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MAKING A SUCCESS OF THE FARM WOOD LOT

Introduction

Wood grown in the farm wood lot is a farm crop. That it is, however, is too often overlooked, because, unlike other farm crops, timber requires a small amount of labor and a long period of years to bring it to a marketable condition. If properly cared for, a wood lot will furnish material for market at intervals, and will afford a supply for home use at all times. If neglected and abused it is found to deteriorate, and may eventually disappear altogether. The aim of this paper is to point out methods of caring for the wood lot and improving and marketing it as to make it produce the largest, best, and most economical crop that a specific piece of land is capable.

Extent of Farm Woodlands

About one-third of the forest land of the United States is on farms. According to some of the latest figures, the farm woodlands amounted in all to about 168,000,000 acres. If placed contiguous this would form a solid strip 100 miles in width reaching from New York to San Francisco. In the eastern United States--east of the Plains--the total woodlands on farms amounted to about 150,000,000 acres. Farm woodlands in the east-

ern United States comprise an area nearly seven times as large as the entire forest lands of France, which furnished practically all of the timber required during the war by all of the Allied countries. If all of the farms of the East had woodlands, there would be an average of 26 acres per farm. The wood-lots of the United States have been decreasing in area at the rate of $\frac{1}{2}$ of 1% per year. The woodlots may be reduced in area, but they will never disappear; for timber can be made an actively growing crop, often capable of yielding better returns than any other that can be grown on the poorer soils and situations of the farm. By proper management the quantity of wood products raised within a given time can be increased and the quality improved. The farmer has an advantage over other classes of people who might wish to grow timber in that the funds invested in the timber in the aggregate are smaller, while the benefits to be secured are varied, and the labor that is necessary can be supplied by farm hands and teams when otherwise they would be idle. As a region becomes settled, it becomes easier for the farmer to market his woodlot products profitable, because markets are more numerous and more accessible by good roads or railroads. Furthermore, the wood lot is the source of a great many indirect benefits to the farm, which are often themselves sufficient to warrant its being maintained permanently.

The history of the wood lot is a part of the history of agriculture in general; the status of farming in most regions and the extent and character of the farm wood lot have been so related that if one were known the other could be determined with a fair degree of accuracy. Thus in most parts of the East the early stages of farming involved a bitter struggle with the timber, and only a small area was actually cleared; then, in proportion as settlement progressed more and more of the wooded area was claimed for cultivation, but there is much land that is not suitable for cultivation or pasturage and should therefore be kept in timber and made to contribute to the farm income.

Planning the Wood Lot

Before attempting to lay down specific rules to govern the management of a wood lot, it must be borne in mind that nearly every wood lot presents its own specific problems for solution, and it is impossible in a paper of this nature to do more than to indicate some of the general features which should be considered under normal conditions.

Generally speaking unless intended for windbreaks, plantations should be located on the poorest soil of the farm, or that soil least suited to the production of agricultural crops, such^{as} hillsides, poorly drained or

rocky, sandy situations, corners of the farm cut off by streams or railroads may be chosen. If no such situation is on the farm, the plantation should be located near the buildings where it will not only be convenient but will serve as a windbreak as well.

The best trees to grow should be determined by the object of planting, by their adaptability to the climate and soil of the region, and by their resistance to serious disease or to insect attack. It is evident for climatic reasons particularly that douglas fir as found on the Pacific Coast is not suitable for planting in Eastern Oregon. The safest rule and the one that has stood the test in determining the species to grow is to plant those trees which occur naturally and successfully on similar soils in the same region. Many plantations have turned out to be failures, because of the selection of trees unsuited either to the climate or to the soil of the planting site. One should also be influenced in his choice of species by their rates of growth which might well be compared to the rate of interest that the investor is receiving on his money. The rates of growth have been figured and made available for all of the principal species so one no longer need to guess as to which species to plant if growth is the deciding factor.

