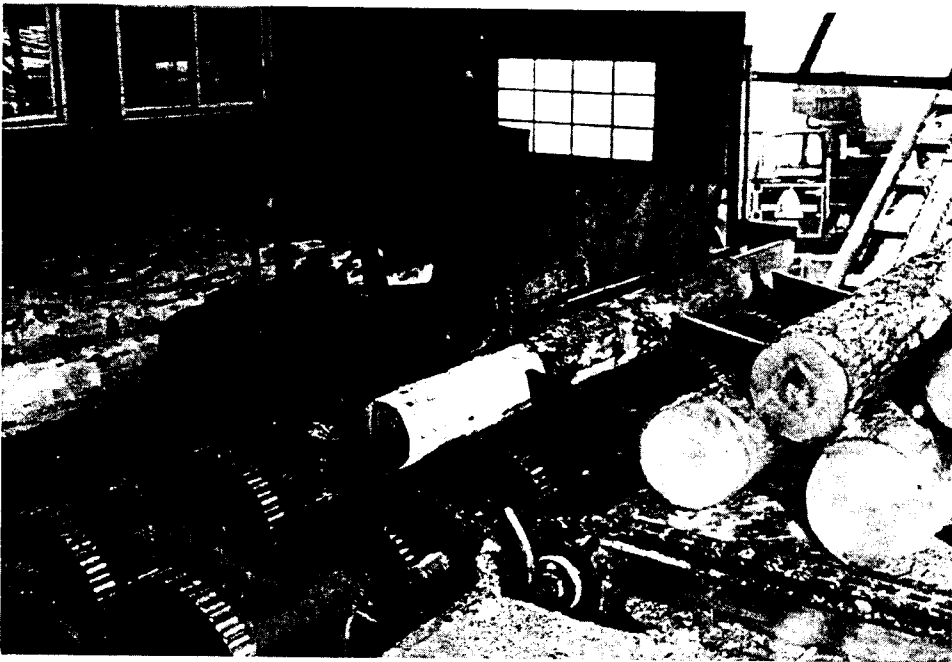


April 1992

NEW HAMPSHIRE FOREST MARKET REPORT 1992



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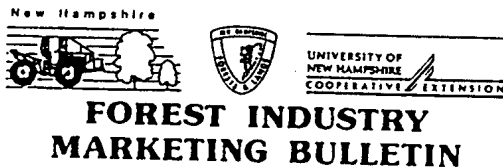
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NEW HAMPSHIRE'S EXTENSION FORESTRY PROGRAM

The UNH Cooperative Extension Forestry Program is conducted by County Extension educators in forestry and by Extension Specialists based at the University of New Hampshire at Durham. These educators provide technical information to woodland owners, woods workers, community officials, and processors of primary and secondary forest products.

County Extension educators in forestry and forestry specialists can provide on-site recommendations about the alternative of managing forest stands. This includes advice about planting or naturally regenerating forest land, pruning, pre-commercial weeding and thinning, wildlife habitat improvement, recreational uses, commercial harvesting of sawlogs, pulpwood, biomass or firewood, and marketing of a wide variety of forest products.

Utilization and marketing specialists can provide business management and technical information to timber harvesters, sawmills and other wood industry businesses. This includes recommendations on production control and yield studies, taxes and insurances, personnel, safety, wood processing, and lumber drying.

This is a cooperative program between the University of New Hampshire Cooperative Extension, the Division of Forests and Lands and Fish and Game of the Department of Resources and Economic Development, the U.S. Department of Agriculture, and the U.S. Fish and Wildlife Service.

For additional information or assistance, call UNH Cooperative Extension in Durham or the County Cooperative Extension offices listed on page 3.

The information in this bulletin covering prices and specifications was gathered by the New Hampshire County Extension Foresters and the Utilization and Marketing Specialists. The bulletin was prepared by:

Nicolas Engalichev
Extension Specialist, Forest Products
Marketing and Utilization
(603) 862-1096

UNH COOPERATIVE EXTENSION COUNTY OFFICES

Belknap County

Sumner Dole, III
UNH Cooperative Extension
Beacon St. East, Box 368
Laconia, NH 03246
524-1737

Carroll County

Peter W. Pohl
UNH Cooperative Extension
Main St., Box 367
Conway, NH 03818
447-5922

Cheshire County

Marshall Patmos, Jr.
UNH Cooperative Extension
P.O. Box 798, 33 West St.
Keene, NH 03431
352-4550

Coos County

Sam Stoddard
UNH Cooperative Extension
148 Main St.
Lancaster, NH 03584
788-4961

Grafton County

Northam D. Parr
UNH Cooperative Extension
County Court House
Box 191
Woodsville, NH 03785
787-6944

John J. Kanter
Extension Specialist, Wildlife
862-1065

Sarah S. Smith
Forestry Industry Specialist
862-2647

Hillsborough County

John Ferguson, Jr.
Jonathan W. Nute
UNH Cooperative Extension
468 Route 13, South
Milford, NH 03055
673-2510

Merrimack County

Karen P. Bennett
UNH Cooperative Extension
327 Daniel Webster Highway
Boscawen, NH 03303
796-2151 and 225-5505

Rockingham County

Philip A. Auger
UNH Cooperative Extension
Brentwood, NH
P.O. Box 200, Epping, NH 03042
679-5616 or 1-800-248-6672

Strafford County

Donald C. Black
UNH Cooperative Extension
Justice and Administration Building
259 County Farm Rd.
Dover, NH 03820
749-4445

Sullivan County

Stephen A. Wood
UNH Cooperative Extension
24 Main St.
Newport, NH 03773
863-9200

David Langley
Assistant Wildlife Specialist
862-1359

OUTLOOK FOR TIMBER PRODUCTS — 1991-1992

General Economic Trends

Many forecasters were surprised by the extent of the economy's show of strength in the third quarter, which was largely fueled by consumer spending, especially for durable goods, and to some extent by residential and nonresidential investment. Much of the increase apparently came in mid-summer, however, and several indicators, especially those related to consumer confidence, suggested that the economy was likely growing a little more slowly at the end of the quarter than at the beginning. Such factors as retail sales, industrial production, and capacity utilization were relatively flat.

These trends, along with other indicators, such as the still high rates of unemployment in several sectors of the economy, have led most analysts to forecast slightly slower growth in the months ahead. A growth rate in the last quarter of the year of about 2 percent would mean an average GNP for all of 1991 of about \$4,137 billion (1982 dollars), down about 0.5 percent from the average for 1990. Continued growth in 1992 at a slightly larger 2.5 percent, considered likely by many economists, would increase the average gross national product to \$4,240 billion for the year.

Major Timber Product Market Trends

Although mortgage interest rates have generally declined throughout the year, and are currently near three-year lows, continued problems with obtaining financing and the uncertainties associated with the general economic outlook have continued to impact housing demand. As a result, many analysts have revised their estimates of housing activity downwards from those made earlier in the year. Most forecasts currently assume continued slow improvement in last quarter of 1991, coupled with a somewhat more rapid recovery in 1992 if interest rates continue down and the economy shows a moderate expansion. Recent estimates of housing starts for 1991 range from 1.0 to 1.2 million units, with the consensus at about 1.05 million — down 12 percent from the volume started in 1990. This would amount to the smallest number of starts for any year since 1945. Analysts' forecasts for 1992 naturally have a somewhat wider range; however, most estimates available early in the last quarter show an increase of about 15 percent to the 1.2 million level.

