

United States  
Department of  
Agriculture  
Forest Service

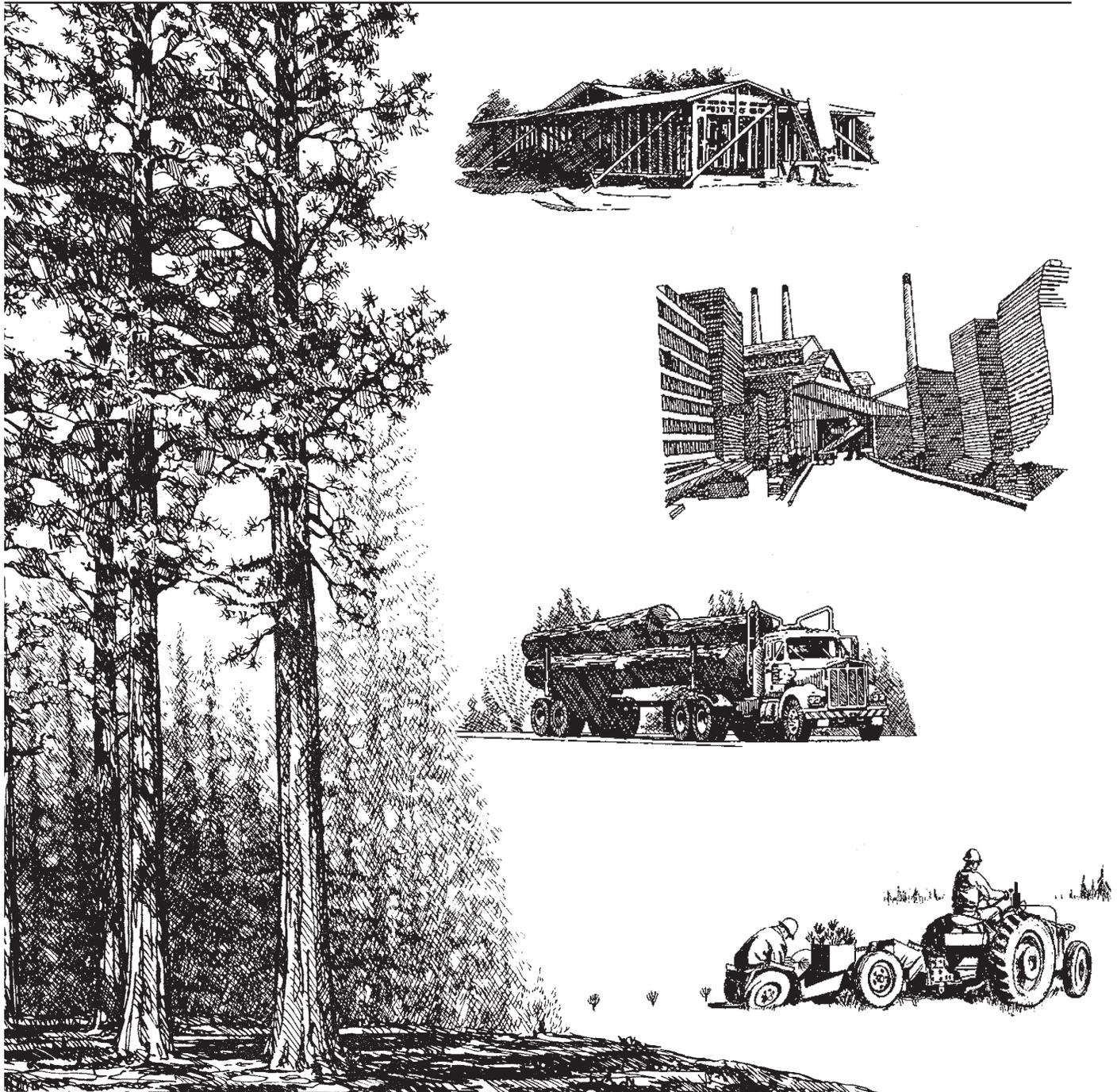


Southern  
Research Station

Resource Bulletin  
SRS-71

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

Tony G. Johnson and  
Larry Lowe



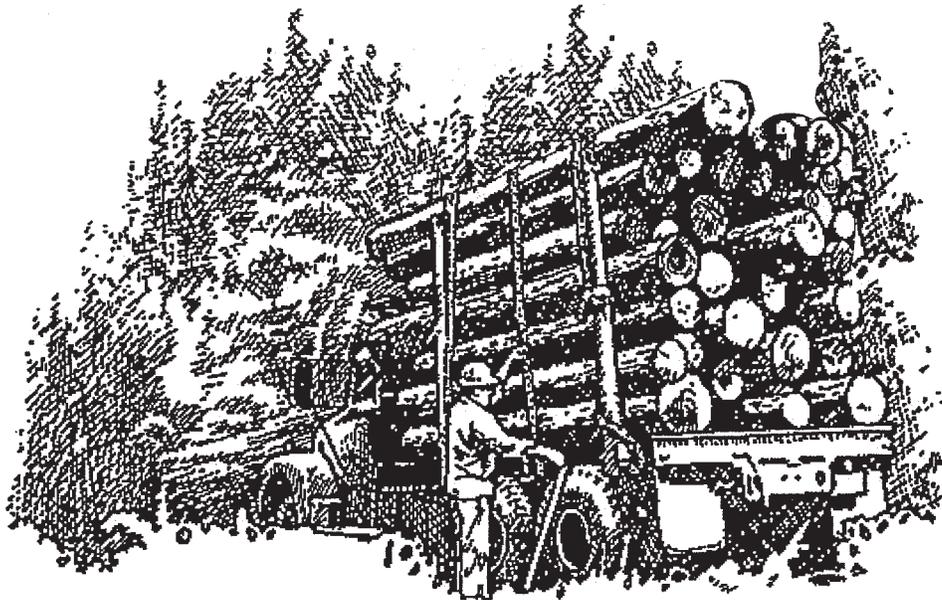
---

**The Authors:**

---

**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.

**Larry Lowe** is Chief of Forest Resource Utilization with the Kentucky Division of Forestry, Frankfort, KY 40601.



May 2002

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

## Foreword

This report contains the findings of a 1999 canvass of all primary wood-using plants in Kentucky, and presents changes in product output and residue use since 1997. It complements the Forest Inventory and Analysis (FIA) periodic inventory of volume and removals from the State's timberland. The canvass was conducted to determine the amount and source of wood receipts and annual timber product drain, by county, in 1999 and to determine interstate and cross-regional movement of industrial roundwood. Only primary wood-using mills were canvassed. Primary mills are those that process roundwood in log or bolt form or as chipped roundwood. Examples of industrial roundwood products are saw logs, pulpwood, veneer logs, poles, and logs used for composite board products. Mills producing products from residues generated at primary and secondary processors were not canvassed. Trees chipped in the woods were included in the estimate of timber drain only if they were delivered to a primary domestic manufacturer.

A 100-percent canvass of all wood processors in Kentucky was conducted in 2000 to obtain information for 1999. In addition, roundwood from out-of-State mills known to be using logs or bolts harvested from Kentucky timberland was incorporated into Kentucky production estimates. Each mill was canvassed by mail or through personal contact at plant locations. Telephone contacts followed mailed questionnaire responses when additional information or

clarification of a response was necessary. In the event of a nonresponse, data collected in previous surveys were updated using current data collected for mills of similar size, product type, and location. Surveys for all timber products other than pulpwood began in 1948, and are currently conducted every 2 years.

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

## Acknowledgments

The authors thank Eric Grey for review and comments; Dale Gormanson from the North Central Research Station for the maps; Anne Jenkins, Susan Bowman, and Donna Burnett for tables, graphs, and statistical checking; and Paul Smith, Diana Corbin, and Louise Wilde for editorial review, styling, and publication of this report.

The Southern Research Station gratefully acknowledges the cooperation and assistance provided by the Kentucky Department of Forestry in collecting mill data. Appreciation is also extended to forest industry and mill managers for providing timber products information.



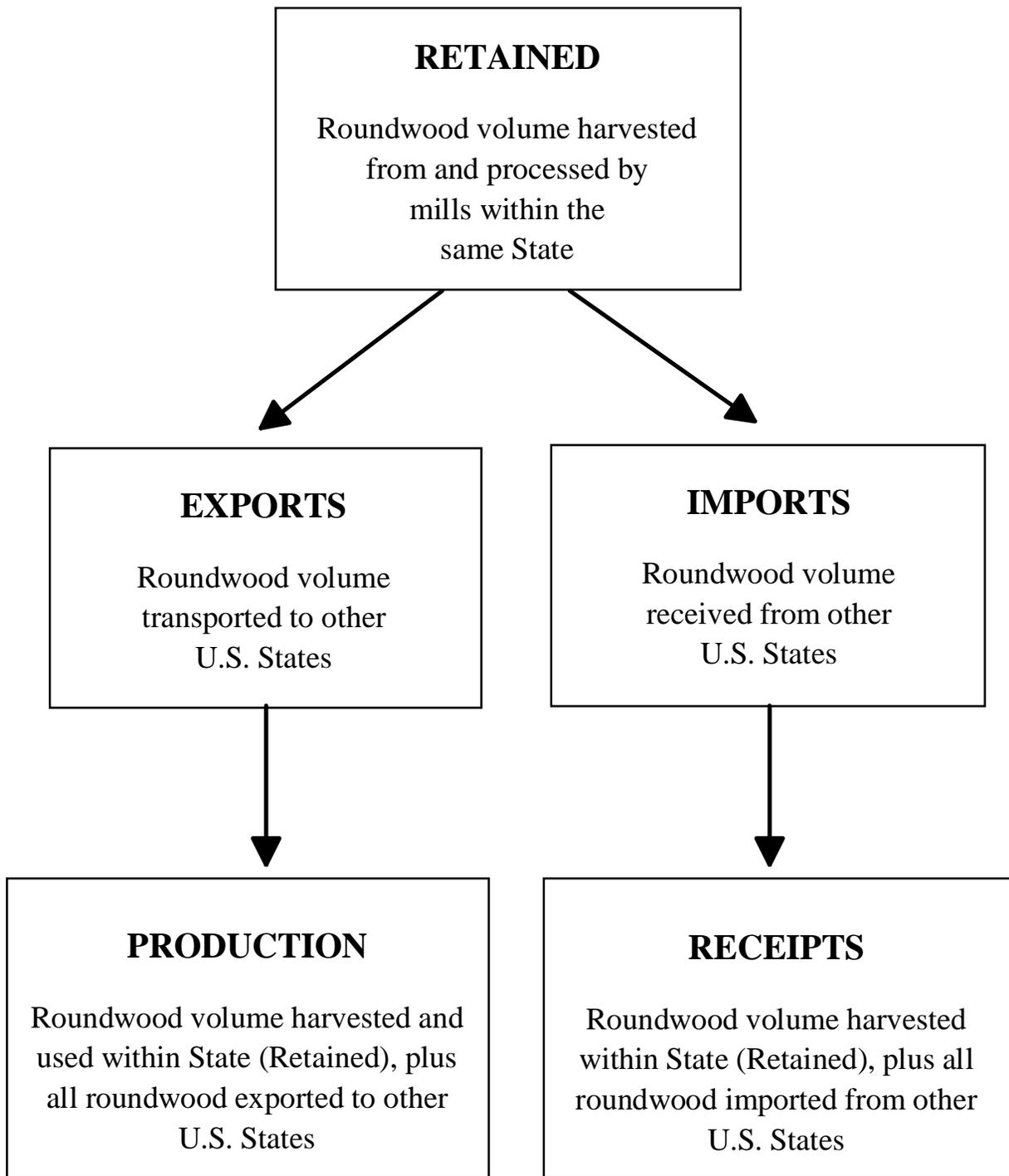


## Contents

	<i>Page</i>
Output of Industrial Timber Products .....	1
All Products .....	1
Saw Logs .....	4
Pulpwood .....	5
Veneer Logs .....	5
Other Industrial Products .....	6
Plant Byproducts .....	6
Regional Trends .....	8
Eastern Region .....	8
Northern Cumberland Region .....	8
Southern Cumberland Region .....	8
Bluegrass Region .....	8
Pennyroyal Region .....	9
Western Coalfield Region .....	9
Western Region .....	9
Total Roundwood Output .....	9
Source .....	9
Ownership .....	10
Species .....	10
References .....	11
Definition of Terms .....	12
Conversion Factors .....	15
Index of Tables .....	16
Tables 1–31 <sup>a</sup> .....	17

<sup>a</sup> 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.



**Production** = Retained + Exports

**Receipts** = Retained + Imports

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

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

Tony G. Johnson and Larry Lowe

## Output of Industrial Timber Products

Note: Certain terms used in this report—retained, export, import, production, and receipts—have specialized meanings unique to Forest Inventory and Analysis Units across the country that deal with timber products output (fig. 1).

### All Products

- Between 1997 and 1999, the combined industrial timber products output (TPO) from roundwood and plant byproducts increased by 12 percent from 293 to 328 million cubic feet.
- Timber products output from roundwood was up 25 million cubic feet, or 13 percent, to 220 million cubic feet, while output of plant byproducts increased 10 million cubic feet to 108 million cubic feet.

