

CO-OPERATIVE FOREST MANAGEMENT
IN
PRIVATE INDUSTRY

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PREFACE

For many years, the farmers of America grew their crops and transported them to market individually and independently. Each farmer competed against every other farmer to sell his produce. Often because of the lack of knowledge or financial resources, these farmers necessarily were at the mercy of the local buyer, who tended to play one against the other to buy as cheaply as possible. Then these farmers began to band together to sell their products. Individually they were weak, collectively they became strong. They set up co-operative units to handle their marketing problems. Each member received the maximum value for his produce. Effective sales organizations were developed, and competition among the local individuals was minimized.

As a student of forestry, I have long wondered why forest owners, particularly small owners, have not applied this same principle as a means of overcoming problems of forest management.

Owners of comparatively small forest tracts as a rule have little knowledge of what trees to cut and other aspects of good forest management. Often because of the small acreages and relatively small values involved, these owners cannot afford to employ consulting foresters. Moreover, most owners lack experience in the practical aspects of logging, milling, and marketing forest products and thus fail to obtain full value for them. For these

and similar reasons, they sometimes come to the conclusion that good forestry is impractical and unprofitable, whereas with proper help and guidance they might discover sustained forest production a highly profitable business.

Why, then, should these forest owners not join together to accomplish what they cannot accomplish individually?

In this paper, I have attempted to point the way toward co-operative effort as a profitable and practical means of solving some of the management problems of the smaller forest operator and at the same time a means of increasing the number of privately-owned acres under intensive forest management.

Co-operative forest management is admittedly new and only partially tried, and of course, its practicability in many instances might be questionable. I have tried, however, to present some "food for thought" based upon sound reasoning and, in so far as possible, upon tried and proven examples.

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INTRODUCTION

Forest industries have passed the era of migration. They are fast becoming agricultural industries, anchored to the land which produces their needed crops of trees. Their raw material grows, and through land management and forest protection, can grow, forever, endless successive crops of trees. The commercial forest lands of America consist of 460 million acres, of which 340 million acres are privately owned. Thus, America's future is a challenge to the principle of traditional American enterprise.

It is not difficult to understand the attitudes which motivated private industry in their treatment of the forest resource in the decades past. The conservationists of today loudly cry of the malicious devastation wrought in our forests by private industry. Probably everyone will agree that destructive forest practices have left many thousands of acres of forest land barren and unproductive. Yet has this devastation resulted from malicious intent? It must be remembered that only in the past few years has the science of forestry been sufficiently developed to the point of practical application. The concept that everything a business undertakes must pay its way is not peculiar to the lumbering industry. It has been the basic concept on which all types of successful business has been built.

Not many years ago, the forest industries operated almost

exclusively in high-quality virgin growth. These industries were in the business of harvesting trees, and that is just what they did. When an operator cut over one area, he had only to move a short distance to find more timber at a price of fifty cents a thousand board feet. Under conditions like these, the growing of trees just was not practical. There was no object, as far as the forest operator was concerned, in holding and re-stocking cut-over lands as long as new timber supplies could be purchased at prices far under what it would cost to hold and re-stock these lands.

The results of these conditions were, of course, unfortunate and often disastrous, but they were simply the results of a supply far in excess of the demand--certainly not the results of malicious intent to destroy.

Entirely different circumstances exist today. No longer can the virgin resource be purchased at fantastically low prices--in fact timber of any age and almost any price is scarce. The virgin timber supplies now are almost completely exhausted, and the timber cut is coming more and more from second-growth forests. Here we have the normal transition transpiring. Where once the practice of good forestry and the growing of trees to replace those cut was economically impractical, these practices now represent distinct parts of the industry's working plans. It necessarily follows, then, that in order to remain in the forestry business,

the forest operator must reproduce trees as he cuts trees.

Now the problem of "how to grow these trees" arises. Can the owner himself adequately provide for regrowth on his cut-over lands? Obviously, he has had neither the training nor the practice. He must, therefore, turn to the forester. Immediately an important query is raised. What of the owners whose lands will not support a forestry program? For the most part, the larger forest owners, whose lands are capable of supporting forestry staffs, have had no particular problems along this line. The smaller owner, on the other hand, whose holdings may not be quite large enough or valuable enough to support a forestry program in themselves, finds himself between two horns of a dilemma. He can either ravage his lands completely and go into other fields of endeavor, or he can join with others of similar circumstances and profitably succeed in the business of forestry through this means of private co-operative forest management.

