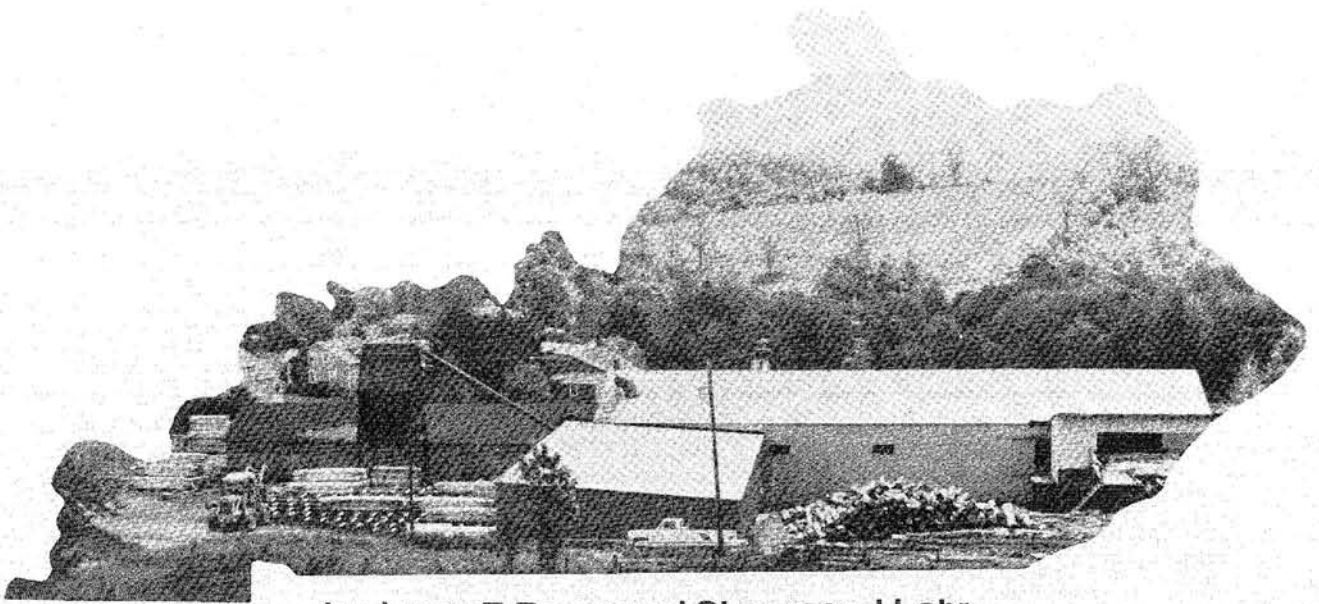


THE TIMBER INDUSTRIES OF KENTUCKY



by James T. Bones and Chauncey J. Lohr

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Headquarters of the Northeastern Forest Experiment Station are in Upper Darby, Pa. Field laboratories and research units are maintained at:

- Amherst, Massachusetts, in cooperation with the University of Massachusetts.
- Beltsville, Maryland.
- Berea, Kentucky, in cooperation with Berea College.
- Burlington, Vermont, in cooperation with the University of Vermont.
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- Warren, Pennsylvania.

HIGHLIGHTS

THE 1974 TIMBER-INDUSTRY SURVEY in Kentucky showed that, since 1969:

★ Total timber output has increased 1 percent to 98.1 million cubic feet.

★ Sawlog production has declined less than ½ percent to 489 million board feet.

★ Pulpwood production has increased 69 percent to 133 thousand cords.

★ Veneer-log production has declined 10 percent to 6.3 million board feet.

★ Cooperage-log production has declined 43 percent to 12.2 million board feet.

★ The number of sawmills has declined from 538 to 388.

ROUND TIMBER CONVERSIONS FOR MAJOR PRODUCTS:

Softwood logs: M bf (Int. 1/4-inch) = 178.7 ft³ = 5.06 M³

Hardwood logs: M bf (Int. 1/4-inch) = 146.0 ft³ = 4.13 M³

Pulpwood: 1 Std. Cord = 85 ft³ = 2.41 M³

BACKGROUND

THE FOREST SERVICE of the U.S. Department of Agriculture conducts continuing forest surveys of all states to provide up-to-date information about the timber and other related resources of the Nation. In the 14-state region served by the Northeastern Forest Experiment Station, all states have now been surveyed at least twice. Kentucky has now been inventoried for the third time. A part of the latest survey included a timber-industry survey to determine the output of timber products and the volume and disposition of primary wood-product manufacturing residues.

This report is the result of a 100-percent canvass of all primary wood-product manufacturers that were operating in Kentucky in 1974. Pulpwood production data were gathered as part of the Station's annual survey of pulpwood producers in the Northeast. The primary manufacturers were first contacted through a questionnaire that was mailed from the Experiment Station headquarters. After three mailings, those mill owners who did not respond were contacted in person by Kentucky Division of Forestry personnel. The authors thank the Kentucky primary wood-product manufacturers for their excellent cooperation and the personnel of the Kentucky Division of Forestry for assistance in contacting nonrespondents.

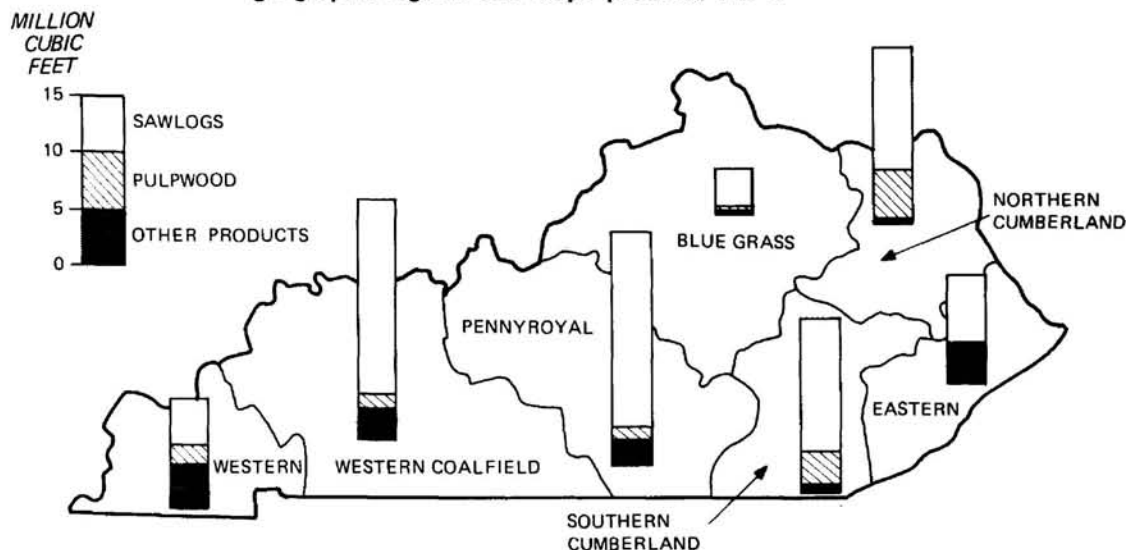
This report for the most part deals with statistics for two years: 1974, the calendar year of the current timber-industry survey; and 1969, the calendar year of the previous complete canvass. The reader is reminded that these years may, or may not, be representative for the various Kentucky timber industries covered in this report. When documented production statistics were available for individual timber products for previous or intervening years, they were included for comparative purposes.

Long-term production trends will be forthcoming from repeated surveys in the future. Until a data base is built up over time, the reader is cautioned to use the current statistics prudently.

INDUSTRIAL TIMBER HARVEST

Forest industries used more than 98 million cubic feet of timber from the forests of Kentucky in 1974. Ninety percent of this volume was from hardwoods. Sawlogs were the major timber product, accounting for nearly three-fourths of the total harvest. Pulpwood ranked second in volume, accounting for about 12 percent of the total. Other products that made up a minor portion of the harvest were veneer and cooperage logs, mine timbers, posts and poles,

Figure 1.—Harvest of industrial timber in Kentucky, by geographic regions and major products, 1974.



metallurgical and charcoal wood, and handle stock.

