

United States
Department of
Agriculture

Forest Service



Southern
Research Station

Resource Bulletin
SRS-184

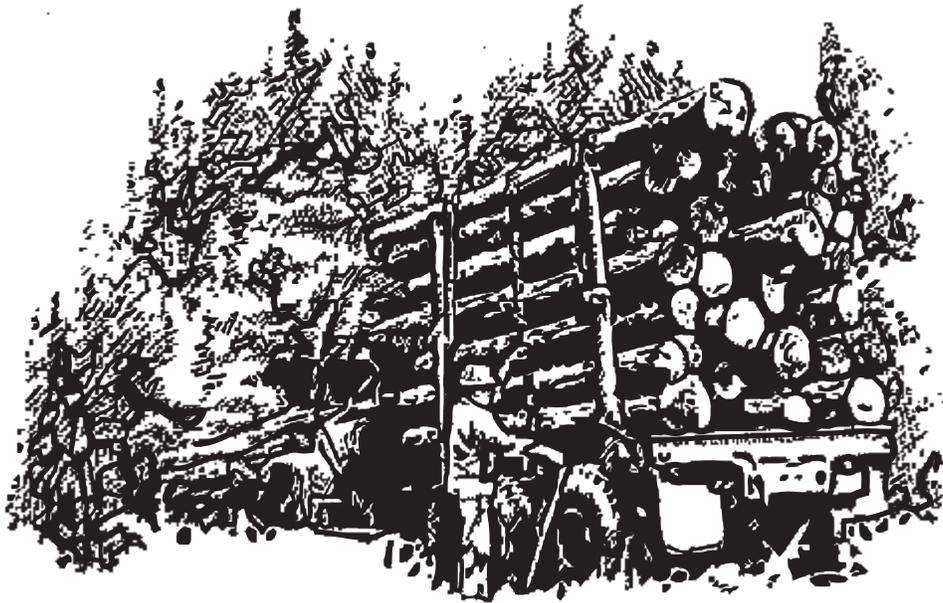
Oklahoma's Timber Industry—An Assessment of Timber Product Output and Use, 2009

Tony G. Johnson



The Author:

Tony G. Johnson, Forester, U.S. Forest Service, Southern Research Station, Asheville, NC 28804.



September 2011

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

Foreword

This report contains the findings of a 2009 canvass of all known primary wood-using plants in Oklahoma, and presents changes in product output and residue use since 2005. 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 Oklahoma 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 Oklahoma timberland was incorporated into Oklahoma 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 1955, and are currently conducted every 3 years.

Pulpwood production data were taken from an annual canvass of all southern pulpmills. Medium density fiberboard, insulating board, and hardboard plants were included in this survey.

Acknowledgments

The author thanks George Geissler, Joanne Lenahan, and Robert Fry 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, and statistical checking; and the Southern Research Station (SRS) Technical Publications Team for editorial review and publication of this report.

The SRS gratefully acknowledges the cooperation and assistance provided by the 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/>.

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

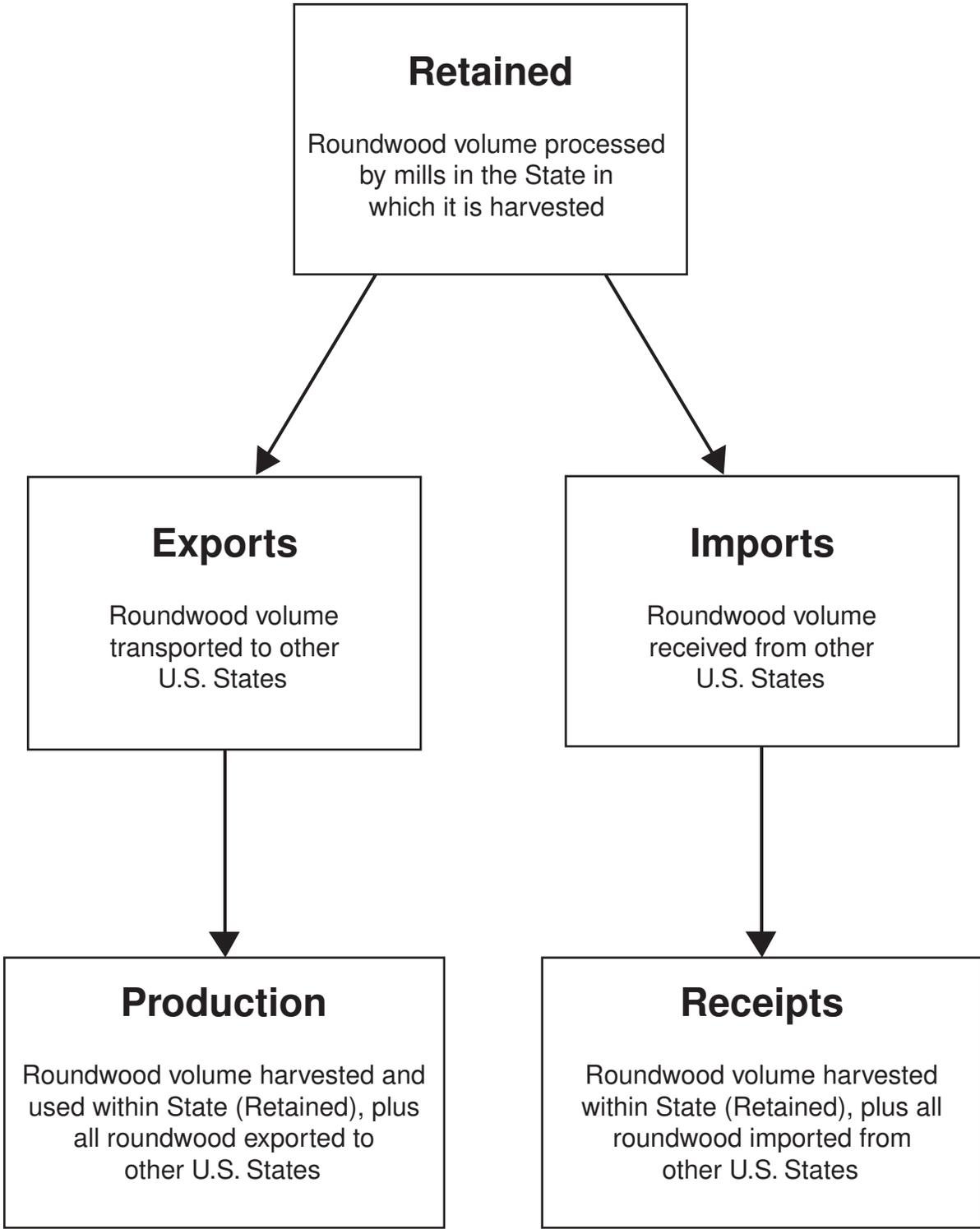
James Bentley
Southern Research Station
USDA Forest Service
4700 Old Kingston Pike
Knoxville, TN 37919
jbentley@fs.fed.us
865-862-2056

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

Contents

	<i>Page</i>
Output of Industrial Timber Products	1
All Products	1
Saw Logs	2
Pulpwood	3
Other Industrial Products	4
Plant Byproducts	4
County Data	5
Total Roundwood Output	5
Source	5
Ownership	6
Species	6
References	7
Glossary	8
Conversion Factors	11
Species List	12
Appendix	13
Index of Tables	15
Tables A.1–A.16 ^a	17

^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.



