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6-1-1955

Marketing forest products in New Hampshire, Station Bulletin, no.420

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Recommended Citation

Swain, Lewis C.; Wallace, Oliver P.; and New Hampshire Agricultural Experiment Station, "Marketing forest products in New Hampshire, Station Bulletin, no.420" (1955). *NHAES Bulletin*. 382.

<https://scholars.unh.edu/agbulletin/382>

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Marketing Forest Products in New Hampshire

By Lewis C. Swain and Oliver P. Wallace



Logs from the woodlot await trucks for delivery to the mill.

AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF NEW HAMPSHIRE
DURHAM, NEW HAMPSHIRE

A publication of the
New Hampshire Agricultural Experiment Station
at the University of New Hampshire
Durham, N. H.

THIS PUBLICATION is a summarization of the findings resulting from New Hampshire's contributory project to the Regional Research Project NEM-6. Marketing Forest Products. Cooperating or participating in this regional project are the Northeastern States Agricultural Experiment Stations, and the Northeastern Forest Experiment Station of the U. S. Forest Service, the Agricultural Marketing Service and the Agricultural Research Service of the U. S. Department of Agriculture.

Marketing Forest Products in New Hampshire

BY LEWIS C. SWAIN AND OLIVER P. WALLACE*

THE KEY TO successful marketing of farm woodland products may rest with a knowledge of what, where, and when to sell.

It is quite probable that you can place one thousand seedlings in the hands of a farmer sometime during the early spring with reasonable assurance that, without instruction, he will take the necessary steps which will result in one acre of land planted, and that barring drought or fire, a high percentage of the planted trees will survive. In the hands of the woodlot owner, you can place a pruning saw with confidence that he will prune those trees of proper size and quality in his woodlot. Furthermore he has knowledge of the fire protection system in New Hampshire and he can be expected to know where to secure information about forest insects or diseases which he may observe. Thus you may say the farm woodlot owner in New Hampshire is quite well grounded in forestry. But growing trees to sizes large enough to become merchantable, is only a part of forest management. The other part — always essential — is marketing. How does the woodlot owner measure up to the requirements of what, where, and when to sell.

Adoption of Methods

THE MARKETING OF forest products in New Hampshire became a research project of the University of New Hampshire Agricultural Experiment Station as a portion of a regional study encompassing the northeastern states in 1952.

Fifty-five sample areas were selected in such a manner as to eliminate bias. A graduate forester made the actual contacts and secured information which he recorded on uniform schedules. He visited all of the land owners in the selected areas and completed 241 schedules which represent forest ownerships of 10 to 500 acres. It was necessary to make 835 contacts to obtain 241 qualifying ownerships. The average size of holdings of the 241 landowners was 127.3 acres. Of this average ownership 89.7 acres represents woodland and the remainder is in field, pasture, and tillage. It is of interest to note that farms of less than 100 acres have an average of 50.8 percent in woodland. In the larger division — 100 to 500 acres — 84 percent is wooded. This figure is the same as the ratio of forested to total land area for the whole State.

*Mr. Swain is Associate Forester and Mr. Wallace is Assistant Forester in the Agricultural Experiment Station.

The Marketing Situation

IN 1951 New Hampshire had 500 registered sawmills, 12 mills buying pulpwood, and 58 other mills buying wood for the manufacture of poles, handles, shingles, excelsior, boxes and shook, cooperage, veneer, and turnery products. These mills used a total volume 384 million board feet of logs and bolts and 300,000 cords of pulpwood. This volume is the equivalent of cutting 82 board feet on every acre of commercial forest land in New Hampshire plus six tenths of a cord of pulpwood.

Of the 241 landowners from whom schedules were obtained, 65 made sales during the period 1947-1951. They made 112 sales of which 99 were from farm woodlots. The existence of over 560 mills buying wood in various forms should create a ready market for these forest products.