As a result of the relatively smaller decline in single-family starts, they are expected to account for more than 80 percent of total starts in 1991, up from 75 percent in 1989. This is a plus for wood products, because single-family houses use more per unit and per square foot of floor area than is used in multifamily units. On the downside, available data indicate that average housing size has probably decline in 1991 for the first time in nearly 10 years. Shipments of mobile homes, about 11 percent below year-earlier levels through September, are likely to total about 170,000 units in 1991 and increase to 180,000 in 1992.

Maintenance, repairs, and improvements to residential structures, another major wood products market, has declined in 1991 after showing small increases in 1989 and 1990. Generally these types of expenditures, which include such things as replacement or repair of broken plumbing or heating systems, cannot be postponed.

Bureau of the Census construction surveys show that expenditures for improvement (additions, alterations, and major replacements) were about 12 percent below expenditures in 1990. As noted earlier, this represented a continuation of the declines in 1990 and 1989. Most analysts agree that the residential improvements segment of the construction market will turn around and continue to grow in the years ahead; however, short term increases are likely to be constrained by the same factors currently impacting the remainder of the housing economy.

Total nonresidential construction activity through 1991 also has been weaker than during 1990. Most of the decline was due to a 22 percent drop in expenditures for private nonresidential building construction. A number of factors are apparently responsible for the decline, including, for example, the slowdown in economic growth, continued high office building vacancy rates in some major urban areas, and the problems in obtaining construction loans and nonresidential mortgages. Many of these factors will likely continue to negatively affect nonresidential construction in the months ahead. Most economists expect that nonresidential construction expenditures are not likely to increase markedly until the second or third quarter of 1992.

The index of manufacturing production — an important indicator of the demand for pallet lumber, container board, and some grades of paper — was unchanged from September to October at a seasonally adjusted value of 108.9 (1987 = 100). This stabilization came after a slow and somewhat erratic 3.5 percent rise, since the low for the year was reached in March.

Total manufacturing and furniture and fixtures output have both remained below their averages for 1990. As a result of the relatively slow growth through the fall, most economists currently feel that total production, including the furniture and fixtures industry, will only begin to improve markedly as the economy picks up in 1992.

In summary, activity in most of the principal U.S. timber products markets has shown declines or somewhat slower rates of growth over the first three quarters of 1991 than in the first 9 months of 1990. In addition, prospective trends in several of the important indicators point to continued slow growth or possible declines in late 1991 and early 1992. The extent and duration of these market trends are still matters of conjecture; however, most analysts currently foresee improvement in the coming months. A turn-around in the construction markets would have a particularly positive influence on the consumption of many timber products.

International Markets

Available data indicate that economic growth in some of our major European and Asian markets has remained relatively strong in 1991, while in others the economic and political situations have caused somewhat lowered demands for timber products imports. On balance, the total volume of U.S. wood products exports in 1991 was somewhat smaller than in 1990.

Looking forward to 1992, the likelihood is for a gradual improvement in the exports of most timber products. Several, though not all of our major western European trading partners, expect a return to positive growth after some easing back in their purchases in 1991. Industry analysts also expect that shipments of processed timber products to our major Pacific Rim markets will be somewhat larger. U.S. imports, particularly of those products used in housing construction, should show some increase as the housing situation improves.

Timber Products Production, Trade, and Consumption

Softwood Lumber

According to data from the National Forest Products Association, softwood lumber consumption through mid-summer of this year was about 11 percent below that in the same period in 1990. The positive, though slow growth in housing and some other markets in the fall, suggests that demand has been rising and will continue to increase in the final months of the year. Thus consumption for all of 1991 is estimated at 42.6 billion board feet, 6 percent below consumption in 1990 and down about 18.5 percent from the record 50.5 billion board feet consumed in 1987.

Imports, nearly all from Canada, have also declined in 1991. Exports in 1991 have shown mixed trends. Shipments to Japan and Canada were down, while those to several European and Middle Eastern countries were up.

Through mid-summer, U.S. production of softwood lumber was about 10 percent below output during the similar period in 1990, according to information from the Western Wood Products Association. With the slight improvements expected in the last months of the year discussed previously, production for all of 1991 should amount to about 34.0 billion board feet, 5 percent below production in 1990. Current expectations about the major softwood lumber markets indicate that increased production, imports, and consumption are likely in 1992.

Hardwood Lumber

Data published by the National Forest Products Association show hardwood lumber consumption down markedly from 1990. Consumption for 1991 is likely to be 9.0 billion board feet, about 9.6 percent below the 1990 total.

Hardwood lumber imports through August were almost 20 percent below those in the first 8 months of 1990 with some additional slowing expected in the last quarter. The total for the year is thus estimated at 0.1 billion board feet. Total exports for the year are expected to be 0.9 billion board feet, very near the volume exported in 1990.

Hardwood lumber production in 1991 is estimated at 9.8 billion board feet, down about 8.4 percent from output in 1990. Anticipated growth in the important hardwood markets suggests that increases in production and consumption are likely in 1992. Imports and exports also are expected to rise. Hardwood lumber prices have shown little variation over the past year.

Softwood Plywood

Softwood plywood consumption apparently has declined in 1991. Even with some improvement likely late in the year, consumption in 1991 is expected to drop to about 18.1 billion square feet ($\frac{3}{8}$ -inch basis), 5 percent below the volume used in 1990.

Data for 1991 show softwood plywood exports close to 20 percent below shipments during 1990, with significantly smaller exports to nearly all of our major offshore markets. Imports are expected to amount to less than 50 million square feet.

With these levels of consumption and trade, softwood plywood production for 1991 is estimated to have declined to 19.4 billion square feet, 6.3 percent below output in 1990.

For 1992, with the prospective trends in new housing construction, and the relatively slow growth in other markets, total consumption is expected to increase to about 19.0 billion square feet. Exports also should show a small rise, but imports likely will remain about the same volume. As a consequence, production should increase. Prices will likely stay relatively soft until the construction markets, particularly housing, rebound.

Hardwood Plywood

Consumption of hardwood plywood in 1991 is estimated to be about 9 percent below total use in 1990. Trade data indicate that imports are likely to decline about 17 percent. Exports are expected to increase slightly. With these trends in consumption and trade, production for 1991 will be slightly under output in 1990.

Much of the hardwood plywood consumed each year is used in residential construction as well as in the manufacturing sector. As a consequence, if these two markets improve in 1992, increases in consumption, imports, and production are likely.

Particleboard and Medium Density Fiberboard

Activity in the major manufacturing markets and shipments data from the National Particleboard Association suggest that combined consumption of particleboard and medium density fiberboard in 1991 will be close to 4.4 billion square feet, $\frac{3}{4}$ -inch basis, about 8 percent below that used in 1990.

Data from the Bureau of the Census and the National Particleboard Association indicate that exports will drop. With these estimates, production would be about 8 percent under output in 1990.

Hardboard and Insulation Board

Based on industry shipments through the first 8 months of the year, hardboard production in 1991 is estimated at 1.5 million short tons, down about 7 percent from production in 1990. Data from the Bureau of the Census indicate that imports are likely to total 0.2 million short tons. Consumption with these estimates of production and trade, would also amount to 1.5 million short tons, 6.2 percent below 1990 output.

