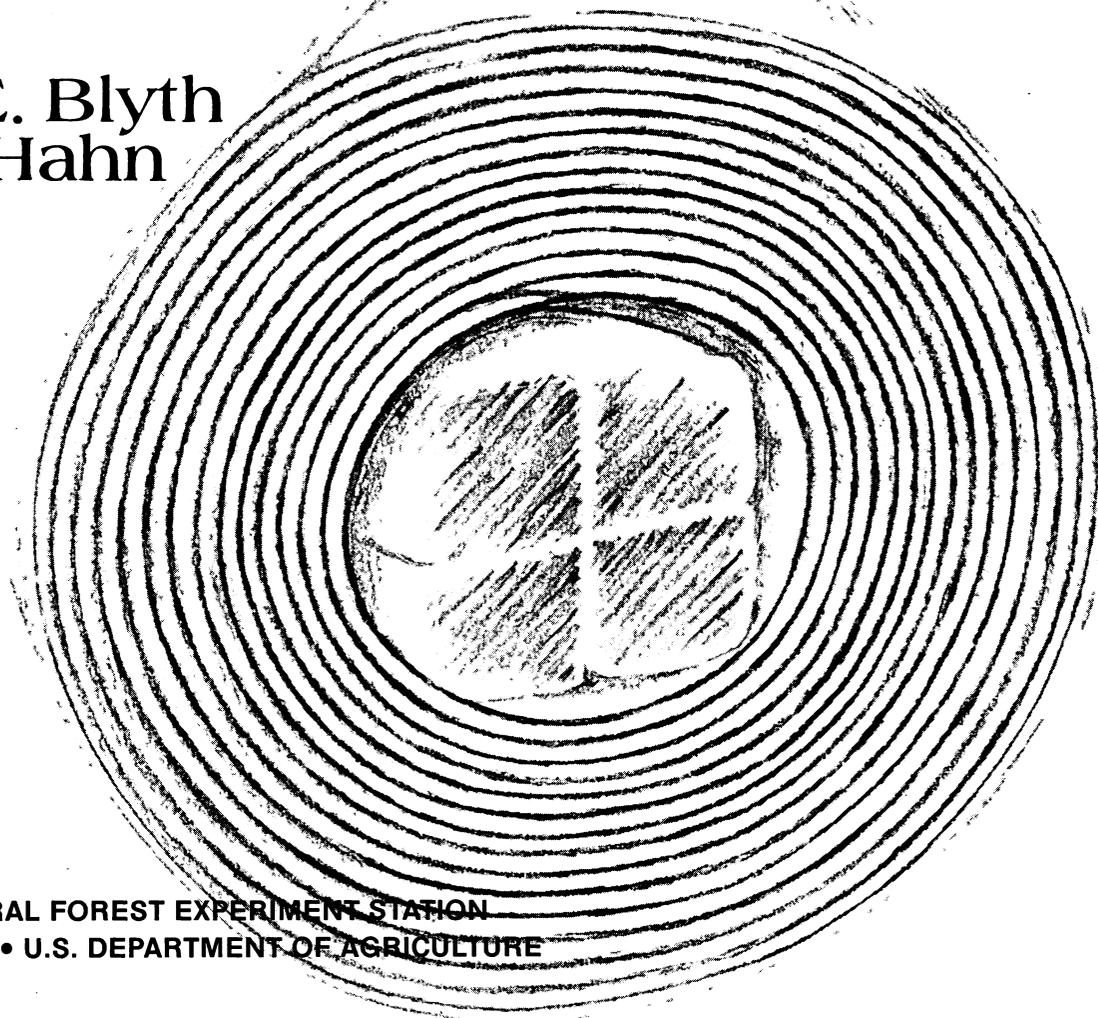


**VENEER - LOG
PRODUCTION
AND
RECEIPTS,
NORTH CENTRAL REGION
1976**

**James E. Blyth
Jerold T. Hahn**



**North Central Forest Experiment Station
John H. Ohman, Director
Forest Service - U.S. Department of Agriculture
1992 Folwell Avenue
St. Paul, Minnesota 55108**

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HIGHLIGHTS

Lake States

In 1976 veneer log production was 69.6 million board feet, up 1 percent from 1974. Upward trends in production from hard maple, red oak, and elm continued. Log exports increased 19 percent from 1974 to 6.3 million board feet. Michigan outproduced Wisconsin for the first year recorded since 1956.

Veneer log receipts were off 2 percent from 1974 at 66.3 million board feet. Demand fell significantly for aspen and soft maple. Imports from Canada were only one-half million board feet.

Thirty-four percent of fine residue and 28 percent of the bark residue at veneer plants was not used and presents a disposal problem that may be alleviated by expanded use as industrial fuel.

Central States

Central States loggers harvested 27.4 million board feet of veneer logs in 1976, off 6 percent from 1974. White oak was the leading species harvested, displacing walnut for the first time recorded. Compared to 1974, exports rose 14 percent to 6.3 million board feet. Missouri may become a more important veneer log source if red and white oak continue to be favored species.

Compared to 1974, veneer logs receipts fell 9 percent to 36.1 million board feet. Imports of 15.0 million board feet came from 18 other states.

Disposal of wood and bark residue at mills is not a problem; only 6 percent of the wood and 7 percent of the bark was not used.

VENEER-LOG PRODUCTION AND RECEIPTS, NORTH CENTRAL REGION, 1976

**James E. Blyth, Principal Market Analyst
and Jerold T. Hahn, Mensurationist**

This report of 1976 veneer log production and receipts in the North Central Region is a continuation of a series begun more than 20 years ago. Veneer logs constitute the third most valuable roundwood product harvested (about \$26 million F.O.B. mill) in the Region, outranked only by pulpwood and saw logs.

Current detailed veneer log production¹ and receipt information is necessary for intelligent planning and decisionmaking in wood procurement, forest resource management, and forest industry development. In addition, researchers need veneer log harvest and receipt information for planning projects and analyzing and appraising the veneer industry.

All but one veneer mill in the United States and Canada using North Central States timber reported their veneer log receipts in 1976 by species groups and State of origin. Their cooperation is gratefully acknowledged. Receipts were estimated for the nonresponding mill. Statistics for one large specialty veneer mill are excluded from this report to avoid disclosure of its operations (fig. 1). Data on logs exported to countries other than Canada are not shown.

All of the mills, except those in the northeast, were canvassed by this Station. A similar study by the Northeastern Forest Experiment Station

¹*Production is the volume of veneer logs cut from a specific area; receipts are the volume of veneer logs received by mills in a specific area regardless of geographic source.*

provided data for veneer logs harvested in North Central States that were shipped to northeastern mills.

This report presents the results of the survey, analyzes and interprets the data where appropriate, compares results with 1974 or earlier years, and discusses trends in veneer log production and use. After a brief national overview, the report is divided into two sections—Lake States (Michigan, Minnesota, and Wisconsin) and Central States (Illinois, Indiana, Iowa, and Missouri)—because different species are grown and used as veneer logs in each area. Moreover, less information can be released about the Central States because more detailed data would reveal the operations of individual mills.

Fifty-six veneer mills operated in the Region in 1976; 38 were standard² veneer mills and 18 were container³ veneer mills. Since 1974 two standard veneer mills closed (one in Wisconsin and one in Michigan), two merged in Indiana, and a large one began operating in Michigan. No container veneer mills completely ceased production, but two or three appear to be marginal operations.

²*Commercial, face, and specialty veneer mills that manufacture veneer used in doors, furniture, wall panels, exterior sheathing, specialty plywood, and similar items.*

³*Mills that manufacture veneer used in boxes, crates, packing cases, and other wood veneer containers.*

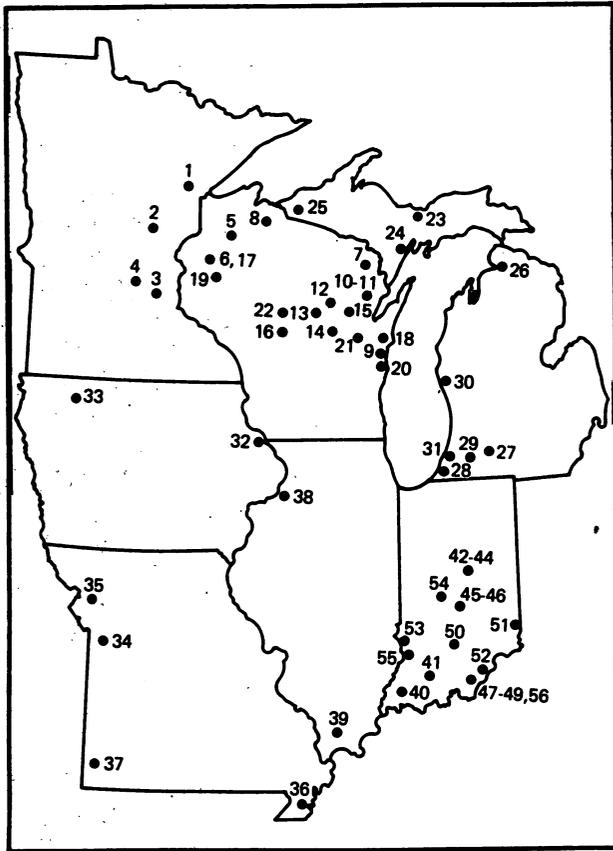


Figure 1.—Location of active veneer mills in the North Central Region, 1976.