PRIVATE FOREST OWNERSHIP

It has been said that a weak link in our forestry practice could be immeasurably strengthened if the attempt was made to enlarge the practice of sustained yield by increasing, through co-operative effort, the number of properties in which sustained yield exists. Even the most ardent public forest expansionists believe that private ownership has a substantial place in a nationally-obtainable sustained yield program. Yet no thoughtful and informed forester believes that all private timber land owners in any region necessarily should adopt sustained yield management. Neither does he believe that all forest land is adaptable to such management, or in fact to any management. A thought which all should hold, however, is that of the responsibility of ownership.

Responsibilities of Ownership

The responsibility that goes with ownership has been called a social responsibility. It may not be part of the political or economic program of a frontier nation, but given a due sense of responsibility of land ownership--whether it be social, economic, or political--there would not now be new agricultural programs in the Corn Belt; neither would there be a dust bowl in the Great Plains region. There probably would have been no need for a T.V.A. or resettlement programs in other sections of the country. There are responsibilities of ownership that go beyond the philosophy

of profit. They are fundamental in the maintenance of this thing we call the United States.

The Possibilities and Limitations of Private Effort

The traditional American policy has been to depend upon private ownership and initiative. This is largely true in forest land ownership and management despite the departure represented by the national, state, and other public forests.

The possibilities and limitations of private effort must be judged in part from past results. In general, these results have been seriously detrimental to the owners and the forest industries, to the productivity of the forests, and to the public interest. Constructive management has been conspicuous by its absence, except in fire protection.

The results indicated are so universal that the question is sometimes raised if they are not almost inevitable in the system of private ownership, particularly under American conditions and expectations for quick business turnover and quick profits. Of course, tradition and private attitude are not the only causes of poor forest practices. The time element, uncertainties as to cost and markets, the absence of practical demonstrations, the lack of traditional knowledge, the general inertia or opposition to radical change in long-established ways of doing things, as well as methods of taxation and scattered ownership have all

contributed to the difficulties standing in the way of satisfactory private forestry.

Private forestry has the possibilities common to all forestry in the United States: the intrinsic value of wood as a raw material and the fact that it is renewable indefinitely, the exceptional number and value of American species, the most favorable growth conditions, the largest domestic market in the world, regional demand larger than the cut in all parts of the country except the South and Pacific Northwest, and the same opportunities to fight for future markets as any raw material; the practical exhaustion of virgin timber supplies, the drain on our forests twice the growth, a world demand at least holding its own and probably increasing, and for coniferous timber most in demand, a world cut in excess of growth.

Finally, there is growing evidence that under many and perhaps most conditions it is more profitable even in immediate returns to leave land productive rather than devastated.

Private forestry has some distinct advantages over the public forests. It has the best land, and it has the opportunity to supply needed raw materials to perpetuate many industries. In addition, there are whatever further advantages may lie in the greater efficiency claimed for private over publicly-managed activities.

One obvious advantage which would accrue from fully adequate private effort would be the elimination of any necessity for further extension of public ownership and administration of land. Another might be the outlet for private initiative. Further, the largest possible tax base would exist and hence tax returns to local governments.

COSTS OF PRIVATE FORESTRY

Costs of Management

Only meager data are available for estimating the costs of handling forest lands held at present in private ownership.

Rapid exploitation or liquidation is incompatible with the long-term rotations demanded in forest management and with the nonrevenue-producing periods which must pass while depreciated areas are converted to productive forests. To practice forestry, whether by private or public endeavor, requires certain immediate and continuous investments--not necessarily large or impossible--if future continuous returns are to be insured.

The costs that the private owner must consider in any intensive system of forestry are taxes, carrying charges, protection (fire, insects, disease), and silviculture practices (stand improvements and planting as may be necessary). In contrast to the public owner, he need make no investment in nonrevenue-producing public benefits such as recreation, although in some sections such expenditures may be justified.

