United States
Department of
Agriculture

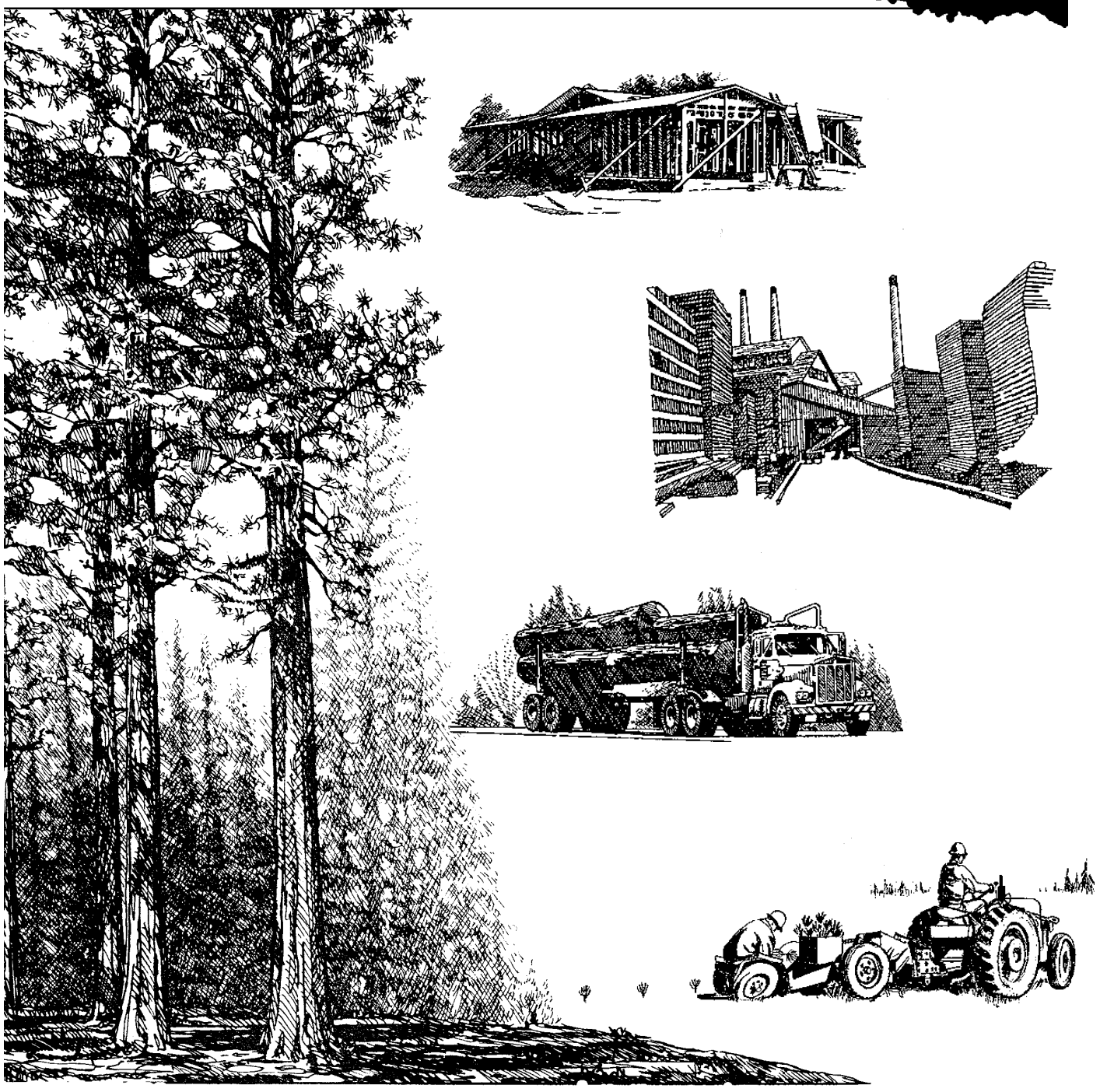
Forest Service

**Southern
Research Station**

Resource Bulletin
SRS-30

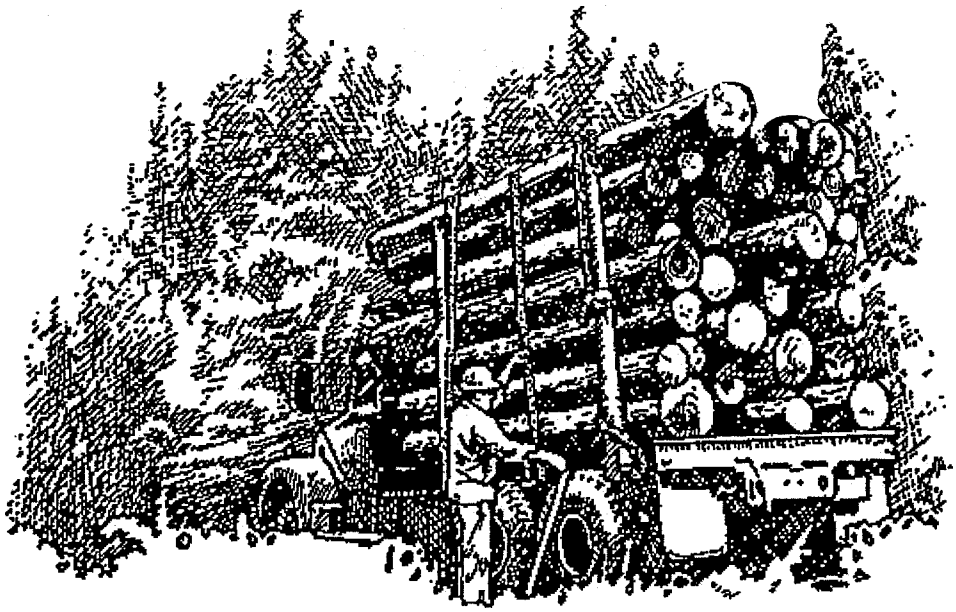
# Oklahoma's Timber Industry—An Assessment of Timber Product Output and Use, 1996

**Michael Howell and Tony G. Johnson**



## The Authors:

**Michael Howell** is a Resource Analyst with the Forest Inventory and Analysis Research Work Unit, Southern Research Station, U.S. Department of Agriculture, Forest Service, Starkville, MS 39760. **Tony G. Johnson** is a Resource Analyst with the Forest Inventory and Analysis Research Work Unit, Southern Research Station, U.S. Department of Agriculture, Forest Service, Asheville, NC 28802.



June 1998

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

## Foreword

This report contains the findings of a 1996 canvass of primary wood-using plants in Oklahoma and presents changes in product output and residue use since 1984. It complements the Forest Inventory and Analysis (FIA) periodic inventory of volume and removals from the State's timberland. The canvass was conducted to determine the amount and source of wood receipts and annual timber product drain by county in 1996 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 sampled canvass of wood processors in Oklahoma was conducted in 1997 to obtain information for 1996. 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 response was necessary.