NATIONAL OVERVIEW

Hardwood plywood production recovered in 1976 from 1975, but remained 11 percent below 1974 at 1.463 billion square feet⁴ surface measure. Annual imports (for consumption) of hardwood plywood rose 44 percent between 1974 and 1976. Thus domestic manufacturers are facing severe competition from foreign sources.

Housing and furniture markets improved during 1976. Demand for high-grade veneers for furniture remained strong as walnut, red oak, pecan, maple, and cherry continued to dominate the market. However, veneer producers faced difficulties in marketing lower grade veneers because many furniture manufacturers switched

⁴Source: U.S. Department of Commerce, Bureau of the Census. Current Industrial Report Series MA-24F.

| MINNESOTA | | | | | |
|--------------|--------------------|--|---------------------------|----------------------------|----------|
| Type of mill | Number | Name of mill | Location | | |
| Standard | 1 | Diamond International Co. ¹ | Cloquet | | |
| | 2 | Wahkon Veneer Mills | Wahkon | | |
| | Container | 3 | Allen Wood Products, Inc. | Hopkins | |
| | | 4 | Elk River Box Company | Elk River | |
| WISCONSIN | | | | | |
| Standard | 5 | Birchwood Lumber & Veneer Co. | Birchwood | | |
| | 6 | Birchwood Mfg. Co. | Rice Lake | | |
| | 7 | Louisiana-Pacific Corp. | Goodman | | |
| | 8 | Louisiana-Pacific Corp. | Mellen | | |
| | 9 | Eggers Plywood Co. | Two Rivers | | |
| | 10 | Gillett Veneer & Plywood Co. | Gillett | | |
| | 11 | Linwood, Inc. | Gillett | | |
| | 12 | Wisconsin Timber & Land Co. | Matoon | | |
| | 13 | Hatley Veneer Co., Inc. | Hatley | | |
| | 14 | Marion Plywood Corp. | Marion | | |
| | 15 | Weber Veneer & Plywood Co. | Shawano | | |
| | Container | 16 | Weyerhaeuser Co. | Marshfield | |
| | | 17 | Bruneete Box & Veneer | Rice Lake | |
| | | 18 | Dufeck Mfg. Co. | Denmark | |
| | | 19 | Ebner Box Factory | Cameron | |
| | | 20 | Konz Container Co. | Howard Grove | |
| | | 21 | Seymour Woodenware Co. | Seymour | |
| | | 22 | Standard Container Co. | Edgar | |
| | | MICHIGAN | | | |
| | | Standard | 23 | Cliffs Forest Products Co. | Munsing |
| | | | 24 | Anthony & Co. | Escanaba |
| 25 | Iron Wood Products | | Bessemer | | |
| 26 | Manthei Bros. | | Petosky | | |
| Container | 27 | | A. C. Hensel Mfg. Co. | Augusta | |
| | 28 | | Anderson Container Co. | Stevensville | |
| | 29 | Fruit Growers Package Co. | Paw Paw | | |
| | 30 | Michigan Crate & Basket | Shelby | | |
| | 31 | Riverside Package Co. | Riverside | | |
| IOWA | | | | | |
| Standard | 32 | R. S. Bacon Veneer Co. | Dubuque | | |
| | 33 | Iowa Veneers, Inc. | Spencer | | |
| MISSOURI | | | | | |
| Standard | 34 | Vario Veneer Corp. | Pleasant Hill | | |
| | 35 | Missouri Valley Walnut Co. | St. Joseph | | |
| Container | 36 | Betz Tipton Veneer Co. | Caruthersville | | |
| | 37 | Crumbliss Wood Products | Neosho | | |
| ILLINOIS | | | | | |
| Standard | 38 | Swords Veneer & Lumber Co. | Rock Island | | |
| | 39 | The Martin Bros. Container & Timber Products, Inc. | Karnak | | |
| INDIANA | | | | | |
| Standard | 40 | Evansville Veneer Co. | Evansville | | |
| | 41 | Jasper Veneer Mills | Jasper | | |
| | 42 | Central Veneer Co., Inc. | Indianapolis | | |
| | 43 | Curry Miller Veneers, Inc. | Indianapolis | | |
| | 44 | Indiana Veneers, Inc. | Indianapolis | | |
| | 45 | David R. Webb Co. | Edinburg | | |
| | 46 | Amos Hill Veneer Co. | Edinburg | | |
| | 47 | B. L. Curry & Sons | New Albany | | |
| | 48 | Chester B. Stem, Inc. | New Albany | | |
| | 49 | Adams Custom Veneer Co. | New Albany | | |
| | 50 | National Veneer & Lumber Co. | Seymour | | |
| | 51 | Pierson-Holowell Co., Inc. | Lawrenceburg | | |
| | 52 | Roberts & Strack Veneer Co. | Clarksville | | |
| | 53 | Ford Sawmill Inc. (Veneer Div.) | Vincennes | | |
| | 54 | Theising Veneer Co., Inc. | Mooresville | | |
| | Container | 55 | Farrell Box Co., Inc. | Decker | |
| 56 | | New Albany Box & Basket Co., Inc. | New Albany | | |

¹Receipts not recorded to avoid disclosure of operations at this mill.

from low-grade veneers for backs and drawer bottoms to prefabricated imports of these items or to hardboard or other materials.

Private housing starts were 1,540,000 units in 1976, a rise of 33 percent from the 29-year production low of 1975. Rising housing starts lead to better markets for veneer producers serving the wall paneling, kitchen cabinet, door, and furniture manufacturers.

Spending for home improvements has grown rapidly from about \$12 billion in 1968 to nearly \$30 billion in 1976. Popular items for the do-it-yourselfer have been two hardwood plywood products—prefinished wall paneling and laminated block flooring.

LAKE STATES

Production

Loggers harvested 69.6 million board feet of veneer logs in the Lake States in 1976, a gain of 900,000 board feet from 1974. More than 90 percent of the harvest was standard veneer logs; the rest was container veneer logs. Log markets strengthened in 1976 because the housing and furniture industries were recovering from low levels of production during 1974 and 1975. Many of the standard veneer mills sell veneer and plywood products to the housing and furniture suppliers and manufacturers.

Five species accounted for 85 percent of the total volume:

| Species | Million board feet |
|--------------|--------------------|
| Aspen | 21.8 |
| Hard maple | 14.0 |
| Red oak | 11.8 |
| Elm | 6.7 |
| Yellow birch | 4.5 |

Recent upward trends continued in 1976 in hard maple, red oak, and elm veneer log production (fig. 2). Annual elm harvests are rising because high-quality logs are being salvaged from trees infected with Dutch Elm disease. Major changes in veneer log production between 1974 and 1976 were:

| Species | Thousand board feet | Percent |
|------------|---------------------|---------|
| Aspen | -2,432 | -10 |
| Hard maple | +2,312 | +20 |
| Soft maple | -967 | -48 |

Log exports from the Lake States increased 19 percent from 1974 to 6.3 million board feet. Major export markets by volume were:

| Destination | Thousand board feet |
|-------------|---------------------|
| Indiana | 2,618 |
| Canada | 2,425 |
| Kentucky | 614 |

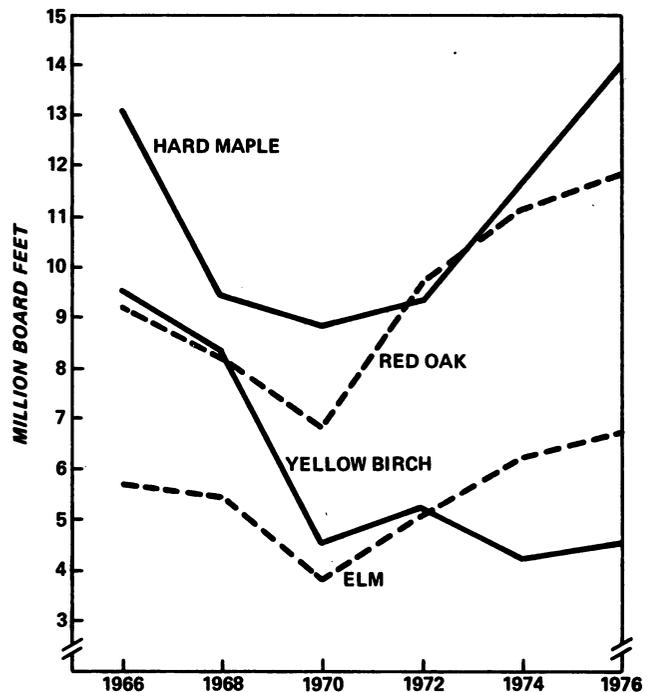


Figure 2.—Veneer-log production of four major species for selected years, Lake States, 1966-1976.

