SOME PERSONAL VIEWS CONCERNING WOODLOT MANAGEMENT¹

By W. M. ROBERTSON

Ottawa, Canada

WHILE I believe that control of woodlot production should be made effective at the proper time, I do not believe that the present is the proper time. Until the average woodlot owner has a better appreciation of the heritage he holds, and that regulation is a measure to improve that heritage for himself and his heirs and to increase the wealth of the nation, he will look upon such legislation as an invasion of his rights, and will resent it accordingly.

To bring about that condition, at least three problems, closely interrelated, must be solved. These are: education, management plans, and investigation. The owner must be educated to an appreciation of his woodlot and its possibilities. He must be shown how his products can be maintained continuously and perpetually. The need for better management of the woodlot has long been appreciated by foresters. Governments are now becoming perturbed about the problem. And the present abnormal shortage of wood products of every kind is bringing home to the owner the value of his woodlot as he has never before seen it.

Before he can practise forestry intelligently, he must have a simple, practical working or management plan, an inventory, and a statement of the annual growth which will constitute the cutting budget. He must be instructed in methods of marking that will improve quality of the stock, and increase the increment to the limit the soil is capable of producing.

Primary responsibility for all three problems rests with the governments, the custodians of this natural wealth. The owners can only be looked upon as co-operators in putting sound forestry practice into execution. Regulation can only be a means to enforce co-operation of those who do not or will not see the advantages to themselves.

A sound beginning has been made towards education by the establishment of many demonstration woodlots. The value of this field of education would be greatly increased at very little additional cost by coupling investigation with it. Without the taking of periodic records, the benefits of improvement cutting are purely observational and cannot be measured in dollars and cents. Without such records who is to say, with any degree of assurance, what effect the treatment has had upon increment or what species are best adapted to the site and the method of treatment.

Let me cite a case in point. A permanent sample plot was established in a well-stocked stand of overmature maple mixed with younger beech and white birch, in 1919. The stand then contained 3,200 cubic feet. It increased at the rate of 47 cubic feet per year until 1934 when the stock was

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3,800 cubic feet. Then 1,900 cubic feet of overmature maple was removed, leaving the stand half-stocked. Despite the heavy cutting, the net increment increased to 58 cubic feet per year during the next five years. But that is not the whole story. An examination of the records showed that the site and treatment were much more favourable to beech than to either maple or white birch. The growth rate of beech increased threefold; the growth rate of maple doubled. Contrary to expectations, the light-demanding, intolerant species, white birch, did not respond to the opening, but the mortality in it between 1939 and 1942 offset the entire increment which accrued on the other species. The conclusion is that all the white birch, and probably less of the maple than was cut, should have been taken in 1934. This information, however, would not have been available had not detailed records been taken.

A few years ago the Dominion Forest Service gave a short course in forestry to farmers' sons in the Maritime Provinces. Just last week a Prince Edward Island farmer, owner of 75 acres of woodland, told me that the sons of two neighbours who had taken that course had so treated their woodlots that the neighbours were all impressed with the obvious improvement, and he was appealing for guiding help.

Government appreciation of the importance of education and management is expressed by the establishment of so many Extension Services in the past few years.

The average farmer has neither the means nor the experience to estimate the timber on his woodlot. It should be the duty of the Extension Services to make such surveys, to estimate the growth rate and to prepare a simple working plan for each interested woodlot owner, either gratis, or at cost if necessary. The plan should be a statement of the stock by species and broad age-groups, and the estimated increment. It should also include instructions for marking to improve quality and growth—as is now being done on demonstration woodlots. In lots of ten acres or more it would be an advantage to subdivide it into compartments of five acres or so to be cut over in rotation.

In addition to the working plan, a transect sample plot should be established in each woodlot by the Extension Service to obtain detailed information on the development of the stand, particularly to measure the increment and improvement in quality. For this purpose all that is required is to mark the boundaries of the plot, to tally the trees on each square chain separately, by species and one-inch diameter classes. A reproduction plot, say 3.3' x 66', should be established on each square chain, on which a count of all seedlings should be taken.

The Extension Service too should be prepared to advise on planting problems, not only for underplanting but for planting non-productive potential forest lands.

I believe, therefore, that woodlot management in all its phases is the responsibility of the Extension Service, and not until those activities are much further advanced should the powers of regulation be invoked.

In the meantime it is in keeping with our policy to urge upon the proper authorities the necessity of development of the Extension Services.