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ANNEXURE III.—SUMMARIZED REPORT UPON STATE FORESTATION OPERATIONS IN THE SOUTH ISLAND.

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(By W. T. Morrison, Conservator of Forests, Canterbury-Otago Region.)

EXTENSION OF PLANTATIONS.

Operations at the various plantations have been successful, and a record new area was planted, a total of 2,192 acres being established.

Generally speaking, very good survivals have been obtained. At Greenvale 600 acres were established with a loss of only 4 per cent. over all, while the same applies to Naseby. In the majority of cases two-year seedlings were used, and it is evident that greater success attends the planting of this stock than was the case with older lined-out stock used in previous years. The former appear to be more vigorous and quicker to strike off than three-year lined-out stock, and the percentage of deaths is less.

The actual labour-costs of planting per acre are as follows—these are merely the actual wages covering planting, cartage, heeling in, and distribution:—

				£	s.	a.	
Greenvale Plantation		 	 	1	2	4	per acre.
Naseby Plantation		 	 	0	18	1	.,,
Balmoral Plantation		 	 	1	8	1	,,
Hanmer Springs Plantatio	n	 	 	1	1	9	,,

The general development of the established plantations has been excellent, and at both Naseby and Hanner Springs the wet season has induced almost abnormal growth.

TREE-GROWING.

A very successful year may be recorded as far as our operations are concerned in the South Island nurseries. Considerable advance was made with the line-sowing operations, and it appears that the preliminary work carried out in this direction can be substantiated by results obtained on a much larger scale and which prove that the theory of mass production by cheap and simple methods is sound. The total number of seedlings raised by this method during the year at the three stations totals 3,314,000 trees. Of this number, 2,349,000 are insignis pine, while the remainder are of various species, such as pondosa pine, Corsican pine, and Douglas fir.

The actual cost per thousand to date, including all principal charges, shows a very considerably reduced production figure as compared with the old methods. At Tapanui Nursery one-year trees cost from 5s. 8d. per 1,000 (main nursery) to 8s. 2d. per 1,000 (extension nursery).

For the purposes of comparison I give here the production-cost figures for previous years on the old system of sowing and lining out at Tapanui based on age-classes. This is, of course, an all-in cost, and includes all species of trees.

	Seaso		First Year.	Second Year.	Third Year.
1921–22 1922–23 1923–24 1924–25		 	£ s. d. 2 5 2 1 17 10 1 19 9 1 9 8*	£ s. d. 4 12 5 3 15 8 3 19 6 2 19 4	£ s. d. 6 18 5 5 13 6 5 19 3 4 9 0

^{*} Approximate only.

At Hanmer Springs nursery the line sowing has met with equal success, and costs show a very marked reduction. Accurate figures have been kept in regard to a block of 2,500,000 Corsican pine which were sown in 1922–23, and I give here the cost in connection with these in which all amounts chargeable have been covered, including supervision, proportional depreciation on departmental property, and interest, &c. The total cost of the trees per 1,000 to date of transfer to permanent quarters in plantation is 5s. $9\frac{1}{2}$ d. per 1,000. To have raised this number by the old treatment a charge would have to be included for lining-out of at least £750, for scrim covering approximately £100, frames £60, lifting and sizing £120. The actual saving represented, therefore, amounts to over £1,000, while the final output of trees would have been very much reduced by losses through lining-out. For the purpose of comparison, previous "all-in" costs at Hanmer Springs are as follows:—

Season.			First Year	Second Year.	Third Year.	
			£ s. d.	£ s. d.	£ s. d.	
21-22			 2 - 9 - 0	4 18 2	7 7 6	
22-23			 1 17 10	3 15 8	5 13 6	
23-24			 1 2 1	2 4 2	3 6 3	
24-25			 0 16 8*	1 13 4	2 10 0	

^{*} Approximate.

It will be noticed that the price has been steadily reduced since 1921, and this is mainly accounted for by the adoption of line sowing, discarding scrim covering, less elaborate methods of seed-bed treatment, and elimination of lining-out.