The costs of private forestry must be determined for each property under one individual and the generalized figures presented here can be indicative only. Where the convertible cash values on a forest have been largely removed and a long period must expire before incomes are available, private ownership may

TABLE 1. Representative Costs For Intensive Private Forestry, in Cents Per Acre Per Year.*
(Copeland Report, Reference no. 1)

TYPE	TAXES	OTHER CHGS.	PROTECTION		TIMBER MANAGEMENT			TOTAL
			FIRE	INS.	CUTS	STAND IMP.	PLANT	
	cents	cents	cents	cents	cents	cents	cents	cents
Western White Pine	40	2	12	11	12	1	3	81
Ponderosa Pine (Calif.)	40	2	8.5	2	10	1	2	65.5
Douglas Fir (Pacific)	50	2	8	....	3	1	1	65

*Generalized costs for forest properties in which at least half of the stand is assumed in merchantable stands. Silvicultural cutting charges, stand improvement, and planting charged off at 1% per year as a capital investment.

TABLE 2. Estimated Gross Returns Per M. Per Acre on
Private Forests Under Intensive and Ex-
tensive Forestry.
(Copeland Report, Reference no. 1)

FROM INTENSIVE FORESTRY					
REGION	GROWTH RATE PER ACRE	STUMPAGE REALI- ZATION VALUE	SAW TIMBER RETURNS	SALVAGE CULLING RETURNS	TOTAL RETURNS PER ACRE
	F.B.M.	\$	\$	\$	\$
Pacific Coast	559	5.55	3.10	.50	3.60
Northern Rocky Mt.	348	9.29	3.23	.25	3.48
Southern Rocky Mt.	126	9.29	1.17	.13	1.30
FROM EXTENSIVE FORESTRY					
REGION	GROWTH RATE PER ACRE	STUMPAGE REALI- ZATION VALUE	SAW TIMBER RETURNS	SALVAGE CULLING RETURNS	TOTAL RETURNS PER ACRE
	F.B.M.	\$	\$	\$	\$
Pacific Coast	213	5.55	1.18	.....	1.18
Northern Rocky Mt.	175	9.29	1.63	.....	1.63
Southern Rocky Mt.	79	9.29	.73	.....	.73

not be attracted, even by the prospect of large profits, if too long deferred. On the other hand, where a property produces a steady current income, it is only good business for private enterprise to make necessary investments in silvicultural treatment, fire protection, and the like, because the current income will carry the expenditures.

Many recent studies show that what appear at first as added expenditures for silvicultural treatments of a forest may be in reality an indication of higher returns. Case after case has been encountered where such treatment not only gives higher current returns but offers the best opportunity for fully and adequately depreciating heavy capital investments.

Tables I and II present illustrative costs and gross returns for forestry under private ownership. These figures are based on costs existing in 1933 and are not applicable at the present time, although they may represent fair comparative averages.

Costs of Growing Timber

A question commonly asked by those interested in growing timber is "how much will it cost?"

In an attempt to answer this question, the Willamette Valley Tree Farms prepared the following data. Average costs have been used in so far as possible. Costs for individual forest units

vary according to differences in timber producing capacities (site qualities) of the land and other factors involved.

There are two schools of thought regarding the method of charging interest against the investment in growing forests: one group maintains that the cost of growing timber should be carried as a direct annual cost of the going concern with simple interest charged (this is reasonable and possible with a sustained yield operation). The other group holds that money spent in growing timber is an investment which must carry compound interest until the timber is cut and the investment liquidated (this is necessary for a non-continuous operation). Tables III, IV, and V were prepared from the view point of the less favorable compound interest theory. Two simple interest calculations are indicated, however.

