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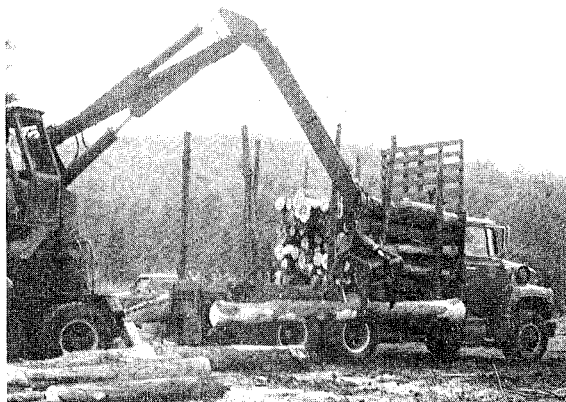
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New York Timber Industries— A Periodic Assessment of Timber Output

Robert L. Nevel, Jr.
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ERRATA SHEET

NEW YORK TIMBER INDUSTRIES - A PERIODIC ASSESSMENT OF TIMBER OUTPUT

Resource Bulletin NE-73

Please make the following changes:

Cover -- Everett L. Stochia should read Everett L. Sochia

Insert this copy on page 2, after last line in column 2:

Until the late 19th century, most timber cutting and processing was associated with agriculture and the settlement of forested land. Much of the timber cut to clear land was piled and burned. The best timber was used for lumber and other building materials, fencing, shipmasts, cooperage, and tannin. Less valuable timber was used for fuel. The industry used mainly the abundant high-quality hardwoods and white pine and hemlock. Until the 1800's, wood production in the state was low and timber harvesting and processing were slow, tedious and labor-intensive. Hand tools and animals were used in the woods and water-powered saws in the mills.

Through most of the 1800's and into the early 1900's, the timber and wood-using industries flourished with the expansion and development of other industry in the state. Hardwood timber products were used by the iron, chemical, charcoal, railroad, and mining industries. Quality hardwood timber was used for furniture, tools, and farm implements. So much white pine lumber was cut that eventually the supply of this species was depleted. Other softwood timber was cut in large volumes and floated down rivers to supply an expanding pulp and paper industry as well as the growing lumber industry. The introduction of steam-driven equipment increased productivity in the woods and at portable sawmills. Steam-powered trains hauled logs and lumber to market. Both lumber and pulpwood production peaked in the early 1900's and lumber production changed from softwood to hardwood.

Until the late 1920's, the major products and harvesting technology remained much the same, and the markets for traditional timber products remained large as the population grew. But the number of mills in most wood-using industries declined; both hardwood and softwood lumber production declined; pulpwood production fluctuated; the demand for veneer logs peaked, then began a period of fluctuation.

Page 12--Paragraph 1, line 10-- (39 thousand m³) should read (390 thousand m³)

Page 12--Under the heading "Literature Cited", 5th line -- 1967-1969
should read 1967

Page 15--Table--add footnote: *Less than 1,000 cubic meters

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Cover Photo

Throughout New York, loggers use machines to harvest and transport sawlogs, pulpwood, and other timber products from the state's timberlands. In this series of photographs, trees are felled and limbs removed with a chainsaw, stems are dragged to a central collection area by a rubber-tired skidder, sawn into the roundwood products, segregated into piles by product type with a hydraulic loader, and hauled to mills by truck.

Abstract

A periodic evaluation of statewide industrial timber output based on a survey of the primary wood manufacturing plants in New York. Contains statistics on the industrial timber harvest and plant wood receipts in 1979, and the production and disposition of the manufacturing residues that resulted. The 152 million cubic feet (4.3 million cubic meters) of industrial wood produced in 1979 represented a 56 percent increase in production since 1967 when the previous survey was made. Although production of sawlogs and pulpwood increased substantially during the period, production of veneer logs, poles and posts, and most miscellaneous products decreased. Other trends in industrial product output and the increased use of manufacturing residue are presented along with 18 statistical tables.

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Highlights

The 1979 Timber Industry survey in New York showed that, since 1967:

°Total timber output increased 56 percent to 152 million cubic feet (4.3 million cubic meters).

°Sawlog production rose 70 percent, to 596 million board feet.

°Sawmills of all size classes increased in number. The total number of sawmills in New York has increased from 439 to 494.

°Production of all forms of pulpwood increased. Total pulpwood production almost doubled, reaching 858 thousand cords.

°Veneer log production has decreased 44 percent to 12.6 million board feet.

°The use of wood manufacturing residues increased from 76 percent to 94 percent of the total available.

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 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. New York has now been inventoried for the third time. The latest survey, completed in 1979, included a

timber-industry survey in 1980 to determine the output of timber products and the volume and disposition of primary wood-product manufacturing residues in New York for 1979.

This report is the result of a 100 percent canvass of all primary wood-product manufacturers that were operating in New York in 1979. Pulpwood production data were gathered as part of the Northeastern Station's annual survey of pulpwood producers in the Northeast. The New York State Department of Environmental Conservation, Bureau of Forest Marketing and Economic Development, assembled a list of all known primary wood-product manufacturing firms for the canvass. The primary manufacturers were first contacted through a questionnaire mailed from the Experiment Station headquarters. Possible out-of-state consumers of New York roundwood were also sent questionnaires. After three mailings those mill owners in New York who did not respond were contacted in person by the New York Bureau's personnel; nonresponding out-of-state primary manufacturers were contacted by telephone by the Station's personnel.

This report deals mainly with statistics for two years: 1979, the calendar year of the current timber-industry survey; and 1967, the calendar year of the previous complete canvass. The reader is reminded that these years may not be representative for the various New York timber industries covered in this report. When documented production statistics for individual timber products were available for previous or intervening years, they were included for comparison.

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

Timber Industry Trends - A Perspective

The cutting and processing of timber in New York have always been important to the economic development of the state. The current strength and stature of the state's timber and timber products industry can be more thoroughly appreciated as one looks at the changes the industry since its birth in colonial days. The following summary of past reports (Barrett 1962, Bones 1969, Canham 1981, Canham 1968, Steer 1948, and Von Ohlsen 1957) is presented to put the current assessments in perspective.

During the next 25 years, industrial demand for sawlogs and veneer logs remained low, quality timber became scarce, and changes in the economy as well as the war made employment and investment in other local industry more attractive. The lumber industry eventually moved to other states. As local pulpwood supplies dwindled, the older and less efficient pulpmills closed, and fewer and fewer pulpmills managed to increase production by importing wood from outside the state. Variable but continuing demand for furniture veneer and plywood kept the veneer industry relatively stable. The substitution of nonwood products brought about the demise of most of the remaining manufacturers of minor specialty products.

During the last quarter-century, stability has come to the timber and timber products industry. Since the 1950's, the number of loggers, sawmills, and pulpmills has diminished, but the remaining mills provide a solid industrial base. The industry has adapted to improved technology, better transportation, and stronger demand; changing bark, pulpwood, and fuelwood markets; and concerns over energy and the environment. The result has been greater efficiency, increased productivity and production, energy cost savings, and better use of the timber resource and of manufacturing residues for old and new products.

Examples of the industry's recent adaptation to economic opportunities and new technology include multiproduct logging of hardwood stands; harvesting of tree-length material; buying sawlogs and other roundwood by weight; using advanced pulping technology better able to utilize hardwoods, residue, and total-tree chips; and employing chips and wood byproducts for fuel and sewage treatment. The industry continues to substitute more of the state's red pine, spruce, and other plantation species for out-of-state softwoods in the manufacture of cabin logs, poles, piling, lumber, and other construction materials. Some manufacturers have merged with other local, regional, and national enterprises. Industry has responded to stimulated export demand and a favorable exchange rate by producing quality hardwood products, such as veneer logs, lumber, and dimension stock. The industry's ability to capitalize on this variety of recent economic opportunities is indicative of its strength and its potential for continued growth and development.

The Industrial Timber Harvest

In 1979, 152 million cubic feet (4.3 million cubic meters) of timber were harvested from New York's forests for use by the timber industry. Hardwoods accounted for 74 percent of the harvested timber. Almost all of the timber was used for sawlogs and pulpwood--sawlogs accounted for over 60 percent of the total harvest, and pulpwood made up slightly more than 36 percent of the harvest. Two percent was used for poles and posts and miscellaneous timber products such as cabin logs and piling and stock for bowls, handles, ladders, shingles, and dimension stock.

The timber harvest in New York has increased by 54.3 million ft³ (1.5 million cubic meters) since the last complete reinventory of the state's forest resources and forest products industry in 1967. The two major timber products--sawlogs and pulpwood--were responsible for the 56 percent gain in harvested timber between 1967 and 1979. Together, the cubic-foot volume of timber for sawlogs and pulpwood was 68 percent higher in 1979. Declines in timber cut occurred for all other products, such as veneer logs, poles, and posts, ranging from 36 to 83 percent. Overall, timber use for these products dropped by 5.5 million ft³, or 53 percent, while the harvest of sawlogs and pulpwood jumped 59.8 million ft³.

Timber harvests in New York have increased substantially only in recent years. The harvest of 1967 (97.8 million ft³) was only 8 percent higher than that of 1950, when 90.8 million ft³ were produced; the harvest of 1979 was 68 percent higher than 1950's.

The volume of hardwoods harvested in the state has continued to rise since 1950. Hardwoods accounted for two-thirds of the gain in the total harvest between 1967 and 1979 and nearly all of the gain between 1950 and 1967. Most of the gains since 1950 were due to increases in the harvests of hardwoods for sawlogs and pulpwood.

The volume of softwoods harvested in New York has also risen in recent years. Availability of mature white pine, hemlock, and red pine has contributed to the near-doubling of the annual softwood harvest in the state between 1967 and 1979. The softwood sawlog harvest has doubled since 1967, and the harvest of all other softwood products increased also.

