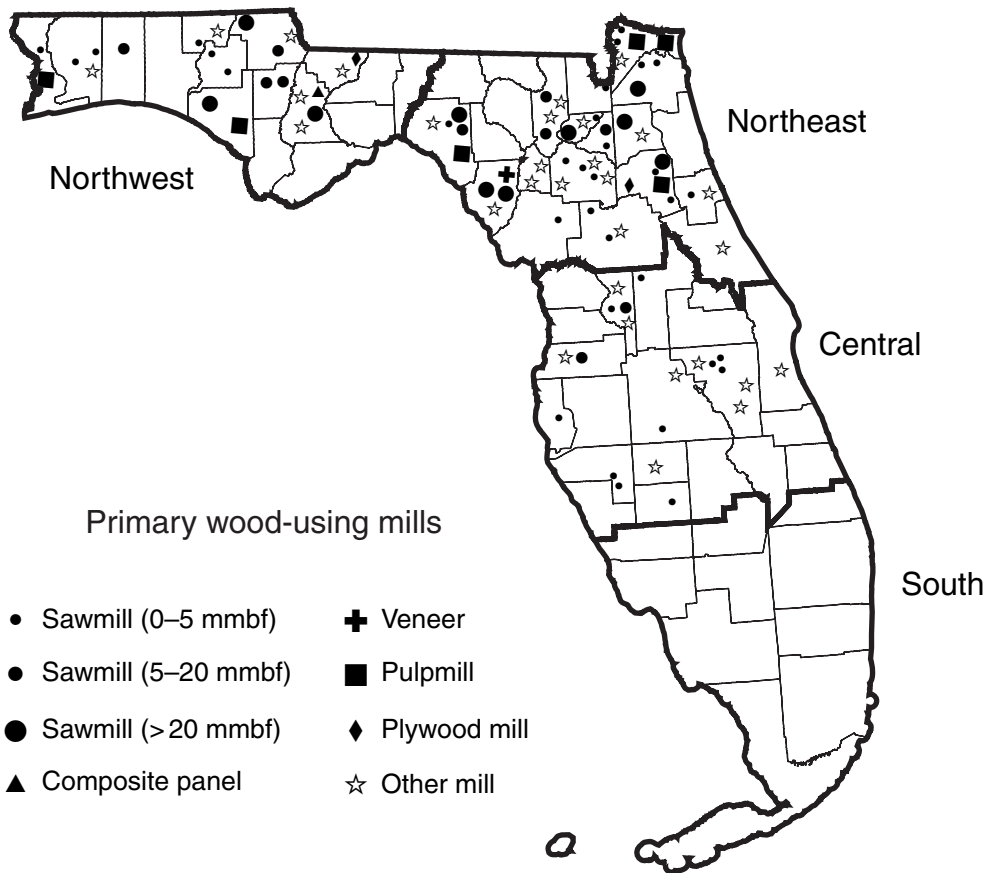


Figure 4—Primary wood-using mills by region, 2005.



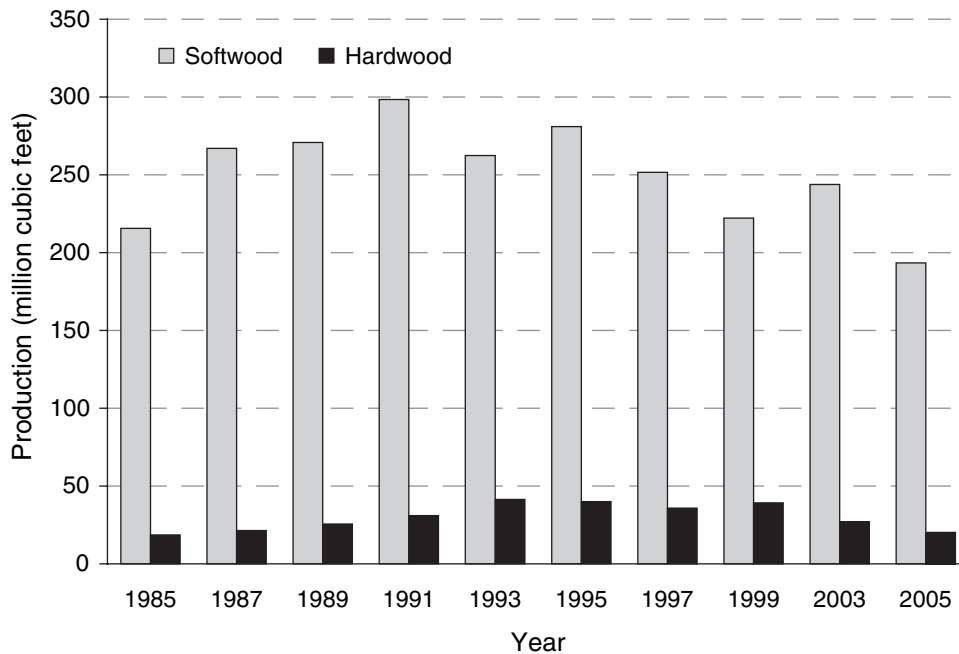


Figure 5—Roundwood pulpwood production by species group and year (see page 8 for references for individual years).

imports amounted to 64 million cubic feet, 23 million cubic feet more than was exported, making the State a net importer of pulpwood for processing.

### Saw Logs

- Saw logs accounted for 37 percent of the State's total roundwood products. Output of softwood saw logs declined 2 percent to 163 million cubic feet (852 million board feet, International ¼-inch rule), while that of hardwood saw logs was down nearly 1 percent to 4.4 million cubic feet (26 million board feet, International ¼-inch rule) (fig. 6).
- In 2005, Florida had 53 sawmills, the same as in 2003. Total saw-log receipts increased 922,000 cubic feet to 155 million cubic feet. Softwood saw-log receipts were up 1 percent to 151 million cubic feet, while those of hardwoods remained unchanged at 3.9 million cubic feet. Of the 53 mills operating in 2005, 45 percent had receipts of < 1 million board feet. Thirty percent, or 16 mills, had receipts > 10 million board feet and accounted for 94 percent of saw-log receipts.
- Florida retained 88 percent of its saw-log production for within-State manufacture; saw-log exports exceeded imports by nearly 12 million cubic feet in 2005.

### Veneer Logs

- Output of veneer logs in 2005 totaled 26 million cubic feet, and accounted for 6 percent of the State's total roundwood TPO volume. Softwood veneer production declined 18 percent to 25 million cubic feet (145 million board feet, International ¼-inch rule), while output of hardwood veneer logs increased 6 percent to 1.5 million cubic feet (9.5 million board feet, International ¼-inch rule) (fig. 7).
- Three veneer mills operated in Florida in 2005. Total veneer-log receipts declined 6 percent to 32.4 million cubic feet. Softwood receipts were down 6 percent to 31.6 million cubic feet, while hardwood receipts remained relatively stable at 828,000 cubic feet.
- Florida retained 93 percent of its veneer-log production for processing at veneer mills within the State. Imports amounted to 7.9 million cubic feet, while exports totaled 1.9 million cubic feet, making the State a net importer of roundwood veneer logs.

