

ANNEXURE II.—REPORT UPON FORESTATION OPERATIONS IN THE NORTH ISLAND.

(H. A. GOUDIE, Conservator of Forests, Rotorua Conservation Region.)

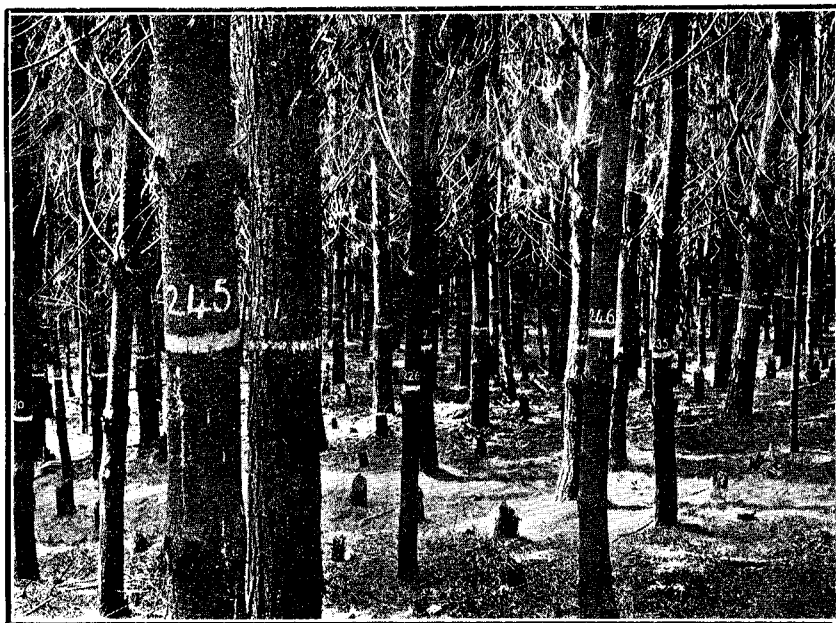
EXTENSION OF PLANTATIONS.

The plantations in the North Island, which now cover an area of 28,768 acres, were increased during the year by 2,681 acres, planted at the two Kaingaroa Plains stations. On the whole the planting has been very successful, the death-rate being estimated at 14 per cent. at Kaingaroa West and 10 per cent. at Kaingaroa Plains, or an average of 12 per cent. over both stations.

The extension work has been very accurately costed this year. Over the actual period of operations—viz., from October, 1920, to October, 1921—the costs, including labour, materials, salaries, and trees, were as follows: Kaingaroa Plains Plantation, £5 6s. 3d. per acre; Kaingaroa West Plantation, £5 4s. per acre. The labour charges have been reduced very considerably by the substitution of notch planting in lieu of pitting. It is estimated that the alteration in method will result in a saving of at least 15s. per acre in the establishment charges.

TREE-GROWING.

During the year 1,760,000 trees were raised from seed, the principal species being *Pinus ponderosa*, *Pinus insignis*, Douglas fir, *Cupressus lawsoniana*, and eucalypti in eleven species. The germination was satisfactory except in the case of *Pinus insignis*, of which a second sowing had to be made. After



(Govt. Publicity) photo.

RECORDING ANNUAL GROWTH: A SAMPLE PLOT IN THE WHAKAREWAREWA STATE FOREST.

many years of immunity from the ravages of the grass-grub this pest again made its appearance in the nursery stock, and was responsible for the destruction of close on 300,000 Douglas fir lined out during the spring. Hitherto the depredations of this insect have been confined to trees which have remained in the seed-beds for two years, and it is the first time in the history of the nursery that newly lined-out trees have been attacked. For this reason it was concluded that the insect concerned is a different species to the one hitherto prevalent in the nursery. The prevalence of large numbers of bronze beetles in the months of January and February makes it certain that the destruction was due to this species of insect.

HUTS.

Twelve small three-roomed cottages were re-erected on the plantations during the year for the plantation labourers. These buildings were economically erected by using two of the cell-huts which were taken over from the Prisons Department as a nucleus and adding a room, 12 ft. by 8 ft., and a 4 ft. 6 in. veranda. This improvement in accommodation has assisted very materially in retaining the services of good workmen.

LABOUR.

No difficulty was experienced during the year in obtaining a sufficiency of labour.

FIRE PROTECTION.

The erection of lookout stations on Mount Kakapiko and Maungakakaramea to serve the needs of Whakarewarewa and Waitapu Plantations respectively, as forecasted in last year's report, was