Production = Retained + Exports

Receipts = Retained + Imports

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

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

Tony G. Johnson

Output of Industrial Timber Products

Note: Certain terms used in this report—retained, export, import, production, and receipts—have specialized meanings and relationships unique to the Forest Inventory and Analysis Units across the country that deal with timber products output (fig. 1). Unless otherwise indicated, the context for production and receipts comparisons (increases, decreases, or stabilizations) throughout the report is the change from 2005 to 2009.

All Products

- Between 2005 and 2009, industrial TPO from roundwood was down 52.9 million cubic feet, or 44 percent, from 119.2 million cubic feet in 2005 to 66.3 million cubic feet in 2009.

- Output of softwood roundwood products declined 52 percent to 46.3 million cubic feet, while output of hardwood roundwood products declined 16 percent to 20.0 million cubic feet (fig. 2).
- Pulpwood and saw logs were the principal roundwood products in 2009. Combined output of these two products totaled 62.7 million cubic feet and accounted for 95 percent of the State's total roundwood output (fig. 3).
- Total receipts at Oklahoma mills, which included roundwood harvested and retained in the State and roundwood imported from other States, fell 50 percent from 148.7 million cubic feet in 2005 to 74.5 million cubic feet, while output of utilized plant byproducts declined 64 percent to 19.2 million cubic feet.

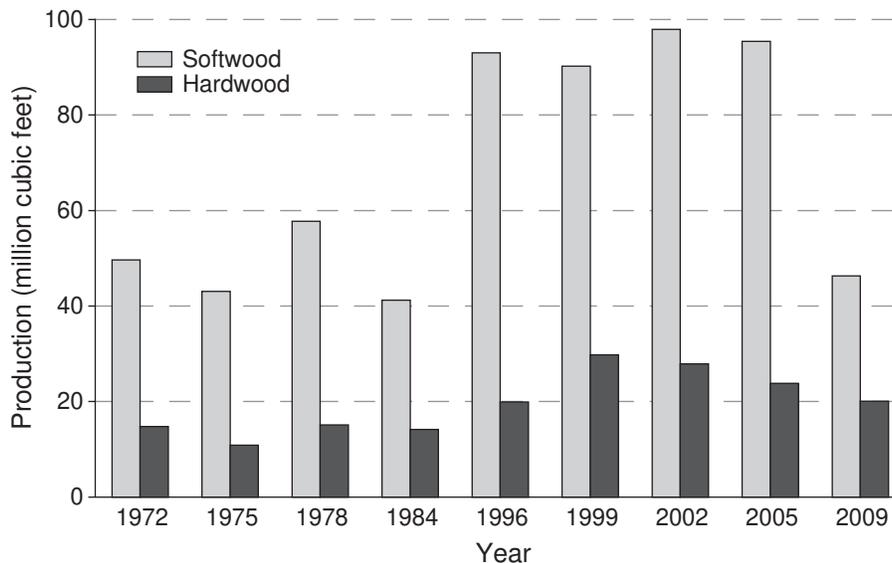


Figure 2—Roundwood production for all products by species group and year (see page 7 for references for individual years), Oklahoma.

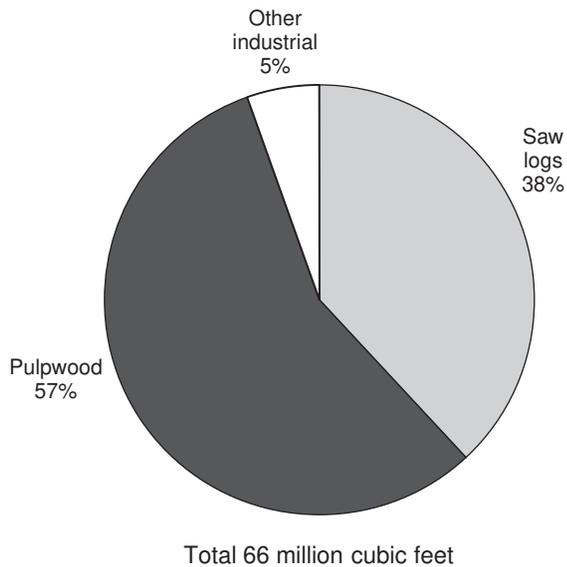


Figure 3—Roundwood production by type of product, Oklahoma, 2009.

of roundwood to other States amounted to 18.4 million cubic feet, while imports of roundwood amounted to 26.5 million cubic feet making the State a net importer of roundwood. Tables A.8 and A.9 show exports to and imports from other States by individual product type.

Saw Logs

- Saw logs accounted for 38 percent of the State’s total roundwood products. Output of softwood saw logs declined 58 percent to 22.7 million cubic feet (126.5 million board feet), while that of hardwood saw logs dropped 63 percent to 2.5 million cubic feet (15.1 million board feet) (fig. 5).
- In 2009, Oklahoma had 26 sawmills. Total softwood saw-log receipts were 18.8 million cubic feet, while those of hardwoods totaled 2.7 million cubic feet. Of the 12 reporting mills, 4 had receipts < 1.0 million board feet, 5 had receipts between 1.0 and 9.99 million board feet, while 3 had receipts > 10 million board feet. These three mills accounted for 80 percent of the reported volume.
- Oklahoma retained 71 percent of its saw-log production for domestic manufacture, with saw-log exports exceeding imports by nearly 3.8 million cubic feet in 2009.
- There were 31 primary roundwood-using plants operating in Oklahoma in 2009 (fig. 4). The map includes only those mills that were canvassed for this report.
- Across all products, 72 percent of roundwood harvested was retained for processing at Oklahoma mills. Exports

