

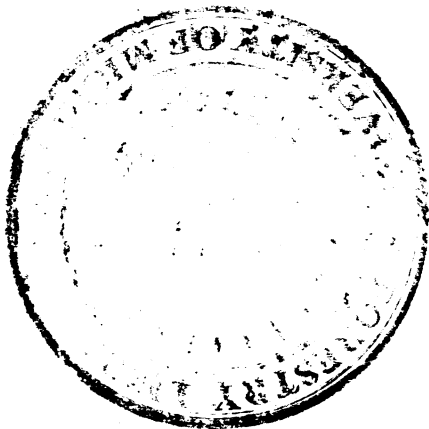
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THE MARKETING OF TIMBER PRODUCTS AND ITS BEARING ON FOREST PRACTICE

by

Frederick S. Hopkins, Jr.





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PREFACE

Of the many and varied approaches to a solution of the forest problem existing in the United States today, one of the most important is marketing, the business of transferring timber products from the producer to the intermediate or final consumer. In a sense, marketing is the keystone which supports commercial forest management and production on the one hand, and the utilization of forest products on the other. Subsequently, it is inevitable that without efficient and effective marketing practice, a portion of the values derived from skillful forest practice or from highly developed techniques of wood use will be lost. Marketing is a factor that warrants considerable attention if this country is to achieve its goal of adequate and perpetual production of high quality forest products.

This paper presents some of the fundamental principles of marketing, discussion of the methods of marketing the major timber products most generally employed, and an analysis of the relationship between marketing and forest practice.

The writer wishes to acknowledge the contributions of information and viewpoints made through correspondence and interviews by a large number of individuals, business organizations, and trade associations. Such assistance was a valuable supplement to the limited literature available on the subject. Gratitude is also extended to Professor Willet F. Ramsdell of the School of Forestry and Conservation, University of Michigan, for the guidance and suggestions that he has given so generously.

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I

INTRODUCTION

In its briefest terms, the forest problem existing in the United States today is that of building up the increment rate and quality of our forests to the point where they will adequately and permanently fulfill the nation's requirements for forest products and other less direct values derived from our woodlands. Considerable effort has been expended in recent years to establish in detail the nature of this problem, particularly in determining current conditions and the extent of forest practice, the production capacity of forest lands, and what future demands for forest products might be anticipated. In addition, the tools with which to meet this problem have been and are being turned out by study and research on the part of a large number of public and private organizations and individuals. There remains the task of putting these tools to more intensive use or inducing the establishment of sound forest practice in order to insure a balance *between*

production ~~and the~~ demand for forest goods and services on a widespread basis. Already great strides have been taken toward achieving this task, notably by the U. S. Forest Service and, more significantly, by an appreciable number of the larger private lumber and pulp companies.

Several means have been employed in the effort to establish sound forest practice upon private lands. One has been education and propaganda designed to convince the owner that such activities will be a benefit both to himself and to his community. Another and more forceful method--public regulation as to minimum practices--has been used with a considerable degree of success by some states and has been proposed for Federal legislation. A third and perhaps most effective means has been that of making forest practice economically feasible for the owners. A long list of activities could well be included under this heading. Among them would be:

favorable tax legislation; extended protection facilities; new and improved methods of utilization; practicable ways of applying silvicultural and management practices; and a more stabilized trade. In other words, any activities which tell or show the forest owner how he can best manage his stands and which aid in making it possible and profitable for him to do so may be considered means of furthering the establishment of sound forest practice and approaches to the solution of the forest problem.

This is the point at which marketing makes its appearance as a phase of the situation and as one of many approaches to its solution. Effective forest production and utilization on a commercial basis, and the satisfactory fulfillment of the need for products of the forest are both dependent upon efficient and complete performance of the marketing functions.

From the standpoint of a forest owner or producer,

therefore, marketing has a dual bearing upon the effectiveness with which he handles his stand. In the first place it will be a most important factor in determining the price he receives for his harvest cut and that, if any, which he receives for intermediate cuttings. High returns through careful marketing will be a considerable incentive to adequate forest practice. Secondly, effective marketing will channel timber of a given species, size, and quality into the use for which it is best suited, thus achieving more efficient utilization, and again, higher values.

While this aspect of forestry has commonly been taken for granted or placed in a secondary position in developing the effectiveness of forest utilization, authorities agree as to its importance in the present forest situation. In saying "Forest use planning is possible only in relation to the marketing or use of products and services provided",¹ Josephson points out the significance of marketing as a factor in forestry.

¹H. R. Josephson, "Economic Research and Forest Use Planning," Journal of Forestry, Vol. 35(1936),^p746

II

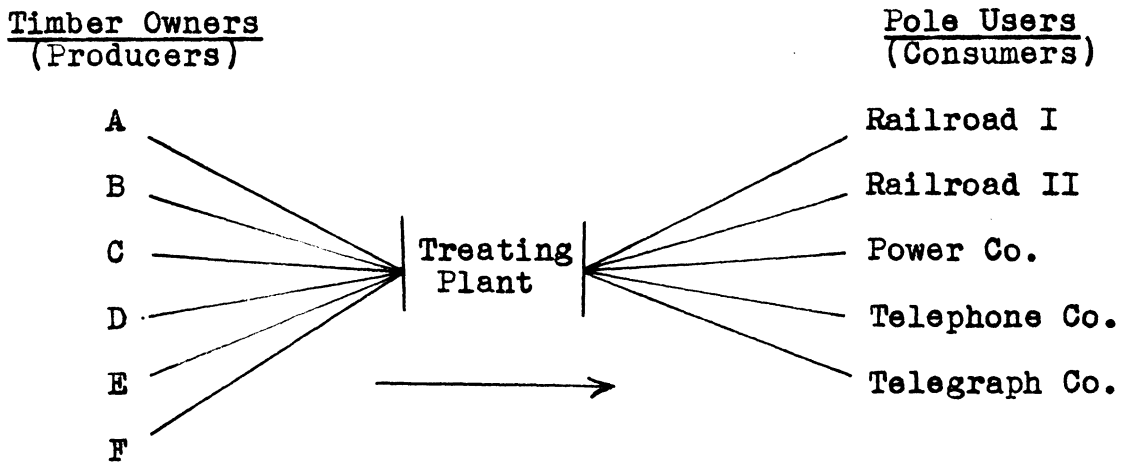
THE MARKETING PROCESS

Marketing includes those activities which together achieve the transfer of ownership and the physical distribution of a good. For the purposes of this paper the discussion is restricted to the raw or semimanufactured timber product and its course from the woods producer to the intermediate or final consumer. These operations are closely integrated with other factors and activities which contribute to the overall make-up of an industry, and it is difficult and undesirable to separate marketing entirely.

In general, three basic processes--concentration, equalization, and dispersion--are observed in the pattern of marketing. The first of these involves bringing goods together at a point in order to meet the requirements of manufacturers or the trade. Dispersion, on the other hand, is the process of getting

these goods to consumers as they are needed. Between these two equalization enters and serves as the adjusting factor, between supply and demand on the basis of time, quantity and quality. These processes are very simply illustrated by the hypothetical operation of a pole industry in a region. Half a dozen timber owners may sell poles to a treating plant which concentrates these poles in its yards, gives them the required preservative treatment, and ships them to utilities or railroads when needed.

THE MARKETING PROCESSES



EQUALIZATION
CONCENTRATION DISPERSION

Actually, most cases are very much more complex than

this and each process, which may itself include a number of operations^{and}, may be repeated several times. The concentration process is far more important than dispersion in the marketing of raw materials or producers goods while in the case of manufactured goods, dispersion is given greater emphasis.

In order to carry on these processes effectively, a number of marketing functions must be performed. These can be readily classified into three groups: the functions of exchange, selling and assembling; the functions of physical supply which are transportation and storage; and the facilitating functions including risk-taking, standardization, the collection and interpretation of market information, and financing. All of these functions assume some degree of importance in the marketing of timber products.

Between the producer and the consumer there is a great variety of channels through which timber products may be distributed. Each of these is characterized by middlemen, (or the absence or combination thereof)

who play a very important part in performing the marketing functions. These middlemen are broadly classified into two groups. The first includes those who take title to the products involved. These are commonly known as merchant middlemen. Agent middlemen comprise the second group which differs in that these men do not take title. Within each group are a number of varieties who are separated on the basis of the nature and the extent of the marketing services they render. Middlemen and the performance of marketing functions will be more completely discussed in the following section.

Cooperative associations are assuming an increasingly significant role in the marketing of timber products. These enterprises do not represent a new and distinct type of middleman, but merely a different form of organization, control and ownership system, method of financing, and plan to profit distribution. The development of cooperatives has been almost entirely limited to small producers

and the subject will be more appropriately discussed under that topic.

A general discussion of the marketing process should not be closed without mentioning the influence that government has had on this field of activities. Clark¹ considers government operations which bear on marketing in three classes: (1) efforts to maintain competition and control monopolistic tendencies; (2) efforts to control the plane of competition and unfair trade practice and (3) efforts to promote marketing efficiency. Major federal legislation to accomplish these objectives include the Sherman Antitrust Act which aimed at preventing combinations in restraint of trade, the Clayton Act to eliminate price discrimination, and the Federal Trade Commission Act which was the beginning of efforts to combat unfair trade practices. While a number of court cases are on record where trade associations in the lumber industry have been prosecuted for conspiring to raise price levels, the number of small producers

¹ F. E. Clark and Carrie Patton Clark, Principles of Marketing, The Macmillan Company, New York, 1945. p. 253.

is so large that such attempts to restrain trade are hardly practicable. Trade associations today are very much on guard against undertaking any activities that might be construed as contrary to public policy. The government has also played a significant role in an effort to promote marketing efficiency. In addition to being instrumental in the establishment of standards and grades for timber products, several government agencies have been set up to improve the marketing situation. These include the Farm Credit Administration, the Federal Trade Commission, the Agricultural Adjustment Administration, and the Norris-Dorey Cooperative Farm Forestry Act.

Efficiency in marketing is determined in terms of the effectiveness with which the marketing functions are performed and the cost of performing them. The marketing methods selected to sell a given product, therefore, should be selected on this basis. The middlemen take an additional profit margin and thereby may add to the price which the consumer pays, or

reduced the amount received by the owner. It is often true, however, that he is in a position to perform necessary services at an appreciably lower cost than that at which the producer could accomplish the same to cover his margin. On the other hand, direct marketing may be most effective and less costly for some products or under certain conditions.

Table 1

TIMBER REMOVED ANNUALLY FROM COMMERCIAL FORESTS

(Figures are estimates for 1943)

<u>Products</u>	<u>Unit of Measure-</u>	<u>Quantity (Millions)</u>	<u>Volume in Mill. Cu. Ft.</u>	<u>% of Prod. Tot.</u>
Lumber - - -	feet b.m.	34, 289	6, 789	51.0
Fuelwood - -	cord	63.65	3,501	26.3
Pulpwood - -	cord	14.03	1,333	10.0
Fence Posts -	piece	248	248	4.4
Mine Timbers -	cu. ft.	190	238	
Poles - -	piece	3.8	39	
Piling - -	piece	2.2	59	
Veneer Logs -	foot l.s.	1,711	441	3.3
Slack Staves -	piece	512	51	2.4
Slack heading-	set	41	24	
Slack hoops -	piece	16	1	
Tight Staves -	piece	119	31	
Tight Heading-	set	7	9	
Shingles - -	square	3.7	67	
Misc. Logs & Bolts	ft. l.s.	500	129	
Ties (hewed) -	piece	24	281	2.1
Distillation Wood, etc.	cord	1.14	65	.5
Products, total	-	-	13, 306	100.0
<u>Damage</u>				
Fire	-	-	800	
Disease, etc.	-	-	<u>1, 200</u>	
Damage, total	-	-	2, 060	
Aggregate	-	-	15, 366	

SOURCE: U. S. Department of Commerce, Bureau of the Census
Statistical Abstract of the United States-1944-45 p.734.