### Composite Panels

- Roundwood harvested from Florida's forests for composite panels more than doubled, from 7.7 million

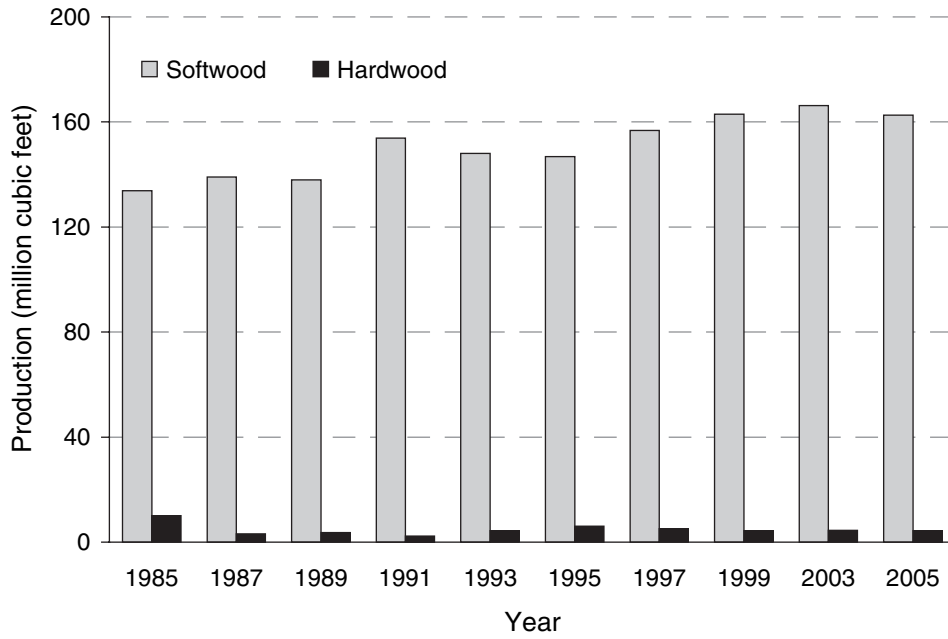


Figure 6—Roundwood saw log production by species group and year (see page 8 for references for individual years).

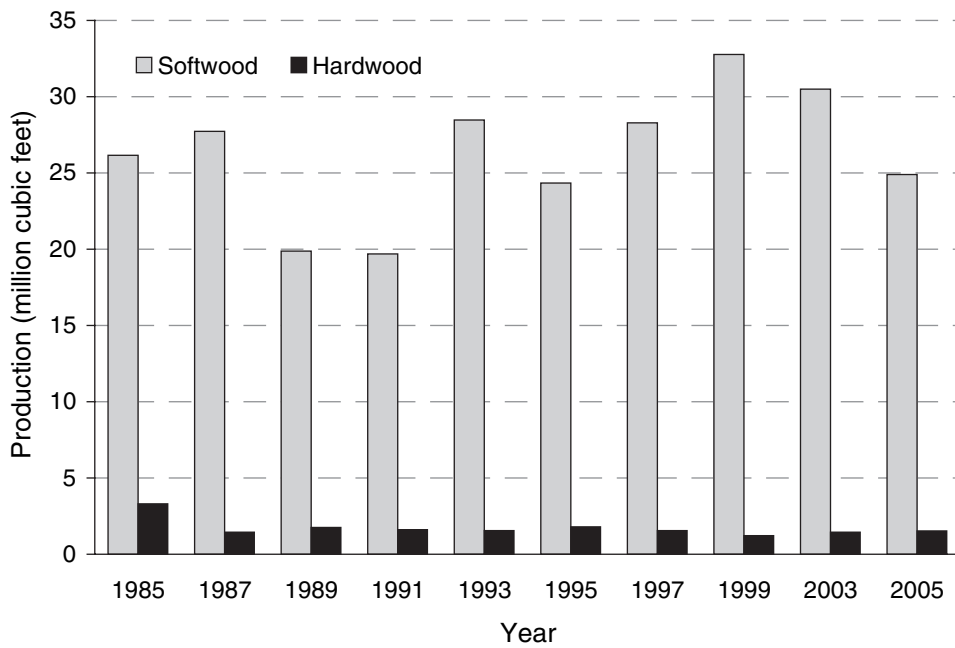


Figure 7—Roundwood veneer-log production by species group and year (see page 8 for references for individual years).

cubic feet to 15.6 million cubic feet. This large increase was due to the opening of Florida’s first oriented strand board mill in Liberty County. Softwood output totaled 14 million cubic feet (200,000 cords); hardwood production dropped 5 million cubic feet to 1.4 million cubic feet (19,000 cords) (fig. 8).

### Other Industrial Products

- Roundwood harvested for other industrial uses, such as poles, posts, mulch, firewood, logs for log homes, and all other industrial products, declined 18 percent to 23 million cubic feet. Softwood made up 96 percent of the other industrial product volume (fig. 9).
- Between 2003 and 2005, the number of plants producing other industrial products remained at 30.

### Plant Byproducts

- In 2005, processing of primary products in Florida mills generated 146 million cubic feet of wood and bark residues. Coarse residues from all primary products amounted to 53 million cubic feet, and bark volume totaled 49 million cubic feet. Sawdust and shavings made

up 31 percent of total residues, or 45 million cubic feet (fig. 10).

- The processing of saw logs generated 85 million cubic feet of mill residues, accounting for 58 percent of the total residues produced (fig. 11).
- Virtually all residues were used for a product (fig. 12). Thirty-five million cubic feet, or 66 percent, of the coarse residues were used to manufacture fiber products. Most of the bark was used for industrial fuel or other miscellaneous products, and 73 percent of the sawdust and shavings was used for industrial fuel.

### County Data

- Table A.14 shows softwood and hardwood product output by county and individual product type. Sixty-one of the sixty-seven counties in Florida had either softwood or hardwood output. Eight counties (Bay, Dixie, Jackson, Levy, Madison, Nassau, St. Johns, and Taylor) had combined softwood and hardwood product output of > 15 million cubic feet each. These eight counties’ total product output amounted to nearly 163 million cubic feet and accounted for 37 percent of the State’s total product output.

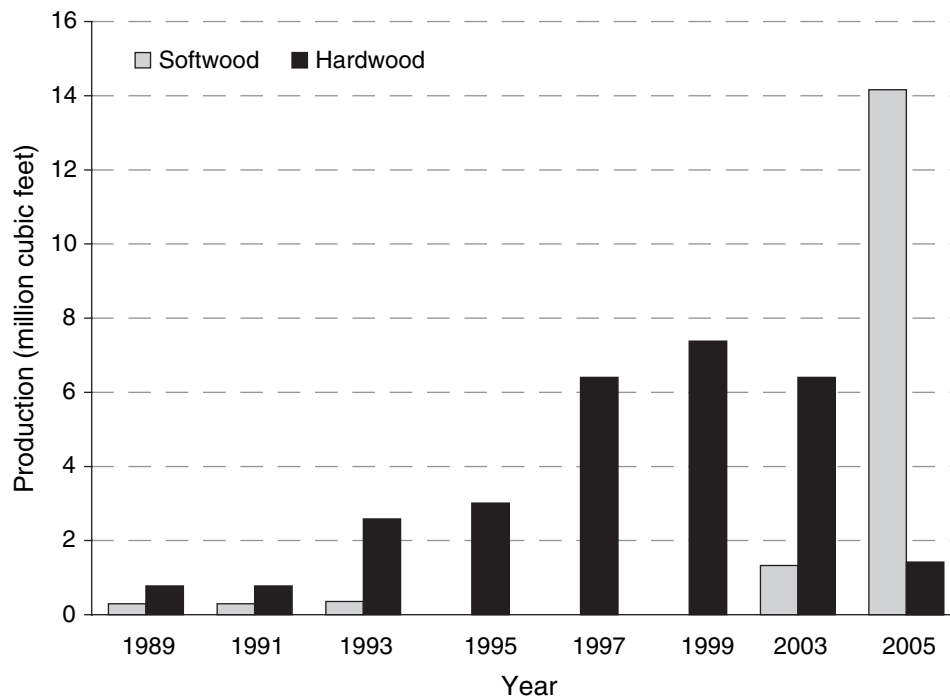


Figure 8—Roundwood production for composite panels by species group and year (see page 8 for references for individual years).

