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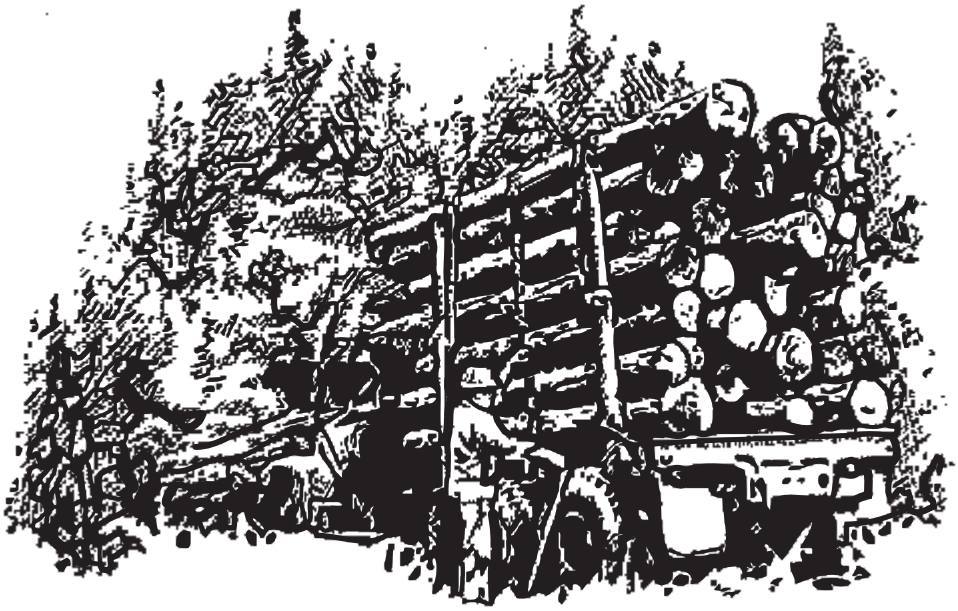
Georgia's Timber Industry—An Assessment of Timber Product Output and Use, 2009

**Tony G. Johnson,
Nathan McClure, and
Risher A. Willard**

The Authors:

Tony G. Johnson, Forester, U.S. Forest Service, Southern Research Station, Asheville, NC 28804; **Nathan McClure** and **Risher A. Willard**, Staff Foresters, Georgia Forestry Commission, Macon, GA 31202.



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

Foreword

This report contains the findings of a 2009 canvass of all primary wood-using plants in Georgia, and presents changes in product output and residue use since 2007. It complements the Forest Inventory and Analysis annual 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 2009 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 Georgia was conducted in 2010 to obtain information for 2009. In addition, roundwood from out-of-State mills known to be using logs or bolts harvested from Georgia timberland was incorporated into Georgia 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 1961, 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 Southern Research Station (SRS) gratefully acknowledges the tremendous cooperation and assistance provided by the Georgia Forestry Commission (Risher Willard, Nathan McClure, Druid Preston, and Josh Love) in collecting mill data. Appreciation is also extended to forest industry and mill managers for providing timber products information.

The authors thank Druid Preston, Sara Baldwin, and Fred Allen for review and comments; Carolyn Steppleton and Michael Howell for their tireless efforts in processing and accuracy of the data; Helen Beresford for timber product output database maintenance and support; Anne Jenkins, Janet Griffin, Sharon Johnson, and Charlene Walker for tables, graphs, statistical checking, and styling; and the SRS Technical Publications Team for editorial review and publication of this report.

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/.

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
200 W.T. Weaver Blvd.
Asheville, NC 28804
tjohnson09@fs.fed.us
828-257-4888

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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[a] 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.

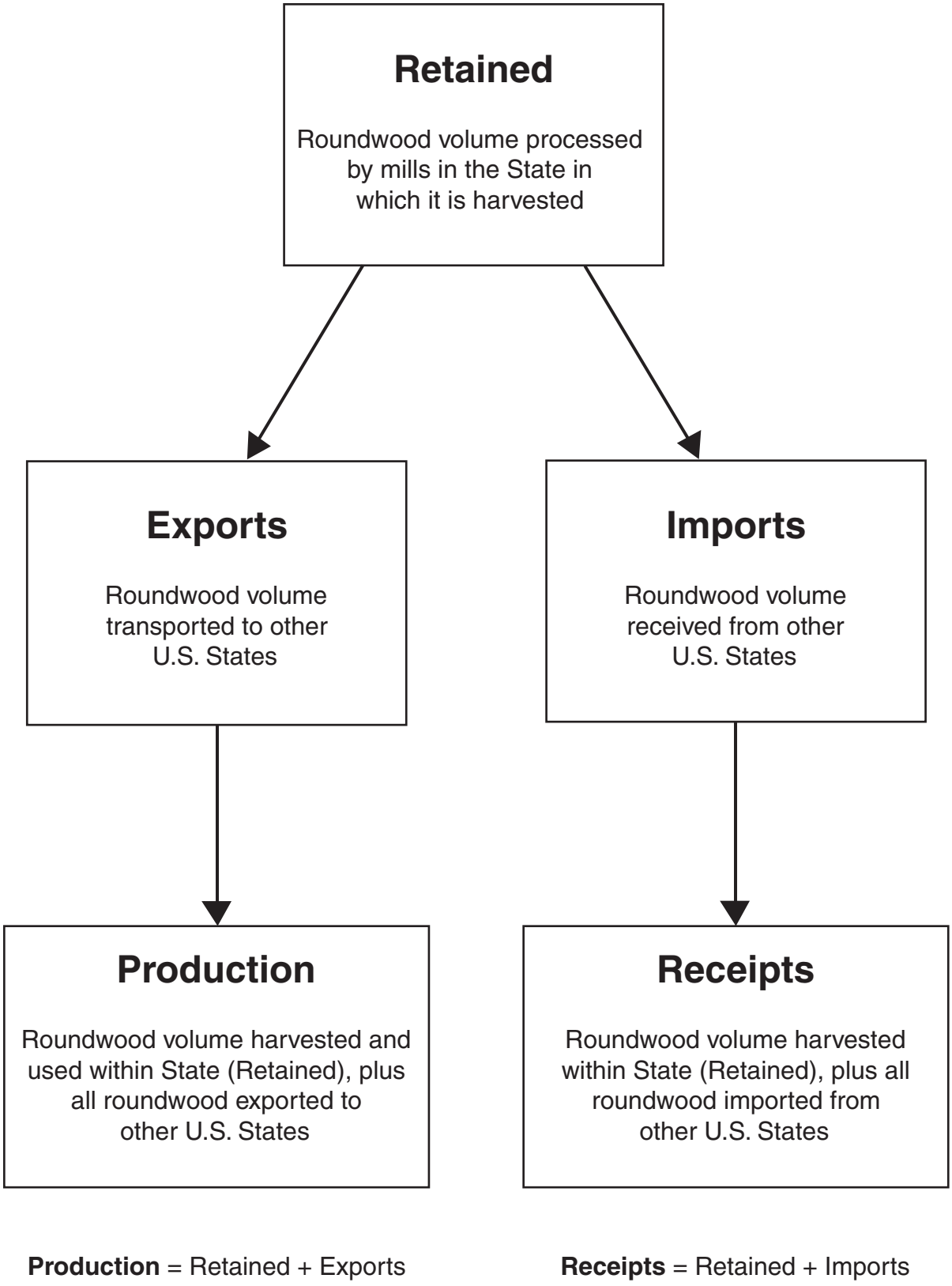

Figure 1—Movement of roundwood exports and imports within the United States.

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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 Work Units across the country that deal with timber product output (TPO) (fig. 1). Unless otherwise indicated, the context for production and receipts comparisons (increases, decreases, and stabilizations) throughout the report is from 2007 to 2009.

All Products

- Industrial TPO from roundwood declined 157.1 million cubic feet, or 13 percent, to 1.05 billion cubic feet.
- Output of industrial softwood roundwood products declined 13 percent, to 908.6 million cubic feet, while output of industrial hardwood roundwood products was down 16 percent to 144.1 million cubic feet (fig. 2).
- Pulpwood and saw logs were the principal roundwood products in 2009. Combined output of these two products totaled 906.9 million cubic feet and accounted for 86 percent of the State's total industrial roundwood output (fig. 3).
- Total receipts at Georgia mills, which included roundwood harvested and retained in the State and roundwood imported from other States, declined 14 percent from 1.22 billion cubic feet to 1.05 billion cubic feet, while output of utilized plant byproducts was down 120.6 million cubic feet, or 29 percent, to 292.2 million cubic feet.
- At the same time, the number of primary roundwood-using plants in Georgia declined from 168 in 2007 to 152 in 2009 (fig. 4). The number of sawmills declined by 17, veneer and composite panel mills declined by 1 each, and other miscellaneous mills was up by 3.
- Across all products, 86 percent of roundwood harvested was retained for processing at Georgia mills. Exports of roundwood to other States amounted to 146.7 million cubic feet, while imports of roundwood amounted to 139.9 million cubic feet making the State a net exporter

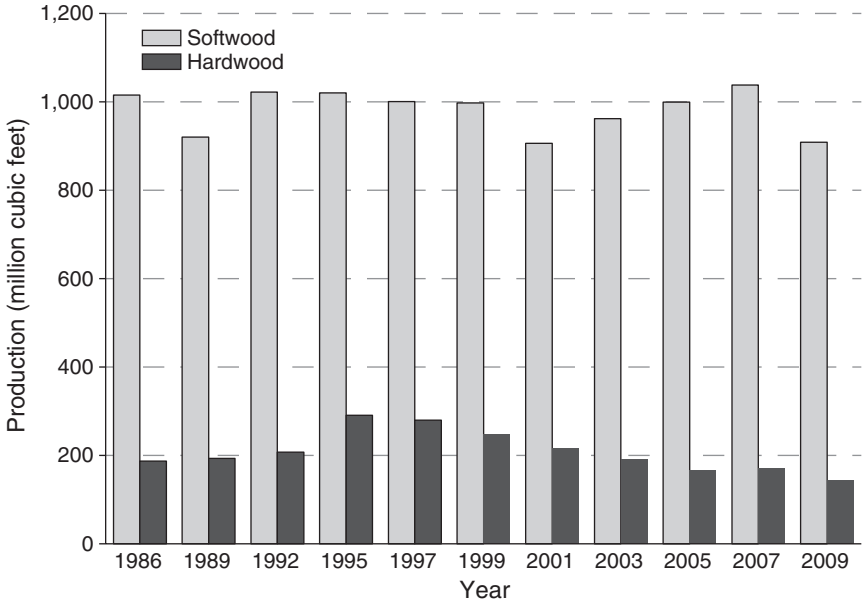

Figure 2—Roundwood production for all products by species group and year (see page 8 for references for individual years), Georgia.