Overall, the timber harvest in Kentucky has increased 1 percent since 1969, when the last industry survey was made, and 8 percent since 1962. Though the sawlog harvest has remained virtually the same since 1969, the pulpwood harvest has jumped 69 percent. This dramatic increase occurred because three pulp mills have been established within the State since 1967. The most recent mill, which produces 600 tons of woodpulp per day, has been responsible for nearly doubling Kentucky's pulpwood requirement since 1970.

The harvest of roundwood for veneer and cooperage logs and for the other minor products decreased between 1969 and 1974. Cooperage-log production dropped 43 percent during the period because the distilling industry has been re-using wooden barrels. The softwood harvest has remained the same during the 5-year period, while the hardwood harvest has increased 1 percent.

Kentucky's west-central regions—the Pennyroyal and Western Coalfield Regions—produced 43 percent of the State's industrial roundwood in 1974 (fig. 1). The 21.3 million-cubic-foot hardwood harvest in the Western Coalfield Region and 4.8 million-cubic-foot softwood harvest in the South Cumberland Region were records for the respective species groups. The largest volume of sawlogs came from the Western Coalfields, and the largest volume of pulpwood came from the North Cumberland Region in 1974. The Western Region had the largest harvest of other minor products, accounting for 27 percent of the total. Harlan, McCreary, and Ohio Counties each

produced more than 15 million board feet of sawlogs in 1974.

LUMBER AND SAWLOGS

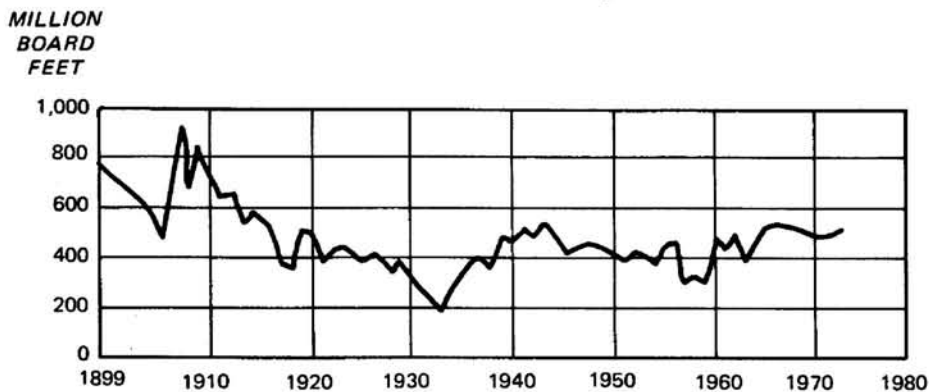
Kentucky has been an important hardwood lumber-producing state for a century. The 200 million board feet of hardwood lumber produced in 1869 ranked the State seventh in the Nation. In 1973, the State ranked fourth behind Virginia, Tennessee, and Pennsylvania.

Annual lumber production has ranged from 913 million board feet in 1907 to 180 million board feet in 1933 (fig. 2). During World War II, lumber production climbed from the lows of the depression years to more than 500 million board feet. Since the war, production has declined. Estimated production for Kentucky was 468 million board feet in 1974.

The number of sawmills operating in Kentucky has generally followed the fluctuations in lumber production. During the first decade of the century, when historic high production levels were being recorded, more sawmills were operating in Kentucky than at any other time: 2,351 sawmills operated in 1909. By 1918, the number of mills had dropped to 464. An all-time low of 104 sawmills was reported in 1933. During World War II the number increased—to 1,875 in 1942; and to 2,168 by 1947.

Our industry study showed that the number of sawmills decreased from 538 in 1969 to 388 in 1974. This change is inconsistent with long-term trends because the 28-percent decrease in the number of sawmills was accompanied by an 8-percent decrease in lumber production. However, the change is consistent with the trend toward larger production units that has

Figure 2.—Lumber production in Kentucky, 1899-1972.



developed in all of the eastern states during the last quarter century. Most of the sawmills that closed between 1969 and 1974 were low-production mills capable of producing less than a million board feet annually. The Bluegrass Region experienced the greatest percentage loss of mills (55 percent) and the Pennyroyal Region experienced the greatest numerical loss (48 sawmills).

Although sawlog production and receipts have remained virtually the same for the past 5 years in Kentucky, some significant shifts have taken place between regions. Sawlog production declined 29 percent in the Eastern Region and 12 percent in the Western Coalfields between 1969 and 1974. Concurrently, production climbed 29 percent in the North Cumberland Region and 16 percent in the Pennyroyal Region.

Sawlog receipts declined 37 and 15 percent respectively in the Eastern and Western Regions. At the same time, receipts rose 27 and 16 percent respectively in the Pennyroyal and North Cumberland Regions. In the Western Region, sawlog production rose 5 percent, but receipts fell 15 percent; while in the Bluegrass Region production fell 6 percent and receipts rose 13 percent.

Statewide, Kentucky was a net importer of sawlogs in 1974. Some 27 million board feet of the 489 million board-foot sawlog harvest was shipped to other states for manufacture. Ken-

tucky sawmills imported nearly 35 million board feet of sawlogs from other states, in addition to the 462 million board feet they obtained from Kentucky forest lands. Tennessee was both the largest recipient of Kentucky sawlogs and the largest supplier of sawlogs to Kentucky sawmills in 1974. Indiana ranked second.

Since oaks make up 44 percent of the growing-stock volume, it is to be expected that sawlog production was dominated by the oaks in 1974. Red oaks accounted for 33 percent of the volume of sawlogs produced, and white oaks accounted for 16 percent (fig. 3). Other important hardwood species included yellow-poplar, hickory, and maple. The softwood species accounted for only 7 percent of the total volume harvested. Shortleaf pine was the most important softwood harvested.

PULPWOOD

More than 133 thousand cords of pulpwood were harvested from Kentucky timberlands in 1974, and in addition, more than 263 thousand cord equivalents of pulp chips were recovered from the primary wood-product manufacturing plants of the State. Although the volume of wood from plant residues is at a record high level, the total roundwood harvest is down 73 thousand cords from 1973, when 206 thousand cords of roundwood was harvested. Six percent of the 1974 pulpwood production came from softwoods, 27 percent came from hardwoods, and 67 percent came from manufacturing residues (fig. 4). Most of the softwood harvest was pine. Oak and hickory represented 49 percent of the total roundwood harvest. Yellow-poplar made up 11 percent of the total.

Before April 1967, all of Kentucky's pulpwood production was exported to manufacturers in neighboring states. The 75-thousand-cord annual harvest was divided evenly between the hardwood pulpmills in Ohio and the pine pulpmills in Tennessee. Kentucky's first pulpmill at Hawesville had a negligible effect on pulpwood production because it used wood residues that were generated by local primary wood-product manufacturers (fig. 5).

Two years later, a second pulpmill was constructed at Hawesville, and in 1969 a new 600-

Figure 3.—Kentucky sawlog production, by species, in percent, 1974.

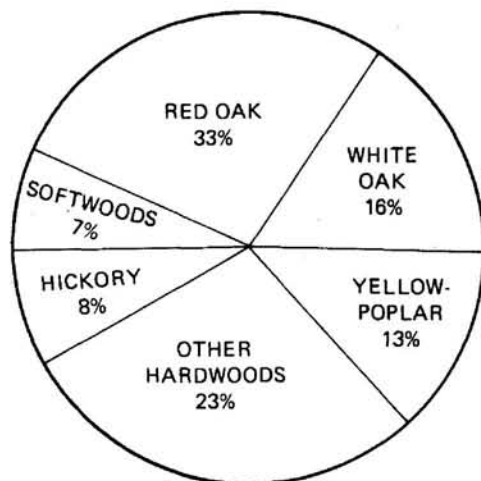


Figure 4.—Kentucky pulpwood production, in percent, 1974.