Michigan outproduced Wisconsin for the first recorded year since 1956 with a harvest of 33.4 million board feet. The new Michigan mill provided another important market for Michigan logs. Principal species cut were aspen and hard maple. Hard maple log production rose 2.5 million board feet above 1974. Wisconsin mills received 31 percent of the volume and 14 percent went outside the Lake States. Major species shipped out-of-state were hard maple, red oak, and yellow birch.

Wisconsin cut 31.7 million board feet of veneer logs, primarily aspen, red oak, elm, and hard maple. Aspen output fell 3.8 million board feet from 1974. Less than 4 percent of the harvest was

shipped outside the Lake States because of the large concentration of mills in and near Wisconsin.

Of the 4.6 million board feet of veneer logs produced in Minnesota, out-of-state mills procured 89 percent. Red oak, elm, and aspen were the primary species cut.

Mill Receipts

Veneer log receipts at Lake States mills fell 1.2 million board feet from 1974 to 66.3 million board feet in 1976. Demand dropped significantly for aspen and soft maple. Imports from Canada were one-half million board feet, down 76 percent from 1974. Import reductions from Canada were mainly hard maple and yellow birch.

Wisconsin veneer mills received 37.0 million board feet of veneer logs in 1976 compared with 41.6 million board feet in 1974. Major species procured were red oak, hard maple, elm, and yellow birch. Wisconsin forests supplied 56 percent of the volume, Michigan 28 percent, and Minnesota 8 percent. Nearly all (96 percent) of the imports to the Lake States from other States and Canada were shipped to Wisconsin.

Receipts rose in 1976 at nine Michigan mills to 28.8 million board feet from 25.3 million board feet in 1974. Aspen and hard maple accounted for 86 percent of the volume. Lake States forests furnished all the logs shipped to Michigan.

Minnesota's mills received 0.6 million board feet of veneer logs, unchanged from 1974.

Plant Residue ⁵

As in 1974, more than 99 percent of the coarse residue generated at Lake States veneer mills was used. However, the use of the coarse residue changed because of the energy crisis. Coarse residue use for industrial fuel tripled between 1974 and 1976 while use of coarse residue for fiber products was halved. Meanwhile, use of fine

⁵Plant residue at veneer mills is classed as: (1) bark; (2) coarse (wood)—suitable for chipping, such as veneer cores; (3) fine (wood)—not suitable for chipping, such as veneer clippings.

residue for industrial fuel climbed to 58 percent of the total from 32 percent, and the same use of bark increased to 69 percent from 59 percent. The 34 percent of the fine residue and 28 percent of the bark not used has potential use as fuel.

CENTRAL STATES

Production

Central States loggers cut 27.4 million board feet of veneer logs in 1976, off 6 percent since 1974 and about 10 million board feet less than a decade earlier (fig. 3). Of this total, 87 percent (23.8 million board feet) was standard veneer logs, and the remainder was used for container veneer.

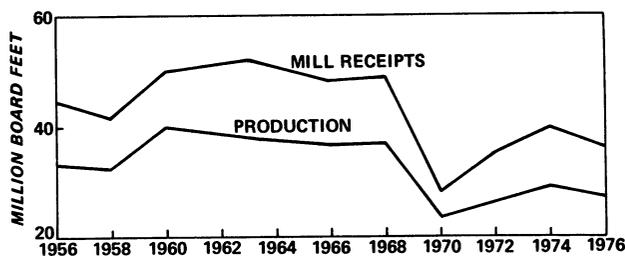


Figure 3.—Veneer-log production and mill receipts in the Central States, 1956-1976.

Major species cut were:

| Species | Million board feet |
|------------|--------------------|
| White oak | 7.7 |
| Walnut | 7.6 |
| Red oak | 3.8 |
| Cottonwood | 2.3 |

For the first time recorded, walnut was not the leading species harvested. White oak production advanced from only 1.7 million board feet cut in 1970 to the top position. Oak showed strong gains in importance for furniture in 1976. Red oak, also heavily used for furniture and cabinets, displaced cottonwood (used for containers) for third place in volume cut.

Principal harvest changes between 1974 and 1976 were:

| Species | Thousands board feet |
|------------|----------------------|
| White oak | +2,516 |
| Red Oak | +853 |
| Cottonwood | -1,692 |
| Walnut | -964 |

Exports moved 14 percent higher than in 1974 to 6.3 million board feet; primary buyers were in Kentucky (38 percent), Wisconsin (38 percent), and Ohio (9 percent).

Indiana supplied more than half (55 percent) of the Central States veneer log harvest. More than four-fifths of Indiana's production remained in the State. Iowa, the most lightly forested of the Central States, was the second-place producer, but relies heavily on Wisconsin markets for veneer logs. Missouri, heavily forested with oak, furnished only 10 percent of the veneer-log volume and only 8 percent of the oak harvest. If red and white oak continue to be favored veneer species, Missouri is likely to be a more important source of veneer logs.

Mill Receipts

Veneer log receipts dipped to 36.1 million board feet at 25 Central States mills in 1976 from 39.7 million board feet in 1974. Fifteen million board feet were imported from 18 other states representing all areas of the country except the far West. Ohio, Kentucky, Michigan, Oklahoma, and Pennsylvania each supplied more than one million board feet. Major imports included white oak from Ohio, pecan from Oklahoma, and hard maple from Michigan.

Indiana's 17 veneer mills received 83 percent of the total log receipts in 1976 including more than 90 percent of the pecan, black cherry, yellow-poplar, and hard maple.

Plant Residue

Disposal of wood and bark residue at mills is not a problem; only 6 percent of the wood and 7 percent of the bark was not used. Bark used increased from 70 percent in 1974 to 93 percent in 1976. Veneer mills burned nearly two-thirds of the residue as fuel. Other uses were for pulp manufacturing, mulch, and livestock bedding.

APPENDIX

Table 1.—*Production and imports of veneer logs, Lake States, 1976*
(In thousand board feet, International 1/4-inch log rule)

| SPECIES AND DESTINATION | PRODUCTION BY STATES 1/ | | | | IMPORTS | | | TOTAL RECEIPTS 2/ |
|----------------------------|-------------------------|------------|--------------|-------------------|---------------|----------|------------------|----------------------|
| | MICHIGAN | MINNESOTA | WISCONSIN | REGIONAL TOTAL | OTHER U.S. | CANADA | TOTAL IMPORTS | |
| PINE | | | | | | | | |
| MICHIGAN | 0 | 0 | 108 | 108 | 0 | 0 | 0 | 108 |
| WISCONSIN | 106 | 0 | 188 | 294 | 0 | 0 | 0 | 294 |
| TOTAL | 106 | 0 | 296 | 402 | 0 | 0 | 0 | 402 |
| ASH | | | | | | | | |
| MICHIGAN | 67 | 0 | 0 | 67 | 0 | 0 | 0 | 67 |
| WISCONSIN | 49 | 31 | 761 | 841 | 34 | 0 | 34 | 875 |
| EXPORTED 3/ | 29 | 2 | 26 | 57 | 0 | 0 | 0 | 0 |
| TOTAL | 145 | 33 | 787 | 965 | 34 | 0 | 34 | 942 |
| ASPEN | | | | | | | | |
| MICHIGAN | 10939 | 418 | 9614 | 20971 | 0 | 0 | 0 | 20971 |
| MINNESOTA | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 6 |
| WISCONSIN | 18 | 0 | 465 | 483 | 0 | 0 | 0 | 483 |
| EXPORTED 3/ | 0 | 368 | 0 | 368 | 0 | 0 | 0 | 0 |
| TOTAL | 10957 | 786 | 10085 | 21828 | 0 | 0 | 0 | 21460 |
| BASSWOOD | | | | | | | | |
| MICHIGAN | 346 | 0 | 0 | 346 | 0 | 0 | 0 | 346 |
| MINNESOTA | 0 | 191 | 0 | 191 | 0 | 0 | 0 | 191 |
| WISCONSIN | 170 | 265 | 982 | 1417 | 300 | 0 | 300 | 1717 |
| EXPORTED 3/ | 115 | 0 | 0 | 115 | 0 | 0 | 0 | 0 |
| TOTAL | 631 | 456 | 982 | 2069 | 300 | 0 | 300 | 2254 |
| BEECH | | | | | | | | |
| MICHIGAN | 437 | 0 | 0 | 437 | 0 | 0 | 0 | 437 |
| WISCONSIN | 546 | 0 | 11 | 557 | 0 | 0 | 0 | 557 |
| EXPORTED 3/ | 177 | 0 | 0 | 177 | 0 | 0 | 0 | 0 |
| TOTAL | 1160 | 0 | 11 | 1171 | 0 | 0 | 0 | 994 |
| BLACK CHERRY | | | | | | | | |
| MICHIGAN | 92 | 0 | 0 | 92 | 0 | 0 | 0 | 92 |
| WISCONSIN | 21 | 0 | 66 | 87 | 11 | 0 | 11 | 98 |
| EXPORTED 3/ | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 |
| TOTAL | 179 | 0 | 66 | 245 | 11 | 0 | 11 | 190 |