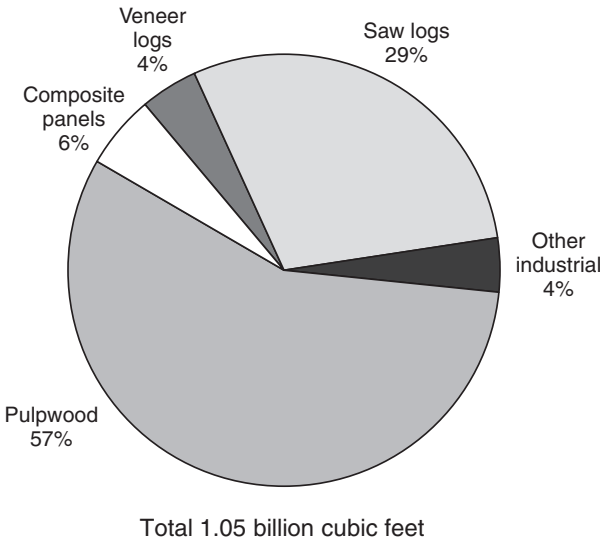

Figure 3—Roundwood production by type of product, Georgia, 2009.

of roundwood. Tables A.8 to A.12 show exports to and imports from other States by individual product type.

Pulpwood

- Total pulpwood production, including chipped roundwood, declined 2 percent to 597.4 million cubic feet but accounted for 57 percent of the State's total roundwood TPO compared to 51 percent of total TPO in 2007. Softwood output was down to 503.2 million cubic feet (6.9 million cords); hardwood output declined as well to 94.2 million cubic feet (1.3 million cords) (fig. 5). These were declines from 2007 numbers of 1 percent and 8 percent, respectively.

- Twelve pulpmill facilities were operating and receiving roundwood in Georgia in 2009, the same since 2003. Total pulpwood receipts for these mills declined to 596.8 million cubic feet, accounting for 57 percent of total receipts for all mills.

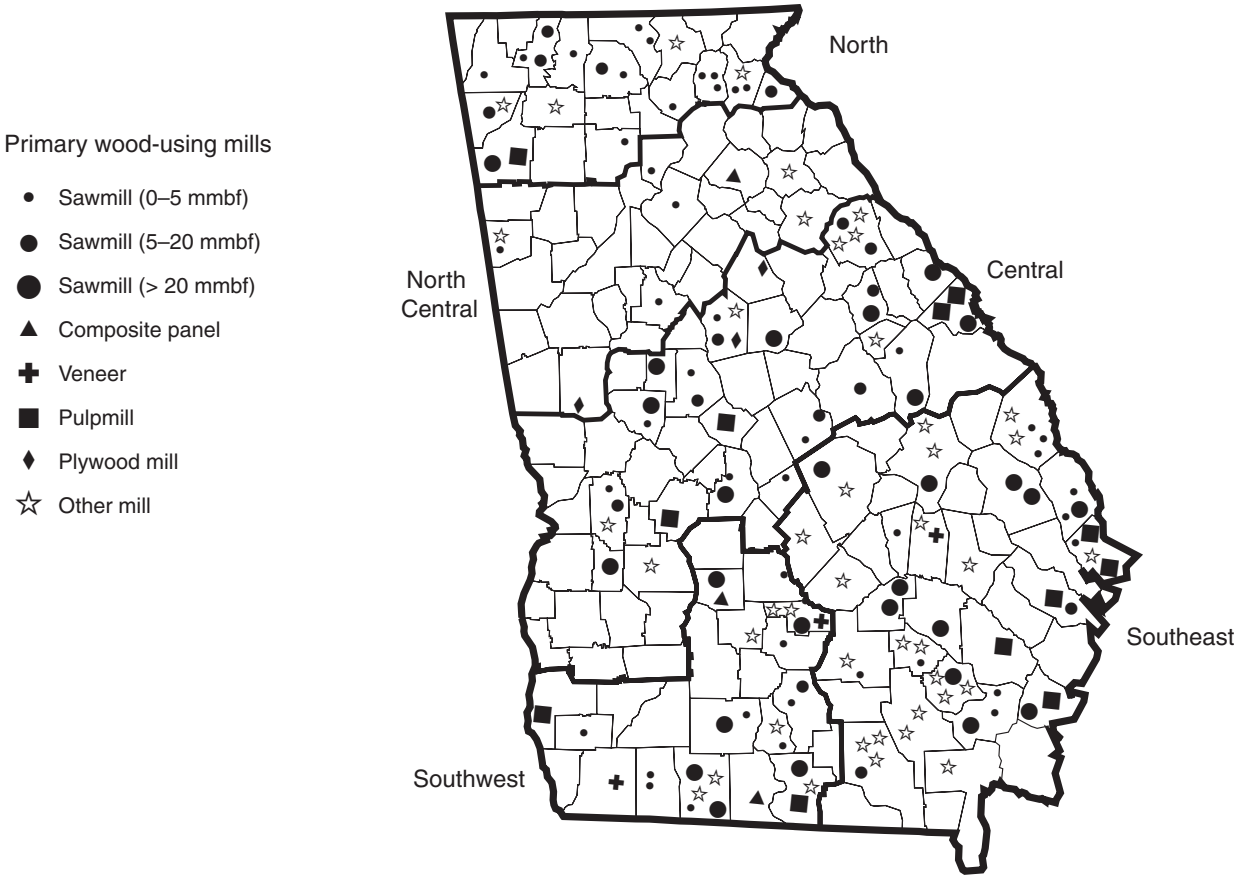

Figure 4—Primary wood-using mills by region, Georgia, 2009.

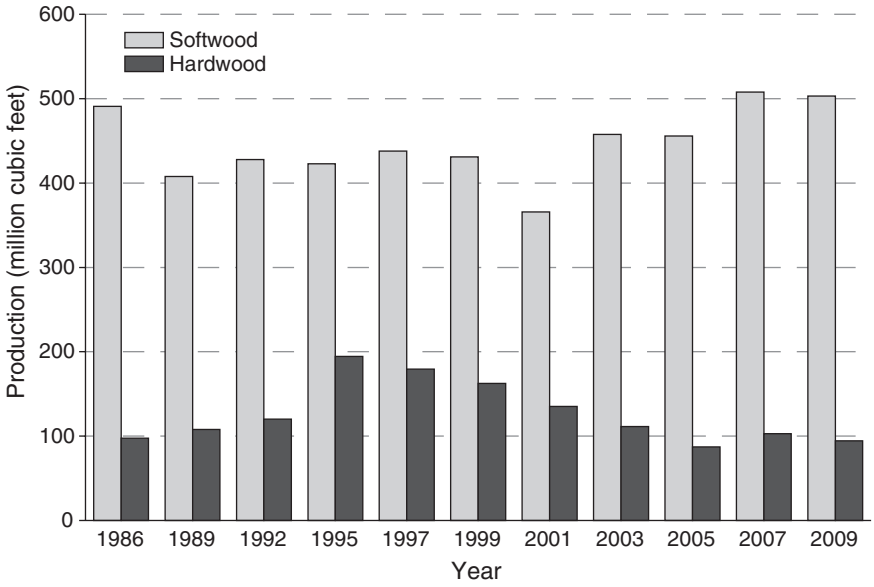

Figure 5—Roundwood pulpwood production by species group and year (see page 8 for references for individual years), Georgia.

- Eighty-four percent of roundwood cut for pulpwood was retained for processing at Georgia pulpmills. Roundwood pulpwood accounted for 66 percent of total known exports and 69 percent of total imports. Roundwood pulpwood exports exceeded imports by 6.9 million cubic feet, making the State a net exporter of pulpwood for processing.

Saw Logs

- Saw logs accounted for 29 percent of the State's total roundwood products. Output of softwood saw logs declined 24 percent to 266.2 million cubic feet (1.5 billion board feet, International ¼-inch rule), while that of hardwood saw logs was down 27 percent to 43.3 million cubic feet (258 million board feet, International ¼-inch rule) (fig. 6).

- In 2009, Georgia had 88 sawmills, 17 fewer mills than in 2007. The total number of sawmills does not include the several single operator sawmills in the State. Total saw-log receipts were down 119.0 million cubic feet to 310.6 million cubic feet. Softwood saw-log receipts dropped 28 percent to 264.1 million cubic feet, while those of hardwoods declined 25 percent to 46.5 million cubic feet.

- Of the operating mills in 2009, 35 percent had receipts of < 1 million board feet, while 39 percent had receipts > 10 million board feet. Those 34 mills, however, accounted for 94 percent of total saw-log receipts.

- Georgia retained 90 percent of its saw-log production for within State manufacture, with saw-log imports exceeding exports by 1.1 million cubic feet in 2009.

Veneer Logs

- Output of veneer logs in 2009 totaled 45.4 million cubic feet and accounted for 4 percent of the State's total roundwood TPO volume. Softwood veneer production was down 27 percent to 42.1 million cubic feet (246.7 million board feet, International ¼-inch rule); output of hardwood veneer logs declined nearly 44 percent to 3.3 million cubic feet (20.3 million board feet, International ¼-inch rule) (fig. 7).