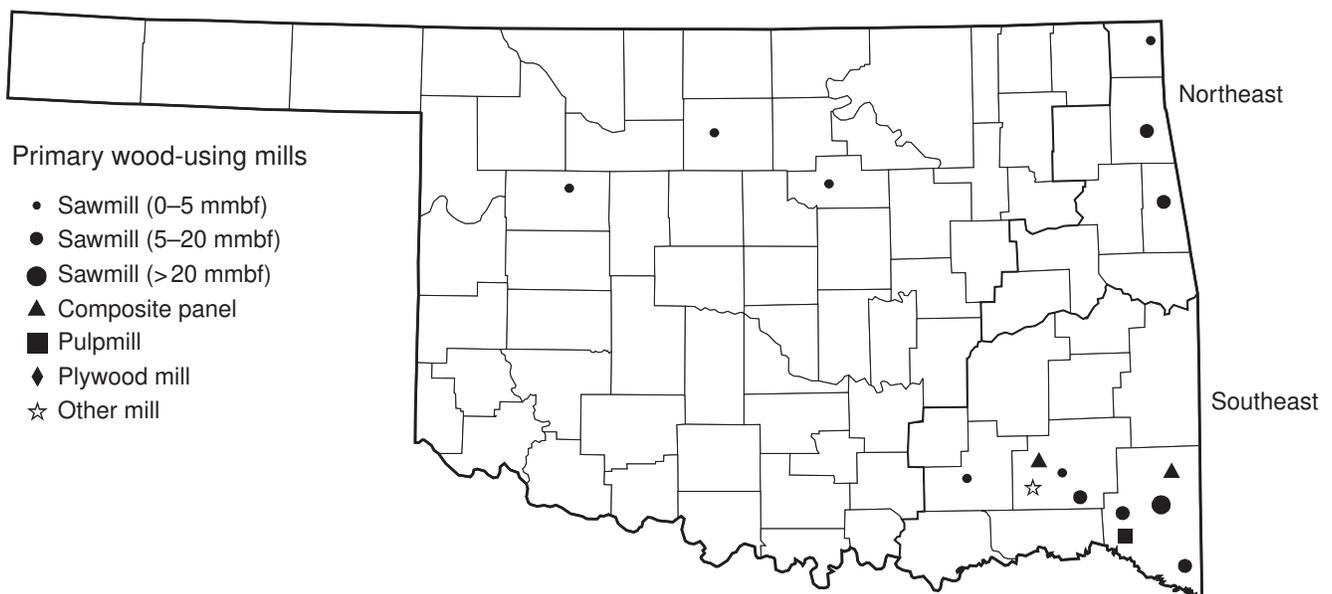


Figure 4—Primary wood-using mills by region, Oklahoma, 2009 (16 of the 31 mills were contacted).

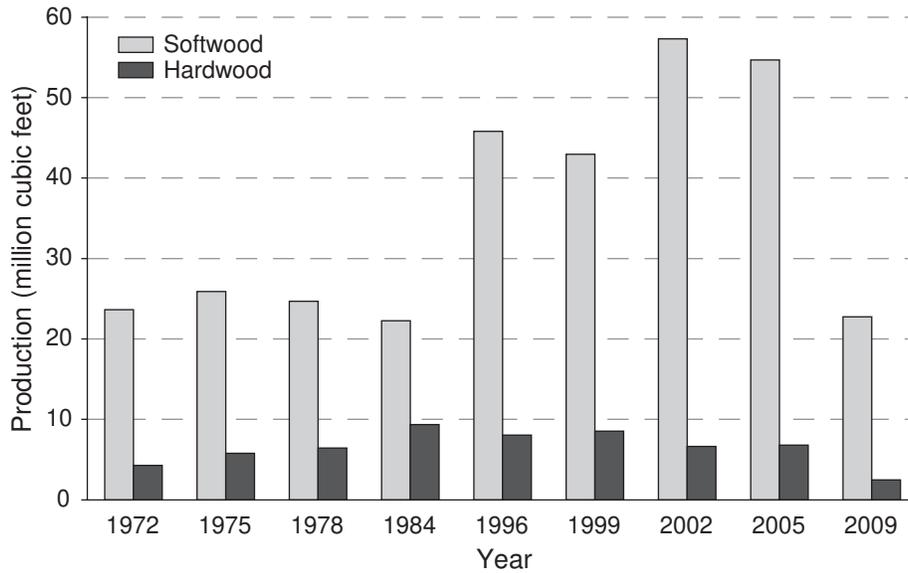


Figure 5—Roundwood saw-log production for all products by species group and year (see page 7 for references for individual years), Oklahoma.

Pulpwood

- Total pulpwood production, increased 2 percent to 37.5 million cubic feet (503,400 cords) and accounted for 57 percent of the State’s total roundwood TPO. Softwood output was up 1 percent to 19.9 million cubic feet

(274,200 cords), while hardwood output increased 3 percent to 17.6 million cubic feet (229,200 cords) (fig. 6).

- One pulpmill was operating and receiving roundwood in Oklahoma in 2009. Total pulpwood receipts have been combined with other industrial products to protect the confidentiality of the data.

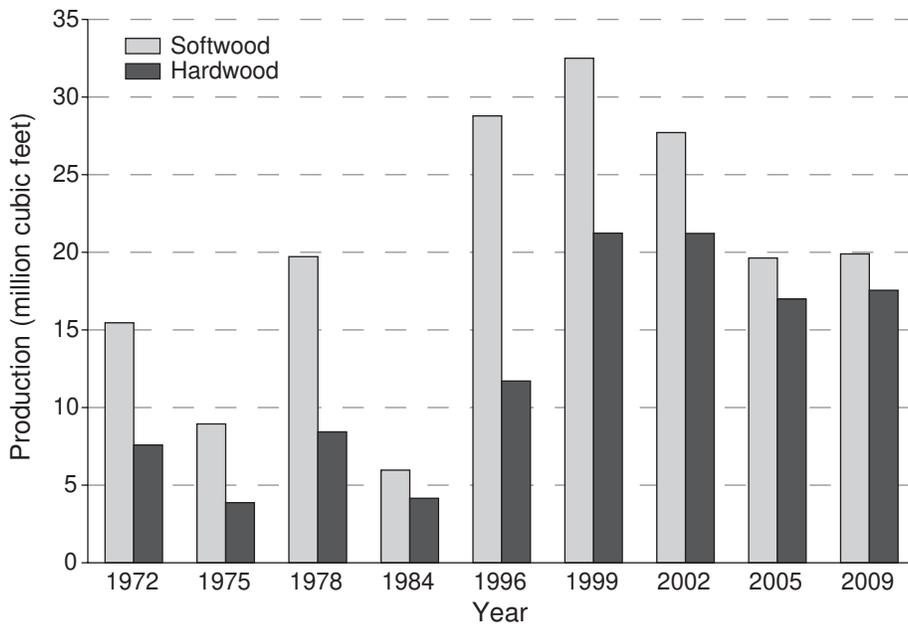


Figure 6—Roundwood pulpwood production for all products by species group and year (see page 7 for references for individual years), Oklahoma.

Other Industrial Products

- In 2009, output of other industrial products totaled 3.6 million cubic feet and accounted for 5 percent of the State’s total roundwood TPO volume. Softwood production declined 83 percent and accounted for all of the other industrial production volume.
- Two composite panel mills and two other industrial mills were contacted for this report. Receipts at these mills and the pulpmill totaled 53.0 million cubic feet. Softwood receipts dropped 28.6 million cubic feet, or 40 percent, to 42.7 million cubic feet. Hardwood receipts for the four mills were down 21 percent to 10.3 million cubic feet.
- Oklahoma retained 73 percent of its other industrial production for processing at the pulpmill and other industrial mills. Imports amounted to 23.1 million cubic feet, while exports were 11.2 million cubic feet, making the State a net importer of roundwood for pulpmill and other industrial uses.

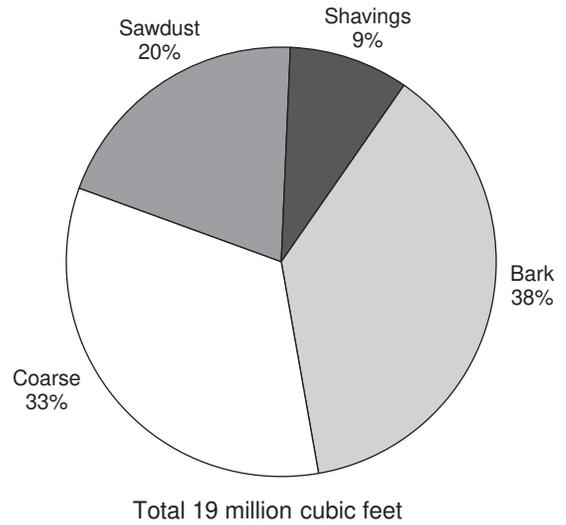


Figure 7—Primary mill residue by residue type, Oklahoma, 2009.