- Output of hardwood roundwood products increased 14 percent to 209 million cubic feet, while output of softwood roundwood products was up 3 percent to 11 million cubic feet (fig. 2).
- Figures 3 and 4 display softwood and hardwood county-level intensity of roundwood production for all industrial products across Kentucky. The data are depicted in cubic feet produced per acre of census land area. Counties with the highest production intensity are depicted in the darker shades. For hardwoods the darkest shade represents more than 20 cubic feet of production per acre, while for softwoods the darkest shade represents more than 1.5 cubic feet per acre.

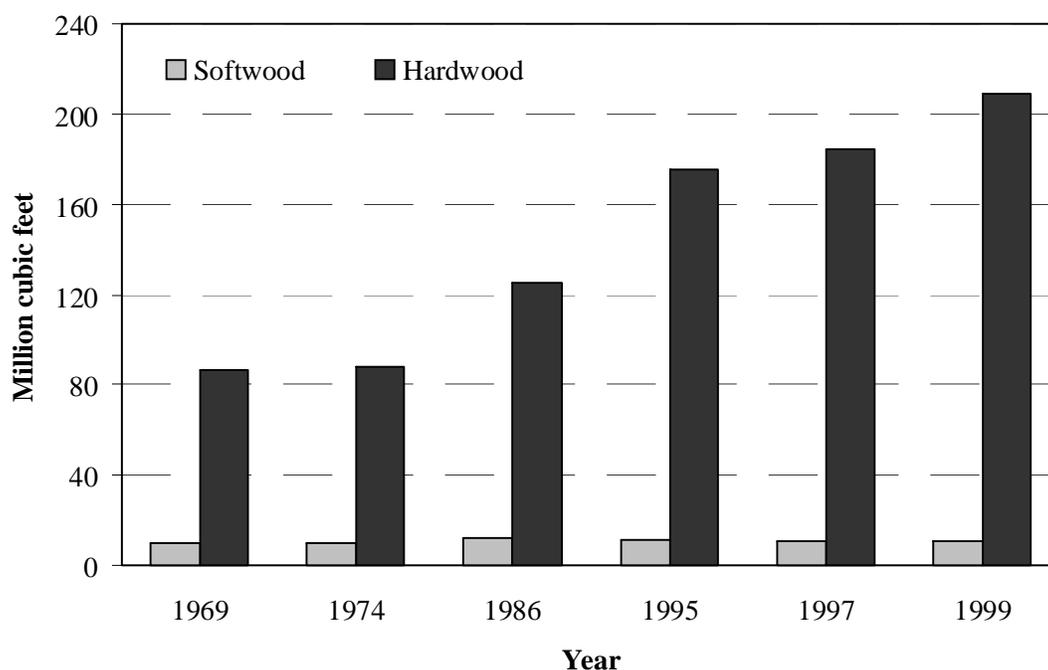


Figure 2—Roundwood production for all products by species group and year (see page 11 for references for individual years).

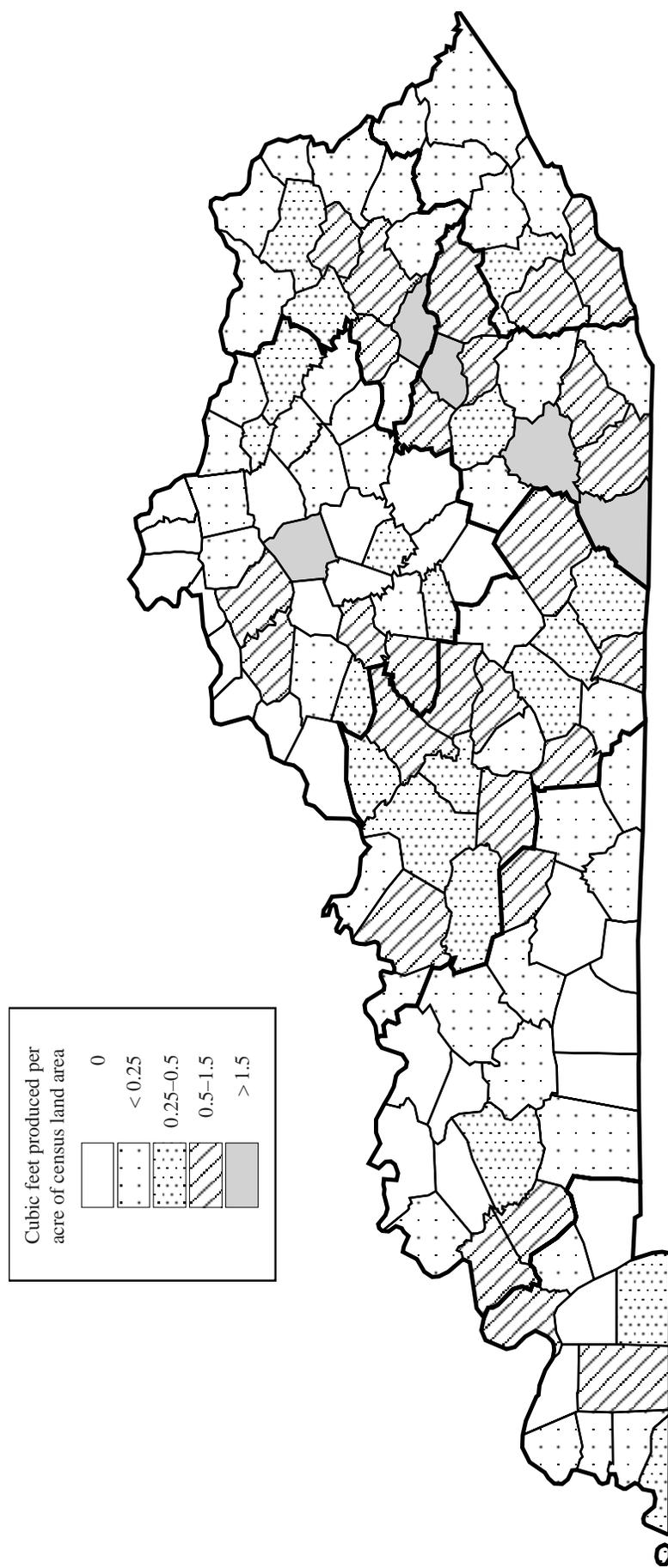


Figure 3—Intensity of roundwood softwood output for all industrial products in Kentucky by county, 1999.

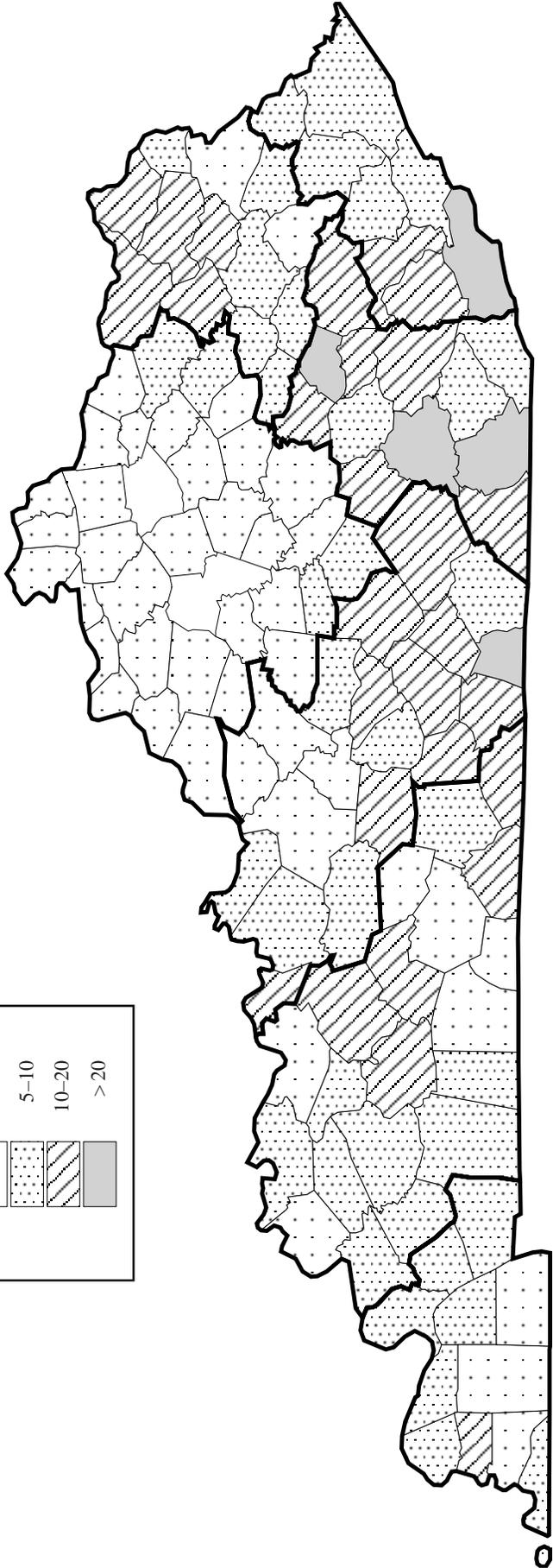
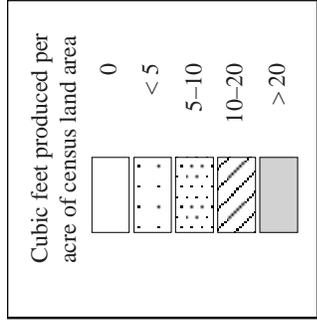


Figure 4—Intensity of roundwood hardwood output for all industrial products in Kentucky by county, 1999.

- Saw logs and pulpwood were the principal roundwood products in 1999. Combined output of these products totaled 198 million cubic feet and accounted for 90 percent of Kentucky's total roundwood output (fig. 5).
- Total receipts at Kentucky mills, which included roundwood harvested and retained in the State, as well as roundwood imported from other States, increased 10 percent to 237 million cubic feet. At the same time, the number of primary roundwood-using plants in Kentucky declined from 391 in 1997 to 348 in 1999.

**Saw Logs**

- Saw logs accounted for 81 percent of the State's total roundwood products. Output of hardwood saw logs increased 11 percent to 173 million cubic feet (1.1 billion board feet, International ¼-inch rule), while that of softwood saw logs increased 3 percent to 6 million cubic feet (32 million board feet, International ¼-inch rule) (fig. 6).

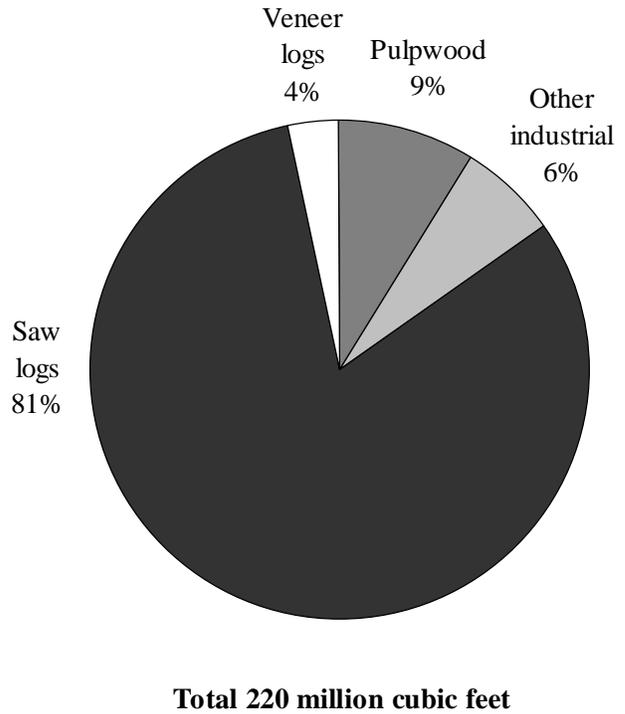


Figure 5—Roundwood production by type of product, 1999.

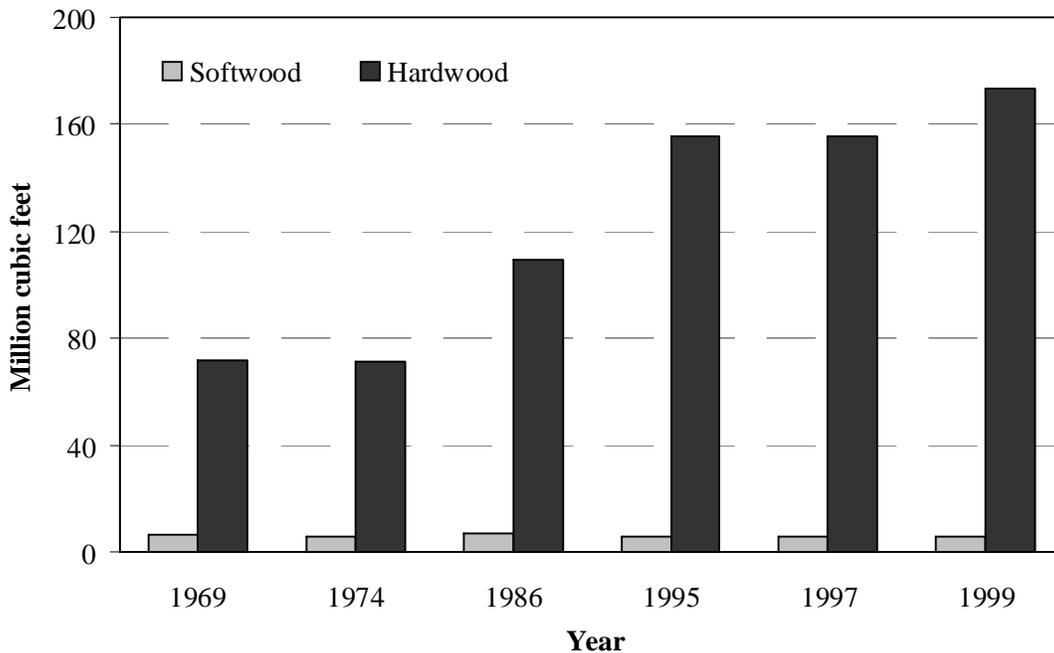


Figure 6—Roundwood saw-log production by species group and year (see page 11 for references for individual years).

