

PUHIPUHI PLANTATION.

As may be seen by the record of rainfall and temperatures attached hereto, the past year has been a very dry one. In spite of this fact, however, the results obtained with the trees planted during last winter have been very satisfactory. An area of 250 acres (approximately) upon which totara had been planted some years ago was cleaned and burned, and replanted with *Eucalyptus resinifera* (red-mahogany) and its variety *E. resinifera grandiflora* (mountain-mahogany). The death-rate is estimated at 12 per cent. During the early summer the progress made by the newly planted trees was somewhat slow, but in the early autumn they began to freshen up, and since have made splendid headway. The mountain-mahogany is simply a large-fruited form of the red-mahogany, and it appears to be the better tree of the two for this district. From the seedling state it is ever so much more vigorous, and there is every indication that it will be a faster-growing tree than its congener. The seedlings used for planting were supplied from Rotorua Nursery, and were sent by rail and steamer packed in cases. Generally the time occupied on the journey was four days, but on several occasions the trees were in the cases five or six days, with the result that many were lost owing to them becoming heated. The losses due to delay in transportation amounted to 38 per cent. of the total trees sent, so that it will readily be understood that if planting was to be carried on on an extensive scale in this district it would be more profitable to open a small nursery at Puhipuhi to raise the trees. Fortunately the crop of eucalypts largely exceeded the estimate, owing to the especially good quality of the seed, so that the loss did not at all interfere with the planting proposals for the year.

It is proposed to plant another 150 acres during the coming year with mountain-mahogany and *Eucalyptus Macarthuri*.

The average daily number of men employed during the year was 5.21. Following is a record of the rainfall and temperature:—

Month.	Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
			Maximum.	Minimum.	
1914.	In.		Deg. F.	Deg. F.	
April	3.14	13	68	40	..
May	3.00	14	60	32	3
June	2.00	18	60	32	4
July	3.02	22	60	32	4
August	3.38	17	60	32	4
September	2.33	10	66	32	1
October	1.19	8	70	32	2
November	0.77	6	70	34	..
December	0.42	4	82	40	..
1915.					
January	0.99	6	90	46	..
February	0.51	6	92	40	..
March	7.42	12	76	40	..
Totals	28.17	136	..	..	18

REPORT ON AFFORESTATION OPERATIONS IN THE SOUTH ISLAND.

[By the Superintending Nurseryman, Tapanui.]

A general review of the year's afforestation operations reveals the attainment of very similar results to those specially commented upon in earlier reports. New experiences gained each year, however, enable the Department to put into practice methods having an economic bearing and improvement upon those superseded. Under separate headings are disclosed some of the leading features connected with the year's undertakings, and district reports contain information that will doubtless be valuable to persons interested in the progress of any particular tree-planting station. Certain abbreviations have been made in the compilation of returns this year, and as circumstances arise efforts will be made to still further curtail statistical matter. Several valuable ideas for giving publicity to our operations were discussed at a recent forestry conference in Wellington, but could not be judiciously introduced this year, as sufficient data were not available for accurate tabulation. Adverse climatic conditions have been instrumental in causing unusually severe losses in seedlings raised, particularly in the Otago nurseries, and perhaps the prevalence of constantly recurring high winds may be singled out as being the paramount cause of the minimized success. The intensely dry weather experienced at Ranfurly can be gauged from the fact that only 7.34 in. of rain fell for the six months ended December—a period over which a fair amount of moisture is essential if even moderately successful issues are to be the outcome of our tree-planting work. On perusal of Otago Central meteorological records it is possible to understand the disadvantages under which the Department has to labour there, although on our more recently acquired plantation area adjacent to the Naseby reservoir the rainfall not only greatly exceeds that registered on the plains, but precipitations are of a more frequent occurrence. It is indeed fortu-