Plant Byproducts

- In 2009, processing of primary products in Oklahoma mills generated 19.2 million cubic feet of wood and bark residues. Coarse residues from all primary products amounted to 6.4 million cubic feet, while bark volume totaled 7.2 million cubic feet. Collectively, sawdust and shavings made-up 29 percent of total residues, or 5.6 million cubic feet (fig. 7).
- The processing of saw logs generated 13.6 million cubic feet of mill residues, accounting for 70 percent of the total residues produced (fig. 8).
- Sixty-four percent, or 12.3 million cubic feet, of the wood and bark residues were used for industrial fuel (fig. 9). Twenty-five percent were used for fiber products, with the remainder used for miscellaneous and particle board products. Nearly 75 percent, or 4.8 million cubic feet, of the coarse residue generated were used for fiber products. Ninety-six and 93 percent, respectively, of the bark and sawdust was used for industrial fuel, while 80 percent of the shavings were used for industrial fuel.

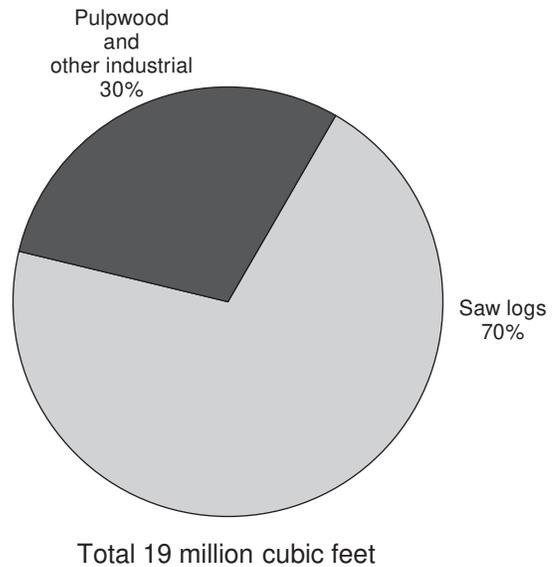


Figure 8—Primary mill residue produced by roundwood type, Oklahoma, 2009.

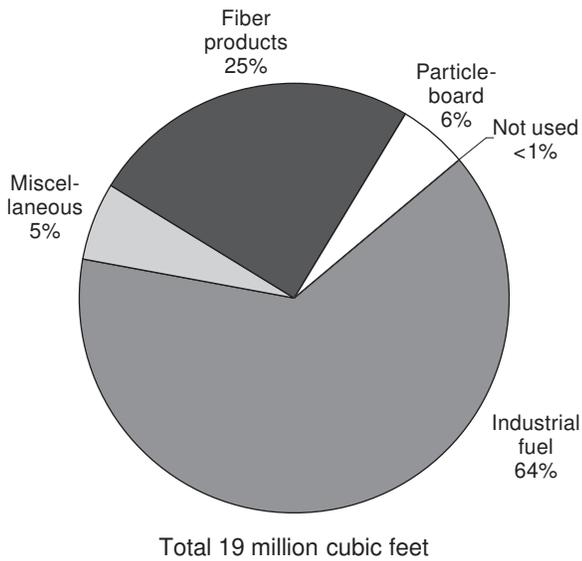


Figure 9—Disposal of residue by product, Oklahoma, 2009.

Total Roundwood Output

Using the latest inventory data for Oklahoma, product output for source, ownership, and detailed species group was estimated.

Source

- In addition to the 66.3 million cubic feet of roundwood output for industrial roundwood products, an estimated 16.4 million cubic feet was harvested for residential fuelwood, bringing Oklahoma's total roundwood output to 82.7 million cubic feet.
- Eighty-four 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 13.5 million cubic feet, or 16 percent of total roundwood output (fig. 10).

County Data

- Table A.12 shows softwood and hardwood product output by county and individual product type. Only 18 of Oklahoma's 67 counties had reported softwood or hardwood product output. Three counties (Le Flore, McCurtain, and Pushmataha) had combined softwood and hardwood product output of > 6 million cubic feet each. These three counties total product output amounted to > 57.6 million cubic feet and accounted for 87 percent of the State's total product output.

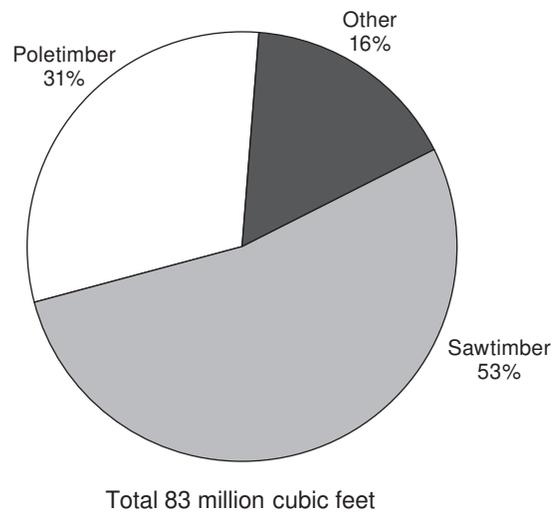


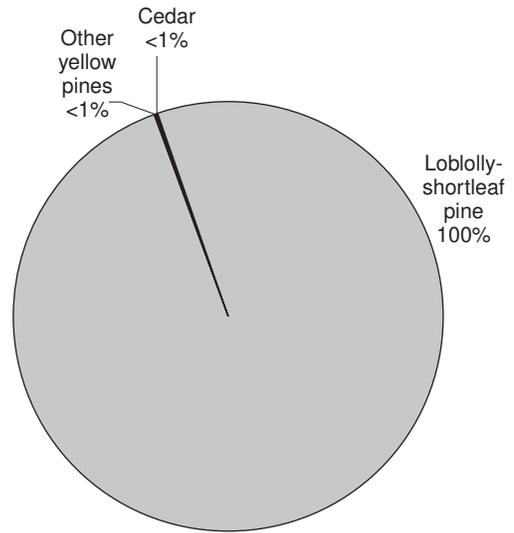
Figure 10—Roundwood output by source, Oklahoma, 2009.

Ownership

- An estimated 39.6 million cubic feet, or 48 percent, of the total roundwood output came from nonindustrial private forest lands.
- Forest industry lands contributed 39.2 million cubic feet, or 47 percent, of the output. Public lands made-up the remaining 5 percent, or 3.9 million cubic feet (fig. 11).

