



United States
Department of
Agriculture

Forest Service

Northeastern
Research Station

Resource Bulletin NE-140



Pulpwood Production in the Northeast: 1994, 1995, and 1996

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Abstract

This assessment of pulpwood production and receipts for the 13 states in the Northeast Region includes information for the years 1994, 1995, and 1996. During this period, annual production averaged 6.6 million cords of roundwood and the equivalent of 2.5 million cords of wood residues that were produced and used for pulp. The production of pulpwood over the last 10 years in the Northeastern States has risen slowly, with 1996 production 3.5 percent above the 1986 level. Consumption of pulpwood at mills in the Northeast remained at a high level, averaging 6.8 million cords annually. The harvesting of trees (roundwood) for pulp was most intense in Maine, where the annual harvest of pulpwood averaged 16 cubic feet per acre of timberland.

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Manuscript received for publication 15 December 1997

Published by:
USDA FOREST SERVICE
5 RADNOR CORP CTR SUITE 200
RADNOR PA 19087-4585

March 1998

For additional copies:
USDA Forest Service
Publications Distribution
359 Main Road
Delaware, OH 43015
Fax: (614)368-0152

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Highlights

- ➔ Pulpwood production in the Northeast has increased by only 3.5 percent since 1986.
- ➔ There has been a reduction in pulpwood production in the New England states.
- ➔ Hardwood use in pulpwood production is increasing while softwood use is decreasing. However, spruce and fir still account for more than 25 percent of the pulpwood produced in Maine.
- ➔ An increasing percent of pulpwood is coming from sawlog and veneer log residues.
- ➔ The Northeast region is a net importer. Imports account for 3.2 percent of total pulpwood consumption.
- ➔ Harvesting was most intensive in Maine, where the annual harvest of pulpwood averaged 16 cubic feet per acre of timberland.

Introduction

This report presents data on annual pulpwood production and consumption for the 13 Northeastern States¹ during 1994, 1995, and 1996. Data were obtained by a 100-percent canvass of pulpmills in the Northeast (Fig. 1) that use wood as a basic raw material to make pulp for the production of paper, insulation board, and hardboard products. Shipments outside the Northeast are traced by exchanging information with neighboring Forest Experiment Stations that conduct similar canvasses, and by canvassing pulpmills in adjacent Canadian provinces.

These statistics are based on mill receipts of roundwood and manufacturing plant residues.² These receipts are subject to year-to-year fluctuations in wood inventory. Mill receipts of pulpwood from roundwood are reported by county where harvested. However, mills often do not have complete records of the origin of the wood they receive. In such cases, they are asked to provide a best estimate of where the wood was harvested. Because of these difficulties in tracing the harvest to the county of origin, reported state-level data are assumed to be more accurate than those for individual counties. Pulpwood from residues is not reported beyond the state where the residues were produced. Some of the logs from which the residues were generated probably were harvested in states other than the one in which they were processed. Therefore, the volume of pulpwood produced from residues in a state may not be directly linked to the sawlog harvest for the state.

Total Production

Total pulpwood production for the 13 Northeastern States rose to a record of 9.4 million cords in 1995 and, then decreased in 1996 to 8.9 million cords (Table 1). High levels of production of both roundwood and pulpwood produced from manufacturing residues contributed to the rise in 1995. Roundwood includes logs, bolts, and whole-tree chips generated from harvesting trees. Typically, roundwood used for pulp is from poor-quality trees or from the tops and branches of trees harvested for sawlogs. Manufacturing residues are byproducts generated in the conversion of logs into lumber and other products. These include chips made from sawmill slabs and edgings and veneer cores. The manufacturing residue category also includes a small amount of sawdust and chipped pallets that were used to make pulp.

¹In previous reports, Kentucky was included in the Northeast Region. Beginning in 1994, Kentucky was moved to the Southern Region. For this report, trend data for the Northeast have been modified to reflect this change.

²Note that whole-tree chips and logs chipped at satellite chipping facilities are included as roundwood.

During the 3-year period covered in this report, roundwood comprised 72 percent of total production, and manufacturing residues 28 percent. The production of pulpwood over the last 10 years in the Northeastern States has risen slowly, with 1996 production 3.5 percent above the 1986 level (Fig. 2). Levels of pulpwood production have been high despite an environment of weak prices for paper products during much of that decade. The recent rise in production during 1995 and decline in 1996 closely followed the rise and fall in paper prices.

Roundwood

Roundwood production averaged 6.6 million cords annually during 1994-96 (Table 2). This was a continuation of the high levels of production that have been maintained over the past 10 years in the Northeast. Production reached a record high in 1995 and then decreased by 6 percent in 1996, most of this decrease occurred in New England.

In 1996, production of roundwood in New England fell due to decreases in wood from both softwoods and hardwoods. This may reflect tight supplies in the wood resource. The most recent forest inventory of Maine reported a 18-percent decrease in that state's softwood timber resource from 1982 to 1996.³ During the same period, hardwoods increased by 13 percent statewide, but in Piscataquis and Somerset Counties, hardwood volume decreased by 5 percent and 2 percent, respectively. These two counties historically are the source of significant pulpwood production. This was the first year production from hardwood species declined in New England after nearly continuous increases over the last 10 years. Until recently, the increased use of hardwood species offset declines in softwood production. Red maple, an abundant species with limited markets has been used increasingly for pulp. It is included in the "other hardwood" species group in Tables 6 through 8. The use of hardwoods for pulp demonstrates how pulpmills have adapted to changes in the resource. The decrease in production from softwoods continued a decline that began after production from softwoods peaked in 1984 (Fig. 3). In Maine, pulpwood production from spruce and fir has been declining since 1980, though these two species still account for more than 25 percent of the roundwood produced for pulp in that state.

Pulpwood from Manufacturing Residues

High production of hardwood lumber in the Northeast has resulted in more manufacturing residues available for use as pulpwood. During 1994-96, wood from sawmills and other primary processors of logs in the Northeastern States averaged the equivalent of 2.5 million cords annually (Table

³An outbreak of spruce budworm from 1974 to 1984 and the salvage of dead and dying spruce and balsam fir trees that followed caused most of the reduction in softwood volume.

3); 57 percent of these residues were produced from hardwood species. As hardwood lumber production has increased, pulpmills have come to rely more heavily on residues as a source of wood. In West Virginia, manufacturing residues accounted for more than half of the pulpwood produced in the state. Residues also account for a large portion of the pulpwood produced in Ohio, Maryland, and Pennsylvania—47, 39, and 35 percent, respectively.

Consumption

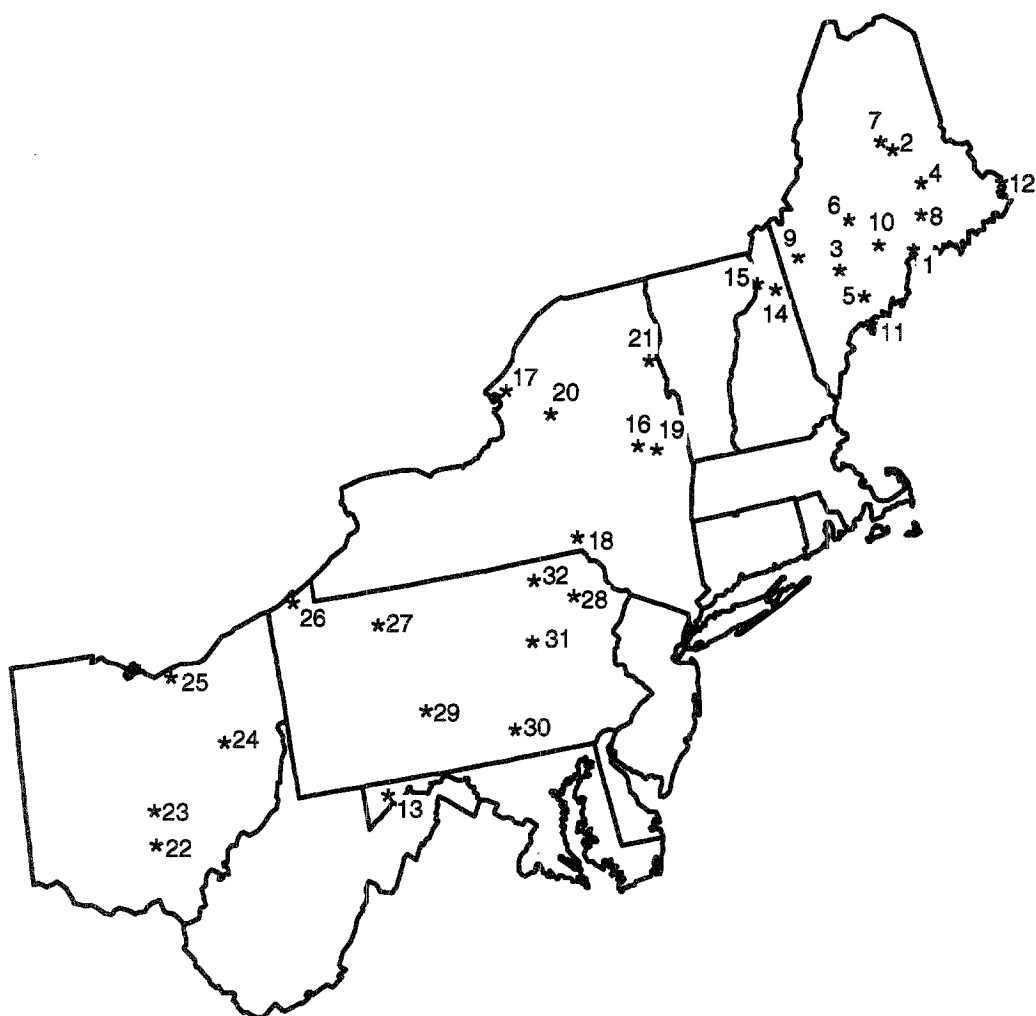
Northeast mills continued high levels of pulpwood consumption (Tables 4, 5, and 17). Since 1987, receipts have been steady, with approximately 9 million cords consumed each year. In 1996, Northeast pulpmills received 2.7 million cords of softwood roundwood, 4.0 million cords of hardwood roundwood, and the equivalent of 2.5 million cords of chips produced from manufacturing residues. These receipts were 289,000 cords more than the region produced. Mills in Maine and Maryland received most of the shipments into the region. Mills in Maine imported 354,000 cords of roundwood and the equivalent of 377,000 cords of residues from Canada for use as pulpwood (Tables 18-19). A large portion of these residues was produced from Maine logs processed at a Canadian mill located just across the