Markets during 1991 indicate that insulation board consumption for the year are near 0.8 million short tons — about the same volume as was used in 1990. Imports and exports are likely to be less than 50,000 short tons. Consequently, production is estimated to be about the same as output in 1990.

With the prospective trends in housing and the major manufacturing markets, consumption and production of hardboard and insulation board are likely to show small increases in 1992. Imports and exports for both products will probably remain about the same as in 1991.

Pulpwood

In 1991, U.S. demand for paper and paperboard has been below consumption during 1990, according to data from the American Paper Institute. Production, on the other hand, was up by about 0.5 percent because of a relatively large increase in exports, coupled with a decline in imports. As a result of the increased paper and paperboard production, and a nearly 9 percent rise in wood pulp exports, consumption of fibrous raw materials for its manufacture grew. However, the rate of waste paper usage rose slightly faster than that for wood pulp consumption, and according to data from the American Pulpwood Association, pulpwood consumption showed a small decline. It is estimated that pulpwood consumption (roundwood and chips) in 1991 totaled about 98.6 million cords, down 0.5 percent from the record high consumption recorded in 1990.

Pulpwood imports, mostly chips from Canada, have declined according to the Bureau of the Census, while exports have increased by 25 percent over 1990. As a result, pulpwood production in 1991 is estimated to be about 103.2 million cords, 0.5 percent more than in 1990, and a record level. The prospective trends in overall economic activity suggests that the upward trend will continue in 1992.

Softwood Log Trade

Softwood log exports during 1991 were down about 12 percent from shipment in 1990. Exports to several countries were below year-earlier volumes, however, the largest decline — 22.6 percent — was in shipments to Japan, the major offshore market for U.S. softwood logs. As a result, exports for all of 1991 are estimated to be about 15 percent below total shipments in 1990. Industry sources indicate that the outlook for 1992 is for a continued decline.

The prospective decline in 1992 is based primarily on estimates of market strength in the principal importing countries. Late in 1990, legislation was enacted that placed a permanent ban on export of softwood logs from lands in the contiguous states west of the 100th meridian managed by Federal agencies. It also prohibited the export of logs from lands in the same area managed by State and other public agencies. The ban is total in states exporting less than 400 million board feet annually, but permits export of 25 percent of state and other public harvest for those exporting 400 million board feet or more.

Softwood log imports were down sharply through late summer and are likely to total less than 10 million board feet, roughly half the volume imported in 1990.

Hardwood Log Trade

Hardwood log exports for 1991 are estimated at 0.2 billion board feet. Although the volume is relatively small, many of the logs exported in 1991 and in recent years have been high quality oak, walnut, and other species prized for their use in the manufacture of fine furniture and cabinetry. As a consequence, they constitute one of our most valuable timber products exports on a per unit basis.

Hardwood log imports in 1991 are expected to be close to 10 million board feet.

Industrial Roundwood Summary

Given the trends discussed above in the production, trade, and consumption of the various individual products, total consumption of all industrial roundwood products (i.e., all products except fuelwood) in 1991 is estimated to be about 15.5 billion cubic feet, 3 percent below the total in 1990. Production, imports, and exports likely will also be below year-earlier levels. Consumption, imports, exports, and production will rebound in 1992 if the major markets follow the trends discussed earlier.

1991 PRICE RANGE FOR FOREST PRODUCTS

**Table I. Price Range Standing Timber (Stumpage) and Sawlogs
Per Thousand Board Feet (MBF)**

Prices quoted are an average range for the county. Prices will vary depending on quantity, quality, access, and market conditions. More specific prices can be obtained by contacting Consulting Foresters or industry representatives.

Belknap County

Species	Quality	Stumpage	Delivered
White Pine	Low (8')	\$10-30	\$75-110
	Medium	70-85	
	High	90-115	
Red Pine		30-50	200-230
Hemlock		20-50	110-140
Red Oak	Medium	125-200	100-135
	High	225-450	275-350
	Medium to High	80-200	450-850
White Birch	Medium to High	60-100	150-450
Sugar Maple	Medium to High	60-100	150-275 +
Red Maple	Sawlog	25-30	175-350
Beech	Sawlog	25-30	115-150
Pallet		25-30	120-130
Fuelwood (per cord)	Long	7-10	90-110
Hardwood Pulp (per cord)	Long	6-8	45-55
Pine Pulp (per cord)		1.00-3.00	45-50
Hemlock Pulp (per cord)		2.00-8.00	40-52
Biomass Fuel Chips		0.-1.00	15-18
Oak Veneer	Veneer	400-750	700-1000 +

Carroll County

Species	Quality	Stumpage	Roadside	Delivered
White Pine	Low	\$60	\$90-120	\$120-150
	Medium	70-100	120-150	150-190
	High	100-150	150-190	190-230
Red Pine	Medium	20-35	80-100	100-120
	High	35-50	100-130	110-150
Hemlock	Medium	20-35	65-80	90-110
	High	35-50	80-100	110-130
Spruce	Medium	30-60	85-100	110-150
	High	60-75	100-120	120-150
Ash	Low	40-70	90-150	135-200
	Medium	70-150	210-300	250-400
	High	140-230	300-400	400-500
Beech	Low	20	45	60
	Medium	25-30	50-80	65-80
	High	35-60	80-135	130-150
Beech Boltwood	High	20	30-35	70-90
Red Maple	Low to High	20-40	70-90	90-180
Sugar Maple	Low	25	60	90-130
	Medium	40	90	130-150
	High	70-100	110-175	175-300

Carroll County (Continued)

Species	Quality	Stumpage	Roadside	Delivered
Paper Birch	Low	\$60	\$80	\$110-140
	Medium	75	120	140-170
	High	90-100	165	170-200
Paper Birch Boltwood	Medium	30/cord	40-50/cord	70-100/cord
Yellow Birch	Medium	60-80	70-80	120-160
	High	80-100	140-190	160-225
Oak	Low	30-100	60-120	90-150
	Medium	100-250	120-350	150-400
	High	250-500	250-400	400-700
Mixed Hardwood	Pallet	25-45	70-95	110-120
Hardwood Pulp	per cord	6-10	30-35	47-50
Softwood Pulp	per cord	3-10	19-36	45-52
Fuelwood Chips		0-1.00/ton		

Cheshire County

Species	Quality	Stumpage	Roadside	Delivered
White Pine	Sawlog	\$40-85	\$90-150	\$95-200
Red Pine	Sawlog	30-50	85-120	100-150
Hemlock	Sawlog	20-40	65-90	90-110
Spruce	Sawlog	35-45	65-100	90-115
Beech	Sawlog	20-40	50-85	90-110
Poplar	Sawlog	20-35	65-85	90-110
Red Maple	Sawlog	25-35	60-90	90-125
Red Oak	Low	125-200	210-260	200-250
	Medium	200-250	260-300	275-375
	High	250-300 +	325-450 +	375-550 +
Sugar Maple	Sawlog	55-90	90-160	130-200 +
White Ash	Sawlog	100-200 +	175-250 +	200-300 +
White Oak	Sawlog	100-150	125-200	150-225 +
White Birch	Sawlog	40-60	90-130	120-160
	Boltwood	20-30/cord	40-60/cord	60-80/cord
Yellow & Black Birch	Sawlog	45-80	100-160	120-240
	Boltwood	20-30/cord	40-60/cord	60-80/cord
Mixed Hardwood	Pallet	20-35	70-100	80-120
	Tie Log	25-40	65-100	95-130

