

beetle (*Odontria puncticollis*) has been successfully controlled by the use of scrim, and the damage to the young trees from this source is practically nil.

Corsican Pine (Pinus Laricio).—Wonderfully good growth has been made by these trees, 90 per cent. of which are large enough to be transferred to permanent positions in the plantations. The drought had no ill effects upon this crop, and no deaths have occurred. This species has again proved itself a splendid drought-resister.

Heavy Pine (Pinus ponderosa).—The dry weather has retarded the growth of this species to a considerable extent, and it will be necessary to keep 75 per cent. of them for another year in the nursery.

Two- and Three-year-old Lined-out Trees.

The pines and larch have made good growth. Douglas fir suffered severely from the drought, and about one-third of the trees died, while the remainder made poor growth.

Cost of Work.

Lifting, sizing, counting, and bundling trees for the plantations cost on an average 2s. 1d. per thousand. Lining out seedlings cost 1s. 10d. per thousand. The average cost of growing trees since the inception of the nursery is 18s. 6d. per thousand.

Manuring.

The green crops sown for soiling purposes have made splendid progress as a whole, and should be the means of increasing the fertility of the soil to a considerable extent. All the land set apart for sowing tree-seeds in 1914 was sown with either red clover only or red clover mixed with cocksfoot. In order to ensure a good sward, 8 cwt. of basic slag per acre was sown along with the seed, and the results more than justify the expenditure. An experimental sowing was made on one of the blocks by mixing basic slag and superphosphate in equal proportions along with the clover-seed, the sowing of the whole being done immediately after mixing. Judging by the result there does not appear to be any advantage derived from the addition of the superphosphate to the mixture. Germination took place as quickly and as well, and the growth generally was as good, on the plots where basic slag only was applied. The seed-bed plots have in the past received fairly liberal dressings of stable manure, and consequently the growth of clover on these plots is very good. On land which has never received stable manure—and this applies to the whole of the nursery with the exception of the seed-bed ground—the growth of clovers and other soiling crops is very slow, and it is always a question whether the soiling crops or the sorrel and other weeds will dominate. Artificial manures, no matter how heavily applied, do not appear to compensate for the lack of humus in the land, but they act very beneficially, provided the crop can be allowed to remain for about twelve months. Unfortunately the nursery area is not sufficiently large to allow of the land being left in a soiling crop for more than about eight months, consequently such slow-starting crops as clovers never attain to any great size before it becomes necessary to turn them under. Russian rye has been used as a soiling crop to a large extent during the past few years, and generally has done very well. This year, however, very poor growth was made by the rye, and as a result the benefits accruing from it are small. Most of the cereals tried for this purpose make very few leaves, and are in the ground only a short time before the flower-head begins to show. The rape, which was sown after the rye had been turned in, has not done as well as usual, but the exceeding dry and hot weather will account for the partial failure of this crop. The best autumn crop which has been obtained is a mixture of Cape barley and winter tares. This gives great promise of furnishing a large amount of leafage for turning under. The paddocks which were top-dressed in the spring with basic slag made remarkably good headway, and the expenditure on the manure has been amply returned in the shape of hay and green feed for the horses.

Trees to the number of 4,916,530 were sent out from the nursery during the year, and the total output since the inception of the nursery is 41,684,841. During the year 4,191,450 trees were raised from seed, which brings the total raised to date up to 50,260,941. Tabulated information with respect to the trees follows this report.

Proposals for 1914.

It is estimated that the number of trees available for sending to the plantations during the winter of 1914 is 4,750,000. These will be distributed between the plantations at Whakarewarewa, Waiotapu, Kaingaroa, and Puhipuhi.

Further accommodation for vehicles and implements is urgently required, and the question of renewing the foundations of the stable-building will also have to be faced at an early date. This building was erected in 1899, and the wooden foundations are perished in many places.

The average daily number of workmen employed was 28.03. Tables showing expenditure, &c., are attached hereto.

Following is a record of rainfall and temperature for the year.

H. A. GOUDIE,
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