TABLE 1 CONTINUED ON NEXT PAGE

TABLE 1 CONTINUED

| SPECIES AND DESTINATION | PRODUCTION BY STATES 1/ | | | | IMPORTS | | | TOTAL |
|----------------------------|-------------------------|-----------|-----------|----------|---------|--------|---------|-------------|
| | MICHIGAN | MINNESOTA | WISCONSIN | REGIONAL | OTHER | CANADA | TOTAL | RECEIPTS 2/ |
| | | | | TOTAL | U.S. | | IMPORTS | |
| BUTTERNUT | | | | | | | | |
| WISCONSIN | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 14 |
| EXPORTED 3/ | 1 | 0 | 184 | 185 | 0 | 0 | 0 | 0 |
| TOTAL | 1 | 0 | 198 | 199 | 0 | 0 | 0 | 14 |
| COTTONWOOD | | | | | | | | |
| MICHIGAN | 559 | 0 | 0 | 559 | 0 | 0 | 0 | 559 |
| MINNESOTA | 0 | 43 | 0 | 43 | 0 | 0 | 0 | 43 |
| WISCONSIN | 0 | 83 | 749 | 832 | 0 | 0 | 0 | 832 |
| TOTAL | 559 | 126 | 749 | 1434 | 0 | 0 | 0 | 1434 |
| ELM | | | | | | | | |
| MICHIGAN | 19 | 0 | 108 | 127 | 0 | 0 | 0 | 127 |
| WISCONSIN | 1108 | 628 | 4478 | 6214 | 3 | 0 | 3 | 6217 |
| EXPORTED 3/ | 59 | 161 | 140 | 360 | 0 | 0 | 0 | 0 |
| TOTAL | 1186 | 789 | 4726 | 6701 | 3 | 0 | 3 | 6344 |
| GUM | | | | | | | | |
| MICHIGAN | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| TOTAL | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| HARD MAPLE | | | | | | | | |
| MICHIGAN | 3645 | 0 | 0 | 3645 | 0 | 0 | 0 | 3645 |
| MINNESOTA | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 5 |
| WISCONSIN | 4835 | 186 | 3363 | 8384 | 122 | 234 | 356 | 8740 |
| EXPORTED 3/ | 1968 | 0 | 16 | 1984 | 0 | 0 | 0 | 0 |
| TOTAL | 10448 | 191 | 3379 | 14018 | 122 | 234 | 356 | 12390 |
| PAPER BIRCH | | | | | | | | |
| MICHIGAN | 625 | 0 | 0 | 625 | 0 | 0 | 0 | 625 |
| WISCONSIN | 207 | 137 | 255 | 599 | 0 | 85 | 85 | 684 |
| EXPORTED 3/ | 0 | 12 | 0 | 12 | 0 | 0 | 0 | 0 |
| TOTAL | 832 | 149 | 255 | 1236 | 0 | 85 | 85 | 1309 |
| PECAN | | | | | | | | |
| EXPORTED 3/ | 49 | 0 | 7 | 56 | 0 | 0 | 0 | 0 |
| TOTAL | 49 | 0 | 7 | 56 | 0 | 0 | 0 | 0 |
| RED OAK | | | | | | | | |
| MICHIGAN | 224 | 0 | 0 | 224 | 0 | 0 | 0 | 224 |
| MINNESOTA | 0 | 87 | 0 | 87 | 0 | 0 | 0 | 87 |
| WISCONSIN | 1201 | 1565 | 7232 | 9998 | 1746 | 0 | 1746 | 11744 |
| EXPORTED 3/ | 1389 | 24 | 114 | 1527 | 0 | 0 | 0 | 0 |
| TOTAL | 2814 | 1676 | 7346 | 11836 | 1746 | 0 | 1746 | 12055 |

TABLE 1 CONTINUED ON NEXT PAGE

TABLE 1. CONTINUED

| SPECIES AND DESTINATION | PRODUCTION BY STATES ^{1/} | | | | IMPORTS | | | TOTAL RECEIPTS ^{2/} |
|----------------------------|------------------------------------|-----------|-----------|-------------------|---------------|--------|------------------|---------------------------------|
| | MICHIGAN | MINNESOTA | WISCONSIN | REGIONAL TOTAL | OTHER U.S. | CANADA | TOTAL IMPORTS | |
| SOFT MAPLE | | | | | | | | |
| MICHIGAN | 248 | 0 | 0 | 248 | 0 | 0 | 0 | 248 |
| MINNESOTA | 0 | 82 | 26 | 108 | 133 | 0 | 133 | 241 |
| WISCONSIN | 130 | 42 | 514 | 686 | 184 | 0 | 184 | 870 |
| EXPORTED ^{3/} | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 |
| TOTAL | 385 | 124 | 540 | 1049 | 317 | 0 | 317 | 1359 |
| SYCAMORE | | | | | | | | |
| MICHIGAN | 61 | 0 | 0 | 61 | 0 | 0 | 0 | 61 |
| WISCONSIN | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 11 |
| TOTAL | 61 | 0 | 0 | 61 | 11 | 0 | 11 | 72 |
| WALNUT | | | | | | | | |
| EXPORTED ^{3/} | 169 | 9 | 531 | 709 | 0 | 0 | 0 | 0 |
| TOTAL | 169 | 9 | 531 | 709 | 0 | 0 | 0 | 0 |
| WHITE OAK | | | | | | | | |
| MICHIGAN | 50 | 0 | 0 | 50 | 0 | 0 | 0 | 50 |
| WISCONSIN | 1 | 0 | 47 | 48 | 0 | 0 | 0 | 48 |
| EXPORTED ^{3/} | 512 | 72 | 25 | 609 | 0 | 0 | 0 | 0 |
| TOTAL | 563 | 72 | 72 | 707 | 0 | 0 | 0 | 98 |
| YELLOW BIRCH | | | | | | | | |
| MICHIGAN | 1028 | 0 | 0 | 1028 | 0 | 0 | 0 | 1028 |
| WISCONSIN | 1870 | 77 | 1464 | 3411 | 0 | 175 | 175 | 3586 |
| EXPORTED ^{3/} | 35 | 0 | 0 | 35 | 0 | 0 | 0 | 0 |
| TOTAL | 2933 | 77 | 1464 | 4474 | 0 | 175 | 175 | 4614 |
| YELLOW-POPLAR | | | | | | | | |
| MICHIGAN | 170 | 0 | 0 | 170 | 0 | 0 | 0 | 170 |
| WISCONSIN | 18 | 16 | 161 | 195 | 0 | 0 | 0 | 195 |
| EXPORTED ^{3/} | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| TOTAL | 189 | 16 | 161 | 366 | 0 | 0 | 0 | 365 |
| OTHER HARDWOODS | | | | | | | | |
| WISCONSIN | 0 | 3 | 2 | 5 | 1 | 0 | 1 | 6 |
| EXPORTED ^{3/} | 0 | 52 | 28 | 80 | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 55 | 30 | 85 | 1 | 0 | 1 | 6 |
| ALL SPECIES | | | | | | | | |
| MICHIGAN | 18516 | 418 | 9830 | 28764 | 0 | 0 | 0 | 28764 |
| MINNESOTA | 0 | 408 | 32 | 440 | 133 | 0 | 133 | 573 |
| WISCONSIN | 10280 | 3033 | 20752 | 34065 | 2412 | 494 | 2906 | 36971 |
| EXPORTED ^{3/} | 4577 | 700 | 1071 | 6348 | 0 | 0 | 0 | 0 |
| TOTAL | 33373 | 4559 | 31685 | 69617 | 2545 | 494 | 3039 | 66308 |

^{1/} VERTICAL COLUMNS OF FIGURES UNDER BOX HEADING PRODUCTION BY STATES PRESENT THE AMOUNT OF VENEER LOGS CUT IN EACH STATE.

^{2/} PRODUCTION MINUS EXPORTS PLUS IMPORTS.

^{3/} VENEER LOGS SHIPPED TO STATES OUTSIDE THE LAKE STATES AND TO CANADA.