- The number of veneer mills operating in Georgia declined from seven to six for 2009. Receipts of veneer logs dropped 31 percent to 44.5 million cubic feet. Softwood veneer receipts were down 14.4 million cubic feet to 37.9 million cubic feet, while hardwood veneer receipts declined 46 percent to 6.6 million cubic feet.

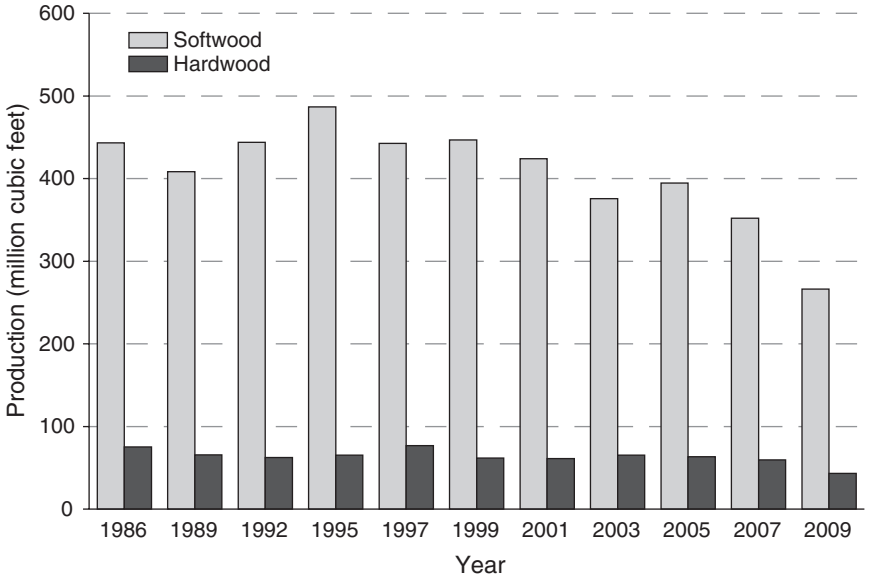

Figure 6—Roundwood saw-log production by species group and year (see page 8 for references for individual years), Georgia.

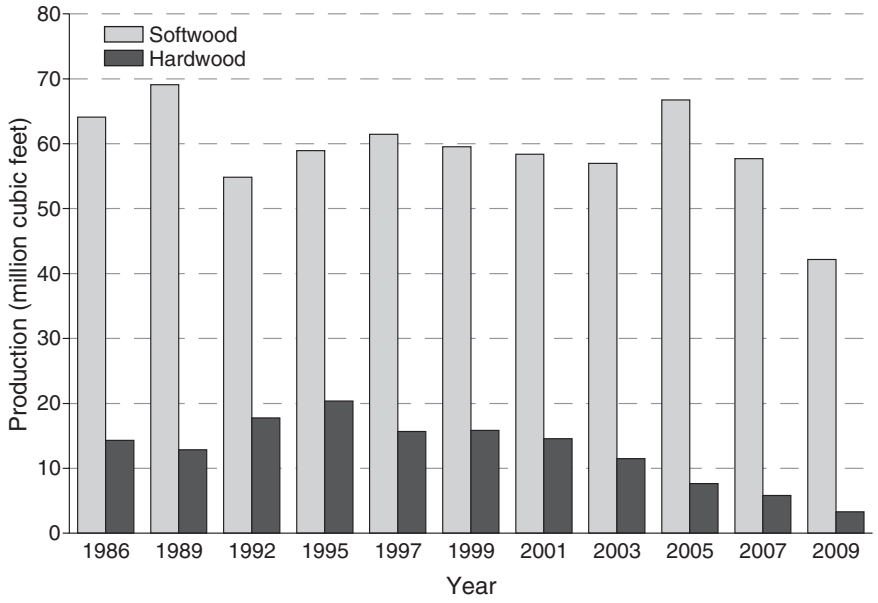

Figure 7—Roundwood veneer-log production by species group and year (see page 8 for references for individual years), Georgia.

- Georgia retained 85 percent of its veneer-log production for processing at veneer mills within the State. Exports amounted to 6.9 million cubic feet, and imports totaled 6.0 million cubic feet, making the State a net exporter of roundwood veneer logs.

Composite Panels

- Roundwood harvested from Georgia's forests for composite panels fell 41 percent and totaled 57.9 million cubic feet. Softwood output was down 40 percent to 57.5 million cubic feet (792,600 cords); hardwood production dropped 87 percent to 370,000 cubic feet (5,000 cords) (fig. 8).

- Three composite panel, or oriented strand board, mills were operating in Georgia in 2009, one less than in 2007. Total receipts for these mills declined 37 percent to 57.4 million cubic feet, and accounted for 5 percent of the State's total receipts.

- Ninety-one percent of the roundwood production harvested for composite panels was retained for processing at Georgia's mills. Exports amounted to 5.1 million cubic feet, and imports totaled 4.6 million 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, residential firewood, industrial fuel, logs for log homes, and all other industrial products totaled 42.5 million cubic feet, a 65-percent increase from 2007. Softwood made-up 93 percent of the other industrial products volume.

- The number of plants producing other industrial products totaled 43 in 2009. Combined receipts of other industrial products from softwood and hardwood increased 42 percent to 36.6 million cubic feet. Industrial fuel accounted for 7.1 million cubic feet, or 19 percent, of receipt volume for this category.

- Georgia was a net exporter of roundwood used for other industrial products; nearly all of the 6.5 million cubic feet exported and 0.6 million cubic feet imported were softwood.

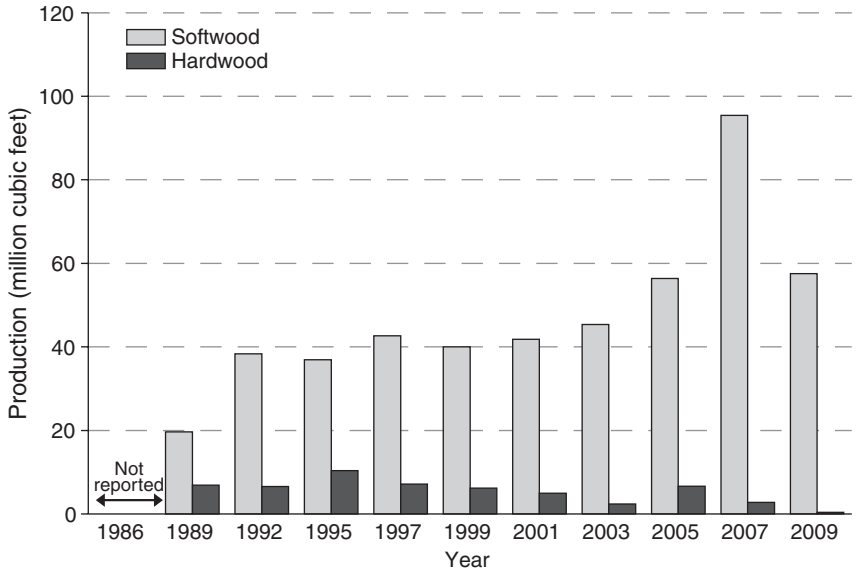

Figure 8—Roundwood production for composite panels by species group and year (see page 8 for references for individual years), Georgia.

Plant Byproducts

- In 2009, processing of primary products in Georgia mills generated 292.4 million cubic feet of wood and bark residues. Coarse residues from all primary products amounted to 105.6 million cubic feet, while bark volume totaled 102.7 million cubic feet. Collectively, sawdust and shavings made-up 29 percent of total residues, or 84.2 million cubic feet (fig. 9).

- The processing of saw logs generated 193.8 million cubic feet of mill residues, accounting for 66 percent of the total residues produced (fig. 10).

- Nearly 292.2 million cubic feet, or 100 percent, of the wood and bark residues were used for a product. While < 1 percent of the residues were not used for a product, 48 percent of the residues were used for industrial fuel and 34 percent were used for fiber products (fig. 11). More than 97.1 million cubic feet, or 92 percent, of the coarse residues were used for fiber products. Eighty-three percent of the bark was used for industrial fuel, while 64 percent of the sawdust and shavings were used for industrial fuel.

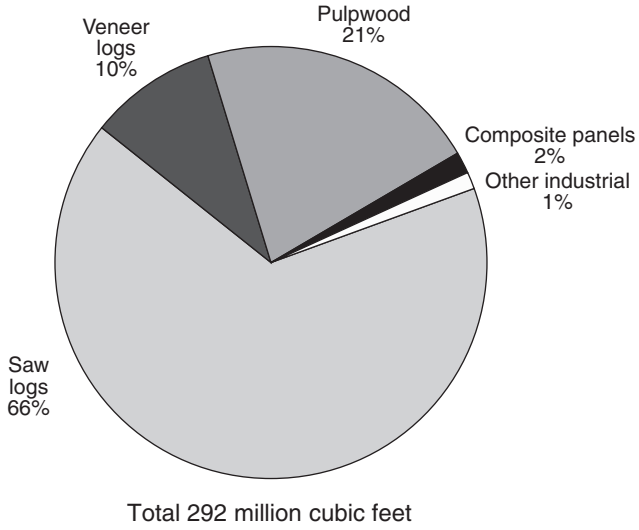

Figure 10—Primary mill residue produced by roundwood type, Georgia, 2009.

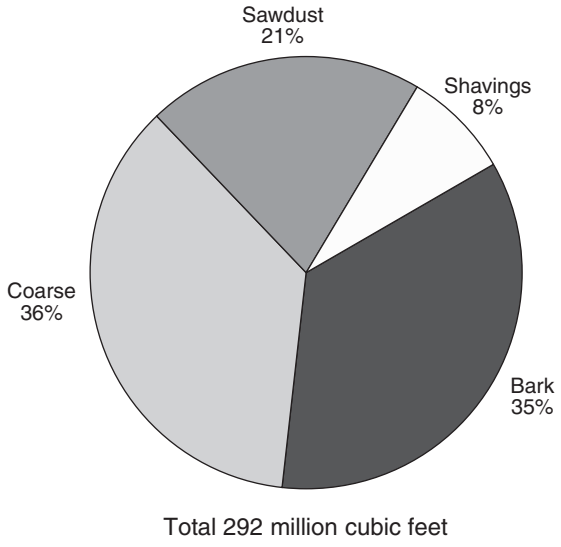

Figure 9—Primary mill residue by residue type, Georgia, 2009.