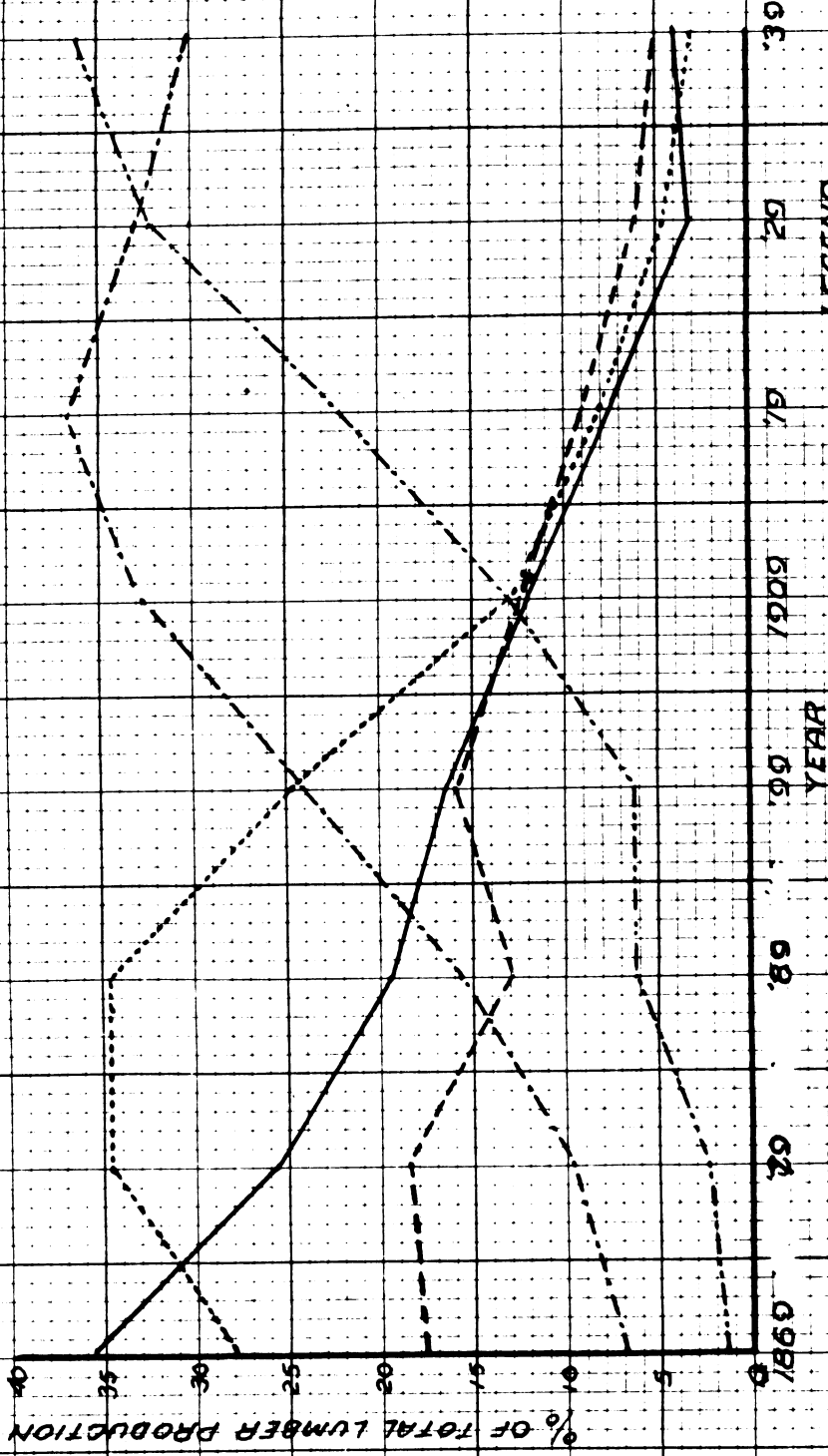
III

MARKETING IN THE LUMBER INDUSTRY

Foremost among the timber using industries in this country is the lumber industry into which approximately 6,789 million cubic feet or 61 percent of the total annual timber cut flows. (See table 1-) Typically mills and production centers are situated in close proximity to, or in timber producing areas, while the lumber market is widespread with greatest concentration of consumption being found in industrial areas and centers of population. This characteristic of the industry arises from the fact that sawlogs are bulky and contain a large portion of waste and low quality material. As a rule, they cannot be economically transported over great distances. A second characteristic of the industry has been its migratory nature which is graphically indicated in chart A. As resources in one region became depleted, loggers and millmen moved to untapped timberlands to maintain or increase their output. Transportation costs are also a most significant factor in causing

CHART A

TRENDS IN LUMBER PRODUCTION BY REGIONS 1869/1939



LEGEND
 NORTH EAST
 LAKE
 CENTRAL
 SOUTH
 N. PACIFIC

SOURCE: 16th CENSUS OF U.S. 1940 MANUFACTURES 1939
 VOL. I PART 1 p. 515-519

the scale of logging and milling operations to be determined by the density of the timber stand. Hence, we find activities on a tremendous scale in the Pacific Northwest where stands running upwards of 100 M board feet per acre are common, while in the Lake States and other regions where culled over or second growth stands predominate, operations on a smaller scale are found. The trend in many sections of the country, including the West, is toward small producing units. The following table illustrates this trend in the Lake States:

Table 2

Lumber Production in the Lake States
1936 -- 1940 -- 1945
(Percent of total production)

<u>Production Size Class</u>	<u>1936</u>	<u>1940</u>	<u>1945</u>
Over 15,000 M	45.6	28.0	10.9
5,000 M to 15,000 M	25.4	26.6	17.2
Under 5,000 M	<u>29.0</u>	<u>45.4</u>	<u>71.9</u>
	100.0 %	100.0 %	100.0 %

SOURCE: Northern Hemlock and Hardwood Association

These figures over-accentuate the trend to some extent due to the circumstances of war-time production.

The ever changing conditions of production in the lumber industry have been accompanied by changes in the practice and problems of marketing. The early colonial operator of a water-powered mill capable of producing only a few hundred board feet of lumber a day was perhaps so close to the forest that logs were dragged to his cold deck, and so close to his market that settlers carried away in a cart boards and timbers with which to build a home or barn. His marketing activities were of the simplest form. Today some mills produce as much as half a million board feet in a single day, and it is more than likely that a portion of the output of such mills will be put to use several thousand miles away. At the same time, we find many thousands of producers presenting a great range in scale of operations, in kind and quality of product, and in the market conditions which they face. Subsequently, the overall marketing situation in the

lumber industry today has become extremely complex.

Two phases are evident in approaching the subject of marketing in the lumber industry. First, we are concerned with the concentration of sawlogs to meet production demands, and secondly, we are concerned with the more expansive scope of activities which enter into the process of marketing lumber.

MARKETING STUMPAGE AND SAWLOGS:

Marketing activities make their initial appearance in the lumber industry between the stump and the cold deck of the sawmill. At this stage, the process is almost entirely one of concentrating in the mill yard or hot pond a sufficient volume of sawlogs to keep the mill operating. Although the initiative in acquiring this raw material is commonly assumed by the mill operator, the viewpoint of the timber owner is adapted here as most suitable to the purposes of this paper. A large variety of ways and means of selling saw timber will be found in practice, but the

~~-----~~ majority of these are variations or combinations of the chief methods which are presented below.

Owners of small timber properties or farm woodlots are generally reluctant to become involved in any but the simplest of arrangements when selling standing timber. As a result, sales in most sections of the country are commonly made on a lump sum basis whereby the owner sells all of the timber on a prescribed area for a stated sum. In some cases, provision will be made for a minimum cutting limit, indicating some appreciation of the value of a residual stand, but more often than not this limit is so low as to include any trees which the buyer can process at a profit.¹ Frequently, only one bid is secured for the stumpage, and the sale is made without the benefit of a cruise.²

While this system may suit the seller in its simplicity and gives the buyer an opportunity to buy at the lowest possible price and with a minimum of restrictions, it

¹ H. R. Moore, & O. D. Diller, "Lumber Marketing in Eastern Ohio", Ohio Agricultural Experimental Station Bulletin 666 (1946), 8.

² Ibid., p. 18.

could hardly be considered equitable; the seller is generally at a disadvantage because he cannot match the buyer's experience in estimating the value of the stand. In spite of the fact that the integrity of the buyer may be above question, there are a number of factors that tend to depress the price. The first of these is that a stand sold on this basis will include an appreciable portion of small trees of low value which would not be cut if the buyer was paying for it separately. The buyer must also make allowance for hidden defect, particularly in overmature stands. In addition, it is not uncommon for the amount offered for a stand on a lump sum basis to be set by the value of the poorer material of the lot.

Any number of instances may be cited to show the loss that owners have borne in transactions of this type. A Maryland owner was offered \$1,500 for a tract of timber on a lump sum basis, but prior to accepting the offer, which he considered a fair one, he consulted a state forester. After being advised

both as to the true value of the stand and possible buyers, the owner advertised. Subsequently the original offeree boosted his bid to \$4,500, and the sale was made to another party for \$5,500. Not only was the selling price increased appreciably, but since the stand had been marked by the forester and sold on a selective basis, it was left in very much better shape after logging than would otherwise have been the case.¹

Marketing timber on an unrestricted lump sum agreement is likely to be not only contrary to the owners best immediate interests, but also injurious to the residual stand. Trees below otherwise merchantable diameters may be removed and reproduction may be reduced to such an extent that inferior species take over the stand completely. Further, because of his fear of making a bad deal in selling his timber, an owner will frequently avoid selling until the stand is over-mature and decadent, thereby failing to realize

¹ Wilbur R. Mattoon & William B. Barrows, "Measuring and Marketing Farm Timber," Farmers Bulletin, 1210 (Washington, 1940) 48.

the maximum value.¹

A second technique sometimes employed in marketing timber is based on the volume and value of lumber produced at the mill. While this practice leads to a return on the actual product obtained from the timber which may be somewhat higher (\$79.16 per acre as compared with \$71.06 on the lump sum basis in Eastern Ohio)², the reasons why it has not been more widely adapted in selling timber are quite apparent. First, only in mills which operate on a very small scale would it be feasible to keep track of the grades and species of lumber produced from a given lot of logs. Secondly, the seller must place complete confidence in the mill operator and have reliance on his capacity to saw the logs effectively and to grade the lumber accurately.

A more widely used method of marketing stumpage than the last is that of selling only selected trees

¹ A. E. Wakerman, "Forest Products Marketing Problems in the Piedmont Regions of N. C.," Duke University School of Forestry Bulletin, 12 (Durham, N. C., June, 1945)46.