Type of Ownership

IN ORDER TO learn whether there are differences in marketing practices which may be attributed to the owners' place of residence the type of ownership was recorded. These divisions separated resident from non-resident owners and commercial from non-commercial. It also showed which were farm and which were non-farm owners. Only those ownerships containing a forest area between 10 and 500 acres were accepted as qualifying for the study.

While areas up to 10 acres might be of much importance to an individual owner, the marketing of forest products from so limited an area would not necessarily contribute to the general sales picture.

Table 1. Size of Farms and Farm Woodlots and Amount of Sawtimber Per Farm

Farm Woodlot Area Size Classes	Number Farms Sampled by Size Classes	Average Size of Farms Acres	Average Forest Area Per Farm Acres	Sawtimber Per Farm Acres
Acres				
10- 29	33	42	18	1
30- 49	40	72	36	4
50- 74	40	97	57	7
75- 99	17	106	80	9
100-149	33	165	118	9
150-199	15	222	162	16
200-249	9	262	213	35
250-299	7	332	263	11
300-399	4	430	322	12
400-500	2	605	450	175

Forest Composition

THE TREE species found in farm woodlands were classified into three broad groups: hardwoods, softwoods, and mixed woods, the latter made up of both hardwoods and softwoods. Within these three groups two classes were set up designating trees large enough to saw, and those of smaller size. The totals show 12 percent to be large enough to saw and 88 percent in the lower age class. The greatest amount of standing timber is to be found in the class smaller than sawtimber. It is composed of mixed hardwoods and softwoods.

Table 2. Forest Composition of Farm Woodlots

Kind of Timber	Forest Composition		Mixed Hardwood and Softwood	Total
	Hardwoods	Softwoods		
	Percent			
Sawtimber	1	7	4	12
Smaller than Sawtimber	20	29	39	88

Use of Products

THE PRODUCTS cut for home use on 102 farms include 263,000 board feet of softwood lumber, 982 cords of fuel wood, and 1,100 stakes. One farm made use of 1,000 board feet of hardwood lumber and another used 100 posts. Presumably the stakes are used to support wires for electric fences. The average fuelwood requirement is $9\frac{1}{2}$ cords. About 2,500 board feet of lumber is used for repairs.

That the woodlands of New Hampshire are supplying a farm home need is shown by the replies of one half of the farm residents who said they used products for maintenance and repairs.

Sales of Woodland Products

THE SELLING of products appears to be a problem to most woodland owners. In the period 1947 to 1951 there were 99 sales made on 56 farms. This left 144 farms with no sales in the past five years. It may be assumed that some among those who did not make sales lacked information which would have prompted selling action, as there is data to show there were salable products in their woodlands.

The size of ownership indicates that sales are more frequent in the higher acreage classes. For example, 113 owners of woodland of 30 to 99 acres made 23 sales, while 65 owners in the 100 to 249 acre class made 35 sales. In the higher class, 250 to 500 acres, 22 owners made 31 sales.

Table 3. Reasons for Selling Products from Farm Woodlots

Reason	Years					Total
	1947	1948	1949	1950	1951	
	Number Sales					
Timber Mature	10	10	8	12	16	56
Stand Improvement			1			1
Salvage			1			1
To Employ Labor and Equip- ment During Slack Period	5	5	6	7	10	33
To Meet Current Expenses			1		4	5
High Product Prices					1	1
Land Clearing				1	1	2
Total	15	15	17	20	32	99

Reasons for Selling Products from Farm Woodlots

WHEN ASKED what prompted the sale of forest products in connection with 99 sales, 56 respondents stated that the timber was mature. Thirty-three had equipment and labor which they could keep employed during an otherwise slack season. Five needed money and sold timber to meet expenses. Two cut their timber in connection with land clearing and one each made a salvage cutting a forest improvement project, or took advantage of a high price offered.

Pattern of Sales

OUT OF 99 timber sales, 33 woodland owners had a rough idea of how much they had to sell. This indicates that the majority of owners sold with incomplete knowledge of their products. Only one sold on the basis of a reliable cruise.