The bulk of New York's timber harvest has always been in the form of sawlogs and pulpwood, and the preponderance has increased over the last 30 years. Since 1950, the distribution of timber products in New York has changed significantly. Sawlogs and

pulpwood together account for more and more of the state's timber harvests, while declining production of all other hardwood products continues to reduce the overall production of the other products (Fig. 1 and Table 2).

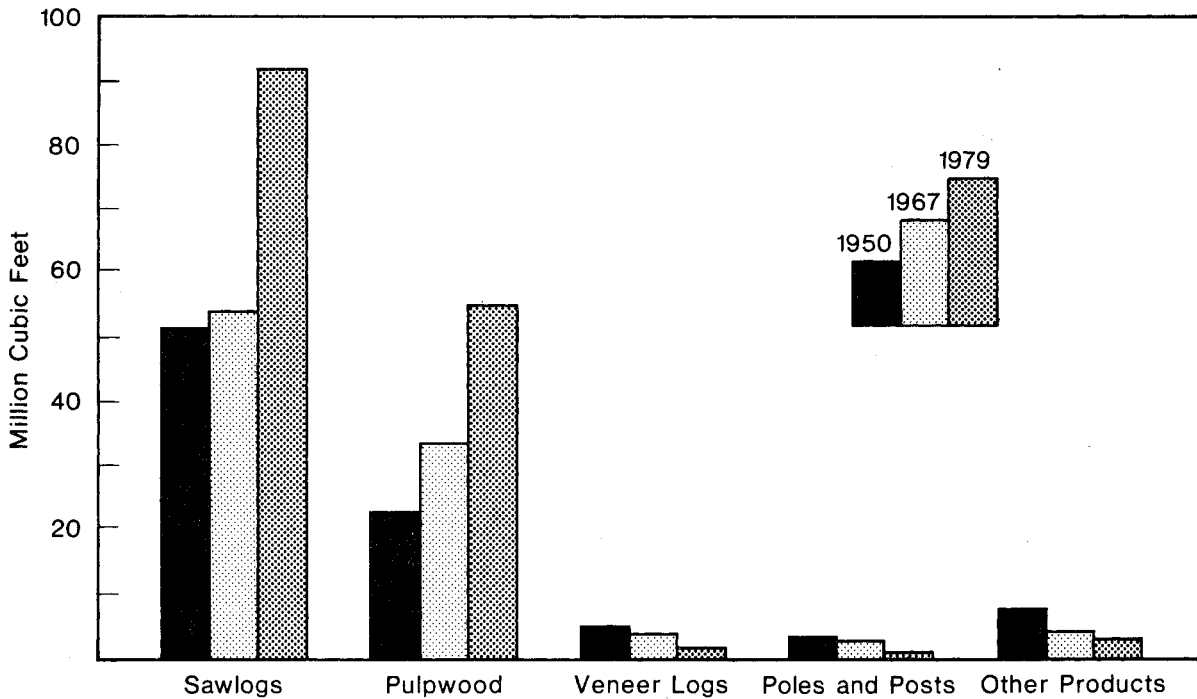


Figure 1.--Trend in industrial timber harvest in New York for selected years, by product use.

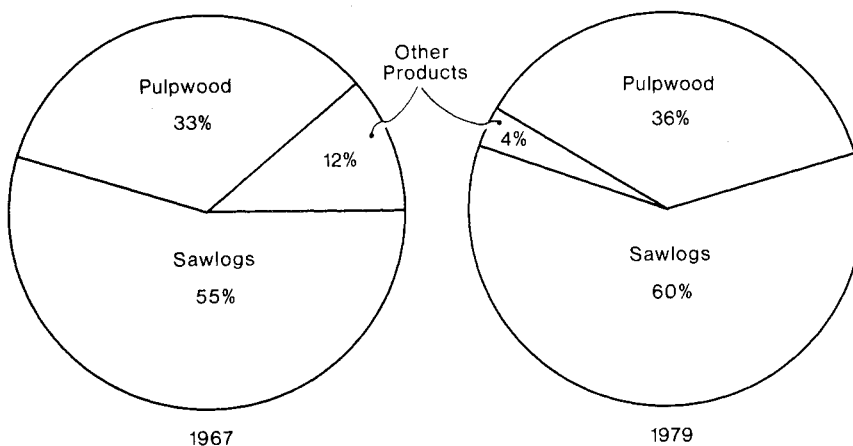


Figure 2.--New York industrial timber harvest in 1967 and 1979, by product, in percent.

Since 1967, the production of sawlogs has increased more than pulpwood production, both in terms of volume and in percentage of the total harvest (Fig. 2). Sawlog production was 54 million ft³, or 55 percent of the state's total harvest, in 1967. By 1979, it had risen to 92 million ft³, for 5 percent more of the harvest. Pulpwood production was 33 million ft³ in 1967, about one-third of the total harvest that year. By 1979, pulpwood production had risen to more than 55 million ft³, for 2 percent more of the year's total harvest. Between 1967 and 1979, the production of sawlogs and pulpwood increased by 70 and 66 percent, respectively. The production of other products such as veneer logs, poles and posts, and miscellaneous products was slightly more than 3 percent of the harvest in 1979, down from 10 percent in 1967 and 18 percent in 1950.

Since 1967, the proportion of hardwoods and softwoods in New York's timber harvest changed only slightly while considerable change occurred in the species distribution among the various timber products. Hardwoods comprised approximately three-fourths of the harvest in 1967 and in 1979, up from about half in 1950. During the 1967 to 1979 period, the production of hardwood products increased 48 percent, from 75.8 to 111.9 million ft³. Increased hardwood sawlog and pulpwood production was responsible for most of this increase. Hardwood sawlogs and pulpwood increased by almost the same volume--20.3 and 21.7 million ft³, respectively. Hardwood sawlog production rose nearly 50 percent, while the production of pulpwood from hardwoods almost doubled. The hardwood volume in veneer logs and bolts, poles and posts, and miscellaneous products dropped by 5.9 million ft³. The production of hardwood veneer logs dropped by 1.5 million ft³, a decrease of 44 percent; the production of miscellaneous hardwood products, such as bats, bowls, and handles, dropped to nearly half (2.1 million ft³) of the state's 1967 production; and hardwood poles and posts were almost extinct, dropping 98 percent.

Nearly twice as much softwood was used in 1979 as in 1967--over 40 million ft³, up from 22.0 million. Most of the increase was due to an almost tripled use of softwood sawlogs, from 10.3 million to 27.9 million ft³. The production of softwood miscellaneous products increased by 300,000 ft³, largely because of increased production of cabin logs throughout the state. Less than 100,000 ft³ of softwood veneer logs were produced in 1979, as opposed to none in 1967; and softwood pole and post production rose by 100,000 ft³.

Most of New York's 1979 timber harvest and sawlog production was from the state's northern and southwestern regions (Fig. 3). The northern region accounted for almost half of the total harvest for the state and nearly a third of the sawlogs:

Region	Harvest	Sawlogs	Pulpwood
	----- (Million ft ³) -----		
Northern	73.5	27.5	43.9
Southeastern	28.9	20.9	7.2
Southwestern	49.8	43.6	4.2
Total	152.2	92.0	55.3

The southwestern region produced nearly a third of all timber produced in the state and almost half of the sawlogs. About a fifth of the total harvest and of the sawlog harvest was from the southeastern region. Nearly four-fifths of the state's total pulpwood harvest came from the northern region; the southeastern harvest was about 13 percent; the balance came from the southwestern region.

Less than 20 percent of the other products harvested in New York in 1979 came from the southeastern region. The bulk of these minor products were evenly distributed between the northern and southwestern regions.

The Lumber and Sawlog Segment

New York has been an important lumber-producing state for over a century. In 1850, it led the nation, producing more than 1.6 billion board feet at the peak of its most productive period. Throughout the last half of the 19th century, it continued to be one of the leaders in the Northeast and in the nation, producing more than one billion feet annually for more than 30 years after the Civil War. Lumber production reached its second peak in New York in 1869 with 1.3 billion board feet. Production then began a relatively smooth decline which lasted until the end of the Depression. This decline was a result of a change in the relative importance of softwood and hardwood lumber. Prior to the turn of the century, most of the lumber produced in the state was softwood; and until 1910 the decline in New York's lumber production was governed by changes in the output of softwood lumber. Since then, the state's lumber production has been much more stable; and usually has been made up mostly of hardwood.