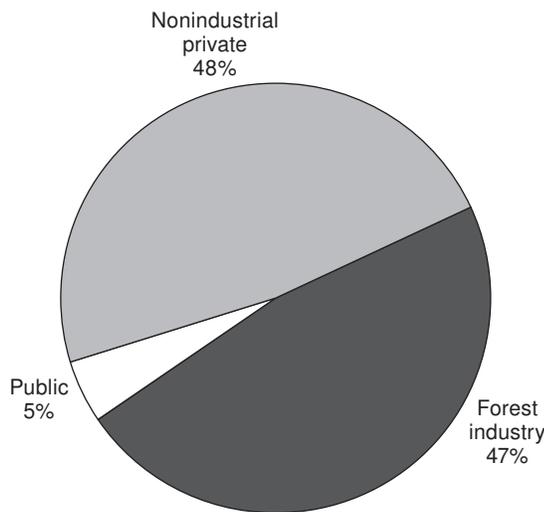
Species

- The loblolly and shortleaf pine group provided more volume than any other softwood species group, accounting for 46.4 million cubic feet, or nearly 100 percent of total softwood output (fig. 12). The cedar and other yellow pine type accounted for 133,000 cubic feet of the softwood output.
- The red oak and white oak groups combined accounted for 24.2 million cubic feet, or 67 percent of total hardwood output (fig. 13).



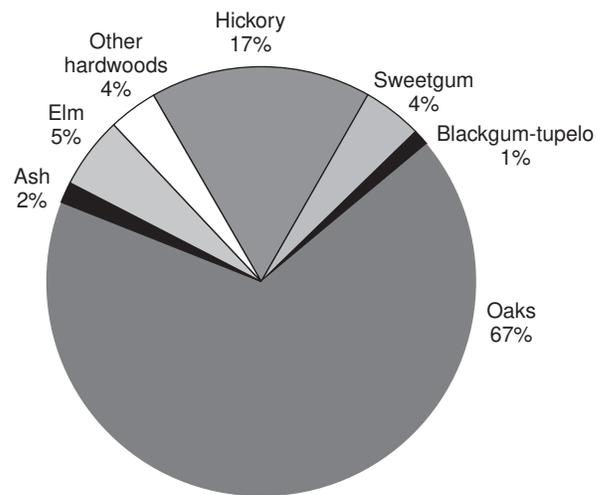
Total 47 million cubic feet

Figure 12—Roundwood output by softwood species group, Oklahoma, 2009.



Total 83 million cubic feet

Figure 11—Roundwood output by ownership, Oklahoma, 2009.



Total 36 million cubic feet

Figure 13—Roundwood output by hardwood species group, Oklahoma, 2009.

References

- Bertelson, D.F. 1973. Oklahoma forest industries, 1972. Resour. Bull. SO-45. New Orleans: U.S. Department of Agriculture Forest Service, Southern Forest Experiment Station. 16 p. [1972].
- Bertelson, D.F. 1977. Oklahoma forest industries, 1975. Resour. Bull. SO-64. New Orleans: U.S. Department of Agriculture Forest Service, Southern Forest Experiment Station. 14 p. [1975].
- Howell, M.; Johnson, T.G. 1998. Oklahoma's timber industry—an assessment of timber product output and use, 1996. Resour. Bull. SRS-30. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 16 p. [1996].
- Howell, M.; Johnson, T.G. 2002. Oklahoma's timber industry—an assessment of timber product output and use, 1999. Resour. Bull. SRS-82. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 28 p. [1999].
- Johnson, T.G.; Howell, M.; Bentley, J.W. 2005. Oklahoma's timber industry—an assessment of timber product output and use, 2002. Resour. Bull. SRS-100. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 34 p. [2002].
- Johnson, T.G.; Howell, M.; Bentley, J.W. 2008. Oklahoma's timber industry—an assessment of timber product output and use, 2005. Resour. Bull. SRS-136. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 28 p. [2005].
- Little, E.L., Jr. 1979. Checklist of United States trees (native and naturalized). Agric. Handb. 541. Washington, DC: U.S. Department of Agriculture. 375 p.
- May, D.M. 1986. Oklahoma forest industries, 1984. Resour. Bull. SO-109. New Orleans: U.S. Department of Agriculture Forest Service, Southern Forest Experiment Station. 11 p. [1984].
- Rudis, V.A.; Jones, G.J. 1981. Oklahoma forest industries, 1978. Resour. Bull. SO-78. New Orleans: U.S. Department of Agriculture Forest Service, Southern Forest Experiment Station. 10 p. [1978].

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 1/4-inch rule. A log rule or formula for estimating the board-foot volume of logs, allowing 1/2-inch of taper for each 4-foot length. The rule appears in a number of forms that allow for kerf. In the form used by FIA, a 1/4-inch of kerf is assumed. This rule is used as the 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 1/4-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	0.18018 cubic foot = 1 board foot 5.55 board feet = 1 cubic foot
Hardwood	0.16556 cubic foot = 1 board foot 6.04 board feet = 1 cubic foot
Veneer logs	
Softwood	0.17391 cubic foot = 1 board foot 5.75 board feet = 1 cubic foot
Hardwood	0.15873 cubic foot = 1 board foot 6.30 board feet = 1 cubic foot
Pulpwood ^b	
Softwood	72.5 cubic feet per cord
Hardwood	76.6 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 Oklahoma during the most recent survey period.

^b Cubic feet of solid wood per cord.