² ~~"American Lumberman", #3332, 1946 Reference Number, (April, 1946).~~

² H.R. Moore and O.D. Diller, *op. cit.*, 9

or species. This means enables the owner to exercise considerable control over what timber is sold as well as the condition of the residual stand. For this reason it is commonly adapted by the Federal and state forest services in making their timber sales. The owner determines what is to be sold and either marks trees accordingly or specifies in the sales contract what classes of trees are included in the sale. Frequently, accurate estimates of the volume and character of the timber being sold are obtained and bids are made by prospective buyers on this basis, and their own appraisal of the logging chance. As a rule, stumpage returns from this type of sale are higher than those realized by the preceding methods. The costs of cruising and marking are outweighed by the bargaining advantage and added control that the seller obtains. ¹

Sales by log measure are frequently made, although timber is not sold in this manner as frequently as by the lump sum method by small owners. Log meas-

¹ The Morris-Doxey Farm Forestry program has accomplished a great deal toward inducing small owners to sell by this method based on judicious product selection. Activities under this program include both demonstration projects and actual forestry and marketing services.

ure is used as a means of determining the price paid for logs in the woods, at the roadside, or in the mill yard. Small sales are often handled in this way and bring a higher stumpage return than other methods. Both buyer and seller can readily scale the logs involved in the transaction and reach an agreement as to the grade and value of the logs. In some sections of the country, notably in the Pacific Northwest, organized log markets exist where some mills secure part or all of their log supply.

Another practice is for owners to harvest their own timber and sell part or all of the product as it comes from the mill. The most obvious illustration of this method is any of the larger companies that own both timber and mill. While the volume of logs handled in this way is large, there is actually no marketing activity between the woods and the mill, and for this reason, the subject is treated briefly here. Small owners also operate in this manner frequently. The owner may have a small mill of his own,

or portable or stationary mill operators may contract to saw logs for him. This practice offers the owner an opportunity to directly control logging and milling operations and to utilize his own labor and equipment profitably. However, caution should be exercised before undertaking an operation of this sort. Hoyle¹ says that in New York state many owners have sustained considerable loss as a result of their efforts to log and mill timber without the advantage of proper equipment or adequate skill in processing or marketin. Logging contractors and established mills take a price margin, but it is generally true that these operators are well equipped and experienced in such work, thereby enabling them to gain more than that margin for the owner. The chief exception to this generalization is the marginal or submarginal mill operator who produces at best a low quality of lumber. A conscientious owner might well be able to derive greater value from his timber by doing his

¹ Raymond J. Hoyle, "Harvesting and Marketing Timber in New York," (Tech. Pub.) #49, N. Y. State College of Forestry (Syracuse, 1936), p.16.

own processing than by contracting with an operator of this type.

Before leaving the subject of marketing stumpage and sawlogs, a relatively recent development in the field should be given consideration. Several cooperative organizations have arisen in various sections of the country, particularly in the Northeast and the South to give farmers and other small timber owners a more advantageous position in managing woodlands and marketing their products. These vary considerably in form and in operating methods. While this approach seems to be one promising answer to the problems encountered by small owners, the cooperative cannot be deemed a panacea and none have yet developed to the point where their capacity to fill the need can be wholly determined. One enterprise of this type is the "Ostego Forest Products Cooperative Association, Incorporated" of Cooperstown, New York. Since its origination in 1935, this cooperative has not only handled rough products for members, but has also under-

taken to process these products. A permanent, well equipped mill with an annual capacity of 3,500 M board feet has been put in operation; logs are harvested either by the owner or by the association, and delivered to the mill where the owner receives the full price for the logs less five percent which is used to buy common stock of the corporation in his name. Logs are then milled and the product is sold by the association. The processing and marketing operations are well coordinated with a plan of woodland management for the area so that the requirements for a steady market are met. These requirements have been determined as: 1.) a sufficiently large and dependable supply of raw material; 2.) accurate sawing; 3.) proper grading; and 4.) careful seasoning (dry kiln capacity of 3 M feet per day).¹ (Attention is called to a publication now being prepared by the Northeastern Forest Experiment Station on the progress of the Cooperstown project during the last six years.)²

¹ Lawrence, Solin, A Study of Farm Woodland Cooperatives in the U. S., Tech. Pub #48 (Syracuse: N. Y State College of Forestry, 1940) pp.55-56.

² *This project has had the advantage of considerable financial and technical assistance from federal agencies, chiefly the U.S. Forest Service.*

Marketing Lumber:

As was indicated in the introduction to this section, there is a significant relationship between production characteristics and the practices adopted in the marketing of lumber. The most important of these are the size of the producing unit, the quality of the product, the kind of product, and the location of the mill with respect to markets.

Recently, due to the heavy demand, there has been a preponderance of small marginal and submarginal mills in most sections of the country. Duerr¹ reports that 77 percent of the sawmills operating in a section of Eastern Kentucky (1942-1944) fall into this category. They are, in general, characterized by worn-out and inadequate equipment and inexperienced operators. Their product was, for the most part, of too low a quality to be suited for the general market and was used locally. About 42 percent of the product of mills in this group was in the form of ties or timbers, but even a large portion

¹ William A., Duerr, et al, Timber-Products Marketing in Eastern Kentucky, Kentucky Agr. Exp. Sta. Bul.488(Lexington: 1946), pp. 21-25.

of these were miscut or otherwise unsuitable for a normal market. It does not follow that all small scale producers operate inefficiently or put out only low grades of material. Many examples can be cited where small mills, cutting not more than five or ten thousand feet a day, are reasonably efficient and produce lumber of a perfectly satisfactory quality. Such mills usually sell to a restricted market and some specialize in a certain species, such as ash or walnut, or in a limited type of product, such as box boards or ties.

At the other extreme are the very large mills which operate in the Southern Pine and Douglas Fire regions. Two mills in Longview, Washington are each capable of sawing more than a million board feet of lumber in a single eight-hour day. Such plants as these must be very well equipped for efficient utilization and production, and there is considerable pressure to obtain the highest possible quality of material from the logs. Likewise, there is pressure to apply

the most effective marketing methods in selling and distributing the product. One of the largest timber corporations operates as a subsidiary^a sales company which is devoted entirely to these activities. According to Cline¹ producers in the South and Northwest, by offering superior products at relatively low unit cost and by more effective merchandising, have been able to compete and even to control the prices of some species in New Hampshire; the following table gives an indication of the range in size of lumber producers:

Table 3 Size of Producers by Value of Products--1939
(Sawmills, Veneer Mills, and Cooperaage Stock Mills)

<u>Value of Product</u> <u>(\$1,000)</u>	<u>Number of</u> <u>Establishments</u>	<u>Av. No. of</u> <u>Wage Earners</u>
5 to 20	3,802	7.6
20 to 50	1,632	16.4
50 to 100	719	33.6
100 to 250	682	65.2
250 to 500	267	136.8
500 to 1,000	169	242.3
1,000 to 2,500	97	425.0
2,500 to 5,000	21	} 962.0
Over 5,000	2	

SOURCE: 16th Census of the U. S., 1940, Manufactures, 1939
Vol. I, p. 190.

¹ A. C. Cline, The Marketing of Lumber in New Hampshire, Harvard Forest Bul. #10 (Petersham, Mass.: 1926)p.17.

The Manufacturer

Actual marketing activities on the part of the manufacturer begin at the green chain or sorting table. Here lumber is tallied and sorted by size, grade, and species. Grading rules for lumber have been established within the last fifty years through the efforts of trade associations in the industry and the U. S. Department of Commerce (National Bureau of Standards). These rules are made to standardize grading practice among the producers of a given species or group of species, and to facilitate the sale or purchase of lumber. While it is not possible to achieve absolute uniformity of quality in lumber, or even to avoid a small amount of overlapping of grades, satisfactory results are realized by **setting** the maximum limits for the amount of defect that will be allowed in any grade. Another factor that enters into the grading of lumber is the personal element, or difference in the judgement of individuals who might grade the same or similar lots. The object of lumber grading is to provide a basis for

dividing production according to the utility and value of each piece as simply as possible. It makes it possible for a reliable seller to give a prospective buyer a reasonable idea of the quality of the lumber he is purchasing. Some mills use a trade and grade mark of the association to which they belong. Where this is done, or where manufacturers' shipping certificates are used, the trade association assumes the liability in the event that a shipment does not measure up to the volume or grades specified. Association inspectors are on call to settle any dispute that might arise between buyer and seller as to the quantity of a shipment, or the quality; and the judgment of the inspector is usually accepted as final.

A second marketing function is primarily performed by the manufacturer as an outcome of the nature of his product; the function of storage. Since lumber is not a desirable product for most uses until the moisture content has been reduced to twenty or fifteen percent, it is necessary that some means of drying it be provided. Ordinarily mills maintain large yards

where green lumber is carefully piled when it comes from the green chain and allowed to dry for from ~~four~~ to eight months. There are several reasons why the mill operator takes on this function. First, the weight of wood is reduced considerably when it is dried; thus the shipping cost per thousand board feet is reduced when wood is dried. Secondly, land and the cost of maintaining large yards is generally less per unit of volume for the manufacturer than for middlemen or retailers in consuming centers. And third, the storage function enables producers to meet market conditions more effectively by being in a position to meet increased demand for a certain product, or to regulate shipments according to market fluctuations, thereby rendering greater stability to the market. There are two instances in which a producer does not maintain large stocks. One of these is when his high-grade product or his entire output is kiln dried and ready for market within a few weeks after milling. The other is when his output is small or other reasons

make it necessary for him to sell almost immediately in order to meet expenses. In such cases, wholesalers often buy his output in mill-run lots once a month or more frequently, and make provisions for drying and grading it themselves.

Other marketing functions are undertaken by the manufacturer to a lesser extent. Though he has usually taken the initial step in selling his product, until recently he has done little in the way of demand creation.

~~Recently,~~ Some producers have begun to brand a few of their high-quality products. ~~and~~ there has been a more widespread tendency toward branding, trade-marking, advertising, and general publicity on the part of manufacturers' trade associations. Much of this sort of demand creation is done through various trade journals, but special educational campaigns and good-will drives have been successful in boosting sales.