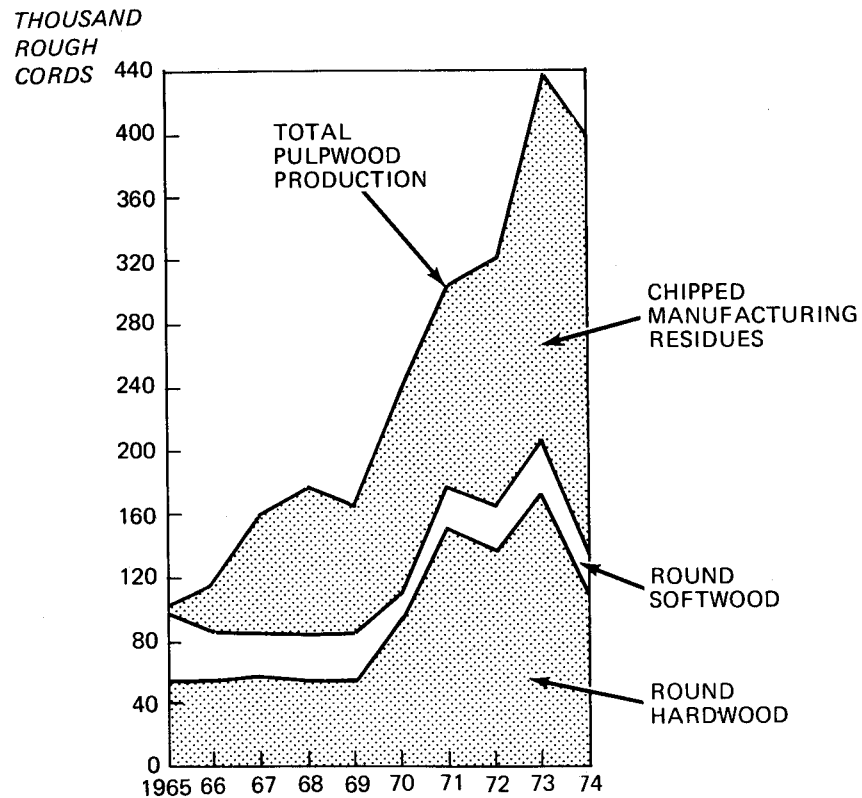
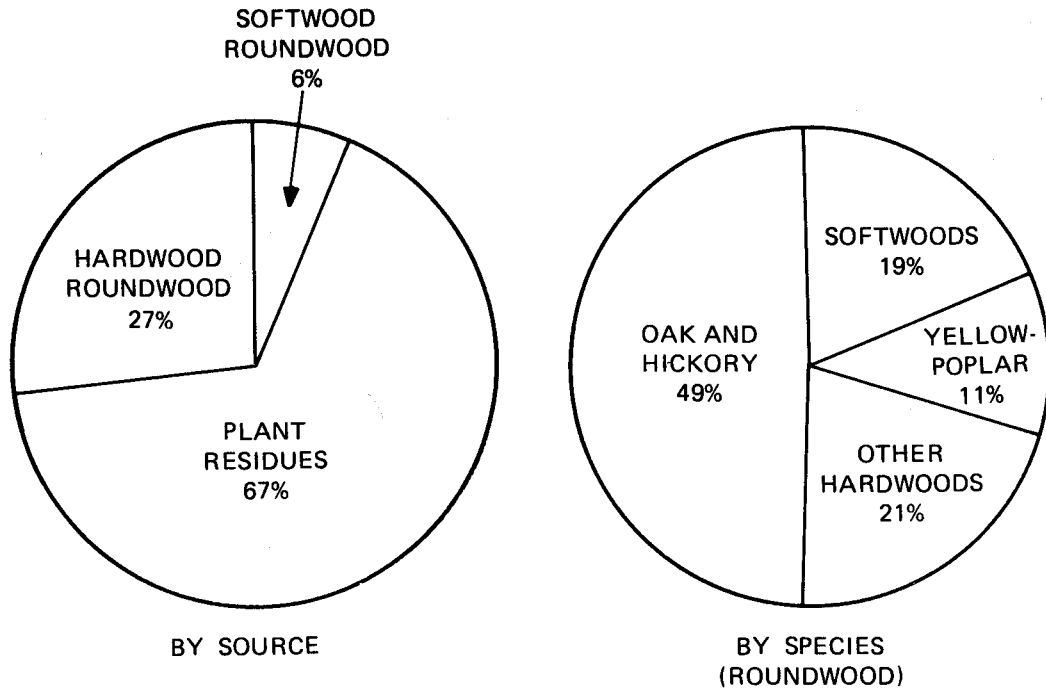


Figure 5.—Pulpwood production in Kentucky, by source, 1965-1974.

ton-per-day pine and hardwood kraft mill began to build a wood inventory at Wickliffe, Kentucky. The result of installing nearly 1,100 tons per day of woodpulp capacity in Kentucky in the last 5 years was to transform the State from a net exporter of pulpwood to the second largest importer of pulpwood in the Northeast in 1974. Although the pulpwood harvest increased 59 percent and chipped residue production increased 212 percent between 1969 and 1974, an additional 287 thousand cords of pulpwood was required in 1974 to meet the industry's demand for wood fiber. This pulpwood was imported from as far away as Mississippi and Alabama.

In the last decade, 285 thousand cords of softwood pulpwood from roundwood and 946 thousand cords of hardwood pulpwood from roundwood were harvested from Kentucky forest lands. Nearly 65 percent of the softwood came from the South Cumberland Region and nearly 38 percent of the hardwood came from the North Cumberland Region. Together the two Cumberland regions accounted for 61 percent of the pulpwood harvest in Kentucky between 1965 and 1974.

OTHER TIMBER PRODUCTS

Veneer Logs and Bolts

More than 6.3 million board feet of veneer logs were harvested in Kentucky in 1974. Sixty-three percent of the volume was shipped to 5 other states for manufacture. Indiana and Tennessee were major recipients. More cottonwood was shipped from the State than any other species, whereas black walnut and red oak were favored for retention by local manufacturers.

Kentucky veneer plants received more than 6.9 million board feet of veneer logs in 1974. Nearly two-thirds of these logs were imported from 15 other states. Oaks and black walnut were the major species imported. During the 1974 survey, no attempt was made to trace veneer logs that were not channeled through primary manufacturers. Therefore the volume statistics for some species might be low. They do not include veneer-log purchases by brokers for export overseas. About 7.8 million board feet of walnut logs were exported nationally in 1974. Undoubtedly many of these logs were harvested from Kentucky forest lands, since the State

ranks second in the Nation in its volume of walnut growing stock.

Changing consumer preferences and the availability of suitable high-quality logs have affected the species distribution of the veneer-log harvest over the years. Important veneer species harvested from Kentucky forest lands during the last quarter century give an indication of these changing trends:

Year	Species	Harvest (million bd. ft.) ^a	Portion of total harvest (percent)
1948	White oak	1.4	14
	Yellow-poplar	1.1	12
	Sweetgum	1.1	11
	Black walnut	1.0	10
1968	Black walnut	2.6	31
	Cottonwood	1.3	15
	Hickory (pecan)	1.1	13
	Yellow-poplar	0.8	10
1974	Black walnut	1.7	26
	Cottonwood	1.3	20
	Yellow-poplar	0.8	12
	Red oak	0.8	12

^a International 1/4-inch rule.

Species preferences for veneer logs were less pronounced in 1948 than in 1974. The four most important species harvested in 1948 made up only 47 percent of the total volume harvested. In 1974, four species accounted for 70 percent of the total. Black walnut has always been a major component of the harvest. White oak and sweetgum have been replaced recently by cottonwood and red oak.

Cooperage

Tight cooperage for bourbon barrels has been an important use of white oak in Kentucky for many years. However, large high-quality white oak sawtimber is becoming increasingly difficult to find.

Nationwide, production of new barrels dropped from 2.3 million in 1969 to 1.2 million in 1974. This drop in demand is mostly responsible for the number of stave mills in Kentucky dropping from 23 in 1969 to 12 in 1974. Cooperage-log receipts during the same period dropped from 20.8 million board feet to 13.4 million board feet. Cooperage-log production in Kentucky was 12.2

million board feet, a 43-percent decrease since 1969.