- In 1999, Kentucky had 330 sawmills, a net loss of 35 mills since 1997. Total saw-log receipts were up 18 million cubic feet to 183 million cubic feet. Hardwood saw-log receipts increased by 11 percent, to 176 million cubic feet, while those of softwoods increased 3 percent to 7 million cubic feet. Of the operating mills, 38 percent had receipts of less than 1 million board feet, 42 percent had receipts of between 1 and 4.99 million board feet, while 19 percent had receipts of 5 million board feet or greater. Those 63 mills accounted for 62 percent of total saw-log receipts.
- Kentucky retained 95 percent of its saw-log production for domestic manufacture; saw-log imports exceeded exports by 4 million cubic feet in 1999.

### Pulpwood

- Total pulpwood production, including chipped roundwood, increased 3 million cubic feet to 19 million cubic feet and accounted for 9 percent of the State's total roundwood TPO. Hardwood output was up 19 percent to 17 million cubic feet (228 thousand cords); softwood output was down 8 percent to 2 million cubic feet (30 thousand cords) (fig. 7).

- Two pulpmill facilities were operating and receiving roundwood in Kentucky in 1999, the same as in 1997. Total pulpwood receipts for these mills increased 2 percent, or 833 thousand cubic feet, to 37 million cubic feet, accounting for 16 percent of total receipts for all mills.
- Eighty percent of roundwood cut for pulpwood was retained for processing at Kentucky pulpmills. Roundwood pulpwood accounted for 21 percent of total known exports and 61 percent of total imports. Roundwood pulpwood imports amounted to 22 million cubic feet, while exports amounted to 4 million cubic feet, making the State a net importer of pulpwood.

### Veneer Logs

- Output of veneer logs was up 49 percent in 1999 and totaled 8 million cubic feet (47 million board feet, International ¼-inch rule), 99 percent of which was hardwood (fig. 8). Veneer-log production accounted for 4 percent of the State's total roundwood TPO volume.

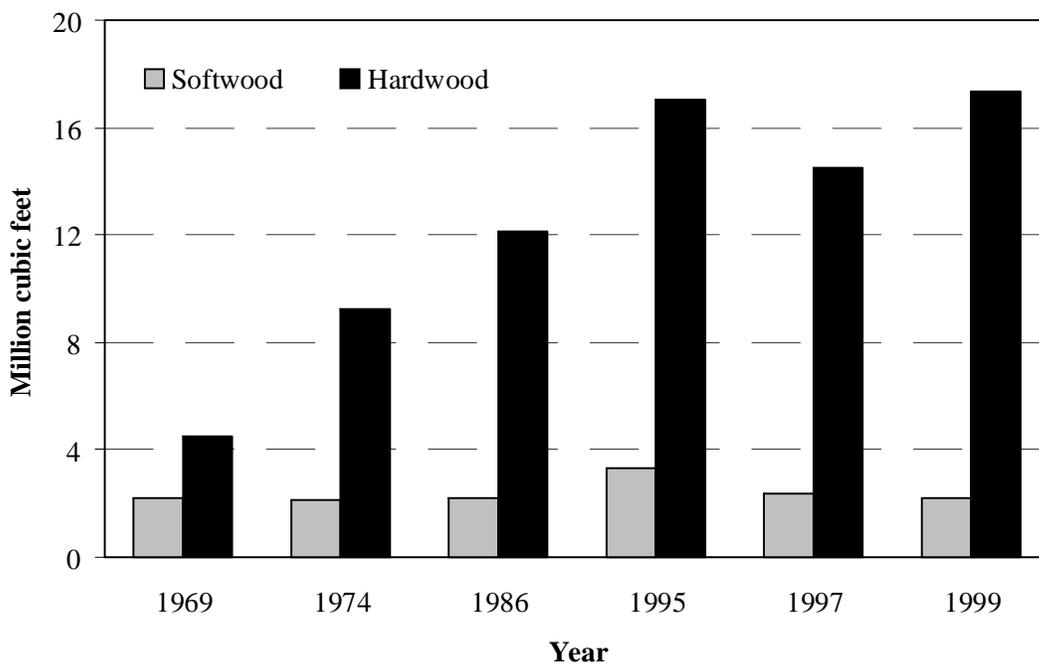


Figure 7—Roundwood pulpwood production by species group and year (see page 11 for references for individual years).

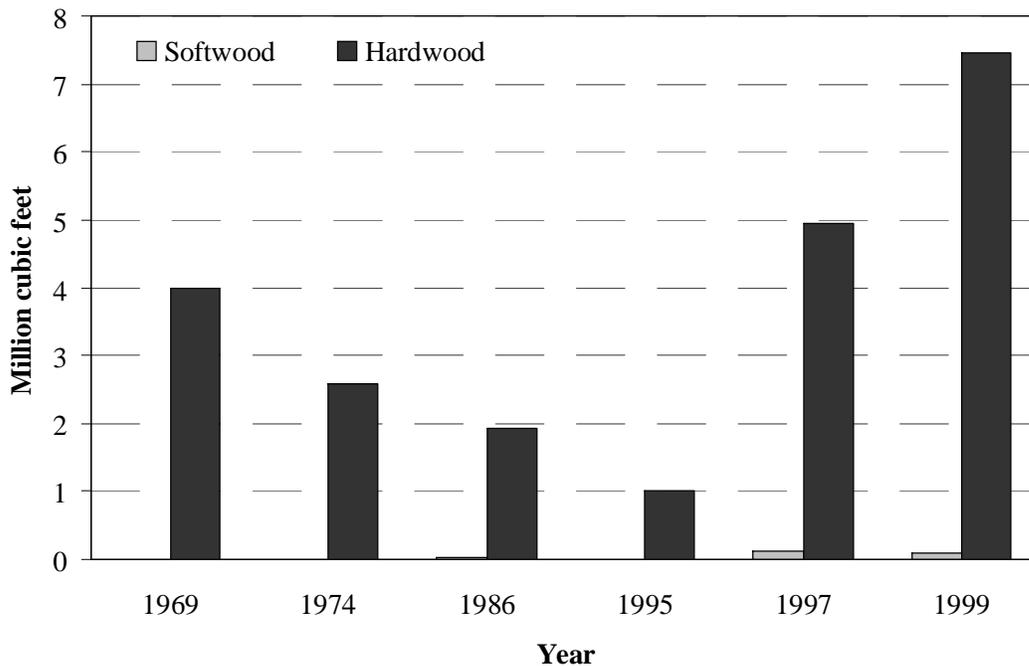


Figure 8—Roundwood veneer-log production by species group and year (see page 11 for references for individual years).

- Three veneer mills operated in Kentucky in 1999. Total receipts of veneer logs increased 65 percent from 3 million cubic feet to 5 million cubic feet.
- Kentucky retained 56 percent of its veneer-log production for processing at domestic veneer mills. Imports amounted to 1 million cubic feet, and exports totaled 3 million cubic feet, making the State a net exporter of roundwood veneer logs.

#### Other Industrial Products

- Roundwood harvested for other industrial uses, such as composite panels, poles, posts, mulch, firewood, and all other industrial products, totaled 14 million cubic feet (fig. 9) and accounted for 6 percent of the State's total timber products output. Hardwood made up 82 percent of the other industrial product volume.
- Between 1997 and 1999, the number of plants producing other industrial products dropped from 19 to 12. Combined receipts of other industrial products from softwood and hardwood totaled 12 million cubic feet.

- Kentucky was a net exporter of roundwood used for other industrial products, with exports totaling 2.7 million cubic feet, while imports amounted to 354 thousand cubic feet.

#### Plant Byproducts

- In 1999, processing of primary products in Kentucky mills generated 115 million cubic feet of wood and bark residues. Coarse residues from all primary products amounted to 50 million cubic feet, and bark volume totaled 27 million cubic feet. Sawdust and shavings made up 34 percent of total residues, or 38 million cubic feet (fig. 10).
- Ninety-five percent of the wood and bark residues were used for a product, with 33 percent of the residues used for fiber products (fig. 11). Thirty-seven million cubic feet, or 73 percent, of the coarse residues were used to manufacture fiber products. Most of the bark was used for other miscellaneous products or industrial fuel, and 52 percent of the sawdust and shavings was used for fuel.

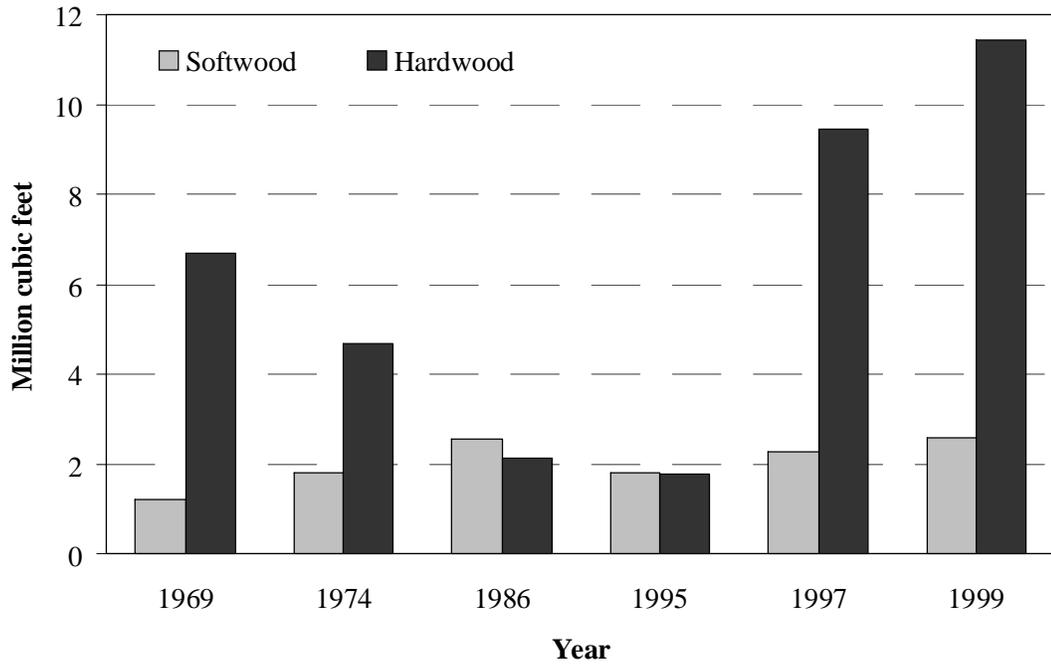


Figure 9—Roundwood production for other industrial by species group and year (see page 11 for references for individual years).

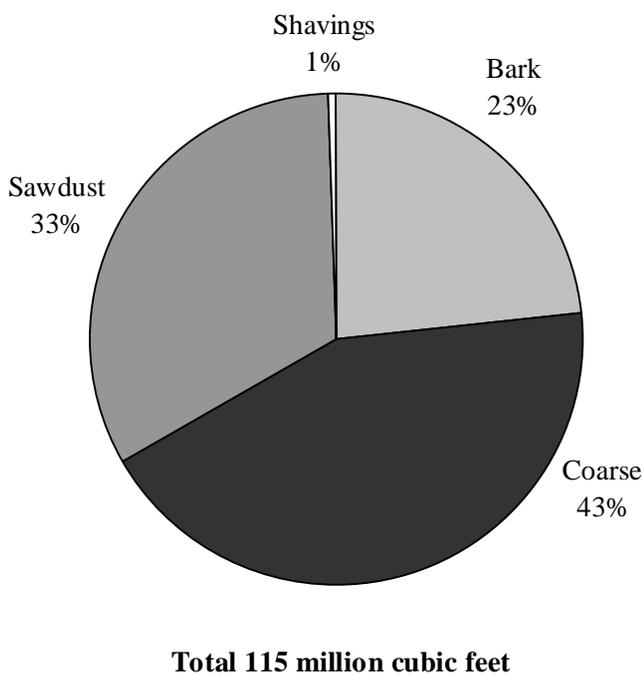


Figure 10—Primary mill residue by residue type, 1999.