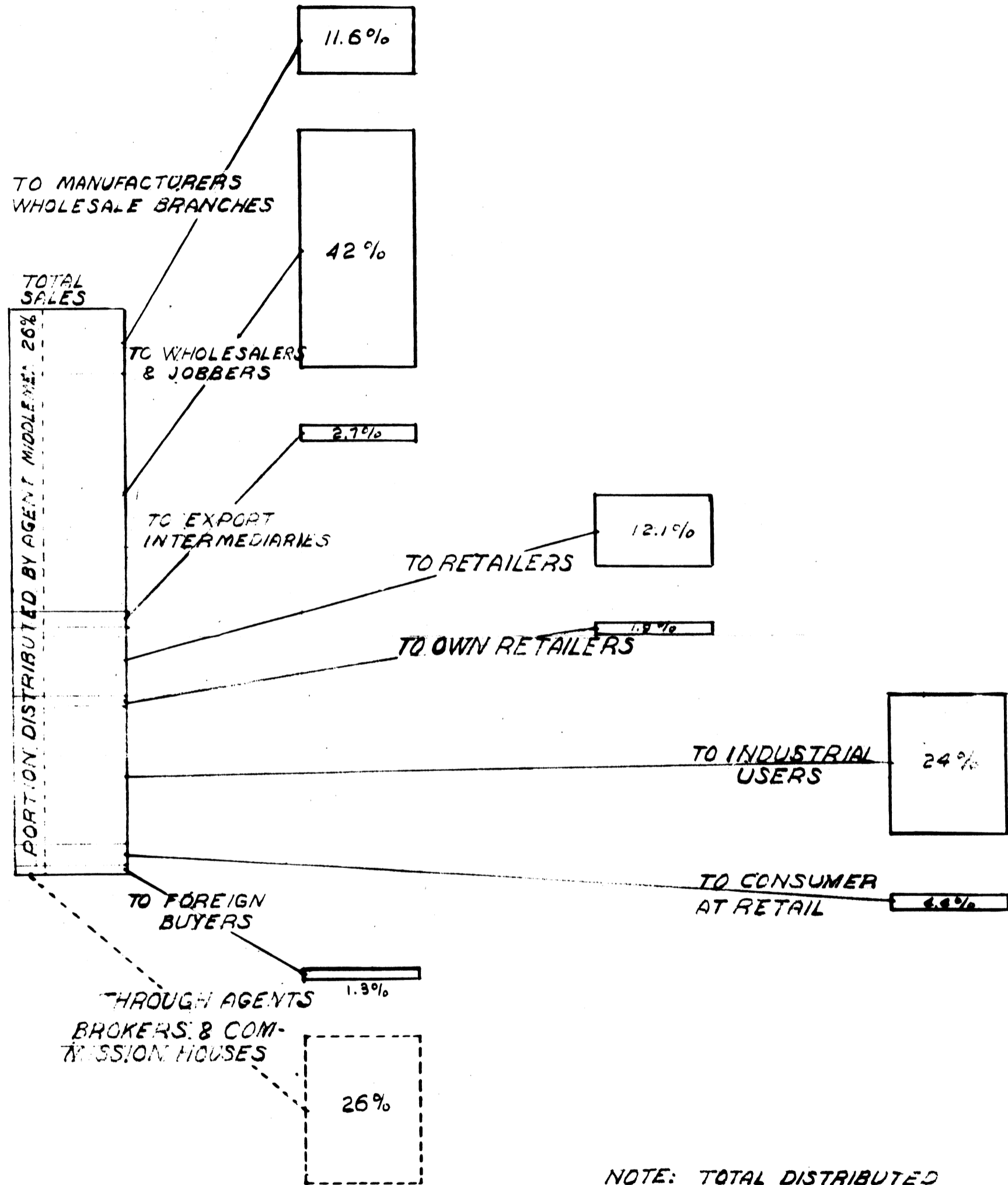
The millman's acceptance of market risk has already been suggested. A large part of his working capital is tied up in his stock piles, and, while it

may be possible for him to delay shipments until market conditions are favorable, it may be necessary for him to sell while prices are low in order to meet operating costs. He also assumes part of the financing function. Sales to wholesalers are usually based on a sight draft for 80 percent of the sale, and sales to retailers usually grant 2 percent discount for payment in ten to twenty days, with net due in thirty to sixty days.¹ Trade associations provide credit information on wholesalers, retailers, and important industrial users of lumber. The chief sources of credit information are the Lumbermen's Bluebook, published by the National Lumber Manufacturers' Credit Corporation of Chicago, and the Redbook, put out by the Lumbermen's Credit Corporation, also of Chicago. In addition to those activities which have already been mentioned, regional and National trade associations have played an important role in the development of the industry in other matters. Their programs

¹ Nelson C. Brown, The American Lumber Industry (New York: John Wiley & Sons, Inc, 1923)p. 130.

CHART B

DISTRIBUTION of LUMBER MANUFACTURERS SALES
1939



NOTE: TOTAL DISTRIBUTED
MANUFACTURERS SALES
\$656,568,000.

SOURCE: 16th CENSUS OF U.S. - 1940, CENSUS OF BUSINESS, DISTRIBUTION OF
MANUFACTURERS SALES, 1939, VOL. I pp 72, 122-132

include work on forestry and conservation, accounting and statistics, traffic, government activities, taxation and tariffs, foreign markets, and building ordinances to mention a few of the topics. In 1946, the American Lumberman listed thirty-two manufacturer's trade associations.¹

Middlemen in the Lumber Industry

The channels by which lumber is distributed are shown on Chart B. It is noticeable in this presentation of the data that a considerable portion, (42%) of the total lumber sales is taken up for distribution by wholesalers and jobbers. When compared with corresponding percentages for all commodities (See Table 4) this characteristic becomes more outstanding.

Table 4 Distribution of Manufacturer's Sales of Lumber Compared with Those of All Commodities

<u>Distribution</u>	<u>Lumber</u>	<u>All Commodities</u>
Industrial Users	24.0%	26.0%
Wholesalers & Jobbers	42.0	25.1
Own Wholesale Branches	11.6	22.4
To Retailers for Resale	12.1	19.6
To Own Retail Stores	1.3	2.3

¹ American Lumberman, #3332, 1946 Reference Number (April, 1946) p. 239.

Table 4 (continued)

<u>Distribution</u>	<u>Lumber</u>	<u>All Commodities</u>
To Foreign Buyers	1.3	2.3
To Consumers at Retail	4.4	1.6
To Export Intermediaries	2.7	.9

SOURCE: 16th Census of the U. S., 1940,
Distribution of Manufactures, 1939, pp. 24 & 114.

Such a situation arises from the fact that producers are often far distant from their markets; that these markets are widely scattered; that the mill operator is not well acquainted with the markets; or that he is not in a financial position to undertake direct marketing. It should be noted that the distribution chart shows the volume handled by agent middlemen as a supplementary factor because most of this portion follows the same channels with these men entering between the producer and merchant or retailer. Agent middlemen do not take title to the lumber, but aid in arranging transactions.

Table 5 Lumber Middlemen-1939

<u>Type & Sub-Type</u>	<u>Number</u>	<u>Net Sales</u> (thousands)	<u>Op. Exp.</u> Percent of Net Sales
<u>Service & limited func-</u> <u>tion wholesaler _ _ _</u>	1,236	\$ 378,222	11.1
Wholesale Merchants	836	194,664	
Export Merchants	39	15,626	
Importers	12	2,269	
Drop Shippers	349	165,663	
<u>Manufacturers' Sales</u> <u>Branches (with stocks)</u>	37	22,201	14.2
<u>Manufacturers's Sales</u> <u>Branches (without stocks)</u>	21	12,511	13.5
<u>Agents & Brokers</u>	474	155,187	4.2
Brokers	162	56,693	
Export Agents *	44	19,107	
Import Agents*	9	776	
Mfg. Agents* (with stocks)	83	8,776	
Mfg. Agents(without ")	143	29,830	
Selling Agents	87	40,237	
Other Agents*	5	6,668	

*-Lumber & Construction Material
SOURCE: 16th Census of the U. S., 1940, Census of Business,
Vol. 11, Wholesale Trade, 1939, pp.48-59.

Of the types of merchant middlemen engaged in the lumber trade, wholesale merchants are the most prominent, comprising about 68% of the wholesale-jobber classification. Drop shippers rank second with 28%,

export and import merchants low with 3% and 1%, respectively. The Wholesale merchant maintains large yards between the mill and the market, generally in the vicinity of major consuming areas. Among the important wholesale centers are Buffalo and Tonawanda, N. Y., Poughkeepsie, N. Y., New London, Providence, Portsmouth, Newark, Baltimore, and Norfolk in the east and Nashville, Memphis, Cincinnati, St. Louis, Cairo, Chicago, and Minneapolis in the central states. At these points and others, wholesalers assemble lumber in large quantities from various producing districts.¹ Occasionally specialization occurs to the extent that a wholesaler will deal only in one species such as ASH or WALNUT, or more frequently in a group of species such as hardwoods, but most wholesalers stock all out, or at least a great variety of commercial woods in order to meet the requirements of their customers. Some wholesalers buy an appreciable portion of their stock rough, sometimes as ungraded mill-run lumber, particularly

¹ Ralph C. Bryant, Lumber, Its Manufacture and Distribution (New York: John Wiley & Sons, Inc., 1940) pps. 380-381.

from small mills. They then assume the task of dressing their stock, seasoning or kiln drying it, gradually--grading it, or otherwise putting the lumber in shape for market.¹ These operations are of special importance in the hardwood trade which is largely directed to the wood using industries. Very often these factories require special material which the wholesaler is equipped to provide. On the other side of the picture, hardwood mills are widely scattered and frequently operate on such a small scale that they could not market their product without the service or financial aid rendered by merchants. Purchase is facilitated by the grading operation mentioned. Of all the operations performed by the wholesale merchant, the most essential are assembly and dispersion. He is in a position to buy large quantities of lumber and distribute it in carload lots or mixed car lots to retailers throughout the area he serves. Since retailers often do not have facilities for storing, handling, or preparing lumber for consumer

¹ I. N. Tate, Modern Trends in Lumber Selling, Yale University, School of Forestry, New Haven, 1925, pp.21-22.

use in large volumes, such service is a great convenience to them and they are enabled to place orders to meet their more immediate requirements with assurance of fairly prompt delivery. They are also assisted by the credit terms which wholesalers offer them. (See Table 6.)

Table 6 Wholesale Cash-Credit Analysis -- 1939

Service & Limited Function Wholesaler	<u>Cash</u>	<u>Credit to 10 days</u>	<u>Credit 10-30 days</u>	<u>Credit over 30 days</u>
	6.3%	13.9%	27.5%	52.3%
Mfg. Sales Branches (with stocks)	2.0%	18.8%	40.9%	38.3%

SOURCE: 16th Census of the U. S., 1940, Wholesale Trade, 1939, p. 113.

The drop shipper, in contrast to the wholesaler lumber merchant, carries no stock, ~~and never sees the product he buys and sells.~~ His office is usually located in a producing area where he has an opportunity to become well acquainted with mill conditions as well as the character of the lumber manufactured. Inspection service is rendered and the drop shipper is well situated to inform the buyer as to the quality of lumber he purchases as well as trends in production conditions.¹

¹ Nelson C. Brown, The American Lumber Industry. (New York: Wiley & Sons, 1923) p.114.

The drop shipper handles a larger volume of business than do wholesale merchants as evidenced by the fact that the average net sales in 1939 was approximately \$475,000 for the former and \$233,000 for the latter; although some drop shippers restrict their activities to the retail trade it seems reasonable to assume that for the most part they sell to large industrial users of other wholesalers who buy in large quantities. In some respects he is in a less advantageous position than the wholesale merchant but his familiarity with production conditions and lower operating costs are indications that there is room for both types of wholesalers and the services each provides in the lumber industry.