In 1948 there were 87 tight-stave and heading mills operating in Kentucky. Most of them were portable so they could shift from county to county to take advantage of local markets and available timber. These mills used nearly 39 million board feet of oak logs and bolts from Kentucky forest lands. The staves they produced brought a high price, but they required more labor per unit of production than any other timber product.

By 1958, the number of stave mills had dropped 78 percent (to 19 mills), and cooperage log production in Kentucky had been halved. Even so, the State was a major stave manufacturer. The 19.4 million board feet processed by Kentucky's 19 mills in 1958 represented more than 21 percent of the production total for the Central States, and 8 percent of the Nation's cooperage-log requirement.

In 1962 the tight-cooperage industry curtailed production temporarily while awaiting the outcome of a proposal to change the federal regulation that forbade the re-use of bourbon barrels. In 1970 the regulations were changed, allowing the re-use of bourbon barrels for the production of light whisky. The effects were immediate: a strong used-barrel market developed, and production of new barrels dropped significantly.

By 1972, however, even with heavy promotion, a strong market did not develop for light whisky, and distillers curtailed production. Many stave producers thought that the market for new barrels would pick up, but in 1974, cooperage production was still low. Local observers¹ give the following reasons for the continued decline in demand for bourbon barrels:

1. Bourbon sales in the United States declined 14 percent between 1969 and 1974; so less was bottled.
2. Bourbon warehouse inventories declined 25 percent between 1969 and 1974, therefore less whisky and fewer barrels were used to replenish inventories.
3. The bourbon barreled for storage in 1974 was about 120 proof; in 1969, most bourbon

produced was 105 or 110 proof. Thus fewer barrels were required in 1974.

4. Currently, more 4-year-old bourbon is bottled and sold than a few years ago, when 6- to 8-year-old bourbon was popular.
5. Currently, the trend is to bottle and sell 80-proof whisky rather than the 86- and 100-proof whiskies that were popular a few years ago.

These and other factors will probably cause cooperage-log production to continue to decline in the future.

Miscellaneous

Kentucky has many small wood-using industries whose combined timber requirements from the forest lands of the State approached 11.7 million cubic feet in 1974.

Fourteen plants received handle logs in 1974. Some of these plants were producing furniture squares, pallet parts, and bat blanks in addition to handle blanks. About 7.4 million board feet of handle logs were harvested in Kentucky during the year. Comparisons for selected years can be made with the following statistics:

Year	Plants (No.)	Production (million board feet) ^a	Receipts
1948	3	5.5	1.1
1962	9	4.3	3.8
1969	22	10.4	10.4
1974	14	7.4	7.3

^a International 1/4-inch rule.

Most handle plants use ash and hickory; hickory is preferred for such striking tools as picks and hammers, whereas ash is preferred for pulling and lifting tools such as shovels and rakes.

Kentucky charcoal producers are finding manufacturing from round timber and solid wood residues difficult because of stringent air-pollution regulations. In 1974 they used less than a half million cubic feet of roundwood and 5.1 million cubic feet of plant residues at two plant locations, most of it from hardwoods. This compares with 4.2 million cubic feet of roundwood and 1.4 million cubic feet of plant residues that were consumed at five locations in 1969.

Coal mining, which is concentrated in eastern Kentucky, has depended upon local forests over

¹Clayton, J. M., and J. A. Newman, 1976. Personal correspondence. WesCor Corp., Hawesville, Ky., and Coop. Ext. Ser., U. of Ky., Lexington, Ky. (On file at NE Forest Exp. Sta., Upper Darby, Pa.)

the years as a source of mine props and shoring material. Some 5.3 million cubic feet of mine timbers were used in 1974. This is an 8-percent decrease from 1969, when 5.7 million cubic feet were produced.

MANUFACTURING RESIDUES

The woodpulp industry in Kentucky has grown to depend upon primary manufacturing residues as a convenient, readily available, and environmentally acceptable source of raw material. More stringent air- and water-pollution laws in the State have discouraged wood-product manufacturers from burning or dumping their residues and have encouraged them to seek pulpmills and other markets for their waste material.

More than 49 million cubic feet of residues were generated by the primary wood-product manufacturers of Kentucky in 1974. Of this, 40 million cubic feet was woody material and 9 million cubic feet was bark. Some 25 million cubic feet of the woody residue was suitable for

conversion into chips for fiber products. Sixty-five percent of all residues—32 million cubic feet—was used. Only 32 percent of the bark residue was used, but 73 percent of the wood residue was used.

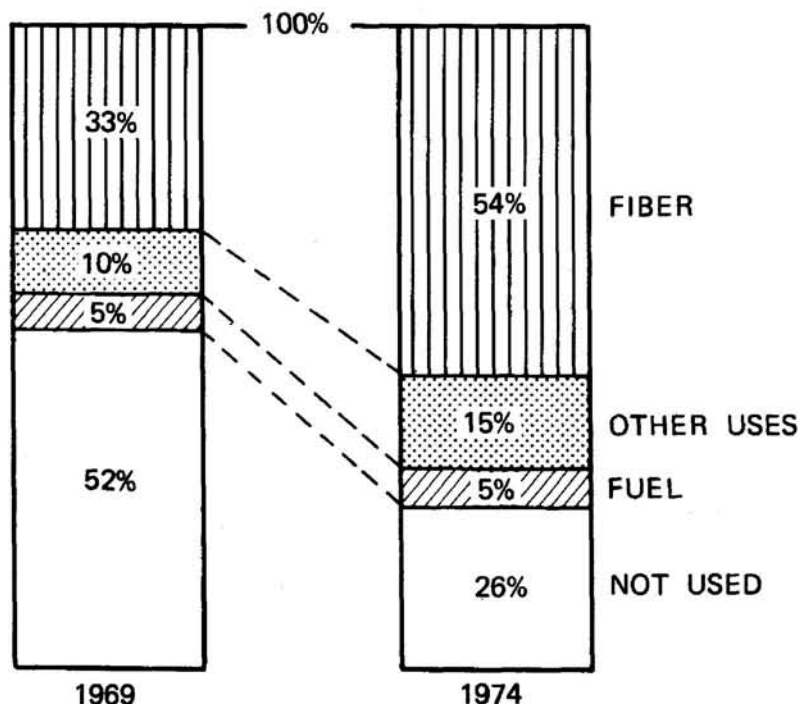
When the results of our 1974 study in Kentucky were compared with a similar study (*Bones and Lohr 1972*) made in 1969, some important trends were identified (fig. 6).

- A 26-percent greater volume of the sawmill residue was being used in 1974 than in 1969.
- A 21-percent greater volume of sawmill residues was being used for fiber-product chips in 1974 than in 1969.
- A 5-percent greater volume of sawmill residues was being used for such products as livestock bedding, horticultural mulch, and flakeboard in 1974 than in 1969.

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Figure 6.—Trends in sawmill residue use in Kentucky, in percent, 1969 and 1974.



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Table 1.—Volume of industrial timber, by products harvested in Kentucky in 1974

Product	Volume in standard units				Roundwood volume		
	Standard units	All species	Softwoods	Hardwoods	All species	Softwoods	Hardwoods
-----Thousand cubic feet-----							
Sawlogs	M board feet ^a	488,794	32,292	456,502	72,429	5,771	66,658
Pulpwood	Standard cords	133,100	24,800	108,300	11,313	2,108	9,205
Veneer logs	M board feet ^a	6,332	—	6,332	853	—	853
Cooperage logs	M board feet ^a	12,152	—	12,152	1,733	—	1,733
Mine timbers	M cubic feet	5,251	428	4,823	5,251	428	4,823
Posts	M pieces	744	10	734	1,598	21	1,577
Misc. products ^b	M cubic feet	4,890	1,778	3,112	4,890	1,778	3,112
Total	—	—	—	—	98,067	10,106	87,961

^a International 1/4-inch log rule.

^b Includes poles, handle stock, metallurgical wood, charcoal wood, dimension, and flakeboard chips.