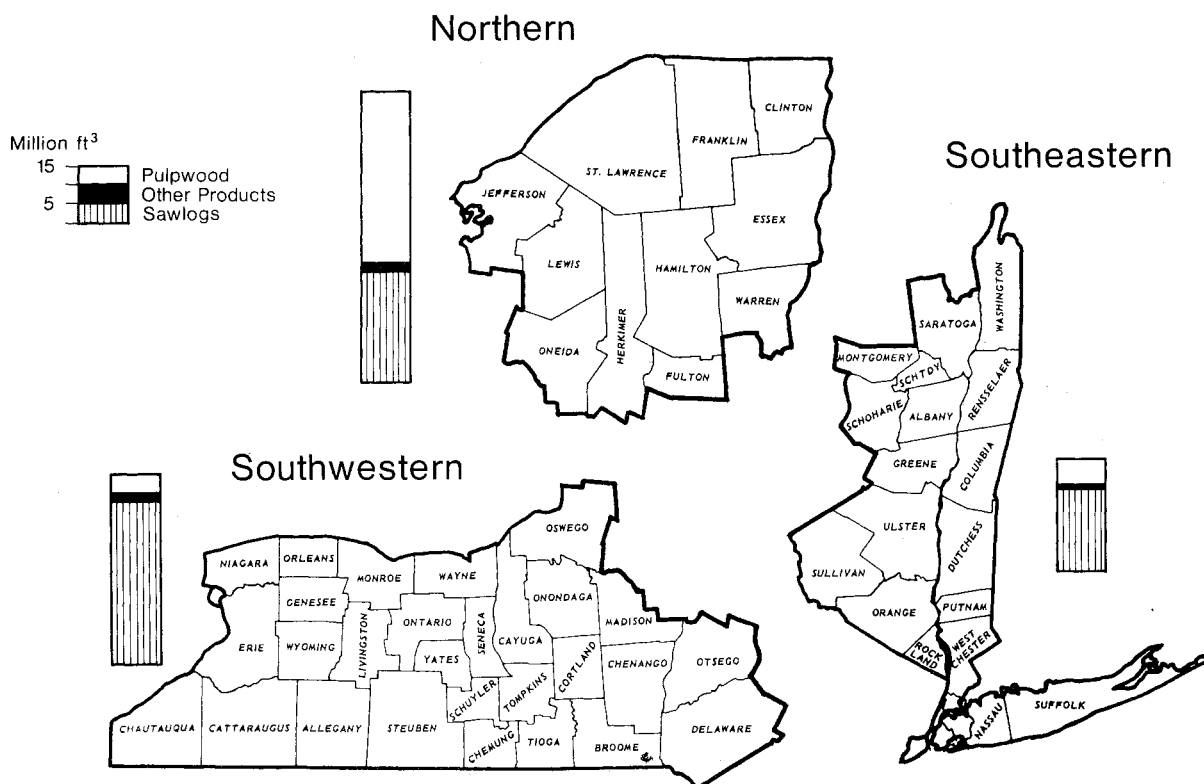


Figure 3.--Harvest of industrial timber in New York in 1979, by geographic region and major products.

In 1899, almost 900 million board feet of lumber was produced by more than 1,000 sawmills (Fig. 4). A third peak in lumber production in New York occurred in 1907 when the Northeast was most productive: nearly 2,200 sawmills produced almost 850 million board feet of lumber. Both lumber production and number of sawmills plunged over the next 25 years with the depletion of the original forests. As the Nation's economy collapsed between 1929 and 1933, New York lumber production bottomed out. In 1932 and 1933, a low of 160 million board feet of lumber was produced annually by less than 100 sawmills. In a quarter of a century, the lumber industry in New York had practically gone out of existence; lumber production had dropped by 81 percent and the number of operating sawmills by 96 percent. These trends within the state were representative of similar changes occurring throughout the Northeast as the softwood lumber industry shifted from the region to the South and Lake States.

As the national economy improved, lumber production and the number of sawmills operating in New York increased. Stimulated

by increased wartime demand for raw materials, lumber production almost doubled from 1932 to 1942. It reached around 280 million board feet in 1940 and stayed at that level for 5 years. By 1947, there were 1,790 sawmills--more than 10 times as many as in 1932 or 1933--producing 383 million board feet of lumber. Housing demand had prompted increased lumber production and the hurricane blowdown program of the early 1950's helped keep it high through most of the decade. By 1963, the circumstances that had been responsible for the levels of the previous three decades had disappeared. Annual production in New York fell to around 300 million board feet in 1963 and has remained rather constant for nearly 20 years. This level of production meets the demand for lumber in the state under normal economic conditions.

While annual lumber production has changed little in recent years, the number of sawmills operating in New York has continued to rise. There were 302 reported sawmills in 1967, 467 in 1976, and 494 in 1979.

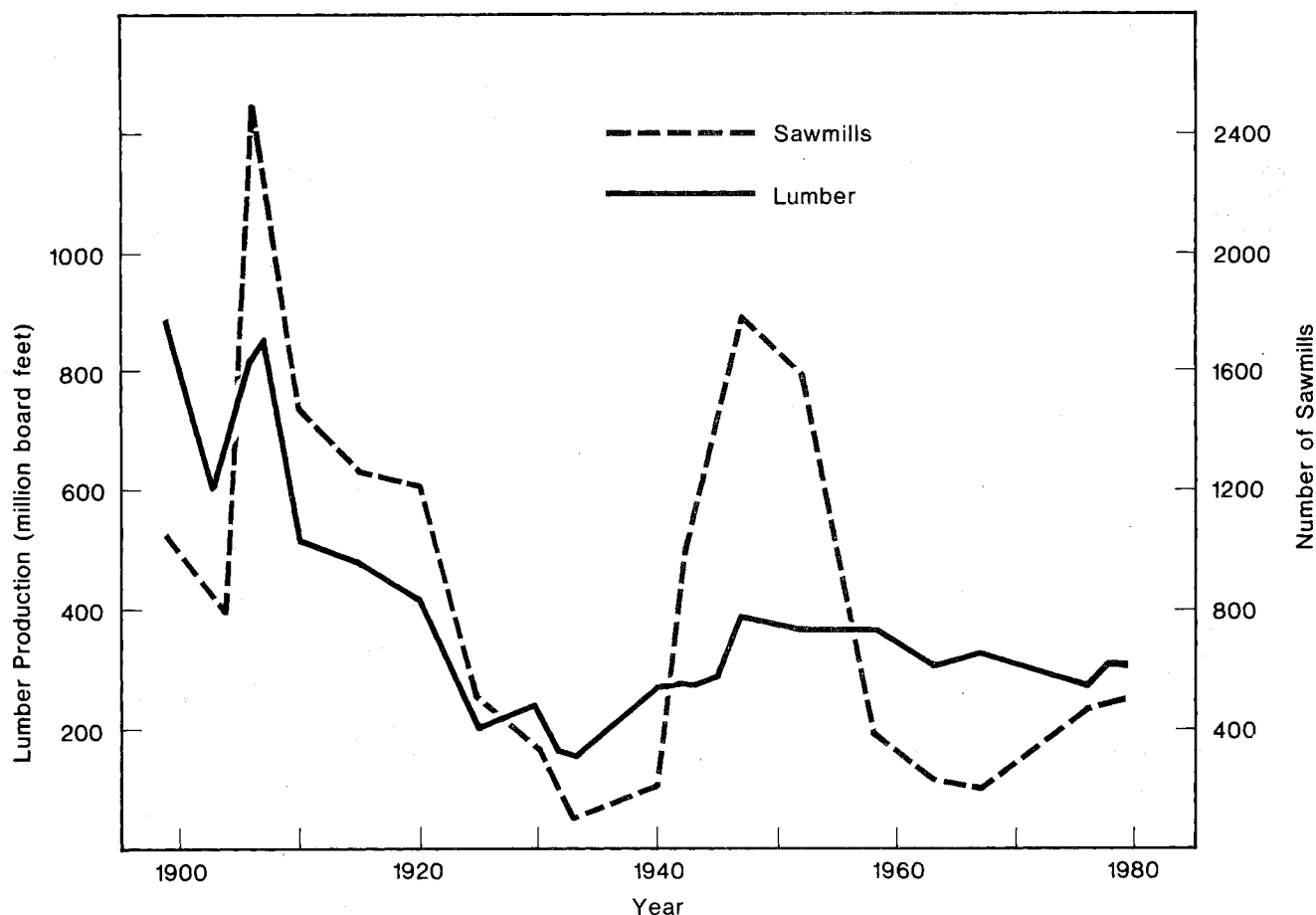


Figure 4.--Lumber production and number of sawmills in New York for selected years between 1899 and 1979.

As in most other regions of the country, an increasing proportion of New York's lumber is produced by high-production mills capable of making more than 1 million board feet of lumber annually. During the 1950's and 1960's the number of high-production mills remained relatively constant and the number of low-production mills (less than 1 million board feet annually) declined sharply while lumber production declined slightly. During this period, stumpage and operating costs increased, while the diameter and quality of available sawlogs decreased and the demand for lumber declined, forcing many seasonal and marginal sawmills to close. From 1952 to 1967 lumber production decreased 12 percent and the number of low-production mills dropped 68 percent. The number of high-production mills decreased by only 3 percent during the period. During the 1970's, with annual lumber production in the state fluctuating around 300 million board feet, sawmills of all production classes increased in number. High-production mills increased faster in number during the decade

than low-production, idle, and part-time mills. From 1967 to 1979, the number of high-production mills rose 22 percent from 114 to 139, while low-production mills increased 10 percent, from 92 to 101. There were 254, or 9 percent more, mills that were idle or operating only part time (custom mills) compared to 233 in 1967.

Between 45 and 51 percent of each production class of New York's sawmills in 1979 were in the southwestern geographic region of the state. Its 233 sawmills included 71 high-production mills, 48 low-production, and 114 idle and custom mills. The northern region had the next highest numbers in each class: 42, 27, and 109, respectively, for a total of 178. The 83 sawmills in the southwestern region were about equally divided among the three classes.

Sawlog production in 1979 was 596 million board feet--a jump of 70 percent from 1967 and 77 percent from 1950. In 1979, as in 1967, about half of the state's sawlogs,

284.5 million board feet, were harvested in the southwestern region. Production in the region rose 72 percent for the period, from 165.4 million board feet. From 1967 to 1979, sawlog production rose 27 percent in the northern region, from 139.5 to 176.6 million board feet, or 30 percent of the state's harvest (9 percent less than in 1967). In the southeastern region, sawlog production almost tripled from about 48.4 to 134.8 million board feet, 23 percent of the state's harvest, and 9 percent more than the region's share in 1967.