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

The Southern Research Station gratefully acknowledges the cooperation and assistance provided by the Oklahoma Department of Agriculture, Forestry Division, in collecting mill data. Appreciation is also extended to forest industry and mill managers for providing timber products information. The information in this report is based on responses from 15 mills operating in 1996: 2 pulpmills, 1 veneer mill, 2 mills manufacturing other industrial products, and 10 of the 68 sawmills.

## Contents



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

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.

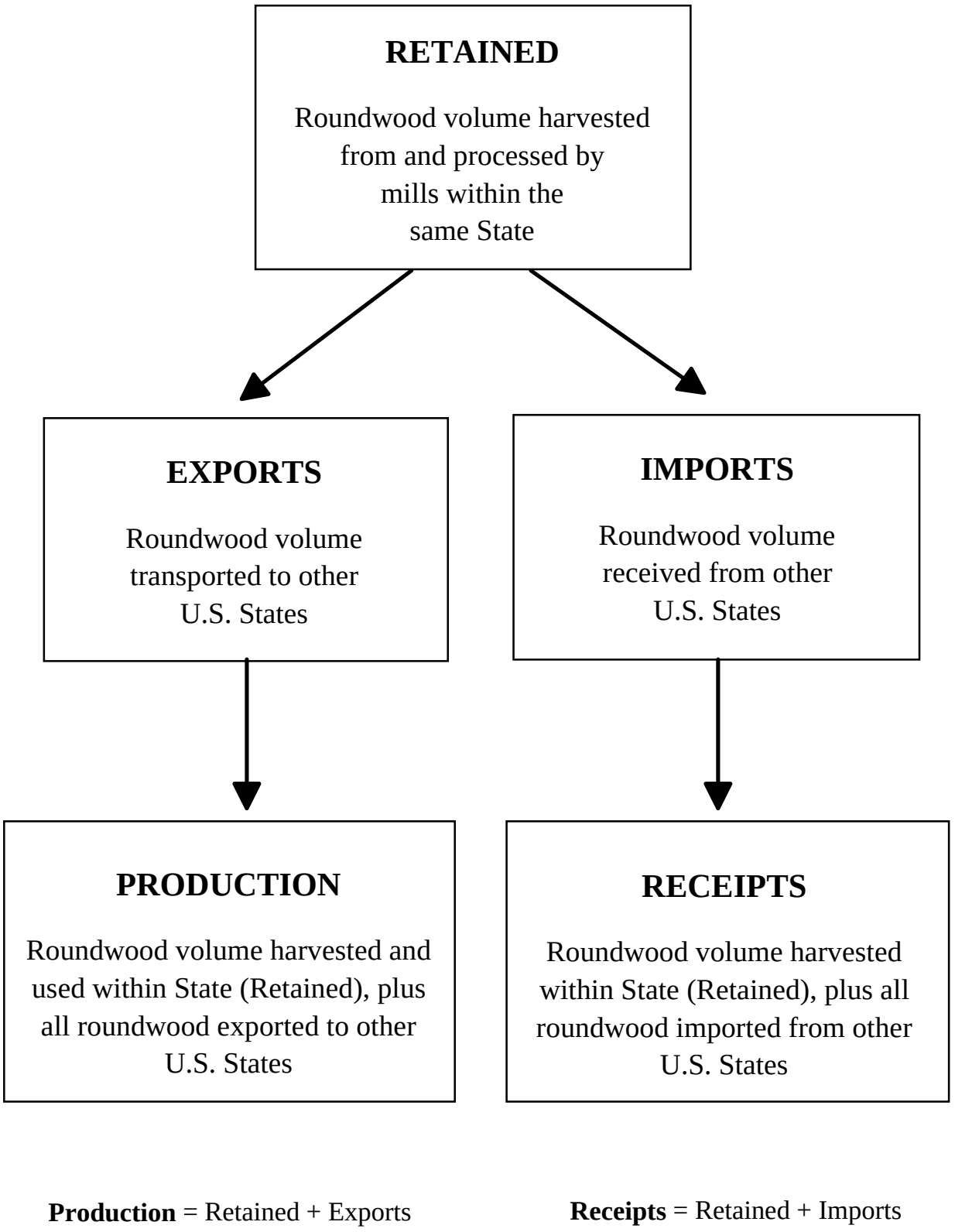



Figure 1—Movement of roundwood exports and imports within the United States.

# Oklahoma's Timber Industry—An Assessment of Timber Product Output and Use, 1996

**Michael Howell and Tony G. Johnson**

## Output of Industrial Timber Products

Note: The reader must understand that certain terms, namely—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).

- Between 1984 and 1996, the combined industrial timber products output (TPO) from roundwood and plant byproducts increased 55 percent, from 100 to 155 million cubic feet.
- Timber products output from roundwood was up 58 million cubic feet, doubling to 113 million cubic feet, while output of plant byproducts declined 3 million cubic feet to 42 million cubic feet.
- Output of softwood roundwood products increased 126 percent, to 93 million cubic feet, while output of hardwood roundwood products increased 41 percent, to 20 million cubic feet (fig. 2).
- Saw logs and pulpwood were the principal roundwood products in 1996. Combined product output was 94 million cubic feet and accounted for 84 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, were 110 million cubic feet. The number of primary roundwood-using plants in Oklahoma declined from 100 in 1984 to 73 in 1996 (fig.4).