Species List^a

Common name	Scientific name ^b	Common name	Scientific name ^b
Softwoods		Hardwoods (continued)	
Eastern redcedar	<i>Juniperus virginiana</i> L.	Chinaberry	<i>Melia azedarach</i> L.
Shortleaf pine	<i>Pinus echinata</i> Mill.	White mulberry	<i>Morus alba</i> L.
Loblolly pine	<i>P. taeda</i> L.	Red mulberry	<i>M. rubra</i> L.
Baldcypress	<i>Taxodium distichum</i> (L.) Rich.	Water tupelo	<i>Nyssa aquatica</i> L.
Hardwoods		Blackgum	<i>N. sylvatica</i> Marsh.
Florida maple	<i>Acer barbatum</i> Michx.	Swamp tupelo	<i>N. sylvatica</i> var. <i>biflora</i> (Walt.) Sarg.
Boxelder	<i>A. negundo</i> L.	Eastern hophornbeam	<i>Ostrya virginiana</i> (Mill.) K. Koch
Red maple	<i>A. rubrum</i> L.	Sourwood	<i>Oxydendrum arboreum</i> (L.) DC.
Silver maple	<i>A. saccharinum</i> L.	Royal paulownia	<i>Paulownia tomentosa</i> (Thunb.) Sieb. & Zucc. ex Steud.
Sugar maple	<i>A. saccharum</i> Marsh.	Water-elm	<i>Planera aquatica</i> J. F. Gmel.
Ailanthus	<i>Ailanthus altissima</i> (Mill.) Swingle	American sycamore	<i>Platanus occidentalis</i> L.
Tung-oil-tree	<i>Aleurites fordii</i> Hemsl.	Eastern cottonwood	<i>Populus deltoides</i> Bartr. ex Marsh.
Serviceberry	<i>Amelanchier</i> spp. Medic.	Plums, cherries (other than black cherry)	<i>Prunus</i> spp. L.
River birch	<i>Betula nigra</i> L.	Black cherry	<i>P. serotina</i> Ehrh.
Chittamwood	<i>Bumelia lanuginosa</i> (Michx.) Pers.	White oak	<i>Quercus alba</i> L.
Water hickory	<i>Carya aquatica</i> (Michx. f.) Nutt.	Scarlet oak	<i>Q. coccinea</i> Muenchh.
Bitternut hickory	<i>C. cordiformis</i> (Wangenh.) K. Koch	Durand oak	<i>Q. durandii</i> Buckl.
Pignut hickory	<i>C. glabra</i> (Mill.) Sweet	Southern red oak	<i>Q. falcata</i> Michx.
Pecan	<i>C. illinoensis</i> (Wangenh.) K. Koch	Cherrybark oak	<i>Q. falcata</i> var. <i>pagodifolia</i> Ell.
Shellbark hickory	<i>C. laciniosa</i> (Michx. f.) Loud.	Laurel oak	<i>Q. laurifolia</i> Michx.
Nutmeg hickory	<i>C. myristiciformis</i> (Michx. f.) Nutt.	Overcup oak	<i>Q. lyrata</i> Walt.
Shagbark hickory	<i>C. ovata</i> (Mill.) K. Koch	Bur oak	<i>Q. macrocarpa</i> Michx.
Mockernut hickory	<i>C. tomentosa</i> (Poir.) Nutt.	Blackjack oak	<i>Q. marilandica</i> Muenchh.
Allegheny chinkapin	<i>Castanea pumila</i> Mill.	Swamp chestnut oak	<i>Q. michauxii</i> Nutt.
Chinkapin	<i>Castanopsis</i> (D. Don) Spach	Chinkapin oak	<i>Q. muehlenbergii</i> Engelm.
Sugarberry	<i>Celtis laevigata</i> Willd.	Water oak	<i>Q. nigra</i> L.
Hackberry	<i>C. occidentalis</i> L.	Nuttall oak	<i>Q. nuttallii</i> Palmer
Eastern redbud	<i>Cercis canadensis</i> L.	Pin oak	<i>Q. palustris</i> Muenchh.
Flowering dogwood	<i>Cornus florida</i> L.	Willow oak	<i>Q. phellos</i> L.
American smoketree	<i>Cotinus obovatus</i> Raf.	Northern red oak	<i>Q. rubra</i> L.
Hawthorn	<i>Crataegus</i> spp. L.	Shumard oak	<i>Q. shumardii</i> Buckl.
Common persimmon	<i>Diospyros virginiana</i> L.	Post oak	<i>Q. stellata</i> Wangenh.
American beech	<i>Fagus grandifolia</i> Ehrh.	Delta post oak	<i>Q. stellata</i> var. <i>paludosa</i> Sarg.
White ash	<i>Fraxinus americana</i> L.	Black oak	<i>Q. velutina</i> Lam.
Green ash	<i>F. pennsylvanica</i> Marsh.	Black locust	<i>Robinia pseudoacacia</i> L.
Pumpkin ash	<i>F. profunda</i> (Bush) Bush	Willow	<i>Salix</i> spp. L.
Blue ash	<i>F. quadrangulata</i> Michx.	Sassafras	<i>Sassafras albidum</i> (Nutt.) Nees
Waterlocust	<i>Gleditsia aquatica</i> Marsh.	American basswood	<i>Tilia americana</i> L.
Honeylocust	<i>G. triacanthos</i> L.	White basswood	<i>T. heterophylla</i> Vent.
Kentucky coffeetree	<i>Gymnocladus dioica</i> (L.) K. Koch	Winged elm	<i>Ulmus alata</i> Michx.
American holly	<i>Ilex opaca</i> Ait.	American elm	<i>U. americana</i> L.
Butternut	<i>Juglans cinerea</i> L.	Cedar elm	<i>U. crassifolia</i> Nutt.
Black walnut	<i>J. nigra</i> L.	Slippery elm	<i>U. rubra</i> Muhl.
Sweetgum	<i>Liquidambar styraciflua</i> L.	September elm	<i>U. serotina</i> Sarg.
Yellow-poplar	<i>Liriodendron tulipifera</i> L.	Rock elm	<i>U. thomasi</i> Sarg.
Osage-orange	<i>Maclura pomifera</i> (Raf.) Schneid.		
Apple	<i>Malus</i> spp. Mill.		

^a Common and scientific names of tree species > 1.0 inch d.b.h. occurring in the Forest Inventory and Analysis sample.

^b Little (1979).

Appendix

Index of Tables

Table A.1—Output of industrial products by product and species group, Oklahoma, 2005 and 2009

Table A.2—Roundwood receipts by product and species group, Oklahoma, 2005 and 2009

Table A.3—Number of primary wood-using plants by type of mill, Oklahoma, 1972 to 2009

Table A.4—Roundwood receipts by sawmill size, Oklahoma, 2005 and 2009

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

Table A.6—Industrial roundwood movement by year and species group, Oklahoma, 2005 and 2009

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

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

Table A.9—Pulpwood and other industrial volume by destination, source, and species group, Oklahoma, 2009

Table A.10—Primary mill residue volume by roundwood type, species group, and residue type, Oklahoma, 2009

Table A.11—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Oklahoma, 2005 and 2009

Table A.12—Roundwood timber product output by county, product, and species group, Oklahoma, 2009

Table A.13—Total roundwood output by product, species group, and source of material, Oklahoma, 2009

Table A.14—Total roundwood output by species group, survey region, and ownership class, Oklahoma, 2009

Table A.15—Total roundwood output by species group, detailed species group, and product, Oklahoma, 2009

Table A.16—Total roundwood output by species group, detailed species group, and ownership class, Oklahoma, 2009

Table A.1—Output of industrial products by product and species group, Oklahoma, 2005 and 2009

Product and species group	Year		Change	Change
	2005	2009		
	<i>--- thousand cubic feet ---</i>			<i>percent</i>
Saw logs				
Softwood	54,691	22,759	-31,932	-58.4
Hardwood	6,803	2,495	-4,308	-63.3
Total	61,494	25,254	-36,240	-58.9
Pulpwood ^a				
Softwood	19,626	19,900	274	1.4
Hardwood	16,983	17,550	567	3.3
Total	36,609	37,450	841	2.3
Other industrial ^b				
Softwood	21,119	3,615	-17,504	-82.9
Hardwood	13	0	-13	-100.0
Total	21,132	3,615	-17,517	-82.9
All industrial				
Softwood	95,436	46,274	-49,162	-51.5
Hardwood	23,799	20,045	-3,754	-15.8
Total	119,235	66,319	-52,916	-44.4

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (3,707,000 cubic feet in 2005 and 0 cubic feet in 2009).

^b Includes poles, posts, composite panels, mulch, firewood, log homes, charcoal, and all other industrial products.

Table A.2—Roundwood receipts by product and species group, Oklahoma, 2005 and 2009

Product and species group	Year		Change	Change
	2005	2009		
	- - - thousand cubic feet - - -			percent
Saw logs				
Softwood	55,839	18,816	-37,023	-66.3
Hardwood	8,481	2,652	-5,829	-68.7
Total	64,320	21,468	-42,852	-66.6
Pulpwood ^a and other industrial ^b				
Softwood	71,278	42,682	-28,596	-40.1
Hardwood	13,064	10,311	-2,753	-21.1
Total	84,342	52,993	-31,349	-37.2
Total output				
Softwood	127,117	61,498	-65,619	-51.6
Hardwood	21,545	12,963	-8,582	-39.8
Total	148,662	74,461	-74,201	-49.9

^a Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (4,528,000 cubic feet in 2005 and 0 cubic feet in 2009).