Seventy-one percent of the total sawlog production in New York in 1979 was from hardwood trees. No one species dominated the harvest. Hard maple made up the largest share at 17 percent of the total sawlog volume and almost 25 percent of the hardwood harvest (Fig. 5). Red oak and white pine each accounted for almost 15 percent of all the sawlogs, and hemlock for 11 percent. White pine made up half and hemlock almost 40 percent of the softwood sawlogs. Ash, beech, black cherry, and soft maple were the other important species, each comprising 6 to 7 percent of the total sawlog production.

In 1979, slightly less than 7 percent (38.5 million board feet) of New York's sawlogs were shipped to manufacturers in other states

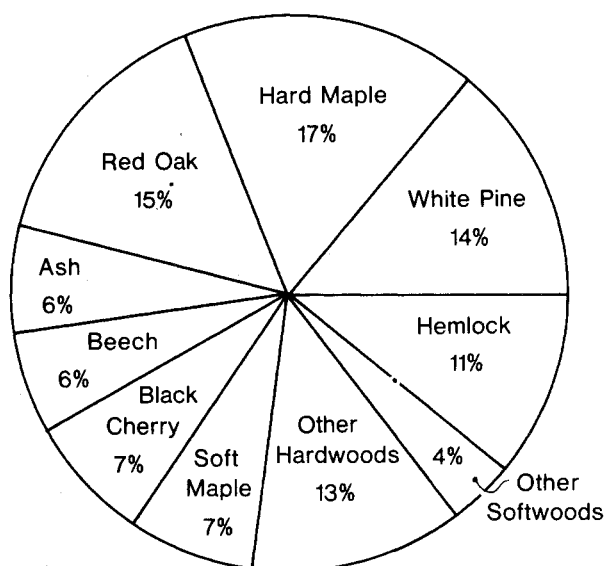


Figure 5.--New York sawlog production in 1979, by species.

(Tables 6 and 11). Overall, the state was a net exporter of sawlogs--2.9 million board feet less were received from log processors in other states than were sent out of the state. Most of these interstate shipments went to and from Pennsylvania, Massachusetts, and Vermont; and the same amount--32.2 million board feet--went to these three states as was received from them. Pennsylvania was New York's largest trader, receiving 14.4 million board feet and supplying 24.5 million board feet.

Within New York, the southwestern region was the only net exporting region; the northern and southeastern regions were net importers. Most of the regions' exports were interregional transfers rather than out-of-state shipments.

The Pulpwood Segment

Total pulpwood production, the roundwood harvest, and the use of chipped manufacturing residues in New York all have grown considerably in recent years (Fig. 6). Continuing an incremental climb that began in 1976, both total pulpwood production and the roundwood harvest were more than 10 percent higher in 1979 than in 1974, when production levels peaked before an economic slowdown in 1975. The 650,800 cords of roundwood and 207,400 cord equivalents of pulp chips produced in 1979 are nearly double the 462,500 cords of all forms of pulpwood produced in 1967. This rise from 1967 to 1979 is attributable to a 66 percent increase in the roundwood harvest and the production of over three times as much wood pulp from chipped residue.

The availability of plant residues for use as pulp chips is governed by the volume of roundwood processed. The rise in the volume of pulp chips from manufacturing residues was a result of an increase in sawlog receipts at New York roundwood processing plants and increased utilization of the residues generated at these plants.

Since 1864 when the first woodpulp mill in New York was started at Luzerne, the state has always been an important pulpwood user. By 1900, nearly 600 thousand cords of pulpwood were being harvested annually for nearly 150 pulpmills. The industry continued to grow rapidly, reaching a peak consumption of 1.3 million cords. By 1910, New York had 98 pulpmills and led the nation in woodpulp production. Since then woodpulp production has fallen and risen over the years as the number of pulpmills has continued to decline.

A record low of 438 thousand cords of wood went into New York pulp in 1932. Production peaked again in 1952, when more than 1 million cords went into woodpulp. Woodpulp production dropped to about 600 thousand cords by the end of the 1950's and remained there until the late 1960's.

Since then, fewer and fewer mills have been producing more and more woodpulp; the woodpulp industry in New York has continued to grow mainly by increasing production capacity at existing mills. In 1967, the 16 mills consumed 680 thousand cords of pulpwood, both roundwood and chipped residue. In 1974, there were three fewer mills but receipts of more than 854 thousand cords. Five years later, consumption had increased another 20 thousand cords and the number of mills had dropped to 11. The daily pulping capacity of pulp mills in the state rose 42 percent, from 1,875 tons in 1967 to 2,670 tons in 1979, while the number of mills dropped 31 percent. The average capacity per mill has almost doubled, from 125 tons per day to 243. In 1979, there were only two mills capable of less than 100 tons per day and one could produce more than 500.

Advances in pulping technology over the last 30 years have brought radical changes in the pulp industry and in the species composition of its raw material. In New York today, most pulp is produced from hardwoods, both from roundwood and manufacturing residues. As recently as 1952, 85 percent of New York's pulpwood came from softwood trees and hardly any came from chipped residue. By 1967, 29 percent was from softwoods and 15 percent from chips (Fig. 6). In 1979, chipped residues accounted for nearly a fourth of all the pulpwood produced in the state (Figs. 6

and 7); hardwood roundwood made up 60 percent of the total pulpwood and 79 percent of the roundwood; hardwood from both roundwood and residue accounted for nearly four-fifths of the total pulpwood.

Neither the hardwoods nor the softwoods harvested for pulpwood in New York in 1979 were dominated by any particular species or species group. Pine was the major softwood, followed by spruce and fir, then by hemlock and tamarack. Of the hardwoods, aspen and yellow-poplar were used about equally with oak and hickory. Beech, maple, and all other hardwoods made up 56 percent of the total roundwood pulpwood.

Slightly over 7 million cords of pulpwood have been harvested from New York timberlands during the last 15 years (Table 13), an average of 470,000 cords per year. The 1979 harvest was 650,800 cords. During the last 15 years, the northern region has accounted for over 70 percent of the harvest. The proportions for the other two regions have averaged about 15 percent for the southeastern region and about 11 percent for the southwestern.

Since 1967, the pulpwood harvest has risen considerably throughout most of the state, declining in only the least productive region:

Region	1967 (thousand cords)	1979	Change (percent)
Northern	274.8	516.2	+88.0
Southeastern	60.8	85.0	+40.0
Southwestern	58.7	49.6	-15.5
Total	394.3	650.8	+65.0

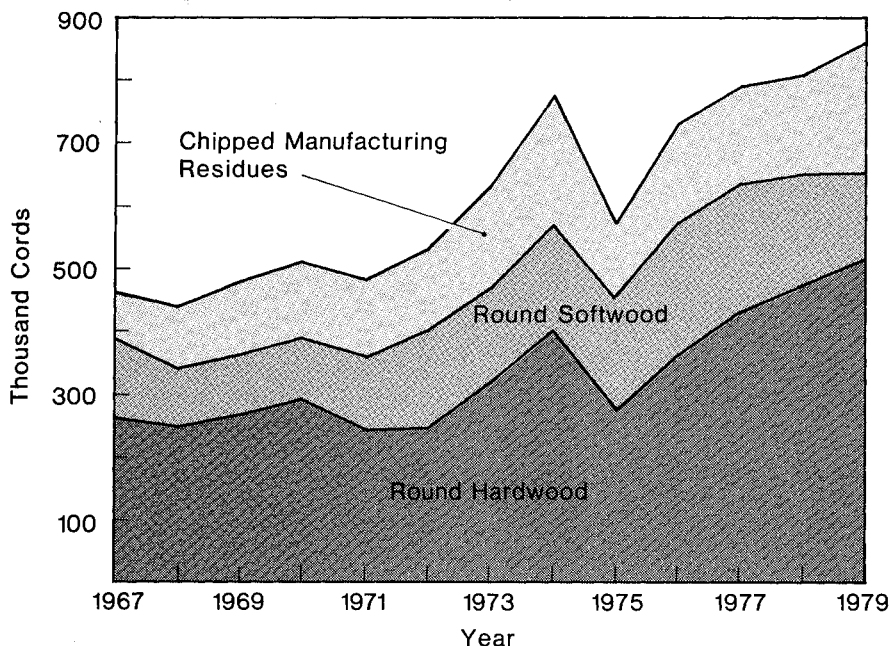


Figure 6.--Pulpwood production in New York by source, 1967-1979.

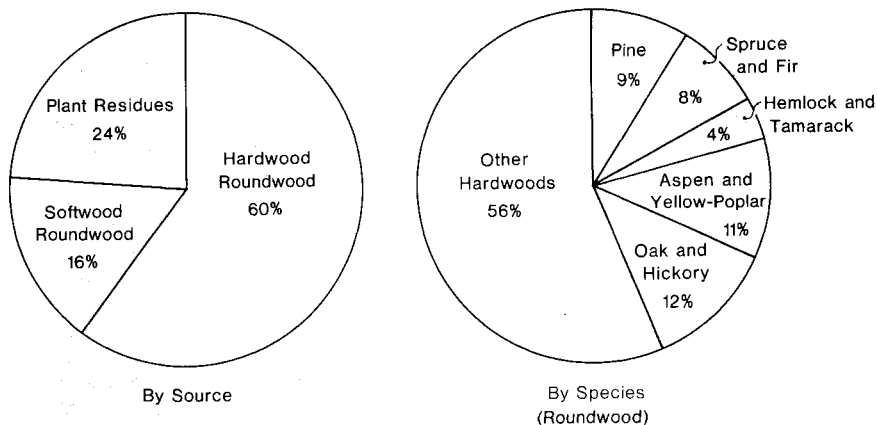


Figure 7.-- New York pulpwood production in 1979, in percent.

