

CHAPTER III.—CONSTITUTION OF STATE FORESTS

27. *Changes in Area.*—During the year 76,032 acres were set apart as permanent and provisional State forest and 1,777 acres withdrawn from reservation, a net increase of 74,255 acres. The area under State forest reservation now totals 9,027,051 acres, equivalent to 13.6 per cent. of the land area of the Dominion. Of this total 6,089,488 acres are permanently reserved, being 67.4 per cent. of the total State forest area (see Appendix I). The purchase of land for post-war and rehabilitation projects is separately reviewed in Chapter XI (page 24, paragraph 98).

28. *Change in Status.*—A total of 146,779 acres of provisional State forest were permanently reserved; this area mainly comprised upland forest in the South Island. The area withdrawn from State forest reservation was made available for settlement purposes.

CHAPTER IV.—FOREST MANAGEMENT

29. *Surveys.*—Depleted staffs again greatly curtailed survey operations. In exotic forests 30 acres were topographically surveyed, and forest-type surveys were carried out over 1,045 acres. Timber-appraisal surveys of 131 areas of indigenous forest totalled 26,640 acres, while 5 areas totalling 3,239 acres were covered by forest reconnaissance. Aerial photographs have proved of great value for forest inventory and reconnaissance purposes and have effected a considerable saving of time and field work. Nine mosaic copies and 162 prints covering an area of 420 square miles were added to the library of aerial photographs during the year, while 17 duplicate mosaic copies were obtained for the use of conservancy offices. The library now contains 30 mosaics covering 980 square miles.

30. *Mapping.*—Owing to shortage of staff, work during the year was limited to current requirements and maintenance. Additions were made to 46 stock and operational maps, while 3 forest atlas sheets were renewed and 37 new plans were recorded. Large additions to the draughting staff are urgently required in order to overtake serious arrears in mapping work and to service post-war and rehabilitation projects, and a commencement has already been made in obtaining the services of returned servicemen for training in this activity.

31. *Forest-management Staff.*—One assistant forester returned from military leave and was reposted in charge of training duties at Head Office. Work connected with timber control and post-war rehabilitation projects again prevented the technical assistant staff from devoting anything approaching full time to forest management.

32. *Forest Working Plans.*—The cut of living or "green" kauri under the working plan for the kauri working circle was unavoidably exceeded to maintain supplies for the building of small naval vessels, and Ministerial approval of the excess fellings was recommended and sanctioned pursuant to the Act.

Growing-stock assessments were commenced in four exotic forests—Maramarua (3,050 acres completed), Kaingaroa (6,336 acres completed); Balmoral (1,063 chains of plot pruned and cut ready for enumeration of 17 compartments); and preliminary pruning and line-cutting were undertaken at Puhupuhi. In the younger of these forests insignis-pine stands are being assessed first, for working under a separate working circle. The assessment of Waitapu Forest was completed for all species, while that of insignis and prickly-cone pines on Golden Downs Forest was completed for 4,352 acres on 29 compartments, leaving 12 to complete. Working plans for four further exotic forests and two kauri forests are in draft form or in course of preparation. Blue Mountains Forest was subjected to a more logical and convenient subdivision into compartments.

CHAPTER V.—SILVICULTURE

33. *General.*—Labour available for silvicultural works was again limited to bare maintenance personnel. The area of new planting dropped further to 1,183 acres, and pruning and thinning were again possible on only 1 per cent. of the total planted area. Under present conditions attention is being confined mainly to blanking and restocking of existing compartments.

34. *Natural Regeneration.*—In the more open portions of kauri forest felled under working plan, kauri germination again suffered high mortality during the hot dry summer period, but it is quite satisfactory where side shade is provided by underscrub. A quantity of seed of manuka, the nurse shrub for young kauri under natural conditions, was collected for broadcast sowing in order to assist regeneration, which is also being supplemented by planting.

Natural regeneration of insignis pine in clear-felled compartments in Whakarewarewa Forest may now be termed successful, though planting of a small proportion of the compartments is of course necessary, mainly where mechanical extraction has bared and hardened the ground (see also paragraph 41, below).

35. *Interplanting Indigenous Forests.*—The small amount of planting stock available was utilized in stocking 95 acres of worked podocarp forest with shade-bearing exotic conifers.

36. *Afforestation.*—Only 1,088 acres of new area were planted with exotics, but 1,382 acres were blanked and 3,695 acres replanted. Planting and silvicultural statistics are presented in Appendix II. Indigenous- and exotic-tree seed collected amounted to 38½ lb. and 357 lb. respectively.

37. *Nursery Operations.*—From 1,044 lb. of tree seed sown (including 5 lb. of indigenous species) 2,583,000 seedlings were obtained; trees lifted for planting amounted to 4,860,000, while 298,000 trees were lined out. At the close of the year there were 7,500,000 trees in the nurseries.