Commission houses, agents, and brokers, as has been indicated, also play an important role in lumber marketing.¹ This group of middlemen is distinct

¹ Ibid., p.117.

from the merchant class in that they do not buy or sell lumber but merely arrange transactions between the mill operator and merchant, retailer, or industrial user as the case may be. Such service is of value to both parties because he is well informed as to the best markets for the manufacturers output and the best sources of supply for the purchaser. These agent middlemen, like the merchant group, sometimes render financial assistance to the buyer, seller, or both, but they exist primarily to facilitate transfer of title and the fact that their service is so limited makes the cost of it low in comparison to merchants. They are usually paid a fee or commission based on the volume and value of the lumber involved in the transaction. Brokers generally do not confine their activities to one mill, but rather sell lots for any number of producers as desired under terms indicated by the producers. The manufacturers' agent will often handle part of the production of a small number of mills in a given area under the mill operators'

terms. Selling agents may sell under contract for a single mill, and are often given the power to set their own terms and conditions of sale. The relative volumes of trade handled by each of these types were shown in table 5.

Operating expenses as a percentage of net sales were shown on the table of wholesale operations. (Table 5) These figures coincide closely with that derived from a study of 85 lumber wholesalers of all types who distributed ^{about 10 million board feet in 1935.¹} ~~The cost of distributing~~ this lumber, which had an F.O.B. mill value of \$33,9000,733, was reported as \$3,416,535, or 10.8% of the mill value. This study also revealed that the average wholesale distributing cost from 1928 to 1937 was \$2.37 per thousand board feet, or 9.56% of the mill value. The distribution of the wholesale lumber sales by the more important classes of middlemen in 1939 is shown on table 7.

In April, 1946, the American Lumberman listed sixteen wholesale trade associations in the lumber

¹ McNair, Malcolm P., et al., Distribution Costs, An International Digest, Harvard University, Boston, 1941, pp. 346-347

industry. Originally, these organizations were of a local nature, but many of them have grown to include wholesalers throughout a large area. Two are national; the National-American Wholesale Lumber Association and the National Hardwood Lumber Association. With the Manufacturers' associations, these organizations have made a successful effort to standardize grading rules, to regulate trade practices, and to promote the development of the industry as a whole as well as the marketing aspect of it. Improved relations between mill operators and wholesalers, between wholesalers and retailers have been one of the greatest benefits to be derived by the whole industry from activities of the wholesale trade associations.¹

¹ I. N. Tate, Modern Trends in Lumber Selling, Yale University, School of Forestry, (New Haven: 1925)pp.25-26.

Table 7- Distribution of Wholesale Lumber Operations- 1939

<u>Distribution</u>	Service & limited Function Wholesalers	Manufacturers Sales Branches (with stocks)
Retailers for Resale	55.4%	59.3%
Household Consumers	.9	x
Industrial Users	28.0	23.2
Wholesalers	10.6	15.0
Export Intermediaries	1.0	x
To Foreign Buyers	4.1	1.6
	Manufacturers Sales Branches (without stocks)	Agents & Brokers
Retailers for Resale	28.1%	44.3%
Household Consumers	.1	x
Industrial Users	35.7	25.1
Wholesalers	34.1	16.4
Export Intermediaries	1.0	2.0
To Foreign Buyers	1.0	12.2

SOURCE: 16th Census of the U. S., 1940, Wholesale Trade, 1939, pp. 122-132

Not all middlemen's functions are undertaken by wholesalers or agents. Several of the largest lumber producers, particularly on the West Coast, have successfully engaged in all of the marketing activities involved in getting their output from the mill to retail yards. One of the largest enterprises in the country operates a sales company in connection with their milling activities, and as a subsidiary to this, a credit corporation which is engaged primarily in home financing. The same organization operates a sea-going fleet of eight ships which transport the product of their mills in the Pacific Northwest to their distributing yards at Baltimore, Philadelphia, Port Newark, Portsmouth, and Boston, and return with general cargo bound for the West Coast. Tables 6 and 7 show data for such yards under the heading of "Manufacturers' Sales Branches, (with stocks)". Many manufacturers also maintain offices without yards to deal mostly with large industrial users and

wholesalers. Operating expenses for these branches are slightly higher than for merchant wholesalers, but the close contact and control afforded make such activities worthwhile for large concerns. A small volume of lumber is also marketed direct to the retailer or consumer by very small mills which can sometimes get a better price for their output that way. This procedure is limited almost entirely to local transactions, and the product involved is often of low quality.

Transportation

Transportation has been the most important single factor in the development of the lumber industry. The spread of adequate transportation facilities throughout the country has facilitated the migration of lumbermen into new sources of raw material as the old sources diminished, and has made it possible to market the product of their mills. Increased speed

and efficiency of transportation facilities has released more than four billion board feet, or \$60,000,000, which was previously tied up in transit as much as thirty days longer.¹ Shortened delivery time also made for a more stable market and reduced the risk assumed by purchasers who had been forced to make large orders in anticipation of their requirements. One practice of lumber shipping was for mills to load a car with mixed stock and start it moving toward a central market without an order.² Thus the operator could secure a loan from the local bank on the basis of his shipping papers. If a retailer or other purchaser placed an order before the car reached the market, he would receive the load sooner than would otherwise be possible, and all would be well and good. On the other hand, the situation would be less satisfactory if no buyer appeared and the shipper in deperation had to sell it below cost, and local market values would be lowered if overstocking

¹ A. G. T. Moore, Transportation as a Factor in Forest Conservation and Lumber Distribution, Yale University, School of Forestry, (New Haven: 1937)p.16.

² I. N. Tate, Modern Trends in Lumber Selling, Yale University, School of Forestry, (New Haven: 1925)p.15.

resulted. Though this practice has largely been discontinued, it still occurs to some extent with water shipments. A feature of rail lumber transportation which is of special value to the relatively small scale operator is the "milling in transit" privilege. Rough lumber may be shipped to a distant point with one or two stops for dressing, resawing, kiln drying, or other operations allowed without affecting the rate, except for a small stopover charge. This also enables wholesalers to assemble the product of numerous small mills, process it, and ship it or similar loads on to its destination at lower freight costs than would otherwise be possible.

One manufacturers' trade association is at the present time trying to persuade certain railroads to allow milling in transit privileges for the benefit of mills in the region.

Lumber is considered a very desirable form of freight because it is not perishable and requires

no special handling in transit. In 1935, Class 1 railroads hauled 42,482,832 tons of lumber, and forest products made up about $5\frac{1}{2}\%$ of their total tonnage. Trucks carrying $2\frac{1}{2}$ to 5 tons of lumber are used satisfactorily for comparatively short hauls. Seagoing vessels transport about 36% of the lumber cut in Washington and Oregon in 1935. Of this, about 37% went to the East Coast; 36% to California; and 27% to points outside the limits of the U. S., primarily to the Orient. Water shipments have also been of some importance from Gulf and South Atlantic ports. Only occasional shiploads of lumber are now carried on the Great Lakes.¹

¹ Ralph C. Bryant, Lumber, Its Manufacture and Distribution (New York: Wiley, 1938) pp. 374-378.

Lumber Retailing

Retailing plays a significant role in the lumber industry as evidenced by the fact that between 65 and 70 per cent of all lumber manufactured is sold to the consumer through about twenty thousand retail dealers. Until about twenty years ago little consideration was given to the idea of creating a demand for lumber. Instead, yards were poorly maintained, service was practically non-existent, and the consumer was expected to come to the dealer whenever he needed lumber.¹ Competition between lumber dealers and sellers of lumber substitutes forced a change in this condition. Today the average yard is considerably more progressive, and more active in the demand creation field. Yards are well laid out for efficient operation as well as to give the customer a chance to see what he is buying. An extensive line of hardware, millwork insulating materials, and other items required by the

¹ Ludwig, Fred H., The Retail Lumber Dealer, And How He Functions, Yale University, School of Forestry, (New Haven: 1927) p.6.

by the home builder is carried, and the retailer is also in a position to advise his customer with regards to the most effective materials for his use or even provide him with plans if they are desired. The retailer has done much to educate the public as to the relative merits of the various species and grades ~~and grades~~ of lumber. Granting consumer credit is an additional retail service. In 1939, 82.7% of all retail lumber sales were on a credit basis, and of these, 97.6% were on open account and 2.4% consisted of installment payments.¹ Total retail sales in the same year were comprised of the following items:

Merchandise	\$1,475,176,000
Repairs & Service	3,283,000
To Other Retailers	64,432,000
Total Retail Lumber Sales	<u>\$1,478,459,000</u>

SOURCE: 16th Census of the U. S., 1940. Retail Trade, 1939, Part 3, p.109.

Independent retail yards are the most common, including about 79.6% of all lumber retailers, while

¹ 16th Census, 1940, Retail Trade, 1939, Part 3, p.108.

chain or line yards comprise an additional 20.0%. The remaining .4% includes a few mail order houses, cooperative associations, and so forth.¹ Distribution costs of retailers are considerably higher than those of wholesalers for apparent reasons. The retailer is the seller who must make the direct sales contact with the consumer. Therefore, his location, sales promotion efforts, and comparatively small volume handled are all factors affecting his high operating cost. The stock turnover in retail lumber yards averaged about 3.1 in 1927, but varied from less than 2 to over 6.² A breakdown of the distribution costs of 129 lumber dealers in the same year reveals the following percentages:

Table 8 - Retail distribution costs -- 1927.

<u>Typical Net Sales</u>	<u>\$200,000</u>	
Cost of Goods Sold	76.0%	
Gross Margin	24.0	
Sales Force	2.3	
Advertising	.5	
Warehouse & Delivery	6.85	(continued)

¹ Ibid., p.145.

² Malcolm P. McNair, et al, Distribution Costs, An International Digest, Harvard University (Boston: 1941) p.346. p.563.

Table 8 (continued)

Office & Administration	6.1
Rent, Ins., Deprec., etc.	2.95
Bad Debts, Dues, etc.	1.3
Interest	3.0
Total Expense	23.0 (including interest)
Residual Profit	<u>1.0</u>
	24.0%

SOURCE: Malcolm P. McNair, et al, Distribution Costs, An International Digest, Harvard University, (Boston, 1941) p.562.

SUMMARY ON MARKETING IN THE LUMBER INDUSTRY

Throughout this section, the great range and variety of conditions of production and distribution in this industry is outstanding. Production and marketing are interdependent factors; the effectiveness of one having a considerable bearing upon the effectiveness of the other. The development of a suitable marketing policy is an individual problem that must be solved by each producing unit. In determining how he will market his

product, whether directly or through one or more of the various indirect channels, a producer must consider the following factors: 1) relative costs; 2) marketing facilities available; 3) marketing services required; 4) degree of control required; 5) the extent and character of distribution.

Marketing the raw material, sawlogs, is almost entirely a process of concentration, while in the case of lumber, both concentrating and dispersing operations appear at various stages with the latter predominating. Marketing is a complex process which touches, directly or indirectly, every phase of the lumber industry. Subsequently, it is often difficult and inadvisable to draw sharp lines of distinction between marketing and other aspects of the industry, and between the various activities included in the marketing process. Four factors which have been most significant, both in the development of the industry as a whole, and in the evolution of marketing practices, are: 1) the extent and character of raw material; 2) the volume and quality of production; 3) transportation; and 4) the nature and extent of the demand.

IV

MARKETING FUELWOOD

In terms of volume, fuelwood constitutes the second most important form in which timber is consumed. Approximately 26 percent of the product drain on forests in the United States is used as fuel. The greatest part of this consumption is found in rural areas and small towns East of the Mississippi river.