**Table 2.—Mills using five species of Lake States veneer logs,
by location, 1976
(In numbers)**

| Location | Red oak | Hard maple | Yellow birch | Elm | Aspen |
|-------------|---------|------------|--------------|-----|-------|
| Lake States | 16 | 15 | 9 | 15 | 9 |
| Indiana | 5 | 6 | -- | 1 | -- |
| Illinois | 1 | 1 | -- | 1 | -- |
| Iowa | -- | -- | -- | -- | -- |
| Ohio | -- | 1 | -- | -- | -- |
| Kentucky | 1 | 1 | -- | 1 | -- |
| Maryland | -- | -- | -- | 1 | -- |
| Canada | 2 | 2 | 1 | 1 | 1 |
| Total | 25 | 26 | 10 | 20 | 10 |

**Table 3.—Veneer-log production and receipts in the Lake
States by species, 1974 and 1976**

| Species | Production | | | Receipts | | |
|-----------------|------------|--------|----------|----------|--------|----------|
| | : 1974 | : 1976 | : change | : 1974 | : 1976 | : change |
| Ash | 752 | 979 | +227 | 944 | 1236 | +292 |
| Basswood | 263 | 316 | +53 | 69 | 43 | -26 |
| Black cherry | 198 | 135 | -63 | 809 | 660 | -149 |
| Butternut | 49 | 10 | -39 | 274 | 194 | -80 |
| Cottonwood | 3956 | 2264 | -16992 | 5615 | 2584 | -3031 |
| Elm | 664 | 42 | -622 | 714 | 221 | -493 |
| Gum | 1004 | 417 | -587 | 1070 | 432 | -638 |
| Hard maple | 1118 | 400 | -718 | 1292 | 1364 | +72 |
| Pecan (hickory) | 1166 | 975 | -191 | 3618 | 4293 | +675 |
| Red oak | 2944 | 3797 | +853 | 3828 | 3068 | -760 |
| Soft maple | 632 | 875 | +243 | 670 | 560 | -110 |
| Sycamore | 897 | 614 | -283 | 1026 | 651 | -375 |
| Walnut | 8518 | 7554 | -964 | 10107 | 8264 | -1843 |
| White oak | 5175 | 7691 | +2516 | 7679 | 10821 | +3142 |
| Yellow-poplar | 1225 | 1293 | +68 | 1268 | 1393 | +125 |
| Other species | 503 | 29 | -474 | 748 | 304 | -444 |
| Total | 29064 | 27391 | -1673 | 39731 | 36088 | -3643 |

Table 4.—Veneer-log production by species group for selected years,
Lake States, 1946-1976

(In million board feet, International 1/4-inch log rule)

| Year | Ash | Aspen | Bass- wood | Beech | Yellow birch | Cotton- wood | Elm | Hard maple | Soft maple | Red oak | White oak | Paper birch | Walnut | Other species | All species |
|------|-----|-------|---------------|-------|-----------------|-----------------|------|---------------|---------------|------------|--------------|----------------|--------|------------------|----------------|
| 1946 | 2.3 | 4.0 | 10.4 | 5.6 | 126.8 | 0.4 | 16.6 | 240.3 | -- | 33.1 | -- | -- | -- | 1.1 | 110.6 |
| 1952 | -- | 1.4 | 10.4 | 3.1 | 118.2 | -- | 11.5 | 223.8 | -- | 35.1 | -- | -- | -- | 4.7 | 78.2 |
| 1954 | .8 | .3 | 9.2 | 3.2 | 117.3 | 2.7 | 10.5 | 220.9 | -- | 35.5 | -- | -- | -- | 1.6 | 72.0 |
| 1956 | .7 | .8 | 10.3 | 5.7 | 120.3 | 2.1 | 9.6 | 20.1 | 3.7 | 34.5 | -- | -- | .3 | .9 | 79.0 |
| 1958 | .6 | 1.7 | 7.1 | 1.8 | 113.1 | 2.2 | 8.9 | 9.7 | 2.2 | 34.8 | -- | -- | .2 | .4 | 52.7 |
| 1960 | 1.0 | 2.1 | 6.2 | 1.0 | 114.1 | 1.9 | 5.1 | 10.9 | 2.9 | 37.6 | -- | -- | .6 | .6 | 54.0 |
| 1963 | .6 | 1.5 | 6.6 | .3 | 110.9 | .4 | 5.7 | 10.5 | 2.2 | 38.9 | -- | -- | 2.3 | .6 | 50.5 |
| 1965 | .7 | .6 | 6.0 | .5 | 111.3 | 1.4 | 6.3 | 11.8 | 1.8 | 39.0 | -- | -- | .9 | 1.4 | 51.7 |
| 1966 | 1.1 | .7 | 4.5 | .5 | 109.5 | 1.4 | 5.7 | 13.1 | 1.5 | 9.1 | .3 | -- | 1.5 | 2.0 | 50.9 |
| 1968 | 1.0 | .6 | 3.6 | .5 | 8.3 | 1.4 | 5.4 | 9.4 | 1.2 | 8.2 | .5 | 1.9 | 1.7 | 1.8 | 45.5 |
| 1970 | .4 | 1.3 | 3.2 | .3 | 4.4 | 1.3 | 3.8 | 8.8 | .8 | 6.8 | .3 | 1.2 | .6 | 1.2 | 34.4 |
| 1972 | .6 | 2.6 | 2.9 | 1.1 | 5.2 | 1.3 | 5.1 | 9.2 | 1.0 | 9.7 | .3 | 1.2 | 1.4 | .6 | 42.2 |
| 1974 | .9 | 24.2 | 2.4 | .7 | 4.2 | 1.8 | 6.1 | 11.7 | 2.0 | 11.1 | .6 | 1.3 | 1.0 | .7 | 68.7 |
| 1976 | 1.0 | 21.8 | 2.1 | 1.2 | 4.5 | 1.4 | 6.7 | 14.0 | 1.1 | 11.8 | .7 | 1.2 | .7 | 1.4 | 69.6 |

¹Includes paper birch.

²Includes soft maple.

³Includes white oak.

⁴Includes ash and cottonwood.

Table 5.—Veneer-log production for selected
years and type of industry, Lake States,
1946-1976

(In million board feet, International 1/4 log rule)

| Year | Standard | Container | Total |
|------|----------|-----------|-------|
| 1946 | 72.7 | 37.9 | 110.6 |
| 1948 | 71.7 | 45.1 | 116.8 |
| 1950 | 47.3 | 39.3 | 86.6 |
| 1952 | 46.8 | 31.4 | 78.2 |
| 1954 | 45.3 | 26.7 | 72.0 |
| 1956 | 51.6 | 27.4 | 79.0 |
| 1958 | 40.3 | 12.4 | 52.7 |
| 1960 | 46.5 | 7.5 | 54.0 |
| 1962 | 41.0 | 6.6 | 47.6 |
| 1963 | 43.9 | 6.6 | 50.5 |
| 1965 | 44.6 | 7.1 | 51.7 |
| 1966 | 45.0 | 5.9 | 50.9 |
| 1968 | 40.6 | 4.9 | 45.5 |
| 1970 | 29.4 | 5.0 | 34.4 |
| 1972 | 38.0 | 4.2 | 42.2 |
| 1974 | 64.1 | 4.6 | 68.7 |
| 1976 | 65.0 | 4.6 | 69.6 |

Table 6.—*Lake States veneer-log production, receipts, exports, and imports for selected years, 1946-1976*

(In million board feet, International 1/4-inch log rule)

| Year | : Produced in the Lake: : States and received : at Lake States mills: | : Exported ¹ | : Imported ² | : Total : production in : Lake States | : Total : receipts in : Lake States |
|------|---|-------------------------|-------------------------|---|---|
| 1946 | 109.7 | 0.9 | 5.9 | 110.6 | 115.6 |
| 1948 | 116.0 | .8 | 12.0 | 116.8 | 128.0 |
| 1950 | 86.0 | .6 | 15.7 | 86.6 | 101.7 |
| 1952 | 77.8 | .4 | 12.1 | 78.2 | 89.9 |
| 1954 | 71.6 | .4 | 12.1 | 72.0 | 83.7 |
| 1956 | 78.7 | .3 | 13.4 | 79.0 | 92.1 |
| 1958 | 51.5 | 1.2 | 6.0 | 52.7 | 57.5 |
| 1960 | 51.9 | 2.1 | 12.5 | 54.0 | 64.4 |
| 1963 | 45.0 | 5.5 | 7.7 | 50.5 | 52.7 |
| 1965 | 49.0 | 2.7 | 7.6 | 51.7 | 56.6 |
| 1966 | 45.8 | 5.1 | 9.6 | 50.9 | 55.4 |
| 1968 | 39.7 | 5.8 | 7.9 | 45.5 | 47.6 |
| 1970 | 31.4 | 3.0 | 5.6 | 34.4 | 37.0 |
| 1972 | 37.7 | 4.5 | 4.6 | 42.2 | 42.3 |
| 1974 | 63.4 | 5.3 | 4.1 | 68.7 | 67.5 |
| 1976 | 63.3 | 6.3 | 3.0 | 69.6 | 66.3 |

¹From Lake States to other States and Canada.

²From other States and Canada into Lake States.