^b Includes poles, posts, composite panels, mulch, firewood, log homes, charcoal, and all other industrial products.

Table A.3—Number of primary wood-using plants by type of mill, Oklahoma, 1972 to 2009

Type of mill	Year								
	1972	1975	1978	1984	1996	1999	2002	2005	2009
	<i>number</i>								
Sawmills	103	83	66	84	68	62	97	95	26
Veneer or plywood mills	1	1	1	1	1	1	1	1	0
Pulpmills	3	3	3	3	2	2	2	2	1
Composite panel mills	0	0	0	0	0	0	1	1	2
Other mills	11	14	11	12	2	2	8	8	2
All plants	118	101	81	100	73	67	109	107	31

Table A.4—Roundwood receipts by sawmill size, Oklahoma, 2005 and 2009

Sawmill size class ^a <i>mmbf</i>	2005			2009		
	Mills <i>number</i>	Volume <i>mbf percent</i>		Mills <i>number</i>	Volume <i>mbf percent</i>	
< 1.0	7	612	0	4	172	0
1.0–9.99	8	35,209	10	5	24,345	20
> 10.0	4	325,614	90	3	96,039	80
Total	19	361,435	100	12	120,556	100

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

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

Species	All mills	Type of mill	
		Sawmills	Pulpmills ^a and other industrial
<i>thousand cubic feet</i>			
Softwood			
Yellow pine	18,807	18,807	0
Eastern white pine	0	0	0
Cedar	9	9	0
Cypress	0	0	0
Other softwood	0	0	0
Unclassified	42,682	0	42,682
Total softwoods	61,498	18,816	42,682
Hardwood			
Blackgum and tupelo	0	0	0
Soft maple	0	0	0
Sweetgum	0	0	0
Yellow-poplar	0	0	0
Other soft hardwood	24	24	0
Hickory	265	265	0
Red oak	1,113	1,113	0
White oak	662	662	0
Other hard hardwood	588	588	0
Unclassified	10,311	0	10,311
Total hardwoods	12,963	2,652	10,311
All species	74,461	21,468	52,993

^a Only collected by softwood and hardwood and includes roundwood chipped.

Table A.6—Industrial roundwood movement by year and species group, Oklahoma, 2005 and 2009

Year	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>thousand cubic feet</i>					
Softwood					
2005	95,436	12,049	83,387	43,730	127,117
2009	46,274	8,391	37,883	23,615	61,498
Hardwood					
2005	23,799	10,751	13,048	8,497	21,545
2009	20,045	9,991	10,054	2,909	12,963
All species					
2005	119,235	22,800	96,435	52,227	148,662
2009	66,319	18,382	47,937	26,524	74,461

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

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>thousand cubic feet</i>					
Saw logs					
Softwood	22,759	6,588	16,171	2,645	18,816
Hardwood	2,495	615	1,880	772	2,652
Total	25,254	7,203	18,051	3,417	21,468
Pulpwood ^a and other industrial ^b					
Softwood	23,515	1,803	21,712	20,970	42,682
Hardwood	17,550	9,376	8,174	2,137	10,311
Total	41,065	11,179	29,886	23,107	52,993
All products					
Softwood	46,274	8,391	37,883	23,615	61,498
Hardwood	20,045	9,991	10,054	2,909	12,963
Total	66,319	18,382	47,937	26,524	74,461

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

^b Includes poles, posts, composite panels, mulch, firewood, log homes, charcoal, and all other industrial products.

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

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Oklahoma (retained)	18,051	16,171	1,880
Exports to			
Arkansas	6,268	5,679	589
Texas	935	909	26
Total	7,203	6,588	615
Imports from			
Arkansas	2,004	1,357	647
Missouri	125	0	125
Texas	1,288	1,288	0
Total	3,417	2,645	772

Table A.9—Pulpwood and other industrial^a volume by destination, source, and species group, Oklahoma, 2009

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>thousand cubic feet</i>			
Oklahoma (retained)	29,886	21,712	8,174
Exports to			
Arkansas	9,491	1,594	7,897
Georgia	2	0	2
Texas	1,686	209	1,477
Total	11,179	1,803	9,376
Imports from			
Arkansas	13,030	12,811	219
Louisiana	24	24	0
Texas	10,053	8,135	1,918
Total	23,107	20,970	2,137

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

Table A.10—Primary mill residue volume by roundwood type, species group, and residue type, Oklahoma, 2009

Roundwood type and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>thousand cubic feet</i>					
Saw logs					
Softwood	11,888	1,263	5,559	3,337	1,729
Hardwood	1,664	275	856	533	0
Total	13,552	1,538	6,415	3,870	1,729
Pulpwood and other industrial ^a					
Softwood	4,405	4,405	0	0	0
Hardwood	1,278	1,278	0	0	0
Total	5,683	5,683	0	0	0
Total					
Softwood	16,293	5,668	5,559	3,337	1,729
Hardwood	2,942	1,553	856	533	0
Total	19,235	7,221	6,415	3,870	1,729

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

Table A.11—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Oklahoma, 2005 and 2009

Product and species group	All types		Bark		Coarse		Sawdust		Shavings	
	2005	2009	2005	2009	2005	2009	2005	2009	2005	2009
	<i>thousand cubic feet</i>									
Fiber products										
Softwood	14,953	4,387	0	0	14,953	4,387	0	0	0	0
Hardwood	1,097	395	0	0	1,097	395	0	0	0	0
Total	16,050	4,782	0	0	16,050	4,782	0	0	0	0
Particleboard										
Softwood	1,515	1,128	0	0	1,515	1,128	0	0	0	0
Hardwood	0	0	0	0	0	0	0	0	0	0
Total	1,515	1,128	0	0	1,515	1,128	0	0	0	0
Charcoal/ chemical wood										
Softwood	2	2	0	0	2	2	0	0	0	0
Hardwood	0	0	0	0	0	0	0	0	0	0
Total	2	2	0	0	2	2	0	0	0	0
Sawn products										
Softwood	3,146	0	0	0	3,146	0	0	0	0	0
Hardwood	3	3	0	0	3	3	0	0	0	0
Total	3,149	3	0	0	3,149	3	0	0	0	0
Industrial fuel										
Softwood	26,178	10,265	10,425	5,513	17	39	10,991	3,336	4,745	1,377
Hardwood	5,286	2,050	2,329	1,414	1,463	372	1,494	264	0	0
Total	31,464	12,315	12,754	6,927	1,480	411	12,485	3,600	4,745	1,377
Miscellaneous										
Softwood	1,091	510	647	155	2	2	1	1	441	352
Hardwood	452	494	102	139	150	86	200	269	0	0
Total	1,543	1,004	749	294	152	88	201	270	441	352
Not used										
Softwood	6	1	1	0	3	1	2	0	0	0
Hardwood	43	0	7	0	23	0	13	0	0	0
Total	49	1	8	0	26	1	15	0	0	0
All products										
Softwood	46,891	16,293	11,073	5,668	19,638	5,559	10,994	3,337	5,186	1,729
Hardwood	6,881	2,942	2,438	1,553	2,736	856	1,707	533	0	0
Total	53,772	19,235	13,511	7,221	22,374	6,415	12,701	3,870	5,186	1,729