Coos County

Species	Quality	Stumpage	Delivered
White Pine	Sawlog	\$45-100	\$140-250
Red Pine	Sawlog	30-60	140-210
Spruce-Fir	Sawlog & Cabin	45-85	190-235
Hemlock	Sawlog	15-40	135-165
Hard Maple	Sawlog	40-130	160-355
Soft (Red) Maple (Tie Logs)	Sawlog	15-40	140-210
Poplar	Sawlog	15-40	120-130
White Birch	Sawlog	52-110	175-270
	Boltwood	38-80	90-105
Beech	Sawlog	15-40	140-200
Yellow Birch	Sawlog	40-130	160-300
	Boltwood	30-70/cord	90-165
Red Oak	Sawlog	75-275	275-600
White Ash	Sawlog	60-150	175-350
Basswood	Sawlog	15-60	140-260
Mixed Hardwood (Pallet & Tie Stock)	Sawlogs	15-40	135-140
Poplar—Veneer			140-160
Tamarack	Tie Logs	15-40	135-150

Grafton County

Species	Quality	Stumpage	Delivered
White Pine	Low (8'-10')	\$10-65	\$80-120
	Medium	40-80	120-180
	High	80-110	190-300
Hemlock	Sawlog	18-40	90-140
Spruce-Fir	Sawlog	50-90	115-225
Yellow Birch	Sawlog	80-125	170-300
Sugar Maple	Sawlog	80-125	150-300
White Birch	Sawlog	55-110	150-300
Red Maple	Sawlog	20-40	110-150
White Ash	Sawlog	60-150	150-350
Beech	Sawlog	20-40	110-140
Red Oak	Sawlog	100-250	225-400 +
Red Pine	Sawlog	25-50	125-180
Poplar	Sawlog	15-50	90-150
Pallet Mxd. & Tie Logs	Sawlog	10-30	90-140
White Birch	Veneer	100-150	250-500 +
Yellow Birch	Veneer	100-150	270-400 +
Sugar Maple	Veneer	100-190	300-350
White Ash	Veneer	150-220 +	400-650 +
Red Oak	Veneer	350-500	400-900 +

Hillsborough County

Species	Quality	Stumpage	Roadside	Delivered
White Pine	Low	\$60-65	\$85-100	\$120-130
	Medium	70-85	100-115	130-165
	High	85-95	120-140	180-200
Hemlock	Low	30-35	70-75	90-110
	High	40-45	85-90	100-110
Red Oak and W. Ash	Low	85-100	120-140	175-230
	Medium	125-175	170-240	250-400
	High	200-300	275-325	500-600
	Veneer			600-850+
Other Hardwoods				
Birch, Maple	Low	40-50	70-90	100-130
Mixed Hardwood	High	85-120	150-200	200-300
Pallet Stock	Logs	30-40	—	90-130

Merrimack County

Species	Quality	Stumpage	Roadside	Delivered
White Pine	Low	\$50-65	\$80-115	\$90-120
	Medium	70-90	100-110	120-160
	High	70-120	140-160	165-230
Hemlock	All	25-35	70-90	80-125
White Birch	Medium	30-50	90-110	110-160
	High	60-100	100-140	200+
Hard Maple	Medium	40-60	100-110	120-140
	High	60-130	110-160	175-300
White Ash	Medium	40-175	140-200	120-265
	High	175-200	200-350	350-400
Red Oak	Medium	150-300	200-350	225-400
	High	300-400	350-500	350-600
Pallet Stock	Logs	25-40	75-100	80-125
White Pine	Tie Logs	15-30	75-100	100-110

Rockingham County

Species	Quality	Stumpage	Roadside	Delivered
White Pine	Low	\$60	\$110	\$110-120
	Medium	80	120	130-140
	High	110	140	150-180
Hemlock	Sawlogs	30-50	85	100-120
Red & White Oak	Medium	120-150	160-185	200+
	High	300+	310-350	400-525
Other Hardwoods	Medium	70	120	150
	High	100+	150	200

Strafford County

Species	Quality	Stumpage	Roadside	Delivered
White Pine	Low to Medium	\$35-80	\$80-150	\$90-185
	High	100-125		
Hemlock	Low to Medium	20-30	60-75	85-110
	High	35-40	75-85	100-120
Red Oak	Low to Medium	100-200	175-275	200-310
	High	200-450	275-475	375-575 +
Other Hardwoods	Low to Medium	40-70	90-120	115-155
	High	100-125	150-175	205-230
Birch—Yellow, White, Black	High	100-120	150-200	200-350
White Ash	High	100-150	150-200	200-350

Sullivan County

Species	Quality	Stumpage	Roadside	Delivered
White Pine	Low	\$15-70	\$90-110	\$80-120
	Medium	65-90	100-150	140-170
	High	75-110	140-180	180-220
Hemlock	Sawlog	25-60	75-120	110-140
Spruce	Sawlog	35-50	80-180	110-170
Yellow Birch and Black Birch White Birch	Sawlog	40-70	100-140	—
Sugar Maple				
Red Oak	Sawlog	70-150	130-270	180-300
White Ash	Sawlog	250-300	300-450	350-500
	Veneer	350 +	500 +	700 +
Red Maple	Sawlog	100-170	180-320	200-350
	Veneer	300 +	500 +	600 +
Pallet	Sawlog	30-40	80-110	120-130
Other Hardwoods		15-30	70-90	100-115
		20-40	95-110	125-150

Table II. Prices Pulpwood Per Cord*—Northern New Hampshire

Species	Stumpage	Roadside	Delivered	
			Per ton	Per cord
Spruce and Fir	\$6.00-17.50		\$21.90-39.50	\$47.00-85.00
Hemlock				
Tamarack, Red Pine				
White Pine	2.50-6.00		18.40-24.80	40.00-54.00
Hardwood	3.00-10.00		18.00-20.00	47.00-52.00

*Pulpwood is weight scaled at the mills in green ton equivalents. Converting factors to cords vary according to species.

**Table II. (Cont'd.)
Prices Pulpwood Per Cord—Central New Hampshire**

Species	Stumpage	Delivered	
		Per ton	Per cord
Mixed Softwood Pulp	\$5.00-10.00	\$16.00-20.00	\$35.00-44.00
Pine	2.50-10.00	16.50-22.00	35.00-50.00
Hemlock	5.00-14.00	16.50-22.00	35.00-72.00
Spruce and Fir	2.50-4.00	17.50-26.00	40.00-55.00
Mixed Hardwood	6.00-10.00	18.00-20.00	45.00-55.00
Random Length Hardwood	5.00-10.00	18.00-20.00	44.00-50.00
Mixed Hardwood including Poplar	4.00-8.00	16.00-20.00	40.00-45.00

Prices of Pulpwood Per Cord—Southern New Hampshire

Species	Stumpage	Roadside	Delivered
Softwood Pulp	\$0.50-1.50/ton 2.25-4.00/cord	\$12.00-26.00/ton 20.00-35.00/cord	\$15.00-31.00/ton 40.00-55.00/cord
Random Length			
Mixed Softwood	3.00-5.00	15.00-30.00/cord	14.00-16.50/ton
Mixed Hardwood	6.00-10.00		14.00-20.00/ton
Biomass (mixed)	0.00-1.00/ton		12.00-18.00/ton