Table 7.—*Veneer-log receipts in the Lake States by species groups for selected years, 1952-1976*

(In million board feet, International 1/4-inch log rule)

| Year | : Ash | : Aspen | : Bass- : wood | : Beech | : Yellow : birch | : Cotton- : wood | : Elm | : Hard : maple | : Soft : maple | : Red : oak | : White : oak | : Paper : birch | : Other : species | : All : species |
|------|-------|---------|-------------------|---------|---------------------|---------------------|-------|-------------------|-------------------|----------------|------------------|--------------------|----------------------|--------------------|
| 1952 | -- | 1.4 | 10.9 | 3.2 | 127.1 | -- | 11.7 | 224.9 | -- | 35.3 | -- | -- | 45.4 | 89.9 |
| 1954 | .8 | .3 | 10.3 | 3.2 | 125.0 | 2.7 | 10.9 | 222.4 | -- | 36.5 | -- | -- | 1.6 | 83.7 |
| 1956 | .7 | .8 | 10.6 | 5.7 | 128.5 | 3.0 | 10.2 | 21.9 | 4.7 | 5.0 | -- | -- | 1.0 | 92.1 |
| 1958 | .6 | 1.7 | 7.3 | 1.8 | 117.2 | 2.2 | 9.2 | 9.6 | 2.5 | 5.0 | -- | -- | .4 | 57.5 |
| 1960 | 1.1 | 2.1 | 6.8 | .9 | 118.9 | 3.3 | 6.2 | 12.2 | 3.6 | 8.4 | -- | -- | .9 | 64.4 |
| 1963 | .7 | 1.6 | 6.7 | .3 | 114.3 | .7 | 4.9 | 11.1 | 2.6 | 9.3 | -- | -- | .5 | 52.7 |
| 1965 | .7 | .6 | 6.3 | .5 | 114.5 | 2.1 | 6.3 | 13.2 | 1.9 | 9.3 | -- | -- | 1.2 | 56.6 |
| 1966 | 1.1 | .7 | 4.8 | .5 | 114.7 | 2.3 | 5.8 | 12.8 | 1.8 | 9.7 | .2 | -- | 1.0 | 55.4 |
| 1968 | 1.0 | .6 | 3.9 | .5 | 10.2 | 2.1 | 5.2 | 9.0 | 1.3 | 8.3 | .2 | 4.0 | 1.3 | 47.6 |
| 1970 | .3 | 1.3 | 3.6 | .3 | 6.1 | 1.4 | 3.8 | 9.0 | .9 | 7.7 | .2 | 1.9 | .5 | 37.0 |
| 1972 | .6 | 2.4 | 3.1 | .7 | 6.3 | 1.3 | 5.3 | 9.4 | 1.2 | 10.1 | .2 | 1.5 | .2 | 42.3 |
| 1974 | .9 | 24.3 | 2.6 | .5 | 4.6 | 1.8 | 5.7 | 11.9 | 2.3 | 11.1 | .1 | 1.3 | .4 | 67.5 |
| 1976 | .9 | 21.5 | 2.2 | 1.0 | 4.6 | 1.4 | 6.3 | 12.4 | 1.4 | 12.1 | .1 | 1.3 | 1.1 | 66.3 |

¹Includes paper birch.

²Includes soft maple.

³Includes white oak.

⁴Includes ash and cottonwood.

Table 8.—Production and disposition of hardwood veneer plant residue by type of residue and use, Lake States, 1976

(In thousand cubic feet)

| State and type of use | Wood residue | | | Bark |
|------------------------------------|---------------|---------------------|-------------------|---------------|
| | Total | Coarse ¹ | Fine ² | |
| Illinois, Iowa and Missouri | | | | |
| Fiber products | 32.0 | 32.0 | -- | -- |
| Industrial fuel | 221.3 | 49.9 | 171.4 | 103.4 |
| Domestic fuel | 7.4 | 7.4 | -- | .5 |
| Miscellaneous ³ | 19.7 | 19.7 | -- | 13.1 |
| Not used ⁴ | 160.3 | 60.0 | 100.3 | 70.2 |
| Total | 440.7 | 169.0 | 271.7 | 187.2 |
| Indiana | | | | |
| Fiber products | 342.3 | 149.3 | 193.0 | -- |
| Industrial fuel | 1484.4 | 341.5 | 1142.9 | 738.7 |
| Domestic fuel | 3.5 | 3.5 | -- | -- |
| Miscellaneous ³ | 339.8 | 339.8 | -- | 179.8 |
| Not used ⁴ | 4.4 | -- | 4.4 | 5.1 |
| Total | 2174.4 | 834.41 | 1340.3 | 923.6 |
| All Central States | | | | |
| Fiber products | 347.3 | 181.3 | 193.0 | -- |
| Industrial fuel | 1705.7 | 391.4 | 1314.3 | 842.1 |
| Domestic fuel | 10.9 | 10.9 | -- | .5 |
| Miscellaneous ³ | 359.5 | 359.5 | -- | 192.9 |
| Not used ⁴ | 164.7 | 60.0 | 104.7 | 75.3 |
| Total | 2615.1 | 1003.1 | 1612.0 | 1110.8 |

¹Suitable for chipping, such as veneer cores.

²Not suitable for chipping, such as veneer clippings.

³Livestock bedding, mulch, small dimension and specialty items.

⁴Including residues burned as waste.

Table 9.—Production and imports of veneer logs, Central States, 1976

(In thousand board feet, International 1/4-inch log rule)

| SPECIES AND DESTINATION | PRODUCTION BY STATES 1/ | | | | | IMPORTS | | | TOTAL RECEIPTS 2/ |
|----------------------------|-------------------------|---------|------|----------|-------------------|----------------|---------------|------------------|----------------------|
| | ILLINOIS | INDIANA | IOWA | MISSOURI | REGIONAL TOTAL | LAKE STATES | OTHER U.S. | TOTAL IMPORTS | |
| PINE | | | | | | | | | |
| INDIANA | 0 | 0 | 0 | 0 | 0 | 0 | 257 | 257 | 257 |
| ILL., IOWA, MO. | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 6 | 6 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 | 263 | 263 | 263 |
| ASH | | | | | | | | | |
| INDIANA | 18 | 469 | 0 | 0 | 487 | 0 | 295 | 295 | 782 |
| ILL., IOWA, MO. | 11 | 38 | 284 | 23 | 356 | 27 | 71 | 98 | 454 |
| EXPORTED 3/ | 0 | 102 | 34 | 0 | 136 | 0 | 0 | 0 | 0 |
| TOTAL | 29 | 609 | 318 | 23 | 979 | 27 | 366 | 393 | 1236 |
| PASSWOOD | | | | | | | | | |
| INDIANA | 0 | 15 | 0 | 0 | 15 | 27 | 0 | 27 | 42 |
| ILL., IOWA, MO. | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| EXPORTED 3/ | 0 | 0 | 300 | 0 | 300 | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 15 | 301 | 0 | 316 | 27 | 0 | 27 | 43 |
| BLACK CHERRY | | | | | | | | | |
| INDIANA | 1 | 94 | 0 | 0 | 95 | 57 | 457 | 514 | 609 |
| ILL., IOWA, MO. | 0 | 5 | 24 | 0 | 29 | 0 | 22 | 22 | 51 |
| EXPORTED 3/ | 0 | 0 | 11 | 0 | 11 | 0 | 0 | 0 | 0 |
| TOTAL | 1 | 99 | 35 | 0 | 135 | 57 | 479 | 536 | 660 |
| BUTTERNUT | | | | | | | | | |
| INDIANA | 0 | 0 | 0 | 0 | 0 | 179 | 0 | 179 | 179 |
| ILL., IOWA, MO. | 4 | 0 | 6 | 0 | 10 | 5 | 0 | 5 | 15 |
| TOTAL | 4 | 0 | 6 | 0 | 10 | 184 | 0 | 184 | 194 |
| COTTONWOOD | | | | | | | | | |
| INDIANA | 65 | 668 | 0 | 0 | 733 | 0 | 99 | 99 | 832 |
| ILL., IOWA, MO. | 1421 | 0 | 0 | 110 | 1531 | 0 | 221 | 221 | 1752 |
| TOTAL | 1486 | 668 | 0 | 110 | 2264 | 0 | 320 | 320 | 2584 |
| ELM | | | | | | | | | |
| INDIANA | 0 | 2 | 8 | 0 | 10 | 73 | 0 | 73 | 83 |
| ILL., IOWA, MO. | 7 | 0 | 21 | 0 | 28 | 110 | 0 | 110 | 138 |
| EXPORTED 3/ | 0 | 1 | 3 | 0 | 4 | 0 | 0 | 0 | 0 |
| TOTAL | 7 | 3 | 32 | 0 | 42 | 183 | 0 | 183 | 221 |

