

so low. Wet weather was general throughout the summer months, and where the trees have become established the growth made is remarkably good. All species seem to have benefited by the plentiful rains.

The seedlings raised during the year number 4,615,400, and are valued at £4,588 15s.; and the number raised in the North Island to date is 42,956,687. Trees planted on new area during the year number 4,762,215, and occupy an area of 1,664 acres. The plantations now contain 29,329,105 trees, which occupy an area of 12,915 acres.

The output of trees from the nursery during the year was 5,320,230, details of which will be found on Schedule V attached to the Rotorua Nursery report, and the output of trees from the North Island nurseries to date is 35,907,037. The estimated number of trees in the Rotorua Nursery is 7,049,650, of which probably 3,500,000 will be transferred to the plantations during the coming planting season.

COST OF GROWING TREES.

Attached to the reports on each station are statements showing the cost of raising the trees and forming the plantations, and from these figures it will be seen that the cost during the year compares favourably with last year's figures. The cost of growing trees in a nursery for a single year can only be arrived at by keeping strict account of the labour expended on each crop, and as this involves an immense amount of clerical work it is thought that the average cost to date is sufficiently comprehensive for all practical purposes. To further explain the matter it may be pointed out that Rotorua Nursery sent out 5,300,000 trees, raised 4,600,000 from seed, and grew some 2,000,000 two-year-old trees during the year, making the total of trees dealt with 12,000,000-odd. If the expenditure for the year, with a proportion of the cost of property improvements, such as buildings, &c., added, is divided over this number of trees, the average cost per thousand runs out at 6s. 1d. This average is not strictly correct, and a more reliable cost would be got by adding this year's to last year's average of 6s. 1d., making the cost 12s. 2d. per thousand, because the trees are mostly two years old when sent out from the nursery. The average cost as shown in the summaries for Rotorua Nursery has this year been worked out in this manner. The cost of growing trees in a nursery is bound to vary each year, as the results depend largely upon the germinative quality of the seed. It has frequently occurred in Rotorua Nursery that the year's seed of a certain tree germinated at the rate of, say, 15 per cent., and the following year's seed of the same tree at the rate of 30 per cent., thus resulting in 100 per cent. more trees with practically the same expenditure in sowing, weeding, and other attention.

COST OF FORMING PLANTATIONS.

Waiotapu Plantation.

Most of the work done at this plantation has been undertaken by prison labour, and the expenditure on this station represents supervision, purchase of tools, erection of buildings, &c., with also a comparatively small expenditure on the employment of discharged prisoners. The actual cost of forming the plantations during the year was £2 5s. 5d. per acre, or 16s. 1d. per thousand trees. The average is higher than usual, owing to the expenditure incurred in the erection of buildings and other formation-work necessary for the new prison camp. To date the actual average costs are 12s. 4d. per thousand trees and £1 12s. 2d. per acre. Although no payment is made to the Prisons Department for the labour supplied, the value of the work done by the prisoners is accurately kept, and if this value is added to the expenditure the costs work out during the year to £1 9s. 8d. per thousand trees planted and £4 3s. 8d. per acre, while the costs to date are £2 0s. 2d. per thousand and £5 4s. 9d. per acre. These costs also include the maintenance of the areas planted.

Whakarewarewa Plantation.

The plantations at this station have for the most part been formed by free labour, and the cost is necessarily higher than at Waiotapu. During the year the plantations cost £4 3s. 9d. per acre, or £1 9s. 2d. per thousand trees; and to date £5 0s. 9d. per acre and £2 5s. 9d. per thousand trees. With the value of prison labour added, the averages for the year work out at £5 7s. 11d. per acre and £1 17s. 7d. per thousand trees, while the averages to date are £6 1s. 9d. per acre and £2 15s. 3d. per thousand trees. This plantation reserve has large areas which carry a dense growth of bracken, and the cost of the work, which also includes the maintenance, has thereby been much higher than at Waiotapu, where most of the land planted has been tussocky and required comparatively little labour in clearing and in maintenance subsequent to planting.

LIBRARY OF FORESTRY LITERATURE.

Several new publications have this year been added to the library, which now contains 150 volumes and reports, and the officers have made good use of the books generally.

The competitive papers this year show that a decided advance has been made in the study of forestry questions. Mr. R. Glass secured first prize, and the second prize was awarded to Mr. W. Montgomery. Papers on the progress of afforestation in the Rotorua district were asked for, as it was thought that the discussion of such a subject would indicate in how far each officer had studied the general principles underlying the work. Mr. Glass's paper will be produced in the report, as it contains much information relative to tree-growth in this district, both as regards the successes and failures.

For the future it is intended that individual officers should specialize in one particular branch. One or perhaps two will take up the study of insects and plant-diseases, and while