The northern and most productive region, where the pulpwood harvest almost doubled, was responsible for 241,000 of the 256 thousand-cord increase in the state in 1979. In 1979, the region accounted for more than six times as much pulpwood as the next highest region and for nearly four-fifths of the state harvest. The volume increase in the northern region was made up entirely of hardwood, accounting for all but 20,000 cords of the increases in the hardwood and total pulpwood production for the state.

In each of the last 8 years, at least one county in the northern region has produced more than 50 thousand cords of pulpwood. During seven of the these years, the counties of Essex and St. Lawrence exceeded 50 thousand cords a year. Since 1967 these two counties have accounted for 1.4 million cords or nearly one-fourth of the total state harvest and nearly a third of the harvest for the northern region.

In New York, the use of total-tree chips from the stems, branches, and tops of hardwood trees has risen from 5,000 cord-equivalents in 1974 to 14,000 in 1979. Whole-tree chipping is not nearly as common in New York as in other parts of the Northeast, accounting for less than 5 percent of the regional use and less than 2 percent of the total pulpwood production. This is partly due to the availability of hardwood roundwood and chippable sawmill residue.

New York pulp mills consumed 72 percent of the state's total pulpwood production in 1979. Almost half of the pulpwood that was shipped out of the state went to other mills in the Northeast. Nearly three-tenths --252,800 cords--of the 873 thousand cords of pulpwood received at New York mills came from

timberlands outside the state. Receipts for 1979 were 15,700 cords more than were produced in the state, making New York a net importer of pulpwood.

Other Timber Products and Industries

New York has several small wood-using industries that use less than 3 percent of the state's annual timber harvest. Most of the timber harvested for these industries is used for veneer and cabin logs, piling, poles, fencing, and bat stock. Most of these industries have exacting requirements and are willing to pay a premium for certain species, sizes, and other physical attributes.

Veneer Logs and Bolts

Most veneer logs from New York are used to make face veneer for furniture; some are used to make material for specialty products. In 1979, 12.6 million board feet of these high-quality, high-value hardwood and softwood logs were harvested in New York--almost half as much as in 1967. Forty-three percent of the veneer logs were shipped to four other states and Canada for manufacture, with Vermont receiving two-thirds of the exported logs. An undeterminable and likely significant volume went overseas.

In 1979, there were four commercial and face veneer mills in New York, one manufacturer of specialty products, and no basket manufacturers. The four veneer mills all used logs to make commercial and face veneer; the specialty mill consumed only bolts. The number of veneer mills and other users of

veneer logs has declined for almost 30 years while the consumption has been more erratic:

Year	Number of plants	Receipts (million board feet) ^a
1952	29	23.0
1963	11 ^b	15.6
1967	12	23.7
1968	12 ^c	18.1
1979	5	8.0

^aInternational 1/4-inch rule.

^b1964 data.

^c1967 data.

In 1952, 14 of the veneer log users in New York made basket veneer for fruit and vegetable growers. By 1967, there were only three. A similar fate has come to the manufacturers of face veneer in New York. For the most part, the erratic production and eventual decline of the veneer industry has been the result of changes in the markets for veneer. The furniture market has moved to the southern states, fruit production has shifted to several other regions of the United States, consumer preference of species has changed, and wooden containers and wood-veneered furniture have lost markets to products made from other materials.

Historically, more veneer logs and bolts have been used in New York than were produced there as late as 1967, approximately 1.6 million board feet more veneer logs were consumed than were produced. By 1979, the state became a net exporter of veneer logs and bolts, with 4.6 million board feet more shipped out of the state than were received by New York processors in 1979. All of the imported veneer logs were from Massachusetts, Pennsylvania, and Vermont.

Beech, red oak, and hard maple were the most popular veneer species harvested in the state in 1979, making up nearly three-fourths of the total veneer log production. Beech and hard maple were the species imported most for use in the state, making up more than seven-tenths of both native and imported veneer logs processed in the state. Red oak was most sought after by timber processors in other states, accounting for 60 percent of the veneer logs sent out of New York. Nearly all of the state's red oak went to other states, primarily to Vermont and Canada, which received over six-tenths of New York's entire red oak production. Sixty-one percent of the veneer logs came from the northern geographic unit and one-fourth of the state's logs were produced in the southeastern unit.

Bat Stock

One of the more important small wood-using industries in recent years has been the manufacture of ball bats. In 1979, the two bat makers in New York used more than 5.5 million board feet of white ash and soft maple logs. A quarter of a million feet of ash came from Pennsylvania; the rest from timber harvesters in New York. Of the 5.9 million board feet of bat stock cut in the state in 1979, 420 thousand board feet was soft maple and 614 thousand board feet was ash that went out of the state. Two-thirds of the logs for bats came from the northern region of New York; the rest were cut in the southwestern region.

Miscellaneous Products

There are several small wood-using industries in New York whose combined 1979 timber requirements from the state timberlands were only 2.1 million ft³--less than 2 percent of the total harvest. Slightly more hardwood logs than softwood logs were harvested for the manufacture of various miscellaneous products. Almost all of the softwood logs were red pine used as cabin logs and poles and almost all the hardwoods went for other products, such as bowls, handles, ladders, and miscellaneous dimension stock.

Except for cabin logs, fewer and fewer logs of all species are being used for the minor miscellaneous products in New York, and the decline is accelerating. Between 1952 and 1967 the log harvest for poles and posts dropped 17 percent; the harvest for the other products dropped by 51 percent. Between 1967 and 1979, logs for poles and posts dropped 83 percent to around 500,000 ft³ and the harvest for the other products excluding cabin logs, dropped 49 percent to 2.0 million ft³.

The Use of Manufacturing Residues

Primary wood manufacturing residues, such as bark, chips, slabs, sawdust, and the like, have increased in value and utility in recent years. Pulpmills and other industrial facilities in New York have been using residues as dependable and readily available sources of raw material for pulp and energy. Environmental concerns have discouraged wood-product manufacturers from disposing of their residues through open burning and dumping, and have encouraged them to seek markets for this material.

In recent years, New York's primary wood manufacturers have become more efficient in converting logs into other products, and wood

residue users have made more use of the residues generated in the conversion. Nearly 61 million ft³ (1.7 million m³) of residues were generated by New York's primary wood manufacturers in 1979, of which 87 percent --52.9 million ft³, or 1.5 million m³--was recovered and used (Fig. 8). In 1979, woody material accounted for 46.7 million ft³ (1.3 million m³) of the residue; bark amounted to 13.8 million ft³ (39 thousand m³). Excluding the wood pulp industry, the volume of wood residue generated rose 43 percent, compared to a 50 percent increase in timber products output; nearly 94 percent of all wood residue was used in 1979, compared to 76 percent in 1967. Sixty-five percent of the available bark was recovered and used in 1979, mostly as fuel.

In 1979, there was a heavy demand for all wood residue -- both coarse and fine. Ninety-four percent of the total available of each type was recovered and used. About six-tenths of the woody material was coarse residue, such as sawmill slabs and edgings, suitable for conversion into wood chips for fiber products. Nearly two-thirds of the coarse residue was eventually made into wood fiber; most of the rest ended up as fuelwood. Seventy-one percent of the fine residue, such as sawdust and shavings, was used for livestock bedding and farm and horticultural mulch. Nearly all of the remaining fine residue went into energy production; less than 2 percent was used for pulp and only 6 percent went unused.

Proportionately, more of the wood residue was used in 1979 than in 1967 (Fig. 8), particularly as pulp:

- Much less of the wood residue was left unused (18 percent less in 1979 than in 1967).
- Slightly more of the wood residue was used as fuelwood (2 percent more in 1979 than in 1967).
- Much more wood residue was used as horticultural mulch and livestock bedding (4 percent more in 1979 than in 1967).
- A slightly lower proportion of the wood residue was used for other uses (2 percent less in 1979 than in 1967) even though the volume used quadrupled.
- Much more of the wood residue was used as pulpwood - the proportion of the wood residue used to make woodpulp increased 14 percent while the volume used nearly doubled.

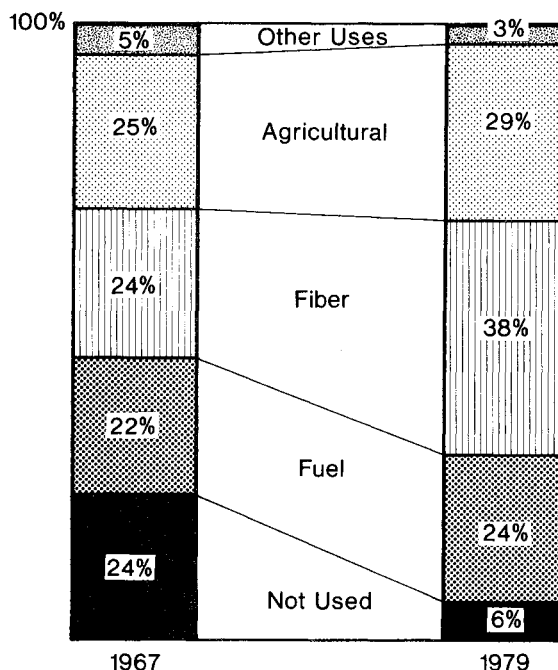


Figure 8.--Trends in wood manufacturing residue use in New York in 1967 and 1979. (See table 16 for definition of terms.)

Overall, between 1967 and 1979, much more of the total manufacturing residue volume was being used for woodpulp and agricultural use and less was being left unused or used for other purposes, such as chemical wood and small dimension stock.

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Definition of Terms

Species

Softwoods. Coniferous trees, usually evergreen, with needles or scale-like leaves.

Hardwoods. Dicotyledonous trees; usually broad-leaved and deciduous.