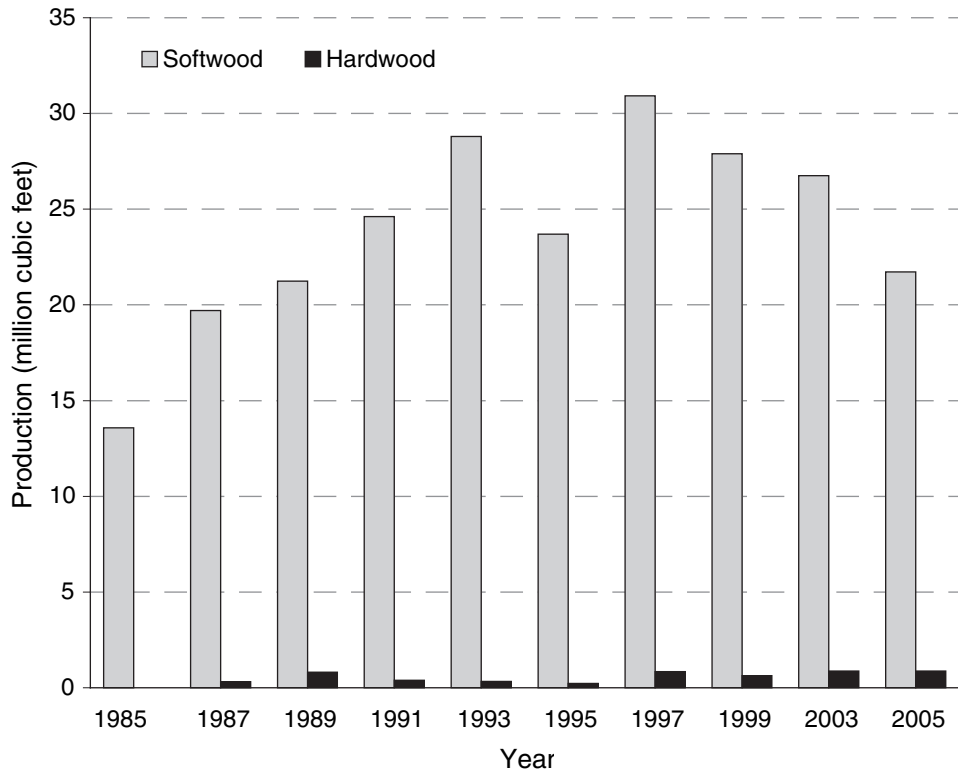


Figure 9—Roundwood production for other industrial products by species group and year (see page 8 for references for individual years).

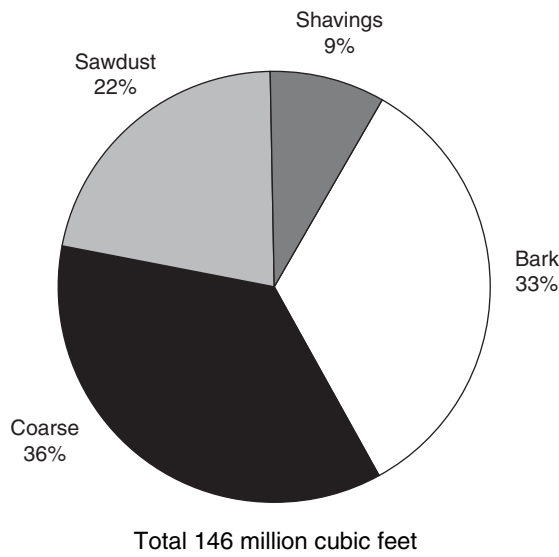


Figure 10—Primary mill residue by residue type, 2005.

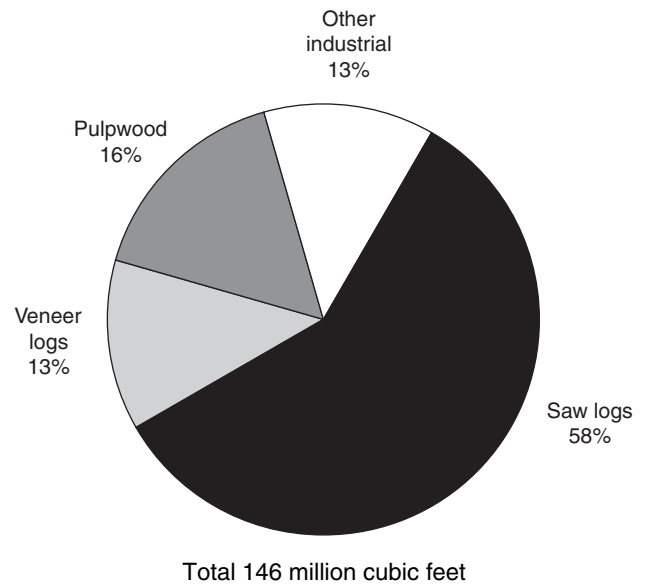


Figure 11—Primary mill residue produced by roundwood type, 2005.

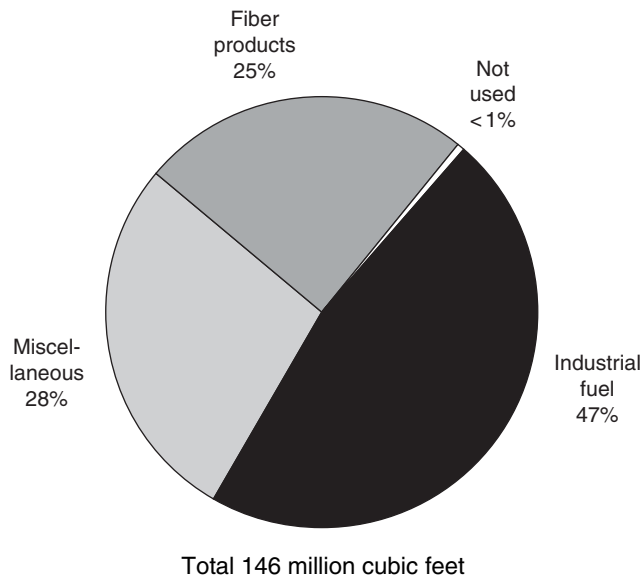


Figure 12—Disposal of residue by product, 2005.