Table 2.—Change in timber products output in Kentucky between 1969 and 1974

Product	All species			Softwoods			Hardwoods		
	1969	1974	Change	1969	1974	Change	1969	1974	Change
	<i>Million cubic feet</i>		<i>Percent</i>	<i>Million cubic feet</i>		<i>Percent</i>	<i>Million cubic feet</i>		<i>Percent</i>
Sawlogs	72.6	72.4	(a)	6.3	5.8	- 8	66.3	66.6	(a)
Pulpwood	6.7	11.3	+69	2.2	2.1	- 5	4.5	9.2	+104
Veneer logs	1.0	.9	-10	—	—	—	1.0	.9	- 10
Cooperage logs	3.0	1.7	-43	—	—	—	3.0	1.7	- 43
Mine timbers	5.7	5.3	- 8	.4	.4	+10	5.3	4.9	- 9
Misc. products ^b	7.9	6.5	-18	1.2	1.8	+50	6.7	4.7	- 30
Total	96.9	98.1	+ 1	10.1	10.1	(a)	86.8	88.0	+ 1

^a Less than 0.5 percent.

^b Includes posts, poles, handle stock, metallurgical wood, charcoal wood, and dimension.

Table 3.—Industrial timber harvest^a in Kentucky, by geographic regions, species groups, and products, 1974

[In thousands of cubic feet]				
Region and species group	Sawlogs	Pulpwood	Other products ^b	All products
Eastern:				
Softwood	322	—	257	579
Hardwood	6,468	—	2,905	9,373
Total	6,790	—	3,162	9,952
North Cumberland:				
Softwood	875	187	1	1,063
Hardwood	10,455	3,918	1,029	15,402
Total	11,330	4,105	1,030	16,465
South Cumberland:				
Softwood	3,127	1,615	76	4,818
Hardwood	8,922	1,020	1,258	11,200
Total	12,049	2,635	1,334	16,018
Bluegrass:				
Softwood	268	17	7	292
Hardwood	2,687	8	345	3,040
Total	2,955	25	352	3,332
Pennsylvanian:				
Softwood	1,126	289	15	1,430
Hardwood	16,223	1,351	1,984	19,558
Total	17,349	1,640	1,999	20,988
Western Coalfield:				
Softwood	18	—	153	171
Hardwood	17,522	1,369	2,379	21,270
Total	17,540	1,369	2,532	21,441
Western:				
Softwood	35	—	1,718	1,753
Hardwood	4,381	1,539	2,198	8,118
Total	4,416	1,539	3,916	9,871
All regions:				
Softwood	5,771	2,108	2,227	10,106
Hardwood	66,658	9,205	12,098	87,961
Total	72,429	11,313	14,325	98,067

^a Does not include fuelwood or removals that are not manufactured into industrial products.

^b Includes mine timber, veneer and cooperage logs, poles and posts, handle stock, metallurgical wood, and charcoal wood.

Table 4.—Number of sawmills in Kentucky, by geographic regions and annual production classes, 1969 and 1974

Region	Production class ^a							
	Greater than 1 million board feet		Less than 1 million board feet		Idle and custom mills		Total	
	1969	1974	1969	1974	1969	1974	1969	1974
Eastern	13	6	16	7	17	19	46	32
North Cumberland	19	20	29	17	40	25	88	62
South Cumberland	20	22	37	17	17	24	74	63
Bluegrass	3	6	11	3	35	13	49	22
Pennyroyal	28	32	63	34	83	60	174	126
Western Coalfield	39	27	16	13	28	25	83	65
Western	9	8	9	6	6	4	24	18
All regions	131	121	181	97	226	170	538	388

^a Based upon the volume of lumber produced during calendar years 1969 and 1974.

Table 5.—Sawlog production and receipts relationships in Kentucky, by geographic regions between 1969 and 1974

Region	Production			Receipts		
	1969	1974	Change	1969	1974	Change
	<i>Million board feet ^a</i>	<i>Million board feet ^a</i>	<i>Percent</i>	<i>Million board feet ^a</i>	<i>Million board feet ^a</i>	<i>Percent</i>
Eastern	64.8	46.1	- 29	62.6	39.4	- 37
North Cumberland	59.2	76.5	+29	67.0	77.6	+16
South Cumberland	77.4	78.6	+ 2	77.0	77.8	+ 1
Bluegrass	21.1	19.9	- 6	13.7	15.5	+13
Pennyroyal	101.1	117.4	+16	94.5	120.0	+27
Western Coalfield	136.7	120.1	- 12	152.6	142.9	- 6
Western	28.8	30.2	+ 5	27.4	23.3	- 15
All regions	489.1	488.8	(b)	494.8	496.5	(b)

^a International 1/4-inch rule.

^b Less than 0.5-percent change.

Table 6.—Sawlog production for Kentucky, by species groups, geographic regions, and where received, 1974

[In millions of board feet, International 1/4-inch rule]

Species group and geographic region	Where received			Total production
	Within region	Within state	In other states	
Softwoods:				
Eastern	1.4	0.4	—	1.8
North Cumberland	4.8	.1	—	4.9
South Cumberland	12.3	3.2	2.0	17.5
Bluegrass	.9	.6	—	1.5
Pennyroyal	5.7	.5	.1	6.3
Western Coalfield	—	(a)	.1	.1
Western	—	—	.2	.2
All regions	25.1	4.8	2.4	32.3
Hardwoods:				
Eastern	31.1	12.8	.4	44.3
North Cumberland	65.7	4.7	1.2	71.6
South Cumberland	41.8	13.4	5.9	61.1
Bluegrass	8.3	10.1	—	18.4
Pennyroyal	90.0	17.8	3.3	111.1
Western Coalfield	106.5	7.5	6.0	120.0
Western	16.2	6.0	7.8	30.0
All regions	359.6	72.3	24.6	456.5
All species	384.7	77.1	27.0	488.8

^a Less than 50,000 board feet.

Table 7.—Sawlog receipts for Kentucky, by species groups, geographic regions, and where produced, 1974

[In millions of board feet, International 1/4-inch rule]

Species group and geographic region	Where produced			Total receipts
	Within region	Within state	In other states	
Softwoods:				
Eastern	1.4	0.1	(a)	1.5
North Cumberland	4.8	.6	—	5.4
South Cumberland	12.3	.6	(a)	12.9
Bluegrass	.9	.2	—	1.1
Pennyroyal	5.7	3.2	0.1	9.0
Western Coalfield	—	.1	—	.1
Western	—	—	—	—
All regions	25.1	4.8	0.1	30.0
Hardwoods:				
Eastern	31.1	5.2	1.6	37.9
North Cumberland	65.7	6.5	—	72.2
South Cumberland	41.8	16.3	6.8	64.9
Bluegrass	8.3	4.7	1.4	14.4
Pennyroyal	90.0	18.1	2.9	111.0
Western Coalfield	106.5	19.0	17.3	142.8
Western	16.2	2.6	4.5	23.3
All regions	359.6	72.4	34.5	466.5
All species	384.7	77.2	34.6	496.5

^a Less than 50,000 board feet.

Table 8.—Sawlog production and receipts in the EASTERN REGION of Kentucky, by species and destination of shipments, 1974

[In millions of board feet, International 1/4-inch rule]

Species	Cut and retained in region	Out-shipments		Total production	In-shipments		Total receipts
		To other regions	To other states		From other regions	From other states	
Hemlock	0.7	0.1	—	0.8	0.1	(a)	0.8
Shortleaf pine	.6	.2	—	.8	(a)	(a)	.6
Other softwoods ^b	.1	.1	—	.2	—	—	.1
Total softwoods	1.4	0.4	—	1.8	0.1	(a)	1.5
Ash	0.4	0.4	(a)	0.8	0.1	(a)	0.5
Basswood	1.2	.3	(a)	1.5	.2	(a)	1.4
Beech	3.0	.9	(a)	3.9	.4	.2	3.6
Gum	.8	.4	—	1.2	.1	(a)	.9
Hickory	4.0	1.3	(a)	5.3	.5	.2	4.7
Hard maple	1.2	.4	(a)	1.6	.2	.1	1.5
Soft maple	.8	.3	—	1.1	.1	.1	1.0
Northern red oak	2.6	.2	—	2.8	.5	.2	3.3
Black oak	2.9	.3	.1	3.3	.6	.2	3.7
Other red oaks	3.1	2.4	.1	5.6	.4	.1	3.6
White oak	1.9	.8	.1	2.8	.4	.1	2.4
Chestnut oak	3.9	2.1	—	6.0	.7	.2	4.8
Yellow-poplar	4.5	2.5	.1	7.1	1.0	.2	5.7
Other hardwoods ^c	.8	.5	—	1.3	(a)	(a)	.8
Total hardwoods	31.1	12.8	0.4	44.3	5.2	1.6	37.9
All species	32.5	13.2	0.4	46.1	5.3	1.6	39.4

^a Less than 50,000 board feet.

