

The Work of a Forest Engineer.

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In the present stage of our civilization, wood, in one form or another, is an absolute necessity. Our people use enormous quantities of it for all sorts of purposes.

During the present century Canada's population is sure to reach the eighty million mark. Meanwhile enormous quantities of wood will be required for the construction of the railways needed to open up the country in advance of settlement and to build homes for the people. The myth that Canada possesses inexhaustible supplies of timber is now pretty well exploded. The fact of the matter is that there is far less timber in Canada than many Canadians are willing to admit, and much of it is of an inferior quality. The growing scarcity of timber has led to a steady rise in prices during the last fifteen years, and the end is not yet. In eastern Canada the wholesale prices of pine and spruce lumber have advanced between fifty and sixty per cent. This is partly due to the growing scarcity of timber and the increased cost of logging, and partly to the enormous quantities of timber exported to other countries, but mainly to a knowledge of the limited quantity still available.

The growing scarcity of timber in other countries than this and the constantly improving transportation between the different countries of the whole civilized world warrant us in predicting the establishment of world prices for timber.

Thus, if Canadians are to avert the evils which have overtaken other lands where the forest resources have been allowed to diminish or approach the vanishing point, they must adopt a general and far-reaching policy for the management of their timber lands. Such a policy must be based upon an adequate, scientific and practical grasp of the whole situation. Hence there has arisen the necessity for a class of men with both a training of a highly technical nature and a clear conception of things which at first sight do not seem to be related, even in the remotest degree. These men must clearly understand the relationships that exist between the different parts of their work. Otherwise, they will make many serious blunders and bring their profession into disrepute.

A forester is not a mere botanist let loose to air his theories at the expense of others; neither is he a mere 'lumber-

jack', fire-ranger, sportsman, entomologist, pathologist, dendrologist, silviculturist, or any other kind of 'ist'. He should be all of these rolled into one and must clearly understand all these phases of the general problem of preserving his property and increasing its productive capacity. The profession of forestry touches life at many points, and cannot safely be entrusted to half-educated men. It has constantly to deal with questions of tremendous magnitude and importance, and its devotees are engaged in a profession of which they may well be proud.

The professional forester does not aim to oppose Nature, but to assist her—to make use of the naturally favourable conditions existing in any given locality and to hold in check the unfavourable ones. He exercises his skill in encouraging the growth of the most suitable species, and modifies their growth so as to produce the most valuable timber in the shortest space of time. All this must be done without diminishing the value of the soil for the production of future crops.

Just as the agriculturist is engaged in the production of food crops, so the forester is engaged in the production of wood crops. Each carries on his business for the practical purpose of producing a revenue. Each must protect his crop from insect ravages, fungus diseases, fire, trespass, etc. Each of them should guard against the impoverishment of the soil, and constantly aim to increase its value. In each case, the land is the principal capital, and any part of it either wholly non-productive or turned to a less profitable use than it might be represents so much wasted capital.

Twenty years ago, the science of forestry was regarded as an abstract and debatable theory, and all knowledge of it was confined to a few experts and enthusiasts whose views were regarded as of doubtful value. Today the most intelligent and public-spirited members of the community regard the treatment of forest resources according to well established forestry principles as a vital and urgent economic problem. From what has already been said, it is surely evident that the professional forester should be thoroughly trained in all the branches of his work if he is to be of the highest service to the state.