Table III. Price of Debarked and Chipped Stemwood Per Green Ton

	Stumpage	Delivered
Pine, Hemlock, Tamarack	\$2.00-3.00	\$35.00-40.00/ton
Hardwood (mixed)	2.00-3.00	35.00-40.00/ton

Price of Pulp Chips (Paid in New Hampshire)

	Produced from Slabs and Edgings (Clean, Screened, Bark free)	
	F.O.B. Sawmill Per Green Ton	Delivered to Pulp Mill Per Green Ton
Pine and Hemlock	\$12.00-16.00	\$22.00-28.00
Spruce and Fir	14.00-18.00	26.00-32.00
Hardwood (mixed)	12.00-15.00	18.00-29.00

Average Price of Total Tree and Fuel Chips

	Spout Prices (including stumpage)	Delivered	Stumpage
Biomass Fuel: Mixed Species	\$10.00-15.00/ton	\$14.00-19.25/ton	\$0.50-2.25/ton
Sawdust		\$10.00-13.00/ton	Tops for Biomass
Sawdust and Bark Combination	\$0.15-0.18/cu. ft.	11.00-19.00/ton	\$0.50/ton
Bark Fuel (Processed)		8.00-15.00/ton	

Table IV. Price Range Boltwood, Posts, Poles, Piling, Cross Ties, and Switch Ties

Species	Stumpage	Roadside	Delivered at Mill
	Boltwood Per Cord ¹		
White Birch	\$38.00-80.00	\$65.00-85.00	\$90.00-105.00 per cord
Yellow Birch	30.00-70.00	50.00-70.00	90.00-165.00 per cord

1. Price per cord varies according to diameter and length of bolt. Some mills prefer to buy by the MBF.

Guardrail Posts, Utility Poles and Piling

Species	Min. Small End Diameter	Max. Large End Diameter	Length	Delivered
Posts				
Red Pine	5"	10"	7' or Multiples	\$1.75 ea.
Pitch Pine				
White Pine				
Spruce				
Poles and Piling				
Red Pine	7"	17"	40'	\$0.80-1.00/lin. ft.
Pitch Pine				

Railroad Crossties

Grade	Size	Oak Ties F.O.B. Mill		Mixed Hardwood Ties ¹ F.O.B. Mill	
		Each	Per MBF	Each	Per MBF
3	(6" × 8" × 8'6")	\$ 8.65	\$254.00	\$ 8.15	\$240.00
4	(7" × 8" × 8'6")	11.50	290.00	10.50	265.00
5	(7" × 9" × 8'6")	12.50	280.00	11.50	258.00

1. Beech, Birch, Maple, Cherry, Ash, Hickory

Switch Ties (Oak only)

7" × 9")	12'-16' long	\$330.00-375.00 per MBF +
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Table V. Price Range of Hardwood Fuelwood Per Cord

Species	Stumpage	Roadside	Delivered Buyers Premises
Hardwood	} \$3.00-15.00	\$32.00-60.00	\$50.00-90.00 +
4' Wood			
12", 14", 16" Lengths			
Slabs (Hardwood or Softwood)			
Dry Fuelwood, 16 inches		15.00-40.00	25.00-55.00
Tree length loads of Cordwood			120.00-150.00
Southern N.H.	9.00-10.00	25.00-55.00	40.00-60.00
Northern N.H.	6.00-10.00	25.00-40.00	40.00-60.00

Table VI. Price Range of Sawdust and Shavings and Bark

Sawdust	\$ 9.00-25.00 per cord green at sawmill or 12.00-15.00 per ton	\$22.00 +/ton (dry) 15.00 +/cord (farm bedding)
Shavings	10.00-20.00 per cord green at sawmill or	10¢ per cu. ft.
Bagged Dry Shavings		2.00-2.50 per bag
Bark (mulch)	3.50-12.00 per yard (loaded) or 12.00-18.00 per ton	15.00 + yard (processed) 18.00-27.00 per ton (processed)

Table VIIA. Representative Operating Costs (Contract Prices) Northern N.H.

Sawlogs: Felling and Limbing	\$11.50-30. per MBF
Yarding and Bucking (softwood)	25.00-45. per MBF
(hardwood)	25.00-65. per MBF
Felling, Yarding, and Bucking (softwood)	34.50-80. per MBF
(hardwood)	37.50-100. per MBF
(veneer)	60.00-80. per MBF
Pulpwood and Cordwood: (with machine) stump to roadside	
Random length	20.00-30. per cord
Biomass	14.00 per ton
Contract Chipping—roadside	8.00-10. per ton

Table VIIB. Representative Operating Costs (Contract Prices) Southern N.H.

Sawlogs: Felling and Limbing	\$10.-16. per MBF
Yarding and Bucking (softwood)	32.-50. per MBF
(hardwood)	40.-66. per MBF
Felling, Yarding, and Bucking (softwood)	50.-75. per MBF
(hardwood)	65.-125. per MBF
Pulpwood and Cordwood: (with machine) stump to roadside	
Random length Softwood	20.-22. per cord
Hardwood	23.-35. per cord

Table VIIC. Representative Processing Costs (Contract Prices) Average for N.H.

Custom Sawing—	
Softwood	\$125.-150. per MBF or 125.-175. per hour
Hardwood	175.-225. per MBF or 150.-200. per hour
Planing	45.-50. per MBF, 2 sides; 50. + per MBF 4 sides; (patterns extra).
Resawing	40.-50. per MBF

Table VIID. Representative Kiln Drying Costs (Custom)

4/4 Pine (Yard)	12-14% MC	\$75.00-85.00
4/4 Pine—Furniture	6-8% MC	90.00-100.00
4/4 Oak—Furniture	6-8% MC	140.00-160.00
4/4 Maple—Furniture	6-8% MC	90.00-100.00
8/4 Oak	6-8% MC	375.00-390.00

Table VIIE. Representative Trucking Costs* (Trucks with Loaders)

Sawlogs: Local deliveries	\$25.00-55.00 per MBF
Distant deliveries	22.00-30.00 for the first 10 miles and 40¢ to 75¢ for each additional mile per MBF OR 35.00 to 50.00 per hour
Cordwood and Pulpwood:	11.00-29.00/cord
Lumber and Chips:	2.00-2.50 per loaded mile

*For short hauls or partial loads minimum charges may apply.

CHRISTMAS TREE SITUATION — 1991-1992

For the most part, the 1991 Christmas tree season was good for the 300 or so New Hampshire Christmas tree growers. Wholesale orders were reported as increased from 1990, while retail stands had a number of trees left. Wholesale orders increased in number while the average trees per order decreased.

Continued recognition that New Hampshire trees are available through marketing efforts by UNH Cooperative Extension, growers associations, and aggressive marketing by growers has accounted for increased wholesale orders. Late wholesale ordering and continued caution by wholesale buyers continues to worry the major producers, but few cut trees were left in the wholesale marketplace. Wholesale prices remained stable with little drop despite intense price competition from other areas of the country.

Cut-your-own operations had a good year as usual, though many reported a decrease in sales from last year. A few bad weekend weather days plus the poor economy seemed to account for the slowdown.