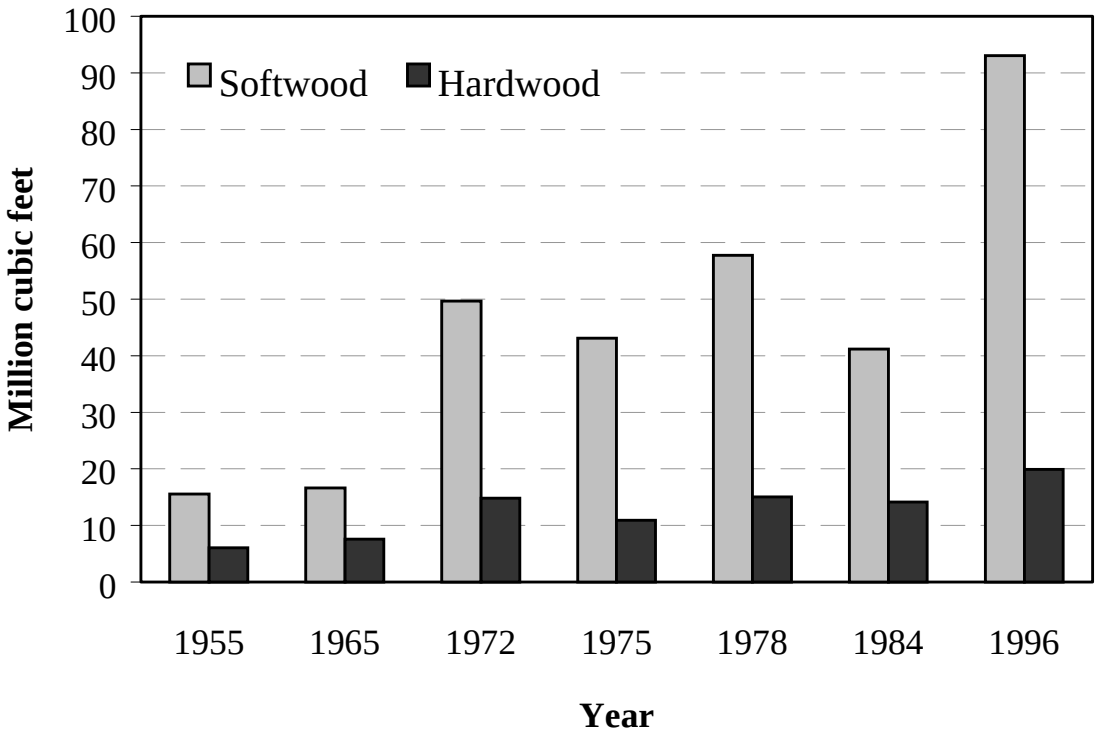



Figure 2—Roundwood production for all products by species group and year (see page 5 for references for individual years).

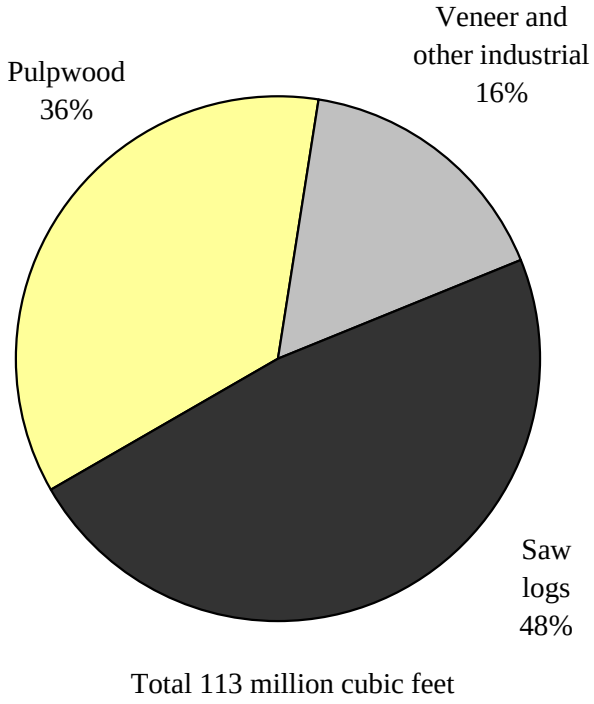



Figure 3—Roundwood production by type of product, 1996.

## Saw Logs

- Saw logs accounted for 48 percent of the State's total roundwood products. Output of softwood saw logs increased 106 percent, to 46 million cubic feet (254 million board feet), while hardwood saw-log output declined 14 percent, to 8 million cubic feet (49 million board feet) (fig. 5).

- Oklahoma had 68 sawmills, representing a net loss of 16 since 1984. Total softwood saw-log receipts were 44 million cubic feet, while those of hardwoods totaled 9 million cubic feet. Of the 10 reporting mills, 6 had receipts between 1.0 and 9.99 million board feet, while 4 had receipts greater than 10 million board feet. These 4 mills accounted for 92 percent of the reported volume.

- Oklahoma retained 71 percent of its saw-log production for domestic manufacture, with saw-log exports exceeding imports by 1 million cubic feet in 1996.

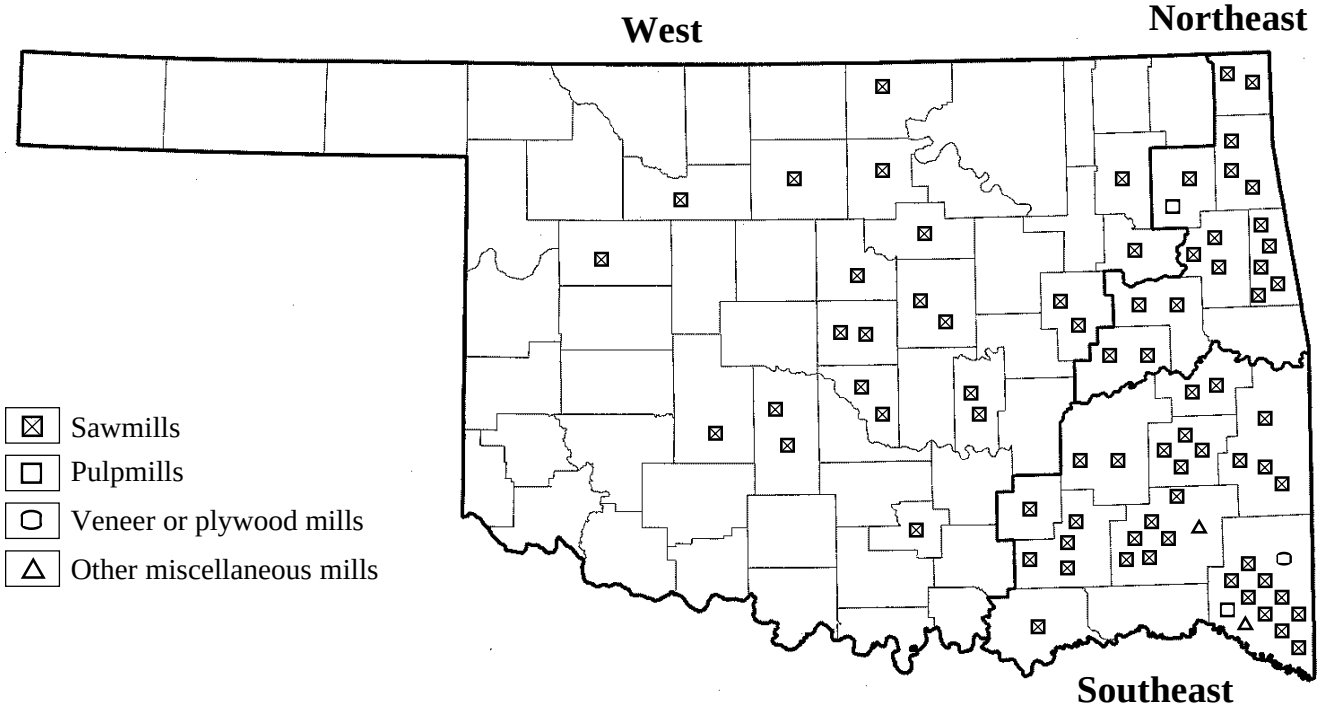



Figure 4—Primary wood-using mills by region, 1996.

