

SIR,—

Department of Lands and Survey, Wellington, 2nd June, 1914.

I have the honour to state that the operations of the Forestry Branch of the Lands Department have been vigorously carried on during the past year. Eight and a half million trees were raised in the four State nurseries, about half being raised at Rotorua and the balance at the three State nurseries in the South Island. During the same period six and a half million trees were sent out to the State plantations; and at the 31st March last it was estimated that there were seventeen and a half million trees in the nurseries for planting out in the coming and following seasons. Since the formation of the nurseries in 1896 over sixty-five million trees have been sent to the plantations, and three and a half million trees to outside places.

The total cost to date of the seven nurseries (three of which are now closed) has been £118,392; but of this, however, £24,707 has been expended on permanent works.

During the year in the nine plantations in which operations are now being carried on an area of 1,825 acres was planted, making a total of 22,458 acres planted since 1896. The average cost per acre planted during the year was £5 17s. 5d., which is a satisfactory reduction on previous years. The total expenditure (inclusive of the estimated value of prison labour) since 1896 amounts to £186,041, of which £29,255 was on permanent works such as buildings, formation, fencing, roads, &c.

In the North Island the months of January, February, and March were, for the second year in succession, excessively dry, with the result that there were serious losses in the nurseries, especially with larch and *Pinus ponderosa* seedlings. Though in the plantations the effects of the drought were less severe, nevertheless small groups of larch planted in 1901 and *Pinus radiata* planted in 1904 were killed. In spite of the drought the trees planted during the season have thriven particularly well, and in this respect the season has been the most successful experienced.

It is to be regretted that the supply of prison labour was inconstant, as irregularity and uncertainty in this matter seriously disarrange the operations as schemed out for the season. An unexpected shortage in prison labour cannot readily be compensated by the employment of free labour, as it is not found desirable to have free men and prisoners working together. It is to be hoped that a more regular supply of the valuable prison labour can be arranged for future planting.

Owing to eucalypts varying so much in their characteristics several species are now being tried so as to ensure getting those best suited to New Zealand. As only a small proportion of the seedlings grown experimentally will be required, the balance will be available for distribution to farmers and settlers, as in this way a much wider range of climatic conditions will be tried, and the value of the experiment much enhanced.

As a further precaution against fire three huts have been erected at Whakarewarewa and two at Waiotapu for Rangers, whose sole duty during the dry season of the year will be to patrol the boundaries. The Rangers' huts are connected by telephone with the quarters of the officers in charge, so that immediate assistance can be supplied if required. One fire occurred at Waiotapu, but it was detected soon after starting and quickly put out.

The precautions taken against the grass-grub have proved most successful in the North Island, and practically no damage has been done this year by this pest.

Experiments will be tried next season with the valuable Scots pine (*Pinus sylvestris*), using seed obtained from Norway and Finland, as it is thought trees from these countries may succeed better than trees from British sources have done. Ceyennes, Tauric, and Calabrian varieties of the Corsican pine and various eucalypts will also be sown. At Whakarewarewa 1,200,000 *Pinus radiata* will be planted out.

I regret to have to record the death of Mr. Robert Glass, Assistant Forester at Green Lake Prison Camp.

In the South Island weather-conditions were particularly favourable for tree-growing at Naseby and Hanmer; but in the most southern nursery excessive rainfall was most detrimental to seed-germination and cultivation among transplanted trees. For the third year in succession at Tapanui climatic conditions have proved most adverse to tree-raising.

The acquirement of further areas for the extension of plantations is now a matter of urgency, as Conical Hills, Naseby, and Hanmer are nearly full. Experience has proved that in the South Island wind is one of the chief factors that determines the suitability of an area for tree-planting.

In spite of preventive measures the grass-grub has done much mischief in the nurseries in the South Island.

Five depots have been established for fighting incipient fires, and poplars are now being planted to serve as fire-breaks. About a hundred thousand trees were sent out from Hanmer Springs Nursery to plant reserves under the control of the Selwyn Plantation Board. A further hundred thousand are proposed to be allotted for the same purpose for the year 1914-15.