Poor economic conditions, consumer caution, plus increased retail outlets accounted for the high number of retail trees left unsold. New retailers attempting to make extra money during hard times flooded the retail markets.

Nineteen ninety-two will probably see more of the same — prices stable, possible slight decrease. As more New Hampshire trees come on the market some displacement of imported trees will continue.

With a sound marketing strategy and cultural practices, some of the long-term risks of 8-10 years for getting trees to the marketplace can be minimized. Prospects for New Hampshire Christmas trees remain good.

Table VIII. Wholesale Price Range of Christmas Trees and Boughs

	Roadside 6-8' Trees		Delivered
	Grade 1 ^(a)	Grade 2	
Balsam Fir	\$14.00-20.00	\$9.00-14.00	Trees mostly \$12.00-25.00 ea. depending on species, quality, and quantity. \$1.00-2.00/tree or \$2.50 per loaded mile
White Spruce	7.00-12.00		
Scotch Pine	10.00-12.00	5.00 +	
Blue Spruce	14.00-16.00	10.00 +	
White Pine	10.00-12.00	5.00	
Fraser Fir	15.00-24.00	12.00-17.00	
BOUGHS (baled or tied)			
Balsam Fir	50 lb. bundle \$5.50-10.00	\$220.-340./ton	
Pine	50 lb. bundle 5.50-7.50	220.-300./ton	
Wreaths—Size 12" to 14" (Ring Size)			
Balsam Fir—single faced	\$2.75-3.50 ea.		
double faced	3.50-5.00 ea.		

(a) No uniform grading system is in use statewide. Grades based on foliage density and symmetry.

Table IX. Retail Price Range of Single Christmas Trees

	(Select and cut your own)
White Pine	
Scotch Pine	\$15.00-35.00 per tree or
Balsam Fir	
White Spruce	\$3.00-5.00 per lineal foot
Douglas Fir	
Norway Spruce	
Blue Spruce	
Fraser Fir	

MAPLE SITUATION: 1992 MARKET REPORT

(Statistics from U.S.D.A.—N.E. Agricultural Statistics Service)

In 1991, the New Hampshire maple syrup crop was increased by 25 percent over the previous year. In New England, all states had larger crops than previous years—overall for the region, the crop was up 18 percent.

For several years while New England experienced reduced crops attributable to unfavorable weather conditions, the Canadian crop exceeded normal production levels and shared a bumper crop in 1991, resulting in a tremendous surplus. The Canadian surplus of maple syrup is caused by a complexity of factors including production practices, government policies, and industry actions. The Canadian surplus of maple syrup remains a major concern in the industry to both the United States and Canada. The world market for syrup and its prices are greatly influenced by Canada, as it produces 70 percent of the world crop. The current surplus exceeds one year's annual production.

In New Hampshire, the 1991 maple syrup price dropped by 3 percent, to an average of \$32.80 per gallon for all types of sales and sizes of containers. The level of production rose from 63,000 gallons in 1990, to 81,000 gallons in 1991, with a total crop value of \$2,657,000.00. The marketing of NH maple syrup is 60 percent retail, 20 percent wholesale, and 20 percent bulk. In 1991, there was a shift, with more syrup marketed in bulk, from 11 percent in 1990 to 20 percent in 1991. Prices for bulk syrup in New Hampshire rose for the darker grades and dropped for the lighter grades. Bulk packers/distributors require a darker syrup with a stronger maple flavor due to consumer preference and consistency of color for glass container packaging.

With New Hampshire's population and tourists, opportunities exist for expansion of the industry and more producer-retail market sales, it is estimated that the NH annual production meets about half the demand. While crop production is substantially higher in some of the other New England states, New York, and Canada, their sales are in bulk form due to the absence of indigenous population centers that New Hampshire and Massachusetts have in proximity of production facilities. For all sales, the equivalent per gallon price for maple syrup is \$33.70/gallon in Massachusetts, \$32.80 in New Hampshire, \$26.00 in Vermont, and \$16.70 in Maine.

Table X. Average Maple Sap Prices at Sugar House in New Hampshire

% sugar	¢/gal.	% sugar	¢/gal.
0-1.1	1.0	3.4	34.9
1.2	4.0	3.5	36.2
1.3	5.9	3.6	37.4
1.4	7.8	3.7	38.7
1.5	9.6	3.8	40.0
1.6	11.3	3.9	41.2
1.7	13.0	4.0	42.5
1.8	14.5	4.1	43.7
1.9	15.9	4.2	45.0
2.0	17.3	4.3	46.3
2.1	18.5	4.4	47.5
2.2	19.8	4.5	48.8
2.3	21.1	4.6	50.0
2.4	22.3	4.7	51.3
2.5	23.6	4.8	52.6
2.6	24.8	4.9	53.8
2.7	26.1	5.0	55.1
2.8	27.4	5.1	56.3
2.9	28.6	5.2	57.6
3.0	29.9	5.3	58.9
3.1	31.1	5.4	60.1
3.2	32.4	5.5	61.4
3.3	33.7		

Table XI. Prices for Table Grade Maple Syrup and Products at Producers

Volume	Maple Syrup Retail	Wholesale	Bulk Wholesale
1 gallon	\$32.20	\$28.70	Grade A
½ gallon	18.00	15.40	\$1.30-1.60/lb.
1 quart	10.30	8.75	Grades B and C
1 pint	6.15	5.05	\$1.00/lb.
½ pint	3.70	2.90	
Maple Products—Retail	Sugar 1 lb.	\$8.50-9.50	Candy ½ lb. \$4.50-7.00
	Cream ½ lb.	8.00	

Rent Price Per Tap Hole

Tap hole rentals: 20 to 30 cents per tap with average being 25 cents. Sugar Maples in the woods, which are not too easy to get to, average 20 cents per tap; while easily accessible trees and roadside trees average 30 cents per tap.

FOREST PRODUCTS LABORATORY PUBLICATION LISTS

LISTS OF PUBLICATIONS dealing with research projects of the U.S. Forest Products Laboratory or relating to special interest groups are available from the Director, Forest Products Laboratory, P.O. Box 5130, Madison, Wis. 53705. Separate lists have been compiled for each of the following subjects: Box, Crate, and Packaging Data; Drying of Wood; Fire Protection; Glue and Plywood; Growth, Structure, and Identification of Wood; Furniture Manufacture; Logging, Milling, and Utilization of Timber Products; Mechanical Properties of Timber; Structural Sandwich; Plastic Laminates and Wood-Base Components; Thermal Properties of Wood; Wood Finishing Subjects; Wood Preservation; Architects, Builders, and Engineers.

METRIC EQUIVALENTS—LUMBER & PULPWOOD

(Source: Anthony Binek, 1973)

Lumber

1 MBF	=	2.36 m ³	=	83.33 cu. ft.
1 m ³	=	423 bd. ft.	=	35.31 cu. ft.

Pulpwood

1 m³ = 35.31 cu. ft. Solid wood content of a cord may vary between 75 and 90 cubic feet or 2.12 m³ and 2.55 m³.
(Example: 1 cord = 85 cu. ft. = 2.40 m³)

CONVERSION FACTORS AND UNITS OF MEASUREMENT FOR FOREST PRODUCTS

A knowledge of the common units of measure for the various forest products is of importance to persons involved in the marketing process. These units of measure form a basis for common understanding between buyer and seller. Familiarity with these units can mean a greater financial return and a reduction of the chances of misunderstanding of the terms of forest products sale agreements.