Fuelwood is a product well adapted to farm woodlots and other small forest properties. In such cases, the owner can profitably utilize his own labor and equipment during periods when other work is at a low ebb. Relatively little experience is required for fuelwood operations, the necessary investment in equipment is small, and little risk is involved. The only special power machinery necessary is a small circular crosscut or "buzz" saw, which can be hired for use if the owner does

not wish to make this investment. Beyond that, hand tools and whatever means of transportation are available to the operator are adequate. Where added labor is required, cheap and unskilled woods workers may be employed.

Fuelwood is also a product which may be readily incorporated into a management plan for such small properties. This use makes it possible for an owner to realize a return on improvement cuttings or other silvicultural operations which would otherwise be impracticable. Inferior species, poorly formed or damaged trees, or diseased trees can also be utilized in this way, whereas they would be worthless for higher ranking products. In addition, waste or cull material left after logging or pulping operations can often be cut up for fuel profitably. This possibility has been incorporated by the Virginia Forest Service, into its system of utilizing State Forest lands, particularly the poorer

hardwood types, so as to improve the composition and productivity of the stand. Whatever trees are not desired in the residual stand are marked for cutting with no product or operation in mind. Then successive contracts are made on a volume basis with producers of the more valuable products in declining order. A sawlog operator takes out any material that he can use from marked trees. The only restriction being that he must cut no unmarked timber and keep his stumps low. Next, a tie hack goes into the area and manufactures ties from any of the remaining marked trees or tops left by the logger. In sequence other operators take out whatever marked material they can use. Finally, all logging debris and marked trees which were not of sufficient quality to attract previous operators are cut into fuelwood. This operation is put on a stumpage basis, but where no one will do the work and pay the stumpage, crews employed by the state do the cleanup job. About \$1.00 per standard cord is realized as net return on this fuelwood operation.

Fuelwood operations are generally not practicable for large industrial operators. The demand for this product is limited in any locality, and the return that could be realized, if any, would not justify the expense involved in cutting up low quality trees or logging debris for fuelwood. In fact, many logging camps use material other than wood for fuel.

The marketing of fuelwood generally includes only local activities. A large portion of the fuelwood cut is used by the parties producing it. Another generous portion is sold by the producer or owner directly to residents of nearby towns, farmers, or summer residents. A smaller part of the output is sold through coal yards, lumber yards, or other agencies which serve in the capacity of retailer. Some of these agencies are situated in larger towns or cities where, though the volume of fuelwood consumed is small, the price received per cord is relatively high. In such cases, retailing

yards are commonly in direct contact with producers. Marketing conditions are such that there generally is little justification for the existence of middlemen. The principal exception to this generalization is the trucker who may buy a load of cordwood from some producer and transport it to a nearby city where he sells it on his own to a retailer. Ordinarily, the price of fuelwood does not permit long distance transportation. This product is ordinarily sold by the standard cord in 4-foot lengths or by the short cord or rick in which lengths are less than four feet.

There is a considerable amount of fluctuation in the amount of fuelwood consumed. In prosperous years, other types of fuel, such as coal, oil, gas, or electricity, which are considered more convenient to use, supplant wood to some extent. Conversely, wood is cheaper than other types in many regions, and is used in greater quantities during depression periods. One factor that may have an influence on

the future demand for fuelwood is the recent development of more efficient woodburning heating units.

These have been designed for more complete burning, the production of a combustible wood gas, and more efficient control of the heat produced.

V

MARKETING PULPWOOD

Pulpwood ranks third among the timber products in terms of volume. About 10 percent of the total product drain on forests is utilized in this form. The pulp and paper industry is characterized by medium to large sized manufacturing plants which require a relatively high capital investment. They are generally located, at least at the outset, in regions where there is an abundant supply of pulpwood nearby or where inexpensive transportation facilities are available to provide access to pulpwood producing regions. However, when sources nearby are depleted, operators will seek supplies at a considerable distance. One mill in the Lake States is now buying pulpwood from areas as far west as Wyoming and Idaho. A practice of this sort requires that the cost of the wood where it is acquired be enough less and the quality sufficiently higher to compensate for a competitive situation

which is weakened as a result of high transportation costs. While this practice is probably temporary, pulpwood is commonly acquired from Canada and other less remote regions to supply mills in the Lake States.

Most pulp companies own some woodlands, but there is considerable variation in policies with regard to control over the source of supply. Some corporations own enough land to provide the bulk of their pulpwood requirements. Others have adopted a policy of buying the greatest part of their pulpwood through mill representatives, dealers, or producers, and use their own stands when the volume that can be purchased at a reasonable price is inadequate. Still other pulp mills buy practically their entire supply.

Pulpwood is produced by farmers and small woodland owners in relatively small quantities and sold through brokers or dealers. Larger producers may buy stumpage on an acre basis, by marked trees, on

a diameter basis, or by volume. They sell by contract with pulp mills for a prescribed volume. In addition, they buy pulpwood from small owners. A producer's contract with a mill usually calls a certain volume be shipped during a specified period. The manner in which this material is secured is up to the producer.

Pulpwood is another product which lends itself well to the application of broad management plans, whether the objective is pulpwood alone or higher ranking products. Some processes require the use of a restricted number of species. Where this is the case, intermediate cuttings in stands of the species required are often used as small diameters are suitable for pulp. In areas where there are established mills, the tendency will probably be for stands of the best pulp species for which the site is suitable to predominate with rotations of adapted for the production of this product. A

large number of species are suitable for other processes used for lower grades of pulp. Here material derived from tops, cleanup operations, or inferior species may be utilized as well as that produced in intermediate or harvest cuts. Recent research in the field has lead to an increase in the number of species that may be used for each process, ~~At one sulphite mill in New Hampshire, any species except HEMLOCK is now acceptable.~~ whereas, a few years ago, SPRUCE was considered the only species suitable for ~~some~~ processes. The most desirable species for ~~sulphite pulp~~ are those that have the following characteristics: 1) a long, strong, flexible fiber; 2) a large amount of available cellulose; 3) white or light colored fiber; and 4) wood relatively sound and free of knots.

Pulp wood operations require little in the way of investment in heavy equipment, which is another factor that favors this type of production by small operators. In addition, the shorter rotation necessary

for pulpwood stands reduces the risk involved and encourages the application of management principles on the part of smaller owners. The demand for pulpwood is relatively stable as compared with that for lumber.

In the South, the pulp industry has done much to establish sound forest practice. The Forest Service reappraisal ~~conditions~~¹ rated 77% of the large pulpwood holdings as good or better with reference to the management status of these lands. In addition to this, the industry is making considerable effort to aid the small owner in managing his stands effectively.

¹ The Management Status of Forest Lands in the U. S. (Report #3) From a Reappraisal of the Forest Situation, USFS, 1946.

V

MARKETING ROUND PRODUCTS

The round products group includes fence posts, round mine timbers, poles, and piling, which together constitutes about $4\frac{1}{2}$ percent of the estimated cubic volume removed from forest lands in 1943. The following table indicates the relative volumes utilized for each of these products:

Table 9- Round Products Removed Annually from Commercial Forests.
(estimated for 1943)

<u>Item</u>	<u>Volume in Units</u> (Millions)	<u>Volume in</u> <u>Million Cu. Ft.</u>
Fence Posts - piece	248	248
Mine Timbers - cu. ft.	190	238
Piling - piece	3.8	59
Poles - piece	2.2	39

While the products in this group make up only a small portion of the total drain on timber resources, they frequently offer an opportunity for small owners to obtain a more satisfactory return on woods operations than other outlets. For this reason, these products are significant in an approach to a solution of the small ownership problem.

Fence Posts

Fence posts are used chiefly on farms and most of these were produced by the farmers who used them as shown by the following data:

Fence posts used on farms	460 million
Fence posts cut on farms	385 million
Posts used on farm where cut	350 million

Posts are also used for highway guard fences and a variety of lesser purposes. They are generally used in the locality where they are produced, and most commonly cut as they are needed.

As has been indicated, nearly 60 percent of the *farm* post production is used by those who produce them. Various methods of marketing the remainder are employed. Some are by one farmer to another or other users directly. Cedar mills, on the other hand, have exclusive dealers who arrange for the purchase and cutting of RED CEDAR stumpage. They in turn sell posts derived from tops or small trees through

filling stations or rural stores--while logs are converted to cedar lumber or specialty products. Other dealers purchase and concentrate posts for sale to highway departments or railroads and a number are handled by cooperatives.

The species that are most satisfactory for this use are the more durable species, notably RED CEDAR, *White Cedar* and BLACK LOCUST, or those which are readily treated with preservative. The demand for this product is such that there is little danger of serious over-cutting for posts in most areas.²

Mine Timbers

The demand for mine props and lagging is localized in mining districts. Approximately 68 percent of the total output of these products is used in underground bituminous coal mines¹-- and the remainder is distributed among anthracite and metal mining operations.

¹ "Potential Requirement for Timber Products in the U. S." (Report #2) From a Reappraisal of the Forest Situation, USFS, 1946. p.45.

² *During the war, however, steel posts were not available and the demand throughout the North Central states exceeded the supply of Northern white cedar and lead to severe over-cutting in some areas in the Lake states.*

Large mines buy, as a rule, from the larger producers and jobbers who are in a position to supply large quantities of these products on short notice. These operators buy stumpage and cut for mine timbers in addition to concentrating materials purchased from small owners. Some small owners and operators deliver products directly to coal mines, take a load of coal in payment therefor, and sell the coal locally.¹ Mine operators commonly contract in advance for purchases of props and lagging. Under normal conditions, they prefer to deal with a few reliable suppliers.²

Many mines own or lease timberlands but they are holding these resources in reserve against the time when scarcity causes higher prices. In the meantime the still abundant supply and the large number of producers tend to keep prices down.³ Sawn timber, and lumber, are, for the most part, acquired directly from sawmills.

¹ Raymond J. Hoyle, Harvesting and Marketing Timber in New York, Tech. Pub. #49, N. Y. State College of Forestry, (Syracuse: 1936) pp.91-93.

² William A. Duerr et al, Timber-Product Marketing in Eastern Kentucky, Kentucky Agr. Exp. Sta. Bul.488 (Lexington: 1946)p.64.

³ Ibid.

Mine props are generally six inches in diameter and from four to eleven feet in length. Acceptable diameters range from four to twenty-four inches, however, and from two to twenty-six feet in length. They are ordinarily peeled and sold either by weight or by the cubic foot. Preservative treatment is not usually required as these products are used only temporarily in most cases.

Poles

The demand for poles is small in relation to that for other timber products and it is spread throughout the entire country. This product is utilized almost entirely by railroads, telephone and telegraph companies, and power companies; in view of the fact that the construction of new lines is variable and replacement may be deferred, the demand for poles is quite unstable. The expansion program of the Rural Electrification Administration will be an important factor in the pole requirements for the next ten years.¹

¹ "Potential Requirements for Timber Products in the U. S." (Report #2) p.38. *op. cit.*

Trees suitable for poles usually bring a higher price when sold as such than to sawmills or pulpwood producers. The poles produced are sold to creosoting plants ^{or to concentration yards} with a stumpage return to the owner of about 40 percent of this price. Because of high freight rates on poles, they are inspected by a representative of the purchaser before shipment to avoid a loss on pieces that turn out to be unacceptable. The owner will often specify that any trees cut must be sold as sawlogs if they cannot be used as poles. In another instance, the producer accepts this risk in paying for selected trees regardless of the product. Creosoting plants sell to railroads or utilities, and by maintaining concentration yards, are in a position to supply large quantities and specified sizes as required. What sizes are required as the demand changes frequently, and he should secure a written contract before cutting.¹

¹ C. H. Coulter, Cutting Timber for Increased Profits, Florida Forest and Park Service, Bulletin 13, (Tallahassee 1945)p.7.