Two thirds were aware of available market information which could be obtained from farm foresters, State forestry department members, and consulting foresters. This resulted in more than half of the trees being cut on a marked basis. The farm forester was instrumental in assisting in 53 sales and it is probable that some owners who did their own selecting and marking received instruction from the same source.

In the matter of product integration only 7 percent sold more than one product. These were principally a sawlog-pulpwood combination.

How the Sale Was Initiated

WE HAVE already had an indication of landowner information regarding markets in about two thirds of the sales. It follows rather naturally that three fourths of them made their own contacts in initiating the sale. Mill buyers were next in importance and accounted for 17 percent of all sales. Others included logging jobbers but these constituted only 7 percent.

In the matter of price, 87 percent of the negotiations were based on contacts with one buyer only. Five received their asking price, five others agreed on a compromise figure, and two sold to the high bidder.

Most sales are made with verbal agreements only. Twenty-three percent had written contracts.

Table 4. Method Used to Arrive at an Agreeable Price in Selling Woodlot Products

Method	Years					Total
	1947	1948	1949	1950	1951	
	Number of Sales					
Offer by One Buyer	12	12	16	19	28	87
Asking Price of Owner	3	1			1	5
Compromise Between One Buyer and Owner		1	1	1	2	5
Soliciting Bids:						
One Bid					1	1
Five Bids		1				1
Sales by Years	15	15	17	20	32	99

Average Stumpage Prices

Reason for Selection of Buyer

One of the problems in marketing forest products is the selection of a buyer, that is, if there are several among which a choice can be made. The present study attempts to show reasons why the buyer was selected and, with that information, to present a comparison of results including amounts received for products.

In 15 cases the buyer was selected by the woodland owner because he had a reliable reputation. Eleven other respondents gave other reasons which are referred to in Table 5.

Those who selected the buyer because of his reliable reputation (15) received an average stumpage return of \$8.55 per thousand board feet, while those who gave other reasons (11) for their choice were paid \$10.84.

A study of the data contained in Table 5 reveals some of the reasons why those who did not depend entirely on the buyer's reputation received more for their product. First, they did not accept the first offer but sought other buyers. Second, they sold more than one product which increased the total value. And third, they secured bids and accepted the highest.

The reasons why buyers were successful in making purchases from forest owners are indicated under nine different categories in the table. It shows the most common reason to be that of a reliable reputation of the buyer. This accounted for more than half of the sales over a five-year period. The next reason is that the buyer offered a higher price. Twenty buyers were selected on this basis. Six sales resulted from long time business connections, three others because the buyer had the best location for delivery, two because the buyer would take marked trees and cut according to good management practices, and two more because he would take the



Many woodland owners sell their products at local mills.

lower grade as well as high grade products. Lastly, one sale was made because the buyer would take a variety of products and another because he was the only known buyer.

Table 5. Reasons Given for Selection of Buyer for Forest Products Sale¹

Reason	Year of Sale					Total
	1947	1948	1949	1950	1951	
1. Best Price Offered	4	1	2	3	10	20
2. Because Buyer Would Purchase Marked Products and Would Cut in Best Interests of Management					2	2
3. Because Buyer Would Purchase Less Valuable with Valuable Products					2	2
4. Because Buyer Would Purchase Variety of Products	1					1
5. Reliable Reputation of Buyer	8	10	13	13	13	57
6. Because Business Connections With Buyer of Long Standing	2	1	1	1	1	6
7. Buyer Had Best Location For Delivery of Product		1		2		3
8. Only Local Buyer Known			1			1
9. Friendship		2	1		4	7
	15	15	17	20	32	99

¹Sales at all points of delivery included.

Effect of Advice by Consulting Foresters

Foresters assisted woodlot owners in more than half of the sales. This assistance shows up as higher prices obtained by the owners. The study showed that owners who obtained a forester's advice (9) received an average stumpage price of \$10.53 per thousand board feet. Those who did not get help from foresters (17) received an average stumpage return of \$8.80 per thousand board feet.