border. Imports helped offset the decline in pulpwood production in Maine.

Harvesting Intensity

The average annual pulpwood harvest per acre of timberland indicates the intensity of pulpwood harvesting (Table 20). The highest harvesting rate was in Maine, which averaged 16.2 cubic feet of roundwood per acre of timberland. New Hampshire Delaware and Vermont averaged 10.3 , 8.8 , and 8.1 cubic feet harvested per acre, respectively. Rates were low in Pennsylvania (4.3 cubic feet) and New York (3.8 cubic feet). The intensity rate in Delaware was abnormally high (8.8 cubic feet) because of an unusually large harvest in 1996.

The average annual net growth on timberland in the Northeast is roughly 38 cubic feet of growing-stock volume per acre. The percentage of this average growth used for pulpwood roundwood ranges from 37 in Maine to 1 in Rhode Island. The pulpwood harvest averaged 17 percent of the growth across the entire Northeast. Actual data for a specific area within a state may vary considerably because pulpwood represents only part of the total harvest. For example, it does not include the harvesting of sawlogs that varies across the region.



- | | |
|--|--|
| 1. Bucksport, ME Champion International Corp. | 17. Deferiet, NY Champion International Corp. |
| 2. E. Millinocket, ME Great Northern Paper, Inc. | 18. Deposit, NY Norbord Industries |
| 3. Jay, ME International Paper Co. | 19. Glens Falls, NY Finch-Pruyn and Company |
| 4. Lincoln, ME Lincoln Pulp and Paper Co. | 20. Lyons Falls, NY Lyons Falls Pulp and Paper, Inc. |
| 5. Lisbon Falls, ME Masonite Corp. | 21. Ticonderoga, NY International Paper Co. |
| 6. Madison, ME Madison Paper Industries | 22. Chillicothe, OH The Mead Corp. |
| 7. Millinocket, ME Great Northern Paper, Inc. | 23. Circleville, OH Jefferson Smurfit Corp. |
| 8. Old Town, ME James River Corp. | 24. Coshocton, OH Stone Container Corp. |
| 9. Rumford, ME The Mead Corp. | 25. Milan, OH Certainteed Corp. |
| 10. Hinckley, ME S.D. Warren Company | 26. Erie, PA International Paper Co. |
| 11. Westbrook, ME S.D. Warren Company | 27. Johnsonburg, PA Willamette Industries, Inc. |
| 12. Woodland, ME Georgia-Pacific Corp. | 28. Mehoopany, PA Proctor and Gamble Co. |
| 13. Luke, MD Westvaco Corp. | 29. Roaring Spring, PA Appleton Papers, Inc. |
| 14. Berlin, NH Crown Vantage Corp. | 30. Spring Grove, PA The P. H. Glatfelter Co. |
| 15. Groveton, NH Groveton Paper Board, Inc. | 31. Sunbury, PA Jim Walter Corp. |
| 16. Corinth, NY International Paper Co. | 32. Towanda, PA Masonite Corp. |

Figure 1.—Locations and names of mills receiving pulpwood in the Northeastern States.

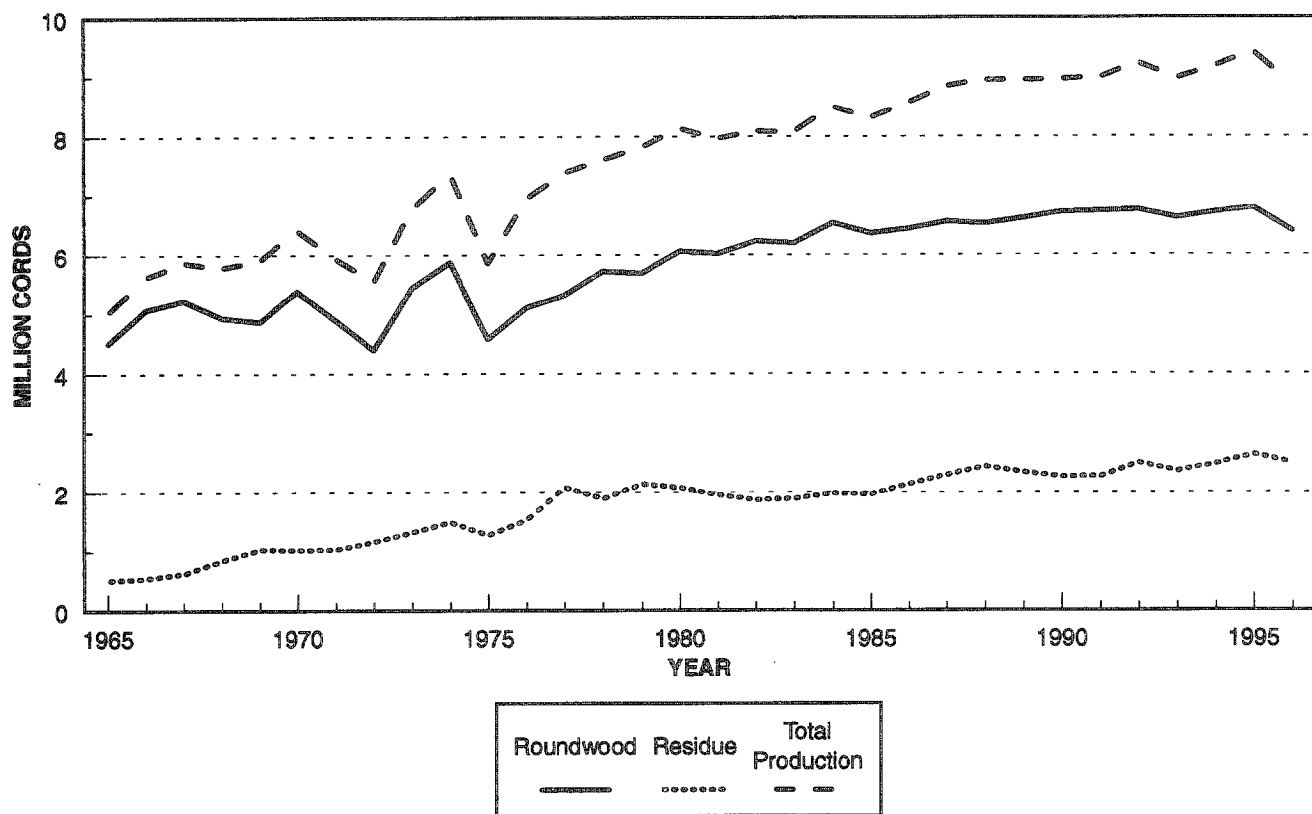


Figure 2.—Total pulpwood, roundwood, and manufacturing residue production in the Northeast, 1965-96.

