

## APPENDIX A.

## REPORT ON TREE-GROWING OPERATIONS IN THE NORTH ISLAND, 1910-11.

[By the Superintending Nurseryman, Rotorua.]

Afforestation-work at the North Island stations has been attended with much success, which is due in a great measure to the favourable weather experienced during the year. Although the rainfall was exceedingly low, it was fairly well distributed over each month of the year. One very dry spell was experienced during January and the greater part of February, but practically no losses were occasioned thereby. The record of rainfall and temperature attached to the report on Rotorua Nursery may be accepted as giving an indication of the weather experienced in this district generally.

In the nurseries, 3,316,250 trees were raised during the year, making a total to date of 40,004,573. The output of trees from nurseries during the year amounted to 4,626,921, and the number sent out to date is 30,586,807. Trees in nurseries at 31st March numbered 8,937,630. The difference between the sum of trees sent out and stock in hand compared with the number raised is 480,136, which represents deaths in trees grown at Ruatangata Nursery, 26,100 trees—totara—destroyed when the nursery was closed, and to a very large extent an overestimation of stock at that nursery for some years.

## COUNTING THE TREES.

It will be readily understood that for stock-taking purposes the only method of arriving at the number of trees in a nursery is by counting portions, and averaging the whole on the counts obtained. The numbers given in the schedules of trees in stock must therefore be understood as being approximate only. When sending trees out from the nursery they are counted into bundles, each containing twenty-five trees, so that the numbers given as being sent out may be relied upon as being accurate. It has been customary to show in the summaries and elsewhere the number of trees raised in each nursery from the time of its inception, and the best method by which this can be arrived at is by adding the total of trees sent out to the estimated number in the nursery. As a consequence, it follows that it is impossible to have an uninterrupted succession of figures balancing year after year.

Another question which has a close bearing upon this subject is the counting of deaths amongst the nursery stock. This is even more impossible than counting the whole stock. A 2-per-cent. death-rate in seed-beds containing 5,000,000 trees would mean the loss of 100,000 trees, yet such a loss, if evenly distributed over the beds, would not be noticed unless each of the deaths occurred at the same time. When stock-taking it has been usual to allow a margin for probable overestimation and losses. The total of seed-beds arrived at by averaging is reduced by one-third, and the lined-out trees by one-fifth, and this method has been proved to give a reasonably accurate count of the stock.

## PRISON LABOUR.

The work performed by the prison labour at the Whakarewarewa and Waiotapu Prison Camps during the year is valued at £3,347 7s. 4d., which shows an average of £98 15s. 5d. for each of the 33-89 prisoners employed. In placing a value upon the work done by prisoners, the cost of similar work performed by free labour is taken as a basis; thus, pitting is valued at 7s. 6d. per thousand, and this work by free labour during the year cost 9s. 1½d. per thousand. Planting is also valued at 7s. 6d. per thousand, and the cost of this by free labour was 7s. 3d. Much depends upon the class of land on which the work is done, and the cost by free labour varies accordingly. The rates of values as given above for prison labour is therefore considered fairly average ones.

Details of the work performed by prisoners during the year and since prison labour was first employed is here given:—

## Whakarewarewa Plantation—

Average daily number of prisoners employed during year, 10-44.

Average daily number of prisoners employed since camp started. 11-53.

|   | Value during<br>Year, 1910-11. |    |    | Value since Camp<br>started, 1904 to 1911. |    |    |
|---|--------------------------------|----|----|--|----|----|
|   | £                              | s. | d. | £  | s. | d. |
| Clearing land for tree-planting .. .. .             | 258                            | 10 | 0  | 1,287                                      | 4  | 8  |
| Pitting .. .. .                                     | 408                            | 11 | 3  | 481  | 11 | 6  |
| Tree-planting .. .. .                               | 47                             | 2  | 0  | 1,273                                      | 1  | 5  |
| Roadmaking .. .. .                                  | ..                             | .. | .. | 642  | 11 | 9  |
| Fencing .. .. .                                     | ..                             | .. | .. | 7  | 13 | 0  |
| Buildings, new erections and alterations to .. .. . | ..                             | .. | .. | 205  | 16 | 0  |
| Formation of fire-breaks, &c. .. .. .               | 75                             | 19 | 5  | 342  | 5  | 11 |
| General upkeep of plantation .. .. .                | 131                            | 15 | 0  | 1,049                                      | 14 | 3  |
| General repairs .. .. .                             | 11                             | 11 | 3  | 306  | 13 | 11 |
| Miscellaneous works .. .. .                         | 23                             | 11 | 4  | 91   | 3  | 5  |
| Totals .. .. .                                      | £957                           | 0  | 3  | £5,687                                     | 15 | 10 |