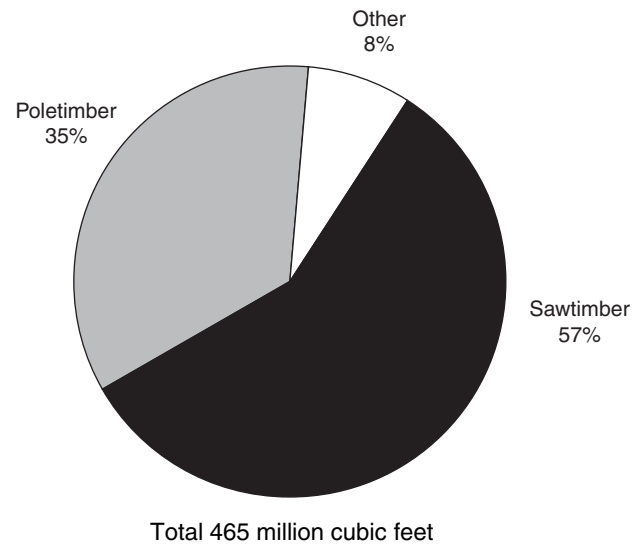


Figure 13—Roundwood output by source, 2005.

## Total Roundwood Output

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

### Source

- In addition to the 445 million cubic feet of roundwood output for industrial products, an estimated 20 million cubic feet was harvested for domestic fuelwood, bringing Florida's total roundwood output to 465 million cubic feet.
- Ninety-two percent 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 36 million cubic feet, or 8 percent of total roundwood output (fig. 13).

### Ownership

- Forest industry and nonindustrial private forest lands contributed 92 and 336 million cubic feet, or 20 and 72 percent, respectively, of the total roundwood output. Public lands made up the remaining 8 percent, or 37 million cubic feet (fig. 14).

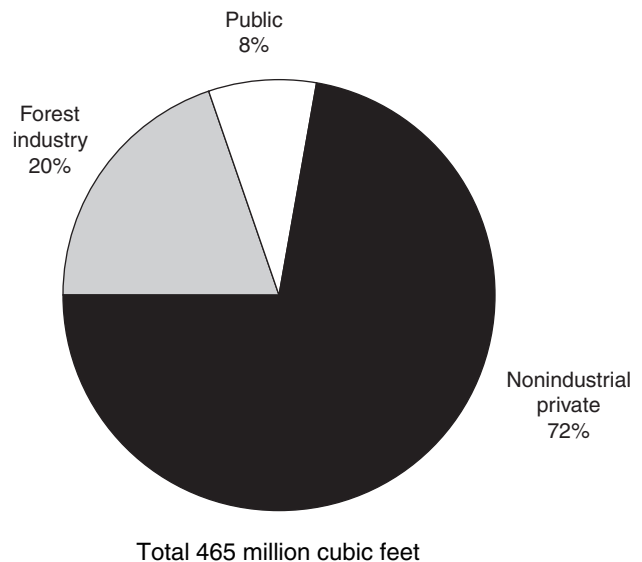


Figure 14—Roundwood output by ownership, 2005.

### Species

- The slash and longleaf pine group provided more volume than any other softwood species group; at 325 million cubic feet, it accounted for 77 percent of total softwood output (fig. 15). The red oak and white oak groups combined accounted for 20 million cubic feet of total hardwood output, or 44 percent (fig. 16).

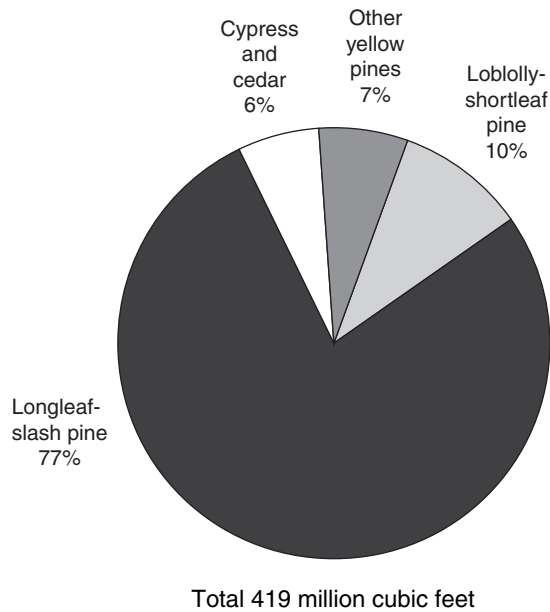


Figure 15—Roundwood output by softwood species group, 2005.

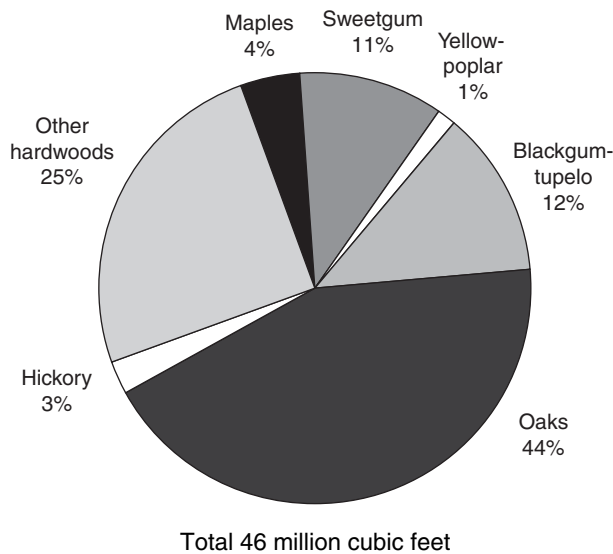


Figure 16—Roundwood output by hardwood species group, 2005.

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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 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 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 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).

