will probably keep the prisoners fully occupied during the coming season. To provide access to this area, and also to that planted during the past season, four and a half miles of road sufficiently wide to carry a buggy and pair, and two miles of bridle-track were formed. The roads have been well graded, and will later on, as time permits, be widened for heavier traffic.

Proposals for 1915.—If sufficient labour can be obtained the remainder of the unplanted land within the present enclosure will be completed. All this land consists of steep faces covered with a dense growth of bracken, tutu, and other native shrubs, and consequently the cost of clearing and planting will be about the same as that incurred on the area planted in 1914. The trees available for planting number a million and a half, and are composed chiefly of *Pinus radiata*, Douglas fir, and *Eucalyptus Macarthuri*.

Summary showing Area of Whakarewarewa Plantation (6,808·74 Acres in Trees).

How occupied.	Acres.
Larch	2,557·80
Pines	2,458·80
Blackwood	79·00
Eucalypti	1,553·50
Walnut	9·70
Spruce, *Picea*, *Pseudo-tsuga*	134·00
Birch	5·80
Alder	8·94
Poplar	1·20
Roads, tracks, and fire-breaks	391·93
Land unsuitable for planting, including swamps, creeks, horse-paddocks, residence reserves, water-main reserve	735·16
Unplanted land	1,807·97
	9,743·80

Waiotapu Plantation.

The season ending the 31st March has probably been the most trying of any in the history of the plantation. Rain was recorded on 121 days, the total fall being only 29·36 in., while the average rainfall for the past six years is 47·08 in. The heaviest monthly rainfall was 6·60 in., falling in April. The highest shade temperature was 88° F. on the 28th January, 1915, and the lowest—15°—recorded on the 18th July and the 15th August. Frosts occurred on 137 nights, this being far more frequent than in past years, due no doubt to the dry weather experienced.

In consequence of the dry weather and frequent frosts, large numbers of failures are noticeable in the season's planting. The area planted consisted mainly of tussock land, this being the most difficult class to deal with in transplanting young trees, as very few species are found to be suitable even under the most favourable weather-conditions. *Pinus ponderosa* is undoubtedly the hardiest tree grown at Waiotapu, and even with this species the death-rate is 20 per cent. In *Pinus Laricio* the failures are at the rate of from 50 to 70 per cent., according to the situation of the different blocks. In this case the frosts were as destructive as the want of sufficient moisture. Larch is considered one of the surest trees to strike, and until the advent of the grass-grub it was rarely necessary to replace failures, the percentage being so small, but this season fully half will require replacing. *Pinus radiata* resulted in a complete failure, 8 to 10 per cent. being the estimate of living trees. This species is always difficult to transplant unless showery weather prevails at the time of planting.

Trees to the number of 869,775 were received from the nursery, these being supplemented by 13,900 *Pinus radiata* lifted from a block planted two seasons ago at 4 ft. apart. In planting an area of about 206 acres 432,750 trees were used. All the suitable land in the enclosed area at Waiotapu has now been planted. *Pinus Laricio* and *Pinus ponderosa* were planted at 4 ft. apart, and *Pinus radiata* and larch at 8 ft. In replacing failures in former plantings 450,925 trees were used. The average cost of planting trees at 4 ft. apart was 6s. 8d. per thousand; larch at 8 ft. cost 11s. 6d. per thousand. The cost of this work was increased by the fact that the pits, being dug four years ago, were difficult to find.

In the older portions of the plantation the trees have not been materially affected by the abnormal season. In a few instances the height-growth is hardly up to former years; but this is most noticeable in *Pinus Laricio*, with trees from 4 ft. to 5 ft. high growing on low-lying country, the growth being about half that of the previous seasons. On the 20th November 14° of frost cut back a great many Douglas fir and large larch, which up till then were considered to be out of the late-frost area. On a block of tall *Pinus radiata* (ten years old) several fine trees have died at the tops, due principally to the drought, and in a few instances to frost. Of the pines planted at different periods for experimental purposes *Pinus Massoniana* has made rapid growth, and will probably shake off the pine aphis in another year or two. The growth of this species, with *Pinus patula* and *Pinus teocote*, exceeds that of *Pinus radiata* at this early stage, and may prove useful for planting up heavy fern country. All other species continue to make good growth, with the exception of *Pinus Lambertiana*, which is not frost-hardy.

A working plan was prepared in connection with thinning larch, and a start made at this important work. Larch even when grown to perfection does not produce a first-class all-round timber, its uses being limited to railway-sleepers, scaffolding-poles, piles, &c., where strength rather than clean timber is required. This being the case, the thinning is made heavy, the number being