The Blodgett rule is the official standard in New Hampshire. Several other rules are also in use by mutual agreement between buyer and seller. However, the International Rule, $\frac{1}{4}$ " kerf, is most commonly accepted.

The volume of a standing tree or log is determined using tree and log rules. These rules simply give the approximate number of board feet of sawed lumber that may be manufactured after allowed for milling losses in slabs, edging and sawdust.

Tree Scale (Tree Volume Measurement)

To determine the board foot content of standing trees, tally the trees by:

- 1) D.B.H. (Diameter Breast Height = measurement of diameter of tree $4\frac{1}{2}$ ft. above ground)
- 2) Estimate the number of 16 foot logs to 6 inch top diameter
- 3) Apply the scale given in Table below

Tree Scale—International Rule

D.B.H. Inches	Number of 16 foot logs—to 6" top						
	1	1½	2	2½	3	3½	4
6	10	15					
8	20	35	50				
10	40	55	70	85	95		
12	60	75	95	110	125	145	165
14	85	110	135	150	165	190	215
16	110	150	190	215	240	260	285
18	140	195	245	285	320	345	370
20	180	245	310	355	400	435	465
22	220	300	380	445	505	545	585
24	270	365	460	540	615	670	730
26	320	435	550	645	735	805	875
28	370	515	655	760	870	950	1035
30	430	595	760	885	1010	1110	1205

Log Rule

To determine the board foot content of sawlogs, tally the logs by:

- 1) Average Diameters at the small end and inside the bark and by lengths
- 2) Apply volumes from the table given in Table below and total

The International Log Rule

¼-inch Saw Kerf

Diameter (Small end inside bark) Inches	Length of Log in Feet						
	8	10	12	14	16	18	20
4		5	5	5	5	5	10
5	5	5	10	10	10	15	15
6	10	10	15	15	20	25	25
7	10	15	20	25	30	35	40
8	15	20	25	35	40	45	50
9	20	30	35	45	50	60	70
10	30	35	45	55	65	75	85
11	35	45	55	70	80	95	105
12	45	55	70	85	95	110	125
13	55	70	85	100	115	135	150
14	65	80	100	115	135	155	175
15	75	95	115	135	160	180	205
16	85	110	130	155	180	205	235
17	95	125	150	180	205	235	265
18	110	140	170	200	230	265	300
19	125	155	190	225	260	300	335
20	135	175	210	250	290	300	370
21	155	195	235	285	320	365	410
22	170	215	260	305	355	405	455
23	185	235	285	335	390	445	495
24	205	255	310	370	425	485	545
25	220	280	340	400	460	525	590
26	240	305	370	435	500	570	640
27	260	330	400	470	540	615	690
28	280	355	430	510	585	665	745
29	305	385	465	545	630	715	800
30	325	410	495	585	675	765	860

Pulpwood

Pulpwood is generally sold by the cord or on the weight basis.

The Cord: A standard cord is generally accepted as equivalent to a pile of closely stacked wood 4 feet high, 4 feet deep and 8 feet long containing a gross volume of 128 cu. ft.

Solid Wood Content of a Cord of Pulpwood

The solid wood content of a cord of pulpwood is dependent on many factors such as:

- 1) The average diameter of the bolts
- 2) Tightness of piling
- 3) Limbing practice and knottiness
- 4) Taper and straightness of individual bolts
- 5) Amount of bark rubbed off prior to scaling
- 6) Period of time between piling and scaling (shrinkage and compaction during transportation)

The volume given in the Table below are *averages* and are commonly used as conversion factors.

Solid Wood Content of a Standard Cord

1 standard cord (4' × 4' × 8')	=	128 cubic feet of wood, bark, and air spaces
1 standard cord of pulpwood, rough	=	85 cubic feet of solid wood (softwood)
1 standard cord of pulpwood, peeled	=	95 cubic feet of solid wood (softwood)
1 standard cord of pulpwood, rough	=	85 cubic feet of solid wood (hardwood)
1 standard cord of pulpwood, peeled	=	95 cubic feet of solid wood (hardwood)
1.7 to 2.0 cord	=	1000 board feet

When green rough pulpwood is purchased by weight, the following weight-volume equivalents are generally accepted:

5600 – 5700 pounds = 1 cord (hardwood)

4300 – 4700 pounds = 1 cord (softwood)

Cordwood

New Law—State of New Hampshire

The change in RSA 438:20 is: "All nomenclature, procedure, and methods of sale of commodities in this state shall comply with the National Institute of Standards and Technology Handbook 130 and all amendments to such handbook, unless otherwise provided in this chapter."

A Cord is 128 cubic feet "ranked and well stowed"—Pieces of wood are placed in a line or row, with individual pieces touching and parallel to each other, and stacked in a compact manner.

Except for small packages less than 4 cubic feet and logs, firewood shall be advertised, offered for sale, and sold only by measure, using the term "cord" and fractional parts of a cord, or the cubic meter.

Except as noted above, firewood shall be sold by the cord and a cord is 128 cubic feet.

**Stacked Volume of a Cord of Wood,
Cut and Split (New Law 1989)**

Length	Approximate Cu. Ft.
48"	128
24"	128
16"	128
12"	128

**Approximate Weight and Heating Value Per Cord (128 cut. ft.) of Cordwood
of Different Woods, Green and Air Dry (Approximately 20% Moisture Content)**

Woods	Weight, lb. per cu. ft.	Weight, lb.	Available Heat, Million BTU ¹	Equivalent in Gallons of Fuel Oil ²
	Green	Air Dry	Air Dry	
Ash	48	4,300	25.0	255
Aspen	43	2,700	15.6	160
Beech, American	54	4,700	27.2	277
Birch, yellow	57	4,600	26.1	271
Elm, American	54	3,625	21.5	220
Hickory, shagbark	63	5,300	30.7	314
Maple, red	50	4,000	23.2	238
Maple, sugar	56	4,600	26.6	271
Oak, red	64	4,600	26.6	271
Oak, white	63	4,900	28.4	290
Pine, eastern white	36	2,600	15.0	154

1. 50 to 60% efficiency of burning unit.
2. 70% efficiency of furnace.

Variation of Heating Values of Wood Due to Moisture

—Percent of Moisture—	—Percent of Usable Heat—
0 (oven dry)	103.4
4	102.7
20 Air dried Hardwood	100.00 7,250 BTU*
40	96.5
80	89.7
100 (Green Hardwood)	85.0

*BTU is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit.

