

WAIOTAPU PLANTATION.

The weather conditions at this station compared with those of last year have been considerably drier. The difference in rainfall amounted to 12·54 in., and in the number of days on which rain fell fifty-three. An unseasonable frost, registering 11 degrees, which was experienced about the middle of December, cut back this season's growth of Douglas fir, and also affected the larch growing on the low-lying country. The *Pinus ponderosa* var. *scopulorum* on Block 20 also were affected, but to a less degree, and these have now practically recovered.

Maintenance.—As the whole of the reserve is planted up, the majority of the work performed during the year has consequently come under the heading of maintenance, this consisting mainly of underscrubbing 330 acres of larch and about 30 acres of pines preparatory to thinning.

The upkeep of fire-breaks has also been a considerable expense. Owing to the dry weather and parching winds which prevailed during the summer months extra precautions had to be taken to guard against fire spreading into the plantation. On adjacent lands several fires occurred during the year, but in each case the fire-breaks proved to be most effective in preventing them from spreading into the plantation. In order to further reduce this expenditure the remaining interior fire-breaks suitable for grassing purposes were sown down in the early spring, and the result of this work, although not up to expectations, will at least answer the purpose for which it was intended, as it greatly benefited by the heavy rains which fell during the months of January and February. It can now in its present state be considered as a fair crop.

The areas thinned in Blocks 1 and 2 were underplanted with 12,000 Weymouth pine, these being planted as an undercrop to the larch. Good results were obtained with these.

A few deaths are noticeable among the *Pinus radiata* on Block 7. Although this compartment was badly affected last year by caterpillars, it soon made a speedy recovery, and the deaths cannot be attributed to this cause. It is probable that the trees are suffering from the effects of the dry weather. The caterpillar *Ctenopseustis obliquana* made its appearance this year, but confined itself to the *Pinus strobus* on Block 3 and caused no permanent damage.

The trees throughout the plantation, although they have not made the average height-growth, have done well considering the weather conditions.

Buildings.—A five-roomed cottage with the necessary conveniences was erected for the use of the plantation foreman. It is proposed to erect seven workmen's cottages during the coming year.

The average daily number of men employed during the year was 22·08.

Summary showing the Area of Waiotapu Plantation (9,206½ Acres in Trees).

How occupied.						Acres.
Larch	...	...	...	...	...	3,310·85
Pines	...	...	...	...	...	5,703·12
Eucalypti	...	...	...	...	...	180·50
Birch	...	...	...	...	...	11·95
Roads, tracks, and fire-breaks...	...	...	...	...	...	620·47
Unplanted land	...	...	...	...	...	278·66
Land unsuitable for planting, including swamps, creeks, reserves for horse-paddocks and residences	...	...	...	...	...	512·41
Total	...	...	...	...	...	10,617·96

Following is a record of the rainfall and temperature for the year :—

Rainfall, Temperature, &c.

Month.			Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
					Minimum.	Maximum.	
1919.			In.		Deg. F.	Deg. F.	
April	..	..	0·75	5	20	71	21
May	..	..	3·21	6	18	69	23
June	..	..	3·08	12	12	59	14
July	..	..	2·83	9	18	62	10
August	..	..	5·43	7	20	61	9
September	..	..	2·61	8	21	69	15
October	..	..	4·88	11	25	71	6
November	..	..	2·70	12	28	72	7
December	..	..	1·32	10	21	84	4
1920.							
January	..	..	5·78	14	31	83	2
February	..	..	5·53	11	31	84	1
March	..	..	3·98	8	31	74	4
Totals	..	..	42·10	113	..	..	116