

Assuming that the population of New Zealand will be doubled in thirty-five years, then, taking the present demand for timber as a basis, and multiplying by two, the probable future demand at that time will be 716,000,000 ft. This, as we have already pointed out, is little more than a guess, but it can quite well serve its purpose here, since when the more accurate statistics are available that we recommend to be procured another much more reliable estimate can be made. Before leaving the subject under consideration, we beg to suggest, in view of the great importance of possessing a more reliable estimate than we have given, that the Government cause exact statistics to be procured regarding the output of the sawmills of the Dominion, and also of that of the travelling sawmills, which even now convert a considerable amount of timber grown on private lands. Details should also be given as to the amount of each class of timber, together with exact quantity used in each trade and industry. Even then, with such statistics as the above available, after deducting the timber exported, the total would not be sufficient, since no account would be taken of the wood from private plantations, &c., used as fuel, fencing-posts, and other purposes.

## 2. AS TO PARTICULARS *re* THE NATURE AND KINDS OF TIMBER LIKELY TO BE REQUIRED.

To answer this question at all fully a great deal of information would be required similar to that mentioned in the last section, but even more detailed, since not only would a knowledge be required of the class of timber used in each trade and industry, but particulars as to the sizes in vogue. Then there also comes in the estimated increase or decrease of any particular trade. Leaving the above out of consideration, there is no doubt but that the following classes of timber will be required in extremely large quantities: (1) Australian gums (*Eucalypti*) of various kinds, especially those yielding the most durable timber; (2) pines of various kinds for building-timber; (3) timber for the carriage of agricultural and other produce. Here *Pinus radiata* comes first, especially as it can be also used for a building-timber. Poplar timber also comes in here, and it is suitable for the manufacture of paper pulp.

## 3. AS TO HOW FAR THE OPERATIONS OF THE EXISTING STATE NURSERIES AND PLANTATIONS MEET THE PROBABLE DEMAND FOR TIMBER.

On the 31st March, 1912, the State plantations were 18,870 acres in extent. Taking the yields per acre as given by Maw,\* since we have as yet no reliable New Zealand data, it appears that the final crop of the following timbers is, in Europe: Silver-fir (*Abies pectinata*), 72,600 superficial feet; Scotch pine (*Pinus sylvestris*), 41,400 superficial feet; Weymouth pine (*Pinus strobus*), 51,340 superficial feet; and larch (*Larix europæa*), 38,400 superficial feet. Since no estimate is made of thinnings in the above figures, and taking into account the greater size that the trees are expected to reach under New Zealand conditions, we have decided on 50,000 superficial feet as the estimated average yield per acre of the State plantations when converted. The total yield, then, of the 18,870 acres would be 943,500,000 ft., which, at the present rate of consumption, would last 2·6 years. At the present rate of planting—namely, 2,566 acres in 1911–12—the total yield, when converted, would be 128,300,000 ft., which, at the present rate of consumption, would last about four months. The determination of the amount to plant yearly in the future will be the duty of the proposed Advisory Forestry Board, who will have more accurate statistics on which to base their calculations. All we can say is that, taking into consideration the expected increase in the crop as more timbers of a high yield are planted, at least two and a half times the acreage of 1911–12 should be planted.

\* "The Practice of Forestry," 1909, pp. 218–23.