**Approximate Number of Trees per Cord
for Peeled Pulpwood and Cordwood**

Tree Diameter at 4½ Feet	Number of Trees
5"	50
6"	25
7"	16
8"	12
9"	10
10"	8
11"	6
12"	5
14"	3
16"	2.5
18"	2
22"	1

**Calculated Sawdust Weights in Pounds Per Cubic Foot
at Selected Moisture Contents¹**

Moisture Content Level		Species and Compaction Classes							
		White Pine			Red Oak			Red Maple	
Percent	Percent	Light	Shaken	Packed	Light	Shaken	Packed	Light	Shaken
Oven-dry	Green Basis	7.7	9.7	13.2	11.0	13.9	16.8	8.9	12.2
5	4.8	8.1	10.2	13.7	11.5	14.6	17.3	9.3	12.8
10	9.1	8.5	10.7	14.0	12.1	15.3	17.7	9.8	13.4
15	13.0	8.8	11.1	14.5	12.6	16.0	18.3	10.2	14.0
20	16.6	9.2	11.6	14.9	13.2	16.7	18.9	10.7	14.6
25	20.0	9.6	12.1	15.2	13.7	17.4	19.5	11.1	15.2
30	23.1	10.0	12.6	15.5	14.3	18.1	20.0	11.6	15.9
50	33.3	11.5	14.5	17.3	16.5	20.8	22.8	13.3	18.3
75	42.8	13.5	17.0	19.5	19.2	24.3	26.2	15.6	21.3
100	50.0	15.4	19.4	22.0	22.0	27.8	31.0	17.8	24.4
125	55.5	17.3	21.8	25.0	24.7	31.3	36.0	20.0	27.4
140	58.3	18.5	23.3	27.1	26.4	33.3	40.0	21.4	29.3

1. Weights by each compaction class are mean values calculated to be within $\pm \frac{1}{2}$ pound of the true mean value at the 95 percent confidence level.

Railroad Tie Volume Table

Grade	Dimensions	Bd. ft. volume per tie	No. of Pcs. per MBF
1	6" × 7" × 8'6"	29.7	33.7
2	6" × 7" × 8'6"	29.7	33.7
3	6" × 8" × 8'6"	34.0	29.4
4	7" × 8" × 8'6"	39.6	25.2
5	7" × 9" × 8'6"	44.6	22.4

Lumber (Square Edge)

The standard unit of measure for lumber is the board foot. It is equivalent to $\frac{1}{12}$ of a cubic foot such as a board 12 inches by 12 inches and 1 inch thick.

Board foot measurements refer to rough lumber. Surfaced lumber is tallied on the basis of width and thickness before surfacing.

To calculate the board footage of lumber, for each piece multiply the width in inches by the thickness by the length in feet and divide by 12.

Example:

$$\frac{6'' \text{ wide} \times 2'' \text{ thick} \times 16' \text{ long}}{12} = 16 \text{ board feet}$$

Board Foot Measure Contained in Lumber

Thickness and Width Inches	Board foot content Board Length in feet					
	6	8	10	12	14	16
1 × 2	1	1½	1¾	2	2½	2¾
1 × 3	1½	2	2½	3	3½	4
1 × 4	2	2¾	3½	4	4¾	5½
1 × 5	2½	3½	4½	5	5½	5¾
1 × 6	3	4	5	6	7	8
1 × 7	3½	4¾	5½	7	8½	9½
1 × 8	4	5½	6¾	8	9½	10¾
1 × 10	5	6¾	8½	10	11¾	13¾
1 × 12	6	8	10	12	14	16
1¼ × 4	2½	3½	4½	5	5½	6¾
1¼ × 6	3¾	5	6¼	7½	8¾	10
1¼ × 8	5	6¾	8½	10	11¾	13¾
1½ × 4	3	4	5	6	7	8
1½ × 6	4½	6	7½	9	10½	12
1½ × 8	6	8	10	12	14	16
2 × 4	4	5½	6¾	8	9½	10¾
2 × 6	6	8	10	12	14	16
2 × 8	8	10¾	11¾	16	18¾	21¾
2 × 10	10	13¾	16¾	20	23¾	26¾
2 × 12	12	16	20	24	28	32
2½ × 12	15	20	25	30	35	40
3 × 6	9	12	15	18	21	24
3 × 8	12	16	20	24	28	32
3 × 10	15	20	25	30	35	40
3 × 12	18	24	30	36	42	48
4 × 4	8	10¾	13¾	16	18¾	21½
6 × 6	18	24	30	36	42	48

LUMBER SIZE TABLE

Nominal and Minimum-dressed Sizes of Boards, Dimensions and Timbers

(All Figures in Inches)

ITEM	THICKNESS			FACE WIDTHS			
	Nominal	Minimum Dressed		Nominal	Minimum Dressed		
		Dry	Green		Dry	Green	
Boards*				2	1½	1¼	
				3	2½	2¼	
				4	3½	3¼	
				5	4½	4⅝	
		1	¾	25/32	6	5½	5⅝
		1¼	1	1½	7	6½	6⅝
					8	7¼	7½
		1½	1¼	1⅝	9	8¼	8½
					10	9¼	9½
					11	10¼	10½
					12	11¼	11½
					14	12¼	13½
					16	15¼	15½
Dimension				2	1½	1¼	
				3	2½	2¼	
				4	3½	3¼	
		2	1½	1¼	5	4½	4⅝
		2½	2	2¼	6	5½	5⅝
		3	2½	2¼	8	7¼	7½
		3½	3	3¼	10	9¼	9½
					12	11¼	11½
					14	13¼	13½
					16	15¼	15½
Dimension				2	1½	1¼	
				3	2½	2¼	
				4	3½	3¼	
				5	4½	4⅝	
		4	3½	3¼	6	5½	5⅝
		4½	4	4¼	8	7¼	7½
					10	9¼	9½
					12	11¼	11½
					14		13½
					16		15½
Timbers	5 and Thicker		½ Off	5 and Wider		½ Off	

*Boards less than the minimum thickness for 1 inch nominal but ¾ inch or greater thickness dry (1¼ inch green) may be regarded as American Standard Lumber, but such boards shall be marked to show the size and condition of seasoning at the time of dressing. They shall also be distinguished from 1-inch boards on invoices and certificates.

Dry Sizes apply to lumber which has been seasoned or dried to a moisture content of 19 percent or less.

Green Sizes apply to lumber having a moisture content in excess of 19 percent.

Computing of Lumber Volume in Board Feet

Take the Lineal Feet and Multiply by the Contents of One Lineal Foot.

Size of Piece	Part of Foot per Lin. Ft.	Size of Piece	Part of Foot per Lin. Ft.
1×1	1/12	4×4	1 1/3
1×2	1/6	4×5	1 2/3
1×3	1/4	4×6	2
1×4	1/3	4×7	2 1/3
1×6	1/2	4×8	2 2/3
1×8	2/3	4×9	3
1×10	5/6	4×10	3 1/3
1×12	1	4×12	4
2×2	1/3	5×5	2 1/2
2×3	1/2	6×6	3
2×4	2/3	7×7	4 1/2
2×5	5/6	8×8	5 1/3
2×6	1	9×9	6 3/4
2×7	1 1/6	10×10	8 1/3
2×8	1 1/3	11×11	10 1/2
2×9	1 1/2	12×12	12
2×10	1 2/3	14×14	16 1/3
2×11	1 5/6	15×15	18 3/4
2×12	2	16×16	21 1/3
2×13	2 1/6	17×17	24 1/2
2×14	2 1/3	18×18	27
2×15	2 1/2	19×19	30
2×16	2 2/3	20×20	33 1/3
3×3	3/4	22×22	40 1/3
3×4	1	22×24	44
3×5	1 1/4	24×24	48
3×6	1 1/2	26×26	56 1/3
3×7	1 3/4	28×28	65 1/3
3×8	2	30×30	75
3×9	2 1/4	32×32	85 1/3
3×10	2 1/2	34×34	96 1/3
3×11	2 3/4	36×36	108
3×12	3		