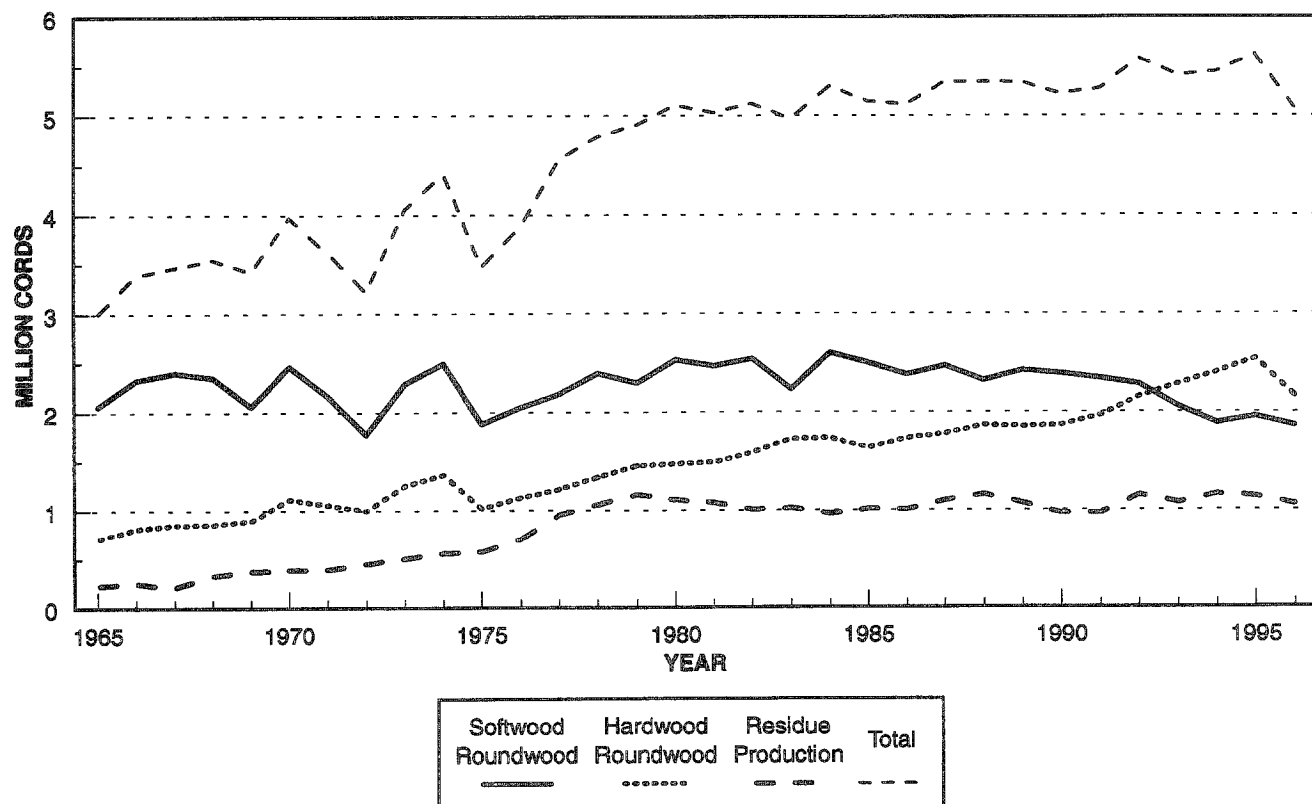


Figure 3.—Pulpwood production in New England, 1965-96.

Appendix

Definition of Terms

Cord. See Standard cord.

Cord equivalent. A unit of measure applied to forms of wood other than roundwood, such as chips, slabs, edgings, and other manufacturing residues, and equal to 85 cubic feet of solid wood, or 1 cord.

Manufacturing residues. Wood materials, such as sawmill slabs and edgings, sawdust, veneer clippings and cores, post and pole trimming, and pulp screening generated from the manufacture of roundwood products.

Pulpwood. Roundwood, whole-tree chips, or manufacturing residues that are used for the production of wood pulp.

Pulpwood production. Roundwood and manufacturing plant residues that are used for the production of wood pulp.

Pulpwood receipts. Pulpwood received at wood pulp mills. These can originate from outside the state or region.

Pulpwood imports. Pulpwood receipts originating from outside the Northeast (14-state region).

Roundwood products. Logs, bolts, total-tree chips, mine timbers, fence posts, poles, and similar timber products generated by harvesting trees for industrial or consumer use.

Standard cord. A unit of measure for stacked bolts of wood, encompassing 128 cubic feet of wood, bark, and air space. In the Northeast, the measure refers to a stack of wood containing 85 cubic feet or 2.41 cubic meters, of solid wood. A standard cord commonly is referred to as a cord, as in this report. This is not the same as a face cord, commonly used in firewood marketing.

Whole-tree chip. Unbarked wood chips generated from the aboveground portion of a tree, including bolewood, limbs, and leaves.

Metric Equivalents

One standard cord = 85 cubic feet (solid wood) = 2.41 cubic meters (solid wood)

One cubic foot = 28,317 cubic centimeters = 0.028 cubic meter

Conversion Factors Used for Green Roundwood

1 ton spruce-fir = 0.5556 cord

1 ton hemlock-tamarack = 0.5000

1 ton pine (New England, New York, and Canada) = 0.5263 cord

1 ton aspen—yellow-poplar = 0.5263

1 ton oak-hickory = 0.3571

1 ton other hardwoods = 0.3846

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Table 1. - Total production of pulpwood in the Northeast, by state and source, 1994, 1995, and 1996

(In thousands of standard cords)^a

State	From Roundwood			From manufacturing residues			From all sources		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Connecticut	3.3	3.0	3.0	3.8	4.4	4.2	7.1	7.4	7.2
Delaware	36.1	20.1	60.6	3.6	3.7	3.5	39.7	23.8	64.1
Maine	3,265.7	3,465.4	2,976.6	814.3	824.2	812.2	4,080.0	4,289.6	3,788.8
Maryland	179.8	182.8	192.3	115.4	125.3	127.3	295.2	308.1	319.6
Massachusetts	13.7	12.3	13.0	9.9	14.3	8.2	23.6	26.6	21.2
New Hampshire	560.6	594.9	606.0	252.2	239.2	170.1	812.8	834.1	776.1
New Jersey	2.3	.3	6.5	*	8.9	6.3	2.3	9.2	12.8
New York	713.0	676.3	662.9	182.7	235.7	182.9	895.7	912.0	845.8
Ohio	271.3	313.9	323.0	275.2	288.9	289.0	546.5	602.8	612.0
Pennsylvania	884.2	732.2	778.4	399.4	438.3	426.6	1,283.6	1,170.5	1,205.0
Rhode Island	--	.4	4.3	1	1.9	1.1	1.0	2.3	5.4
Vermont	439.2	410.5	414.8	77.6	50.6	66.9	516.8	461.1	481.7
West Virginia	348.3	372.5	349.9	334.1	393.0	386.1	682.4	765.5	736.0
Total	6,717.5	6,784.6	6,391.3	2,469.2	2,628.4	2,484.4	9,186.7	9,413.0	8,875.7

^a Cords are on a rough-wood basis, equivalent to 85 cubic feet of solid wood.

* Less than 50 cords.

Table 2. - Pulpwood production from roundwood in the Northeast, by state and softwood and hardwood, 1994, 1995, and 1996

(In thousands of standard cords)

State	Softwood			Hardwood			Total		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Connecticut	3.3	3.0	3.0	*	*	*	3.3	3.0	3.0
Delaware	29.9	15.1	50.7	6.2	5.0	9.9	36.1	20.1	60.6
Maine	1,443.9	1,524.9	1,389.2	1,821.8	1,940.5	1,587.4	3,265.7	3,465.4	2,976.6
Maryland	96.7	95.3	104.4	83.1	87.5	87.9	179.8	182.8	192.3
Massachusetts	13.6	12.0	11.8	.1	.3	1.2	13.7	12.3	13.0
New Hampshire	201.3	228.0	249.5	359.3	366.9	356.5	560.6	594.9	606.0
New Jersey	.3	.2	5.9	2.0	.1	.6	2.3	.3	6.5
New York	321.2	309.7	297.4	391.8	366.6	365.5	713.0	676.3	662.9
Ohio	32.8	37.5	35.3	238.5	276.4	287.7	271.3	313.9	323.0
Pennsylvania	40.7	65.3	74.0	843.5	666.9	704.4	884.2	732.2	778.4
Rhode Island	*	.4	4.3	--	--	--	*	.4	4.3
Vermont	221.9	186.0	203.2	217.3	224.5	211.6	439.2	410.5	414.8
West Virginia	65.4	71.3	54.1	282.9	301.2	295.8	348.3	372.5	349.9
Total	2,471.0	2,548.7	2,482.8	4,246.5	4,235.9	3,908.5	6,717.5	6,784.6	6,391.3

* Less than 50 cords.

Table 3. - Pulpwood chip production from manufacturing residues in the Northeast, by state and softwood and hardwood, 1994, 1995, and 1996

(In thousands of standard cords)

State	Softwood			Hardwood			Total		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Connecticut	--	--	--	3.8	4.4	4.2	3.8	4.4	4.2
Delaware	.5	.9	.6	3.1	2.8	2.9	3.6	3.7	3.5
Maine	723.1	732.3	755.4	91.2	91.9	56.8	814.3	824.2	812.2
Maryland	72.6	82.6	83.8	42.8	42.7	43.5	115.4	125.3	127.3
Massachusetts	2.2	8.4	3.5	7.7	5.9	4.7	9.9	14.3	8.2
New Hampshire	187.3	198.7	132.9	64.9	40.5	37.2	252.2	239.2	170.1
New Jersey	--	--	--	*	8.9	6.3	*	8.9	6.3
New York	49.2	55.5	23.5	133.5	180.2	159.4	182.7	235.7	182.9
Ohio	3.5	3.5	3.3	271.7	285.4	285.7	275.2	288.9	289.0
Pennsylvania	5.5	11.2	9.0	393.9	427.1	417.6	399.4	438.3	426.6
Rhode Island	--	--	.1	1.0	1.9	1.0	1.0	1.9	1.1
Vermont	47.0	39.0	41.4	30.6	11.6	25.5	77.6	50.6	66.9
West Virginia	3.6	5.6	6.8	330.5	387.4	379.3	334.1	393.0	386.1
Total	1,094.5	1,137.7	1,060.3	1,374.7	1,490.7	1,424.1	2,469.2	2,628.4	2,484.4

* Less than 50 cords.

