

APPENDIX A.

(1.) REPORT UPON AFFORESTATION OPERATIONS IN THE NORTH ISLAND.

(By H. A. GOUDIE, Superintending Nurseryman for the North Island.)

THE area planted during the year amounted to 1,430 acres, thus making a total of 25,057 acres planted in the North Island to date. Trees raised in the nurseries during the year are estimated at 8,756,000, while the total raised to date is 71,790,000. On the plantations the results generally are not as good as usual owing to the prevalence of frosts throughout the spring and early summer, which made the death-rate amongst newly planted trees greater than usual.

LABOUR.

A plentiful supply of unskilled labour has been available throughout the year, and at one time it was impossible to employ all the applicants for this class of work whom the Repatriation Department had available. The Waireka returned soldiers' employment camp has fulfilled a useful role in employing a class of demobilized soldier which it was difficult to reinstate into civil life. From a departmental point of view the employment of this labour is not altogether satisfactory, because a great number of the men regard the acceptance of the tree-planting work only as a temporary occupation, and in very many cases they remain for a short period only. The Department is thus debarred from working up a valuable asset in the shape of a staff of experienced workmen. The Maori workmen employed evince a greater desire to look upon the forestry work as a permanent occupation, and it appears as if the future operations of the Department in this district will in a great measure depend upon them. As a class they are splendid workers, fond of the outdoor life, quick to learn, and intelligently interested in the forestry work. The younger generation of Maoris have had the advantage of educational facilities not enjoyed by their fathers, and many of these young men could probably be trained to undertake the more responsible classes of work.

SALE OF TREES TO FARMERS.

Trees to the number of 185,890, and packets of tree-seeds aggregating 130 lb. in weight, were supplied to applicants during the year. The shortage of farm labour and the restricted railway service deterred many persons from planting. Experience has shown that the Department cannot hope to satisfactorily meet the whole of the demands from farmers in the North Island with trees from Rotorua Nursery because of the delay which often takes place in the transmission of packages on the railway. Packages consigned to towns in Hawke's Bay are never less than five days in transit, unless consigned in small lots by parcels rate, and consequently the trees are often in an unsatisfactory state when unpacked. In most cases the amateur tree-planter does not know how to treat such trees, and his losses are consequently a source of disappointment to him. When transport difficulties exist applicants are usually advised to procure seed and raise the trees they require. In this way much disappointment has been avoided, and the applications for tree-seeds have increased.

PRISON LABOUR.

The following schedule shows particulars of the work done by prison labour since the year 1900. During the year prison labour performed work to the value of £2,499 1s. 5d., this being dealt with in detail on the report on Kaingaroa Plains Plantation, at which station the prisoners were employed.

Summary of Prison Labour.

Station.	Year.	Period.	Total Value of Work performed.		Average Daily Number of Men employed during Period.	Average Value of Work per Man per Year.	
		Years.	£	s. d.		£	s. d.
Whakarewarewa Plantation ..	1904-17	12-58	12,518	7 10	12-86	77	7 7
Waiotapu Plantation ..	1900-13	12-08	24,665	2 6	30-22	67	11 3
Kaingaroa Plains Plantation ..	1919-20	1-00	2,499	1 5	23-62	105	16 1
„	1912-20	7-08	15,117	6 1	23-14	92	5 5

DAMAGE TO PLANTATIONS.

In the autumn of 1919 a noticeable amount of damage was observed in the pine plantations at Waiotapu and Whakarewarewa, which when investigated proved to be due to insects. Specimens of larvæ were secured, and these were identified by Mr. G. V. Hudson, F.E.S., as belonging to two genera of moths—viz., *Utenopseustis obliquana* and *Tortrix excessana*. The damage, although not widespread or sufficient to cause any deaths amongst the trees, appeared to be worst where the soil was poor and dry. All species of pines were attacked, and without further investigation it cannot be definitely stated that the insects showed a preference for any particular one. The caterpillars feed on the young leaves, the midrib of which generally gets gnawed through about the centre, thus causing the top end to hang over and wither. Trees affected present the appearance of having had their young shoots badly damaged by frost. During the autumn just passed a recurrence was observed, but the damage done is not as great as on the former occasion.