Lump Sum Sales

TABLE 6 GIVES a summary of information obtained from 11 woodland owners who made 16 timber sales. All of the sales were lump sum — where no measurements were made before the sale. In none of the sales was the owner able to give information on how much he was paid per thousand board feet or per cord. Four had no idea of the volume of timber cut. Nine of the eleven stated that the timber was mature and therefore ready to be marketed.

Eight out of the eleven woodlots were between 100 and 500 acres in area. The other three were 30, 40, and 70 acres, respectively. While most of the areas were fairly large there was no information to show that the size of the woodland area had a bearing on the decision of the owner to sell in a lump sum.

Table 6. Lump Sum Sales

Owner No.	Number Sales	Knowledge of Volume For Selling	Total Forest Area Acres	Reason For Selling	Approximate Volume Sold
1	1	Rough Estimate	72	Timber Mature	300 Mb.f.
2	5	Rough Estimate	500	Timber Mature	3250 Mb.f., 75 cds.
3	1	Rough Estimate	140	Timber Mature	300 Mb.f.
4	1	Rough Estimate	100	To Meet Current Expenses	Unknown
5	2	None	200	Timber Mature	40+ Mb.f.
6	1	Rough Estimate	275	Timber Mature	60 Mb.f.
7	1	None	30	Timber Mature	Unknown
8	1	None	120	Timber Mature	Unknown
9	1	Rough Estimate	40	Timber Mature	30 Mb.f., 50 cds.
10	1	Rough Estimate	180	Land Clearing	Unknown
11	1	Rough Estimate	130	Timber Mature	125 Mb.f.
12	1	Cruised	25	Timber Mature	Unknown

Product Measurement

AN OWNER MAY receive payment for his forest products on the basis of measurement or count, or upon agreement on a price for the total unmeasured lot already referred to as lump sum.

There are several points in the flow of products from woods to mill at which measurement or count can be made. Also, the actual volume determination can be made by seller or buyer.

The present study showed 17 lump sum sales. There were two cases where the buyer measured the product in the woods. The buyer measured 13 at the roadside. In 22 cases the owner's measurement was accepted upon delivery, while the buyer measured the product when delivered in 26 instances. Eighteen sales were made with measurement at the mill at the time of manufacture.

Table 7. Sales According to Point of Measurement

Type	Year of Sale					Total
	1947	1948	1949	1950	1951	
Lump Sum Sale	5	2	4	2	4	17
Measurement or Count in Woods by Buyer		2				2
Measurement or Count at Roadside by Buyer	1	1	2	1	8	13
Measurement or Count on Delivery by Owner	2	2	3	5	11	23
Measurement or Count on Delivery by Buyer	3	5	4	8	6	26
Measured at Mill When Manufactured	4	3	4	4	3	18
	15	15	17	20	32	99

Point of Sale Prices and Volumes

Table 7 shows that stumpage sales were predominant in farm marketing practices. Of 2,906,000 board feet sold, 2,262,000 were sold as stumpage, 335,000 were sold at roadside, and only 309,000 were sold at further delivery points. Pulpwood was sold as a cut product only and 895 of a total of 926 cords were sold delivered at a mill or plant. Since distance to a mill or plant affects prices at previous points of delivery, the effect on prices received at mill delivery points cannot be determined. In general Table 8 shows that sawlogs brought about \$9.00 per 1,000 board feet as stumpage, about \$31.00 at the roadside, and only about \$30.00 delivered to a mill or plant. Pulpwood averaged about \$14.00 per cord at a roadside or railroad car delivery point and \$18.50 per cord delivered at a mill or plant. The highest price, \$65.00 per 1,000 board feet, was obtained for bolts (white ash and white birch) delivered to a mill.