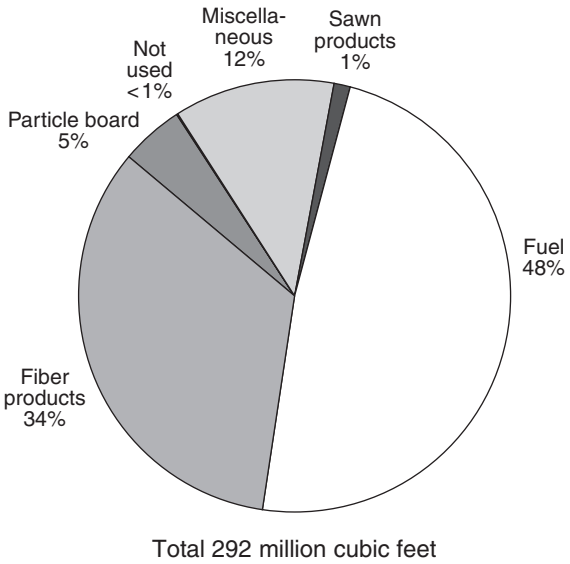

Figure 11—Disposal of residue by product, Georgia, 2009.

County Data

- Table A.15 shows softwood and hardwood product output by county and individual product type. With the exception of Towns County, nearly all counties in Georgia had softwood and hardwood output. Seventeen counties (Appling, Bulloch, Burke, Camden, Charlton, Clinch, Dodge, Effingham, Emanuel, Laurens, Pierce, Screven, Telfair, Ware, Washington, Wayne, and Wilcox) had combined softwood and hardwood product output of >15 million cubic feet each. The total product output of these 17 counties amounted to 340.8 million cubic feet and accounted for 32 percent of the State's total product output.

Total Roundwood Output

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

Source

- In addition to the 1.05 billion cubic feet of roundwood output for industrial roundwood, an estimated 55.8 million cubic feet were harvested for residential fuelwood, bringing Georgia's total roundwood output to 1.11 billion cubic feet.

- Ninety-one 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 98 million cubic feet, or 9 percent of total roundwood output (fig. 12).

Ownership

- An estimated 762.6 million cubic feet, or 69 percent, of the total roundwood output came from nonindustrial private forest lands. Forest industry lands contributed 320.2 million cubic feet, or 29 percent of the output. Public lands made-up the remaining 2 percent, or 25.7 million cubic feet (fig. 13).

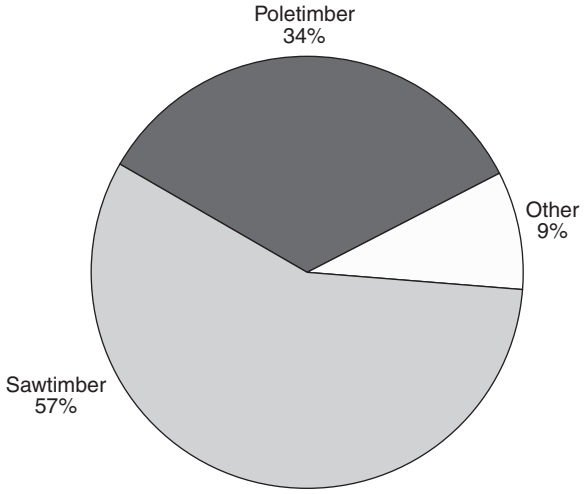

Figure 12—Roundwood output by source, Georgia, 2009.

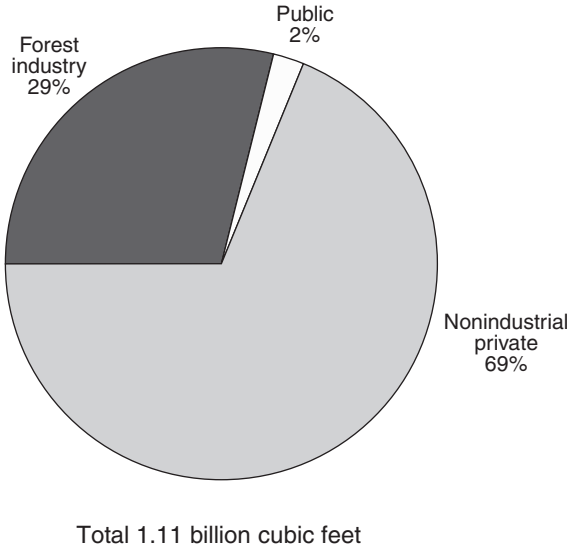

Figure 13—Roundwood output by ownership, Georgia, 2009.

Species

- The loblolly and shortleaf pine group provided the most volume of any softwood species group, accounting for 60 percent of the total softwood output (fig. 14). The longleaf-slash pine type accounted for 34 percent of the softwood output. In hardwoods, the red oak and white oak groups combined accounted for 76.6 million cubic feet, or 39 percent of total hardwood output (fig. 15).

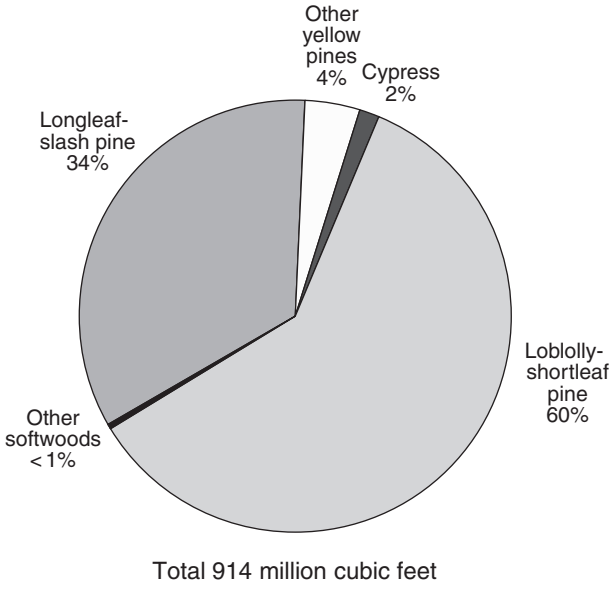

Figure 14—Roundwood output by softwood species group, Georgia, 2009.

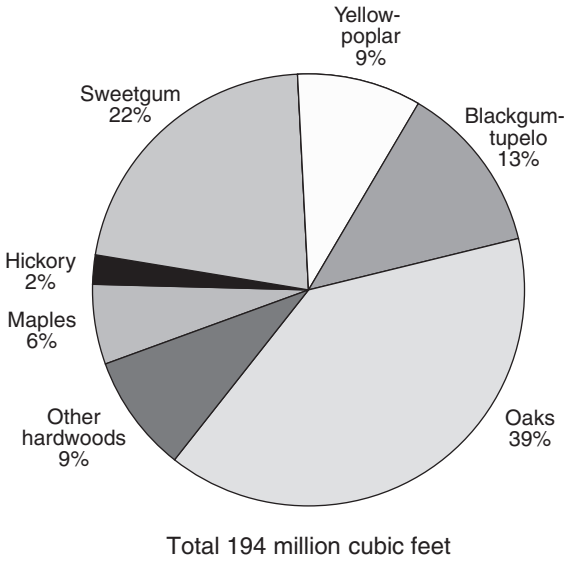

Figure 15—Roundwood output of hardwood species group, Georgia, 2009.

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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.

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, 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 U.S. 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 portion of 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.

Residential fuelwood. The volume of roundwood harvested to produce heat for residential settings.

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).

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 Georgia during the most recent survey period.
[b] Cubic feet of solid wood per cord.

Species List[a]

