

APPENDICES.

APPENDIX I.

SUMMARIZED REPORTS ON STATE AFFORESTATION.

AUCKLAND REGION.

Plantations and Nurseries.

Riverhead.—Planting at Riverhead Plantation was continued with an objective of 2,650 acres, but this was exceeded by 146 acres, which makes a total of 2,914 acres for the year, as compared with 2,615 for the previous year, and a grand total of 5,813 acres to date. Spot-sowing experiments were carried out in an endeavour to overcome the small-bird pest. The following species were tried: *Pinus canariensis*, *Eucalyptus eugenoides*, *Pinus pinea*, *P. halepensis*, *P. sylvestris*, and tung-oil, with fairly satisfactory results. The acquisition of additional small areas to remove what is at present a potential fire danger, and to improve existing boundaries, &c., is being proceeded with as opportunity and funds permit, and will, it is anticipated, be completed in the ensuing year. The trees in the nursery are estimated to total 3,517,400, and these will be utilized for future planting.

Maramarua.—As mentioned in last year's report, this area was acquired in 1927 for plantation purposes, and, following the usual preliminary work of roadmaking, laying off fire-breaks, erection of necessary buildings, &c., planting was commenced last season, when 2,860 acres were established in trees. The labour for these forestry operations was largely recruited from the unemployed in Auckland City, and, although the majority were quite inexperienced in this class of work, a few weeks' practice was, in most cases, sufficient to make them fairly efficient. These remarks also apply to Riverhead Plantation.

Waipoua.—Planting was continued on a small scale, and 16 acres were afforested with a large variety of species. Blanking of previous year's planting was undertaken, and 18,479 seedlings were used in this way.

ROTORUA REGION.

Tree-raising.—Climatic conditions have been favourable to nursery operations generally throughout the year. This, together with improved methods in soil treatment and technique generally, have combined to place the nurseries both at Kaingaroa and Rotorua in a very satisfactory condition. The total number of tree-seedlings raised for the season is estimated at 22,205,600, which makes a total of 31,686,200 young trees in stock. Seed sown totalled 2,968 lb., comprising *Pinus radiata*, *P. muricata*, *P. ponderosa*, and *P. Laricio* in open lines, and the remainder, principally *Sequoia sempervirens*, *Pseudotsuga Douglasii*, *Cupressus Lawsoniana*, *C. Benthamii*, *C. macrocarpa*, and a few eucalypts in protected beds. Very satisfactory crops of seedlings of all species have resulted, although in some species a little less vigorous growth would have been preferred. Trayed stock for farmers' sales is in excellent condition.

Tree-planting.—Trees totalling 16,885,000 have been planted out on 30,990 acres of Kaingaroa Plantation, and it is pleasing to record that, while the area thus dealt with exceeds all previous records, the establishment costs have again been reduced. This is particularly satisfactory, as a large proportion of labour employed was of the "relief" type, with little or no previous experience in such work. Weather conditions were generally favourable for the major planting operations, and good rains in the late spring and early summer had a beneficial effect on the newly planted areas.

Thinning.—Thinning operations have been continued on a small scale at Whakarewarewa Plantation, and material to a value of £73 has been removed under permit from an area of 28 acres, comprising principally compartments of *Pinus austriaca* and eucalypts. At Waiotapu Plantation 8½ acres of *Pinus muricata* were thinned for fuel purposes for the planting-camps at Kaingaroa. A small quantity of *P. Laricio* posts and poles were also obtained from this plantation for use by the planting-gangs. The whole area thinned to date from both plantations is 1,032 acres.

Tree and Seed Sales.—Trees to a total number of 4,169,050 were disposed of as follows: Sales to farmers, &c., 2,493,874; transfers of stock to other regions, 1,667,957; issues to schools, 7,219. The actual seed sold was 1,877 lb., while 418 lb. was transferred to other regions, and issues to schools accounted for 209 lb., making a grand total of 2,504 lb.

Fire Protection.—From a fire point of view the past season was much more favourable than the 1928 period, although on several occasions for short periods the fire danger was acute, and was accentuated by the location of railway-construction gangs on Taupo Road close to Whakarewarewa Plantation. This necessitated greater vigilance on the part of fire patrol officers than would otherwise have been the case, but valuable co-operation in this respect was received from the departmental officers in charge of the railway-works. New fire-breaks were laid off, and maintenance-work on old breaks carried out where necessary.

Equipment.—A Caterpillar tractor and a Russell Super-Mogul grader were purchased and placed in commission at Kaingaroa Plantation for road and fire-break work. These two machines are doing excellent work, have already justified their purchase, and are essential for coping with the extensive operations being undertaken on Kaingaroa Plains. The Ford motor fleet has been strengthened by the acquisition of two utility vans and two 30 cwt. trucks. A Bolens garden tractor was acquired for Rotorua Nursery. The use of this latter implement has greatly reduced the costs of weeding and the intercultivation of tree stock, and is particularly serviceable, as the soil at the nursery is free, light, and clean.