Table 4. - Pulpwood receipts from roundwood in the Northeast, by state and softwood and hardwood, 1994, 1995, and 1996**(In thousands of standard cords)**

State	Softwood			Hardwood			Total		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Maine	1,648.3	1,773.8	1,785.0	2,125.1	2,307.8	1,981.4	3,773.4	4,081.6	3,766.4
Maryland	D	D	D	D	D	D	D	D	D
New Hampshire	D	D	D	D	D	D	D	D	D
New York	588.4	527.3	471.0	303.4	296.3	295.8	891.8	823.6	766.8
Ohio	72.7	72.7	78.5	311.0	312.6	360.2	383.7	385.3	438.7
Pennsylvania	128.6	126.5	159.7	946.9	782.3	817.6	1,075.5	908.8	977.3
Total	2,632.1	2,723.0	2,705.5	4,208.6	4,272.0	4,004.3	6,840.7	6,995.0	6,709.8

D = Data withheld to avoid disclosure for individual mills.

Table 5. - Pulpwood chip receipts from manufacturing residues in the Northeast, by state and softwood and hardwood, 1991, 1992, and 1993**(In thousands of standard cords)**

State	Softwood			Hardwood			Total		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Maine	955.4	946.8	902.3	175.0	145.0	85.7	1,130.4	1,091.8	988.0
Maryland	D	D	D	D	D	D	D	D	D
New Hampshire	D	D	D	D	D	D	D	D	D
New York	82.3	79.2	58.8	101.0	125.3	105.4	183.3	204.5	164.2
Ohio	7.0	7.0	10.2	353.9	363.2	383.4	360.9	370.2	393.6
Pennsylvania	52.4	64.0	64.0	504.6	558.5	538.9	557.0	622.5	602.9
Total	1,251.3	1,275.7	1,192.5	1,277.3	1,321.8	1,262.4	2,528.6	2,597.5	2,454.9

D = Data withheld to avoid disclosure for individual mills.

Table 6. -- Pulpwood production from roundwood in the Northeast, by state and species group, 1994

(In thousands of standard cords)

State	Softwood				Hardwood				All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Oak and hickory	Other hardwood	Total	
Connecticut	*	3.3	*	3.3	*	--	--	*	3.3
Delaware	--	--	29.9	29.9	--	.5	5.7	6.2	36.1
Maine	839.3	384.6	220.0	1,443.9	186.4	--	1,635.4	1,821.8	3,265.7
Maryland	--	--	96.7	96.7	--	12.2	70.9	83.1	179.8
Massachusetts	*	4.8	8.8	13.6	--	--	.1	.1	13.7
New Hampshire	89.2	63.1	49.0	201.3	6.6	--	352.7	359.3	560.6
New Jersey	--	--	.3	.3	--	.2	1.8	2.0	2.3
New York	70.2	169.3	81.7	321.2	20.6	5.5	365.7	391.8	713.0
Ohio	--	--	32.8	32.8	21.6	39.5	177.4	238.5	271.3
Pennsylvania	--	2.3	38.4	40.7	32.3	186.0	625.2	843.5	884.2
Vermont	90.9	88.8	42.2	221.9	2.3	--	215.0	217.3	439.2
West Virginia	--	--	65.4	65.4	1.4	4.3	277.2	282.9	348.3
Total 1994	1,089.6	716.2	665.2	2,471.0	271.2	248.2	3,727.1	4,246.5	6,717.5

* Less than 50 cords.

Table 7. - - Pulpwood production from roundwood in the Northeast, by state and species group, 1995

(In thousands of standard cords)

State	Softwood				Hardwood			Total	All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Oak and hickory	Other hardwood		
Connecticut	--	3.0	*	3.0	*	--	*	*	3.0
Delaware	--	--	15.1	15.1	--	.4	4.6	5.0	20.1
Maine	785.8	488.2	250.9	1,524.9	195.0	--	1,745.5	1,940.5	3,465.4
Maryland	--	--	95.3	95.3	--	9.2	78.3	87.5	182.8
Massachusetts	.4	3.2	8.4	12.0	--	--	.3	.3	12.3
New Hampshire	88.8	40.4	98.8	228.0	6.5	--	360.4	366.9	594.9
New Jersey	--	--	.2	.2	--	--	.1	.1	.3
New York	72.2	149.3	88.2	309.7	18.1	9.5	339.0	366.6	676.3
Ohio	--	--	37.5	37.5	15.3	56.1	205.0	276.4	313.9
Pennsylvania	--	5.7	59.6	65.3	24.1	188.9	453.9	666.9	732.2
Rhode Island	--	.4	--	.4	--	--	--	--	.4
Vermont	73.0	59.0	54.0	186.0	1.3	--	223.2	224.5	410.5
West Virginia	--	--	71.3	71.3	.3	2.7	298.2	301.2	372.5
Total 1995	1,020.2	749.2	779.3	2,548.7	260.6	266.8	3,708.5	4,235.9	6,784.6

* Less than 50 cords.

Table 8. -- Pulpwood production from roundwood in the Northeast, by state and species group, 1996

(In thousands of standard cords)

State	Softwood				Hardwood			Total	All species
	Spruce and fir	Hemlock and tamarack	Pine	Total	Aspen and yellow-poplar	Oak and hickory	Other hardwood		
Connecticut	--	2.8	.2	3.0	--	--	*	*	3.0
Delaware			50.7	50.7	--	.2	9.7	9.9	60.6
Maine	720.2	405.0	264.0	1,389.2	79.8	--	1,507.6	1,587.4	2,976.6
Maryland	--	--	104.4	104.4	--	11.1	76.8	87.9	192.3
Massachusetts	.6	3.9	7.3	11.8	--	--	1.2	1.2	13.0
New Hampshire	98.6	79.9	71.0	249.5	4.4	--	352.2	356.6	606.1
New Jersey	--	--	5.8	5.8	--	.1	.6	.7	6.5
New York	65.7	130.3	101.4	297.4	16.0	9.5	340.0	365.5	662.9
Ohio	--	--	35.4	35.4	18.9	45.2	223.5	287.6	323.0
Pennsylvania	--	1.4	72.6	74.0	37.0	164.7	502.7	704.4	778.4
Rhode Island	*	4.2	.1	4.3	--	--	--	--	4.3
Vermont	103.7	62.2	37.3	203.2	3.0	--	208.6	211.6	414.8
West Virginia	--	--	54.1	54.1	1.2	5.4	289.1	295.7	349.8
Total 1996	988.8	689.7	804.3	2,482.8	160.3	236.2	3,512.0	3,908.5	6,391.3

* Less than 50 cords.

Table 9.--Pulpwood production from roundwood in northern New England by state, county, and softwood and hardwood, 1994, 1995, 1996

(In thousands of standard cords)