Common name	Scientific name[b]
Softwoods	
Atlantic white-cedar	*Chamaecyparis thyoides* (L.) B.S.P.
Southern redcedar	*Juniperus silicicola* (Small) Bailey
Eastern redcedar	*J. virginiana* L.
Shortleaf pine	*Pinus echinata* Mill.
Slash pine	*P. elliottii* Engelm.
Spruce pine	*P. glabra* Walt.
Longleaf pine	*P. palustris* Mill.
Loblolly pine	*P. taeda* L.
Virginia pine	*P. virginiana* Mill.
Baldcypress	*Taxodium distichum* (L.) Rich.
Hardwoods	
Florida maple	*Acer barbatum* Michx.
Boxelder	*A. negundo* L.
Red maple	*A. rubrum* L.
Silver maple	*A. saccharinum* L.
Sugar maple	*A. saccharum* Marsh.
Buckeye	*Aesculus* spp. L.
Ailanthus	*Ailanthus altissima* (Mill.) Swingle
Tung-oil tree	*Aleurites fordii* Hemsl.
Serviceberry	*Amelanchier* spp. Medic.
River birch	*Betula nigra* L.
American hornbeam	*Carpinus caroliniana* Walt.
Hickory	*Carya* spp. Nutt.
Water hickory	*C. aquatica* (Michx. f.) Nutt.
Bitternut hickory	*C. cordiformis* (Wangenh.) K. Koch
Pignut hickory	*C. glabra* (Mill.) Sweet
Pecan	*C. illinoensis* (Wangenh.) K. Koch
Shellbark hickory	*C. laciniosa* (Michx. f.) Loud.
Nutmeg hickory	*C. myristiciformis* (Michx. f.) Nutt.
Shagbark hickory	*C. ovata* (Mill.) K. Koch
Black hickory	*C. texana* Buckl.
Mockernut hickory	*C. tomentosa* (Poir.) Nutt.
Allegheny chinkapin	*Castanea pumila* Mill.
Chinkapin	*Castanopsis* (D. Don) Spach
Catalpa	*Catalpa* spp. Scop.
Sugarberry	*Celtis laevigata* Willd.
Hackberry	*C. occidentalis* L.
Eastern redbud	*Cercis canadensis* L.
Flowering dogwood	*Cornus florida* L.
Hawthorn	*Crataegus* spp. L.
Common persimmon	*Diospyros virginiana* L.
American beech	*Fagus grandifolia* Ehrh.
White ash	*Fraxinus americana* L.
Pumpkin ash	*F. profunda* (Bush) Bush
Blue ash	*F. quadrangulata* Michx.
Waterlocust	*Gleditsia aquatica* Marsh.
Honeylocust	*G. triacanthos* L.
Loblolly-bay	*Gordonia lasianthus* (L.) Ellis
American holly	*Ilex opaca* Ait.
Black walnut	*Juglans nigra* L.
Hardwoods (continued)	
Sweetgum	*Liquidambar styraciflua* L.
Yellow-poplar	*Liriodendron tulipifera* L.
Osage-orange	*Maclura pomifera* (Raf.) Schneid.
Cucumbertree	*Magnolia acuminata* L.
Southern magnolia	*M. grandiflora* L.
Bigleaf magnolia	*M. macrophylla* Michx.
Sweetbay	*M. virginiana* L.
Apple	*Malus* spp. Mill.
Chinaberry	*Melia azedarach* L.
White mulberry	*Morus alba* L.
Red mulberry	*M. rubra* L.
Water tupelo	*Nyssa aquatica* L.
Blackgum	*N. sylvatica* Marsh.
Swamp tupelo	*N. sylvatica* var. *biflora* (Walt.) Sarg.
Eastern hophornbeam	*Ostrya virginiana* (Mill.) K. Koch
Sourwood	*Oxydendrum arboreum* (L.) DC.
Redbay	*Persea borbonia* (L.) Spreng.
American sycamore	*Platanus occidentalis* L.
Cottonwood	*Populus* spp. L.
Black cherry	*Prunus serotina* Ehrh.
White oak	*Quercus alba* L.
Scarlet oak	*Q. coccinea* Muenchh.
Southern red oak	*Q. falcata* Michx.
Cherrybark oak	*Q. falcata* var. *pagodifolia* Ell.
Bluejack oak	*Q. incana* Bartr.
Turkey oak	*Q. laevis* Walt.
Laurel oak	*Q. laurifolia* Michx.
Overcup oak	*Q. lyrata* Walt.
Swamp chestnut oak	*Q. michauxii* Nutt.
Chinkapin oak	*Q. muehlenbergii* Engelm.
Water oak	*Q. nigra* L.
Nuttall oak	*Q. nuttallii* Palmer
Oglethorpe oak	*Q. oglethorpensis* Duncan
Pin oak	*Q. palustris* Muenchh.
Willow oak	*Q. phellos* L.
Chestnut oak	*Q. prinus* L.
Northern red oak	*Q. rubra* L.
Shumard oak	*Q. shumardii* Buckl.
Post oak	*Q. stellata* Wangenh.
Black oak	*Q. velutina* Lam.
Live oak	*Q. virginiana* Mill.
Black locust	*Robinia pseudoacacia* L.
Willow	*Salix* spp. L.
Sassafras	*Sassafras albidum* (Nutt.) Nees
American basswood	*Tilia americana* L.
White basswood	*T. heterophylla* Vent.
Winged elm	*Ulmus alata* Michx.
American elm	*U. americana* L.
Slippery elm	*U. rubra* Muhl.
September elm	*U. serotina* Sarg.

[a] Common and scientific names of tree species ≥ 1.0 inch d.b.h. occurring in the FIA sample.
[b] Little (1979).

Appendix

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Table A.1—Output of industrial products by product and species group, Georgia, 2007 and 2009

Product and species group	Year		Change	Change
	2007	2009		
	thousand cubic feet			*percent*
Saw logs				
Softwood	352,142	266,169	-85,973	-24.4
Hardwood	59,543	43,310	-16,233	-27.3
Total	411,685	309,479	-102,206	-24.8
Veneer logs				
Softwood	57,684	42,145	-15,539	-26.9
Hardwood	5,804	3,279	-2,525	-43.5
Total	63,488	45,424	-18,064	-28.5
Pulpwood[a]				
Softwood	507,960	503,176	-4,784	-0.9
Hardwood	102,767	94,244	-8,523	-8.3
Total	610,727	597,420	-13,307	-2.2
Composite panels				
Softwood	95,415	57,522	-37,893	-39.7
Hardwood	2,786	370	-2,416	-86.7
Total	98,201	57,892	-40,309	-41.0
Other industrial				
Softwood	25,106	39,555	14,449	57.6
Hardwood	609	2,917	2,308	379.0
Total	25,715	42,472	16,757	65.2
All industrial				
Softwood	1,038,307	908,567	-129,740	-12.5
Hardwood	171,509	144,120	-27,389	-16.0
Total	1,209,816	1,052,687	-157,129	-13.0

[a] Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (10,131,000 cubic feet in 2007 and 13,459,000 cubic feet in 2009).

Table A.2—Roundwood receipts by product and species group, Georgia, 2007 and 2009

Product and species group	Year		Change	Change
	2007	2009		
	- - - - - - - thousand cubic feet - - - - - - -			*percent*
Saw logs				
Softwood	367,556	264,067	-103,489	-28.2
Hardwood	62,066	46,512	-15,554	-25.1
Total	429,622	310,579	-119,043	-27.7
Veneer logs				
Softwood	52,242	37,886	-14,356	-27.5
Hardwood	12,272	6,644	-5,628	-45.9
Total	64,514	44,530	-19,984	-31.0
Pulpwood[a]				
Softwood	506,337	505,034	-1,303	-0.3
Hardwood	99,702	91,723	-7,979	-8.0
Total	606,039	596,757	-9,282	-1.5
Composite panels				
Softwood	87,360	56,782	-30,578	-35.0
Hardwood	3,122	603	-2,519	-80.7
Total	90,482	57,385	-33,097	-36.6
Other industrial[b]				
Softwood	25,062	34,155	9,093	36.3
Hardwood	664	2,423	1,759	264.9
Total	25,726	36,578	10,852	42.2
Total output				
Softwood	1,038,557	897,924	-140,633	-13.5
Hardwood	177,826	147,905	-29,921	-16.8
Total	1,216,383	1,045,829	-170,554	-14.0

[a] Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (11,274,000 cubic feet in 2007 and 13,885,000 cubic feet in 2009).

[b] Includes 7,072,000 cubic feet used as industrial fuel in 2009.

Table A.3—Number of primary wood-using plants by type of mill, Georgia, 1986 to 2009

Type of mill	Year										
	1986	1989	1992	1995	1997	1999	2001	2003	2005	2007	2009
	number										
Sawmills	239	172	178	144	129	129	118	122	115	105	88
Veneer mills	18	16	14	12	11	12	10	8	8	7	6
Pulpmills	15	14	13	14	13	12	13	12	12	12	12
Composite panel mills	0	3	4	5	5	4	4	4	4	4	3
Other mills	29	26	41	32	28	31	25	41	42	40	43
All plants	301	231	250	207	186	188	170	187	181	168	152

Table A.4—Roundwood receipts by sawmill size, Georgia, 2007 and 2009

Sawmill size class[a]	2007			2009		
	Mills	Volume		Mills	Volume	
mmbf	*number*	*mbf*	*percent*	*number*	*mbf*	*percent*
<1.0	33	9,763	0	31	7,649	1
1.0–4.99	26	74,696	3	14	34,818	2
5.0–9.99	6	49,160	2	9	54,711	3
10.0–49.99	21	653,666	28	18	482,816	28
>50	19	1,591,266	67	16	1,140,558	66
Total	105	2,378,551	100	88	1,720,552	100

[a] Based on volume received as opposed to actual capacity.

Table A.5—Roundwood receipts by species and type of mill, Georgia, 2009

Species	All mills	Type of mill					
			Veneer mills				
		Sawmills	Pine plywood	Other veneer	OSB and panels	Pulpmills[a]	Other mills[b]
	thousand cubic feet						
Softwood							
Yellow pine	385,303	259,714	31,852	6,034	56,782	NA	30,921
Eastern white pine	751	751	0	0	0	NA	0
Cedar	0	0	0	0	0	NA	0
Cypress	4,469	3,582	0	0	0	NA	887
Other softwood	2,367	20	0	0	0	NA	2,347
Unclassified	505,034	0	0	0	0	505,034	0
Total softwoods	897,924	264,067	31,852	6,034	56,782	505,034	34,155
Hardwood							
Blackgum and tupelo	2,902	1,944	0	550	240	NA	168
Soft maple	2,005	1,767	0	48	121	NA	69
Sweetgum	8,825	7,546	275	715	121	NA	168
Yellow-poplar	11,300	6,060	4,281	740	121	NA	98
Other soft hardwood	2,742	1,806	0	33	0	NA	903
Hickory	1,891	1,786	0	0	0	NA	105
Red oak	16,631	16,292	0	0	0	NA	339
White oak	6,981	6,873	0	0	0	NA	108
Other hard hardwood	2,905	2,438	0	2	0	NA	465
Unclassified	91,723	0	0	0	0	91,723	0
Total hardwoods	147,905	46,512	4,556	2,088	603	91,723	2,423
All species	1,045,829	310,579	36,408	8,122	57,385	596,757	36,578

NA = not applicable; OSB = oriented strand board.

[a] Collected only by softwood and hardwood and includes roundwood chipped.

[b] Includes 7,072,000 cubic feet used as industrial fuel in 2009.