<u>Basic Costs Used</u>		<u>Per Acre</u>
		\$
1. Assumed bare land value:		
\$1 per acre; annual rental.....		0.03
2. Initial investment:		
Fire equipment and development.....		0.43
Land examination and records.....		0.07
3. Annual costs:		
Reforestation land tax.....		0.05
Fire protection.....		0.10
Administration.....		0.01
4. Planting costs:		
No planting needed (full stocked).....		0.00
Half-planting (medium stocked).....		6.00
Full-planting (poor stocking).....		10.00

5. Interest on investment:
3% compounded annually
6. Yield tax: the 12½% yield tax assessed against products removed from forest lands classified under the Oregon Fee and Yield Tax Law has not been included in the cost estimate. This charge was omitted because of the uncertainty of values of forest products 50 to 100 years hence.

Cost Per Acre

Table III shows costs per acre when no planting, half planting, and full planting are required. Further it shows each basic cost with its increase by year at 3 per cent compound interest.

Using 6 per cent simple interest and an annual cost basis, the costs per acre for a 100-year period would be:

No Planting.....	\$ 26.50
Half Planting.....	68.50
Full Planting.....	96.50

Table IV gives estimated costs of growing timber on average forest land in the Willamette Valley. It shows how large the average tree will be for the various ages, how much volume per acre can be expected, and what the cost per thousand board feet will be under different degrees of planting. All costs are compounded annually at 3 per cent.

Using 6 per cent simple interest and an annual cost basis, the costs per thousand feet for a 100-year period would be:

No Planting.....	\$ 0.47
Half Planting.....	1.29
Full Planting.....	1.81

Table V shows volumes of timber produced per acre and the cost

TABLE 3. Cost Per Acre of Growing Douglas Fir
Timber With Different Degrees of Planting.
(Willamette Valley Tree Farms, Ref. no. 3)

YEARS	LAND RENT	INITIAL INVEST.	ANNUAL COST	PLANTING COSTS	
				HALF PLANTING	FULL PLANTING
	\$	\$	\$	\$	\$
1	.03	.50	.16	6.00	10.00
5	.16	.58	.85	6.95	11.59
10	.34	.67	1.83	8.06	13.44
20	.81	.91	4.30	10.84	18.06
30	1.43	1.21	7.61	14.56	24.27
40	2.26	1.63	12.06	19.57	32.63
50	3.38	2.19	18.03	26.30	43.84
60	4.89	2.95	26.07	35.35	58.92
70	6.92	3.96	36.87	47.51	79.18
80	9.64	5.32	51.38	63.84	106.40
90	13.30	7.15	70.89	85.80	143.00
100	18.22	9.61	97.11	115.32	192.20

	TOTAL COSTS PER ACRE		
YEARS	NO	HALF	FULL
	PLANTING	PLANTING	PLANTING
	\$	\$	\$
1	.69	6.69	10.69
5	1.59	8.54	13.18
10	2.84	10.90	16.28
20	6.02	16.86	24.08
30	10.25	24.81	34.52
40	15.95	35.52	48.58
50	23.60	49.90	67.44
60	33.91	69.26	92.83
70	47.75	95.26	126.93
80	66.34	130.18	172.74
90	91.34	177.14	234.34
100	124.94	240.26	317.14

TABLE 4. Cost of Growing Douglas Fir Timber Per
M., International Rule, Site Quality III.
(Willamette Valley Tree Farms, Ref. no. 3)

YEARS	AVERAGE DIAMETER inches	VOLUME PER ACRE F.B.M.	FULL STOCKING NO PLANTING \$	MEDIUM STOCKING HALF PLANTING \$6/acre \$	POOR STOCKING FULL PLANTING \$10/acre \$
30	12.5	5800	1.76	4.25	5.92
40	13.1	14800	1.08	2.39	3.26
50	13.9	24400	.97	2.05	2.76
60	14.7	33200	1.03	2.09	2.80
70	15.6	40600	1.10	2.34	3.13
80	16.5	46300	1.43	2.81	3.74
90	17.4	50400	1.81	3.52	4.64
100	18.4	53300	2.34	4.50	5.95

TABLE 5. Cost of Growing Douglas Fir Timber Per
M., International Rule, With Various
Site Qualities. (Willamette Valley
Tree Farms, Ref. no. 3)