County	Softwood			Hardwood			Total all species		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
MAINE									
Androscoggin	32.5	35.7	27.1	12.0	24.6	91.5	44.5	60.3	118.6
Aroostook	104.3	156.9	161.6	114.2	133.0	40.8	218.5	289.9	202.4
Cumberland	41.5	58.1	45.3	18.6	41.8	33.5	60.1	99.9	78.8
Franklin	92.9	88.2	70.0	232.0	179.2	124.4	324.9	267.4	194.4
Hancock	85.5	114.2	78.4	83.8	85.4	52.4	169.3	199.6	130.8
Kennebec	81.1	112.2	107.8	33.8	28.7	27.5	114.9	140.9	135.3
Knox	30.6	21.4	20.1	6.1	14.7	10.9	36.7	36.1	31.0
Lincoln	36.3	62.3	51.4	7.7	13.1	7.6	44.0	75.4	59.0
Oxford	124.7	146.6	104.5	183.0	194.2	133.1	307.7	340.8	237.6
Penobscot	273.8	240.0	257.3	226.2	217.0	168.8	500.0	457.0	426.1
Piscataquis	168.4	152.2	146.7	223.3	251.7	205.0	391.7	403.9	351.7
Sagadahoc	4.3	15.3	12.1	1.5	7.3	1.9	5.8	22.6	14.0
Somerset	225.3	177.0	155.9	277.9	281.4	237.5	503.2	458.4	393.4
Waldo	50.6	51.3	43.9	23.0	36.2	32.7	73.6	87.5	76.6
Washington	46.6	33.9	42.5	377.1	406.6	379.6	423.7	440.5	422.1
York	45.5	59.6	64.6	1.6	25.6	40.2	47.1	85.2	104.8
Total	1,443.9	1,524.9	1,389.2	1,821.8	1,940.5	1,587.4	3,265.7	3,465.4	2,976.6
NEW HAMPSHIRE									
Belknap	4.5	8.5	21.4	28.5	12.4	17.5	33.0	20.9	38.9
Carroll	47.8	55.3	61.1	40.2	73.9	60.8	88.0	129.2	121.9
Cheshire	10.9	11.6	12.4	21.2	1.4	10.1	32.1	13.0	22.5
Coos	76.2	73.2	54.6	178.5	200.9	144.6	254.7	274.1	199.2
Grafton	34.7	37.8	44.5	69.5	52.7	60.9	104.2	90.5	105.4
Hillsborough	4.8	3.5	10.7	.1	2.3	18.9	4.9	5.8	29.6
Merrimack	2.7	14.5	4.6	4.1	8.6	17.2	6.8	23.1	21.8
Rockingham	8.7	8.8	16.2	.8	2.5	5.5	9.5	11.3	21.7
Strafford	6.9	9.7	14.7	8.2	11.4	10.7	15.1	21.1	25.4
Sullivan	4.1	5.1	9.3	8.2	.8	10.3	12.3	5.9	19.6
Total	201.3	228.0	249.5	359.3	366.9	356.5	560.6	594.9	606.0
VERMONT									
Addison	3.4	2.9	2.0	1.0	1.4	.4	4.4	4.3	2.4
Bennington	2.0	1.6	3.9	5.5	6.1	6.3	7.5	7.7	10.2
Caledonia	42.5	39.2	41.5	35.2	35.0	32.1	77.7	74.2	73.6
Chittenden	3.4	4.3	4.2	1.5	1.2	.6	4.9	5.5	4.8
Essex	35.7	22.6	29.0	103.9	103.8	90.4	139.6	126.4	119.4
Franklin	6.9	7.4	7.3	3.2	4.3	8.9	10.1	11.7	16.2
Grand Isle	--	--	--	*	--	--	*	--	--
Lamoille	8.3	5.9	10.3	8.4	5.3	9.3	16.7	11.2	19.6
Orange	32.4	26.7	21.0	16.7	10.6	9.8	49.1	37.3	30.8
Orleans	45.1	33.5	40.4	22.4	25.8	25.6	67.5	59.3	66.0
Rutland	11.8	11.7	10.2	5.3	10.3	5.6	17.1	22.0	15.8
Washington	7.5	11.7	16.3	7.6	11.4	8.6	15.1	23.1	24.9
Windham	13.3	10.7	7.7	1.6	2.4	7.0	14.9	13.1	14.7
Windsor	9.6	7.8	9.4	5.0	6.9	7.0	14.6	14.7	16.4
Total	221.9	186.0	203.2	217.3	224.5	211.6	439.2	410.5	414.8

* Less than 50 cords. Counties with no reported production are not listed.

Table 10.--Pulpwood production from roundwood in southern New England, by state, county, and softwood and hardwood, 1994, 1995, and 1996

(In thousands of standard cords)

County	Softwood			Hardwood			Total all species		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
CONNECTICUT									
Fairfield	.1	.1	*	--	--	--	.1	.1	*
Hartford	.1	.2	*	--	--	--	.1	.2	*
Litchfield	2.6	2.2	.6	--	*	--	2.6	2.2	.6
Middlesex	.5	.2	--	--	--	--	.5	.2	--
New Haven	*	.1	.3	--	*	--	.0	.1	.3
Tolland	--	--	2.1	--	--	--	.0	.0	2.1
Windham	*	.2	--	*	*	--	.0	.2	--
Total	3.3	3.0	3.0	*	*	--	3.3	3.0	3.0
MASSACHUSETTS									
Barnstable	*	*	.0	--	.0	*	*	*	*
Berkshire	1.5	.4	.4	*	*	--	1.5	.4	.4
Essex	1.4	1.3	.6	.1	*	.3	1.5	1.3	.9
Franklin	1.2	1.0	.7	*	.1	.1	1.2	1.1	.8
Hampden	2.0	1.7	2.5	--	--	--	2.0	1.7	2.5
Hampshire	.8	.5	.3	--	--	--	.8	.5	.3
Middlesex	1.3	1.3	.7	--	--	.4	1.3	1.3	1.1
Norfolk	*	.1	--	--	--	--	--	.1	--
Plymouth	*	--	*	--	.1	.3	*	.1	.3
Worcester	5.4	5.7	6.6	*	.1	.1	5.4	5.8	6.7
Total	13.6	12.0	11.8	.1	.3	1.2	13.7	12.3	13.0
RHODE ISLAND									
Providence	*	.4	4.3	--	--	--	*	.4	4.3
Total	*	.4	4.3	--	--	--	*	.4	4.3

* Less than 50 cords. Counties with no reported production are not listed.

Table 11.--Pulpwood production from roundwood in New York, by county and softwood and hardwood, 1994, 1995, and 1996

(In thousands of standard cords)

County	Softwood			Hardwood			Total all species		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Albany	1.3	2.5	1.8	.2	.4	.7	1.5	2.9	2.5
Alleghany	--	--	5.5	2.1	.5	.8	2.1	.5	6.3
Broome	4.2	5.2	7.3	10.7	6.4	9.0	14.9	11.6	16.3
Cattaraugus	--	.4	.4	12.5	13.2	13.0	12.5	13.6	13.4
Cayuga	.1	--	--	*	--	--	.1	.0	.0
Chautauqua	.8	1.1	.5	3.8	--	3.2	4.6	1.1	3.7
Chemung	.1	.6	.9	3.2	6.1	5.4	3.3	6.7	6.3
Chenango	5.7	9.7	7.5	4.4	5.1	4.1	10.1	14.8	11.6
Columbia	19.0	20.4	23.0	19.0	31.9	18.3	38.0	52.3	41.3
Cortland	.1	.1	.1	.6	.2	.1	.7	.3	.2
Delaware	3.8	5.0	5.6	.5	1.8	.2	4.3	6.8	5.8
Dutchess	3.2	3.9	1.7	8.2	2.3	5.4	11.4	6.2	7.1
Essex	.5	.1	.3	.2	.1	.3	.7	.2	.6
Franklin	32.3	29.6	26.7	21.8	18.1	20.8	54.1	47.7	47.5
Fulton	34.3	31.2	28.0	80.1	54.4	25.3	114.4	85.6	53.3
Greene	16.2	18.1	17.1	6.8	11.0	9.8	23.0	29.1	26.9
Hamilton	3.7	1.4	.6	.2	.1	.2	3.9	1.5	.8
Herkimer	13.2	10.9	12.1	33.1	30.0	40.7	46.3	40.9	52.8
Jefferson	6.0	6.9	6.4	5.1	11.2	8.2	11.1	18.1	14.6
Lewis	5.0	2.4	3.2	.9	.5	1.6	5.9	2.9	4.8
Madison	15.6	13.9	13.2	27.8	18.6	35.1	43.4	32.5	48.3
Montgomery	.9	1.0	.9	.2	.9	.4	1.1	1.9	1.3
New York	3.9	5.2	2.6	1.0	1.1	1.4	4.9	6.3	4.0
Oneida	--	--	--	--	--	1.1	--	--	1.1
Onondaga	5.2	4.9	4.6	3.7	9.6	11.7	8.9	14.5	16.3
Orange	1.7	1.4	1.6	1.1	.4	*	2.8	1.8	1.6
Oswego	*	*	.1	*	*	*	.0	.0	.1
Otsego	5.6	6.5	5.1	.8	1.0	.6	6.4	7.5	5.7
Putnam	10.9	7.3	5.3	5.2	2.6	.5	16.1	9.9	5.8
Rensselaer	--	*	--	.1	*	.2	.1	*	.2
Rockland	3.7	2.8	3.8	2.7	3.1	4.7	6.4	5.9	8.5
St. Lawrence	.2	.1	--	--	--	--	.2	.1	.0
Saratoga	30.1	21.8	27.9	58.7	49.6	75.0	88.8	71.4	102.9
Schenectady	21.7	30.5	28.8	17.3	25.5	18.8	39.0	56.0	47.6
Schoharie	.5	.1	.2	.2	.1	.1	.7	.2	.3
Schuyler	6.6	5.5	5.7	.4	.4	.3	7.0	5.9	6.0
Stueben	.3	.4	2.1	.6	.8	--	.9	1.2	2.1
Sullivan	*	*	.6	2.0	5.6	7.7	2.0	5.6	8.3
Tioga	.9	.9	.5	6.7	2.1	1.5	7.6	3.0	2.0
Tompkins	2.0	2.3	1.0	3.6	3.2	4.4	5.6	5.5	5.4
Ulster	.5	.1	.3	4.6	1.7	1.6	5.1	1.8	1.9
Warren	1.6	1.4	.2	*	.1	.2	1.6	1.5	.4
Washington	43.6	38.3	33.4	32.6	31.9	25.3	76.2	70.2	58.7
Wayne	16.2	15.7	10.8	9.1	13.8	7.8	25.3	29.5	18.6
Westchester	--	--	--	--	1.0	--	--	1.0	--
	--	.1	--	--	.2	--	--	.3	--
Total	321.2	309.7	297.4	391.8	366.6	365.5	713.0	676.3	662.9

* Less than 50 cords. Counties with no reported production are not listed.