Harvest

Timber products output. Includes roundwood (round timber) products harvested from growing stock on commercial forest land; from other sources, such as cull trees, salvageable dead trees, limbs and tops, and saplings; from trees on noncommercial and nonforest lands; and from manufacturing plant byproducts.

Industrial timber harvest. Total production of round timber for conversion into wood products.

Manufacture

Primary wood-manufacturing plant. A plant that converts round timber to wood products such as woodpulp, lumber, veneer, cooperage, and dimension.

Roundwood products. Logs, bolts, and other round timber generated from harvesting trees for industrial or consumer uses.

Sawlog. A roundwood product, from which products such as lumber are sawn, and which meets certain minimum standards of diameter, length, and defect, including a minimum 8-foot length and combination of size and defect specified in regional standards.

Pulpwood. Roundwood or plant byproducts cut (into 4- to 8-foot lengths or chipped) and prepared for manufacture into woodpulp.

Residues

Manufacturing plant residues. Wood materials that are generated when round timber (roundwood) is converted into wood products; includes slabs, edgings, trimmings, miscuts, sawdust, shavings, veneer cores and clippings, and pulp screenings.

Plant byproducts. Wood products, such as pulp chips, recycled from manufacturing plant residue.

Unused manufacturing residues. Plant residues that are dumped or destroyed and not recovered from plant byproducts.

Coarse residues. Manufacturing residues suitable for chipping, such as slabs, edgings, and veneer cores.

Fine residues. Manufacturing residues not suitable for chipping, such as sawdust and shavings.

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Round timber conversions for major products

Softwood logs : M bf (International 1/4-inch rule)
= 162.6 ft³ = 4.60 m³

Hardwood logs : M bf (International 1/4-inch rule)
= 151.1 ft³ = 4.28 m³

Pulpwood : 1 standard cord = 85 ft³ = 2.41 m³

Table 1.--Volume of industrial roundwood, by product harvested, New York, 1979

Product	Standard unit	Volume in standard units		
		Softwoods	Hardwoods	All species
Sawlogs	M board feet ^a	171,713	424,185	595,898
Pulpwood	Standard cords ^b	134,800	516,000	650,800
Veneer logs	M board feet ^a	4	12,574	12,578
Cabin logs	M linear feet	551	1	552
Piling	M linear feet	146	-	146
Poles	M pieces	63	10	73
Posts and fencing	M pieces	136	-	136
Bat stock	M board feet ^a	-	5,903	5,903
Misc. products ^c	M cubic feet	15	1,139	1,154
Total		-	-	-

Product	Roundwood volume			Roundwood volume		
	Softwoods	Hardwoods	All species	Softwoods	Hardwoods	All species
	----- Thousand cubic feet-----			----- Thousand cubic meters-----		
Sawlogs	27,915	64,082	91,997	790.6	1,814.8	2,605.4
Pulpwood	11,458	43,860	55,318	324.5	1,242.1	1,566.6
Veneer logs	1	1,910	1,911	*	54.1	54.1
Cabin logs	347	1	348	9.8	*	9.8
Piling	92	-	92	2.6	-	2.6
Poles	391	60	451	11.1	1.7	12.8
Posts and fencing	84	-	84	2.4	-	2.4
Bat stock	-	899	899	-	25.4	25.4
Misc. products ^c	15	1,139	1,154	.4	32.3	32.7
Total	40,303	111,951	152,254	1,141.4	3,170.4	4,311.8

^aInternational 1/4-inch rule.^bRough wood basis, equivalent to 85 ft³ of solid wood.^cIncludes stock for bowls, handles, ladders, shingles, and miscellaneous dimension.

Table 2.--Change in timber products output, New York, between 1967 and 1979

Product	All species			Softwoods			Hardwoods		
	1967	1979	Change	1967	1979	Change	1967	1979	Change
	Million cubic feet		Percent	Million cubic feet		Percent	Million cubic feet		Percent
Sawlogs	54.1	92.0	+70	10.3	27.9	(b)	43.8 ^f	64.1	+46
Pulpwood	33.4	55.3	+66	11.2	11.4	+2	22.2	43.9	+98
Veneer logs	3.4	1.9	-44	-	*	(b)	3.4	1.9	-44
Poles and posts	3.0	.5	-83	.4	.5	+25	2.6	*	-98
Misc. products ^a	3.9	2.5	-38	.1	.5	(b)	3.8	2.0	-47
Total	97.8	152.2	+56	22.0	40.3	+83	75.8	111.9	+48

	Million cubic meters			Million cubic meters			Million cubic meters		
Sawlogs	1.5	2.6		0.3	0.8		1.2	1.8	
Pulpwood	.9	1.5		.3	.3		.6	1.2	
Veneer logs	.1	.1		-	*		.1	.1	
Poles and posts	.1	*		*	*		.1	*	
Misc. products ^a	.1	.1		*	*		.1	.1	
Total	2.7	4.3		0.6	1.1		2.1	3.2	

^aIncludes cabin logs and piling and stock for bats, bowls, handles, ladders, shingles, and miscellaneous dimension.

^bGreater than 100 percent.

*Less than 100,000 cubic feet or meters.

Table 3.-- Industrial timber harvest^a, by region, softwoods and hardwoods, and products, New York, 1979

Region and species group	Sawlogs	Pulpwood	Other products ^b	All products
(In thousands of cubic feet)				
Northern				
Softwoods	11,414	8,049	334	19,797
Hardwoods	16,082	35,828	1,809	53,719
Total	27,496	43,877	2,143	73,516
Southeastern				
Softwoods	8,041	2,363	107	10,511
Hardwoods	12,882	4,862	636	18,380
Total	20,923	7,225	743	28,891
Southwestern				
Softwoods	8,460	1,046	489	9,995
Hardwoods	35,118	3,170	1,564	39,852
Total	43,578	4,216	2,053	49,847
All regions				
Softwoods	27,915	11,458	930	40,303
Hardwoods	64,082	43,860	4,009	111,951
Total	91,997	55,318	4,939	152,254
(In thousands of cubic meters)				
Northern				
Softwoods	323.3	227.9	9.4	560.6
Hardwoods	455.4	1,014.6	51.2	1,521.2
Total	778.7	1,242.5	60.6	2,081.8
Southeastern				
Softwoods	227.8	66.9	3.0	297.7
Hardwoods	364.8	137.7	18.0	520.5
Total	592.6	204.6	21.0	818.2
Southwestern				
Softwoods	239.6	29.7	13.8	283.1
Hardwoods	994.5	89.8	44.3	1,128.6
Total	1,234.1	119.5	58.1	1,411.7
All regions				
Softwoods	790.7	324.5	26.2	1,141.4
Hardwoods	1,814.7	1,242.1	113.5	3,170.3
Total	2,605.4	1,566.6	139.7	4,311.7

^aDoes not include fuelwood or removals that were not manufactured into industrial products.

^bIncludes cabin and veneer logs, piling, and stock for bats, bowls, handles, ladders, shingles, and miscellaneous dimension.

Table 4.--Number of sawmills, by region and annual production class, New York, 1952, 1967, and 1979

Region	Production class ^a									Total		
	More than 1 million board feet			Less than 1 million board feet			Idle and custom mills					
	1952	1967	1979	1952	1967	1979	1952	1967	1979	1952	1967	1979
Northern	*	*	42	*	*	27	*	*	109	*	*	178
Southeastern	*	*	26	*	*	26	*	*	31	*	*	83
Southwestern	*	*	71	*	*	48	*	*	114	*	*	233
All regions	118	114	139	288	92	101	1,351	233	254	1,757	439	494

^aBased on sawlog receipts or reported annual lumber production capacity.

*Data not available by region.

Table 5.--Sawlog production and receipts relationships, by region, New York, between 1967 and 1979

Region	Production			Receipts		
	1967	1979	Change	1967	1979	Change
	Million board feet ^a	Million board feet	Percent	Million board feet	Million board feet	Percent
Northern	139.5	176.6	+27	(c)	174.9	(c)
Southeastern	48.4	134.8	(b)	(c)	113.6	(c)
Southwestern	165.4	284.5	+72	(c)	304.5	(c)
All regions	353.3	595.9	+69	357.0	593.0	+66

^aInternational 1/4-inch rule.^bGreater than 100 percent.^cInformation unavailable.

Table 6.--Sawlog production, by softwoods and hardwoods, region, and destination of shipments, New York, 1979

(In millions of board feet)^a

Species group and region	Retained in region	Logs shipped to:		Total production
		Other regions	Other states	
Softwoods				
Northern	57.2	12.7	0.3	70.2
Southeastern	36.3	9.5	3.7	49.5
Southwestern	44.0	7.7	.3	52.0
Total softwoods	137.5	29.9	4.3	171.7
Hardwoods				
Northern	77.5	18.8	10.1	106.4
Southeastern	55.1	18.6	11.6	85.3
Southwestern	188.4	31.6	12.5	232.5
Total hardwoods	321.0	69.0	34.2	424.2
All species	458.5	98.9	38.5	595.9

^aInternational 1/4-inch rule.

Table 7.--Sawlog receipts, by softwoods and hardwoods, region and destination of shipments, New York, 1979

(In millions of board feet)^a

Species group and region	Where produced			Total receipts
	In region	In state	In other states	
Softwoods				
Northern	57.2	14.5	0.8	72.5
Southeastern	36.3	5.4	.8	42.5
Southwestern	44.0	10.0	1.1	55.1
Total softwoods	137.5	29.9	2.7	170.1
Hardwoods				
Northern	77.5	22.3	2.6	102.4
Southeastern	55.1	9.0	7.0	71.1
Southwestern	188.4	37.7	23.3	249.4
Total hardwoods	321.0	69.0	32.9	422.9
All species	458.5	98.9	35.6	593.0

^aInternational 1/4-inch rule.