^b Includes Virginia and other pines and eastern redcedar.

^c Includes elm, other white oaks, sycamore, and black walnut.

Table 9.—Sawlog production and receipts in the NORTH CUMBERLAND REGION of Kentucky, by species and destination of shipments, 1974

[In millions of board feet, International 1/4-inch rule]

Species	Cut and retained in region	Out-shipments		Total production	In-shipments		Total receipts
		To other regions	To other states		From other regions	From other states	
Shortleaf pine	2.8	—	—	2.8	0.2	—	3.0
Virginia pine	.5	—	—	.5	.1	—	.6
Other softwoods ^b	1.5	0.1	—	1.6	.3	—	1.8
Total softwoods	4.8	0.1	—	4.9	0.6	—	5.4
Ash	1.5	(a)	0.1	1.6	0.3	—	1.8
Basswood	.8	(a)	(a)	.8	.1	—	.9
Beech	2.9	.1	(a)	3.0	.3	—	3.2
Gum	.5	(a)	—	.5	.1	—	.6
Hickory	4.9	.9	(a)	5.8	.5	—	5.4
Hard maple	.9	(a)	.1	1.0	.1	—	1.0
Soft maple	1.3	(a)	(a)	1.3	.3	—	1.6
Northern red oak	8.8	.1	.4	9.3	.5	—	9.3
Black oak	11.6	.4	.1	12.1	.8	—	12.4
Other red oaks	8.0	.6	.1	8.7	1.3	—	9.3
White oak	9.0	.3	.1	9.4	.8	—	9.8
Chestnut oak	6.2	.7	.2	7.1	.2	—	6.4
Yellow-poplar	7.8	1.1	.1	9.0	.9	—	8.7
Black walnut	.6	.3	(a)	.9	(a)	—	.6
Other hardwoods ^c	.9	.2	(a)	1.1	.3	—	1.2
Total hardwoods	65.7	4.7	1.2	71.6	6.5	—	72.2
All species	70.5	4.8	1.2	76.5	7.1	—	77.6

^a Less than 50,000 board feet.

^b Includes hemlock, eastern redcedar, and other pines.

^c Includes cottonwood, elm, other white oaks, and sycamore.

Table 10.—Sawlog production and receipts in the SOUTH CUMBERLAND REGION of Kentucky, by species and destination of shipments, 1974

[In millions of board feet, International 1/4-inch rule]

Species	Cut and retained in region	Out-shipments		Total production	In-shipments		Total receipts
		To other regions	To other states		From other regions	From other states	
Hemlock	0.7	0.2	—	0.9	(a)	—	0.7
Shortleaf pine	10.5	1.8	—	12.3	0.4	(a)	10.9
Virginia pine	.8	(a)	2.0	2.8	.1	—	.9
Other softwoods ^b	.3	1.2	—	1.5	.1	—	.4
Total softwoods	12.3	3.2	2.0	17.5	0.6	(a)	12.9
Ash	0.7	0.2	(a)	0.9	0.4	0.1	1.2
Basswood	.5	.2	—	.7	.3	(a)	.8
Beech	2.7	.9	(a)	3.6	1.0	.5	4.2
Gum	1.1	.2	(a)	1.3	.5	.4	2.1
Hickory	3.5	1.0	.1	4.6	1.6	.7	5.8
Hard maple	.9	.4	.1	1.4	.4	.1	1.4
Soft maple	1.0	.3	—	1.3	.5	.1	1.6
Northern red oak	1.5	.6	.7	2.8	.2	1.0	2.7
Black oak	5.4	1.6	1.3	8.3	1.6	1.1	8.0
Other red oaks	6.3	1.6	1.3	9.2	3.0	—	9.3
White oak	4.1	1.1	.7	5.9	1.0	.7	5.8
Chestnut oak	4.2	1.4	1.3	6.9	1.8	1.3	7.3
Yellow-poplar	8.7	2.9	.3	11.9	3.6	.4	12.7
Other hardwoods ^c	1.2	1.0	.1	2.3	.4	.4	2.0
Total hardwoods	41.8	13.4	5.9	61.1	16.3	6.8	64.9
All species	54.1	16.6	7.9	78.6	16.9	6.8	77.8

^a Less than 50,000 board feet.

^b Includes other pines and eastern redcedar.

^c Includes elm, other white oaks, sycamore, and black walnut.

Table 11.—Sawlog production and receipts in the BLUEGRASS REGION of Kentucky, by species and destination of shipments, 1974

[In millions of board feet, International 1/4-inch rule]

Species	Cut and retained in region	Out-shipments		Total production	In-shipments		Total receipts
		To other regions	To other states		From other regions	From other states	
Eastern redcedar	0.8	0.1	—	0.9	0.2	—	1.0
Other softwoods ^b	.1	.5	—	.6	(a)	—	.1
Total softwoods	0.9	0.6	—	1.5	0.2	—	1.1
Ash	0.1	0.8	—	0.9	—	(a)	0.1
Beech	.2	.9	—	1.1	(a)	0.3	.5
Hickory	.5	.7	—	1.2	.7	—	1.2
Hard maple	(a)	.4	—	.4	—	.1	.1
Northern red oak	1.0	.7	—	1.7	.3	—	1.3
Black oak	1.1	1.0	—	2.1	.5	—	1.6
Other red oak	.9	1.9	—	2.8	.7	(a)	1.6
White oak	.9	.9	—	1.8	.4	(a)	1.3
Chestnut oak	.5	.3	—	.8	.2	—	.7
Yellow-poplar	1.1	1.8	—	2.9	1.0	.1	2.2
Black walnut	1.8	.1	—	1.9	.7	.9	3.4
Other hardwoods ^c	.2	.6	—	.8	.2	(a)	.4
Total hardwoods	8.3	10.1	—	18.4	4.7	1.4	14.4
All species	9.2	10.7	—	19.9	4.9	1.4	15.5

^a Less than 50,000 board feet.

^b Includes shortleaf, Virginia and other pines, and hemlock.

^c Includes basswood, cottonwood, elm, gum, sycamore, and other white oaks.

Table 12.—Sawlog production and receipts in the PENNYROYAL REGION of Kentucky, by species and destination of shipments, 1974

[In millions of board feet, International 1/4-inch rule]

Species	Cut and retained in region	Out-shipments		Total production	In-shipments		Total receipts
		To other regions	To other states		From other regions	From other states	
Pines ^b	2.3	0.3	0.1	2.7	3.1	(a)	5.4
Eastern redcedar	2.6	.2	(a)	2.8	(a)	0.1	2.7
Other softwoods	.8	—	—	.8	.1	—	.9
Total softwoods	5.7	0.5	0.1	6.3	3.2	0.1	9.0
Ash	3.1	0.3	0.2	3.6	0.9	0.1	4.1
Beech	9.2	1.3	.1	10.6	1.6	.3	11.1
Gum	1.7	.3	.1	2.1	.4	.1	2.2
Hickory	6.2	1.0	.1	7.3	1.1	.2	7.5
Hard maple	2.8	.5	(a)	3.3	.6	.1	3.5
Soft maple	2.1	.6	.1	2.8	.2	.1	2.4
Northern red oak	5.3	1.7	.3	7.3	.4	—	5.7
Black oak	11.2	2.8	.6	14.6	1.8	.3	13.3
Other red oak	16.6	3.4	.1	20.1	2.7	.5	19.8
White oak	7.6	1.6	.4	9.6	1.8	.1	9.5
Chestnut oak	3.9	.3	—	4.2	1.9	.1	5.9
Other white oak	.4	1.3	—	1.7	.1	—	.5
Yellow-poplar	14.8	2.3	.6	17.7	3.8	.6	19.2
Sycamore	1.3	.2	(a)	1.5	.2	.1	1.6
Black walnut	1.3	.1	.6	2.0	.1	.2	1.6
Other hardwoods ^c	2.5	.1	.1	2.7	.5	.1	3.1
Total hardwoods	90.0	17.8	3.3	111.1	18.1	2.9	111.0
All species	95.7	18.3	3.4	117.4	21.3	3.0	120.0

^a Less than 50,000 board feet.