TABLE 9 CONTINUED ON NEXT PAGE

TABLE 9 CONTINUED

| SPECIES AND DESTINATION | PRODUCTION BY STATES 1/ | | | | | IMPORTS | | | TOTAL RECEIPTS 2/ |
|-------------------------|-------------------------|-------------|-------------|-------------|----------------|-------------|-------------|---------------|-------------------|
| | ILLINOIS | INDIANA | IOWA | MISSOURI | REGIONAL TOTAL | LAKE STATES | OTHER U.S. | TOTAL IMPORTS | |
| | | | | | | | | | |
| GUM | | | | | | | | | |
| INDIANA | 2 | 386 | 0 | 0 | 388 | 0 | 41 | 41 | 429 |
| ILL., IOWA, MO. | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| EXPORTED 3/ | 19 | 0 | 0 | 7 | 26 | 0 | 0 | 0 | 0 |
| TOTAL | 24 | 386 | 0 | 7 | 417 | 0 | 41 | 41 | 432 |
| HARD MAPLE | | | | | | | | | |
| INDIANA | 0 | 265 | 0 | 0 | 265 | 998 | 57 | 1055 | 1320 |
| ILL., IOWA, MO. | 4 | 7 | 1 | 0 | 12 | 32 | 0 | 32 | 44 |
| EXPORTED 3/ | 0 | 1 | 122 | 0 | 123 | 0 | 0 | 0 | 0 |
| TOTAL | 4 | 273 | 123 | 0 | 400 | 1030 | 57 | 1087 | 1364 |
| PECAN | | | | | | | | | |
| INDIANA | 151 | 331 | 0 | 54 | 536 | 22 | 3364 | 3386 | 3922 |
| ILL., IOWA, MO. | 4 | 5 | 271 | 91 | 371 | 0 | 0 | 0 | 371 |
| EXPORTED 3/ | 8 | 18 | 0 | 42 | 68 | 0 | 0 | 0 | 0 |
| TOTAL | 163 | 354 | 271 | 187 | 975 | 22 | 3364 | 3386 | 4293 |
| RED OAK | | | | | | | | | |
| INDIANA | 42 | 1283 | 0 | 0 | 1325 | 682 | 667 | 1349 | 2674 |
| ILL., IOWA, MO. | 35 | 40 | 279 | 2 | 356 | 35 | 5 | 38 | 394 |
| EXPORTED 3/ | 144 | 360 | 1602 | 10 | 2116 | 0 | 0 | 0 | 0 |
| TOTAL | 221 | 1683 | 1881 | 12 | 3797 | 715 | 672 | 1387 | 3068 |
| SOFT MAPLE | | | | | | | | | |
| INDIANA | 44 | 265 | 0 | 0 | 309 | 0 | 20 | 20 | 329 |
| ILL., IOWA, MO. | 231 | 0 | 0 | 0 | 231 | 0 | 0 | 0 | 231 |
| EXPORTED 3/ | 17 | 1 | 264 | 53 | 335 | 0 | 0 | 0 | 0 |
| TOTAL | 292 | 266 | 264 | 53 | 875 | 0 | 20 | 20 | 560 |
| SYCAMORE | | | | | | | | | |
| INDIANA | 0 | 518 | 0 | 0 | 518 | 0 | 114 | 114 | 632 |
| ILL., IOWA, MO. | 19 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 19 |
| EXPORTED 3/ | 53 | 7 | 11 | 6 | 77 | 0 | 0 | 0 | 0 |
| TOTAL | 72 | 525 | 11 | 6 | 614 | 0 | 114 | 114 | 651 |
| WALNUT | | | | | | | | | |
| INDIANA | 654 | 2802 | 1481 | 362 | 5299 | 352 | 1379 | 1731 | 7030 |
| ILL., IOWA, MO. | 97 | 5 | 279 | 452 | 833 | 102 | 299 | 401 | 1234 |
| EXPORTED 3/ | 191 | 619 | 81 | 531 | 1422 | 0 | 0 | 0 | 0 |
| TOTAL | 942 | 3426 | 1841 | 1345 | 7554 | 454 | 1678 | 2132 | 8264 |
| WHITE OAK | | | | | | | | | |
| INDIANA | 1071 | 3962 | 0 | 38 | 5071 | 228 | 4225 | 4453 | 9524 |
| ILL., IOWA, MO. | 178 | 152 | 75 | 587 | 992 | 12 | 293 | 305 | 1297 |
| EXPORTED 3/ | 13 | 1314 | 59 | 242 | 1628 | 0 | 0 | 0 | 0 |
| TOTAL | 1262 | 5428 | 134 | 867 | 7691 | 240 | 4518 | 4758 | 10821 |

TABLE 9 CONTINUED ON NEXT PAGE

TABLE 9 CONTINUED

| SPECIES AND DESTINATION | PRODUCTION BY STATES 1/ | | | | | IMPORTS | | | TOTAL RECEIPTS 2/ |
|-------------------------|-------------------------|---------|------|----------|----------------|-------------|------------|---------------|-------------------|
| | ILLINOIS | INDIANA | IOWA | MISSOURI | REGIONAL TOTAL | LAKE STATES | OTHER U.S. | TOTAL IMPORTS | |
| YELLOW BIRCH | | | | | | | | | |
| INDIANA | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| TOTAL | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| YELLOW-POPLAR | | | | | | | | | |
| INDIANA | 11 | 1237 | 0 | 0 | 1248 | 0 | 145 | 145 | 1393 |
| EXPORTED 3/ | 15 | 5 | 0 | 25 | 45 | 0 | 0 | 0 | 0 |
| TOTAL | 26 | 1242 | 0 | 25 | 1293 | 0 | 145 | 145 | 1393 |
| OTHER HARDWOODS | | | | | | | | | |
| INDIANA | 0 | 2 | 0 | 0 | 2 | 0 | 4 | 4 | 6 |
| ILL., IOWA, MO. | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 34 | 34 |
| EXPORTED 3/ | 0 | 0 | 26 | 0 | 26 | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 2 | 26 | 0 | 28 | 0 | 38 | 38 | 40 |
| ALL SPECIES | | | | | | | | | |
| INDIANA | 2059 | 12300 | 1489 | 454 | 16302 | 2618 | 11124 | 13742 | 30044 |
| ILL., IOWA, MO. | 2014 | 252 | 1241 | 1265 | 4772 | 321 | 951 | 1272 | 6044 |
| EXPORTED 3/ | 460 | 2428 | 2513 | 916 | 6317 | 0 | 0 | 0 | 0 |
| TOTAL | 4533 | 14980 | 5243 | 2635 | 27391 | 2939 | 12075 | 15014 | 36088 |

1/ VERTICAL COLUMNS OF FIGURES UNDER BOX HEADING PRODUCTION BY STATES PRESENT THE AMOUNT OF VENEER LOGS CUT IN EACH STATE.
 2/ PRODUCTION MINUS EXPORTS PLUS IMPORTS.
 3/ VENEER LOGS SHIPPED TO STATES OUTSIDE THE CENTRAL STATES AND TO CANADA.

Table 10.—Veneer-log production and receipts in the Central by species, 1974 and 1976

(In thousand board feet, International 1/4-inch log rule)

| Species | Production | | | Receipts | | |
|-----------------|------------|-------|--------|----------|-------|--------|
| | 1974 | 1976 | change | 1974 | 1976 | change |
| Ash | 891 | 965 | +74 | 861 | 942 | +81 |
| Aspen | 24260 | 21828 | -2432 | 24259 | 21460 | -2799 |
| Basswood | 2387 | 2069 | -318 | 2586 | 2254 | -332 |
| Beech | 740 | 1171 | +431 | 540 | 994 | +454 |
| Black cherry | 74 | 245 | +171 | 74 | 190 | +116 |
| Butternut | 234 | 199 | -35 | 11 | 14 | +3 |
| Cottonwood | 1777 | 1434 | -343 | 1774 | 1434 | -340 |
| Elm | 6159 | 6701 | +542 | 5677 | 6344 | +667 |
| Hard maple | 11706 | 14018 | +2312 | 11937 | 12390 | +453 |
| Paper birch | 1277 | 1236 | -41 | 1307 | 1309 | +2 |
| Pecan (hickory) | 32 | 56 | +24 | 1 | -- | -1 |
| Red oak | 11107 | 11836 | +729 | 11098 | 12055 | +957 |
| Soft maple | 2016 | 1049 | -967 | 2313 | 1359 | -954 |
| Walnut | 971 | 709 | -262 | -- | -- | -- |
| White oak | 561 | 707 | +146 | 78 | 98 | +20 |
| Yellow birch | 4172 | 4474 | +302 | 4646 | 4614 | -32 |
| Other species | 337 | 920 | +583 | 327 | 851 | +524 |
| Total | 68701 | 69617 | +916 | 67489 | 66308 | -1181 |

Table 11.— *Veneer-log production by species groups for selected years, Central States, 1956-1976*