YEARS	SITE I		SITE II	
	F.B.M. PER ACRE	COST PER M.	F.B.M. PER ACRE	COST PER M.
30	16900	\$ 1.47	11100	\$ 2.23
40	31700	1.12	23600	1.50
50	46300	1.08	36100	1.38
60	57900	1.20	46400	1.49
70	67100	1.42	55100	1.73
80	74800	1.74	61900	2.12
90	80100	2.20	66700	2.66
100	83800	2.86	70000	3.43
YEARS	SITE III		SITE IV	
	F.B.M. PER ACRE	COST PER M.	F.B.M. PER ACRE	COST PER M.
30	5800	\$ 4.25	1700	\$ 14.80
40	14800	2.39	6200	5.72
50	24400	2.05	12500	4.00
60	33200	2.09	18400	3.76
70	40600	2.34	23500	4.05
80	46300	2.81	27400	4.75
90	50400	3.52	30300	5.84
100	53300	4.50	32700	7.34

per thousand feet of growing this timber on lands of various site qualities. It is assumed that the area will need half planting at \$6 per acre. All costs are compounded annually at 3 per cent.

MANAGEMENT PROBLEMS AND NEEDS OF THE PRIVATE OPERATOR

Industrial ownership is the most important type of forest land ownership in the United States, not only because it includes over half of the commercial acreage, but because it is here that the Nation's forest management problems especially reside. With some notable exceptions, the owners of this land have not been convinced of the financial justification for the measures that would insure keeping their lands continuously and permanently producing timber.

Problems

It is undoubtedly true that private forestry practice would have been and is now economically advantageous on a much broader scale than has been in effect. Nevertheless, private owners face some very disconcerting problems and uncertainties in embarking upon forestry programs. For the most part, these problems are well known to those connected with the forestry business. It might be well, however, to mention here a few of the uncertainties pertaining to private forest management.

The danger of losses by fire and other destructive agencies is probably one of the major uncertainties facing the private owner. Many owners hesitate to intensively manage their lands because such lands cannot support more than the minimum in protection measures.

The uncertainty of future returns--the uncertainty as to

what changes a few decades may bring in the amount of timber products consumed or as to the value in relation to costs of production--is another.

In addition to the two problems listed above is the aversion of the average American to embarking on a long-time enterprise as against one which promises quick returns, even if the former appears thoroughly sound on its own merits.

Needs

The needs of the forest owner include technical assistance, education, and incentive. Individual owners may need one or all three. There are some owners who are able to provide adequate management measures on their lands but who are not doing so. On the other hand, there are owners who are willing but unable to provide adequate management. The needs of the first group are primarily those of education and incentive, while the needs of the latter group are principally for technical assistance and service.

Industry has a stake in good forest management second to none. Present policies and practices incident to supplying logs and wood for their mills range from concern at one extreme to indifference and destruction at the other. There rests on industry a responsibility to develop procurement practices which will encourage better forest practices on the part of forest owners and workers. Such policies would constitute a notable contribution to the overall program.

CO-OPERATIVE FOREST MANAGEMENT IN OPERATION

Co-operative forest management, in the broadest sense, can be defined as any type of forest management accomplished through the joint efforts of two or more parties. Co-operation in forest management can be classified into two general types:

TYPE I -- Co-operation between two or more parties, one or more of which manages all the lands according to methods agreed upon by all parties concerned.

Under this type of agreement, ownership and control of products of the lands may or may not be retained by the individual co-operators.

TYPE II - Co-operation between two or more parties, with management of the lands the function of some organization created and controlled by the parties concerned.

Under this type of agreement, ownership and control of all products are retained by the individual owners.

Emphasis is placed on Type II as being more nearly a truly co-operative system. This reasoning is supported by the fact that in this type of agreement each co-operator has an equal voice in the policies and control of the managing body as well as absolute control of his own lands and the products produced thereon. Under the system of Type I, this may or may not be the case.

Co-operation - Type I

Type I agreements are exemplified by the Forest Service and proposed O & C sustained yield agreements and by certain of the established tree farm organizations.

Sustained Yield Agreements

Under this type of agreement, two parties (at the present time at least) enter into a more or less co-operative arrangement, one party obtaining the cutting rights on all lands. Using the proposed O & C Mohawk sustained yield agreement as an example, the O & C Administration establishes the policies and management methods to be applied on the lands under the agreement, and the co-operating company carries out the management principles and acquires the rights of harvest on O & C lands.