A mixture of two or more kinds of trees in a plantation is not ordinarily recommended, however some trees, such as cottonwood, should be spaced widely in a plantation; others, such as black walnut and black locust, have such scant foliage that their shade does not prevent the growth of a heavy sod of grass. In both of these cases, a mixture will more completely utilize the area planted, increasing the yield and bringing about better forest conditions in the plantation. Mixtures may also be desirable for other reasons. Planting stock of one species alone may be expensive; and if a less valuable tree, or filler, to be cut out when the trees begin to crowd, is mixed with the main crop, it will keep down the first cost. If a species to be planted is liable to serious diseases or attack by fungi, as are chestnut, black locust, and white pine, the planting in mixture with another kind of tree not liable to such attack will provide for a stand of trees in case the trees desired should be killed. Lists of trees that may be grown successfully together based on past experience with them has been prepared for certain localities, but there is not sufficient evidence in all localities as yet to point out precisely as to the best mixtures to use.

In general, if the question of whether to grow

hardwoods or softwoods is the problem confronting the planter, it is best to plant conifers if other things affecting growth and market are about even, because:

(1) Conifers will ordinarily take hold and thrive better on poor soils such as worn out fields or pastures, sandy areas, cut over and burned over woodlands not restocking naturally, and areas with shallow soil. This is not given the trees after they are established. (2) With the possible exception of 2 or 3 species nearly double the yield of saw log material can be procured from a fully stocked stand of merchantable conifers than from a similar stand of equal aged hardwoods. (3) From an aesthetic standpoint, conifers are ornamental the year around. (4) As windbreaks conifers are much more effective the year around than hardwoods.

Perpetuating the Crop

A very striking condition is that in by far the greater proportion of wood lots there is an absence of small trees. In those few wood lots which are fully stocked with even-aged trees of relatively even sizes, smaller trees need not be expected nor should their growth be encouraged. Where, however, as is much more commonly the case, the wood lot is made up partly of mature and partly of decadent trees which should be cut and whose crowns do not fully shade the ground, there should be

young trees coming up in the openings. Under normal conditions these young trees would be present, but because of pasturing and fires they do not start. Grass appears instead, and if pasturing and fires continue, conditions become such that without aid, there is little possibility of securing a natural growth of young trees. If the wood lot has not been too badly abused and there is not a heavy sod of grass present, the exclusion of stock and fires will normally result in its restocking itself in time by natural seeding. Good seed years, however, occur only at intervals. Even with a good seed year, the seedlings may not be able to get a start because of the sod, the packed condition of the soil, or unfavorable weather. Natural reproduction may, therefore, be very slow, becoming satisfactory in amount only after ten to twenty years. It will often be advisable, therefore, when there is a good crop of seed on the trees to put the ground in such shape as to insure a good crop of seedlings. Before the seed is scattered from the trees in the autumn, the ground can be disked, harrowed, or cultivated, or hogs can be turned in to root up the soil. The seed will then lodge in the soft earth, where upon landing in mineral soil, the roots may easily take hold. To prevent undesirable species from obtaining a foothold, any trees of such

species large enough to bear seed should be cut at the time that pasturing is discontinued.

It is not always possible to secure a new growth through sprouts from the stumps of felled trees. Most hardwoods do not sprout vigorously beyond the age of 60 years. Basswood and chestnuts are exceptions, for they can be depended on to sprout well from healthy stumps up to an age of 100 years. Sprout regeneration, then, is especially applicable to hardwood stands which are to be cut when young, as for instance stands which are to be cut over every 20 to 30 years for posts or fuel. It should be remembered that sprouting is most vigorous from low stumps. It is also better from stumps of trees cut during the winter or very early spring. Such sprouts, moreover, are less liable to severe winter injury at the end of their first seasons growth than are those arising after timber is felled in the summer. In felling trees, care should be taken not to injure the stumps any more than absolutely necessary, because the best sprouts will ordinarily arise from good, clean stumps. Because of the clear cut which the axe makes, it is better than the saw when regeneration is desired. Regardless of the tool used, the surface of the stumps should be slanting, so that water will not collect and promote rot.