## 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	0.19121 cubic foot = 1 board foot 5.23 board feet = 1 cubic foot
Hardwood	0.16807 cubic foot = 1 board foot 5.95 board feet = 1 cubic foot
Veneer logs	
Softwood	0.17241 cubic foot = 1 board foot 5.80 board feet = 1 cubic foot
Hardwood	0.16129 cubic foot = 1 board foot 6.20 board feet = 1 cubic foot
Pulpwood <sup>b</sup>	
Softwood	71.00 cubic feet per cord
Hardwood	75.00 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 Florida during the latest 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)	
Southern redcedar	<i>Juniperus silicicola</i> (Small) Bailey	Sweetgum	<i>Liquidambar styraciflua</i> L.
Eastern redcedar	<i>J. virginiana</i> L.	Yellow-poplar	<i>Liriodendron tulipifera</i> L.
Sand pine	<i>Pinus clausa</i> (Chapm. ex Englem.) Vasey ex Sarg.	Osage-orange	<i>Maclura pomifera</i> (Raf.) Schneid.
Shortleaf pine	<i>P. echinata</i> Mill.	Cucumbertree	<i>Magnolia acuminata</i> L.
Slash pine	<i>P. elliotii</i> Engelm.	Southern magnolia	<i>M. grandiflora</i> L.
Spruce pine	<i>P. glabra</i> Walt.	Bigleaf magnolia	<i>M. macrophylla</i> Michx.
Longleaf pine	<i>P. palustris</i> Mill.	Sweetbay	<i>M. virginiana</i> L.
Pond pine	<i>P. serotina</i> Michx.	Apple	<i>Malus</i> spp. Mill.
Loblolly pine	<i>P. taeda</i> L.	Chinaberry	<i>Melia azedarach</i> L.
Baldcypress	<i>Taxodium distichum</i> (L.) Rich.	White mulberry	<i>Morus alba</i> L.
Pondcypress	<i>T. distichum</i> var. <i>nutans</i>	Red mulberry	<i>M. rubra</i> L.
Hardwoods		Water tupelo	<i>Nyssa aquatica</i> L.
Florida maple	<i>Acer barbatum</i> Michx.	Blackgum	<i>N. sylvatica</i> Marsh.
Boxelder	<i>A. negundo</i> L.	Swamp tupelo	<i>N. sylvatica</i> var. <i>biflora</i> (Walt.) Sarg.
Red maple	<i>A. rubrum</i> L.	Eastern hophornbeam	<i>Ostrya virginiana</i> (Mill.) K. Koch
Silver maple	<i>A. saccharinum</i> L.	Sourwood	<i>Oxydendrum arboreum</i> (L.) DC.
Ailanthus	<i>Ailanthus altissima</i> (Mill.) Swingle	Redbay	<i>Persea borbonia</i> (L.) Spreng.
Tung-oil tree	<i>Aleurites fordii</i> Hemsl.	American sycamore	<i>Platanus occidentalis</i> L.
Serviceberry	<i>Amelanchier</i> spp. Med.	Cottonwood	<i>Populus</i> spp. L.
River birch	<i>Betula nigra</i> L.	Black cherry	<i>Prunus serotina</i> Ehrh.
American hornbeam	<i>Carpinus caroliniana</i> Walt.	White oak	<i>Quercus alba</i> L.
Hickory	<i>Carya</i> spp. Nutt.	Scarlet oak	<i>Q. coccinea</i> Muenchh.
Water hickory	<i>C. aquatica</i> (Michx. f.) Nutt.	Durand oak	<i>Q. durandii</i> Buckl.
Bitternut hickory	<i>C. cordiformis</i> (Wangenh.) K. Koch	Southern red oak	<i>Q. falcata</i> Michx.
Pignut hickory	<i>C. glabra</i> (Mill.) Sweet	Cherrybark oak	<i>Q. falcata</i> var. <i>pagodifolia</i> Ell.
Pecan	<i>C. illinoensis</i> (Wangenh.) K. Koch	Bluejack oak	<i>Q. incana</i> Bartr.
Shellbark hickory	<i>C. laciniosa</i> (Michx. f.) Loud.	Turkey oak	<i>Q. laevis</i> Walt.
Nutmeg hickory	<i>C. myristiciformis</i> (Michx. f.) Nutt.	Laurel oak	<i>Q. laurifolia</i> Michx.
Shagbark hickory	<i>C. ovata</i> (Mill.) K. Koch	Overcup oak	<i>Q. lyrata</i> Walt.
Black hickory	<i>C. texana</i> Buckl.	Swamp chestnut oak	<i>Q. michauxii</i> Nutt.
Mockernut hickory	<i>C. tomentosa</i> (Poir.) Nutt.	Chinkapin oak	<i>Q. muehlenbergii</i> Engelm.
Allegheny chinkapin	<i>Castanea pumila</i> Mill.	Water oak	<i>Q. nigra</i> L.
Chinkapin	<i>Castanopsis</i> (D. Don) Spach	Nuttall oak	<i>Q. nuttallii</i> Palmer
Catalpa	<i>Catalpa</i> spp. Scop.	Pin oak	<i>Q. palustris</i> Muenchh.
Sugarberry	<i>Celtis laevigata</i> Willd.	Willow oak	<i>Q. phellos</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.	Willow	<i>Salix</i> spp. L.
American beech	<i>Fagus grandifolia</i> Ehrh.	Sassafras	<i>Sassafras albidum</i> (Nutt.) Nees
White ash	<i>Fraxinus americana</i> L.	American basswood	<i>Tilia americana</i> L.
Pumpkin ash	<i>F. profunda</i> (Bush) Bush	White basswood	<i>T. heterophylla</i> Vent.
Blue ash	<i>F. quadrangulata</i> Michx.	Winged elm	<i>Ulmus alata</i> Michx.
Waterlocust	<i>Gleditsia aquatica</i> Marsh.	American elm	<i>U. americana</i> L.
Honeylocust	<i>G. triacanthos</i> L.	Cedar elm	<i>U. crassifolia</i> Nutt.
American holly	<i>Ilex opaca</i> Ait.	Slippery elm	<i>U. rubra</i> Muhl.
Black walnut	<i>Juglans nigra</i> L.	September elm	<i>U. serotina</i> Sarg.
		Rock elm	<i>U. thomasi</i> Sarg.

<sup>a</sup> Common and scientific and common 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, Florida, 2003 and 2005**

Product and species group	Year		Change	Change
	2003	2005		
	----- thousand cubic feet -----			percent
<b>Saw logs</b>				
Softwood	166,217	162,617	-3,600	-2.2
Hardwood	4,454	4,415	-39	-0.9
Total	170,671	167,032	-3,639	-2.1
<b>Veneer logs</b>				
Softwood	30,492	24,905	-5,587	-18.3
Hardwood	1,437	1,526	89	6.2
Total	31,929	26,431	-5,498	-17.2
<b>Pulpwood<sup>a</sup></b>				
Softwood	243,796	193,390	-50,406	-20.7
Hardwood	26,939	20,111	-6,828	-25.3
Total	270,735	213,501	-57,234	-21.1
<b>Composite panels</b>				
Softwood	1,326	14,164	12,838	968.2
Hardwood	6,400	1,418	-4,982	-77.8
Total	7,726	15,582	7,856	101.7
<b>Other industrial</b>				
Softwood	26,746	21,720	-5,026	-18.8
Hardwood	879	879	0	—
Total	27,625	22,599	-5,026	-18.2
<b>All industrial</b>				
Softwood	468,577	416,796	-51,781	-11.1
Hardwood	40,109	28,349	-11,760	-29.3
Total	508,686	445,145	-63,541	-12.5
<b>Byproduct output</b>				
Softwood	141,578	140,921	-657	-0.5
Hardwood	8,968	5,350	-3,618	-40.3
Total	150,546	146,271	-4,275	-2.8
<b>Total output</b>				
Softwood	610,155	557,717	-52,438	-8.6
Hardwood	49,077	33,699	-15,378	-31.3
Total	659,232	591,416	-67,816	-10.3

— = negligible.

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (4,787,000 cubic feet in 2003 and 4,102,000 cubic feet in 2005).

**Table A.2—Roundwood receipts by product and species group, Florida, 2003 and 2005**

Product and species group	Year		Change	Change
	2003	2005		
	----- thousand cubic feet -----			percent
Saw logs				
Softwood	150,260	151,182	922	0.6
Hardwood	3,912	3,912	0	—
Total	154,172	155,094	922	0.6
Veneer logs				
Softwood	33,752	31,632	-2,120	-6.3
Hardwood	831	828	-3	-0.4
Total	34,583	32,460	-2,123	-6.1
Pulpwood <sup>a</sup>				
Softwood	229,100	221,858	-7,242	-3.2
Hardwood	43,978	14,346	-29,632	-67.4
Total	273,078	236,204	-36,874	-13.5
Other industrial				
Softwood	21,071	35,405	14,334	68.0
Hardwood	879	879	0	—
Total	21,950	36,284	14,334	65.3
Total output				
Softwood	434,183	440,077	5,894	1.4
Hardwood	49,600	19,965	-29,635	-59.7
Total	483,783	460,042	-23,741	-4.9

— = negligible.