Table A.6—Industrial roundwood movement by year and species group, Georgia, 2007 and 2009

Year	Production	Exported to other States	Retained	Imported from other States	Receipts
	thousand cubic feet				
			Softwood		
2007	1,038,307	155,374	882,933	155,624	1,038,557
2009	908,567	127,655	780,912	117,012	897,924
			Hardwood		
2007	171,509	24,207	147,302	30,524	177,826
2009	144,120	19,060	125,060	22,845	147,905
			All species		
2007	1,209,816	179,581	1,030,235	186,148	1,216,383
2009	1,052,687	146,715	905,972	139,857	1,045,829

Table A.7—Industrial roundwood movement by product and species group, Georgia, 2009

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
			thousand cubic feet		
Saw logs					
Softwood	266,169	30,291	235,878	28,189	264,067
Hardwood	43,310	487	42,823	3,689	46,512
Total	309,479	30,778	278,701	31,878	310,579
Veneer logs					
Softwood	42,145	6,799	35,346	2,540	37,886
Hardwood	3,279	74	3,205	3,439	6,644
Total	45,424	6,873	38,551	5,979	44,530
Pulpwood[a]					
Softwood	503,176	79,412	423,764	81,270	505,034
Hardwood	94,244	18,002	76,242	15,481	91,723
Total	597,420	97,414	500,006	96,751	596,757
Composite panels					
Softwood	57,522	5,117	52,405	4,377	56,782
Hardwood	370	3	367	236	603
Total	57,892	5,120	52,772	4,613	57,385
Other industrial					
Softwood	39,555	6,036	33,519	636	34,155
Hardwood	2,917	494	2,423	0	2,423
Total	42,472	6,530	35,942	636	36,578
All products					
Softwood	908,567	127,655	780,912	117,012	897,924
Hardwood	144,120	19,060	125,060	22,845	147,905
Total	1,052,687	146,715	905,972	139,857	1,045,829

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

Table A.8—Saw-log volume by destination, source, and species group, Georgia, 2009

Destination and source	All species	Species group	
		Softwood	Hardwood
	thousand cubic feet		
Georgia (retained)	278,701	235,878	42,823
Exports to			
Alabama	13,793	13,752	41
Florida	9,324	9,324	0
North Carolina	154	28	126
South Carolina	7,507	7,187	320
Total	30,778	30,291	487
Imports from			
Alabama	12,810	11,684	1,126
Florida	9,330	8,895	435
North Carolina	208	168	40
South Carolina	8,430	6,753	1,677
Tennessee	1,100	689	411
Total	31,878	28,189	3,689

Table A.9—Veneer volume by destination, source, and species group, Georgia, 2009

Destination and source	All species	Species group	
		Softwood	Hardwood
	thousand cubic feet		
Georgia (retained)	38,551	35,346	3,205
Exports to			
Alabama	4	0	4
Florida	4,624	4,624	0
North Carolina	61	0	61
South Carolina	2,184	2,175	9
Total	6,873	6,799	74
Imports from			
Alabama	2,897	2,238	659
Florida	644	302	342
Kentucky	1,188	0	1,188
North Carolina	46	0	46
South Carolina	150	0	150
Tennessee	505	0	505
Virginia	549	0	549
Total	5,979	2,540	3,439

Table A.10—Pulpwood volume by destination, source, and species group, Georgia, 2009[a]

Destination and source	All species	Species group	
		Softwood	Hardwood
	thousand cubic feet		
Georgia (retained)	500,006	423,764	76,242
Exports to			
Alabama	33,911	24,864	9,047
Florida	36,156	35,853	303
North Carolina	577	196	381
Ohio	226	224	2
South Carolina	4,338	3,444	894
Tennessee	22,206	14,831	7,375
Total	97,414	79,412	18,002
Imports from			
Alabama	25,517	23,443	2,074
Florida	35,919	33,670	2,249
Kentucky	17	0	17
North Carolina	67	19	48
South Carolina	31,334	24,119	7,215
Tennessee	27	19	8
Virginia	3,870	0	3,870
Total	96,751	81,270	15,481

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

Table A.11—Composite panel volume by destination, source, and species group, Georgia, 2009

Destination and source	All species	Species group	
		Softwood	Hardwood
	thousand cubic feet		
Georgia (retained)	52,772	52,405	367
Exports to			
Florida	1,121	1,121	0
South Carolina	3,987	3,987	0
Tennessee	12	9	3
Total	5,120	5,117	3
Imports from			
Florida	4,613	4,377	236
Total	4,613	4,377	236

Table A.12—Other industrial volume by destination, source, and species group, Georgia, 2009[a]

Destination and source	All species	Species group	
		Softwood	Hardwood
	thousand cubic feet		
Georgia (retained)	35,942	33,519	2,423
Exports to			
Alabama	4,664	4,170	494
Florida	925	925	0
South Carolina	941	941	0
Total	6,530	6,036	494
Imports from			
Alabama	34	34	0
Florida	485	485	0
South Carolina	117	117	0
Total	636	636	0

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

Table A.13—Primary mill residue volume by roundwood type, species group, and residue type, Georgia, 2009

Roundwood type and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
		thousand cubic feet			
Saw logs					
Softwood	164,943	23,403	78,994	38,947	23,599
Hardwood	28,854	5,319	13,701	9,768	66
Total	193,797	28,722	92,695	48,715	23,665
Veneer logs					
Softwood	23,182	3,596	9,787	9,799	0
Hardwood	4,824	784	2,013	2,027	0
Total	28,006	4,380	11,800	11,826	0
Pulpwood					
Softwood	51,057	51,057	0	0	0
Hardwood	11,164	11,164	0	0	0
Total	62,221	62,221	0	0	0
Composite panels					
Softwood	4,707	4,707	0	0	0
Hardwood	0	0	0	0	0
Total	4,707	4,707	0	0	0
Other industrial[a]					
Softwood	3,659	2,572	1,087	0	0
Hardwood	54	54	0	0	0
Total	3,713	2,626	1,087	0	0
Total					
Softwood	247,548	85,335	89,868	48,746	23,599
Hardwood	44,896	17,321	15,714	11,795	66
Total	292,444	102,656	105,582	60,541	23,665

[a] Includes poles, pilings, posts, and all other industrial products.

Table A.14—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Georgia, 2007 and 2009

Product and species group	All types		Bark		Coarse		Sawdust		Shavings	
	2007	2009	2007	2009	2007	2009	2007	2009	2007	2009
	thousand cubic feet									
Fiber products										
Softwood	104,363	84,380	0	0	102,556	82,896	0	0	1,807	1,484
Hardwood	11,489	14,243	0	0	11,489	14,243	0	0	0	0
Total	115,852	98,623	0	0	114,045	97,139	0	0	1,807	1,484
Particleboard										
Softwood	31,131	13,351	0	0	1,957	683	7,003	2,250	22,171	10,418
Hardwood	0	430	0	0	0	0	0	426	0	4
Total	31,131	13,781	0	0	1,957	683	7,003	2,676	22,171	10,422
Sawn products										
Softwood	5,404	3,557	14	0	5,390	3,557	0	0	0	0
Hardwood	33	4	0	0	33	4	0	0	0	0
Total	5,437	3,561	14	0	5,423	3,561	0	0	0	0
Industrial fuel										
Softwood	165,710	116,819	96,328	68,995	9,845	1,158	53,453	38,922	6,084	7,744
Hardwood	35,613	24,256	18,690	16,208	2,195	1,038	14,507	6,996	221	14
Total	201,323	141,075	115,018	85,203	12,040	2,196	67,960	45,918	6,305	7,758
Miscellaneous										
Softwood	46,729	29,271	29,373	16,192	7,190	1,563	8,152	7,563	2,014	3,953
Hardwood	12,279	5,862	2,800	1,112	7,528	426	1,936	4,276	15	48
Total	59,008	35,133	32,173	17,304	14,718	1,989	10,088	11,839	2,029	4,001
Not used										
Softwood	110	170	16	148	44	11	50	11	0	0
Hardwood	475	101	20	1	50	3	405	97	0	0
Total	585	271	36	149	94	14	455	108	0	0
All products										
Softwood	353,447	247,548	125,731	85,335	126,982	89,868	68,658	48,746	32,076	23,599
Hardwood	59,889	44,896	21,510	17,321	21,295	15,714	16,848	11,795	236	66
Total	413,336	292,444	147,241	102,656	148,277	105,582	85,506	60,541	32,312	23,665

Table A.15—Roundwood timber product output by county, product, and species group, Georgia, 2009

