

is estimated at £3,953 16s. 8d., or an average value to each of the 3870 prisoners employed of £102 3s. 4d. These figures show that the average prisoner is capable of doing nearly as much work as the average free man. Most of the prisoners, too, take an intelligent interest in the work, and watch the results obtained amongst the trees planted, all of which tend towards making the work successful.

At Waiotapu the land within working distance of the camp will all have been planted by November, 1911, and after that it will be necessary to shift the camp on to a new block of land. For this purpose an area of 20,000 acres has been set aside, and preparations are now being made for laying off a camp site, land for a kitchen-garden and horse-paddock, and erecting shelter-belts. Roughly speaking, it is not profitable to cause the prisoners to walk more than two miles and a half away from the camps, as the time taken walking to and from the work reduces the working-day very much. If a camp is set down in the centre of a square block of 3,000 acres, and tree-planting is carried on within a 2½-mile radius from the camp, it means that the whole block is planted in four years, and the camp has again to be shifted. In order to avoid shifting the camp so often, it might be desirable to erect a central camp much on the same lines as the present ones, and have smaller and more mobile camps placed at some distance from the central camp. In this way it would be possible to fix the central camp in a position where it could remain for fifteen or sixteen years.

Fire-breaks.—With a view to reducing the labour in the upkeep of the fire-breaks, which are annually becoming of greater extent, some 50 acres of fire-breaks at Whakarewarewa and Waiotapu Plantations were, last spring, sown down in grasses and clovers with good results. It is proposed to graze these areas off with sheep, and in that way secure as efficient a fire-break as if the land was kept ploughed. Until the branches of the trees interlace sufficiently to prevent sheep from getting in amongst them the fire-breaks will need to be ploughed, or have the growth burnt off regularly. This would mean, roughly, that in the case of larch it would not be possible to graze sheep on the fire-breaks until the trees were five years old, and in the case of pines seven years old.

Subdivisional Plans.—The work under this heading comprised the subdividing of Whakarewarewa Plantation, but as the Waiotapu Plantation areas have not been completed, I have been unable to complete the tables showing the areas and ages of each species of tree planted. This return will be got under way as soon as the surveying of the plantation areas at Waiotapu is completed. A surveyor has been detailed for this special work.

DISCONTINUANCE OF TREE-GROWING IN WHANGAREI DISTRICT.

It has been decided to cease further tree-growing operations in this district, and the Ruatanga Nursery will therefore be closed on the 30th September next. The reasons that have contributed towards this decision are twofold. First, it is considered necessary, at least for the present, to concentrate the afforestation work of the North Island to one nursery, in order to make our plantations a success financially; and, second, the natural difficulties to be met with in conducting the work in this district are very numerous, and it is feared would make the work unprofitable. The difficulties referred to are such as may be expected in any district where the natural forest has been similarly exploited, and are alluded to in Appendix D.

The plantation at Puhipuhi will be left in charge of a capable officer, who will attend to such work as is necessary to protect the trees that have been planted, but no further area will be planted after this winter, the area planted to date being 1,616 acres.

TREE-GROWING IN ROTORUA DISTRICT.

The growing scarcity of native timber in parts of the Dominion is every year awakening some of our landholders to the necessity of providing for the future by forming small plantations of timber trees, and this is evidenced by the number of letters received, and by visitors to the nurseries, asking for advice and information as to the best sorts to plant. In many cases it is quite impossible to state what species of trees should be planted, as the conditions of the locality must be taken into consideration in each case. In the majority of cases all that can be done is to give the applicant a list of the hardiest of the economic trees, and also some information as to the best method to adopt in planting. At most of the plantations many different species of trees have been tried, with a view of testing their suitability to the various localities, but it has been found that comparatively few sorts can be successfully grown on cleared land without protection. Again, a species that will succeed on a hillside may be badly frosted if grown in a valley or a hollow, so that local knowledge must be brought to bear in conducting all operations. For general information, it may be well to first briefly state the general conditions necessary for the successful production of timber, and then to give a brief description of the principal silvicultural systems, and the result of the operations in this district since the work was started twelve years ago. These particulars are given in Appendix D.

H. A. GOUDIE,
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ROTORUA NURSERY.

(Approximate area, 85 acres; approximate altitude, 1,000 ft.)

The measure of success obtained at this nursery during the past year is somewhat below the average, the exceptionally heavy rainfall and the weather conditions generally having retarded the growth of some of the crops.