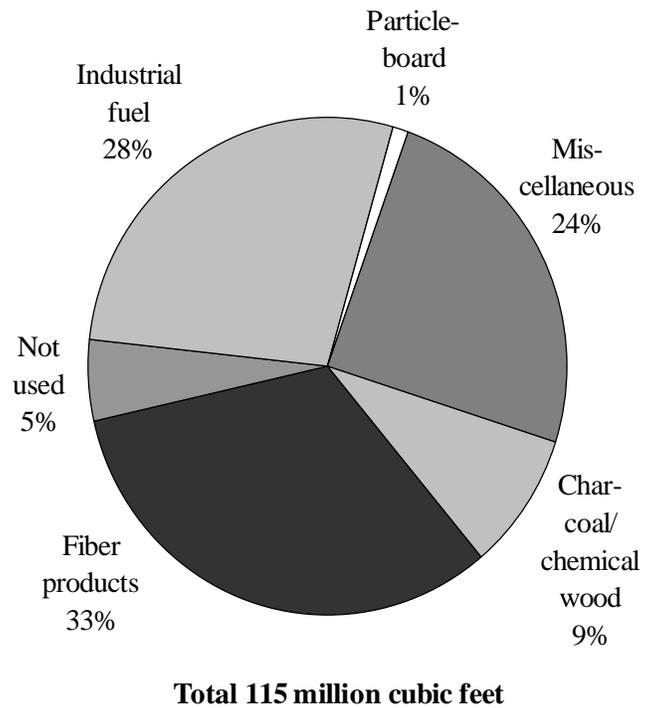


Figure 11—Disposal of residue by product, 1999.

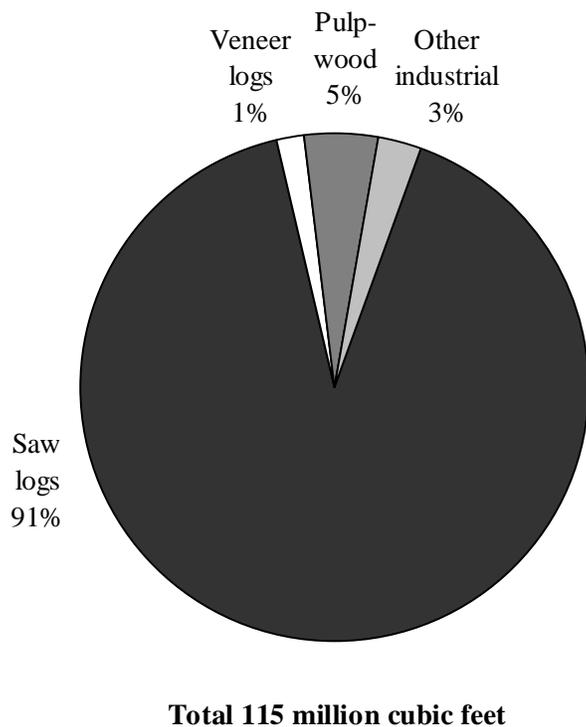


Figure 12—Primary mill residue produced by roundwood type, 1999.

- The processing of saw logs at sawmills generated 104 million cubic feet of mill residues, accounting for 91 percent of the total residues produced (fig. 12).

### Regional Trends

- Output of industrial roundwood products increased across all regions of Kentucky except the Bluegrass and Pennyroyal regions, which had 8- and 2-percent declines, respectively. The largest output change occurred in the Southern Cumberland region (a 40-percent increase) and the Eastern region (a 27-percent increase).

#### Eastern Region

- Roundwood output from the Eastern region totaled 24 million cubic feet, an increase of 5 million cubic feet since 1997.
- Saw logs accounted for 64 percent of the region's TPO and 9 percent of the State's roundwood saw-log output. Other industrial products accounted for another 28 percent of the volume for the region.

- In the Eastern region, 17 primary wood-using plants were operating during 1999: 16 sawmills and 1 other miscellaneous mill. These mills processed 11 percent of the State's total roundwood output.

#### Northern Cumberland Region

- More than 25 million cubic feet of roundwood were produced in the Northern Cumberland region, a 12-percent increase since 1997.
- Saw-log production of 22 million cubic feet accounted for 88 percent of the region's total roundwood output. Production of pulpwood at 3 million cubic feet accounted for 11 percent of the region's total roundwood output.
- The 49 mills operating in the Northern Cumberland region in 1999 included 46 sawmills and 3 other miscellaneous mills. These mills accounted for 11 percent of the State's total roundwood output.

#### Southern Cumberland Region

- Roundwood output from the Southern Cumberland region totaled 50 million cubic feet, up 40 percent from 1997. This region accounted for 23 percent of the State's total roundwood TPO.
- Saw-log production of 39 million cubic feet accounted for 77 percent of the region's total TPO; other industrial products accounted for 11 percent. Veneer production of 3.7 million cubic feet accounted for another 7 percent of the region's total roundwood output.
- The 44 primary wood-using plants operating in the Southern Cumberland region included 39 sawmills, 2 plywood or veneer mills, and 3 other miscellaneous mills.

#### Bluegrass Region

- Roundwood output from the Bluegrass region totaled 11 million cubic feet, down 8 percent. Roundwood production from this region accounted for 5 percent of the State's total roundwood TPO.
- Saw-log production of 9 million cubic feet accounted for 88 percent of the region's total roundwood output. Production of veneer and other industrial products accounted for the remainder of the region's total roundwood output.

- In the Bluegrass region, 25 primary wood-using plants were operating during 1999: 24 sawmills and 1 veneer mill.

### Pennyroyal Region

- Roundwood output from the Pennyroyal region declined 2 percent and totaled 51 million cubic feet. This region accounted for 23 percent of the State's total roundwood output.
- Saw-log production of 46 million cubic feet accounted for 91 percent of the region's total roundwood output and 26 percent of the State's roundwood saw-log output. Pulpwood production of 2.1 million cubic feet accounted for 4 percent of the region's total TPO.
- In the Pennyroyal region, 119 primary wood-using plants were operating during 1999: 113 sawmills, 1 pulpmill, and 5 other miscellaneous mills.

### Western Coalfield Region

- Roundwood output from the Western Coalfield region increased 11 percent to 44 million cubic feet.
- Saw-log production of 37 million cubic feet accounted for 84 percent of the region's total roundwood output, and 21 percent of the State's total saw-log output. At 7 million cubic feet, production of pulpwood accounted for 15 percent of the region's total roundwood output.
- In the Western Coalfield region, 66 primary wood-using plants were operating during 1999: 65 sawmills and 1 other miscellaneous mill. These mills processed 20 percent of the State's total roundwood output.

### Western Region

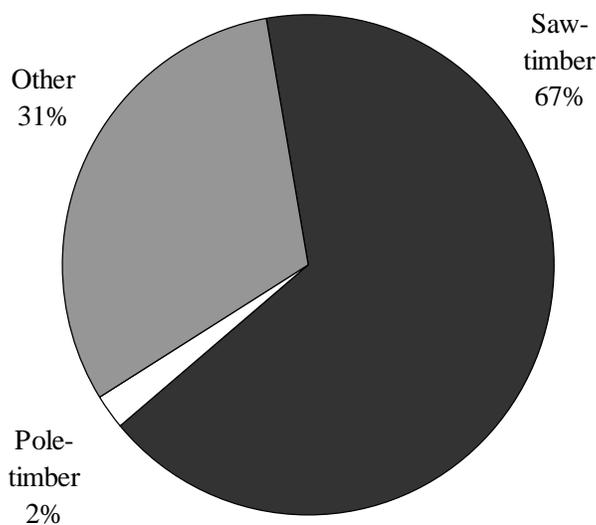
- Roundwood output from the Western region totaled 15 million cubic feet and accounted for 7 percent of the State's total roundwood output.
- Saw-log production of 10 million cubic feet accounted for 64 percent of the region's total roundwood output. At 5 million cubic feet, pulpwood production accounted for the remainder of the region's total TPO.
- In the Western region, 28 primary wood-using plants were operating during 1999: 27 sawmills and 1 pulpmill.

## Total Roundwood Output

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

### Source

- In addition to the 220 million cubic feet of roundwood output for industrial roundwood, an estimated 7 million cubic feet were harvested for domestic fuelwood, bringing Kentucky's total roundwood output to 227 million cubic feet.
- Sixty-nine 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 71 million cubic feet, or 31 percent of total roundwood output (fig. 13).



**Total 227 million cubic feet**

Figure 13—Roundwood output by source, 1999.

**Ownership**

- An estimated 201 million cubic feet, or 88 percent, of the total roundwood output in 1999 came from nonindustrial private forest (NIPF) lands. Public lands contributed 24 million cubic feet, or 11 percent of the output. Forest industry lands made up the remaining 1 percent, or 2 million cubic feet (fig. 14).

**Species**

- The red oak and white oak groups combined accounted for 106 million cubic feet, or 49 percent of total hardwood output (fig. 15). Yellow-poplar and hickory accounted for 13 and 10 percent, respectively, of total hardwood output. Other yellow pines provided more volume than any other softwood species group, accounting for 76 percent of the total softwood output (fig. 16). The loblolly and shortleaf pine types accounted for 16 percent of the softwood output.

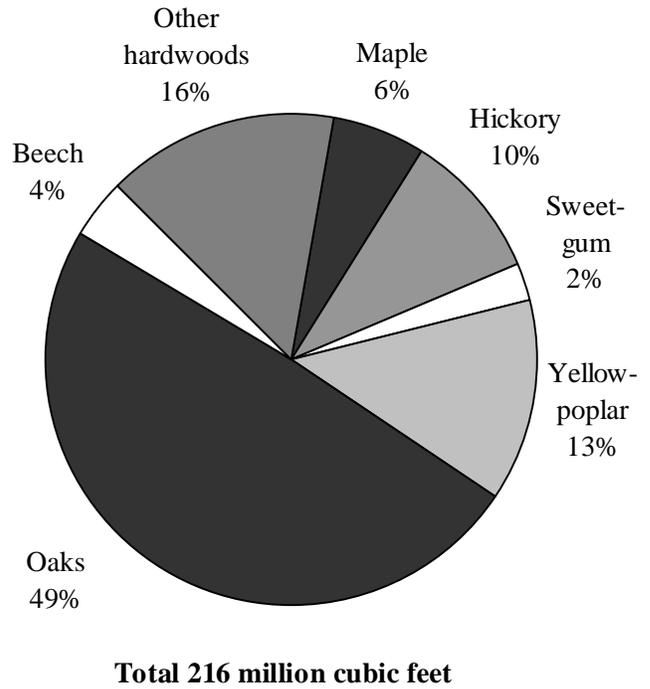


Figure 15—Roundwood output by hardwood species group, 1999.

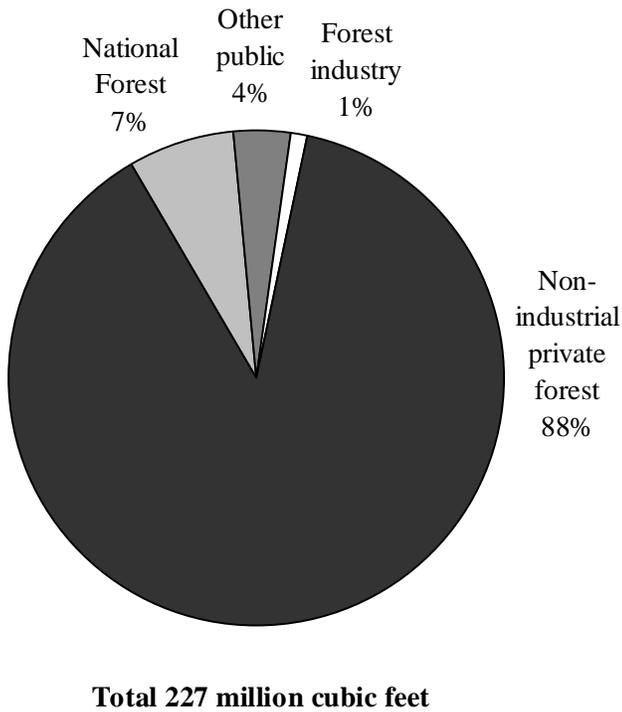


Figure 14—Roundwood output by ownership, 1999.

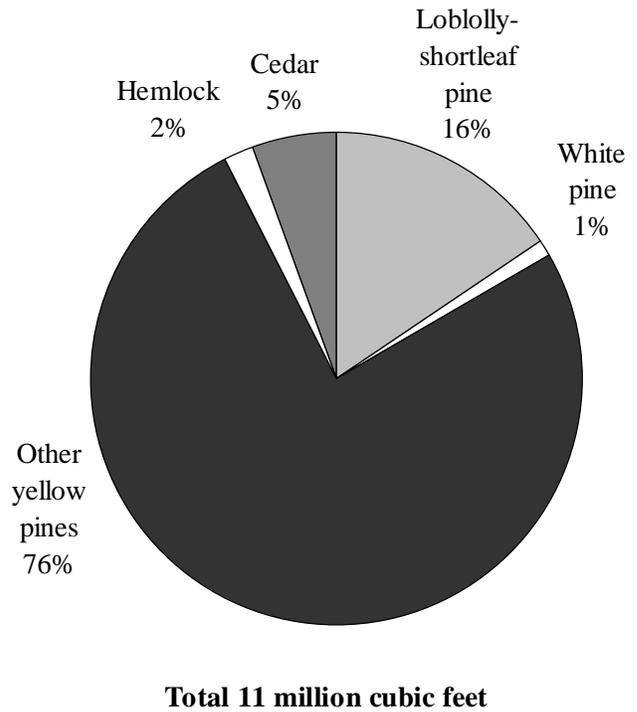


Figure 16—Roundwood output by softwood species group, 1999.