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
	thousand cubic feet											
Appling	21,095	2,324	5,231	724	0	9	15,023	1,360	0	370	841	231
Atkinson	4,253	1,504	763	579	483	9	2,800	910	112	6	95	0
Bacon	8,677	1,439	2,047	724	0	0	6,287	620	0	0	343	95
Baker	1,441	92	228	32	516	0	636	60	0	0	61	0
Baldwin	2,728	598	284	215	377	0	1,995	383	0	0	72	0
Banks	797	337	202	93	169	0	347	244	79	0	0	0
Barrow	383	93	0	0	169	0	56	93	158	0	0	0
Bartow	4,463	687	1,605	18	97	45	2,753	624	0	0	8	0
Ben Hill	4,537	65	1,444	17	483	9	1,169	39	752	0	689	0
Berrien	5,995	1,217	2,966	456	181	3	1,830	690	673	36	345	32
Bibb	613	645	0	70	0	0	613	575	0	0	0	0
Bleckley	3,424	1,142	926	646	0	0	2,498	496	0	0	0	0
Brantley	11,456	747	3,958	435	0	0	6,665	271	0	0	833	41
Brooks	5,888	81	3,562	42	0	0	1,137	3	673	36	516	0
Bryan	8,022	703	2,414	443	0	0	5,150	260	0	0	458	0
Bulloch	15,268	2,180	6,547	1,235	0	7	8,338	938	0	0	383	0
Burke	15,793	4,976	3,127	1,143	0	9	11,199	3,810	1,332	0	135	14
Butts	2,409	428	678	93	260	0	1,471	335	0	0	0	0
Calhoun	1,714	7	0	0	97	0	1,569	7	0	0	48	0
Camden	16,669	1,190	2,903	435	271	0	13,374	755	0	0	121	0
Candler	6,807	227	3,600	0	0	0	3,065	227	0	0	142	0
Carroll	13,316	1,007	1,046	270	972	228	11,298	499	0	0	0	10
Catoosa	263	499	93	181	0	0	170	318	0	0	0	0
Charlton	25,574	494	4,442	0	271	0	20,215	274	0	0	646	220
Chatham	2,176	366	1,445	1	0	0	637	365	0	0	94	0
Chattahoochee	1,431	400	0	202	0	0	1,431	198	0	0	0	0
Chattooga	2,262	1,358	814	264	0	0	1,440	1,094	0	0	8	0
Cherokee	2,602	541	444	56	97	45	2,061	440	0	0	0	0
Clarke	279	89	0	0	169	0	31	89	79	0	0	0
Clay	1,918	142	113	0	0	0	1,805	142	0	0	0	0
Clayton	193	14	0	1	149	0	44	13	0	0	0	0
Clinch	25,071	3,657	8,866	435	0	0	11,027	3,143	1,459	79	3,719	0
Cobb	130	43	0	0	0	0	130	43	0	0	0	0
Coffee	8,788	1,392	4,309	751	241	4	3,867	583	0	0	371	54
Colquitt	7,308	513	4,031	64	422	177	1,592	210	561	30	702	32
Columbia	5,173	1,440	3,569	617	539	0	897	823	0	0	168	0
Cook	4,077	419	2,173	42	422	8	488	190	336	18	658	161
Coweta	4,902	612	2,173	255	486	91	2,243	266	0	0	0	0
Crawford	6,186	299	2,296	0	52	0	3,838	299	0	0	0	0
Crisp	1,298	343	606	7	181	3	393	294	0	0	118	39
Dade	65	70	16	24	0	0	49	46	0	0	0	0
Dawson	1,629	105	120	76	0	0	1,430	29	79	0	0	0
Decatur	4,998	782	1,424	2	737	303	2,039	477	672	0	126	0
De Kalb	123	34	30	12	52	0	41	22	0	0	0	0
Dodge	14,129	2,322	3,384	445	362	7	4,325	1,639	5,646	0	412	231
Dooly	4,564	802	1,691	181	483	9	2,390	580	0	0	0	32
Dougherty	1,361	156	294	26	0	0	1,067	53	0	0	0	77

continued

Table A.15—Roundwood timber product output by county, product, and species group, Georgia, 2009 (continued)

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
	thousand cubic feet											
Douglas	1,049	364	0	0	194	45	855	319	0	0	0	0
Early	4,232	560	547	0	0	101	3,588	459	0	0	97	0
Echols	8,435	660	3,132	0	0	0	4,027	606	1,010	54	266	0
Effingham	14,183	3,122	4,435	961	0	17	9,400	2,144	0	0	348	0
Elbert	3,879	1,710	1,502	360	578	0	963	1,350	793	0	43	0
Emanuel	15,680	2,083	3,854	507	0	9	11,192	1,431	0	0	634	136
Evans	4,766	272	2,624	0	0	0	2,029	272	0	0	113	0
Fannin	388	213	169	161	0	0	219	50	0	0	0	2
Fayette	42	54	0	0	0	0	42	54	0	0	0	0
Floyd	8,433	1,792	1,673	4	194	45	6,525	1,743	0	0	41	0
Forsyth	800	307	59	36	266	45	475	226	0	0	0	0
Franklin	775	639	217	107	52	0	324	532	79	0	103	0
Fulton	1,836	851	305	313	97	91	873	447	0	0	561	0
Gilmer	1,193	792	304	563	0	61	889	168	0	0	0	0
Glascock	3,876	939	641	677	273	0	2,856	262	0	0	106	0
Glynn	11,080	674	3,712	0	262	0	6,957	674	0	0	149	0
Gordon	3,681	567	597	96	97	45	2,873	426	0	0	114	0
Grady	6,867	565	3,504	67	737	202	1,982	296	224	0	420	0
Greene	8,362	2,058	1,683	207	2,972	0	2,531	1,851	1,031	0	145	0
Gwinnett	1,495	391	103	37	630	45	762	309	0	0	0	0
Habersham	1,135	429	310	103	169	0	336	326	317	0	3	0
Hall	389	456	86	31	0	0	303	425	0	0	0	0
Hancock	11,244	1,988	2,530	1,273	1,876	0	6,557	715	158	0	123	0
Haralson	5,609	916	1,075	10	389	49	4,145	847	0	0	0	10
Harris	6,591	1,027	3,139	259	389	91	3,063	677	0	0	0	0
Hart	741	392	284	92	169	0	130	300	158	0	0	0
Heard	7,636	321	1,901	0	1,264	91	4,471	230	0	0	0	0
Henry	937	993	2	279	253	0	682	714	0	0	0	0
Houston	4,878	425	1,817	32	0	0	3,061	393	0	0	0	0
Irwin	4,443	415	2,327	16	483	9	651	366	449	24	533	0
Jackson	655	497	0	0	169	0	407	497	79	0	0	0
Jasper	4,524	1,898	1,552	452	794	411	2,150	1,035	0	0	28	0
Jeff Davis	8,456	1,150	2,263	435	181	49	5,413	571	0	0	599	95
Jefferson	5,968	2,362	1,441	1,292	299	0	4,024	1,070	0	0	204	0
Jenkins	9,013	1,769	734	1,001	0	0	7,128	768	1,036	0	115	0
Johnson	8,699	1,682	4,202	909	0	0	4,295	719	0	0	202	54
Jones	5,550	787	1,869	272	683	0	2,998	515	0	0	0	0
Lamar	2,839	1,337	1,793	9	156	0	890	1,328	0	0	0	0
Lanier	2,275	112	234	0	0	0	1,396	71	449	24	196	17
Laurens	20,899	4,288	9,503	1,672	0	0	11,078	2,398	0	0	318	218
Lee	2,030	416	602	26	0	0	1,428	362	0	0	0	28
Liberty	9,887	1,606	3,256	724	0	0	6,158	882	0	0	473	0
Lincoln	4,132	531	2,261	99	539	0	687	432	444	0	201	0
Long	11,804	2,238	1,921	780	0	0	9,227	1,390	0	0	656	68
Lowndes	6,672	489	3,087	0	0	0	2,502	415	785	42	298	32
Lumpkin	822	129	197	107	0	0	467	22	158	0	0	0

continued

Table A.15—Roundwood timber product output by county, product, and species group, Georgia, 2009 (continued)

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
	thousand cubic feet											
Macon	8,178	519	1,666	0	0	0	5,760	487	752	0	0	32
Madison	947	499	0	150	338	0	108	349	396	0	105	0
Marion	7,274	562	825	293	0	45	5,438	185	0	0	1,011	39
McDuffie	5,120	621	1,553	70	1,117	0	2,275	551	79	0	96	0
McIntosh	8,185	775	999	0	0	9	6,772	766	0	0	414	0
Meriwether	5,223	1,180	2,132	233	583	91	2,508	856	0	0	0	0
Miller	882	338	211	0	331	0	318	338	0	0	22	0
Mitchell	5,740	312	2,493	64	1,032	0	1,032	230	1,089	18	94	0
Monroe	5,166	1,934	2,141	776	461	0	2,564	1,158	0	0	0	0
Montgomery	4,917	1,203	1,170	345	0	36	3,605	699	0	0	142	123
Morgan	3,779	825	745	119	1,277	45	1,571	661	158	0	28	0
Murray	3,704	1,349	370	279	0	0	3,316	1,070	0	0	18	0
Muscogee	6,239	824	4,566	0	0	0	232	329	0	0	1,441	495
Newton	1,845	400	3	99	976	0	837	301	0	0	29	0
Oconee	1,127	170	54	38	782	0	212	132	79	0	0	0
Oglethorpe	5,811	1,018	1,359	462	847	0	1,321	556	1,905	0	379	0
Paulding	4,712	1,179	1,018	0	389	91	3,297	1,088	0	0	8	0
Peach	1,103	88	331	0	52	0	720	88	0	0	0	0
Pickens	1,948	410	27	108	0	45	1,921	257	0	0	0	0
Pierce	13,340	1,683	5,677	724	0	0	6,975	913	0	0	688	46
Pike	4,328	437	2,382	212	149	45	1,797	180	0	0	0	0
Polk	1,422	717	1,250	5	0	0	164	702	0	0	8	10
Pulaski	6,184	881	594	444	181	3	1,618	434	3,764	0	27	0
Putnam	4,989	623	1,459	99	1,537	0	1,842	524	79	0	72	0
Quitman	2,641	151	879	0	0	0	1,762	151	0	0	0	0
Rabun	306	278	101	139	0	0	205	139	0	0	0	0
Randolph	5,816	621	680	0	0	0	5,136	621	0	0	0	0
Richmond	3,593	1,629	1,380	0	108	0	1,891	1,629	0	0	214	0
Rockdale	224	49	0	38	169	0	55	11	0	0	0	0
Schley	5,135	462	936	234	0	0	4,193	189	0	0	6	39
Screven	15,057	2,563	5,031	1,021	0	37	8,327	1,505	1,332	0	367	0
Seminole	1,628	204	211	0	331	67	1,016	137	0	0	70	0
Spalding	1,908	295	1,285	213	149	0	474	82	0	0	0	0
Stephens	611	439	326	202	169	0	113	237	0	0	3	0
Stewart	13,067	892	340	289	0	0	11,726	603	0	0	1,001	0
Sumter	6,788	401	1,238	231	0	0	4,798	123	752	0	0	47
Talbot	7,366	1,156	3,206	571	194	0	3,964	585	0	0	2	0
Taliaferro	4,617	574	1,217	99	1,516	0	994	475	635	0	255	0
Tattnall	8,133	1,431	1,214	724	0	0	6,401	707	0	0	518	0
Taylor	9,294	356	4,127	231	52	0	5,113	125	0	0	2	0
Telfair	18,293	2,087	2,095	1,070	362	7	3,286	1,010	11,293	0	1,257	0
Terrell	2,448	57	113	0	0	0	2,335	29	0	0	0	28
Thomas	9,102	359	5,439	33	131	168	2,608	158	224	0	700	0
Tift	2,327	963	952	478	241	4	156	449	752	0	226	32
Toombs	6,950	2,053	1,034	780	0	44	5,605	1,229	0	0	311	0
Towns	0	68	0	0	0	0	0	68	0	0	0	0

continued

Table A.15—Roundwood timber product output by county, product, and species group, Georgia, 2009 (continued)