Poles are commonly sold to dealers or producers by the tree (stumpage) or by the piece. In cases where it is necessary, because of competition, to buy an entire tract, the residual stand may be sold too, when utilized as sawlogs.¹ This relative value is even greater when compared with pulpwood stumpage prices for the same trees as indicated by the following table on Southern Pine:

<u>Length</u> <u>in</u> <u>Feet</u>	<u>Class</u>	<u>Min.</u> <u>Diam.</u> <u>6' from</u> <u>Butt</u>	<u>Min.</u> <u>Top</u> <u>Diam.</u>	<u>Stumpage</u> <u>as pole</u> <u>(Dollars)</u>	<u>Stumpage</u> <u>as</u> <u>Pulpwood(\$)</u>
35	7	8.1"	4.7"	1.00	.34
40	6	9.2"	5.4"	1.40	.45
45	4	11.5"	6.7"	2.50	.68
50	3	12.7"	7.3"	3.60	.79

SOURCE: Coulter, C. H., Cutting Timber for Increased Profits, Florida Forest and Park Service Bulletin 13, Tallahassee, 1945, p.7.

Prices paid for poles are determined by length, class, diameter six feet from the butt end, and the top diameter as well as the species and quality of of the pole. Specifications for poles are exacting

¹ A. E. Wakerman, Forest Products Marketing Problems in the Piedmont Region of N. C. Duke University School of Forestry, Bulletin #12(Durham, N. C.: June, 1945)p.27.

and only select trees are so used. Wakerman¹ recommends that they be produced only by men in the business if the owner is to avoid loss through failure to comply with these requirements or by breakage. In addition, the owner should determine the size and shape required.

Among the species commonly used for poles are NORTHERN WHITE and WESTERN RED CEDAR, SPRUCE, BLACK LOCUST, TAMARACK, and YELLOW PINE.² Preservative treatment greatly increases the number of species that may be utilized for this product. It is estimated that about 90% of all poles produced are either wholly treated or butt-treated.³

Poles have been established as the management objective on some properties, particularly in the South where second-growth stands of slash or longleaf pine are well suited to this form of utilization. Most poles are secured from widely scattered holdings and

1 A. E. Wakerman, Forest Products Marketing Problems (Bulletin #12, Durham: 1945) p.39.

2 R. J. Hoyle, Harvesting and Marketing Timber, N.Y State College of Forestry (Syracuse: 1936) p.113.

3 "Potential Requirements for Timber" (Report #2) p.36

from producers of other products.¹

Piling

Much of what has been said of poles applies as well to piling. About 28 million linear feet² of piling is used annually in such applications as wharves, trestles and bridges, foundations for buildings, and so forth. Piles are generally of larger diameter than poles, and bring a higher price to the owner and to the producer. They are sold by the linear foot for a given diameter class, or by volume in cubic feet. Another difference in this product is that peeling is not required unless the piles are to be treated. Only about 60 percent of the piling used is given preservative treatment.³

The marketing pattern for piling is similar to that for poles and producers often handle both products. Markets for the former are more heavily concentrated in ~~east~~ coastal regions, however.

- 1 Wakerman, op.cit., p.28.
- 2 Report #2, op. cit., p.39.
- 3 Report #2, loc. cit.,

VII

MARKETING VENEER LOGS

The veneer industry consumes 3.3 percent of the total output of timber products, or about 1.5 billion board feet of logs annually. Veneer production is divided into three categories, each of which presents a distinct set of operating conditions and marketing practices.

Veneer logs of lower quality than those required by the rest of the industry are used to provide material for the manufacture of baskets, crates, and other containers. These products are generally of low unit value and the investment required for the manufacturing plant is not large. Consequently, most of these plants are located where the log supply is adequate and in the proximity of markets for their product. They operate, for the most part, on a relatively small scale and secure a large portion of their logs directly from owners. Some logs are

segregated for this use in the course of other operations. The preferred species for container veneer are redgum, southern pine,¹ ^{Cottonwood, Elm,} and water tupelo.¹

A second type of veneer includes those used in the manufacture of plywood panels, furniture, boats, aircraft, and a large number of other items. This sector of the industry requires ~~inexpensive~~ logs of such species as basswood or yellow poplar to use for core material and cross-banding, as well as high quality logs of valuable species from which face veneer is derived for decorative uses. Factory representatives and independent buyers often travel hundreds of miles to purchase individual trees, logs, or stumps for this latter use. Such products mean high returns to owners, but frequently they are not aware of the true value which may be several hundred dollars for a single tree, and consequently receive only a fraction of the market value. From these products a

1 ^{op. cit.} "Potential Requirements for Timber..." Report #2, p.40.

great variety of patterns and figures are derived, particularly from such native species as maple, walnut, birch, and oak; logs to be used for cores or cross banding are acquired within a shorter radius directly from owners or through concentration yards or buyers. These products must be of high grade material and sufficient size. Even less valuable species bring appreciably higher prices than they would as lumber. Veneer mills in this classification involve a large capital investment and are conveniently located with respect to consuming industries, chiefly in the central and Northeastern states.

The third category of veneer production is the manufacture of plywood for construction purposes. This material is produced chiefly from Douglas fir in the Pacific Northwest. The highest grade logs or "peelers" are separated from sawlogs and sold to plywood factories directly.

The relative volumes of logs consumed in these three divisions of the veneer industry were as follows in 1937: Containers--475 million; Manufactures--190 million; and construction--450 million board feet, log scale. The trend is toward a much greater demand in both of the last two phases of the industry, but in each case the problem of inadequate raw material supplies is serious.¹

The minimum diameter for veneer logs is usually around 14 inches and they are accepted in lengths from 30 inches up to 18 feet, depending on the facilities of the plant.²

¹ "Potential Requirement for Timber..." Report 2, p. 43.
² Wakerman, op. cit., p. 21.

VIII

MARKETING LOGS AND BOLTS FOR SPECIAL PRODUCTS

Approximately 2.4 percent of the timber product drain is used by a variety of small industries in the form of logs and bolts. While the volume so utilized is small, such outlets often provide more desirable markets for certain rough products than some of the more conventional uses. The following table gives an indication of the relative volumes consumed in the major uses and industries of this group:

Table 10 Use of Logs and Bolts

<u>Industry</u>	<u>Use</u>	<u>Volume in Million Cu. Ft.</u>
Tight Cooperage	Staves	31
	Heading	9
Slack Cooperage	Staves	51
	Heading	24
	Hoops	1
Shingles	Shingles	67
Miscellaneous Logs & Bolts		<u>129</u>
		<u>312</u>

As a rule, mills in this group are situated in regions where the supply of wood of the necessary species and grades is adequate. Marketing channels subsequently tend to be fairly direct. Some plants own their own woodlands; others purchase through agent or jobbers; but the majority obtain logs or bolts for manufacture directly from owners or producers. Where there are a number of wood using industries of this type in a locality, concentration yards are sometimes found which are able to supply wood as required. Middlemen are more active in situations where local supplies are depleted and raw materials must be acquired at considerable distance. Many of these mills operate on a very small scale and will be moved when the supply of required materials within a reasonable radius become seriously diminished.

Some of these industries provide an opportunity for close utilization or the more advantageous use of a certain species, short lengths or odd sizes.

There is a marked trend, particularly in the tight cooperage industry, toward direct control through ownership of forest land and operation of mills by industrial consumers such as distillers.

High quality material is required in most cases. The cooperage and shingle industries have been mentioned specifically. Under the miscellaneous heading are included the manufacture of spools, bobbins, last blocks, excelsior, towels, small dimension stock handles, and baseball bats, to mention a few.

IX

MARKETING TIES

Hewed ties comprise about 2.1 percent of the total volume utilized in timber products. However, this constitutes only about 40 percent of ties produced. The remainder are sawed and therefore classified as lumber.¹ Total tie production in 1943 was estimated at over two billion board feet.

For the most part, railroads secure ties on order from tie contractors who produce and creosote ties and maintain concentration yards at loading points. These producers buy stumpage and to some extent untreated ties from mills, small tie operators, or farmers, if they meet specifications. They establish tie camps where hewed ties are produced or contract with mills to manufacture sawed ties.² Ties are then sorted and graded by size and species

¹ "Potential Requirements for Timber Products in the U. S.;" (Report #2) p.15.

² Waldo E. Tiller, Tie Contractors Service, Lake States Timber Digest, Vol.I #10, (Feb.13, 1947)p. 7.

at the creosoting plant where they are treated. Railroads commonly have inspectors at these creosoting plants to see that ties purchased come up to the established specifications before they are shipped. These plants also handle other products requiring preservative treatment, such as poles and piling.

This procedure is varied by some railroads. The New York Central and Santa Fe railroads buy saw ties directly from concentrators or small producers and treat them in their own plants. Ties in this case are delivered by producers along the right of way or to treating plants. The Northern Pacific sell stumpage on its own lands to the manufacturers who make the ties, creosote them, and sell them back to the railroad. Other railroads undertake all operations themselves.

X

MARKETING CORDWOOD FOR DISTILLATION

The wood distillation industry consumes only a little over a million cords or approximately half of one percent of the total timber output. Even this small volume appears to be declining as a result of the competition of coke and carbon black with wood charcoal and synthetic processes for the manufacture of methanol and acetic acid. However, improvements in the methods of hardwood distillation may increase requirements for this product.

Distillation plants using cordwood ordinarily buy directly from owners or producers and in some instances own land of their own. This industry provides a market for small or low grade hardwoods such as may be taken out in improvement cuttings. Material of this sort will bring a slightly higher price if so utilized than if it is used for firewood. The value of this produce generally does not justify long distance transportation.

XI

MARKETING AND FOREST PRACTICE

The degree to which sound principles of forestry are applied to stands of timber will be determined in most cases by the return which the owner expects to realize through utilization of the stand. The chief objects of commercial forestry, therefore, are to determine how maximum values can be obtained on forest land through effective production, protection, and utilization; to show the owner how these values may be attained; and to assist him in doing it. Consequently, the forester must be concerned with marketing the product of the timber stand, as it is through the marketing of the product that money returns to the owner materialize. The return to the owner arises from fulfilling the requirements of the manufacturer for raw materials and ultimately from satisfying the needs of the final consumer. What Hoyke¹

¹ Raymond J. Hoyle, Harvesting and Marketing Timber in N. Y. Tech Pub. #49, p. 11.

says of the situation in New York state could well be applied to many sections of the country. His observation is that,

"Economic factors always play an important part in any enterprise, but the failure of marketing is one of the chief reasons why private forestry has not been practiced to any extent in this state, and particularly on the farm woodlands."

Effective marketing involves not only selling, but the performance of all of the functions of marketing in such a manner as to lead to the realization of the highest values on the part of both the producer and the consumer. These functions were mentioned in Section II and presented more completely in the discussion of marketing in the lumber industry. At this point it seems advisable to consider these functions once more, this time primarily from the standpoint of the forest owner.