Table 8. Sale Volume and Price at Point of Sale

Point of Sale	Number of Sales	Volume Sold		Average Prices Paid - All Species			
		Mb.f.	Cords	Sawlogs	Rough Pulpwood	Bolts	Fuelwood
Stumpage	45	2262		\$ 8.93			
Roadside	17	335	17	31.04	\$14.41		
R.R. Car or Yard	7	153	14	27.00	14.43		
Mill or Plant	29	154	895	29.71	18.59	\$65.12	
Consumer (fuelwood)	2	2	25				\$20.00
		2906	951				

Table 9 shows a further breakdown of prices by species and delivery points. Hemlock logs brought a slightly higher price than white pine. In pulpwood the prices for all species varied little with a range of only 17 to 19 dollars per cord for either hardwood or softwood delivered at a mill.

Table 9. Average Sale Price by Species Sold and Point of Sale

Products Sold	White Pine	Hemlock	Mixed Softwoods	Spruce Fir	Northern Hardwoods	Red and White Spruce	White Ash and Birch
1. Sawlogs (Mb.f.)							
Stumpage	\$ 8.44	\$10.00	\$ 6.00				
Roadside	30.63	37.00		\$30.00			
R.R. Yard	27.00						
Mill or Plant	29.71						
2. Rough Pulpwood (per cord)							
Roadside				12.50	\$19.00		
R.R. Car					14.00	\$15.00	
Mill or Plant				19.45	18.46	17.00	
3. Fuelwood							
Consumer					20.00		
4. Bolts and Misc. Logs (per Mb.f.)							
Mill or Plant							\$63.15

Summary and Conclusions

THE PRESENT STUDY was undertaken with the purpose of securing factual data to show how the New Hampshire woodland owner markets his forest products. How well did he make use of the what, where, and when to market combination?

Two hundred and forty one owners have furnished information from which these conclusions are drawn. They were interviewed by a well qualified enumerator.

Although sawlogs were the principal product sold from farm woodlots, several owners sold a combination of products by locating buyers who would purchase less valuable products with valuable marketable products. Others sold to buyers who would purchase marked trees and would cut in the best interests of good forest management. One farmer sold only to buyers who would purchase a variety of products. Thus integrated utilization was successfully undertaken by some owners who knew the marketing possibilities.

Over half of the sales were made from marked stands. The stumpage sales from marked lots showed that the owners received a higher price than did those who sold their wood from unmarked lots. The marking of trees to cut on stumpage sales was generally done with the assistance of a forester. As a result of his help, farmers received \$1.73 more per 1,000 board feet than those woodlot owners who did not consult a forester.

In general the survey figures indicate that woodlot owners should try to sell a combination of products for maximum returns and that the assistance of foresters has resulted in higher stumpage returns. Furthermore, marked woodlots can be sold at an advantage, and such marking should result in increasingly better woodlot conditions.

New Hampshire woodland products were sold in the woods, at the roadside, and at the mill. Fuelwood was sometimes delivered to a buyer's home.

Higher returns resulted from stumpage sales and from roadside deliveries than from deliveries to the mill. Stumpage sales require little time on the part of the owner; on the other hand roadside delivery of products allows greater profitable use of labor and equipment.

That the woodland owner is conscious of when to sell is seen in the almost nonexistent reason for selling products because of need of ready money. Only 1 percent expressed this reason. Hence, the majority of owners can take advantage of higher prices either by consulting more buyers or by waiting for more favorable price trends.

The method of taxing timber in New Hampshire is favorable to those owners of forest land who desire to improve quality as well as to increase the growth of their stands. The timber itself is taxed only at the time of cutting.

Survey to be Continued

THE DATA PRESENTED herewith represents the first of several objectives in a study of marketing forest products in New Hampshire. It presents the viewpoint of the woodland owner. Another valuable contribution to the over-all marketing picture can be secured from the purchaser of forest products.

Uniform schedules for making a study of marketing practices of purchasers have been prepared, and information is being secured from respondents throughout the State.