Actually all this amounts to is that the co-operating lumber company agrees to manage his own lands on a sustained yield basis as prescribed by the O & C Administration and receives in return the harvesting rights on O & C lands.

Clemons Tree Farm

The Clemons Tree Farm, organized and managed by the Weyerhaeuser Timber Company, is another example of Type I co-operation. The tree farm was established in 1940 in Grays Harbor County, Washington. It embodies 130,000 acres, approximately one-half of which is owned by Weyerhaeuser. In 1940 the co-operators and ownerships were as follows:

State of Washington.....	16,000 acres
County.....	14,000 acres
Weyerhaeuser Timber Company.....	64,000 acres
Miscellaneous Private Ownerships.....	34,000 acres

Shortly after establishment of the tree farm, Weyerhaeuser acquired the county lands, increasing his ownership to about 60 per cent of the total area.

When the area was set aside as a tree farm, it was in a relatively poor condition. Some 76 per cent had been clear-cut, 9 per cent selectively logged, 3 per cent classed as agricultural land, and 12 per cent remained in virgin timber--15 per cent of Weyerhaeuser land was virgin timber.

The area originally produced an average of 75,000 feet per acre in 200 to 400 years. Under management, it is estimated that the area could produce 250,000 feet per acre in a like period. Harvesting, however, is planned when the timber reaches the age of 50 to 80 years, when maximum growth is reached.

Restocking on the area has been accomplished by natural means where possible and by supplementary planting where natural means has not been adequate.

The Weyerhaeuser Company has set up an elaborate fire protection system. Four of the five lookouts covering the tree farm are company owned; one is state owned. Seven large pumper-trucks with water tanks and hose are maintained. Five pickup trucks, three with water tanks and pumps are also provided. Communication is achieved by means of a combination radio-telephone system. The

trucks are equipped with two-way radios, and ninety miles of telephone line cover the area. Additional portable pumps and miscellaneous tools complete the protection scheme.

Co-operation II

Two excellent examples of this type of co-operation are to be found in the Willamette Valley Tree Farms and the South Olympic Tree Farms.

Willamette Valley Tree Farms

The Willamette Valley Tree Farms was organized in late 1941 as the direct result of recommendations of a special committee of the Willamette Valley Lumbermen's Association in the summer of 1941. Recommendations of the committee were roughly as follows:

(1) Recognizing that each operator is more interested in his own holdings, and also, that the more operations which can be brought under the plan the better, it is recommended that a joint, co-operative, non-profit association or company be formed with suitable name.

(2) Function of this association - furnish supervisory service in forest management to those companies who voluntarily join and are willing to underwrite the costs involved and co-operate individually in the objectives.

(3) Membership would include: (a) those operators sufficiently large to employ their own forester and staff, but wish to co-operate in the principles and objectives of the group, (b) those

operators who are not large enough to maintain a forester and staff but who would be willing to underwrite the expense of the staff maintained by the association, and (c) any timber or land-owners wishing to avail themselves of the services of the association and who would subscribe to its rules and regulations.

The report further went on to give the possible services and objectives to be accomplished by the association. It indicated that the success in applying any intensive forestry program was largely dependent upon the co-operation of the public. To partially solve this problem, the group would have as its first objective the posting of all properties under its supervision, especially cut-over lands. This posting should include notice that the lands posted are under intense forest cultivation and, as such, should be recognized by the campers, hunters, fishermen, and general public using them.

Present members of the tree farms are Booth-Kelly Lumber Co., C.D. Johnson Lumber Corp., Row River Lumber Co., Weyerhaeuser Timber Co. (Springfield Branch), Roaring River Logging Co., Long-Bell Lumber Co., and Oregon Pulp and Paper Company.

