

APPENDIX II.

SUMMARIZED REPORT UPON STATE FORESTATION IN THE FOREST CONSERVATION REGIONS OF NEW ZEALAND.

AUCKLAND FOREST CONSERVATION REGION.

Plantations and Nurseries.

Riverhead.—During the year the formation of an extensive plantation was commenced at Riverhead, at the head of Auckland Harbour. An area of 8,765 acres of Crown land was gazetted State forest, and steps are being taken to increase this area to 12,450 acres by the inclusion of other available lands adjoining. The accessibility of this area to Auckland by water, by rail, and by main highway, and its suitability for plantation purposes, makes it an ideal forestation project. The initial planting consisted of 42,500 trees on 53 acres, though, in addition, 32 lb. of seed were spot-sown on 29 acres. The trees made a good strike, but as yet only 33 per cent. of the sown spots carry seedlings. Further experiments with spot-sowing will be carried out, the seed being sown in May and June, instead of in October, and more attention paid to the covering of the seed.

An area of 40 acres near the Riverhead township and wharf was acquired for a nursery-site in connection with the plantation, and the nursery, with the necessary buildings and equipment, is now well established. The estimated tree-stock at the end of the year was 1,892,000 seedlings.

Pukipuhi.—The restocking of the partially unsuccessful eucalypt plantation established in 1904 was continued, and 39,250 trees of insignis pine were planted. It is proposed to plant up most of the remaining area with pondosa pine. The small plantation nursery carries a stock of 70,000 seedlings.

Waipoua.—The experimental planting commenced in 1924 on the open land on the edges of the Waipoua Kauri Forest is showing such promise that the vacant land between the experimental plots is being planted up to consolidate the plantation. During the year 77 acres were planted with 53,030 trees. The small nursery at the Ranger station carries a stock of 37,000 seedlings.

Buildings.

A cottage was built at Riverhead Nursery to accommodate trainees and workmen; also a large shed to serve as stable, workshop, and implement-shed.

Proposals for 1927-28.

1. Establishment of 3,500 acres of plantation.
2. Raising of 3,090,000 trees.
3. Topographic survey and layout of 3,000 acres at Riverhead, and 2,800 acres at the proposed new planting project at Maramarua.

ROTORUA FOREST CONSERVATION REGION.

Planting and Direct Seeding.

This region is still the main centre of the State's nursery and plantation operations. During the year 7,649,050 trees were planted on 12,729 acres at Kaingaroa. Planting operations commenced in April and were completed in November, and, as the season was favourable, a good strike was obtained, approximately 85 per cent. over all species surviving.

Experimental direct sowing was carried out on 2,408 acres, and it was noticed that the best results were obtained in land where there was a fair amount of low vegetation. Where the ground was too bare, damping-off occurred. The sowing was done with a Duncan seed-drill drawn by a tractor, the disk feed being adjusted to sow in spots at approximately 8 ft. spacing. The results to date disclose that too sparse a sowing was made; therefore the amount of seed will be increased in future to about 1 lb. of seed to 2 acres.

The total cost of tree-planting amounted to £1 2s. 2d. per acre.

Tree-raising.

Tree-raising operations at Rotorua Nursery and at the branch nursery at Kaingaroa gave excellent results. The total amount of seed sown was 3,005 lb., and the resulting crop is estimated at 22,500,000 seedlings. Of the stated amount of seed, 1,557 lb. was sown in open drills and 1,448 lb. in protected seed-beds. With insignis pine the average germination for line sowing was 8,740 per pound, and for protected seed-beds 8,540 per pound. The traying of eucalypts and *Cupressus macrocarpa* has given excellent results: 825,000 sturdy plants of the former and 112,000 of the latter will be available for disposal.

Thinning.

The total area thinned to date amounts to 979 acres comprised as follows: Waitapu Plantation—Larch, 448 acres; pines, 223 acres. Whakarewarewa Plantation—Larch, 216 acres; pines, 18 acres; eucalypts, 74 acres. Total, 979 acres.

During the year 90 acres of Corsican pine, insignis pine, and larch were thinned at Waitapu Plantation, and a further 94 acres was underscrubbed. The labour cost for underscrubbing Austrian pine was £1 6s. per acre, and for mixed Austrian pine and *Pinus strobus* £2 per acre. For thinning the labour cost was £2 13s. per acre.