Table 8.--Sawlog production and receipts in the Northern region, by species, and destination of shipment, New York, 1979

(In millions of board feet)^a

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	14.1	4.9	*	19.0	4.6	0.3	19.0
White pine	38.0	5.5	0.2	43.7	8.1	.5	46.6
Red pine	2.0	1.0	*	3.0	.4	-	2.4
Red spruce	2.4	1.3	.1	3.8	1.4	*	3.8
Other softwoods	.7	*	-	.7	*	-	.7
Total softwoods	57.2	12.7	.3	70.2	14.5	.8	72.5
Ash	7.0	2.5	0.4	9.9	3.4	-	10.4
Basswood	4.1	.4	.8	5.3	.5	-	4.6
Beech	9.7	1.9	*	11.6	2.0	-	11.7
Yellow birch	4.9	.9	.6	6.4	1.4	-	6.3
Black cherry	10.4	2.0	3.8	16.2	1.4	-	11.8
Black locust	-	*	-	*	-	-	-
Hard maple	19.1	6.5	2.8	28.4	8.1	0.9	28.1
Soft maple	9.2	1.8	1.1	12.1	2.2	.2	11.6
White oak	2.5	.4	*	2.9	.4	.4	3.3
Red oak	6.9	1.8	.6	9.3	2.7	1.0	10.6
Yellow-poplar	.3	.1	*	.4	.1	*	.4
Other hardwoods ^b	3.4	.5	*	3.9	.1	-	3.5
Total hardwoods	77.5	18.8	10.1	106.4	22.3	2.5	102.3
All species	134.7	31.5	10.4	176.6	36.8	3.3	174.8

^aInternational 1/4-inch rule.

^bIncludes aspen, black and white birch, butternut, elm, hickory, other oaks, and sycamore.

*Less than 50 M bf.

Table 9.--Sawlog production and receipts in the Southeastern region, by species, and destination of shipment, New York, 1979

(In millions of board feet)^a

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	14.3	3.2	1.0	18.5	2.3	0.3	16.9
White pine	19.3	5.9	2.7	27.9	2.5	.5	22.3
Red pine	2.6	.2	-	2.8	.6	*	3.2
Red spruce	.1	.2	*	.3	*	-	.1
Other softwoods	*	*	-	*	*	-	*
Total softwoods	36.3	9.5	3.7	49.5	5.4	.8	42.5
Ash	2.9	1.2	1.3	5.4	0.4	0.3	3.6
Aspen	.5	.1	-	.6	*	*	.5
Basswood	1.4	.7	*	2.1	.4	*	1.8
Beech	2.0	.5	*	2.5	.1	1.2	3.3
Yellow birch	1.4	.5	*	1.9	*	.1	1.5
Black cherry	2.0	1.4	*	3.4	.2	.5	2.7
Elm	.7	.1	*	.8	.1	*	.8
Hickory	.8	.1	.1	1.0	.2	*	1.0
Hard maple	9.6	4.9	1.5	16.0	1.1	2.4	13.1
Soft maple	3.4	1.4	.2	5.0	.3	.5	4.2
White oak	4.8	1.0	1.2	7.0	1.0	*	5.8
Chestnut oak	1.4	.1	.4	1.9	.2	.1	1.7
Red oak	22.1	6.2	6.7	35.0	4.6	1.7	28.4
Black oak	.7	*	*	.7	.1	.2	1.0
Yellow-poplar	.5	.2	.1	.8	.1	*	.6
Other hardwoods ^b	.9	.2	.1	1.2	.2	.1	1.2
Total hardwoods	55.1	18.6	11.6	85.3	9.0	7.1	71.2
All species	91.4	28.1	15.3	134.8	14.4	7.9	113.7

^aInternational 1/4-inch rule.

^bIncludes black and white birch, butternut, black locust, other oaks, sycamore, and black walnut.

*Less than 50 M bf.

Table 10.--Sawlog production and receipts in the Southwestern region, by species, and destination of shipment, New York, 1979

(In millions of board feet)^a

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	23.7	3.3	0.2	27.2	4.5	0.6	28.8
White pine	13.5	.8	.1	14.4	1.6	.5	15.6
Red pine	6.4	3.6	-	10.0	3.8	-	10.2
Red spruce	.2	-	-	.2	.1	-	.3
Other softwoods	.2	*	-	.2	*	-	.2
Total softwoods	44.0	7.7	.3	52.0	10.0	1.1	55.1
Ash	11.5	3.3	7.5	22.3	3.2	2.9	17.6
Aspen	1.8	.3	-	2.1	.4	.1	2.3
Basswood	10.1	1.6	*	11.7	1.8	.6	12.5
Beech	19.9	3.3	.6	23.8	3.6	1.5	25.0
Yellow birch	.9	.2	*	1.1	.2	.1	1.2
Black cherry	20.3	2.5	.2	23.0	4.3	1.9	26.5
Elm	1.1	.1	.1	1.3	.1	*	1.2
Hickory	1.1	.1	*	1.2	*	.2	1.3
Hard maple	48.9	8.6	1.1	58.6	10.8	2.7	62.4
Soft maple	22.5	3.0	.5	26.0	3.7	1.4	27.6
White oak	6.8	1.3	.2	8.3	1.3	2.3	10.4
Chestnut oak	1.4	.1	-	1.5	.1	1.2	2.7
Red oak	35.6	6.0	2.3	43.9	6.7	6.1	48.4
Black oak	1.3	.1	*	1.4	*	1.4	2.7
Yellow-poplar	1.4	.4	*	1.8	.5	.8	2.7
Other hardwoods ^b	3.8	.7	-	4.5	1.0	.1	4.9
Total hardwoods	188.4	31.6	12.5	232.5	37.7	23.3	249.4
All species	232.4	39.3	12.8	284.5	47.7	24.4	304.5

^aInternational 1/4-inch rule.

^bIncludes black and white birch, butternut, black locust, other oaks, sycamore, and black walnut.

*Less than 50 M bf.

Table 11.--Sawlog production and receipts, by species and destination of shipment, New York, 1979

(In millions of board feet)^a

Species	Cut and retained in state	Exported to:				Total production	Imported from:		Total receipts
		Massachusetts	Pennsylvania	Vermont	Ontario		Pennsylvania	Other states ^b	
Hemlock	63.5	0.2	0.8	0.2	-	64.7	0.8	0.4	64.7
White pine	83.0	.6	1.3	1.0	0.1	86.0	.6	.9	84.5
Red pine	15.8	-	-	*	-	15.8	*	*	15.8
Red spruce	4.2	-	-	.1	-	4.3	-	-	4.2
Other softwoods	.9	-	-	*	-	.9	-	-	.9
Total softwoods	167.4	.8	2.1	1.3	0.1	171.7	1.4	1.3	170.1
Ash	28.4	1.0	7.5	0.4	0.3	37.6	3.0	0.2	31.6
Aspen	3.7	-	-	-	-	3.7	.1	*	3.8
Basswood	18.3	*	.1	*	.7	19.1	.6	*	18.9
Beech	37.3	*	.5	.1	-	37.9	1.7	1.0	40.0
Black birch	2.0	*	*	*	-	2.0	-	*	2.0
Yellow birch	8.8	*	*	.1	.5	9.4	.1	.1	9.0
Black cherry	38.6	-	.1	3.0	.9	42.6	2.3	.1	41.0
Butternut	1.0	-	-	*	*	1.0	*	-	1.0
Elm	2.9	-	.1	*	-	3.0	*	*	2.9
Hickory	2.6	*	*	.1	*	2.7	*	.2	2.8
Hard maple	97.6	1.0	1.1	.7	2.6	103.0	3.1	2.9	103.6
Soft maple	41.3	.1	.4	.2	1.1	43.1	1.8	.3	43.4
White oak	16.8	.9	.2	.3	*	18.2	1.7	1.0	19.5
Chestnut oak	3.1	.4	-	*	-	3.5	1.2	.1	4.4
Red oak	8.6	4.5	2.3	2.7	.1	88.2	5.8	3.0	87.4
Black oak	2.1	*	-	-	-	2.1	1.3	.3	3.7
Yellow-poplar	2.9	.1	*	*	*	3.0	.3	.5	3.7
Other hardwoods ^d	4.0	-	-	.1	-	4.1	.1	.1	4.2
Total hardwoods	390.0	8.0 ^c	12.3	7.7	6.2	424.2	23.1	9.8	422.9
All species	557.4	8.8	14.4	9.0	6.3	595.9	24.5	11.1	593.0

^aInternational 1/4-inch rule.^bIncludes Connecticut, Massachusetts, New Jersey, and Vermont.^cIncludes 600,000 board feet mixed hardwoods received in Connecticut.^dIncludes white birch, black locust, other oaks, sycamore and black walnut.

*Less than 50 M bf.

Table 12.--Pulpwood production, by softwoods and hardwoods,
New York, 1965-1979^a

(In thousands of rough cords)

Year	All species	Softwoods	Hardwoods
1965	411.7	140.2	271.5
1966	490.3	125.0	365.3
1967	462.5	133.7	328.8
1968	440.1	95.4	344.7
1969	476.8	103.2	373.6
5-year total	2,281.4	597.5	1,683.9
1970	509.8	100.7	409.1
1971	482.2	121.2	361.0
1972	536.6	168.6	368.0
1973	628.9	173.5	455.4
1974	774.2	194.7	579.5
5-year total	2,931.7	758.7	2,173.0
1975	576.0	204.3	371.7
1976	732.4	247.8	484.6
1977	793.1	253.6	539.5
1978	802.2	213.0	589.2
1979	858.2	193.0	665.2
5-year total	3,761.9	1,111.7	2,650.2

^aIncludes production from both roundwood and chips from manufacturing residues.