Some wood lots are so run down that very little seed is produced and natural reproduction can not be secured quickly enough even if the area is disked or harrowed. Often it is desirable to grow different species than those present or to grow a greater proportion of one species than another. Sometimes no wood lot exists at all, but one is desired. In these cases artificial sowing or planting is necessary.

Where it is desired to establish a wood lot by sowing or planting, the areas to be selected for the purpose merits some attention. If the purpose is primarily for protection, often times the trees may be planted on very good agricultural land. If protection is not considered essential, the logical places for establishing a wood lot are on those portions of the farm which are too steep or which have a soil so rocky, sandy, or wet, that the returns from agricultural crops are very meager.

In general, there is more certainty of success from planting trees grown in a nursery than from sowing seed directly on the permanent site. Nut-bearing trees, however, are exceptions to this rule.

Seedlings may be either grown or bought from reputable nurserymen, or from the state nursery, if one is maintained by the state. As coniferous seedlings

or transplants require less attention for their successful production it is advised to purchase such stock, providing both types will grow on the particular site.

Caring For The Wood Lot

By far the greater number of farm wood lots are in need of improvement. Poorer species are in the majority and are crowding out the better ones, many of the trees are overmature, some show evidence of insect or fungous attack, some are dead, young trees are entirely wanting in the open places, and grazing is allowed to the extent of damaging the older trees and preventing reproduction. Improvement of these conditions can be secured through the judicious use of the use of the axe, by assisting natural reproduction, by the exclusion of stock at least from portions of the wood lot, and where necessary, through planting or sowing. Nearly every individual wood lot presents its own specific problem for solution in these respects, and it is impossible to do more in a paper of the type than to indicate some of the general features which should be considered.

There are two general types of wood lots, each of which requires a different method of handling:

- (1) Wood lots which are characterized by the presence of odd trees which dominate the stand, and (2) wood lots which are made up of a nearly even-aged stand of

second growth.

In the first type the old trees may almost totally exclude the younger growth, or they may exist only as a few scattered individuals through the stand. Such material is very likely to be deteriorating in quality and the problem is that of removing it, and at the same time providing for a new stand of seedlings. From the standpoint of strict business management timber when mature should be cut just the same as wheat or oats; and usually this is also desirable for the good of the wood lot itself. No dead or diseased timber should under any circumstances be allowed to stand. The first operation necessary then, in wood lots of this type, is the cutting out at once of the dead and diseased material. The second is to cut the mature living trees as soon as sufficient reproduction is started in the openings, and market conditions permit a satisfactory sale. Heavy stands composed almost wholly of mature trees should not be removed all at once unless the owner expects to provide for the new crop by planting. To secure natural reproduction the old stand will normally have to be removed in two or three cuttings, each taking from one-third to one-half of the trees. The last cutting should not be made until the seedlings are well established and no longer in need of the protection of the

trees.

In wood lots which are made up of a nearly even-aged stand of second growth, the trees of undesirable species may predominate in the stand and may be crowding out the better ones; the whole stand may be overcrowded; or it may be understocked and not reproducing. The improvement of such wood lots may be brought about by various cuttings, known as "improvement cuttings." Any cutting designed to remove a portion of the trees in a stand for the benefit of the remainder is called an "improvement cutting." When made in stands of seedlings or small saplings, such cuttings are for convenience designated as "clearings;" when made in somewhat older stands they are known as "thinnings;" when made in stands where scattered old trees are suppressing valuable young growth they are known as "liberation cuttings."

Often in young stands some of the less valuable species threaten to overtop, crowd out, or damage the more valuable species; sprouts sometimes arise too quickly from the stumps just recently cut; or the reproduction of good species is too dense. In any of these cases some of the trees should be removed. Cleanings are nothing more than the weeding out of the poorer

species or the poorer individuals where these interfere with the better ones.