## References

- Alerich, Carol L.** 1990. Forest statistics for Kentucky—1975 and 1988. Resour. Bull. NE-117. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 295 p. [1986].
- Bones, James T.; Lohr, Chauncey J.** 1972. Primary wood-product industries of Kentucky—1969. Resour. Bull. NE-24. Upper Darby, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 38 p. [1969].
- Bones, James T.; Lohr, Chauncey J.** 1977. The timber industries of Kentucky. Resour. Bull. NE-50. Upper Darby, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 26 p. [1974].
- Ganser, David A.** 1968. The timber resources of Kentucky. Resour. Bull. NE-9. Upper Darby, PA: U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station. 97 p. [1963].
- Hutchinson, O. Keith; Winter, Robert K.** 1953. Kentucky's forest resources and industries. Forest Resour. Rep. 7. Washington, DC: U.S. Department of Agriculture, Forest Service, Central States Forest Experiment Station. 56 p. [1948].
- Johnson, Tony G.; Jenkins, Anne; Lowe, Larry.** 1997. Kentucky's timber industry—an assessment of timber product output and use, 1995. Resour. Bull. SRS-20. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 33 p. [1995].
- Stratton, Daniel; Lowe, Larry.** 1999. Kentucky's timber industry—an assessment of timber product output and use, 1997. Resour. Bull. SRS-40. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 40 p. [1997].

## Definition of Terms

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

**Byproducts.** Primary wood products, e.g., pulp chips, animal bedding, and fuelwood, recycled from mill residues.

**Composite products.** Roundwood products manufactured into chips, wafers, strands, flakes, shavings, or sawdust and then reconstituted into a variety of panel and engineered lumber products.

**Consumption.** The quantity of a commodity, such as pulpwood, utilized by a particular mill or group of mills.

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

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

**Fiber products.** Byproducts used in the manufacture of pulp, paper, paperboard, and composite products, such as waferboard or chipboard.

**Fuelwood production.** The volume of roundwood harvested to produce some form of energy, e.g., heat and steam, in residential, industrial, or institutional settings.

**Growing-stock removals.** The growing-stock volume removed from poletimber and sawtimber trees in the timberland inventory. (Note: Includes volume removed for roundwood products, logging residues, and other removals.)

**Growing-stock trees.** Living trees of commercial species classified as sawtimber, poletimber, saplings, and seedlings. Growing-stock trees must contain at least one 12-foot or two 8-foot logs in the saw-log portion, currently or potentially (if too small to qualify). The log(s) must meet dimension and merchantability standards and have, currently or potentially, one-third of the gross board-foot volume in sound wood.

**Growing-stock volume.** The cubic-foot volume of sound wood in growing-stock trees at least 5.0 inches d.b.h. from a 1-foot stump to a minimum 4.0-inch top d.o.b. of the central stem.

**Hardwoods.** Dicotyledonous trees, usually broadleaf and deciduous.

*Soft hardwoods.* Hardwood species with an average specific gravity of 0.50 or less, such as gums, yellow-poplar, cottonwoods, red maple, basswoods, and willows.

*Hard hardwoods.* Hardwood species with an average specific gravity greater than 0.50, such as oaks, hard maples, hickories, and beech.

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

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

**Industrial roundwood products.** Any primary use of the main stem of a tree, such as saw logs, pulpwood, and veneer logs, intended to be processed into primary wood products, such as lumber, wood pulp, and sheathing, at primary wood-using mills.

**International ¼-inch rule.** A log rule or formula for estimating the board-foot volume of logs, allowing ½-inch of taper for each 4-foot length. The rule appears in a number of forms that allow for kerf. In the form used by FIA, a ¼-inch of kerf is assumed. This rule is used as the USDA Forest Service standard log rule in the Eastern United States.

**Log.** A primary forest product harvested in long, primarily 8-, 12-, and 16-foot lengths.

**Logging residues.** The unused merchantable portion of growing-stock trees cut or destroyed during logging operations.

**Merchantable portion.** That portion of live trees 5.0 inches d.b.h. and larger between a 1-foot stump and a minimum 4.0-inch top d.o.b. on the central stem. That portion of primary forks from the point of occurrence to a minimum 4.0-inch top d.o.b. is included.

**Merchantable volume.** Solid-wood volume in the merchantable portion of live trees.

**Noncommercial species.** Tree species of typically small size, poor form, or inferior quality that normally do not develop into trees suitable for industrial wood products.

**Nonforest land.** Land that has never supported forests and land formerly forested where timber production is precluded by development for other uses.

**Nongrowing-stock sources.** The net volume removed from the nongrowing-stock portions of poletimber and sawtimber trees (stumps, tops, limbs, cull sections of central stem) and from any portion of a rough, rotten, sapling, dead, or nonforest tree.

**Other forest land.** Forest land other than timberland and productive reserved forest land. It includes available and reserved forest land that is incapable of producing annually 20 cubic feet per acre of industrial wood under natural conditions because of adverse site conditions such as sterile soils, dry climate, poor drainage, high elevation, steepness, or rockiness.

**Other products.** A miscellaneous category of roundwood products, e.g., cooperage, excelsior, shingles, and mill residue byproducts (charcoal, bedding, mulch, etc.).

**Other removals.** The growing-stock volume of trees removed from the inventory by cultural operations such as timber stand improvement, land clearing, and other changes in land use, resulting in the removal of the trees from timberland.

**Other sources.** (See: Nongrowing-stock sources.)

**Ownership.** The property owned by one ownership unit, including all parcels of land in the United States.

*National forest land.* Federal land that has been legally designated as national forests or purchase units, and other land under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III land.

*Forest industry land.* Land owned by companies or individuals operating primary wood-using plants.

*Nonindustrial private forest (NIPF) land.* Privately owned land excluding forest industry land.

Corporate. Owned by corporations, including incorporated farm ownerships.

Individual. All lands owned by individuals, including farm operators.

*Other public.* An ownership class that includes all public lands except national forests.

Miscellaneous Federal land. Federal land other than national forests.

State, county, and municipal land. Land owned by States, counties, and local public agencies or municipalities, or land leased to these governmental units for 50 years or more.

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

*Coarse residues.* Material, such as slabs, edgings, trim, veneer cores and ends, which is suitable for chipping.

*Fine residues.* Material, such as sawdust, shavings, and veneer chippings, which is not suitable for chipping.

*Plant byproducts.* Residues (coarse or fine) used in the further manufacture of industrial products for consumer use or as fuel.

*Unused plant residues.* Residues (coarse or fine) that are not used for any product, including fuel.

**Posts, poles, and pilings.** Roundwood products milled (cut or peeled) into standard sizes (lengths and circumferences) to be put in the ground to provide vertical and lateral support in buildings, foundations, utility lines, and fences. May also include nonindustrial (unmilled) products.

**Poletimber-size trees.** Softwoods 5.0 to 8.9 inches d.b.h. and hardwoods 5.0 to 10.9 inches d.b.h.

**Primary wood-using plants.** Industries that convert roundwood products (saw logs, veneer logs, pulpwood, etc.) into primary wood products, such as lumber, veneer or sheathing, and wood pulp.

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

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

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

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

**Rotten trees.** Live trees of commercial species not containing at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of rot or missing sections, and with less than one-third of the gross board-foot tree volume in sound material.

**Rough trees.** Live trees of commercial species not containing at least one 12-foot saw log, or two noncontiguous saw logs, each 8 feet or longer, now or prospectively, primarily because of roughness, poor form, splits, and cracks, and with less than one-third of the gross board-foot tree volume in sound material; and live trees of noncommercial species.

**Roundwood (roundwood logs).** Logs, bolts, or other round sections cut from trees for industrial manufacture or consumer uses.

**Roundwood chipped.** Any timber cut primarily for industrial manufacture, delivered to nonpulp mills, chipped, and then sold to pulpmills for use as fiber. Includes tops, jump sections, whole trees, and pulpwood sticks.

**Roundwood products.** Any primary product, such as lumber, poles, pilings, pulp, or fuelwood that is produced from roundwood.

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

**Salvable dead trees.** Standing or downed dead trees that were formerly growing stock and considered merchantable. Trees must be at least 5.0 inches d.b.h. to qualify.

**Saplings.** Live trees 1.0 to 5.0 inches d.b.h.

**Saw log.** A roundwood product, usually 8 feet in length or longer, processed into a variety of sawn products such as lumber, cants, pallets, railroad ties, and timbers.

**Saw-log portion.** The part of the bole of sawtimber trees between a 1-foot stump and the saw-log top.

**Saw-log top.** The point on the bole of sawtimber trees above which a conventional saw log cannot be produced. The minimum saw-log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

**Sawtimber-size trees.** Softwoods 9.0 inches d.b.h. and larger and hardwoods 11.0 inches d.b.h. and larger.

**Sawtimber volume.** Growing-stock volume in the saw-log portion of sawtimber-sized trees in board feet (International ¼-inch rule).

**Seedlings.** Trees less than 1.0 inch d.b.h. and greater than 1 foot tall for hardwoods, greater than 6 inches tall for softwood, and greater than 0.5 inch in diameter at ground level for longleaf pine.

**Select red oaks.** A group of several red oak species composed of cherrybark, Shumard, and northern red oaks. Other red oak species are included in the other red oaks group.

**Select white oaks.** A group of several white oak species composed of white, swamp chestnut, swamp white, chinkapin, Durand, and bur oaks. Other white oak species are included in the other white oaks group.

**Softwoods.** Coniferous trees, usually evergreen, having leaves that are needles or scalelike.

**Standard cord.** A unit of measure applied to roundwood, usually bolts or split wood. It is a stack of wood 4 feet high, 4 feet wide, and 8 feet long encompassing 128 cubic feet of wood, bark, and air space. This usually translates to approximately 75.0 to 81.0 cubic feet of solid wood for pulpwood, because pulpwood is more uniform.

**Standard unit.** A unit measure applied to roundwood timber products. Board feet (International ¼-inch rule) is the standard unit used for saw logs and veneer; cords are used for pulpwood, composite panel, and fuelwood; hundred pieces for poles; thousand pieces for posts; and thousand cubic feet for all other miscellaneous forest products.

**Timberland.** Forest land capable of producing 20 cubic feet of industrial wood per acre per year and not withdrawn from timber utilization.

**Timber products.** Roundwood products and byproducts.

**Timber products output.** The total volume of roundwood products from all sources plus the volume of byproducts

recovered from mill residues (equals roundwood product drain).

**Timber removals.** The total volume of trees removed from the timberland inventory by harvesting, cultural operations such as stand improvement, land clearing, or changes in land use. (Note: Includes roundwood products, logging residues, and other removals.)

**Tree.** Woody plant 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 sawtimber 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<sup>a</sup>**

---

#### **Saw logs**

Softwood	0.18282 cubic foot = 1 board foot 5.47 board feet = 1 cubic foot
Hardwood	0.16393 cubic foot = 1 board foot 6.10 board feet = 1 cubic foot

#### **Veneer logs**

Softwood	0.16129 cubic foot = 1 board foot 6.20 board feet = 1 cubic foot
Hardwood	0.16000 cubic foot = 1 board foot 6.25 board feet = 1 cubic foot

#### **Pulpwood<sup>b</sup>**

Softwood	73.3 cubic feet per cord
Hardwood	76.1 cubic feet per cord

---

<sup>a</sup> Conversion factors vary with stem size (d.b.h.) and species. The factors shown are for trees of average diameters removed in Kentucky during the most recent survey period.

<sup>b</sup> Cubic feet of solid wood per cord.

## Index of Tables

1. Output of industrial products by product and species group, Kentucky, 1997 and 1999
2. Roundwood receipts by product and species group, Kentucky, 1997 and 1999
3. Number of primary wood-using plants by industry, Kentucky, 1948–1999
4. Roundwood receipts by sawmill size, Kentucky, 1997 and 1999
5. Roundwood receipts by species and type of mill, Kentucky, 1999
6. Industrial roundwood movement by year and species group, Kentucky, 1997 and 1999
7. Industrial roundwood movement by product and species group, Kentucky, 1999
8. Saw-log volume by destination, source, and species group, Kentucky, 1999
9. Veneer volume by destination, source, and species group, Kentucky, 1999
10. Pulpwood volume by destination, source, and species group, Kentucky, 1999
11. Other industrial volume by destination, source, and species group, Kentucky, 1999
12. Primary mill residue volume by roundwood type, species group, and residue type, Kentucky, 1999
13. Disposal of residue at primary wood-using plants by product, species group, and type of residue, Kentucky, 1997 and 1999
14. Roundwood timber products output by product and species group, Eastern Region of Kentucky, 1997 and 1999
15. Roundwood timber products output by county, product, and species group, Eastern Region of Kentucky, 1999
16. Roundwood timber products output by product and species group, Northern Cumberland Region of Kentucky, 1997 and 1999
17. Roundwood timber products output by county, product, and species group, Northern Cumberland Region of Kentucky, 1999
18. Roundwood timber products output by product and species group, Southern Cumberland Region of Kentucky, 1997 and 1999
19. Roundwood timber products output by county, product, and species group, Southern Cumberland Region of Kentucky, 1999
20. Roundwood timber products output by product and species group, Bluegrass Region of Kentucky, 1997 and 1999
21. Roundwood timber products output by county, product, and species group, Bluegrass Region of Kentucky, 1999
22. Roundwood timber products output by product and species group, Pennyroyal Region of Kentucky, 1997 and 1999
23. Roundwood timber products output by county, product, and species group, Pennyroyal Region of Kentucky, 1999
24. Roundwood timber products output by product and species group, Western Coalfield Region of Kentucky, 1997 and 1999
25. Roundwood timber products output by county, product, and species group, Western Coalfield Region of Kentucky, 1999
26. Roundwood timber products output by product and species group, Western Region of Kentucky, 1997 and 1999
27. Roundwood timber products output by county, product, and species group, Western Region of Kentucky, 1999
28. Total roundwood output by product, species group, and source of material, Kentucky, 1999
29. Total roundwood output by species group, survey region, and ownership class, Kentucky, 1999
30. Total roundwood output by species group, detailed species group, and product, Kentucky, 1999
31. Total roundwood output by species group, detailed species group, and ownership class, Kentucky, 1999