^b Includes shortleaf, Virginia, and other pines.

^c Includes basswood, cottonwood, and elm.

Table 13.—Sawlog production and receipts in the WESTERN COALFIELD REGION of Kentucky, by species and destination of shipments, 1974

[In millions of board feet, International 1/4-inch rule]

Species	Cut and retained in region	Out-shipments		Total production	In-shipments		Total receipts
		To other regions	To other states		From other regions	From other states	
Eastern redcedar	—	(a)	0.1	0.1	—	—	—
Other softwoods ^b	—	—	—	—	0.1	—	0.1
Total softwoods	—	(a)	0.1	0.1	0.1	—	0.1
Ash	4.2	0.2	—	4.4	0.5	0.9	5.6
Beech	3.5	.5	.3	4.3	1.2	.3	5.0
Cottonwood	2.7	.1	—	2.8	.4	.9	4.0
Elm	1.9	.1	—	2.0	.2	.2	2.3
Gum	7.8	.4	.5	8.7	.7	1.4	9.9
Hickory	10.6	.6	.8	12.0	1.3	1.6	13.5
Hard maple	3.2	.3	.1	3.6	.7	.5	4.4
Soft maple	6.0	.2	—	6.2	.7	1.6	8.3
Northern red oak	8.4	.1	1.0	9.5	1.6	.8	10.8
Black oak	9.6	1.0	.8	11.4	1.9	.6	12.1
Other red oaks	17.1	1.3	1.1	19.5	4.2	3.9	25.2
White oak	12.1	1.1	(a)	13.2	2.0	1.9	16.0
Chestnut oak	1.4	.1	—	1.5	.1	(a)	1.5
Other white oaks	3.8	.3	—	4.1	1.4	.3	5.5
Yellow-poplar	8.7	.9	1.4	11.0	1.3	1.6	11.6
Sycamore	3.0	.1	—	3.1	.2	.2	3.4
Black walnut	1.0	.1	—	1.1	.1	.2	1.3
Other hardwoods ^c	1.5	.1	—	1.6	.5	.4	2.4
Total hardwoods	106.5	7.5	6.0	120.0	19.0	17.3	142.8
All species	106.5	7.5	6.1	120.1	19.1	17.3	142.9

^a Less than 50,000 board feet.

^b Includes Virginia pine.

^c Includes basswood.

Table 14.—Sawlog production and receipts in the WESTERN REGION of Kentucky, by species and destination of shipments, 1974

[In millions of board feet, International 1/4-inch rule]

Species	Cut and retained in region	Out-shipments		Total production	In-shipments		Total receipts
		To other regions	To other states		From other regions	From other states	
Pines	—	—	0.2	0.2	—	—	—
Other softwoods	—	—	—	—	—	—	—
Total softwoods	—	—	0.2	0.2	—	—	—
Ash	0.3	0.3	0.3	0.9	0.1	0.1	0.5
Cottonwood	.9	.3	(a)	1.2	(a)	.4	1.3
Gum	1.4	.5	.9	2.8	.1	.3	1.8
Hickory	1.8	.6	.5	2.9	.4	.6	2.8
Hard maple	.4	.2	.2	.8	.1	.1	.6
Soft maple	.7	.4	.1	1.2	.1	.2	1.0
Northern red oak	.8	.1	.1	1.0	—	.1	.9
Black oak	1.5	.4	1.0	2.9	.3	.4	2.2
Other red oaks	3.1	1.5	1.1	5.7	.4	.9	4.4
White oak	1.6	.6	.9	3.1	.1	.4	2.1
Other white oaks	.9	.2	.6	1.7	.2	.2	1.3
Yellow-poplar	.9	.3	1.0	2.2	.2	.2	1.3
Sycamore	1.0	(a)	.2	1.2	.1	.3	1.4
Other hardwoods ^b	.9	.6	.9	2.4	.5	.3	1.7
Total hardwoods	16.2	6.0	7.8	30.0	2.6	4.5	23.3
All species	16.2	6.0	8.0	30.2	2.6	4.5	23.3

^a Less than 50,000 board feet.

^b Includes basswood, beech, elm, and black walnut.

Table 15.—Sawlog production and receipts in KENTUCKY, by species and destination of shipments, 1974

[In millions of board feet, International 1/4-inch rule]

Species	Cut and retained in state	Exported to			Total production	Imported from			Total receipts
		Indiana	Tennessee	Other states		Indiana	Tennessee	Other states	
Hemlock	1.9	—	—	—	1.9	—	—	(a)	1.9
Shortleaf pine	16.8	—	—	—	16.8	—	(a)	(a)	16.8
Virginia pine	2.2	—	2.1	—	4.3	—	(a)	—	2.2
Other pines	3.0	—	.2	—	3.2	—	—	—	3.0
Eastern redcedar	3.7	—	.1	—	3.8	—	0.1	—	3.8
Other softwoods	2.3	—	—	—	2.3	—	—	—	2.3
Total softwoods	29.9	—	2.4	—	32.3	—	0.1	(a)	30.0
Ash	12.6	0.1	0.4	(a)	13.1	0.5	0.4	0.3	13.8
Beech	26.3	(a)	.7	0.1	27.1	.4	.9	.3	27.9
Gum	15.4	.1	1.4	—	16.9	.6	.8	.8	17.6
Hickory	37.6	.2	1.3	.1	39.2	.8	1.3	1.3	41.0
Hard maple	11.6	.1	.3	.1	12.1	.2	.4	.3	12.5
Soft maple	13.9	.1	.1	(a)	14.1	.8	.4	.8	15.9
Northern red oak	31.9	.3	1.8	.3	34.3	.5	1.0	.7	34.1
Black oak	50.7	.4	3.4	.2	54.7	.4	1.1	1.1	53.3
Other red oaks	68.0	—	3.6	.1	71.7	1.6	2.2	1.6	73.4
White oak	43.7	.4	1.6	.2	45.9	1.1	.9	1.3	47.0
Chestnut oak	25.0	—	1.3	.2	26.5	—	1.3	.4	26.7
Other white oaks	7.3	—	.5	—	7.8	.2	.1	.2	7.8
Yellow-poplar	58.3	.6	2.6	.3	61.8	.8	1.3	.9	61.3
Other hardwoods ^b	29.6	.7	.9	.1	31.3	1.4	1.8	1.4	34.2
Total hardwoods	431.9	3.0	19.9	1.7	456.5	9.3	13.9	11.4	466.5
All species	461.8	3.0	22.3	1.7	488.8	9.3	14.0	11.4	496.5

^a Less than 50,000 board feet.

^b Includes basswood, cottonwood, elm, sycamore, and black walnut.

Table 16.—Pulpwood production in Kentucky, by species groups, 1955-1974 ^a

[In thousands of rough cords]

Year	All species	Softwoods	Hardwoods
1955	34.6	12.8	21.8
1956	53.4	25.0	28.4
1957	36.1	22.3	13.8
1958	35.1	16.3	18.8
1959	51.7	21.0	30.7
5-year total	210.9	97.4	113.5
1960	76.6	33.0	43.6
1961	73.4	31.6	41.8
1962	82.2	33.7	48.5
1963	72.4	37.5	34.9
1964	71.7	39.1	32.6
5-year total	376.3	174.9	201.4
1965	101.2	37.4	63.8
1966	114.0	30.1	83.9
1967	159.9	34.8	125.1
1968	177.1	29.9	147.2
1969	167.9	34.4	133.5
5-year total	720.1	166.6	553.5
1970	239.6	26.3	213.3
1971	304.3	29.0	275.3
1972	320.1	29.7	290.4
1973	438.2	43.2	395.0
1974	396.4	33.7	362.7
5-year total	1,698.6	161.9	1,536.7

^a Includes production from roundwood and manufacturing residues.

