

impressed with the very great, we may say, unexpected, amount of highly interesting instructive, and important information embodied in the articles read, the addresses given and the discussions that took place on the various subjects brought forward.

The Forestry Congress.

Even different views, when elicited, gave with advantage the results of greater variety and scope of observation. The valuable timber of our forests is being rapidly destroyed by the commercial demand for it and by desolating fires, and we must now distinctly bear in mind that we have no new fields to fall back on for the white pine that gives our trade its special value. Elsewhere the increasing scarcity of wood for fencing and building, and especially fuel, which has already long been felt, and in some of our oldest settlements is increasing the difficulty of living, and consequently diminishing the value of farms even in situations otherwise favourable.

When we take all this into consideration, together with the consequent ultimate decay of the chief export trade of the port of Quebec, and—what is not to be overlooked—the revenue derived from it, we can hardly over estimate the importance of the objects of the Association, and the obligation we are under to the eminently experienced and talented American and Canadian gentlemen of the Association who have so earnestly devoted their time and attention to the subjects of forest preservation and cultivation, so specially important to the future prosperity of our province of Quebec, obviously adapted by its favourable geographical position, and the unfitness of much of it for other cultivation, to be a timber yielding and timber trading country for ever.

Its interesting and highly important objects and proceedings.

For the object of this memorandum it is proper that any remarks I may have to submit should be confined to such parts of what was read or said at the meetings of the Congress as may be more or less applicable to the management of our provincial public forests, and to the profitable re-forestation by private enterprise of worn out or unarable fields, and the planting of trees of most valuable kinds everywhere where they might be useful or ornamental.

On tree planting.—The able paper by Dr. Hough, the talented Chief of the Forestry Branch of the Department of Agriculture of the United States, advocating the planting of trees along railway lines, and the information it contains on the great and rapidly increasing consumption of small trees for railway ties in the United States, merit the greatest consideration, in view of the like increasing demand for railway ties that must continue increasing for our Canadian railroads. He says 2,200 to 3,000 are used in every mile, sometimes 3,500, and that there are 100,000 miles of railroads in the United States; average duration of a tie is five to eight years, and that 30,000,000 to 50,000,000 of ties will be required for the 100,000 miles each year, which he computes at the rate of 500 ties to an acre, will require 60,000 to 100,000 acres of woods each year to be cut over, to provide which—he says justly, that allowing the trees 30 years on an average to attain the necessary size—there should be 18 to 30, say, 25 acres of woodland to every mile of track either along the road, which in many cases would be desirable to prevent drifts, or where the land could be had at less cost, as near it as economy might dictate, counting in the cost of transport of the wood when cut, if remote.

Dr. Hough on tree planting along railways. Railway ties, number required annually in the United States.

As far as 60 years' experience, chiefly in wooded countries, road engineering, or in charge of public forests, may enable me to judge I can endorse Dr. Hough's views and calculations on this subject (and those of the other members of the Association respecting it) which are applicable to tree planting generally, as regards the selection of kinds most suitable to the soil and the object intended, and the treatment of them.

Among the trees recommended for such planting, the black walnut for many obvious reasons was most strongly advocated by several eminent American and Canadian members. Among the latter, the most prominent and practical, was the Hon. Mr. Joly, well known for the energetic interest he takes in everything for the general good, like the present movement, which is the object of the American Forestry Association; he has set the example on a large scale, in commencing the cultivation of the black walnut in the province of Quebec (it is stated that he planted 10,000 walnut trees in one season recently). The diminishing supply of walnut in the United States and its rapid disappearance have greatly increased the price of it in the wood market, and consequent profit in producing it, which is much sooner obtainable from its well known rapidity of growth, which is stated by Mr. Joly is nearly three times as rapid as that of pine, and still more so than that of spruce, and he estimates that an acre planted with black walnut would in 40 years yield \$10,000.

Recommends black walnut, as does also the Hon. Mr. Joly, who has planted it largely.

Its valuable qualities and estimated profit.

When we add that black walnut stands next to mahogany for furniture and oak for structural purposes, that fence posts of it lasts over 25 years, and that from its strength and hardness and great durability it makes superior railway ties, even its fruit is valuable,

Its durability, strength, and fruit.