In from 15 to 20 years young stands ordinarily reach a condition which makes the cutting out of the trees advisable. By thinning, the stand that is to make the final crop can be regulated and improved. By crowding at the beginning, trees of a high commercial quality are produced; but if crowding is allowed to continue after the lower branches die, it will cause a stagnation both in diameter and height growth. Unless the condition of the stand makes earlier thinnings desirable, the best practice is to defer the first one until the product is merchantable and of sufficient size to pay for the operation. The trees to be removed should be principally the dead ones and those of the least valuable and the most slowly growing species in the suppressed and the intermediate classes; but insect and fungous infected specimens of all classes should always be taken out. In thinnings the health and vigor of the forest trees is very largely influenced by the condition of the soil which should be kept fresh, soft, loose, and free of a mat of grasses. In wood lots this may be secured by keeping the ground shaded. The extent to which the crown canopy of a stand may be opened depends largely upon the rate of growth

of trees and their demands for light. In general, openings should not be so large that they will not close again within about five years. Probably not more than one-fifth to one-fourth of the trees should be removed at one time. The material taken out in thinnings can ordinarily be considered as a net gain.

Scattered old trees suppressing valuable young growth will often be found. These are the first trees to start often having an abundance of room and consequently form very branchy stems and wide, spreading crowns. These trees should be removed as soon as satisfactory sale can be arranged, for they suppress and kill younger and better formed seedlings or saplings which ultimately would be of considerable value if the conditions were more favorable.

Grazing should not generally be tolerated in the wood lot for horses and cattle eat and break down young trees and pack the ground hard. Sheep and goats destroy large numbers of small trees by eating them. Hogs root up the ground, digging up the young trees from starting by devouring the nuts and other seeds from which they grow. About the only time that hogs might be desired is when the trees are bearing small or unpalatable seeds which often start better after the hogs have rooted up the leaf litter and soil. Some people fear that

good pasture will be wasted by keeping stock out of the woods. This is hardly true, since a fully stocked woodlot has little or no grass in it due to the insufficient amount of light. Studies in farm management show that an open stand of trees, such as occur in average wooded pastures, reduces the pasturage value of the land as much as 65 to 70 per cent. Grass in the woods is a sign that the stand is in poor condition and the trees are too far apart for growing a good quality and large amount of timber. Grass grown under the shade of trees is much less nutritious than that grown in the open, so its actual food value is small.

Any forest must be protected from the ever serious enemy--fire. Fire kills the little trees and weakens full grown trees so that they may become diseased or infested with insects. It also destroys the humus cover of leaves and twigs that ordinarily protects the trees against summer drought and heat, conserves water for springs and streams, and enriches the soil by adding nitrogen. Burning over the ground with the aim of improving grazing is an expensive mistake. Although it is possible to secure green grass for stock a week or two earlier in the spring, most of the rich leguminous plants and annual grasses are exterminated, leaving as

survivors only the hardy bunch, wiry, and other coarse perennial grasses.

Woodlands may be guarded against serious insect damage and disease by removing dead or dying trees and all those showing signs of insect attack or decay. In case of insect menace or injury the farmer should consult the Bureau of Entomology, U. S. Dep't. of Agriculture, or the State Entomologists.

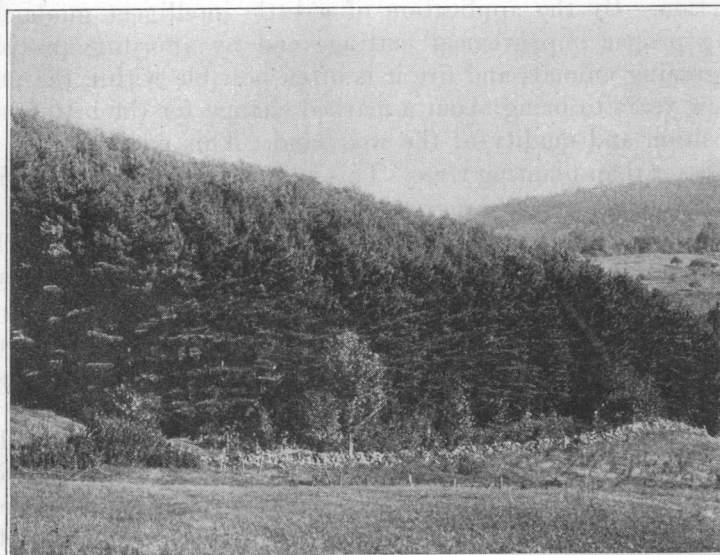
If the wood lot is to be adequately restocked a great deal of care must be exercised in the logging of the area. It also results in serious injury and indirect death to much of the standing timber. For this reason the timber should be removed largely by horses, caterpillars and other machinery in which a great deal of care may be exercised in safeguarding the small and growing timber which is so vital for the future of the wood lot.