Table 13.--Pulpwood harvest, by softwoods and hardwoods and region, New York, 1965-1979

(In thousands of rough cords)

Species group and region	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	All years
Softwoods																
Northern	118.6	103.4	100.1	75.2	78.6	85.1	74.6	105.2	103.7	124.5	132.0	160.6	131.8	137.9	94.7	1,626.0
Southeastern	1.9	2.3	6.5	1.9	4.5	3.0	19.1	28.2	26.1	22.1	26.9	31.8	46.2	25.8	27.8	274.1
Southwestern	11.1	17.6	26.0	17.1	18.1	9.8	20.4	21.7	17.5	22.8	20.4	25.4	23.8	13.3	12.3	277.3
All regions	131.6	123.3	132.6	94.2	101.2	97.9	114.1	155.1	147.3	169.4	179.3	217.8	201.8	177.0	134.8	2,177.4
Hardwoods																
Northern	159.7	219.2	174.7	166.7	173.6	210.6	156.9	187.4	257.8	318.9	193.9	275.5	336.8	352.7	421.5	3,605.9
Southeastern	58.9	67.0	54.3	57.1	60.7	55.8	29.6	33.4	41.4	54.0	42.2	53.6	66.7	69.8	57.2	801.7
Southwestern	20.7	29.5	32.7	21.4	29.7	23.7	55.3	25.2	21.5	31.9	36.5	29.0	28.9	50.0	37.3	473.3
All regions	239.3	315.7	261.7	245.2	264.0	290.1	241.8	246.0	320.7	404.8	272.6	358.1	432.4	472.5	516.0	4,880.9
All species	370.9	439.0	394.3	339.4	365.2	388.0	355.9	401.1	468.0	574.2	451.9	575.9	634.2	649.5	650.8	7,058.3

Table 14.--Veneer log production^a in New York, by species and consuming state, 1979(In thousands of board feet)^b

Species	Cut and retained in state	Exported to:				Total production
		Pennsylvania	Vermont	Ontario	Other states ^c	
Ash	269	18	4	-	-	291
Aspen	153	-	-	-	-	153
Basswood	53	-	243	-	-	296
Beech	3,539	41	289	-	-	3,869
White birch	124	-	143	-	-	267
Yellow birch	164	-	195	372 ^d	1	732
Black cherry	321	-	100	-	-	421
Hard maple	1,818	5	190	10	40	2,063
Soft maple	384	34	173	-	-	591
Red oak	197	549	2,107	538	-	3,391
White oak	85	25	50	133	-	293
Black walnut	72	-	-	-	-	72
Yellow-poplar	53	-	59	-	-	112
Other hardwoods ^e	1	6	16	-	-	23
Softwoods ^f	-	-	4	-	-	4
All species	7,233	678	3,573	1,053	41	12,578

^aVeneer logs handled by brokers for overseas shipment are not included.^bInternational 1/4-inch rule.^cIncludes Maryland and Ohio.^dIncludes 372,000 board feet of yellow birch received in Quebec.^eIncludes miscellaneous hardwoods such as elm.^fIncludes miscellaneous softwoods such as white pine and spruce.

Table 15.--Veneer log receipts in New York, by species and producing state, 1979

(In thousands of board feet)^a

Species	Cut and retained in state	Imported from:			Total receipts
		Massachusetts	Pennsylvania	Vermont	
Ash	269	56	8	54	387
Beech	3,539	12	-	14	3,565
Birch ^b	288	56	-	58	402
Black cherry	321	-	39	-	360
Hard maple	1,818	106	20	176	2,120
Soft maple	384	-	8	-	392
Red oak	197	3	46	7	253
White oak	85	-	30	-	115
Yellow-poplar	53	-	50 ^c	-	103
Other species ^d	279	-	-	-	279
All species	7,233	233	201	309	7,976

^aInternational 1/4-inch rule.^bIncludes black, white, and yellow birch.^cIncludes less than 50,000 board feet from Ohio.^dIncludes miscellaneous hardwoods such as aspen, basswood, elm, and black walnut.

Table 16.--Veneer log production^a and receipts in New York,
for selected years, 1946-1979

(In thousands of board feet)^b

Year	Production	Receipts
1946	*	37.0
1952	*	23.0
1963	18.1	15.6
1967	22.0	23.7
1968	17.4	18.1
1972	13.1	11.6
1976	14.6	12.9
1979	12.6	8.0

*Data unavailable

^aVeneer logs handled by brokers for overseas shipment are not included.

^bInternational 1/4-inch rule.

Table 17.--Production and disposition of manufacturing residues, by type of use and type of residue, New York, 1979

(In thousands of cubic feet)

Disposition	Type of residue			All types
	Bark	Coarse ^a	Fine ^b	
LUMBER				
Fiber ^c	85	16,505	297	16,887
Industrial fuel	1,799	1,034	1,612	4,445
Domestic fuel	3,150	5,575	1,857	10,582
Other ^d	3,644	1,229	13,445	18,318
Total, used	8,678	24,343	17,211	50,232
Unused	4,625	1,466	1,200	7,291
VENEER				
Fiber	-	155	-	155
Industrial fuel	194	103	377	674
Domestic fuel	1	3	-	4
Other	-	52	69	121
Total, used	195	313	446	954
Unused	33	16	-	49
POLES/POSTS				
Fiber	-	-	-	-
Industrial fuel	22	30	29	81
Domestic fuel	12	52	3	67
Other	4	9	45	58
Total, used	38	91	77	206
Unused	49	77	45	171
OTHER INDUSTRIES ^e				
Fiber	1	586	-	587
Industrial fuel	30	185	106	321
Domestic fuel	16	310	-	326
Other	11	-	244	255
Total, used	58	1,081	350	1,489
Unused	146	23	-	169
ALL INDUSTRIES				
Fiber	86	17,246	297	17,629
Industrial fuel	2,045	1,352	2,124	5,521
Domestic fuel	3,179	5,940	1,860	10,979
Other	3,659	1,290	13,803	18,752
Total, used	8,969	25,828	18,084	52,881
Unused	4,853	1,582	1,245	7,680

Table 17.--continued

(In thousands of cubic meters)

Disposition	Type of residue			All types
	Bark	Coarse ^a	Fine ^b	
LUMBER				
Fiber ^c	2.4	467.4	8.4	478.2
Industrial fuel	50.9	29.3	45.7	125.9
Domestic fuel	89.2	157.9	52.6	299.7
Other ^d	103.2	34.8	380.8	518.8
Total, used	245.7	689.4	487.5	1,422.6
Unused	131.0	41.5	34.0	206.5
VENEER				
Fiber	-	4.4	-	4.4
Industrial fuel	5.5	2.9	10.7	19.1
Domestic fuel	*	.1	-	.1
Other	-	1.5	1.9	3.4
Total, used	5.5	8.9	12.6	27.0
Unused	.9	.5	-	1.4
POLES/POSTS				
Fiber	-	-	-	-
Industrial fuel	.6	.8	.8	2.2
Domestic fuel	.3	1.5	.1	1.9
Other	.1	.3	1.3	1.7
Total, used	1.0	2.6	2.2	5.8
Unused	1.4	2.2	1.3	4.9
OTHER INDUSTRIES ^e				
Fiber	*	16.6	-	16.6
Industrial fuel	.8	5.2	3.0	9.0
Domestic fuel	.5	8.8	-	9.3
Other	.3	-	6.9	7.2
Total, used	1.6	30.6	9.9	42.1
Unused	4.1	.7	-	4.8
ALL INDUSTRIES				
Fiber	2.4	488.4	8.4	499.2
Industrial fuel	57.9	38.3	60.2	156.4
Domestic fuel	90.0	168.2	52.7	310.9
Other	103.6	36.5	390.9	531.0
Total, used	253.9	731.4	512.2	1,497.5
Unused	137.4	44.8	35.3	217.5

^aIncludes slabs, edgings, trimmings, veneer cores, and other material suitable for chipping.

^bIncludes sawdust, shavings, and other material considered unsuitable for chipping.

^cIncludes woodpulp and composite products.

^dIncludes livestock bedding and farm and horticultural mulch, small dimension, and chemical wood.

^eIncludes cabin logs and stock for bats, bowls, handles, ladders, and shingles; excludes the woodpulp industry.

Table 18.--Volume of unused sawmill residues, by region, softwoods and hardwoods, and type of residue, New York, 1979

Region	Softwoods			Hardwoods			All species		
	Bark	Coarse	Fine	Bark	Coarse	Fine	Bark	Coarse	Fine
----- Thousand cubic feet -----									
Northern	701	339	274	1,127	240	225	1,828	579	499
Southeastern	158	200	75	502	330	264	660	530	339
Southwestern	461	194	117	1,904	279	290	2,365	473	407
Total	1,320	733	466	3,533	849	779	4,853	1,582	1,245
----- Thousand cubic meters -----									
Northern	19.9	9.6	7.8	31.9	6.8	6.4	51.8	16.4	14.2
Southeastern	4.5	5.7	2.1	14.2	9.3	7.5	18.7	15.0	9.6
Southwestern	13.1	5.5	3.3	53.9	7.9	8.2	67.0	13.4	11.5
Total	37.5	20.8	13.2	100.0	24.0	22.1	137.5	44.8	35.3

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New York Timber industries - a periodic assessment of
timber output. Resour. Bull. NE-73. Broomall, PA:
U.S. Department of Agriculture, Forest Service, 1982.
30 p.

Reports the results of a survey of the timber industries
of New York; contains statistics on industrial timber
production and receipts, and production and disposition
of the manufacturing residues. Comparisons are made
with the most recent survey, and trends in industrial
wood output are noted. Includes 18 statistical
tables.

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