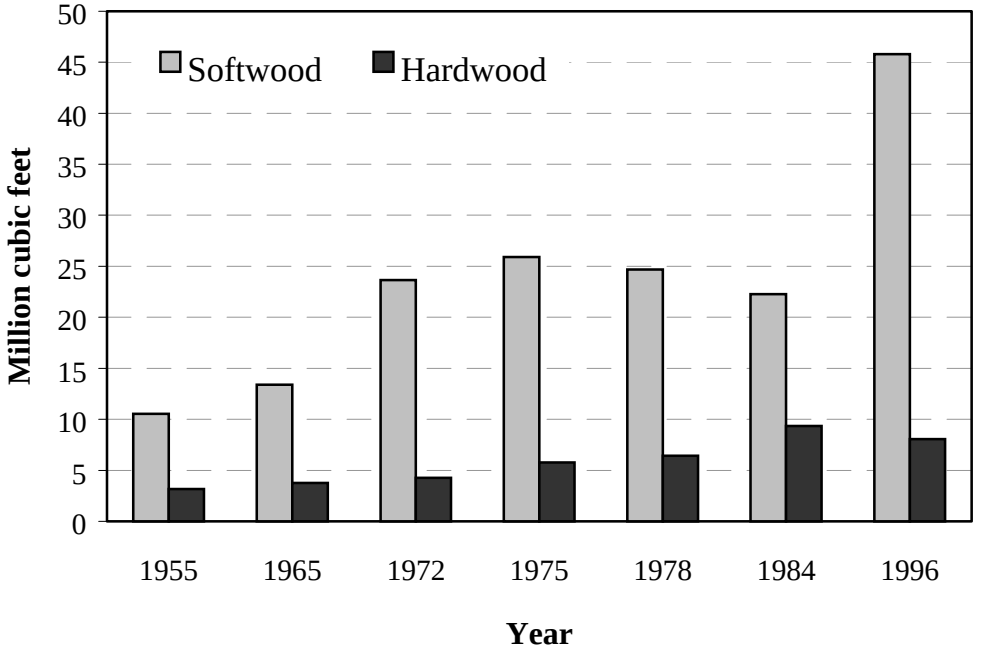



Figure 5—Roundwood saw-log production by species group and year (see page 5 for references for individual years).

## Pulpwood

- Pulpwood production, including chipped roundwood, increased threefold to 40 million cubic feet (549 thousand cords) and accounted for 36 percent of the State's total roundwood TPO. Softwood output was up 383 percent to 29 million cubic feet, while hardwood output increased 182 percent, to 12 million cubic feet (fig. 6).

- Two pulpmill facilities were operating and receiving roundwood in 1996. Pulpwood receipts for these mills totaled 38 million cubic feet, accounting for 35 percent of total receipts for all mills.

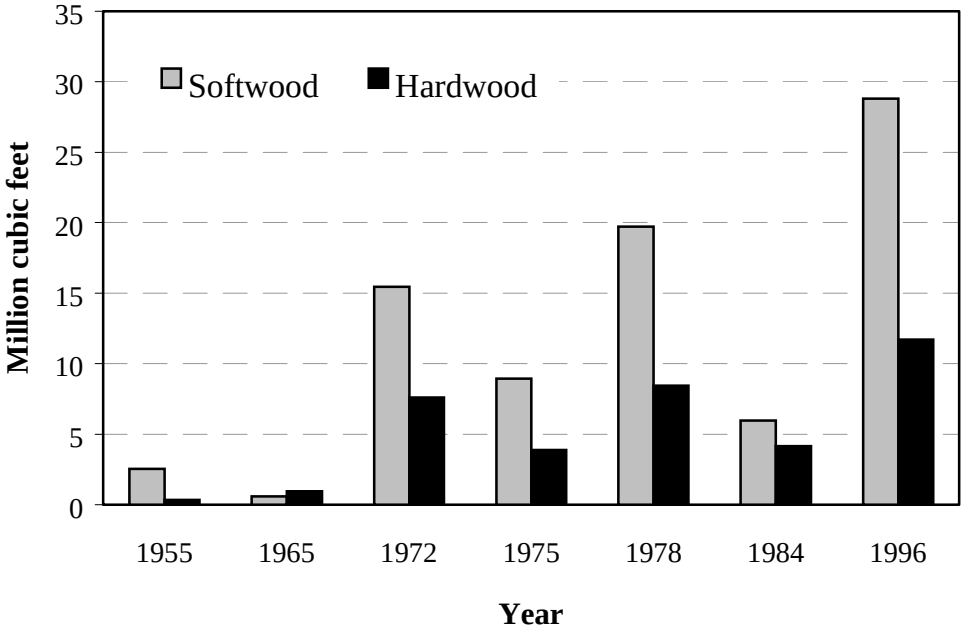



Figure 6—Roundwood pulpwood production by species group and year (see page 5 for references for individual years).

- Sixty-one percent of roundwood cut for pulpwood was retained for processing at Oklahoma pulpmills. Roundwood pulpwood accounted for 44 percent of total known exports and 41 percent of total imports. Roundwood pulpwood exports was 16 million cubic feet, or 2 million cubic feet more than was imported.

### Veneer and Other Industrial Products

- In 1996, output of veneer and other industrial products totaled 19 million cubic feet and accounted for 16 percent of the State's total roundwood TPO volume. Softwood production increased 42 percent, to 18 million cubic feet, while output of hardwood declined 80 percent, to 127 thousand cubic feet (fig. 7).

- Three veneer and other industrial mills were contacted for this report. Their receipts totaled 19 million cubic feet. Softwood accounted for all volume at these mills.

- Oklahoma retained 76 percent of its veneer and other industrial production for processing at domestic mills. Imports amounted to 5 million cubic feet, while exports were 4 million cubic feet, making the State a net importer of roundwood for veneer and other industrial uses.

## Plant Byproducts

- The manufacture of primary products in Oklahoma mills generated more than 42 million cubic feet of wood and bark residues. Coarse residues from all primary products was 18 million cubic feet, while bark volume totaled 10 million cubic feet. Sawdust and shavings constituted 33 percent of total residues, or 14 million cubic feet (fig. 8).

- Forty-six percent of the wood and bark residue was used for industrial fuel (fig. 9). More than 31 percent was used for fiber products, and the remainder was used for miscellaneous and sawn products. Eighty-four and 91 percent of the bark and sawdust, respectively, were used for industrial fuel, while 96 percent of the shavings was used for other miscellaneous products.