Value of the Farm Lot

The right handling of the forest trees on the farm makes it more prosperous, adds to its comforts as a home, and enhances its value as an investment. Forest trees and wood lots are becoming more valuable under normal conditions as time passes. A permanent wood lot is an

Fig. 1

PROFIT IN GROWING TIMBER. AN EXAMPLE.



This white pine, which was planted on an abandoned sidehill pasture of about 3 acres in New Hampshire 44 years ago, now contains about 90,000 board feet of lumber. The total outlay at the time, counting the value of the land and labor of planting, was \$35. The timber to-day is worth on the stump something over \$1,500.

The farmer had this strip of practically worthless sidehill, and with some spare time on hand dug up 1,400 seedling pines growing in a thicket and set them out. About 20 years later the farmer died and among his assets was this small tract of young pine for which, much to her surprise, the widow was offered \$300. The second owner retained it for about 15 years and then, wishing some money, sold it. Soon afterwards it came into the hands of the present owners, a lumber company, for something over \$1,000.

Assuming a land value of \$5 per acre, and a charge for taxes and oversight for the period averaging \$2 per acre per year, the operation has yielded a return of 5 per cent on the total investment in land, labor, and annual outlay, and in addition a neat sum equivalent to a yearly net profit from the start of \$2.34 per acre.

essential part of a well-equipped farm; and more than ever before farm wood lots have become valuable and convertible into money. (Fig. 1)

The total value of forest products taken from timbered land on farms reported in the 1920 census was \$294,321,828. Nearly half of this represents the value of wood and various minor wood products used on the farm and the rest the value of the products sold or cut and held for sale. For the farms reporting, this amounts to an average of about \$217 per farm. Nineteen States reported over \$10,000,000 each in forest products from their farms and four--Virginia, North Carolina, Georgia, and Tennessee--reported more than \$20,000,000 each.

A-Direct Values of Wood Lots

Many wood-manufacturing industries obtain their raw material in the form of logs and bolts. Logs may be sold by sizes and grades or without classification by the lot. Selling "log run" is simple and direct, but offers good opportunity for speculation, usually to the advantage of the buyer, whose knowledge of timber is better than that of the seller. The method is advisable only after the owner has made a careful estimate of the amount and quality of the standing timber. Selling by sizes and grades, when they are defined in the

contract, often results in larger money returns.

Bolts and Billets are used for cooperage, wood pulp, excelsior, wooden ware, handles, vehicle parts, some agricultural implements, fruit and vegetable packages, athletic goods, et. Bolts are measured and sold by the cord, by the linear foot, and by the board foot. If they are 12 inches or over in diameter, they are usually sold by board measure. Billets, which are obtained by halving, quartering, or otherwise splitting or sawing bolts lengthwise, are usually sold by the piece or by the cord.

Poles are also a form in which timber products may be removed. Poles are assigned to two or three classes, according to their length, top circumference, and butt measurement. Defects looked for in inspections are crookedness, split tops and butts, sap and butt rot, checks, and shakes. The pole must be squared at both ends, well proportioned from tip to butt, peeled, and with knots trimmed closely. If the farmer is to ship the poles, himself, it would be best to allow the poles to season one year as they lose about 20% of their green weight in that time which would allow a very substantial saving on transportation.

The classification or grading of piling depends

largely upon its use, whether in fresh water, salt water, or on land, and upon its size and form. Piling is sold at a stated price per linear foot for specified dimensions and kinds of wood.