(In million board feet, International 1/4-inch log rule)

| Year | Cotton-wood | Elm | Hard maple | Pecan (hickory) | Red oak | Soft maple | Syca- more | Wal- nut | White oak | Yellow- poplar | Other species | All species |
|------|-------------|-----|------------|-----------------|---------|------------|------------|----------|-----------|----------------|---------------|-------------|
| 1956 | 8.0 | 0.9 | 0.8 | 0.1 | 1.1 | 1.8 | 0.6 | 10.6 | 3.4 | 1.6 | 4.2 | 33.1 |
| 1958 | 8.9 | .6 | 1.1 | .1 | 1.0 | .5 | .5 | 10.8 | 2.6 | 1.1 | 5.2 | 32.4 |
| 1960 | 11.2 | 2.0 | 1.2 | .1 | 1.5 | 1.2 | 2.5 | 13.2 | 1.6 | 1.6 | 3.8 | 39.9 |
| 1963 | 7.4 | .7 | 1.6 | .8 | .9 | 1.0 | 1.8 | 15.5 | 1.4 | 2.3 | 4.6 | 38.0 |
| 1966 | 6.2 | 1.7 | 1.4 | 1.1 | 2.3 | .5 | 1.0 | 14.7 | 1.9 | 3.0 | 3.9 | 36.7 |
| 1968 | 4.1 | .7 | 1.3 | 3.0 | 2.1 | .4 | 1.2 | 16.1 | 3.6 | 1.3 | 3.2 | 37.0 |
| 1970 | 4.8 | .6 | .8 | 1.5 | 1.3 | .5 | 1.3 | 8.1 | 1.7 | .8 | 2.1 | 23.5 |
| 1972 | 3.5 | .5 | 1.1 | 2.4 | 1.7 | .4 | .7 | 10.0 | 3.3 | 1.2 | 1.4 | 26.2 |
| 1974 | 4.0 | .7 | 1.1 | 1.2 | 2.9 | .6 | .9 | 8.5 | 5.2 | 1.2 | 2.8 | 29.1 |
| 1976 | 2.3 | (2) | .4 | 1.0 | 3.8 | .9 | .6 | 7.5 | 7.7 | 1.3 | 1.9 | 27.4 |

¹Estimated.

²Less than 50 thousand board feet.

Table 12.— *Veneer-log receipts by species groups for selected years, Central States, 1956-1976*

(In million board feet, International 1/4-inch log rule)

| Year | Cotton-wood | Elm | Hard maple | Pecan (hickory) | Red oak | Soft maple | Syca- more | Wal- nut | White oak | Yellow- poplar | Other species | All species |
|------|-------------|-----|------------|-----------------|---------|------------|------------|----------|-----------|----------------|---------------|-------------|
| 1956 | 10.9 | 0.8 | 1.2 | 0.6 | 1.3 | 0.8 | 1.3 | 11.4 | 6.7 | 2.8 | 6.6 | 44.4 |
| 1958 | 10.2 | .6 | 1.7 | .3 | 1.3 | .3 | 1.2 | 13.0 | 4.8 | 1.9 | 6.3 | 41.6 |
| 1960 | 10.4 | 1.0 | 2.9 | .2 | 1.4 | .5 | 2.3 | 17.1 | 3.6 | 2.8 | 8.0 | 50.2 |
| 1963 | 8.6 | 1.0 | 3.1 | 1.6 | .9 | .8 | 2.0 | 21.2 | 2.3 | 2.8 | 7.9 | 52.2 |
| 1966 | 6.7 | 1.0 | 3.6 | 1.6 | 2.0 | .4 | 1.2 | 17.9 | 2.1 | 4.4 | 7.3 | 48.2 |
| 1968 | 5.7 | 1.0 | 2.7 | 4.9 | 2.3 | .5 | 1.1 | 18.4 | 5.2 | 1.9 | 5.1 | 48.8 |
| 1970 | 4.7 | .5 | 1.3 | 3.0 | .8 | .6 | 1.4 | 10.0 | 2.0 | 1.1 | 2.6 | 28.0 |
| 1972 | 4.9 | .3 | 2.4 | 5.7 | 1.6 | .5 | .9 | 11.0 | 4.0 | 1.2 | 2.6 | 35.1 |
| 1974 | 5.6 | .7 | 1.3 | 3.6 | 3.8 | .7 | 1.0 | 10.1 | 7.7 | 1.3 | 3.9 | 39.7 |
| 1976 | 2.6 | .2 | 1.4 | 4.3 | 3.1 | .5 | .6 | 8.3 | 10.8 | 1.4 | 2.9 | 36.1 |

¹Estimated.

Table 13.—*Production and disposition of hard-wood veneer plant residue by type of residue and use, Central States, 1976*

(In thousand cubic feet)

| State and type of use | Wood residue | | | Bark |
|----------------------------|---------------|---------------------|-------------------|---------------|
| | Total | Coarse ¹ | Fine ² | |
| Michigan | | | | |
| Fiber products | 439.5 | 420.9 | 18.6 | 12.8 |
| Industrial fuel | 272.9 | 20.0 | 252.9 | 317.6 |
| Domestic fuel | 43.8 | 16.8 | 27.0 | 18.6 |
| Miscellaneous ³ | 332.9 | 332.9 | -- | -- |
| Not used ⁴ | 1002.8 | 11.8 | 991.0 | 539.4 |
| Total | 2091.9 | 802.4 | 1289.5 | 888.4 |
| Minnesota | | | | |
| Industrial fuel | 4.4 | 2.8 | 1.6 | 3.6 |
| Domestic fuel | 11.4 | 11.4 | -- | 9.9 |
| Miscellaneous ³ | 3.6 | 1.8 | 1.8 | -- |
| Not used ⁴ | 22.3 | -- | 22.3 | 4.2 |
| Total | 41.7 | 16.0 | 25.7 | 17.7 |
| Wisconsin | | | | |
| Fiber products | 319.5 | 236.9 | 82.6 | -- |
| Industrial fuel | 2115.9 | 641.6 | 1474.3 | 1094.1 |
| Domestic fuel | 29.5 | 29.5 | -- | -- |
| Miscellaneous ³ | 212.2 | 119.1 | 93.1 | 7.5 |
| Not used ⁴ | .8 | .3 | .5 | 35.2 |
| Total | 2677.9 | 1027.4 | 1650.5 | 1136.8 |
| All Lake States | | | | |
| Fiber products | 759.0 | 657.8 | 101.2 | 12.8 |
| Industrial fuel | 2393.2 | 664.4 | 1728.8 | 1415.3 |
| Domestic fuel | 84.7 | 57.7 | 27.0 | 28.5 |
| Miscellaneous ³ | 548.7 | 453.8 | 94.9 | 7.5 |
| Not used ⁴ | 1025.9 | 12.1 | 1013.8 | 578.8 |
| Total | 4811.5 | 1845.8 | 2965.7 | 2042.9 |

¹Suitable for chipping, such as veneer cores.

²Not suitable for chipping, such as veneer clippings.

³Livestock bedding, mulch, small dimension and specialty

items.
⁴Including residues burned as waste.

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Shows 1976 veneer-log production and receipts by species in the Lake States (Michigan, Minnesota, and Wisconsin) and in the Central States (Illinois, Indiana, Iowa, and Missouri). Comparisons are made with similar data for 1974. Includes tables showing veneer-log production and receipts (for selected years) since 1946 in the Lake States and since 1956 in the Central States.

OXFORD: 832.20:792(77). KEY WORDS: imports, exports, veneer mills, wood residue, bark.

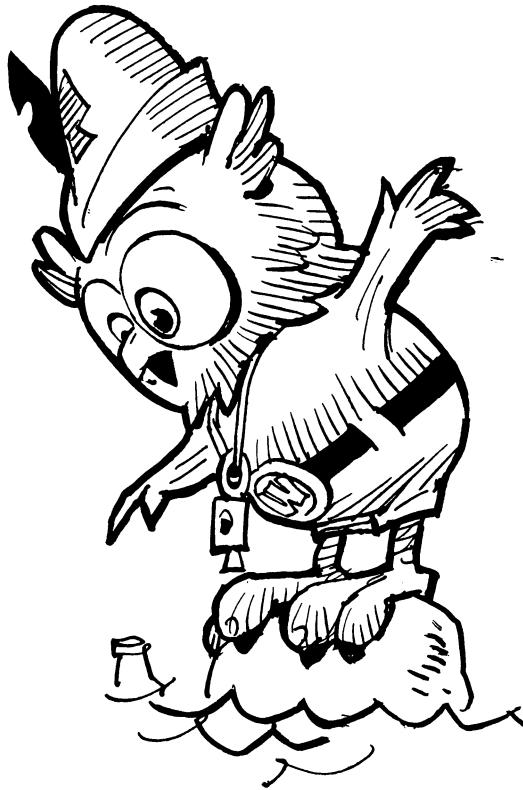
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*People need fish...fish and
people need clean water.*