- Sawmills generated 31 million cubic feet of residue, accounting for 74 percent of the total residue produced (fig. 10).

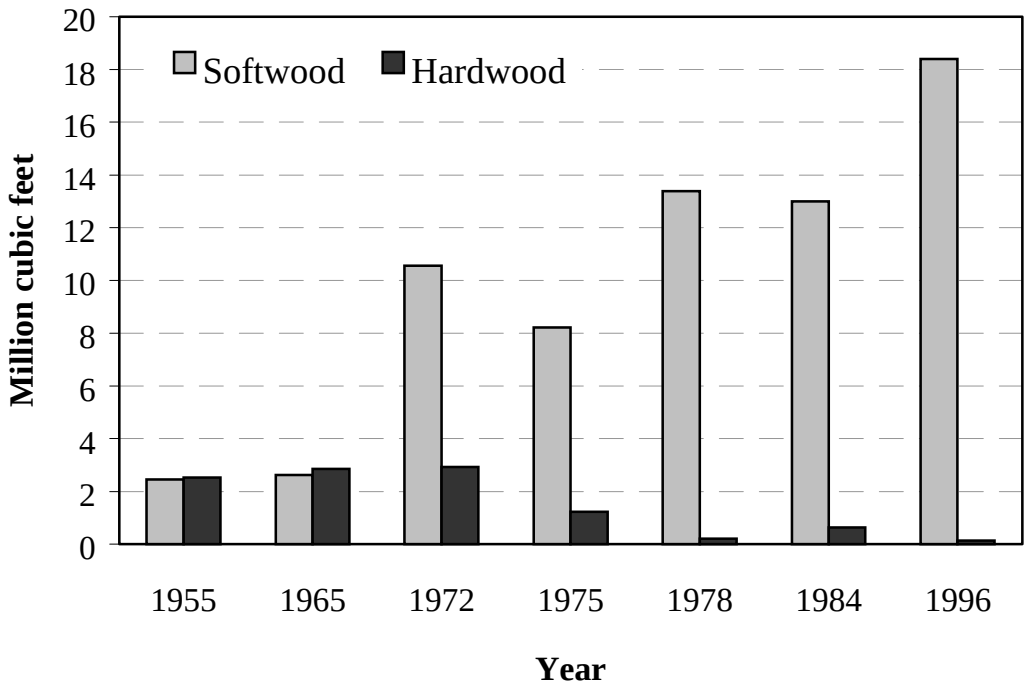



Figure 7—Roundwood production for veneer and other industrial products by species group and year (see page 5 for references for individual years).

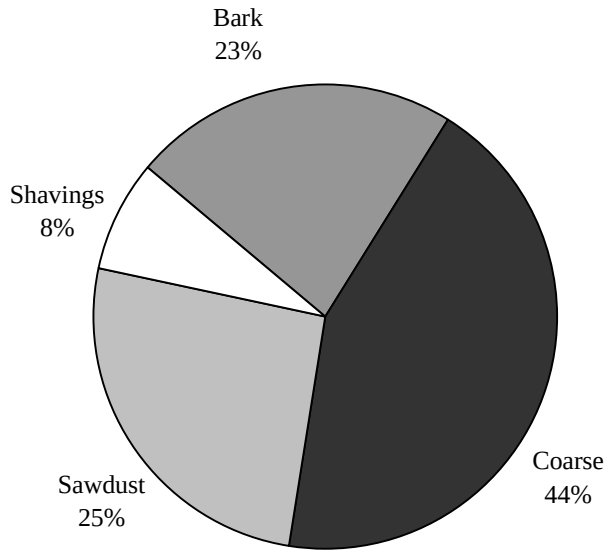



Figure 8—Primary mill residue by residue type, 1996.

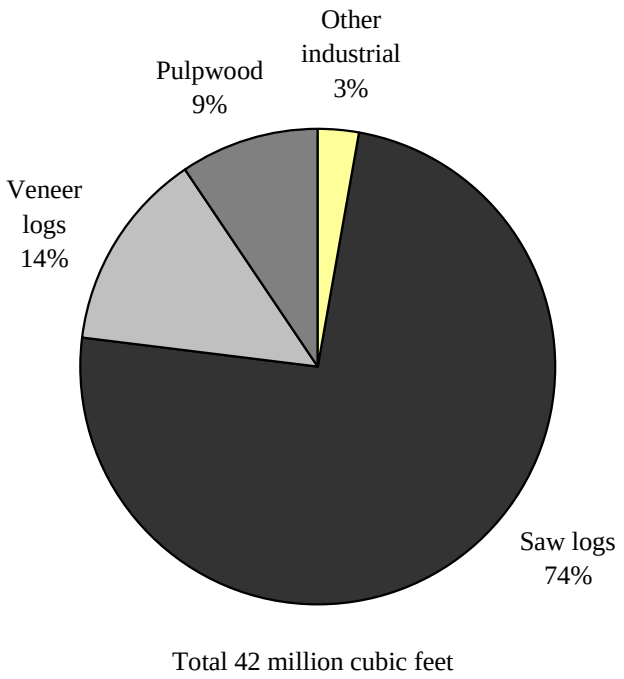



Figure 10—Primary mill residue produced by mill type, 1996.

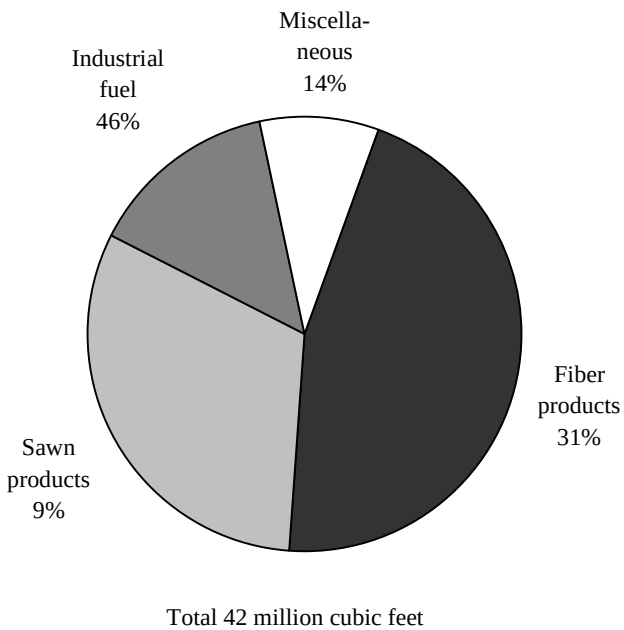



Figure 9—Disposal of residue by product, 1996.

## References

**Bertelson, Daniel F.** 1973. Oklahoma forest industries, 1972. Resour. Bull. SO-45. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 16 p. [1972].