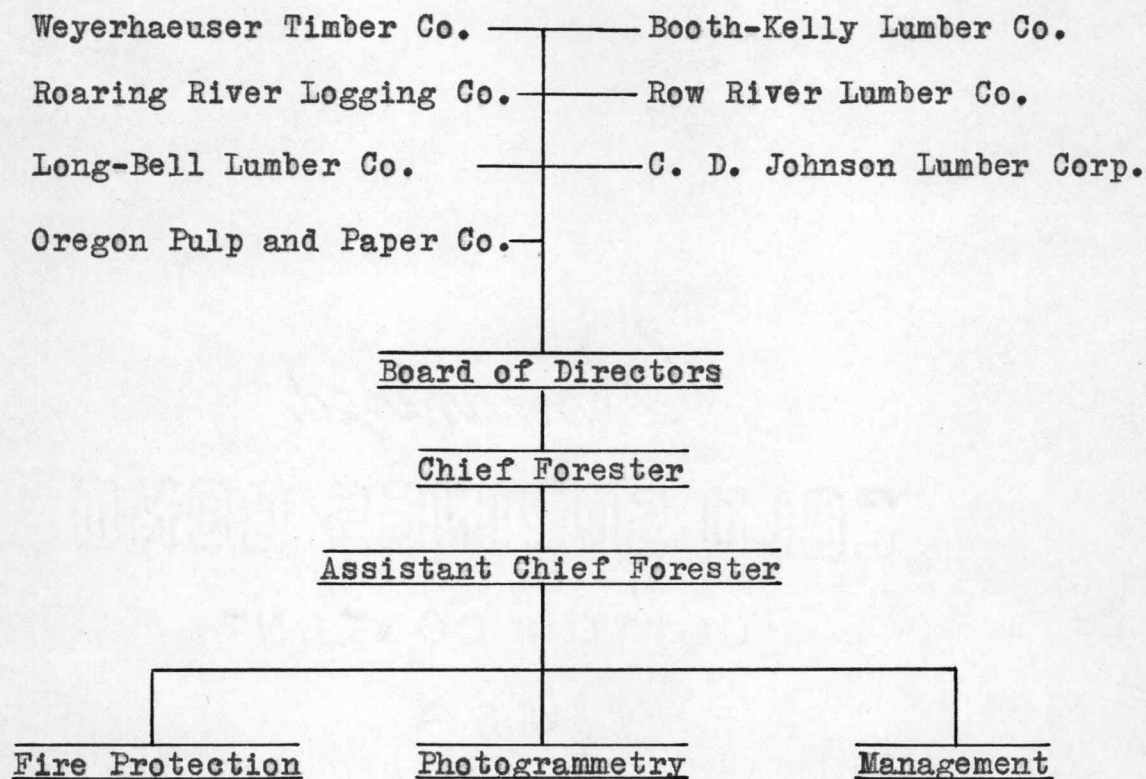
Lands under jurisdiction of the organization aggregate approximately 223,000 acres (not including Oregon Pulp and Paper Company lands). All conditions are to be found on these lands: recent cut-overs, young second-growth, mature second-growth, virgin

forests, old burns, non-stocked and partially-stocked areas. Management and fire plans have been completed for most of the lands.

The Tree Farms is a non-profit organization. Its funds are derived from each individual job--that is, when a service has been rendered to a particular company, that company is billed for the exact cost of the service or services, including salaries, supplies, expenses, and so forth. Each employee keeps a diary and charges every hour of his time to the company for which that hour is spent. Incidental expenses are charged in a like manner.

In the opinion of the writer, the Willamette Valley Tree Farms exemplifies the ideal in co-operative forest management organization. Each company is represented on the Board of Directors (see chart) and has equal voice in the policies and control of the association. A co-operator pays for no more than the actual services he receives and then no more than the actual costs of the services. Each member retains the absolute right to do as he pleases with his own lands and the products produced thereon. He can avail himself of the many services offered by the organization, but he is not required to accept any suggestions or plans submitted by the group. On the other hand, he has for the asking the services of a staff of trained foresters which he probably could never afford under other circumstances.

TABLE 6. Administrative Organization of the
Willamette Valley Tree Farms.



South Olympic Tree Farms

Further illustration of Type II co-operation is given by the South Olympic Tree Farms. This organization, similar in some respects to the Willamette Valley Tree Farms, is a forest management company, a service company, engaged in the business of managing and protecting the forest lands of others--it owns no land. Members of the organization continue their respective ownerships without change; the forest products grown on their lands are their own, to market as they see fit. The only exception on this point of land ownership on the part of the company is that it has the right to purchase and own small parcels of land on which to establish headquarters, fire protection stations, and the like.