Table 12.--Pulpwood production from roundwood in Delaware, Maryland, and New Jersey, by county and softwood and hardwood, 1994, 1995, and 1996

(In thousands of standard cords)

County	Softwood			Hardwood			Total all species		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
DELAWARE									
Kent	0.1	0.3	1.4	0.2	0.2	0.4	0.3	0.5	1.8
Sussex	29.8	14.8	49.3	6.0	4.8	9.5	35.8	19.6	58.8
Total	29.9	15.1	50.7	6.2	5.0	9.9	36.1	20.1	60.6
MARYLAND									
Allegany	3.8	6.6	3.9	16.1	16.2	17.1	19.9	22.8	21.0
Anne Arundel	9.0	7.0	11.1	1.6	1.2	4.4	10.6	8.2	15.5
Baltimore	0.6	1.5	0.7	3.0	3.5	4.8	3.6	5.0	5.5
Calvert	0.3	0.2	0.1	0.5	*	*	0.8	0.2	0.1
Caroline	0.3	2.2	3.8	0.1	0.6	0.3	0.4	2.8	4.1
Carroll	2.8	0.4	2.0	1.2	0.4	0.8	4.0	0.8	2.8
Cecil	0.1	--	--	0.2	--	--	0.3	--	--
Charles	8.0	11.0	4.6	1.9	4.2	4.2	9.9	15.2	8.8
Dorchester	14.1	12.3	5.1	6.3	4.4	0.9	20.4	16.7	6.0
Frederick	0.2	0.3	*	1.2	0.5	0.7	1.4	0.8	0.7
Garrett	0.3	0.9	4.3	21.6	32.2	33.1	21.9	33.1	37.4
Harford	*	6.0	0.4	--	1.6	1.5	0.0	7.6	1.9
Howard	0.1	0.1	0.3	0.1	0.3	0.5	0.2	0.4	0.8
Kent	0.2	--	--	*	--	--	0.2	--	--
Montgomery	*	*	*	0.1	*	0.1	0.1	*	0.1
Prince George	9.1	0.8	1.3	1.8	1.6	2.8	10.9	2.4	4.1
Queen Annes	*	*	--	*	--	*	0.0	0.0	0.0
St. Marys	4.6	7.2	7.0	1.0	0.1	0.4	5.6	7.3	7.4
Somerset	8.2	13.9	13.9	7.9	6.1	3.5	16.1	20.0	17.4
Talbot	0.4	0.6	9.5	0.1	0.7	0.4	0.5	1.3	9.9
Washington	0.1	0.6	0.4	1.4	0.6	0.8	1.5	1.2	1.2
Wicomico	16.5	10.1	17.9	6.5	5.0	3.9	23.0	15.1	21.8
Worcester	18.0	13.6	18.1	10.5	8.3	7.7	28.5	21.9	25.8
Total	96.7	95.3	104.4	83.1	87.5	87.9	179.8	182.8	192.3
NEW JERSEY									
Atlantic	0.3	0.2	0.7	--	--	--	0.3	0.2	0.7
Cape May	--	--	*	--	--	--	--	--	*
Gloucester	--	--	5.1	--	--	0.5	--	--	5.6
Hunterdon	--	--	--	--	--	0.1	--	--	0.1
Morris	--	--	--	1.5	--	--	1.5	--	--
Monmouth	--	--	0.1	--	--	--	0.0	--	--
Sussex	--	--	--	0.5	--	*	0.5	--	*
Ocean	--	--	--	--	*	--	--	*	--
Warren	--	--	--	--	0.1	--	--	0.1	--
Total	0.3	0.2	5.9	2.0	0.1	0.6	2.3	0.3	6.5

* Less than 50 cords. Counties with no reported production are not listed.

Table 13.--Pulpwood production from roundwood in Pennsylvania, by county and softwood and hardwood, 1994, 1995, and 1996

(in thousands of standard cords)

County	Softwood			Hardwood			Total all species		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Adams	.3	.5	1.4	3.0	4.0	3.8	3.3	4.5	5.2
Allegheny	.8	.8	--	--	--	*	.8	.8	*
Armstrong	--	--	--	17.3	.2	5.9	17.3	.2	5.9
Bedford	4.8	4.7	6.7	19.8	22.7	18.6	24.6	27.4	25.3
Berks	*	.5	.2	.4	.5	.5	.4	1.0	.7
Blair	.2	.3	.5	8.2	8.2	7.5	8.4	8.5	8.0
Bradford	1.9	2.8	3.3	40.0	25.7	30.1	41.9	28.5	33.4
Bucks	--	.1	.1	.1	*	.1	.1	.1	.2
Butler	--	--	--	2.7	2.0	2.0	2.7	2.0	2.0
Cambria	.1	.1	1.1	14.1	12.4	14.1	14.2	12.5	15.2
Cameron	--	--	--	8.7	7.9	6.2	8.7	7.9	6.2
Carbon	--	--	--	1.5	1.9	3.7	1.5	1.9	3.7
Centre	1.6	2.8	3.6	40.3	15.0	21.8	41.9	17.8	25.4
Chester	.3	.3	*	.1	.5	.6	.4	.8	.6
Clarion	.1	.1	.1	3.9	3.0	1.9	4.0	3.1	2.0
Clearfield	1.5	8.4	8.9	111.7	50.9	58.8	113.2	59.3	67.7
Clinton	1.3	2.3	1.4	33.3	36.3	23.4	34.6	38.6	24.8
Columbia	.6	.7	.7	5.4	4.5	10.3	6.0	5.2	11.0
Crawford	--	--	--	1.3	2.0	2.0	1.3	2.0	2.0
Cumberland	.7	1.8	.9	2.3	1.1	2.3	3.0	2.9	3.2
Dauphin	.3	.3	.3	2.6	3.2	4.8	2.9	3.5	5.1
Delaware	.1	.1	.2	*	--	--	.1	.1	.2
Elk	--	--	*	46.9	31.7	38.5	46.9	31.7	38.5
Erie	--	--	--	3.8	2.4	2.0	3.8	2.4	2.0
Fayette	*	*	--	.1	.3	1.3	.1	.3	1.3
Forest	--	--	--	34.0	22.4	24.0	34.0	22.4	24.0
Franklin	1.6	1.0	1.5	12.3	10.8	11.6	13.9	11.8	13.1
Fulton	11.5	14.7	9.3	11.6	13.1	11.8	23.1	27.8	21.1
Greene	--	--	--	--	.1	--	--	.1	--
Huntingdon	2.7	3.9	4.9	16.7	14.4	13.9	19.4	18.3	18.8
Indiana	*	*	.1	7.9	6.4	5.8	7.9	6.4	5.9
Jefferson	.2	--	.7	22.8	15.0	19.4	23.0	15.0	20.1
Juniata	1.7	2.7	2.8	4.8	2.5	3.4	6.5	5.2	6.2
Lackawanna	--	--	.1	4.4	8.6	3.7	4.4	8.6	3.8
Lancaster	*	--	--	.3	.8	1.3	.3	.8	1.3
Lawrence	--	--	--	--	.6	1.1	--	.6	1.1
Lebanon	.2	*	.7	2.3	1.3	2.9	2.5	1.3	3.6
Luzerne	--	1.8	1.4	15.0	8.0	11.3	15.0	9.8	12.7
Lycoming	.1	.4	2.2	23.4	9.6	10.8	23.5	10.0	13.0
McKean	--	--	--	54.3	38.5	44.8	54.3	38.5	44.8
Mercer	--	--	--	.6	1.4	3.8	.6	1.4	3.8
Mifflin	.6	.8	.7	5.6	10.8	5.8	6.2	11.6	6.5
Monroe	--	--	.3	2.0	2.6	6.2	2.0	2.6	6.5
Montgomery	*	*	--	--	--	--	*	*	--

(Continued)

Table 13.--Continued

County	Softwood			Hardwood			Total all species		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Montour	.1	--	--	--	--	*	.1	--	*
Northhampton	.6	--	--	*	*	--	.6	*	--
Northumberland	0.7	1.7	2.7	1.4	1.0	0.6	2.1	2.7	3.3
Perry	--	2.3	1.0	1.1	4.0	1.5	1.1	6.3	2.5
Pike	--	*	.1	5.3	2.4	6.3	5.3	2.4	6.4
Potter	--	--	.4	61.3	46.5	42.9	61.3	46.5	43.3
Schuykill	.5	.9	5.2	34.7	37.4	35.0	35.2	38.3	40.2
Snyder	.2	.3	2.4	.1	.3	.9	.3	.6	3.3
Somerset	.5	1.0	.7	19.9	20.2	16.6	20.4	21.2	17.3
Sullivan	.4	.3	.6	22.4	33.9	36.5	22.8	34.2	37.1
Susquehanna	1.5	1.0	.4	19.0	24.2	25.9	20.5	25.2	26.3
Tioga	*	.3	1.5	21.4	29.1	26.8	21.4	29.4	28.3
Union	.2	--	1.4	1.2	.2	.4	1.4	.2	1.8
Venango	--	--	--	9.6	8.2	8.6	9.6	8.2	8.6
Warren	--	--	--	28.9	24.5	26.6	28.9	24.5	26.6
Wayne	.3	.1	.1	10.2	5.4	12.4	10.5	5.5	12.5
Westmoreland	*	--	--	4.3	2.5	--	4.3	2.5	--
Wyoming	.5	1.6	.4	13.1	13.9	13.6	13.6	15.5	14.0
York	2.0	3.9	3.0	4.1	9.9	8.0	6.1	13.8	11.0
Total	40.7	65.3	74.0	843.5	666.9	704.4	884.2	732.2	778.4

* Less than 50 cords. Counties with no reported production are not listed.