**Table 1—Output of industrial products by product and species group, Kentucky, 1997 and 1999**

Product and species group	Year		Change	Percent change
	1997	1999		
<i>Thousand cubic feet</i>				
<b>Saw logs</b>				
Softwood	5,668	5,855	187	3.3
Hardwood	155,297	173,019	17,722	11.4
Total	160,965	178,874	17,909	11.1
<b>Veneer logs</b>				
Softwood	126	88	-38	-30.2
Hardwood	4,954	7,472	2,518	50.8
Total	5,080	7,560	2,480	48.8
<b>Pulpwood<sup>a</sup></b>				
Softwood	2,359	2,162	-197	-8.4
Hardwood	14,502	17,322	2,820	19.4
Total	16,861	19,484	2,623	15.6
<b>Other industrial</b>				
Softwood	2,263	2,575	312	13.8
Hardwood	9,436	11,425	1,989	21.1
Total	11,699	14,000	2,301	19.7
<b>All industrial</b>				
Softwood	10,416	10,680	264	2.5
Hardwood	184,189	209,238	25,049	13.6
Total	194,605	219,918	25,313	13.0
<b>Byproduct output</b>				
Softwood	3,837	3,797	-40	-1.0
Hardwood	94,400	104,668	10,268	10.9
Total	98,237	108,465	10,228	10.4
<b>Total output</b>				
Softwood	14,253	14,477	224	1.6
Hardwood	278,589	313,906	35,317	12.7
Total	292,842	328,383	35,541	12.1

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (589,000 cubic feet in 1997 and 1,156,000 cubic feet in 1999).

**Table 2—Roundwood receipts by product and species group, Kentucky, 1997 and 1999**

Product and species group	Year		Change	Percent change
	1997	1999		
<i>Thousand cubic feet</i>				
<b>Saw logs</b>				
Softwood	6,455	6,642	187	2.9
Hardwood	158,567	176,185	17,618	11.1
Total	165,022	182,827	17,805	10.8
<b>Veneer logs</b>				
Softwood	38	9	-29	-76.3
Hardwood	3,047	5,082	2,035	66.8
Total	3,085	5,091	2,006	65.0
<b>Pulpwood<sup>a</sup></b>				
Softwood	4,139	2,960	-1,179	-28.5
Hardwood	32,524	34,536	2,012	6.2
Total	36,663	37,496	833	2.3
<b>Other industrial</b>				
Softwood	1,807	1,465	-342	-18.9
Hardwood	9,448	10,204	756	8.0
Total	11,255	11,669	414	3.7
<b>Total output</b>				
Softwood	12,439	11,076	-1,363	-11.0
Hardwood	203,586	226,007	22,421	11.0
Total	216,025	237,083	21,058	9.7

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (712,000 cubic feet in 1997 and 1,215,000 cubic feet in 1999).

**Table 3—Number of primary wood-using plants by industry, Kentucky, 1948–1999**

Industry	Year							
	1948	1964	1969	1974	1986	1995	1997	1999
Sawmills	2,168	620	538	388	408	376	365	330
Veneer or plywood mills	6	3	4	4	3	3	4	3
Pulpmills	0	0	2	2	2	2	2	2
Composite panel mills	0	0	0	0	0	1	1	1
Other mills	90	30	45	26	22	19	19	12
All plants	2,264	653	589	420	435	401	391	348

**Table 4—Roundwood receipts by sawmill size, Kentucky, 1997 and 1999**

Sawmill size class <sup>a</sup>	1997			1999		
	Number of mills	Thousand board feet	Percent of volume	Number of mills	Thousand board feet	Percent of volume
<i>Million board feet</i>						
< 1.0	165	41,012	4	127	38,412	4
1.0 - 4.99	138	340,190	34	140	378,742	34
5.0 - 9.99	40	276,380	28	39	256,467	23
> 10	22	344,361	34	24	436,966	39
Total	365	1,001,943	100	330	1,110,587	100

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

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

Species	Type of mill					
	All mills	Sawmills	Veneer mills		Pulpmills <sup>a</sup>	Other mills
			Plywood	Other veneer		
<i>Thousand cubic feet</i>						
<b>Softwood</b>						
Yellow pine	3,422	3,242	0	0	NA	180
White pine	1,024	1,018	0	0	NA	6
Cedar	2,783	2,001	0	0	NA	782
Cypress	181	181	0	0	NA	0
Other softwood	706	200	0	9	NA	497
Unclassified	2,960	0	0	0	2,960	0
Total softwoods	11,076	6,642	0	9	2,960	1,465
<b>Hardwood</b>						
Blackgum and tupelo	561	561	0	0	NA	0
Soft maple	3,941	3,387	0	0	NA	554
Sweetgum	654	654	0	0	NA	0
Yellow-poplar	52,055	39,749	14	4,249	NA	8,043
Other soft hardwood	3,193	3,001	0	8	NA	184
Hickory	6,621	6,613	0	8	NA	0
Red oak	52,662	52,128	3	492	NA	39
White oak	38,735	38,651	3	42	NA	39
Other hard hardwood	33,049	31,441	0	263	NA	1,345
Unclassified	34,536	0	0	0	34,536	0
Total hardwoods	226,007	176,185	20	5,062	34,536	10,204
<b>All species</b>	237,083	182,827	20	5,071	37,496	11,669

NA = not applicable.

<sup>a</sup> Collected only by softwood and hardwood and includes roundwood chipped.**Table 6—Industrial roundwood movement by year and species group, Kentucky, 1997 and 1999**

Year	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
<b>Softwood</b>					
1997	10,416	1,751	8,665	3,774	12,439
1999	10,680	2,326	8,354	2,722	11,076
<b>Hardwood</b>					
1997	184,189	15,241	168,948	34,638	203,586
1999	209,238	16,505	192,733	33,274	226,007
<b>All species</b>					
1997	194,605	16,992	177,613	38,412	216,025
1999	219,918	18,831	201,087	35,996	237,083

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

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
<b>Saw logs</b>					
Softwood	5,855	79	5,776	866	6,642
Hardwood	173,019	8,733	164,286	11,899	176,185
Total	178,874	8,812	170,062	12,765	182,827
<b>Veneer logs</b>					
Softwood	88	88	0	9	9
Hardwood	7,472	3,273	4,199	883	5,082
Total	7,560	3,361	4,199	892	5,091
<b>Pulpwood<sup>a</sup></b>					
Softwood	2,162	695	1,467	1,493	2,960
Hardwood	17,322	3,278	14,044	20,492	34,536
Total	19,484	3,973	15,511	21,985	37,496
<b>Other industrial</b>					
Softwood	2,575	1,464	1,111	354	1,465
Hardwood	11,425	1,221	10,204	0	10,204
Total	14,000	2,685	11,315	354	11,669
<b>All products</b>					
Softwood	10,680	2,326	8,354	2,722	11,076
Hardwood	209,238	16,505	192,733	33,274	226,007
Total	219,918	18,831	201,087	35,996	237,083

<sup>a</sup> Includes roundwood chipped.

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

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
<b>Kentucky (retained)</b>	170,062	5,776	164,286
<b>Exports to:</b>			
Indiana	2,745	2	2,743
Missouri	619	0	619
Ohio	1,277	17	1,260
Tennessee	1,991	60	1,931
Virginia	578	0	578
West Virginia	1,602	0	1,602
Total	8,812	79	8,733
<b>Imports from:</b>			
Arkansas	1	0	1
Illinois	1,254	14	1,240
Indiana	1,120	0	1,120
Missouri	114	0	114
Ohio	394	0	394
Tennessee	9,668	852	8,816
Virginia	139	0	139
West Virginia	75	0	75
Total	12,765	866	11,899

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

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
<b>Kentucky (retained)</b>	4,199	0	4,199
<b>Exports to:</b>			
Georgia	2,066	88	1,978
Indiana	761	0	761
Missouri	93	0	93
North Carolina	125	0	125
Ohio	115	0	115
Virginia	146	0	146
Wisconsin	55	0	55
Total	3,361	88	3,273
<b>Imports from:</b>			
California	9	9	0
Indiana	46	0	46
Michigan	30	0	30
New York	3	0	3
Pennsylvania	304	0	304
Tennessee	217	0	217
Virginia	283	0	283
Total	892	9	883

**Table 10—Pulpwood volume by destination, source, and species group, Kentucky, 1999**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
<b>Kentucky (retained)</b>	15,511	1,467	14,044
<b>Exports to:</b>			
Alabama	350	0	350
Ohio	1,540	219	1,321
South Carolina	29	0	29
Tennessee	726	289	437
Virginia	1,328	187	1,141
Total	3,973	695	3,278
<b>Imports from:</b>			
Georgia	2,802	0	2,802
North Carolina	3,976	0	3,976
Tennessee	14,071	1,493	12,578
Virginia	1,136	0	1,136
Total	21,985	1,493	20,492

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

**Table 11—Other industrial volume by destination, source, and species group, Kentucky, 1999<sup>a</sup>**

Destination and source	All species	Species group	
		Softwood	Hardwood
<i>Thousand cubic feet</i>			
<b>Kentucky (retained)</b>	11,315	1,111	10,204
<b>Exports to:</b>			
Ohio	10	10	0
Tennessee	1,637	1,384	253
Virginia	1,038	70	968
Total	2,685	1,464	1,221
<b>Imports from:</b>			
Indiana	6	6	0
Missouri	32	32	0
Ohio	6	6	0
Tennessee	220	220	0
Virginia	90	90	0
Total	354	354	0

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

**Table 12—Primary mill residue volume by roundwood type, species group, and residue type, Kentucky, 1999**

Roundwood type and species group	All types	Residue type			
		Bark	Coarse	Sawdust	Shavings
<i>Thousand cubic feet</i>					
<b>Saw logs</b>					
Softwood	3,406	442	1,786	1,170	8
Hardwood	100,627	18,032	46,367	35,645	583
Total	104,033	18,474	48,153	36,815	591
<b>Veneer logs</b>					
Softwood	5	1	3	1	0
Hardwood	1,861	543	870	448	0
Total	1,866	544	873	449	0
<b>Pulpwood</b>					
Softwood	343	343	0	0	0
Hardwood	5,175	5,175	0	0	0
Total	5,518	5,518	0	0	0
<b>Other industrial<sup>a</sup></b>					
Softwood	427	108	228	91	0
Hardwood	2,782	2,150	454	178	0
Total	3,209	2,258	682	269	0
<b>Total</b>					
Softwood	4,181	894	2,017	1,262	8
Hardwood	110,445	25,900	47,691	36,271	583
Total	114,626	26,794	49,708	37,533	591

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

**Table 13—Disposal of residue at primary wood-using plants by product, species group, and type of residue, Kentucky, 1997 and 1999**

Product and species group	All types		Bark		Coarse		Sawdust		Shavings	
	1997	1999	1997	1999	1997	1999	1997	1999	1997	1999
<i>Thousand cubic feet</i>										
<b>Fiber products</b>										
Softwood	566	484	2	0	558	484	6	0	0	0
Hardwood	35,236	36,708	39	0	33,883	36,018	1,314	690	0	0
Total	35,802	37,192	41	0	34,441	36,502	1,320	690	0	0
<b>Particleboard</b>										
Softwood	5	43	0	5	5	20	0	18	0	0
Hardwood	814	1,266	103	50	251	837	460	379	0	0
Total	819	1,309	103	55	256	857	460	397	0	0
<b>Charcoal/chemical wood</b>										
Softwood	349	239	21	5	84	21	244	213	0	0
Hardwood	8,889	10,087	396	177	1,736	2,108	6,757	7,802	0	0
Total	9,238	10,326	417	182	1,820	2,129	7,001	8,015	0	0
<b>Sawn products</b>										
Softwood	2	0	1	0	1	0	0	0	0	0
Hardwood	44	0	17	0	27	0	0	0	0	0
Total	46	0	18	0	28	0	0	0	0	0
<b>Fuel</b>										
Softwood	965	696	504	368	232	203	228	125	1	0
Hardwood	25,376	31,171	7,177	7,569	2,354	3,757	15,752	19,700	93	145
Total	26,341	31,867	7,681	7,937	2,586	3,960	15,980	19,825	94	145
<b>Miscellaneous</b>										
Softwood	1,950	2,335	479	469	889	1,082	579	776	3	8
Hardwood	24,041	25,436	14,366	15,936	2,608	3,054	6,173	6,011	894	435
Total	25,991	27,771	14,845	16,405	3,497	4,136	6,752	6,787	897	443
<b>Not used</b>										
Softwood	416	384	69	47	179	207	143	130	25	0
Hardwood	4,654	5,777	845	2,168	1,868	1,917	1,924	1,689	17	3
Total	5,070	6,161	914	2,215	2,047	2,124	2,067	1,819	42	3
<b>All products</b>										
Softwood	4,253	4,181	1,076	894	1,948	2,017	1,200	1,262	29	8
Hardwood	99,054	110,445	22,943	25,900	42,727	47,691	32,380	36,271	1,004	583
Total	103,307	114,626	24,019	26,794	44,675	49,708	33,580	37,533	1,033	591

**Table 14—Roundwood timber products output by product and species group, Eastern Region of Kentucky, 1997 and 1999**

Product and species group	Year		Change	Percent change
	1997	1999		
<i>Thousand cubic feet</i>				
<b>Saw logs</b>				
Softwood	175	162	-13	-7.4
Hardwood	12,524	15,146	2,622	20.9
Total	12,699	15,308	2,609	20.5
<b>Veneer logs</b>				
Softwood	0	0	0	--
Hardwood	448	1,538	1,090	243.3
Total	448	1,538	1,090	243.3
<b>Pulpwood<sup>a</sup></b>				
Softwood	52	47	-5	-9.6
Hardwood	184	305	121	65.8
Total	236	352	116	49.2
<b>Other industrial</b>				
Softwood	0	334	334	--
Hardwood	5,265	6,232	967	18.4
Total	5,265	6,566	1,301	24.7
<b>All industrial</b>				
Softwood	227	543	316	139.2
Hardwood	18,421	23,221	4,800	26.1
Total	18,648	23,764	5,116	27.4

-- = negligible.