**Bertelson, Daniel F.** 1977. Oklahoma forest industries, 1975. Resour. Bull. SO-64. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 14 p. [1975].

**May, Dennis M.** 1986. Oklahoma forest industries, 1984. Resour. Bull. SO-109. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 11 p. [1984].

**Rudis, Victor A.; Jones, Greg J.** 1981. Oklahoma forest industries, 1978. Resour. Bull. SO-78. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 10 p. [1978].

**Sternitzke, Herbert S.; VanSickle, Charles C.** 1968. East Oklahoma forests. Resour. Bull. SO-14. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 32 p. [1965].

**Wheeler, Phillip R.** 1957. Forest of East Oklahoma, 1955-56. Forest Survey Release 79. New Orleans, LA: U.S. Department of Agriculture, Forest Service, Southern Forest Experiment Station. 34 p. [1955].

## Definitions

**Board foot.** Unit of measure applied to roundwood. It relates to lumber that is 1-foot long, 1-foot wide, and 1-inch thick (or its equivalent).

**Composite panels.** Consists of structural panels (oriented strand board or waferboard) or particleboard (industrial underlayment, thin panelboard).

**Consumption.** The quantity of a commodity, such as pulpwood, utilized.

**Drain.** The volume of roundwood removed from any geographic area where timber is grown.

**Exports.** The volume of roundwood used by mills outside the State where timber was cut.

**Imports.** The volume of roundwood delivered to a mill or group of mills in a specific State but harvested outside that State.

**Industrial fuelwood.** A roundwood product, with or without bark, used to generate energy at a manufacturing facility such as a wood-using mill.

**Industrial roundwood products.** Any primary use of the main stem of a tree, such as saw logs, veneer logs, pulpwood, poles, pilings, or posts.

**Log.** A primary forest product harvested in long, primarily 8-foot, lengths.

**Plant residues.** Wood material generated in the production of timber products at primary manufacturing plants.

*Coarse residues.* Suitable for chipping such as slabs, edgings, trim, veneer cores, and ends.

*Fine residues.* Not suitable for chipping such as sawdust, shavings, and veneer clippings.

**Primary wood-using plants.** Industries that receive roundwood or chips from roundwood for the manufacture of products such as lumber, veneer, and pulp.

**Production.** The total volume of roundwood harvested from land within the specified State, regardless of where consumed. Production is the sum of timber harvested and used within the State, plus all roundwood exported to other States.

**Pulpwood.** A roundwood product that will be reduced to individual wood fibers by chemical or mechanical means. The fibers are used to make a broad generic group of pulp products that includes paper products as well as chipboard, fiberboard, insulating board, and paperboard.

**Receipts.** The quantity or volume of industrial roundwood received at a mill or by a group of mills in a State, regardless of the geographic source. Volume of roundwood receipts is equal to the volume of roundwood retained in a State plus roundwood imported from other States.

**Retained.** Roundwood volume harvested from and processed by mills within the same State.

**Roundwood.** Logs, bolts, or other round sections cut from trees for industrial manufacture or consumer use.

**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, and whole trees.

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

**Saw log.** A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with minimum diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods.

**Standard cord.** A unit measure applied to roundwood, usually bolts or split wood. It relates to a stack of wood 4 feet high, 4 feet wide, and 8 feet long encompassing 128 cubic feet of wood, bark, and air space. In the South, this usually translates to approximately 75.0 cubic feet of solid wood for pulpwood, because pulpwood is more uniform.

**Timber products output.** Roundwood production from an area's forests (equals roundwood product drain).

**Timber removals.** The merchantable volume of trees removed from the timberland inventory by harvesting, cultural operations such as stand improvement, land clearing, or changes in land use.

**Veneer log.** A log to be used in the production of plywood, finished panels, or veneer sheets, both rotary cut and sliced.

## Conversion Factors[a]

**Saw logs**

| | |
|---|---|
| Softwood | 0.18018 cubic foot = 1 board foot<br>5.55 board feet = 1 cubic foot |
| Hardwood | 0.16556 cubic foot = 1 board foot<br>6.04 board feet = 1 cubic foot |

**Veneer logs**

| | |
|---|---|
| Softwood | 0.17391 cubic foot = 1 board foot<br>5.75 board feet = 1 cubic foot |
| Hardwood | 0.15873 cubic foot = 1 board foot<br>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.
[b] Cubic feet of solid wood per cord.

## Index of Tables

**Table 1—Output of industrial products by product and species group, Oklahoma, 1984 and 1996**

| Product and species group | Year | | | Percent change |
|---|---|---|---|---|
| | 1984 | 1996 | Change | |
| | *Thousand cubic feet* | | | |
| **Saw logs** | | | | |
| Softwood | 22,254 | 45,803 | 23,549 | 105.8 |
| Hardwood | 9,353 | 8,062 | -1,291 | -13.8 |
| Total | 31,607 | 53,865 | 22,258 | 70.4 |
| **Veneer and other industrial**[a] | | | | |
| Softwood | 12,991 | 18,398 | 5,407 | 41.6 |
| Hardwood | 625 | 127 | -498 | -79.7 |
| Total | 13,616 | 18,525 | 4,909 | 36.1 |
| **Pulpwood** | | | | |
| Softwood | 5,959 | 28,788 | 22,829 | 383.1 |
| Hardwood | 4,145 | 11,699 | 7,554 | 182.2 |
| Total | 10,104 | 40,487 | 30,383 | 300.7 |
| **All industrial** | | | | |
| Softwood | 41,204 | 92,989 | 51,785 | 125.7 |
| Hardwood | 14,123 | 19,888 | 5,765 | 40.8 |
| Total | 55,327 | 112,877 | 57,550 | 104.0 |
| **Byproduct output** | | | | |
| Softwood | 28,889 | 36,006 | 7,117 | 24.6 |
| Hardwood | 16,233 | 6,278 | -9,955 | -61.3 |
| Total | 45,122 | 42,284 | -2,838 | -6.3 |
| **Total output** | | | | |
| Softwood | 70,093 | 128,995 | 58,902 | 84.0 |
| Hardwood | 30,356 | 26,166 | -4,190 | -13.8 |
| Total | 100,449 | 155,161 | 54,712 | 54.5 |

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

**Table 2—Roundwood receipts by product and species group, Oklahoma, 1996**

| Product and species group | Receipts |
|---|---|
| | *Thousand cubic feet* |
| **Saw logs** | |
| Softwood | 43,746 |
| Hardwood | 8,828 |
| Total | 52,574 |
| **Veneer and other industrial**[a] | |
| Softwood | 19,280 |
| Hardwood | 0 |
| Total | 19,280 |
| **Pulpwood** | |
| Softwood | 34,161 |
| Hardwood | 4,215 |
| Total | 38,376 |
| **Total output** | |
| Softwood | 97,187 |
| Hardwood | 13,043 |
| Total | 110,230 |