Table 14.--Pulpwood production from roundwood in West Virginia, by county and softwood and hardwood, 1994, 1995, and 1996

(In thousands of standard cords)

County	Softwood			Hardwood			Total all species		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Barbour	--	--	--	--	.3	.6	--	.3	.6
Berkeley	.4	1.9	1.4	*	2.8	4.2	.4	4.7	5.6
Boone	--	--	--	2.4	1.3	1.1	2.4	1.3	1.1
Braxton	.5	--	--	2.7	*	.1	3.2	*	.1
Brooke	--	--	--	--	*	--	--	*	--
Cabell	.3	.3	*	.1	.1	.1	.4	.4	.1
Calhoun	1.3	.9	.3	.4	.1	*	1.7	1.0	.3
Doddridge	--	--	--	*	*	.2	--	--	.2
Fayette	.2	.2	.1	10.4	15.1	13.4	10.6	15.3	13.5
Grant	.2	1.0	.2	10.7	8.1	3.5	10.9	9.1	3.7
Greenbrier	1.2	3.1	.9	43.4	45.8	62.3	44.6	48.9	63.2
Hampshire	8.2	13.2	7.8	8.5	12.9	12.0	16.7	26.1	19.8
Hardy	3.8	3.7	3.0	8.2	8.7	9.5	12.0	12.4	12.5
Jackson	8.4	7.4	3.6	.2	.1	.5	8.6	7.5	4.1
Jefferson	--	--	--	*	.4	--	--	.4	--
Kanawha	*	--	.2	.5	.1	.2	.5	.1	.4
Lewis	--	--	--	--	--	.3	--	--	.3
Lincoln	*	--	--	.4	--	--	.4	--	--
Logan	--	--	--	--	.4	--	--	.4	--
McDowell	*	--	--	.4	1.8	1.3	.4	1.8	1.3
Marion	--	--	--	--	1.1	1.9	--	1.1	1.9
Marshall	--	--	--	--	--	.3	--	--	.3
Mason	3.5	2.1	2.7	.3	.2	.1	3.8	2.3	2.8
Mercer	--	.1	.2	.8	.9	1.2	.8	1.0	1.4
Mineral	.4	1.9	2.5	.2	8.8	11.5	.6	10.7	14.0
Monongalia	--	--	--	34.6	27.0	5.1	34.6	27.0	5.1
Monroe	.4	1.9	1.8	5.6	6.6	6.2	6.0	8.5	8.0
Morgan	3.2	3.7	1.6	3.6	3.1	3.1	6.8	6.8	4.7
Nicholas	.4	.7	1.1	38.1	46.9	38.8	38.5	47.6	39.9
Ohio	--	--	--	--	.1	--	--	.1	--
Pendleton	1.7	1.6	3.3	6.0	14.1	10.1	7.7	15.7	13.4
Pleasants	.3	.4	.5	--	--	--	.3	.4	.5
Pocahontas	2.0	.5	.2	8.1	11.6	12.7	10.1	12.1	12.9
Preston	1.3	.9	.3	11.8	10.9	11.2	13.1	11.8	11.5
Putnam	10.9	10.7	7.7	8.6	8.9	8.5	19.5	19.6	16.2
Raleigh	.4	.1	1.0	15.3	15.0	12.6	15.7	15.1	13.6
Randolph	.4	.1	.1	31.1	16.6	20.9	31.5	16.7	21.0
Ritchie	3.3	2.8	2.2	.7	1.2	8.2	4.0	4.0	10.4
Roane	*	*	.5	--	--	.1	*	*	.6
Summers	--	*	*	1.0	1.4	1.4	1.0	1.4	1.4
Taylor	--	--	--	.7	.1	--	.7	.1	--
Tucker	.2	.4	.7	10.7	15.5	15.4	10.9	15.9	16.1
Tyler	--	--	--	--	.1	.7	--	.1	.7
Wayne	--	--	--	.4	.4	--	.4	.4	--
Webster	--	--	--	.2	--	--	.2	--	--
Wirt	2.0	2.8	4.1	3.1	1.8	4.1	5.1	4.6	8.2
Wood	10.3	8.7	6.1	9.5	7.7	12.0	19.8	16.4	18.1
Wyoming	.2	.2	*	4.2	3.0	.3	4.4	3.2	.3
Total	65.4	71.3	54.1	282.9	301.0	295.7	348.3	372.3	349.8

* Less than 50 cords. Counties with no reported production are not listed.

**Table 15.--Pulpwood production from roundwood in Ohio by county
and softwood and hardwood, 1994, 1995, and 1996**

(In thousands of standard cords)

County	Softwood			Hardwood			Total all species		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Adams	.1	.1	.5	8.4	8.4	5.7	8.5	8.5	6.2
Ashland	--	--	--	1.6	31.5	1.6	1.6	31.5	1.6
Ashtabula	--	--	--	--	.2	.3	--	.2	.3
Athens	.1	.1	.1	3.3	3.2	6.0	3.4	3.3	6.1
Belmont	--	--	--	1.3	2.6	4.8	1.3	2.6	4.8
Brown	--	--	--	.8	.8	--	.8	.8	--
Carroll	.2	.2	--	3.4	4.3	2.1	3.6	4.5	2.1
Clark	--	--	--	.2	.2	--	.2	.2	--
Columbiana	--	--	--	2.1	.7	24.0	2.1	.7	24.0
Coshocton	--	--	--	12.8	18.3	20.4	12.8	18.3	20.4
Crawford	--	--	--	.3	--	.4	.3	--	.4
Cuyahoga	--	--	--	6.4	3.5	5.7	6.4	3.5	5.7
Fairfield	--	--	--	1.1	1.1	.1	1.1	1.1	.1
Franklin	--	--	--	.6	.7	.2	.6	.7	.2
Gallia	1.1	1.1	.8	5.6	5.5	4.8	6.7	6.6	5.6
Geauga	--	--	--	.3	.5	.6	.3	.5	.6
Greene	--	--	--	*	--	.3	*	--	.3
Guernsey	*	*	--	6.2	8.0	1.4	6.2	8.0	1.4
Harrison	--	--	1.9	5.2	1.2	1.5	5.2	1.2	3.4
Highland	*	*	*	2.8	2.8	5.8	2.8	2.8	5.8
Hocking	3.0	3.0	1.3	7.1	6.4	3.9	10.1	9.4	5.2
Holmes	--	--	--	4.0	1.0	.7	4.0	1.0	.7
Huron	--	--	--	.1	.7	--	.1	.7	--
Jackson	7.2	7.4	3.9	31.1	31.8	36.2	38.3	39.2	40.1
Jefferson	--	--	--	1.5	.6	2.5	1.5	.6	2.5
Knox	--	--	--	.8	1.9	.1	.8	1.9	.1
Lake	--	--	--	.1	.3	.8	.1	.3	.8
Lawrence	3.7	3.8	1.1	21.2	21.2	7.5	24.9	25.0	8.6
Licking	*	--	--	4.2	1.6	2.6	4.2	1.6	2.6
Logan	--	--	--	--	.5	*	--	.5	*
Lorain	--	--	--	--	2.6	2.3	--	2.6	2.3
Lucas	--	--	--	--	--	.2	--	--	.2
Mahoning	--	--	--	.2	.5	*	.2	.5	*
Medina	--	--	--	1.5	3.6	3.3	1.5	3.6	3.3
Meigs	2.7	3.6	1.0	1.8	2.7	5.8	4.5	6.3	6.8
Monroe	--	--	--	--	--	.1	--	--	.1
Montgomery	--	--	--	--	--	*	--	--	*
Morgan	4.3	8.0	--	2.0	6.7	9.3	6.3	14.7	9.3
Muskingum	1.8	1.8	--	5.1	5.3	13.1	6.9	7.1	13.1
Noble	--	--	--	.9	1.5	5.0	.9	1.5	5.0
Perry	--	--	--	2.3	6.3	2.8	2.3	6.3	2.8