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (5,077,000 cubic feet in 2003 and 4,392,000 cubic feet in 2005).

**Table A.3—Number of primary wood-using plants by industry, Florida, 1986 to 2005**

Industry	Year									
	1986	1987	1989	1991	1993	1995	1997	1999	2003	2005
	number									
Sawmills	106	97	85	71	64	68	58	53	53	53
Veneer mills	6	5	5	5	5	5	5	4	3	3
Pulpmills	9	10	9	9	8	8	8	6	6	6
Composite panel mills	0	0	0	0	0	0	0	0	0	1
Other mills	30	31	28	30	32	32	30	30	30	30
All plants	151	143	127	115	109	113	101	93	92	93

**Table A.4—Roundwood receipts by sawmill size, Florida, 2003 and 2005**

Sawmill size class <sup>a</sup> <i>mmbf</i>	2003			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	24	8,367	1	24	8,367	1
1.0–4.99	8	15,564	2	9	18,064	2
5.0–9.99	5	30,684	4	4	24,384	3
10.0–49.99	8	166,066	20	8	169,999	21
> 50	8	589,451	73	8	594,127	73
Total	53	810,132	100	53	814,941	100

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

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

Species	All mills	Sawmills	Type of mill		Pulpmills <sup>a</sup>	Other mills
			Veneer mills			
			Pine plywood	Other veneer		
<i>thousand cubic feet</i>						
<b>Softwood</b>						
Yellow pine	198,644	144,729	31,632	0	NA	22,283
Eastern white pine	0	0	0	0	NA	0
Cedar	12	10	0	0	NA	2
Cypress	19,404	6,443	0	0	NA	12,961
Other softwood	159	0	0	0	NA	159
Unclassified	221,858	0	0	0	221,858	0
Total softwoods	440,077	151,182	31,632	0	221,858	35,405
<b>Hardwood</b>						
Blackgum and tupelo	98	57	0	41	NA	0
Soft maple	18	18	0	0	NA	0
Sweetgum	608	401	0	207	NA	0
Yellow-poplar	377	46	0	331	NA	0
Other soft hardwood	1,042	632	0	249	NA	161
Hickory	110	102	0	0	NA	8
Red oak	882	768	0	0	NA	114
White oak	78	70	0	0	NA	8
Other hard hardwood	2,406	1,818	0	0	NA	588
Unclassified	14,346	0	0	0	14,346	0
Total hardwoods	19,965	3,912	0	828	14,346	879
All species	460,042	155,094	31,632	828	236,204	36,284

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, Florida, 2003 and 2005**

Year	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>thousand cubic feet</i>					
<b>Softwood</b>					
2003	468,577	96,438	372,139	62,044	434,183
2005	416,796	58,146	358,650	81,427	440,077
<b>Hardwood</b>					
2003	40,109	12,200	27,909	21,691	49,600
2005	28,349	8,936	19,413	552	19,965
<b>All species</b>					
2003	508,686	108,638	400,048	83,735	483,783
2005	445,146	67,083	378,063	81,979	460,042

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

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>thousand cubic feet</i>					
Saw logs					
Softwood	162,617	18,685	143,932	7,250	151,182
Hardwood	4,415	650	3,765	147	3,912
Total	167,032	19,335	147,697	7,397	155,094
Veneer logs					
Softwood	24,905	1,168	23,737	7,895	31,632
Hardwood	1,526	698	828	0	828
Total	26,431	1,866	24,565	7,895	32,460
Pulpwood <sup>a</sup>					
Softwood	193,390	35,171	158,219	63,639	221,858
Hardwood	20,111	6,170	13,941	405	14,346
Total	213,501	41,341	172,160	64,044	236,204
Other industrial					
Softwood	35,884	3,122	32,762	2,643	35,405
Hardwood	2,297	1,418	879	0	879
Total	38,181	4,540	33,641	2,643	36,284
Total output					
Softwood	416,796	58,146	358,650	81,427	440,077
Hardwood	28,349	8,936	19,413	552	19,965
Total	445,145	67,082	378,063	81,979	460,042

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

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

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Florida (retained)	147,697	143,932	3,765
Exports to			
Alabama	5,140	5,140	0
Georgia	14,195	13,545	650
Total	19,335	18,685	650
Imports from			
Alabama	3,583	3,542	41
Georgia	3,684	3,578	106
Louisiana	130	130	0
Total	7,397	7,250	147

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

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Florida (retained)	24,565	23,737	828
Exports to			
Alabama	1,168	1,168	0
Georgia	698	0	698
Total	1,866	1,168	698
Imports from			
Alabama	397	397	0
Georgia	7,300	7,300	0
South Carolina	198	198	0
Total	7,895	7,895	0

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

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Florida (retained)	172,160	158,219	13,941
Exports to			
Alabama	11,477	10,184	1,293
Arkansas	58	0	58
Georgia	29,360	24,575	4,785
Louisiana	376	342	34
Mississippi	70	70	0
Total	41,341	35,171	6,170
Imports from			
Alabama	18,412	18,133	279
Georgia	28,761	28,635	126
Mississippi	214	214	0
Foreign	16,657	16,657	0
Total	64,044	63,639	405

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills.

**Table A.11—Other industrial and composite panel volume by destination, source, and species group, Florida, 2005<sup>a</sup>**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Florida (retained)	33,641	32,762	879
Exports to			
Alabama	1,263	1,263	0
Georgia	3,277	1,859	1,418
Total	4,540	3,122	1,418
Imports from			
Alabama	318	318	0
Georgia	2,325	2,325	0
Total	2,643	2,643	0

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

**Table A.12—Primary mill residue volume by roundwood type, species group, and residue type, Florida, 2005**

Roundwood type and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>thousand cubic feet</i>					
Saw logs					
Softwood	82,900	12,561	36,629	20,905	12,805
Hardwood	2,499	448	1,228	821	2
Total	85,399	13,009	37,857	21,726	12,807
Veneer logs					
Softwood	17,951	2,920	7,073	7,958	0
Hardwood	624	99	268	257	0
Total	18,575	3,019	7,341	8,215	0
Pulpwood					
Softwood	21,965	21,965	0	0	0
Hardwood	1,795	1,795	0	0	0
Total	23,760	23,760	0	0	0
Other industrial <sup>a</sup>					
Softwood	18,180	9,258	7,253	1,669	0
Hardwood	489	108	274	107	0
Total	18,669	9,366	7,527	1,776	0
Total					
Softwood	140,996	46,704	50,955	30,532	12,805
Hardwood	5,407	2,450	1,770	1,185	2
Total	146,403	49,154	52,725	31,717	12,807