Selling is the most obvious of the marketing functions, and satisfactory performance involves more than merely seeking out a buyer and making a sale.

The forest owner must first determine what he has to sell, how much of it, and its approximate value. In making this determination, future sales must be anticipated. By sacrificing a portion of his immediate return and increasing the productive capacity of the stand, an owner may add considerably to future returns. Selling, therefore, should be fitted into a long range program of forest management. A second task to be included in effective selling is that of selecting the market that offers the most satisfactory net return for the particular timber products available. This will involve a decision as to what industry will make the highest practicable use of the timber and what operator within this industry will make the most favorable bid for it. The relative costs of producing and marketing various products must enter into a decision of this sort. Consideration of markets for secondary or by-products , as well as the possibility of selling more than one major product, may also prove profitable to the owner. The degree of utilization practicable in

logging will vary greatly, but in the case of materials that would otherwise be wasted it is generally worthwhile to sell them if their market value is more than sufficient to cover the costs of producing and marketing them. The third factor in selling is that of deciding in what form the products are to be sold. The best general rule here is that the owner should carry the operation as far as his skill, equipment, and financial means permit him to do the job more effectively and economically than would be the case if contractors or the purchaser did the job; it is not true that the owner should sell only stumpage. Nor is it true that every owner can retain the profits of other operators by undertaking the entire operation himself. Control over the operation is a factor to be considered here as well as the net money return. The final consideration in selling, and a very important one, is the sales contract. A carefully written contract gives both seller and buyer protection against misunderstanding or fraud and, where the sale

involves stumpage, gives the owner an opportunity to exercise a considerable degree of control over the manner in which his stands are treated. A contract for the sale of standing timber must be in writing to be legally binding. Some of the essentials of a satisfactory contract are: 1) a description of the products or timber being sold and its location; 2) the price and manner of payment as well as details regarding the unit of measure to be used; 4) conditions of cutting (if stumpage) including such items as the duration of the contract, marking or diameter limits, scaling, merchantability, the degree of utilization, and precautions or protective measures to be exercised; 5) details as to title and means of settling disputes; and 6) signatures of parties to the contract and witnesses, and the date of the contract.

The significance of assembling activities from the standpoint of the forest owner lies in the fact that the outlets or markets for his timber products

are the agencies that perform this function in order to operate and to meet the ultimate demand satisfactorily. Effective concentration of materials is essential to effective utilization of these materials, and desirable markets exist through the latter.

Likewise, the owner is concerned with the performance of the functions of physical supply. Transportation is the major factor in determining what markets, with regard to geographical location, will be selected. The owner may produce logs suitable for use by a veneer mill 300 miles away, but although a sawmill 20 miles distant offers a lower price for the logs, this price differential may be more than compensated for by lower transportation costs. Not only the cost of transportation, but also the facilities available and the relative merits of convenience and service rendered by each are to be considered. Storage is an important factor in rendering stability to the market for timber products and increasing the effectiveness of the marketing process. The owner participates

in the performance of this function when he holds standing timber in anticipation of a more favorable market or to await a higher volume or quality of timber to offer for sale.

As for the four facilitating functions, financing, risk-taking, standardization, and the collection and interpretation of market information, they all enter into the effectiveness with which an owner is able to market his timber products. The first two must be undertaken to some extent in any producing or selling activity. If the owner is not in a position to finance the operation or assume the risk involved, frequently he may obtain assistance from the purchaser or from other agencies. Standardization gives both seller and buyer a basis upon which the type, quality, and value of the product may be determined. The collection and interpretation of market information aids the owner in deciding what to sell, when to sell it, and to whom he should sell it.

Reference made to the owner in this section may well lead to confusion when the reader realizes that this may mean one who owns only a small woodlot and whose marketing activities include only the sale of stumpage or a small quantity of low value products, or it may mean a large corporation owning extensive timber lands and which is engaged in every stage of production and marketing between the woods and selling the finished product to the final consumer. This range represents a difference in degree and not a difference in the functions performed. Here, the chief concern is with the effectiveness with which the marketing functions are carried out and the bearing they have on forest practice rather than with the agencies performing them.

There is an apparent conflict between marketing activities and desirable forest practice. It may be said that a highly developed marketing system would lead to the utilization of all trees in a

stand and subsequently a severe reduction in the growing stock where clear cutting is inadvisable from a silvicultural standpoint. This may be true in some instances, but with more effective marketing practices a better established scale of values for timber products will develop and the objective of forest land management will be that product which will bring the most satisfactory returns as determined by the site and markets available. A desirable marketing system is one which will not only lead to the maximum income for the product selected as the goal of management, but will also make possible supplementary returns from thinnings or release cuttings, damaged trees, logging waste, or small quantities of more valuable products removed. An informed owner will not destroy a stand merely because there are facilities for marketing whatever products he can obtain any more than a stove manufacturer will sell his supply of castings because there is a market

for scrap iron. Effective marketing will lead to more intensive management of timber lands rather than to greater abuse or destruction of them.

Marketing and the Small Forest Owners

Of the total commercial forest land area in the United States, 57 percent is in private ownerships of less than 5,000 acres. Only 11 percent is owned by large lumber or pulp companies representing all holdings greater than 50,000 acres.¹ These figures indicate the significance of the small forest owner in the ownership pattern existing in this country. Further, a grading of the character of cutting as shown in the following table indicates another aspect of the small owner in the present forest situation:²

Table 11- Character of Cutting on Private Lands by Size of Holding.

Ownership Class	Ext. No. of Owners	Commercial Forest Area (1,0000 acres)	Grade of Cutting Practice (percent of cutting)				
			High Order	Good	Fair	Poor	Dest-ructive
Small	4,200,600	261.4	0	4	25	63	8
Medium (5,000-	3,200	32.9	1	7	31	50	11
Large 50,000acres)	398	50.7	5	24	39	28	4

¹ "Gaging the Timber Resource of the U. S.," (Report #1) From a Reappraisal of the Forest Situation, USFS, 1946.

² The Management Status of Forest Lands..., USFS, 1946.

It is clear that the major part of the problem of improving the forest situation lies with the small owner and it is with the small owner that there is the greatest need for improvement in marketing practices.

The principal problems of the small forest owner are knowing what he has to sell, the value of his product, what markets are available, and what methods he should use in selling timber products. He is not familiar with specifications for certain products and frequently he is not in a position to supply marketable quantities. The small owner often fails to take advantage of competitive market conditions. He may sell stumpage rights without retaining sufficient control to maintain the productive capacity of his stand. Therefore, what the small owner needs is more adequate information on the subject of marketing timber products and on the management of woodlands to bring larger returns, and the establishment of agencies that are able to perform some of the marketing functions

that the small owner is not in a position to undertake satisfactorily himself. Substantial efforts have been made in recent years to aid small owners along these lines.

State and federal agencies have conducted investigations on various aspects of marketing, and have made available a variety of publications presenting marketing information to improve the position of the small owner. County, state and federal foresters have rendered a considerable amount of direct assistance to small owners by way of helping them cruise and appraise stands, recommending cutting practices, and suggesting possible markets or purchasers. However, publicly employed foresters do not have the authority to bargain for the owner. Under the Norris-Doxey Cooperative Farm Forestry Act of 1937, ~~a~~ a large number of demonstration projects have been established to show what values could be derived from farm woodlands through proper management and marketing.

Cooperatives for marketing timber products were mentioned in Section III as a form of organization that had considerable possibilities in the way of improving marketing conditions on behalf of small owners. Generally speaking, an effectively operated cooperative gives a number of small owners collectively the advantages of a large owner. Some of these advantages and others are:

1. The cooperative is in a better position than the individual to study, contact, and secure markets.
2. A superior competitive position may be achieved by pooling resources.
3. A better price is obtained by eliminating the profit of other middlemen and marketing efficiency is increased through collective bargaining.
4. The condition of woodlands is improved through forest practice.
5. The quality of the product and adequacy of supply are greater than in the case of an individual small owner.
6. The cooperative may be in a position to perform other marketing functions effectively.

Fundamental to the success of a cooperative is the desire of its members to support and abide by the

policies that are not set up for their own benefit. In addition, the soundness of these policies and the ability and integrity of the officers of the cooperative, as in any other enterprise, are vital to its success.

A somewhat different type of organization is presented by the New England Forestry Foundation. This enterprise offers complete forestry and marketing service to woodland owners at cost. In this case, the owner enters into an agreement with the Foundation whereby he makes the Foundation his agent in operating woodlands. A resident forester employed by this organization then makes a cruise of the area and draws up a plan for the management of it. Trained forestry crews directed by a production forester do whatever planting, improvement work, and logging is necessary subject to the condition that all expenditures must be approved by the owner. The management unit is an area including about 200,000 acres of woodland in charge of a resident forester.

Four of these units are already in operation and there is a great demand for the extension of these activities; such a program should do much toward increasing the volume and quality of forest production and stabilizing the wood-using industries in New England.¹

The small forest owner is not ordinarily impressed by forestry terminology or by theoretical silviculture, but he will be interested by the prospect of additional income to be derived from his woodlands. If he is shown how and where he can sell timber products to the greatest advantage, he will devote more effort and attention to their production.

¹ A Plan to Restore the Forest Resources of New England, New England Forestry Foundation (Boston: 1946)
See also "New England Forestry Foundation", Harris A. Reynolds. Journal 45-2, (Feb.: 1947) pp.89-91.

XII

SUMMARY AND CONCLUSION

This study has not been limited to the marketing problems of a restricted area, to a specific timber product, or to a given class of forest ownership. Rather, it has indicated the far-reaching influences of the marketing process and the close relationship between marketing, production, and forest practice. It is not an exhaustive study, but one that should serve as a stepping stone to more intensive analysis on the part of the writer or others under restricted forest and utilization conditions. Marketing problems and their solution must be considered as an important phase of commercial forestry on any scale.

Effective marketing at any stage between the forest owner and the final consumer may improve the position of the former and subsequently the degree to which he will apply sound forest practice.

Adequate refinement of the basic marketing pattern-- concentration, equalization, and dispersion--and diligence in performing the supplementary marketing functions are fundamental to effective marketing. Where practices and facilities do not meet these prerequisites, there will be a corresponding weakness in production and utilization of timber products.

Criticism has been leveled at various phases of marketing activity, particularly at middleman operations, on the grounds that they bring about unnecessary added expense. The middleman, or other marketing agencies, has a very definite service to offer and, where such service is required, the use of such facilities not only justifies the expense involved, but also may be the most economical manner of distributing products. Successful marketing requires a thorough study of the operations that must be performed and of the relative merits of the various facilities for performing them.

In general, the development of marketing practice varies with the size and progress of an industry and the units within it, and the value of its product. Marketing is highly developed in the lumber industry as a whole and particularly in the case of the larger operations. The greatest need for improvement in marketing all timber products is with the small operator. Here, also, is where the greatest advancement in production practices and utilization is to be realized through superior marketing facilities and methods.

The basis of commercial forestry is economic. The success or failure of forest practice hinges upon the degree to which economic principles are integrated into its application. Hence, economy in production, in utilization, and in marketing are all to be considered with care in any effort to improve the forest situation in this country.

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