(Continued)

Table 15.-continued

County	Softwood			Hardwood			Total all species		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Pickaway	--	--	--	.1	.1	--	.1	.1	--
Pike	2.4	2.4	.3	14.8	14.8	18.0	17.2	17.2	18.3
Portage	--	--	--	.9	.7	1.3	.9	.7	1.3
Richland	--	--	--	2.4	1.5	2.0	2.4	1.5	2.0
Ross	.2	.2	4.7	5.1	5.1	21.1	5.3	5.3	25.8
Scioto	2.7	2.7	2.5	19.5	19.6	25.9	22.2	22.3	28.4
Stark	--	--	--	4.4	11.6	4.3	4.4	11.6	4.3
Summit	--	--	--	4.8	3.9	2.9	4.8	3.9	2.9
Trumbull	--	--	--	2.6	.8	.7	2.6	.8	.7
Tuscarawas	.1	.1	*	19.1	11.5	8.1	19.2	11.6	8.1
Union	--	--	--	.3	.3	.5	.3	.3	.5
Vinton	1.4	1.4	.4	14.7	14.6	13.1	16.1	16.0	13.5
Washington	1.8	1.6	16.7	.4	2.7	4.1	2.2	4.3	20.8
Wayne	--	--	.1	3.1	.5	1.6	3.1	.5	1.7
Wood	--	--	--	--	--	2.2	--	--	2.2
Total	32.8	37.5	35.3	238.5	276.4	267.7	271.3	313.9	323.0

* Less than 50 cords. Counties with no reported production are not listed.

Table 16. - Production and receipts of pulpwood in the Northeast, softwood and hardwood by state 1996, and totals for 1995 and 1994

(In thousands of standard cords)

State	Produced in state		Received in state	
	Softwood	Hardwood	Softwood	Hardwood
Connecticut	3.0	4.2	0	0
Delaware	51.3	12.8	0	0
Maine	2,144.6	1,644.2	2,687.3	2,067.1
Maryland	188.2	131.4	197.4	336.9
Massachusetts	15.3	5.9	0	0
New Hampshire	382.4	393.7	171.1	361.4
New Jersey	5.9	6.9	0	0
New York	320.9	524.9	529.8	401.2
Ohio	38.6	573.4	88.7	743.6
Pennsylvania	83.0	1,122.0	223.7	1,356.5
Rhode Island	4.4	1.0	0	0
Vermont	244.6	237.1	0	0
West Virginia	60.9	675.1	0	0
Total 1996	3,543.1	5,332.6	3,898.0	5,266.7
Total 1995	3,686.4	5,726.6	3,998.7	5,593.8
Total 1994	3,565.5	5,621.2	3,883.4	5,485.9

Table 17. - Balance of pulpwood shipments into and out of states, 1994, 1995, and 1996

State	1994 Net export (+) import(-)	1995 Net export (+) import(-)	1996 Net export (+) import(-)
	(In thousands of standard cords)		
Connecticut	+7.1	+7.4	+7.2
Delaware	+39.7	+23.8	+64.1
Maine	-823.8	-883.8	-965.6
Maryland	-235.7	-212.0	-214.7
Massachusetts	+23.6	+26.6	+21.2
New Hampshire	+330.4	+250.0	+243.6
New Jersey	+2.3	+9.2	+12.8
New York	-179.4	-116.1	-85.2
Ohio	-198.1	-152.7	-220.3
Pennsylvania	-348.9	-360.8	-375.2
Rhode Island	+1.0	+2.3	+5.4
Vermont	+516.8	+461.1	+481.7
West Virginia	+682.4	+765.5	+736.0
Northeast	-182.6	-179.5	-289.0

Table 18.--Imports of roundwood into the Northeast, by state (or province) of origin, state of consumption, and softwood and hardwood, 1994, 1995, and 1996

(In thousands of standard cords)

Receiving State	State or province of origin	1994			1995			1996		
		Softwood	Hardwood	Total	Softwood	Hardwood	Total	Softwood	Hardwood	Total
Maine	New Brunswick	8.1	207.3	215.4	34.1	195.3	229.4	35.2	231.2	266.4
	Ontario	.4	--	.4	--	--	--	--	1.1	1.1
	Quebec	20.6	16.5	37.1	33.5	35.6	69.1	71.1	15.5	86.6
Maryland	Virginia	94.5	40.4	134.9	77.4	24.7	102.1	86.8	16.3	103.1
New Hampshire	Quebec	*	1.4	1.4	*	.5	.5	1.0	1.2	2.2
New York	Nova Scotia	--	--	--	--	--	--	.5	--	.5
	Ontario	--	--	--	.3	--	.3	11.8	--	11.8
	Quebec	30.3	.3	30.6	32.6	.3	32.9	24.4	*	24.4
Ohio	Georgia	--	--	--	4.0	*	4.0	13.9	*	13.9
	Indiana	4.0	*	4.0	--	--	--	--	--	--
	Kentucky	9.9	47.5	57.4	9.9	47.5	57.4	11.2	63.7	74.9
	South Carolina	--	1.2	--	--	--	--	--	--	--
	Tennessee	.5	--	.5	--	--	--	1.4	.2	1.6
	Virginia	.6	1.2	1.8	--	--	--	2.2	--	2.2
Pennsylvania	North Carolina	--	.9	--	--	--	--	--	--	--
	South Carolina	--	1.6	1.6	--	--	--	--	--	--
	Virginia	52.1	11.6	63.7	49.0	4.3	53.3	43.5	6.7	50.2
Total		221.0	329.9	548.8	240.8	308.2	549.0	303.0	335.9	638.9

Table 19.--Imports of manufacturing residues used for pulp into the Northeast, by state (or province) of origin, state of consumption, and softwood and hardwood, 1994, 1995, and 1996

(In thousands of standard cords)

Receiving State	State or province of origin	1994			1995			1996		
		Softwood	Hardwood	Total	Softwood	Hardwood	Total	Softwood	Hardwood	Total
Maine	New Brunswick	58.1	3.6	61.7	46.4	3.8	50.2	201.0	1.2	202.2
	Quebec	152.8	17.6	170.4	157.1	5.7	162.8	171.9	2.6	174.5
Maryland	Virginia	11.8	5.6	17.4	9.2	.7	9.9	9.5	4.8	14.3
New Hampshire	Quebec	6.9	1.6	8.5	5.9	.8	6.7	--	--	--
New York	Quebec	--	--	--	10.1	3.9	14.0	--	--	--
Ohio	Indiana	--	2.3	2.3	--	2.3	2.3	--	--	--
	Kentucky	3.0	60.7	63.7	3.0	39.0	42.0	5.1	64.5	69.6
Pennsylvania	North Carolina	--	.8	.8	--	--	--	--	--	--
	Virginia	3.6	14.8	18.4	3.7	14.8	18.5	3.9	14.1	18.0
Total		236.2	107.0	343.2	235.4	71.0	306.4	391.4	87.2	478.6

Table 20. - -Harvest intensity: average annual pulpwood roundwood removals per acre of timberland in the Northeast, 1994-96

State	Timberland ^a	Average pulpwood harvest	Average harvest per acre ^b
	Acres	Cords	Cubic feet
Connecticut	1,777,300	3,100	0.15
Delaware	376,400	38,900	8.78
Maine	16,937,700	3,235,900	16.24
Maryland	2,424,000	185,000	6.49
Massachusetts	2,952,000	13,000	0.37
New Hampshire	4,812,100	587,200	10.37
New Jersey	1,857,000	3,000	0.14
New York	15,405,500	684,100	3.77
Ohio	7,567,400	302,700	3.40
Pennsylvania	15,872,800	798,300	4.27
Rhode Island	371,700	1,600	0.37
Vermont	4,422,100	421,500	8.10
West Virginia	11,917,700	356,900	2.55
Total	86,693,700	6,631,200	6.50

^a Most recent estimates of timberland by USDA, Forest Service.

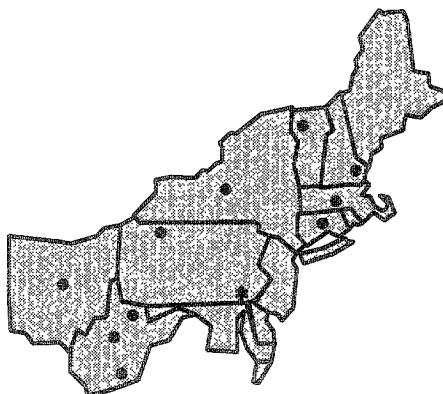
^b Conversion factor is 85 cubic feet per cord.

Widmann, Richard H. 1998. **Pulpwood Production in the Northeast—1994, 1995, and 1996.** Resour. Bull. NE-140. Radnor, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 26 p.

This report contains information for the years 1994-96 compiled from a canvass of all pulpmills that use pulpwood produced in the 13 Northeastern States. It contains data on pulpwood production and consumption from roundwood by county, and on pulpwood chip production from manufacturing residues by state. Trends in pulpwood production are shown graphically.

Keywords: Residue, timber output, harvest





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