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

**Table 3—Number of primary wood-using plants by industry, Oklahoma, 1955-1996**

| | Year | | | | | | |
|---|---|---|---|---|---|---|---|
| Industry | 1955 | 1965 | 1972 | 1975 | 1978 | 1984 | 1996 |
| Sawmills | 80 | 110 | 103 | 83 | 66 | 84 | 68 |
| Veneer or plywood mills | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| Pulpmills | 1 | 2 | 3 | 3 | 3 | 3 | 2 |
| Composite panel mills | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other mills | 17 | 19 | 11 | 14 | 11 | 12 | 2 |
| All plants | 99 | 131 | 118 | 101 | 81 | 100 | 73 |

**Table 4—Roundwood receipts by sawmill size, Oklahoma, 1996**

| Sawmill size class[a] | Number of mills[b] | Thousand board feet | Percent of volume |
|---|---|---|---|
| *Million board feet* | | | |
| 1.0 - 9.99 | 6 | 24,712 | 8 |
| >10.0 | 4 | 271,530 | 92 |
| Total | 10 | 296,242 | 100 |

[a] Based on volume received as opposed to actual capacity.
[b] Mills under 1.0 million board feet were not included in this report.

**Table 5—Roundwood receipts by species and type of mill, Oklahoma, 1996**

| Species | All mills | Type of mill: Sawmills | Veneer and other industrial | OSB[a] and panels | Pulpmills |
|---|---|---|---|---|---|
| | | *Thousand cubic feet* | | | |
| **Softwood** | | | | | |
| Yellow pine | 63,026 | 43,746 | 19,280 | 0 | NA |
| White pine | 0 | 0 | 0 | 0 | NA |
| Cedar | 0 | 0 | 0 | 0 | NA |
| Cypress | 0 | 0 | 0 | 0 | NA |
| Other softwood | 0 | 0 | 0 | 0 | NA |
| Unclassified | 34,161 | 0 | 0 | 0 | 34,161 |
| Total softwoods | 97,187 | 43,746 | 19,280 | 0 | 34,161 |
| **Hardwood** | | | | | |
| Blackgum and tupelo | 0 | 0 | 0 | 0 | NA |
| Soft maple | 254 | 254 | 0 | 0 | NA |
| Sweetgum | 174 | 174 | 0 | 0 | NA |
| Yellow-poplar | 0 | 0 | 0 | 0 | NA |
| Other soft hardwood | 304 | 304 | 0 | 0 | NA |
| Hickory | 1,025 | 1,025 | 0 | 0 | NA |
| Red oak | 2,151 | 2,151 | 0 | 0 | NA |
| White oak | 2,620 | 2,620 | 0 | 0 | NA |
| Other hard hardwood | 2,300 | 2,300 | 0 | 0 | NA |
| Unclassified | 4,215 | 0 | 0 | 0 | 4,215 |
| Total hardwoods | 13,043 | 8,828 | 0 | 0 | 4,215 |
| **All species** | 110,230 | 52,574 | 19,280 | 0 | 38,376 |

NA = not applicable.
[a] OSB = oriented strand board.

**Table 6—Industrial roundwood movement by product and species group, Oklahoma, 1996**

| Product and species group | Production | Exported to other States | Retained | Imported from other States | Receipts |
|---|---|---|---|---|---|
| | | | *Thousand cubic feet* | | |
| **Saw logs** | | | | | |
| Softwood | 45,803 | 13,773 | 32,030 | 11,716 | 43,746 |
| Hardwood | 8,062 | 1,601 | 6,461 | 2,367 | 8,828 |
| Total | 53,865 | 15,374 | 38,491 | 14,083 | 52,574 |
| **Veneer and other industrial** | | | | | |
| Softwood | 18,398 | 4,375 | 14,023 | 5,257 | 19,280 |
| Hardwood | 127 | 127 | 0 | 0 | 0 |
| Total | 18,525 | 4,502 | 14,023 | 5,257 | 19,280 |
| **Pulpwood** | | | | | |
| Softwood | 28,788 | 5,818 | 22,970 | 11,191 | 34,161 |
| Hardwood | 11,699 | 9,959 | 1,740 | 2,475 | 4,215 |
| Total | 40,487 | 15,777 | 24,710 | 13,666 | 38,376 |
| **All products** | | | | | |
| Softwood | 92,989 | 23,966 | 69,023 | 28,164 | 97,187 |
| Hardwood | 19,888 | 11,687 | 8,201 | 4,842 | 13,043 |
| Total | 112,877 | 35,653 | 77,224 | 33,006 | 110,230 |

**Table 7—Saw-log volume by destination, source, and species group, Oklahoma, 1996**

| Destination and source | All species | Species group: Softwood | Species group: Hardwood |
|---|---|---|---|
| | | *Thousand cubic feet* | |
| **Oklahoma (retained)** | 38,491 | 32,030 | 6,461 |
| **Exports to:** | | | |
| Arkansas | 5,689 | 5,164 | 525 |
| Kansas | 58 | 0 | 58 |
| Missouri | 187 | 4 | 183 |
| Texas | 9,440 | 8,605 | 835 |
| Total | 15,374 | 13,773 | 1,601 |
| **Imports from:** | | | |
| Arkansas | 4,640 | 3,111 | 1,529 |
| Texas | 9,443 | 8,605 | 838 |
| Total | 14,083 | 11,716 | 2,367 |

**Table 8—Veneer and other industrial[a] volume by destination, source, and species group, Oklahoma, 1996**

| Destination and source | All species | Species group: Softwood | Species group: Hardwood |
|---|---|---|---|
| | | *Thousand cubic feet* | |
| **Oklahoma (retained)** | 14,023 | 14,023 | 0 |
| **Exports to:** | | | |
| Arkansas | 1,155 | 1,155 | 0 |
| Indiana | 115 | 0 | 115 |
| Missouri | 12 | 0 | 12 |
| Texas | 3,220 | 3,220 | 0 |
| Total | 4,502 | 4,375 | 127 |
| **Imports from:** | | | |
| Arkansas | 2,034 | 2,034 | 0 |
| Louisiana | 88 | 88 | 0 |
| Texas | 3,135 | 3,135 | 0 |
| Total | 5,257 | 5,257 | 0 |

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

**Table 9—Pulpwood volume by destination, source, and species group, Oklahoma, 1996**

| Destination and source | All species | Species group: Softwood | Species group: Hardwood |
|---|---|---|---|
| | | *Thousand cubic feet* | |
| **Oklahoma (retained)** | 24,710 | 22,970 | 1,740 |
| **Exports to:** | | | |
| Arkansas | 15,492 | 5,762 | 9,730 |
| Texas | 285 | 56 | 229 |
| Total | 15,777 | 5,818 | 9,959 |
| **Imports from:** | | | |
| Arkansas | 11,759 | 10,977 | 782 |
| Texas | 1,907 | 214 | 1,693 |
| Total | 13,666 | 11,191 | 2,475 |