Table A.12—Roundwood timber product output by county, product, and species group, Oklahoma, 2009

County	All products		Saw logs		Pulpwood and other industrial ^a	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
	<i>thousand cubic feet</i>					
Adair	0	1,846	0	528	0	1,318
Atoka	390	1,071	249	483	141	588
Bryan	0	874	0	0	0	874
Cherokee	15	438	0	282	15	156
Choctaw	996	599	575	13	421	586
Coal	0	48	0	0	0	48
Delaware	0	428	0	428	0	0
Garfield	8	0	8	0	0	0
Haskell	0	124	0	124	0	0
Hughes	0	65	0	8	0	57
Latimer	385	596	243	0	142	596
Le Flore	4,331	2,191	2,291	0	2,040	2,191
Mayes	0	83	0	83	0	0
McCurtain	26,213	3,037	14,348	177	11,865	2,860
Ottawa	0	157	0	157	0	0
Pittsburg	0	12	0	0	0	12
Pushmataha	13,925	7,945	5,045	5	8,880	7,940
Sequoyah	11	531	0	207	11	324
All counties	46,274	20,045	22,759	2,495	23,515	17,550

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

Table A.13—Total roundwood output by product, species group, and source of material, Oklahoma, 2009

Product and species group	All sources	Total	Growing-stock trees		Other sources
			Sawtimber	Poletimber	
<i>thousand cubic feet</i>					
Saw logs					
Softwood	22,759	21,621	20,323	1,298	1,138
Hardwood	2,495	2,437	2,290	146	58
Total	25,254	24,057	22,614	1,444	1,196
Pulpwood					
Softwood	19,900	13,630	3,478	10,152	6,270
Hardwood	17,550	15,439	6,782	8,657	2,111
Total	37,450	29,069	10,260	18,809	8,381
Other industrial ^a					
Softwood	3,615	3,326	2,103	1,223	289
Hardwood	0	0	0	0	0
Total	3,615	3,326	2,103	1,223	290
Total industrial products					
Softwood	46,274	38,577	25,904	12,673	7,697
Hardwood	20,045	17,876	9,073	8,803	2,169
Total	66,319	56,452	34,977	21,476	9,867
Residential fuelwood					
Softwood	279	129	106	23	150
Hardwood	16,095	12,634	8,977	3,657	3,461
Total	16,374	12,763	9,083	3,680	3,611
All products					
Softwood	46,553	38,706	26,010	12,696	7,847
Hardwood	36,140	30,510	18,050	12,460	5,630
Total	82,693	69,216	44,060	25,156	13,478

Numbers in rows and columns may not add due to rounding.

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

Table A.14—Total roundwood output by species group, survey region, and ownership class, Oklahoma, 2009

Species group and survey region	Total	Ownership class		
		Public	Forest industry	Nonindustrial private
<i>thousand cubic feet</i>				
Softwoods				
Southeast	46,519	3,042	28,971	14,506
Northeast	26	0	0	26
Western	8	0	0	8
Total softwoods	<u>46,553</u>	<u>3,042</u>	<u>28,971</u>	<u>14,540</u>
Hardwoods				
Southeast	29,743	442	10,219	19,082
Northeast	6,280	442	0	5,838
Western	117	0	0	117
Total hardwoods	<u>36,140</u>	<u>884</u>	<u>10,219</u>	<u>25,037</u>
All species	<u>82,693</u>	<u>3,926</u>	<u>39,190</u>	<u>39,578</u>

Numbers in rows and columns may not add due to rounding.

Table A.15—Total roundwood output by species group, detailed species group, and product, Oklahoma, 2009

Species group and detailed species group	Total	Product			Residential fuelwood
		Saw logs	Pulpwood	Other industrial ^a	
<i>thousand cubic feet</i>					
Softwood					
Cedar	114	64	27	22	1
Loblolly-shortleaf pine	46,420	22,687	19,862	3,593	278
Other yellow pines	19	8	11	0	0
Total softwoods	46,553	22,759	19,900	3,615	279
Hardwood					
Soft maple	36	1	19	0	16
Hard maple	47	7	19	0	21
Hickory	5,996	307	3,018	0	2,670
Ash	566	80	234	0	252
Sweetgum	1,618	11	887	0	721
Blackgum-tupelo	435	29	212	0	194
Sycamore	198	0	110	0	88
Black cherry	167	0	93	0	74
Select white oaks	2,421	229	1,113	0	1,078
Other white oaks	11,474	502	5,862	0	5,110
Select red oaks	1,495	64	766	0	665
Other red oaks	8,852	986	3,923	0	3,943
Elm	1,955	86	998	0	871
Other eastern hardwoods	880	191	297	0	392
Total hardwoods	36,140	2,495	17,550	0	16,095
All species	82,693	25,254	37,450	3,615	16,374

Numbers in rows and columns may not add due to rounding.

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

Table A.16—Total roundwood output by species group, detailed species group, and ownership class, Oklahoma, 2009

Species group and detailed species group	Total	Ownership class		
		Public	Forest industry	Nonindustrial private
<i>thousand cubic feet</i>				
Softwood				
Cedar	114	15	0	99
Loblolly-shortleaf pine	46,420	3,027	28,971	14,422
Other yellow pines	19	0	0	19
Total softwoods	46,553	3,042	28,971	14,540
Hardwood				
Soft maple	36	0	6	29
Hard maple	47	0	0	47
Hickory	5,996	94	2,303	3,599
Ash	566	8	10	548
Sweetgum	1,618	0	845	773
Blackgum-tupelo	435	19	25	391
Sycamore	198	0	0	198
Black cherry	167	19	0	148
Select white oaks	2,421	166	126	2,129
Other white oaks	11,474	283	4,295	6,896
Select red oaks	1,495	103	53	1,338
Other red oaks	8,852	137	1,775	6,940
Elm	1,955	17	760	1,178
Other eastern hardwoods	880	38	21	822
Total hardwoods	36,140	884	10,219	25,037
All species	82,693	3,926	39,190	39,578

Numbers in rows and columns may not add due to rounding.

Johnson, Tony G. 2011. Oklahoma's timber industry—an assessment of timber product output and use, 2009. Resour. Bull. SRS-184. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 27 p.

In 2009, roundwood output from Oklahoma's forests totaled 66.3 million cubic feet. Mill byproducts generated from primary manufacturers totaled 19.2 million cubic feet. Almost all plant residues generated were used primarily for fuel and fiber products. Pulpwood was the leading roundwood product at 37.5 million cubic feet; saw logs ranked second at 25.3 million cubic feet. There were 27 primary processing plants operating in Oklahoma in 2009. Receipts totaled 74.5 million cubic feet.

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.

The USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.