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

**Table A.13—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Florida, 2003 and 2005**

Product and species group	All types		Bark		Coarse		Sawdust		Shavings	
	2003	2005	2003	2005	2003	2005	2003	2005	2003	2005
	<i>thousand cubic feet</i>									
Fiber products										
Softwood	44,072	34,818	0	0	42,899	33,645	50	50	1,123	1,123
Hardwood	1,282	1,282	0	0	1,282	1,282	0	0	0	0
Total	45,354	36,100	0	0	44,181	34,927	50	50	1,123	1,123
Particleboard										
Softwood	5,442	4,473	0	0	0	0	689	689	4,753	3,784
Hardwood	0	0	0	0	0	0	0	0	0	0
Total	5,442	4,473	0	0	0	0	689	689	4,753	3,784
Charcoal/ chemical wood										
Softwood	0	0	0	0	0	0	0	0	0	0
Hardwood	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Sawn products										
Softwood	463	7,076	0	0	463	7,076	0	0	0	0
Hardwood	0	0	0	0	0	0	0	0	0	0
Total	463	7,076	0	0	463	7,076	0	0	0	0
Fuel										
Softwood	63,376	66,352	31,691	32,834	2,041	2,057	25,027	25,109	4,617	6,352
Hardwood	6,827	3,209	5,819	2,201	60	60	946	946	2	2
Total	70,203	69,561	37,510	35,035	2,101	2,117	25,973	26,055	4,619	6,354
Miscellaneous										
Softwood	28,225	28,202	12,473	13,856	8,267	8,130	5,258	4,670	2,227	1,546
Hardwood	859	859	249	249	371	371	239	239	0	0
Total	29,084	29,061	12,722	14,105	8,638	8,501	5,497	4,909	2,227	1,546
Not used										
Softwood	75	75	14	14	47	47	14	14	0	0
Hardwood	57	57	0	0	57	57	0	0	0	0
Total	132	132	14	14	104	104	14	14	0	0
All products										
Softwood	141,653	140,996	44,178	46,704	53,717	50,955	31,038	30,532	12,720	12,805
Hardwood	9,025	5,407	6,068	2,450	1,770	1,770	1,185	1,185	2	2
Total	150,678	146,403	50,246	49,154	55,487	52,725	32,223	31,717	12,722	12,807

**Table A.14—Roundwood timber product output by county, product, and species group, Florida, 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>												
Alachua	11,978	1,250	4,253	0	793	0	5,755	1,198	0	0	1,177	52
Baker	10,865	148	5,595	0	198	0	4,873	148	0	0	199	0
Bay	18,757	574	5,787	191	0	0	12,332	383	452	0	186	0
Bradford	6,540	220	3,916	0	198	0	2,335	220	0	0	91	0
Brevard	737	17	264	0	396	0	41	17	0	0	36	0
Calhoun	10,738	1,010	3,071	748	0	0	5,374	262	1,960	0	333	0
Citrus	350	14	213	0	0	0	44	14	0	0	93	0
Clay	11,044	590	4,204	0	793	0	5,942	590	0	0	105	0
Collier	70	0	70	0	0	0	0	0	0	0	0	0
Columbia	9,853	713	4,716	0	198	125	4,877	588	0	0	62	0
Dade	169	0	0	0	0	0	0	0	0	0	169	0
De Soto	127	0	127	0	0	0	0	0	0	0	0	0
Dixie	14,244	1,074	7,801	173	198	125	5,109	776	0	0	1,136	0
Duval	11,110	916	6,468	5	992	111	3,112	800	0	0	538	0
Escambia	3,819	275	1,819	0	0	0	1,408	275	0	0	592	0
Flagler	8,468	821	2,792	0	793	0	3,789	821	0	0	1,094	0
Franklin	4,734	0	2,305	0	0	0	687	0	1,658	0	84	0
Gadsden	10,956	998	3,123	268	2,361	64	2,977	651	2,262	0	233	15
Gilchrist	5,141	193	2,521	0	0	83	2,590	77	0	0	30	33
Glades	726	0	123	0	595	0	8	0	0	0	0	0
Gulf	11,701	655	1,614	412	0	0	9,580	243	452	0	55	0
Hamilton	8,900	480	4,814	0	198	0	3,461	480	0	0	427	0
Hardee	338	0	123	0	198	0	17	0	0	0	0	0
Hendry	294	0	0	0	0	0	294	0	0	0	0	0
Hernando	907	98	708	3	0	0	20	95	0	0	179	0
Highlands	162	0	152	0	0	0	10	0	0	0	0	0
Hillsborough	149	0	124	0	0	0	0	0	0	0	25	0
Holmes	7,986	376	3,800	2	0	0	3,926	374	0	0	260	0
Indian River	297	0	261	0	0	0	0	0	0	0	36	0
Jackson	14,093	1,611	4,955	265	1,182	224	6,586	1,122	1,055	0	315	0
Jefferson	7,279	889	1,877	89	1,180	64	3,338	27	827	709	57	0
Lafayette	10,034	187	3,475	0	0	41	6,260	146	0	0	299	0
Lake	3,010	175	1,003	0	198	0	343	15	0	0	1,466	160
Leon	2,494	210	875	63	0	64	934	33	603	0	82	50
Levy	24,103	1,870	8,341	473	2,976	166	10,561	1,209	0	0	2,225	22
Liberty	7,573	656	1,719	583	0	0	3,150	73	2,412	0	292	0
Madison	15,639	932	6,131	0	1,389	83	6,519	849	1,055	0	545	0
Manatee	16	0	16	0	0	0	0	0	0	0	0	0
Marion	9,021	777	3,168	233	595	103	4,447	441	0	0	811	0
Monroe	38	0	38	0	0	0	0	0	0	0	0	0
Nassau	22,491	750	11,345	258	396	0	10,239	492	0	0	511	0
Okaloosa	4,784	225	1,309	0	163	0	3,028	225	0	0	284	0
Okeechobee	42	0	28	0	0	0	0	0	0	0	14	0
Orange	1,082	78	303	0	198	0	403	78	0	0	178	0

*continued*



**Table A.14—Roundwood timber product output by county, product, and species group, Florida, 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>												
Osceola	1,971	17	201	0	198	0	101	17	0	0	1,471	0
Palm Beach	4	67	0	0	0	0	4	67	0	0	0	0
Pasco	2,236	5	930	0	198	0	79	5	0	0	1,029	0
Polk	2,152	187	1,280	0	396	0	87	27	0	0	389	160
Putnam	10,309	1,734	3,369	0	1,389	0	5,322	1,734	0	0	229	0
St. Johns	14,419	2,312	7,948	0	992	0	4,758	2,312	0	0	721	0
Santa Rosa	6,066	636	1,252	5	0	0	4,451	631	0	0	363	0
Sarasota	1,130	11	76	0	1,038	0	16	11	0	0	0	0
Seminole	620	200	123	0	198	0	125	142	0	0	174	58
Sumter	2,124	303	1,029	13	396	0	136	290	0	0	563	0
Suwannee	12,313	803	3,910	0	0	83	8,258	720	0	0	145	0
Taylor	28,593	1,371	10,953	437	0	190	16,632	35	223	709	785	0
Union	9,333	466	5,750	0	396	0	3,069	466	0	0	118	0
Volusia	6,517	642	2,096	0	992	0	2,442	313	0	0	987	329
Wakulla	5,947	39	2,658	0	0	0	2,150	39	1,055	0	84	0
Walton	10,146	118	3,153	0	163	0	6,507	118	0	0	323	0
Washington	10,057	656	2,542	194	2,361	0	4,884	462	150	0	120	0
All counties	416,796	28,349	162,617	4,415	24,905	1,526	193,390	20,111	14,164	1,418	21,720	879

<sup>a</sup>Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (4,102,000 cubic feet in 2005).

