Following is a summary showing area in trees, &c. :—

Summary showing Area of Whakarewarewa Plantation (7,605·54 Acres in Trees).

How occupied.	Acres.
Larch	2,557·80
Pines	3,006·60
Blackwood	79·00
Eucalypti	1,468·70
Walnut	9·70
Spruce, *Picea, Pseudo-tsuga*	413·40
Birch	5·80
Alder	8·94
Poplar	1·20
Chestnut	54·40
Roads, tracks, and fire-breaks	483·23
Land unsuitable for planting, including swamps, creeks, horse-paddocks, residence reserves, and water-main reserve	1,490·23
Unplanted land	544·80
	10,123·80

Waiotapu Plantation.

(Assistant Forester, J. Mason.)

Afforestation operations have been carried out under much more favourable weather-conditions than have prevailed for the past two or three years. Rain fell on 151 days, with a total fall of 40·51 in. While this is considerably below the average, there was an abundant rainfall during the spring months, enabling the young plants to become established before the dry summer weather set in. Unseasonable frosts were fairly frequent, but not sufficiently severe to do any damage.

All the new plantings were of an experimental nature, and of the 118,500 trees received from the nursery 39,300 were utilized for this purpose. The Japanese larch were planted out on a new area at 8 ft. apart. The test is not altogether a fair one, as the only land available is poor, both as regards soil and shelter. The trees, which were a fine sturdy lot, have made very little growth, but are looking healthy enough. Weymouth pine to the number of 38,850 were used in underplanting larch and birch which had previously been thinned to about 8 ft. apart. It is, of course, too early to express an opinion as to how far this species will succeed as an underplant after the first thinning of larch, and it will probably be found necessary to wait until the second thinning is made before underplanting can be undertaken on an extensive scale. The best results were obtained on two small blocks where the larch were originally planted at 16 ft. apart with birch in between. The death-rate is practically nil where the underplanting has been carried out under the larger trees. Where the larch had been thinned without underscrubbing the pines have not done so well, but even then the losses are comparatively few. Good results were obtained from the trees planted to replace failures in former plantings; rabbits were responsible for some of the deaths in larch, but this must be expected where the young plantings adjoin fairly large trees, owing to the amount of cover afforded. The dry weather accounted for a number of deaths in the young Monterey pine, and it will be necessary to go over this area again.

The established trees have all made a good showing. The season's growth was in no way exceptional, but the absence of severe unseasonable frosts enabled the more tender species to make an uninterrupted growth. Larch and Corsican pine growing on tussock country, and Douglas fir, have probably never done better than during the past season.

Of the trees planted experimentally from time to time, the results obtained must be considered highly satisfactory, especially with those planted in later years when the available land was poor and sparsely covered with tussock and light fern, affording little or no shelter for the young trees. A few remarks regarding these trees may now prove interesting.

Acacia melanoxylon, planted in 1903, has made little or no headway excepting where sheltered by neighbouring pines, and appears to be entirely unsuitable for this locality.

Cupressus Lawsoniana is a splendid shade-bearer, and should prove to be useful for underplanting. At present it is in mixture with *Pinus ponderosa* and with *Pinus Jeffreyi*, but these mixtures are not a success, as they allow for the development of heavy side branches on the pines.

Pinus Coulteri, planted in season 1904, have made good healthy growth, showing an average height of 23 ft.

Pinus sylvestris, planted in 1904, and alongside the last-named pine, were completely killed out by the pine-aphis.

Plantings of *Pinus rigida* were made in 1904 and in 1907, and in each case splendid results have been obtained, the crops being both even and healthy; the younger trees being on an average 13 ft. high and the older 18 ft.

Two plantings of *Pinus Lambertiana* have been made, but in the open tussock country they have failed completely. Under favourable conditions the greatest height-growth for ten-year-old trees is 19 ft.

Pinus Murrayana has proved itself to be a remarkable grower, averaging 20 ft. after having been planted nine years, and in good seasons has shown an increase of over 4 ft.