Table 17.—Pulpwood harvest in Kentucky, by species groups and geographic regions, 1965-1974

[In thousands of rough cords]

Species groups and region	Pulpwood harvest in:										All years
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	
Softwoods:											
Eastern	—	—	—	—	4.8	—	—	—	—	—	4.8
North Cumberland	12.5	3.1	3.6	3.3	.3	3.2	4.0	4.7	16.1	2.2	53.0
South Cumberland	23.5	22.3	19.7	19.8	18.0	15.7	15.8	16.8	13.9	19.0	184.5
Bluegrass	2.5	1.9	2.2	.9	2.1	.3	2.7	1.0	.9	.2	14.7
Pennyroyal	3.5	2.8	2.4	2.5	2.3	2.1	1.0	1.9	3.1	3.4	25.0
Western Coalfield	1.6	—	—	—	—	—	—	—	—	—	1.6
Western	—	—	—	—	—	.3	1.3	.2	—	—	1.8
All regions	43.6	30.1	27.9	26.5	27.5	21.6	24.8	24.6	34.0	24.8	285.4
Hardwoods:											
Eastern	—	—	—	0.2	—	—	—	—	—	—	0.2
North Cumberland	34.9	31.9	30.6	22.0	24.3	25.0	34.8	34.2	73.9	46.1	357.7
South Cumberland	13.1	13.1	10.6	13.3	17.6	19.7	14.6	19.9	16.3	12.0	150.2
Bluegrass	.5	2.0	6.1	4.3	4.4	2.7	36.3	4.0	21.7	.1	82.1
Pennyroyal	—	—	—	.3	2.8	18.5	3.9	19.0	11.8	15.9	72.2
Western Coalfield	6.2	5.7	5.3	15.2	5.7	13.8	37.7	43.6	31.0	16.1	180.3
Western	.2	3.8	5.4	1.1	1.3	13.9	24.2	18.1	17.6	18.1	103.7
All regions	54.9	56.5	58.0	56.4	56.1	93.6	151.5	138.8	172.3	108.3	946.4
All species	98.5	86.6	85.9	82.9	83.6	115.2	176.3	163.4	206.3	133.1	1,231.8

Table 18.—Veneer-log production in Kentucky, by species and consuming states, 1974

[In thousands of board feet, International 1/4-inch rule]

Species	Cut and retained in Kentucky	Exported to:			Total production
		Indiana	Tennessee	Other states ^a	
Ash	45	1	—	—	46
Cottonwood	—	9	—	1,261	1,270
Hickory	287	24	100	265	676
Maple	32	15	8	—	55
Red oak	417	203	—	132	752
White oak	205	296	—	—	501
Sycamore	31	61	40	—	132
Sweetgum	62	77	100	—	239
Black walnut	986	673	—	—	1,659
Yellow-poplar	125	44	595	—	764
Other species ^b	181	57	—	—	238
All species	2,371	1,460	843	1,658	6,332

^a Includes Missouri, North Carolina, and West Virginia.

^b Includes elm and other oaks.

Table 19.—Veneer-log receipts in Kentucky, by species and producing states, 1974

[In thousands of board feet, International 1/4-inch rule]

Species	Cut and retained in Kentucky	Imports from:						Total receipts
		Michigan	Ohio	Indiana	Missouri	Pennsylvania	Other states ^a	
Ash	45	40	11	80	—	—	—	176
Sweetgum	62	—	—	—	—	—	—	62
Hickory	287	—	—	100	28	—	720	1,135
Maple	32	34	—	34	—	—	—	100
Red oak	417	150	25	214	—	280	110	1,196
White oak	205	94	75	435	38	40	175	1,062
Yellow-poplar	125	—	—	9	—	—	—	134
Black walnut	986	—	50	799	639	19	186	2,679
Other species ^b	212	—	—	50	—	15	100	377
All species	2,371	318	161	1,721	705	354	1,291	6,921

^a Includes Tennessee, Illinois, Wisconsin, Texas, Arkansas, Mississippi, Louisiana, Virginia, Idaho, and West Virginia.^b Includes pines, elm, and sycamore.**Table 20.—Veneer-log production, receipts, and number of plants in Kentucky for selected years.**

[In millions of board feet, International 1/4-inch rule]

Year	Number of operating plants	Production	Receipts
1948	6	9.6	5.8
1956	8	12.5	8.1
1958	5	12.1	6.3
1960	2	8.0	2.9
1963	3	11.2	2.5
1968	4	8.4	6.2
1969	4	7.6	7.0
1972	4	5.6	8.5
1974	4	6.3	6.9

Table 21.—White oak cooperage-log and bolt production and receipts and number of operating mills in Kentucky for selected years, 1948-1974

[In millions of board feet, International 1/4-inch rule]

Year	Number of operating mills	Production	Receipts
1948	87	38.8	44.0
1958	19	19.4	22.3
1960	33	29.8	28.2
1962	26	20.5	21.0
1964	21	21.4	21.4
1969	23	22.4	20.8
1974	12	12.2	13.4

Table 22.—Production and distribution of manufacturing residues, by type of residues, type of uses, and industry sources, Kentucky, 1974

[In thousands of cubic feet]

Source industry	Type of use	Type of residue			All types
		Bark	Coarse ^a	Fine ^b	
Lumber	Fiber	—	17,683	1,719	19,402
	Fuel ^c	589	1,360	343	2,292
	Agricultural ^d	—	—	1,131	1,131
	Other ^e	2,215	1,782	2,539	6,536
	All uses	2,804	20,825	5,732	29,361
	Unused	6,353	1,309	8,243	15,905
Veneer	Fiber	—	544	—	544
	Fuel	61	32	130	223
	Agricultural	—	—	—	—
	Other	—	—	—	—
	All uses	61	576	130	767
	Unused	64	57	135	256
Cooperage	Fiber	—	847	34	881
	Fuel	46	12	—	58
	Agricultural	17	—	41	58
	Other	46	98	41	185
	All uses	109	957	116	1,182
	Unused	134	271	99	504
Other industries	Fiber	—	237	—	237
	Fuel	67	237	21	325
	Agricultural	—	—	17	17
	Other	34	173	19	226
	All uses	101	647	57	805
	Unused	113	431	132	676
All industries ^f	Fiber	—	19,311	1,753	21,064
	Fuel	763	1,641	494	2,898
	Agricultural	17	—	1,189	1,206
	Other	2,295	2,053	2,599	6,947
	All uses	3,075	23,005	6,035	32,115
	Unused	6,664	2,068	8,609	17,341

^a Coarse residues include slabs, edgings, trimmings, veneer cores, and other material suitable for chipping.

^b Fine residues include sawdust, shavings, and other material considered unsuitable for chipping.

^c Includes both domestic and industrial fuel.

^d Includes livestock bedding and farm and horticultural mulch.

^e Includes small dimension, charcoal wood, and metallurgical chips.

^f Excludes the pulpwood industry.

Table 23.—Volume of unused sawmill residues, by geographic regions, species groups, and types of residues, Kentucky, 1974

[In thousands of cubic feet]

Geographic region	All species			Softwoods			Hardwoods		
	Bark	Coarse	Fine	Bark	Coarse	Fine	Bark	Coarse	Fine
Eastern	699	103	897	21	11	27	678	92	870
North Cumberland	1,459	508	1,949	103	82	128	1,356	426	1,821
South Cumberland	609	215	1,068	55	31	119	554	184	949
Bluegrass	185	38	237	—	3	—	185	35	237
Pennyroyal	505	168	847	12	30	56	493	138	791
Western Coalfield	2,465	265	2,928	—	—	—	2,465	265	2,928
Western	431	12	317	—	—	—	431	12	317
All units	6,353	1,309	8,243	191	157	330	6,162	1,152	7,913

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