The South Olympic Tree Farm Company was organized and incorporated under the laws of the State of Washington in 1943 by the major forest land owners in eastern Grays Harbor County, western Mason County, and northwestern Thurston County. Creation of the organization was for the purpose of providing, on a co-operative basis, a practical forest management and protection service for the second-growth (reproducing) lands by the various co-operators.

The area of land included in the present boundaries comprises approximately 250,000 acres, of which 140,000 acres were listed originally by the membership for management. The original co-operators were the larger owners with holdings within the area. For administrative purposes, some definite outer boundaries had

to be established, even though, at first, many ownerships within such boundaries, both large and small, were not co-operators in the Tree Farm. Since the formation of the company, however, many of these owners have joined the co-operative undertaking, as was hoped for originally.

The original incorporators purchased stock in the Company to provide funds with which to buy initial equipment and to set up the organization. To meet current operating expenses, such as salaries and wages for the managing forester and his crew, maintenance of roads, facilities, and equipment, members of the company assess themselves yearly on an acreage basis.

The same services are offered to all, whether the acreage owned be large or small. The small owner pays at the same rate as the large owner, but the actual amount he pays is less because service charges are on a per acre basis. The advantage, then, if any, seems to be entirely on the side of the smaller owner inasmuch as the Tree Farms offers services which the small owner could not normally provide for himself except at prohibitive cost. The larger owner, on the other hand, because of the widespread nature of his holdings, often has a sufficiently large investment in forest lands to enable him to undertake these services for himself where necessary.

The services provided by the Company, other than supplemental fire protection, fall into four principal classifications: tech-

nical planning to obtain maximum production results from the land; detailed inspections on a periodic or special basis; restocking of the lands by planting; and advice and assistance in marketing.

Fire protection is provided on the area by a number of agencies working together. For example, there are six lookout towers within the boundaries. One of these lookouts is operated by the Forest Service, two are operated by the State and the Washington Forest Fire Association jointly, one is operated by the State in conjunction with a private logging company, while two are operated by the State jointly with the Tree Farms. In addition, the Company maintains complete communication and fire suppression systems.

CONCLUSION

The steady extermination of our old-growth timber has firmly established the necessity of intensive forest management on all forest lands as a major National objective.

Large forest land owners, by and large, have adopted continuous production policies, not only to maintain the timber resource for America and her people, but also to protect their investments and stay in business. Small owners must also adopt these policies. Forestry can and will pay its way if given the opportunity.

The preceding pages have presented some evidence supporting co-operative forest management as a practical means of providing technical management and protection services at the minimum cost. It is hoped that all forest owners will seriously consider the merits of this type of forest management. To repeat--it will Pay!

In concluding, I should like to quote a statement made by Mr. C.H. Watzek, manager of the Roaring River Logging Company, shortly after his company joined the Willamette Valley Tree Farms in 1944. The statement indicates, to a certain degree, the attitude of private industry toward co-operative forest management.

"We were happy to have the Willamette Valley Tree Farms accept membership this month for the 6500 acres we own and are operating in Linn County. That association in its two-year history has made a progressive start on practical forestry and we wanted that kind of protection for our lands.

We joined the Willamette Valley Tree Farms because it is just plain good business to do so. For a business generation we have made forestry pay on a large acreage in Arkansas, and we know the time has come when it will pay in Oregon. Our Linn County ownership is too small

to carry a forestry program itself, so we were pleased to share the professional advice and help offered by the staff of trained foresters in the Willamette Valley Tree Farms.

We will honestly try to comply with their membership requirements, which mean, roughly, to harvest forest crops and protect our lands so that they will grow the most trees possible on the acres concerned."

A philosophy which should be the very basis of private ownership is presented in the words of Parker Kuhne:

"Title to a certain piece of earth is one of our more or less useless human fictions. The only true title to things is use, and good use in the long run is good title, while bad use is bad title. We will soon lose what we cannot use well, no matter how sure we are that we own it."

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