Ties have always been an important direct value from the wood lot. The specifications for railroad ties in most cases are for sound timber of good quality, stripped of bark, and free from imperfections that would impair their strength and durability. The ties must be sawed or hewed smooth on two parallel faces, and the ends must be cut square. Prices are exceedingly variable in different parts of the country, depending upon the kind of wood, size, grade, and distance of the producing point from the larger trunk-line railroads.

The kinds and forms of timbers in demand for mines are many, and, as a rule, many kinds of woods are usable.

Firewood is one of the important crops of the farm. In 1920 an average of 10.6 cords of wood, or a total of 68,244,000 cords, were burned on the farms of the country. Piled continuously, this would reach four times around the world. The total production of cordwood during 1920, which includes wood burned on the farms and that sold by the farmers as cordwood is estimated at not less than 90,000,000 cords. The average farm value in 1920

was \$5.07 a cord. Specifications, if given, refer to the kind of wood, length, average size of the pieces, whether split or round, general soundness, body of limbwood, and degree of dryness.

Specifications for lumber deal with quality and size, in addition to kind of wood. The basis for grading is the quality of the lumber as determined by the number and size of standard defects; also by the width of the piece. As lumber becomes more valuable, particularly the finished product, the number of grades greatly increases.

Christmas trees as a side-line crop may also prove profitable in many localities especially if remote from large natural supplies of Christmas trees and relatively near good markets.

The above includes the greater uses of wood products that may be obtained on the farm wood lot. These products represent most of the direct values received from the wood lot, although there is constantly being found new uses of wood which tends to keep the market fairly constant.

B-Indirect Value of the Wood Lot.

All the above, however, relates to making the woodlot pay better as a source of a money crop. It

is true that in the long run the opportunity to obtain a money crop from the wood lot will be for most farmers the chief incentive for practicing forestry. Quite apart from its value as the source of a money crop, the wood lot often pays well, though not a dollar's worth of the wood crop is sold. (Fig. 2--Picture) These are the indirect values which alone might well pay the farmer for having a wood lot.

- Inquires made within a year by the Forest Service have shown that in some regions where the market for wood lot products is not good, a wood lot can nevertheless be counted as adding very materially to the value of the entire farm. Undoubtedly this added value is partly sentimental. The land brings a higher price not altogether because more money can be made on it, but because the farm is a pleasanter one upon which to live. A farmers thrift in starting a wood lot will pay well if the time ever comes when he wants to dispose of his farm.

There is also the value of the woods as a shelter. To the extent that this adds to the comfort of those who make the farm their home, the protection afforded by the wood lot is a part of what has been referred to as its sentimental value. A very real value, however, is attached to the timber which protects stock against

Fig. 2



No. 1 Thrifty Woods, Good Crops, and a
Happy Farmer.



No. 2 Black Locust Planted on Waste
Land, Supplying the Farm with Fence Posts
and Enriching the Soil.

high winds and storms. In regions where a naturally flat country interposes little resistance to the sweep of cold winds, the degree to which timber furnishes windbreaks and shelterbelts has a material relation to the severity of the conditions which must be faced. Often the entire crop is saved in severe localities besides affording added protection and comfort to the home against the sun and wind.

One of the greatest indirect values of the wood lot to the farmer is the protection or prevention of his ~~steeper~~ soils from eroding. It is usually the case that the wood lot is on the highest and steepest lands of the farm, which is the land that is most susceptible to erosion. The keeping of these lands with a timber crop is the surest way of preventing the soil from eroding and becoming worthless.

If the wood lot is properly cared for, it not only holds the soil intact, but the accumulation of litter and debris from the forest builds up the soil and keeps it very fertile. A forest is one of the best ways of building up worn out soils.

There are many other indirect benefits of the wood lot which also contribute very materially to the success of the farm.