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (4,000 cubic feet in 1997 and 60,000 cubic feet in 1999).

**Table 15—Roundwood timber products output by county, product, and species group, Eastern Region of Kentucky, 1999**

County	All products		Saw logs		Veneer logs		Pulpwood <sup>a</sup>		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
	<i>Thousand cubic feet</i>									
Floyd	35	1,606	18	1,034	0	211	0	10	17	351
Harlan	208	7,183	2	4,090	0	125	47	245	159	2,723
Knott	18	1,303	1	952	0	0	0	0	17	351
Leslie	150	3,566	84	1,808	0	422	0	20	66	1,316
Letcher	8	1,859	8	1,859	0	0	0	0	0	0
Martin	34	757	34	757	0	0	0	0	0	0
Perry	59	2,378	15	838	0	633	0	30	44	877
Pike	31	4,569	0	3,808	0	147	0	0	31	614
All counties	543	23,221	162	15,146	0	1,538	47	305	334	6,232

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (60,000 cubic feet in 1999).

**Table 16—Roundwood timber products output by product and species group, Northern Cumberland Region of Kentucky, 1997 and 1999**

Product and species group	Year		Change	Percent change
	1997	1999		
<i>Thousand cubic feet</i>				
<b>Saw logs</b>				
Softwood	755	736	-19	-2.5
Hardwood	18,220	21,618	3,398	18.6
Total	18,975	22,354	3,379	17.8
<b>Veneer logs</b>				
Softwood	0	0	0	--
Hardwood	279	133	-146	-52.3
Total	279	133	-146	-52.3
<b>Pulpwood<sup>a</sup></b>				
Softwood	229	209	-20	-8.7
Hardwood	2,530	2,489	-41	-1.6
Total	2,759	2,698	-61	-2.2
<b>Other industrial</b>				
Softwood	552	107	-445	-80.6
Hardwood	137	87	-50	-36.5
Total	689	194	-495	-71.8
<b>All industrial</b>				
Softwood	1,536	1,052	-484	-31.5
Hardwood	21,166	24,327	3,161	14.9
Total	22,702	25,379	2,677	11.8

-- = negligible.

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (115,000 cubic feet in 1997 and 51,000 cubic feet in 1999).

**Table 17—Roundwood timber products output by county, product, and species group, Northern Cumberland Region of Kentucky, 1999**

County	All products		Saw logs		Veneer logs		Pulpwood <sup>a</sup>		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
	<i>Thousand cubic feet</i>									
Boyd	4	801	0	595	0	0	4	206	0	0
Carter	80	3,020	0	2,413	0	0	65	607	15	0
Elliott	112	1,786	11	1,341	0	0	51	445	50	0
Greenup	41	2,510	0	1,684	0	0	31	826	10	0
Johnson	14	898	14	898	0	0	0	0	0	0
Lawrence	55	1,120	0	800	0	110	55	210	0	0
Lewis	58	5,327	55	5,142	0	0	3	185	0	0
Magoffin	25	771	24	771	0	0	0	0	1	0
Menifee	66	1,249	63	1,249	0	0	0	0	3	0
Morgan	140	2,230	131	2,230	0	0	0	0	9	0
Powell	9	1,078	9	1,055	0	23	0	0	0	0
Rowan	49	2,291	33	2,194	0	0	0	10	16	87
Wolfe	399	1,246	396	1,246	0	0	0	0	3	0
All counties	1,052	24,327	736	21,618	0	133	209	2,489	107	87

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (51,000 cubic feet in 1999).

**Table 18—Roundwood timber products output by product and species group, Southern Cumberland Region of Kentucky, 1997 and 1999**

Product and species group	Year		Change	Percent change
	1997	1999		
<i>Thousand cubic feet</i>				
<b>Saw logs</b>				
Softwood	1,447	1,629	182	12.6
Hardwood	25,438	37,230	11,792	46.4
Total	26,885	38,859	11,974	44.5
<b>Veneer logs</b>				
Softwood	38	0	-38	-100.0
Hardwood	1,880	3,690	1,810	96.3
Total	1,918	3,690	1,772	92.4
<b>Pulpwood<sup>a</sup></b>				
Softwood	465	438	-27	-5.8
Hardwood	1,952	2,163	211	10.8
Total	2,417	2,601	184	7.6
<b>Other industrial</b>				
Softwood	895	1,667	772	86.3
Hardwood	3,877	3,676	-201	-5.2
Total	4,772	5,343	571	12.0
<b>All industrial</b>				
Softwood	2,845	3,734	889	31.2
Hardwood	33,147	46,759	13,612	41.1
Total	35,992	50,493	14,501	40.3

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (218,000 cubic feet in 1997 and 120,000 cubic feet in 1999).

**Table 19—Roundwood timber products output by county, product, and species group, Southern Cumberland Region of Kentucky, 1999**

County	All products		Saw logs		Veneer logs		Pulpwood <sup>a</sup>		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
	<i>Thousand cubic feet</i>									
Bell	13	1,334	13	1,113	0	211	0	10	0	0
Breathitt	180	3,923	114	1,723	0	844	0	40	66	1,316
Clay	14	3,363	2	2,916	0	427	0	20	12	0
Estill	243	2,525	243	2,480	0	45	0	0	0	0
Jackson	81	2,094	55	1,652	0	422	0	20	26	0
Knox	160	2,304	5	1,813	0	462	148	29	7	0
Laurel	583	11,825	323	7,373	0	741	117	1,867	143	1,844
Lee	244	4,861	231	4,598	0	0	0	0	13	263
McCreary	1,730	3,819	265	3,278	0	142	72	146	1,393	253
Owsley	77	1,704	77	1,483	0	211	0	10	0	0
Rockcastle	23	2,865	16	2,865	0	0	0	0	7	0
Whitley	386	6,142	285	5,936	0	185	101	21	0	0
All counties	3,734	46,759	1,629	37,230	0	3,690	438	2,163	1,667	3,676

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (120,000 cubic feet in 1999).

**Table 20—Roundwood timber products output by product and species group, Bluegrass Region of Kentucky, 1997 and 1999**

Product and species group	Year		Change	Percent change
	1997	1999		
<i>Thousand cubic feet</i>				
<b>Saw logs</b>				
Softwood	1,261	1,421	160	12.7
Hardwood	8,761	7,921	-840	-9.6
Total	10,022	9,342	-680	-6.8
<b>Veneer logs</b>				
Softwood	0	0	0	--
Hardwood	1,109	873	-236	-21.3
Total	1,109	873	-236	-21.3
<b>Pulpwood<sup>a</sup></b>				
Softwood	6	0	-6	-100.0
Hardwood	1	0	-1	-100.0
Total	7	0	-7	-100.0
<b>Other industrial</b>				
Softwood	427	100	-327	-76.6
Hardwood	5	324	319	6,380
Total	432	424	-8	-1.9
<b>All industrial</b>				
Softwood	1,694	1,521	-173	-10.2
Hardwood	9,876	9,118	-758	-7.7
Total	11,570	10,639	-931	-8.0

-- = negligible.

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (7,000 cubic feet in 1997 and 0 cubic feet in 1999).

**Table 21—Roundwood timber products output by county, product, and species group, Bluegrass Region of Kentucky, 1999**

County	All products		Saw logs		Veneer logs		Pulpwood <sup>a</sup>		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
<i>Thousand cubic feet</i>										
Anderson	171	11	171	11	0	0	0	0	0	0
Bath	24	1,251	24	1,251	0	0	0	0	0	0
Boone	0	63	0	23	0	40	0	0	0	0
Bourbon	36	56	36	0	0	56	0	0	0	0
Boyle	50	723	0	723	0	0	0	0	50	0
Bracken	23	281	23	281	0	0	0	0	0	0
Campbell	0	51	0	51	0	0	0	0	0	0
Carroll	0	181	0	116	0	65	0	0	0	0
Clark	10	77	10	17	0	60	0	0	0	0
Fayette	0	45	0	0	0	45	0	0	0	0
Fleming	71	1,151	71	1,151	0	0	0	0	0	0
Gallatin	0	48	0	48	0	0	0	0	0	0
Garrard	0	150	0	150	0	0	0	0	0	0
Grant	41	62	41	62	0	0	0	0	0	0
Henry	212	104	212	62	0	42	0	0	0	0
Jefferson	0	819	0	514	0	305	0	0	0	0
Jessamine	38	45	38	0	0	45	0	0	0	0
Kenton	0	12	0	12	0	0	0	0	0	0
Lincoln	0	1,246	0	1,246	0	0	0	0	0	0
Madison	0	271	0	215	0	56	0	0	0	0
Mason	22	405	22	401	0	4	0	0	0	0
Mercer	38	28	38	28	0	0	0	0	0	0
Montgomery	14	215	14	192	0	23	0	0	0	0
Nicholas	17	52	17	52	0	0	0	0	0	0
Oldham	0	389	0	389	0	0	0	0	0	0
Owen	123	107	123	65	0	42	0	0	0	0
Pendleton	28	63	28	63	0	0	0	0	0	0
Robertson	25	52	25	52	0	0	0	0	0	0
Scott	298	44	298	16	0	28	0	0	0	0
Shelby	41	125	41	125	0	0	0	0	0	0
Spencer	59	31	59	11	0	20	0	0	0	0
Trimble	0	133	0	91	0	42	0	0	0	0
Washington	180	827	130	503	0	0	0	0	50	324
All counties	1,521	9,118	1,421	7,921	0	873	0	0	100	324

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (0 cubic feet in 1999).

**Table 22—Roundwood timber products output by product and species group, Pennyroyal Region of Kentucky, 1997 and 1999**

Product and species group	Year		Change	Percent change
	1997	1999		
<i>Thousand cubic feet</i>				
<b>Saw logs</b>				
Softwood	1,429	1,684	255	17.8
Hardwood	47,898	44,482	-3,416	-7.1
Total	49,327	46,166	-3,161	-6.4
<b>Veneer logs</b>				
Softwood	88	88	0	--
Hardwood	965	965	0	--
Total	1,053	1,053	0	--
<b>Pulpwood<sup>a</sup></b>				
Softwood	84	142	58	69.0
Hardwood	1,068	1,990	922	86.3
Total	1,152	2,132	980	85.1
<b>Other industrial</b>				
Softwood	371	367	-4	-1.1
Hardwood	0	972	972	--
Total	371	1,339	968	260.9
<b>All industrial</b>				
Softwood	1,972	2,281	309	15.7
Hardwood	49,931	48,409	-1,522	-3.0
Total	51,903	50,690	-1,213	-2.3

-- = negligible.

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (13,000 cubic feet in 1997 and 548,000 cubic feet in 1999).

**Table 23—Roundwood timber products output by county, product, and species group, Pennyroyal Region of Kentucky, 1999**

County	All products		Saw logs		Veneer logs		Pulpwood <sup>a</sup>		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
<i>Thousand cubic feet</i>										
Adair	95	3,410	49	3,314	0	0	0	96	46	0
Breckinridge	223	3,407	223	2,564	0	55	0	788	0	0
Bullitt	88	694	88	672	0	22	0	0	0	0
Casey	22	3,358	22	3,262	0	0	0	96	0	0
Clinton	184	3,677	96	2,485	88	888	0	304	0	0
Cumberland	48	3,343	48	3,327	0	0	0	16	0	0
Grayson	157	2,555	15	2,186	0	0	142	369	0	0
Green	29	1,291	29	1,286	0	0	0	5	0	0
Hancock	6	1,320	6	1,320	0	0	0	0	0	0
Hardin	120	1,698	120	1,698	0	0	0	0	0	0
Hart	179	2,766	179	2,754	0	0	0	12	0	0
Larue	51	587	1	587	0	0	0	0	50	0
Marion	146	1,873	77	1,549	0	0	0	0	69	324
Meade	7	1,617	7	1,617	0	0	0	0	0	0
Metcalfe	124	3,257	64	3,241	0	0	0	16	60	0
Nelson	167	1,171	167	847	0	0	0	0	0	324
Pulaski	311	4,564	278	4,468	0	0	0	96	33	0
Russell	72	2,656	26	2,560	0	0	0	96	46	0
Taylor	107	3,351	44	2,931	0	0	0	96	63	324
Wayne	145	1,814	145	1,814	0	0	0	0	0	0
All counties	2,281	48,409	1,684	44,482	88	965	142	1,990	367	972

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulp mills (548,000 cubic feet in 1999).