**Table A.15—Total roundwood output by product, species group, and source of material, Florida, 2005**

Product and species group	All sources	Total	Growing-stock trees		Other sources
			Sawtimber	Poletimber	
<i>thousand cubic feet</i>					
Saw logs					
Softwood	162,617	156,575	144,314	12,260	6,042
Hardwood	4,415	4,395	4,040	355	20
Total	167,032	160,970	148,354	12,616	6,062
Veneer logs and bolts					
Softwood	24,905	24,515	24,200	315	390
Hardwood	1,526	1,521	1,521	0	5
Total	26,431	26,036	25,720	315	395
Pulpwood					
Softwood	193,390	177,448	52,690	124,757	15,942
Hardwood	20,111	15,931	10,616	5,315	4,180
Total	213,501	193,379	63,306	130,073	20,122
Composite panels					
Softwood	14,164	12,996	3,859	9,137	1,168
Hardwood	1,418	1,123	749	375	295
Total	15,582	14,120	4,608	9,512	1,462
Poles and posts					
Softwood	7,713	7,231	5,554	1,677	482
Hardwood	0	0	0	0	0
Total	7,713	7,231	5,554	1,677	482
Other miscellaneous					
Softwood	14,007	10,677	8,995	1,682	3,330
Hardwood	879	833	98	734	46
Total	14,886	11,510	9,094	2,416	3,376
Total industrial products					
Softwood	416,796	389,442	239,612	149,830	27,354
Hardwood	28,349	23,803	17,023	6,780	4,546
Total	445,145	413,245	256,636	156,609	31,900
Fuelwood					
Softwood	2,198	1,885	1,675	210	313
Hardwood	17,804	13,719	9,299	4,420	4,085
Total	20,002	15,604	10,974	4,630	4,398
All products					
Softwood	418,994	391,327	241,287	150,040	27,667
Hardwood	46,153	37,522	26,322	11,200	8,631
Total	465,147	428,849	267,610	161,239	36,298

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

**Table A.16—Total roundwood output by species group, survey region, and ownership class, Florida, 2005**

Species group and survey region	Total	Ownership class		
		Public	Forest industry	Nonindustrial private
<i>thousand cubic feet</i>				
Softwoods				
Northeast	262,290	14,023	64,634	183,634
Northwest	137,853	13,179	20,897	103,777
Central and South	18,851	4,512	0	14,339
Total softwoods	<u>418,994</u>	<u>31,713</u>	<u>85,531</u>	<u>301,750</u>
Hardwoods				
Northeast	29,709	4,057	5,812	19,840
Northwest	14,535	945	971	12,619
Central and South	1,909	322	0	1,587
Total hardwoods	<u>46,153</u>	<u>5,324</u>	<u>6,783</u>	<u>34,046</u>
All species	<u>465,147</u>	<u>37,037</u>	<u>92,314</u>	<u>335,796</u>

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

**Table A.17—Total roundwood output by species group, detailed species group, and product, Florida, 2005**

Species group and detailed species group	Total	Product						Fuel- wood
		Saw logs	Veneer logs	Pulpwood	Composite panels	Poles and posts	Other miscellaneous	
<i>thousand cubic feet</i>								
<b>Softwood</b>								
Cedar	449	158	26	198	51	9	4	2
Longleaf-slash pine	324,760	126,975	16,902	154,912	9,966	5,469	8,831	1,704
Loblolly-shortleaf pine	41,253	15,612	3,614	17,458	2,830	650	872	216
Other yellow pines	27,357	9,563	2,279	12,517	1,127	834	893	144
Cypress	25,175	10,309	2,083	8,304	189	751	3,407	132
<b>Total softwoods</b>	<b>418,994</b>	<b>162,617</b>	<b>24,905</b>	<b>193,390</b>	<b>14,164</b>	<b>7,713</b>	<b>14,007</b>	<b>2,198</b>
<b>Hardwood</b>								
Soft maple	1,941	86	70	966	47	0	24	749
Hard maple	116	10	8	40	13	0	0	45
Other birch	50	0	0	29	0	0	1	19
Hickory	1,161	163	55	430	50	0	16	448
Beech	426	194	0	68	0	0	0	164
Ash	790	122	37	292	13	0	21	305
Sweetgum	5,054	377	124	2,375	187	0	40	1,950
Yellow-poplar	641	151	5	236	0	0	1	247
Blackgum-tupelo	5,685	349	235	2,693	131	0	84	2,193
Black cherry	177	8	14	79	0	0	8	68
Select white oaks	396	119	7	117	0	0	0	153
Other white oaks	3,574	95	70	1,865	64	0	102	1,378
Select red oaks	152	6	9	78	0	0	1	59
Other red oaks	15,956	1,640	597	6,563	822	0	179	6,155
Basswood	93	13	5	38	0	0	1	36
Elm	486	29	21	216	12	0	21	187
Other eastern hardwoods	9,456	1,054	269	4,025	79	0	381	3,648
<b>Total hardwoods</b>	<b>46,153</b>	<b>4,415</b>	<b>1,526</b>	<b>20,111</b>	<b>1,418</b>	<b>0</b>	<b>879</b>	<b>17,804</b>
<b>All species</b>	<b>465,147</b>	<b>167,032</b>	<b>26,431</b>	<b>213,501</b>	<b>15,582</b>	<b>7,713</b>	<b>14,886</b>	<b>20,002</b>

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 ownership class, Florida, 2005**

Species group and detailed species group	Total	Ownership class		
		Public	Forest industry	Nonindustrial private
<i>thousand cubic feet</i>				
Softwood				
Cedar	449	57	51	341
Longleaf-slash pine	324,760	23,505	68,529	232,726
Loblolly-shortleaf pine	41,253	3,033	8,032	30,188
Other yellow pines	27,357	3,698	4,051	19,608
Cypress	25,175	1,420	4,868	18,886
Total softwoods	418,994	31,713	85,531	301,750
Hardwood				
Soft maple	1,941	250	429	1,262
Hard maple	116	4	18	94
Other birch	50	24	2	24
Hickory	1,161	163	169	829
Beech	426	0	37	390
Ash	790	163	141	486
Sweetgum	5,054	440	775	3,838
Yellow-poplar	641	12	88	541
Blackgum-tupelo	5,685	383	1,126	4,176
Black cherry	177	21	18	138
Select white oaks	396	19	61	316
Other white oaks	3,574	628	374	2,572
Select red oaks	152	19	9	124
Other red oaks	15,956	2,379	2,490	11,086
Basswood	93	21	24	48
Elm	486	79	86	320
Other eastern hardwoods	9,456	719	935	7,802
Total hardwoods	46,153	5,324	6,783	34,046
All species	465,147	37,037	92,314	335,796

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



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In 2005, volume of industrial roundwood output from Florida's forests totaled 445 million cubic feet, 13 percent less than in 2003. Mill byproducts generated from primary manufacturers declined to 146 million cubic feet. Almost all plant residues were used primarily for fuel and fiber products. Pulpwood was the leading roundwood product at 214 million cubic feet; saw logs ranked second at 167 million cubic feet; veneer logs were third at 26 million cubic feet. Total receipts declined 5 percent to 460 million cubic feet. The number of primary processing plants totaled 93 in 2005.

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



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