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
	thousand cubic feet											
Treutlen	4,018	485	2,128	0	0	15	1,747	470	0	0	143	0
Troup	4,246	3,022	1,093	216	875	137	2,278	2,669	0	0	0	0
Turner	1,977	226	1,131	35	241	4	424	187	0	0	181	0
Twiggs	9,912	1,931	3,519	567	52	0	6,341	1,364	0	0	0	0
Union	197	158	146	105	0	0	51	51	0	0	0	2
Upson	6,284	939	2,276	236	52	0	3,956	703	0	0	0	0
Walker	1,436	553	221	79	97	0	1,093	471	9	3	16	0
Walton	1,186	312	0	95	730	0	377	217	79	0	0	0
Ware	22,204	1,602	4,476	435	0	0	10,144	1,121	0	0	7,584	46
Warren	6,135	559	2,017	84	612	0	3,295	475	158	0	53	0
Washington	13,305	3,046	1,496	1,535	560	0	10,816	1,511	0	0	433	0
Wayne	16,401	742	3,895	0	0	0	11,845	742	0	0	661	0
Webster	6,004	479	1,992	231	0	0	4,012	216	0	0	0	32
Wheeler	4,667	1,429	1,015	780	0	0	3,191	649	0	0	461	0
White	550	176	256	90	0	0	136	86	158	0	0	0
Whitfield	1,355	656	271	226	0	0	1,084	430	0	0	0	0
Wilcox	18,662	804	2,779	372	302	5	1,922	427	13,175	0	484	0
Wilkes	8,325	1,993	3,025	1,070	1,764	0	2,976	923	0	0	560	0
Wilkinson	8,132	3,214	3,606	763	0	0	3,581	2,451	873	0	72	0
Worth	4,976	312	2,687	237	483	9	1,614	49	0	0	192	17
All counties	908,567	144,120	266,169	43,310	42,145	3,279	503,176	94,244	57,522	370	39,555	2,917

[a] Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (13,459,000 cubic feet in 2009).

Table A.16—Total roundwood output by product, species group, and source of material, Georgia, 2009

Product and species group	All sources	Growing-stock trees			Other sources
		Total	Sawtimber	Poletimber	
	thousand cubic feet				
Saw logs					
Softwood	266,169	259,577	244,574	15,003	6,592
Hardwood	43,310	42,357	39,895	2,462	953
Total	309,479	301,935	284,469	17,466	7,544
Veneer logs and bolts					
Softwood	42,145	41,303	40,848	454	842
Hardwood	3,279	3,236	3,204	32	43
Total	45,424	44,539	44,053	486	885
Pulpwood					
Softwood	503,176	456,344	194,180	262,164	46,832
Hardwood	94,244	86,737	33,060	53,677	7,507
Total	597,420	543,081	227,240	315,840	54,339
Composite panels					
Softwood	57,522	52,285	21,436	30,849	5,237
Hardwood	370	339	135	203	31
Total	57,892	52,624	21,572	31,052	5,268
Poles and posts					
Softwood	18,363	17,939	16,928	1,011	424
Hardwood	0	0	0	0	0
Total	18,363	17,939	16,928	1,011	424
Other miscellaneous					
Softwood	21,192	4,628	2,702	1,926	16,564
Hardwood	2,917	449	262	187	2,468
Total	24,109	5,077	2,963	2,113	19,032
Total industrial products					
Softwood	908,567	832,076	520,669	311,407	76,491
Hardwood	144,120	133,119	76,557	56,562	11,001
Total	1,052,687	965,195	597,226	367,969	87,492
Residential fuelwood					
Softwood	5,827	3,196	2,239	957	2,631
Hardwood	49,965	42,051	32,941	9,109	7,914
Total	55,792	45,246	35,180	10,066	10,546
All products					
Softwood	914,394	835,272	522,908	312,364	79,122
Hardwood	194,085	175,169	109,498	65,671	18,916
Total	1,108,479	1,010,441	632,406	378,035	98,038

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

Table A.17—Total roundwood output by species group, survey region, and ownership class, Georgia, 2009

Species group and survey region	Total	Ownership class		
		Public	Forest industry	Nonindustrial private
		thousand cubic feet		
Softwoods				
Southeast	415,702	8,929	177,804	228,969
Southwest	110,594	1,463	9,867	99,264
Central	275,723	7,059	83,825	184,839
North Central	75,094	78	14,383	60,633
North	37,281	657	9,095	27,529
Total softwoods	914,394	18,186	294,975	601,233
Hardwoods				
Southeast	72,912	5,553	12,854	54,505
Southwest	13,431	309	452	12,670
Central	67,029	1,118	9,418	56,493
North Central	25,536	169	1,819	23,548
North	15,177	391	688	14,098
Total hardwoods	194,085	7,539	25,231	161,314
All species	1,108,479	25,725	320,206	762,548

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

Table A.18—Total roundwood output by species group, detailed species group, and product, Georgia, 2009

Species group and detailed species group	Total	Product						
		Saw logs	Veneer logs	Pulpwood	Composite panels	Poles and posts	Other miscellaneous	Residential fuelwood
		thousand cubic feet						
Softwood								
Cedar	987	102	72	787	11	1	7	6
Longleaf-slash pine	311,392	92,576	6,321	166,401	23,860	11,736	8,514	1,985
Eastern white pine	2,353	618	149	1,286	281	3	1	15
Loblolly-shortleaf pine	548,532	159,137	34,420	303,629	29,999	5,947	11,904	3,495
Other yellow pines	37,594	10,621	1,070	23,052	1,772	365	475	239
Cypress	13,530	3,113	112	8,017	1,598	311	292	86
Hemlock	6	2	0	3	1	0	0	0
Total softwoods	914,394	266,169	42,145	503,176	57,522	18,363	21,192	5,827
Hardwood								
Soft maple	10,935	2,509	102	5,169	26	0	313	2,815
Hard maple	650	156	2	326	0	0	0	167
Hickory	4,235	801	84	1,850	2	0	407	1,090
Beech	75	6	3	44	1	0	3	19
Ash	2,016	489	24	971	0	0	12	519
Black walnut	224	23	2	141	0	0	0	58
Sweetgum	41,913	9,889	819	20,134	40	0	242	10,790
Yellow-poplar	18,027	3,629	523	9,023	28	0	185	4,641
Blackgum-tupelo	24,660	6,163	143	11,217	80	0	710	6,348
Sycamore	93	17	1	51	0	0	0	24
Black cherry	2,804	381	86	1,588	5	0	22	722
Select white oaks	10,428	2,118	122	5,471	26	0	6	2,685
Other white oaks	8,451	2,222	170	3,723	36	0	124	2,175
Select red oaks	1,432	232	11	821	0	0	0	369
Other red oaks	56,248	12,302	1,077	27,534	94	0	761	14,481
Basswood	972	151	14	557	0	0	0	250
Elm	3,469	750	6	1,807	4	0	8	893
Other eastern hardwoods	7,452	1,473	91	3,817	28	0	124	1,918
Total hardwoods	194,085	43,310	3,279	94,244	370	0	2,917	49,965
All species	1,108,479	309,479	45,424	597,420	57,892	18,363	24,109	55,792

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

Table A.19—Total roundwood output by species group, detailed species group, and ownership class, Georgia, 2009

Species group and detailed species group	Total	Ownership class		
		Public	Forest industry	Nonindustrial private
	thousand cubic feet			
Softwood				
Cedar	987	1	39	947
Longleaf-slash pine	311,392	4,648	112,118	194,627
Eastern white pine	2,353	86	24	2,243
Loblolly-shortleaf pine	548,532	12,774	167,433	368,326
Other yellow pines	37,594	558	9,635	27,401
Cypress	13,530	120	5,727	7,683
Hemlock	6	0	0	6
Total softwoods	914,394	18,186	294,975	601,233
Hardwood				
Soft maple	10,935	1,063	880	8,992
Hard maple	650	3	57	591
Hickory	4,235	90	269	3,876
Beech	75	1	0	74
Ash	2,016	1	335	1,680
Black walnut	224	0	17	206
Sweetgum	41,913	1,088	4,446	36,380
Yellow-poplar	18,027	272	1,968	15,788
Blackgum-tupelo	24,660	1,780	4,945	17,935
Sycamore	93	0	62	31
Black cherry	2,804	46	585	2,173
Select white oaks	10,428	100	1,154	9,175
Other white oaks	8,451	167	1,235	7,048
Select red oaks	1,432	2	12	1,418
Other red oaks	56,248	2,406	7,217	46,625
Basswood	972	0	112	860
Elm	3,469	168	635	2,665
Other eastern hardwoods	7,452	352	1,303	5,796
Total hardwoods	194,085	7,539	25,231	161,314
All species	1,108,479	25,725	320,206	762,548

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

Johnson, Tony G.; McClure, Nathan; Willard, Risher A. 2011. Georgia's timber industry—an assessment of timber product output and use, 2009. Resour. Bull. SRS–175. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 35 p.

In 2009, industrial roundwood output from Georgia's forests totaled 1.05 billion cubic feet, 13 percent less than in 2007. Mill byproducts generated from primary manufacturers declined 29 percent to 292.4 million cubic feet. Almost all plant residues were used primarily for fuel and fiber products. Pulpwood was the leading roundwood product at 597.4 million cubic feet; saw logs ranked second at 309.5 million cubic feet; composite panels third at 57.9 million cubic feet. The number of primary processing plants was down from 168 in 2007 to 152 in 2009. Total receipts dropped from 1.22 billion cubic feet in 2007 to 1.05 billion cubic feet in 2009.

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

The Forest Service, U.S. Department of Agriculture (USDA), 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.