**Table 10—Primary mill residue volume by roundwood type, species group, and residue type, Oklahoma, 1996**

| Roundwood type and species group | All types | Residue type: Bark | Residue type: Coarse | Residue type: Sawdust | Residue type: Shavings |
|---|---|---|---|---|---|
| | | *Thousand cubic feet* | | | |
| **Saw logs** | | | | | |
| Softwood | 25,567 | 2,936 | 11,667 | 7,757 | 3,207 |
| Hardwood | 5,751 | 916 | 2,934 | 1,778 | 123 |
| Total | 31,318 | 3,852 | 14,601 | 9,535 | 3,330 |
| **Veneer and other industrial**[a] | | | | | |
| Softwood | 6,957 | 1,815 | 3,845 | 1,297 | 0 |
| Hardwood | 0 | 0 | 0 | 0 | 0 |
| Total | 6,957 | 1,815 | 3,845 | 1,297 | 0 |
| **Pulpwood** | | | | | |
| Softwood | 3,482 | 3,482 | 0 | 0 | 0 |
| Hardwood | 527 | 527 | 0 | 0 | 0 |
| Total | 4,009 | 4,009 | 0 | 0 | 0 |
| **Total** | | | | | |
| Softwood | 36,006 | 8,233 | 15,512 | 9,054 | 3,207 |
| Hardwood | 6,278 | 1,443 | 2,934 | 1,778 | 123 |
| Total | 42,284 | 9,676 | 18,446 | 10,832 | 3,330 |

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

**Table 11—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Oklahoma, 1996**

| Product and species group | All types | Residue type | | | |
|---|---|---|---|---|---|
| | | Bark | Coarse | Sawdust | Shavings |
| | | *Thousand cubic feet* | | | |
| **Fiber products** | | | | | |
| Softwood | 11,667 | 0 | 11,667 | 0 | 0 |
| Hardwood | 1,608 | 0 | 1,608 | 0 | 0 |
| Total | 13,275 | 0 | 13,275 | 0 | 0 |
| **Particleboard** | | | | | |
| Softwood | 0 | 0 | 0 | 0 | 0 |
| Hardwood | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 |
| **Composite panels** | | | | | |
| Softwood | 0 | 0 | 0 | 0 | 0 |
| Hardwood | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 |
| **Sawn products** | | | | | |
| Softwood | 3,748 | 0 | 3,748 | 0 | 0 |
| Hardwood | 0 | 0 | 0 | 0 | 0 |
| Total | 3,748 | 0 | 3,748 | 0 | 0 |
| **Fuel** | | | | | |
| Softwood | 16,106 | 6,847 | 87 | 9,054 | 118 |
| Hardwood | 3,161 | 1,262 | 1,086 | 813 | 0 |
| Total | 19,267 | 8,109 | 1,173 | 9,867 | 118 |
| **Miscellaneous** | | | | | |
| Softwood | 4,485 | 1,386 | 10 | 0 | 3,089 |
| Hardwood | 1,509 | 181 | 240 | 965 | 123 |
| Total | 5,994 | 1,567 | 250 | 965 | 3,212 |
| **Not used** | | | | | |
| Softwood | 0 | 0 | 0 | 0 | 0 |
| Hardwood | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 |
| **All products** | | | | | |
| Softwood | 36,006 | 8,233 | 15,512 | 9,054 | 3,207 |
| Hardwood | 6,278 | 1,443 | 2,934 | 1,778 | 123 |
| Total | 42,284 | 9,676 | 18,446 | 10,832 | 3,330 |

**Table 12—Roundwood timber products output by county, product, and species group, Oklahoma, 1996**

| County | All products | | Saw logs | | Veneer logs and other industrial | | Pulpwood[a] | |
|---|---|---|---|---|---|---|---|---|
| | Soft-wood | Hard-wood | Soft-wood | Hard-wood | Soft-wood | Hard-wood | Soft-wood | Hard-wood |
| | *Thousand cubic feet* | | | | | | | |
| Adair | 0 | 552 | 0 | 552 | 0 | 0 | 0 | 0 |
| Atoka | 0 | 138 | 0 | 138 | 0 | 0 | 0 | 0 |
| Bryan | 0 | 141 | 0 | 141 | 0 | 0 | 0 | 0 |
| Cherokee | 0 | 315 | 0 | 315 | 0 | 0 | 0 | 0 |
| Choctaw | 4,119 | 478 | 2,601 | 289 | 1,333 | 0 | 185 | 189 |
| Delaware | 4 | 246 | 4 | 244 | 0 | 2 | 0 | 0 |
| Haskell | 4,942 | 691 | 3,402 | 681 | 1,512 | 0 | 28 | 10 |
| Latimer | 5,413 | 1,110 | 3,402 | 427 | 1,897 | 0 | 114 | 683 |
| Le Flore | 15,388 | 1,694 | 9,358 | 1,137 | 3,923 | 115 | 2,107 | 442 |
| McCurtain | 45,084 | 7,700 | 19,608 | 2,630 | 6,026 | 0 | 19,450 | 5,070 |
| Nowata | 0 | 58 | 0 | 58 | 0 | 0 | 0 | 0 |
| Ottawa | 0 | 259 | 0 | 249 | 0 | 10 | 0 | 0 |
| Pittsburg | 385 | 0 | 0 | 0 | 385 | 0 | 0 | 0 |
| Pushmataha | 17,654 | 6,043 | 7,428 | 738 | 3,322 | 0 | 6,904 | 5,305 |
| Sequoyah | 0 | 463 | 0 | 463 | 0 | 0 | 0 | 0 |
| All counties | 92,989 | 19,888 | 45,803 | 8,062 | 18,398 | 127 | 28,788 | 11,699 |

[a] Includes roundwood that was delivered to nonpulpmills and then chipped and sold to pulpmills (399,000 cubic feet in 1996).

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



**Howell, Michael; Johnson, Tony 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.

In 1996, roundwood output from Oklahoma's forests totaled 113 million cubic feet. Mill byproducts generated from primary manufacturers was 42 million cubic feet. Almost all plant residue was used primarily for fuel and fiber products. Saw logs were the leading roundwood product at 54 million cubic feet; pulpwood ranked second at 40 million cubic feet. There were 73 primary processing plants operating in Oklahoma in 1996. Receipts totaled 110 million cubic feet.

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

United States
Department of Agriculture

Forest Service

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

OFFICIAL BUSINESS
Penalty for Private Use $300