Problems Encountered by the Farm Wood Lot Owner

One of the chief difficulties is the marketing of the wood products of the farm to advantage. It is difficult for the farmers to get the full value from what they have to sell. Unless they are organized and have the services of a capable manager or expert in marketing methods, they are likely to find the cash returns on what they have produced disappointingly small. Many farmers now feel, not without reason, that it is as important for them to learn how to be sure of getting what their crops are worth as to know how to best grow the crop. Comparatively seldom can the owner of a small piece of woodland harvest his own saw logs, but must sell his timber on the stump to a mill man. The mill man who is experienced in estimating goes through the woods and gets a close approximation before he makes an offer upon the quantity and value of the timber that he wishes. The farmer seldom knows anything about estimating timber, and has only the vaguest idea of what it ought to bring, and competition among mill men is seldom active enough to afford the owner much protection against a losing bargain. He has probably never had the thought enter his mind that there has been the equivalent of *costs* of production in past expenditures for taxes and in interest charges, which he should get back if he is to even realize the actual *costs*.

Even though such a thought has occurred to him, he has no way of finding out what the cost of production has been. Naturally he is on very unequal terms with the "would-be" purchaser.

It is quite possible for the farmer to learn how to estimate his own timber fairly well, and advice can be obtained from competent foresters regarding reasonable terms of sale. There is great need for owners of farm wood lots to try to cooperate with each other. By collective bargaining they should be able to secure decidedly better terms than when each sells independently of the rest. The truth is that farmers are at a disadvantage as timberland owners because their holdings are individually too small. An association of farmers in a certain locality with enough timberland held in common ownership to make a good working forest would be in position to market a high grade output, where a market for such an output is open, far more advantageously than they can do as individuals. Such an association could even employ a trained forester as advisor if not as manager. In order for the farmer to find markets for the many special products on his wood lot, he should write to the state forester or the Forest Service for a list of wood-using plants in his region and should then obtain from each of these plants a copy

of the specifications under which they purchase material, price quotations, and instructions for shipment. It is also very possible if there is enough farm wood lots in certain countries to insist that the County Agent be trained or at least well versed on the wood lot problems so that he may give the farmer advise while making his trips through the country. The County Agent would not only be handy, but would not entail any additional expense on the part of the farmer. With proper advise the question of when to sell or how to sell will be solved so as to bring the greatest return from the wood lot.

Often wood lots are taxed excessively. The higher it is taxed the harder is the task of making it pay. In most of the states timberland is assessed on the basis of its value, timber and land together. Lands assessed on this basis is overtaxed as compared with land assessed on the basis of what it produces each year. Under this system a full grown tree may have been taxed 40 or 50 times. Each year the land on which it grew has been valued not on the basis of its earning power, but on the basis of what it would bring if sold, timber and all. A tax levied on the income-earning value of the land is much more equitable. Certain states, our own included, have provided for the application of essent-

ially this principle. This is done by legislation under which a classification can be made, under suitable restrictions, of land to be used for growing timber, with taxation of the timber separately from the land. The tax on the timber is not paid until the timber or crop is harvested. This form of taxation seems very just, but it is not within the scope of this paper to suggest proper or just taxation plans, but mainly to point out that the States are realizing the unfairness of the old tax system on forest property and are attempting to correct these fallacies so that in the future it may be said that the burden on taxation will not be a handicap to the farmer growing a wood lot.

Conclusion

It has been the aim of this paper to point out the importance of the wood lot to the farm, and how the wood lot if given the proper care will produce a crop of timber far in excess of any other crop that could be grown on the same site. This paper was also intended to help the farmer realize the importance of proper disposal of his timber crops with a better grasp of the real value of the timber.

Many farmers are getting a part of their yearly cash income from timber grown on their farms. In hard

years, due to short crop, the sale of wood products has kept the farmers' family from financial distress and the banks and other institutions from closing their doors.

Forest crops may be grown successfully on soils too poor or on slopes too steep for the successful production of the ordinary agricultural crops. Forest trees supply material for farm and market, they afford shelter for live stock, and protect crops and buildings from the hot winds of summer and cold winds of winter. They also add to the beauty of the farm to the extent of making the farm decidedly more valuable. It is now generally recognized, especially in the East, that a wood lot is an essential part of a well organized farm.

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