**Table 24—Roundwood timber products output by product and species group, Western Coalfield Region of Kentucky, 1997 and 1999**

Product and species group	Year		Change	Percent change
	1997	1999		
<i>Thousand cubic feet</i>				
<b>Saw logs</b>				
Softwood	585	125	-460	-78.6
Hardwood	33,443	37,145	3,702	11.1
Total	34,028	37,270	3,242	9.5
<b>Veneer logs</b>				
Softwood	0	0	0	--
Hardwood	180	180	0	--
Total	180	180	0	--
<b>Pulpwood<sup>a</sup></b>				
Softwood	580	626	46	7.9
Hardwood	4,624	5,898	1,274	27.6
Total	5,204	6,524	1,320	25.4
<b>Other industrial</b>				
Softwood	18	0	-18	-100.0
Hardwood	152	134	-18	-11.8
Total	170	134	-36	-21.2
<b>All industrial</b>				
Softwood	1,183	751	-432	-36.5
Hardwood	38,399	43,357	4,958	12.9
Total	39,582	44,108	4,526	11.4

<sup>a</sup> Includes roundwood delivered to nonpulpmills, then chipped and sold to pulpmills (214,000 cubic feet in 1997 and 300,000 cubic feet in 1999).

**Table 25—Roundwood timber products output by county, product, and species group, Western Coalfield Region of Kentucky, 1999**

County	All products		Saw logs		Veneer logs		Pulpwood <sup>a</sup>		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
<i>Thousand cubic feet</i>										
Allen	1	3,315	1	3,288	0	0	0	27	0	0
Barren	1	2,361	1	2,306	0	0	0	55	0	0
Butler	4	3,413	0	2,044	0	0	4	1,369	0	0
Caldwell	206	1,512	4	1,239	0	0	202	273	0	0
Christian	4	3,342	4	3,281	0	0	0	17	0	44
Crittenden	252	1,704	0	1,459	0	0	252	245	0	0
Daviess	0	1,444	0	1,309	0	80	0	55	0	0
Edmonson	103	745	84	651	0	0	19	94	0	0
Henderson	0	1,976	0	1,854	0	100	0	22	0	0
Hopkins	107	2,511	0	2,389	0	0	107	122	0	0
Logan	0	1,416	0	1,398	0	0	0	18	0	0
McLean	0	1,414	0	1,389	0	0	0	25	0	0
Monroe	24	3,464	24	3,440	0	0	0	24	0	0
Muhlenberg	14	3,756	0	3,572	0	0	14	138	0	46
Ohio	33	7,020	7	3,648	0	0	26	3,328	0	44
Simpson	0	297	0	284	0	0	0	13	0	0
Todd	0	1,349	0	1,336	0	0	0	13	0	0
Union	2	313	0	301	0	0	2	12	0	0
Warren	0	922	0	896	0	0	0	26	0	0
Webster	0	1,083	0	1,061	0	0	0	22	0	0
All counties	751	43,357	125	37,145	0	180	626	5,898	0	134

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (300,000 cubic feet in 1999).

**Table 26—Roundwood timber products output by product and species group, Western Region of Kentucky, 1997 and 1999**

Product and species group	Year		Change	Percent change
	1997	1999		
<i>Thousand cubic feet</i>				
<b>Saw logs</b>				
Softwood	16	98	82	512.5
Hardwood	9,013	9,477	464	5.1
Total	9,029	9,575	546	6.0
<b>Veneer logs</b>				
Softwood	0	0	0	--
Hardwood	93	93	0	--
Total	93	93	0	--
<b>Pulpwood<sup>a</sup></b>				
Softwood	943	700	-243	-25.8
Hardwood	4,143	4,477	334	8.1
Total	5,086	5,177	91	1.8
<b>Other industrial</b>				
Softwood	0	0	0	--
Hardwood	0	0	0	--
Total	0	0	0	--
<b>All industrial</b>				
Softwood	959	798	-161	-16.8
Hardwood	13,249	14,047	798	6.0
Total	14,208	14,845	637	4.5

-- = negligible.

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (18,000 cubic feet in 1997 and 77,000 cubic feet in 1999).

**Table 27—Roundwood timber products output by county, product, and species group, Western Region of Kentucky, 1999**

County	All products		Saw logs		Veneer logs		Pulpwood <sup>a</sup>		Other industrial	
	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood	Soft-wood	Hard-wood
	<i>Thousand cubic feet</i>									
Ballard	38	961	5	205	0	0	33	756	0	0
Calloway	108	1,176	0	979	0	0	108	197	0	0
Carlisle	23	1,898	14	752	0	0	9	1,146	0	0
Fulton	56	764	56	410	0	0	0	354	0	0
Graves	278	1,643	14	1,100	0	0	264	543	0	0
Hickman	9	628	9	233	0	37	0	358	0	0
Livingston	281	1,452	0	1,021	0	0	281	431	0	0
Lyon	5	1,086	0	872	0	0	5	214	0	0
McCracken	0	1,051	0	898	0	0	0	153	0	0
Marshall	0	1,460	0	1,217	0	56	0	187	0	0
Trigg	0	1,928	0	1,790	0	0	0	138	0	0
All counties	798	14,047	98	9,477	0	93	700	4,477	0	0

<sup>a</sup> Includes roundwood delivered to nonpulp mills, then chipped and sold to pulpmills (77,000 cubic feet in 1999).

**Table 28—Total roundwood output by product, species group, and source of material, Kentucky, 1999**

Product and species group	All sources	Total	Growing-stock trees		Other sources
			Sawtimber	Poletimber	
<i>Thousand cubic feet</i>					
<b>Saw logs</b>					
Softwood	5,855	4,437	4,437	0	1,418
Hardwood	173,019	119,210	117,480	1,731	53,809
Total	178,874	123,647	121,917	1,731	55,227
<b>Veneer logs and bolts</b>					
Softwood	88	57	57	0	31
Hardwood	7,472	5,358	5,211	147	2,114
Total	7,560	5,415	5,268	147	2,145
<b>Pulpwood</b>					
Softwood	2,162	1,176	1,149	27	986
Hardwood	17,322	10,940	9,207	1,732	6,382
Total	19,484	12,115	10,356	1,759	7,369
<b>Poles and posts</b>					
Softwood	247	203	185	18	44
Hardwood	1	1	1	0	0
Total	248	204	186	18	44
<b>Other miscellaneous</b>					
Softwood	2,328	1,260	1,173	87	1,068
Hardwood	11,424	7,004	5,861	1,143	4,420
Total	13,752	8,264	7,034	1,230	5,488
<b>Total industrial products</b>					
Softwood	10,680	7,132	7,001	131	3,548
Hardwood	209,238	142,513	137,760	4,753	66,725
Total	219,918	149,645	144,761	4,884	70,273
<b>Fuelwood</b>					
Softwood	35	27	27	0	8
Hardwood	6,864	6,366	6,287	79	498
Total	6,899	6,393	6,314	79	506
<b>All products</b>					
Softwood	10,715	7,159	7,028	131	3,556
Hardwood	216,102	148,879	144,047	4,832	67,223
Total	226,817	156,038	151,075	4,963	70,779

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

**Table 29—Total roundwood output by species group, survey region, and ownership class, Kentucky, 1999**

Species group and survey region	Total	Ownership class			
		National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand cubic feet</i>					
<b>Softwoods</b>					
Eastern	545	0	0	0	545
Northern Cumberland	1,055	343	0	0	712
Southern Cumberland	3,748	885	9	0	2,854
Bluegrass	1,525	0	181	0	1,344
Pennyroyal	2,289	0	120	0	2,169
Western Coalfield	753	0	0	0	753
Western	800	0	0	0	800
Total softwoods	10,715	1,228	310	0	9,177
<b>Hardwoods</b>					
Eastern	23,994	281	0	689	23,024
Northern Cumberland	25,133	3,079	448	0	21,606
Southern Cumberland	48,237	10,418	622	0	37,196
Bluegrass	9,417	822	854	0	7,741
Pennyroyal	50,014	165	2,648	863	46,337
Western Coalfield	44,793	0	1,299	0	43,494
Western	14,514	0	2,053	441	12,021
Total hardwoods	216,102	14,765	7,925	1,993	191,419
<b>All species</b>	226,817	15,992	8,235	1,993	200,596

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

**Table 30—Total roundwood output by species group, detailed species group, and product, Kentucky, 1999**

Species group and detailed species group	Total	Product					Fuelwood
		Saw log	Veneer	Pulpwood	Poles and posts	Other miscellaneous	
<i>Thousand cubic feet</i>							
<b>Softwood</b>							
Cedar	587	465	0	0	20	100	2
White pine	116	115	0	0	1	0	1
Loblolly-shortleaf pine	1,676	679	0	591	43	356	6
Other yellow pines	8,136	4,565	88	1,563	181	1,713	26
Hemlock	200	31	0	8	1	159	1
Total softwoods	10,715	5,855	88	2,162	247	2,328	35
<b>Hardwood</b>							
Soft maple	7,114	5,908	78	814	0	86	228
Hard maple	6,178	4,528	63	862	0	526	199
Other birch	1,640	1,186	49	233	0	123	48
Hickory	21,202	17,395	859	1,192	0	1,081	676
Beech	8,423	6,957	250	487	0	464	264
Ash	5,667	4,298	371	737	0	79	182
Black walnut	2,330	2,014	52	153	0	37	74
Sweetgum	4,855	3,289	54	1,347	0	9	155
Yellow-poplar	28,859	22,063	1,011	1,836	0	3,037	913
Blackgum-tupelo	1,731	1,354	53	174	0	94	56
Sycamore	1,413	1,226	10	90	0	41	45
Cottonwood	770	551	13	181	0	0	25
Black cherry	1,149	930	15	157	0	10	37
Select white oaks	31,962	27,028	925	1,721	0	1,263	1,025
Other white oaks	15,639	13,101	386	898	0	756	498
Select red oaks	15,752	12,302	674	1,658	0	621	497
Other red oaks	42,862	34,103	1,782	3,588	0	2,038	1,351
Basswood	2,062	1,352	95	93	0	456	66
Elm	3,971	3,127	60	651	0	5	127
Other Eastern hardwoods	0						
	12,520	10,304	671	451	0	695	399
Total hardwoods	216,098	173,019	7,472	17,322	0	11,421	6,864
<b>All species</b>	226,813	178,874	7,560	19,484	247	13,749	6,899

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

**Table 31—Total roundwood output by species group, detailed species group, and ownership class, Kentucky, 1999**

Species group and detailed species group	Total	Ownership class			
		National forest	Other public	Forest industry	Nonindustrial private
<i>Thousand cubic feet</i>					
<b>Softwood</b>					
Cedar	587	0	301	0	286
White pine	116	99	0	0	17
Loblolly-shortleaf pine	1,675	392	3	0	1,281
Other yellow pines	8,136	686	7	0	7,443
Hemlock	200	50	0	0	150
Total softwoods	10,715	1,228	310	0	9,177
<b>Hardwood</b>					
Soft maple	7,113	188	136	61	6,729
Hard maple	6,178	365	191	215	5,407
Other birch	1,641	427	0	0	1,213
Hickory	21,202	1,415	1,149	119	18,520
Beech	8,423	1,101	75	97	7,150
Ash	5,668	242	211	0	5,215
Black walnut	2,330	3	73	2	2,253
Sweetgum	4,855		375	0	4,480
Yellow-poplar	28,860	2,303	381	243	25,933
Blackgum-tupelo	1,731	10	131	23	1,568
Sycamore	1,412	79	45	0	1,288
Cottonwood	770	0	0	0	770
Black cherry	1,149	45	63	12	1,029
Select white oaks	31,962	1,536	1,400	363	28,663
Other white oaks	15,638	1,535	370	216	13,518
Select red oaks	15,752	1,282	675	102	13,693
Other red oaks	42,862	4,114	1,433	379	36,936
Basswood	2,062	83	0	89	1,890
Elm	3,971	3	264	6	3,698
Other Eastern hardwoods	12,521	34	953	67	11,467
Total hardwoods	216,102	14,765	7,925	1,993	191,419
<b>All species</b>	226,817	15,992	8,235	1,993	200,596

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



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

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (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 USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

**Johnson, Tony G.; Lowe, Larry.** 2002. Kentucky's timber industry—an assessment of timber product output and use, 1999. Resour. Bull. SRS-71. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 45 p.

In 1999, roundwood output from Kentucky's forests totaled 220 million cubic feet, 13 percent more than in 1997. Mill byproducts generated from primary manufacturers increased 10 percent to 108 million cubic feet. Ninety-five percent of plant residues were used, primarily for fuel and fiber products. Saw logs were the leading roundwood product at 179 million cubic feet; pulpwood ranked a distant second at 19 million cubic feet; other industrial products were third at 14 million cubic feet. The number of primary processing plants declined from 391 in 1997 to 348 in 1999. Total receipts increased 10 percent to 237 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

