

2. PROTECTION FORESTS.

So much has been published in the press, broadcast over the air, and spoken from the public platform during recent months regarding the valuable functions performed by our hill-country forests and the vital importance of maintaining the forest growth thereon in its virgin state that it seems unnecessary to emphasize the point here. Moreover, the matter was dealt with at some length in the report for the year 1935-36, to which the inquiring reader is referred.

It may be stated, however, for public information that the area of protection forest was increased last year by the addition of 111,779 acres of bush provisionally reserved in previous years, but now dedicated as portion of our permanent forest estate. Of this total, 107,100 acres comprised hill country in Nelson Conservancy. This important work of building up and consolidating the permanent State forest domain will not be allowed to flag, but will be pushed forward until finality is reached, although the magnitude of the task precludes its being completed for some years to come.

3. FOREST RECONNAISSANCE, TIMBER CRUISING, SURVEYING, ETC.

Indigenous Forests.

Forest Reconnaissance and Forest Inventory.—In both Herekino and Omahutu State Forests (North Auckland) a complete inventory of kauri of all-age classes was made in order to compile a report for "managed" kauri areas. Field-work in Herekino was practically completed, but at Omahutu the field-work including topography and inventory of species other than kauri was being extended.

An inventory of the kauri area in Waipoua Forest was commenced and was being made in conjunction with a topographical survey.

A detailed reconnaissance of some 12,000 acres of forested area in South Westland was completed. This data will be used for the inauguration of a working-plan and selective-cutting management.

In Nelson and Southland Regions a total of 3,630 acres was cruised and estimated to contain 24,214,000 board feet of timber.

Demarcation.—Over thirty-eight miles of boundary-lines were defined.

Forest Roads.—A total of eight miles of forest roads were explored, graded, and constructed. Four miles of tracks were similarly dealt with during the year.

Timber Cruising.—In State and provisional State forests 12,200 acres, containing 109,886,000 board feet, were cruised. For other Government Departments 6,860 acres, carrying 46,399,000 board feet, were cruised, and 477 acres, comprising 6,111,000 board feet, were cruised for private owners.

Topographical Surveys.—The topographical surveys of the kauri-clad portions and of the cut-over kauri areas were completed in Omahutu and Herekino forests; at Waipoua forest 2,400 acres were similarly treated.

Tramway Traverses.—In order to keep record of the progress of timber-cutting operations 704 chains of bush tramways were surveyed.

Aerial Survey Photographs.—An aerial survey of some twenty-six square miles of State forest in the vicinity of Reefton was carried out by officers of the Royal New Zealand Air Force. Aerial photography is the only practical means of defining rugged bush-edges, tracks, streams, &c., in easy or mountainous country. Under present survey methods the data are obtained by laborious hours on the ground. It is anticipated that when equipment is improved and a higher technique developed greater use will be made of aeroplanes for air-inspections of forests and aerial surveying.

Exotic Forests.

Topographical Surveys.—Only 2,200 acres were surveyed topographically. At Whakarewarewa Plantation the field-work was completed early in the year. A topographical survey was commenced of Puhipuhi Plantation.

Topographical Engineering Survey.—At Whakarewarewa and Conical Hills Plantations topographical engineering surveys were made of proposed mill-sites. Plans on a scale of 1 chain to an inch were prepared to show contours at intervals of 2 ft.

Road and Track Construction.—Over fifty miles of roads were carefully located and constructed; three miles of tracks were formed.

Plantation Inventory.—Stocktaking at Waiotapu Plantation was completed, and at Hanmer Plantation an inventory of 2,800 acres was made. An inventory of Puhipuhi Plantation was commenced.

General.—To provide Balmoral Plantation with an adequate water-supply a preliminary survey of the old abandoned water-race was commenced. This old race starts at the Hurunui River and runs for fifteen miles through the plantation. The old intake was swept away during a flood, and as the bed of the river has been lowered measurements of the river were commenced in order to determine the lowest level of the river during dry spells of weather.

Some little time must necessarily elapse before these investigations can be concluded.

4. STATE AFFORESTATION.

Table 4, which follows, summarizes the position of the exotic State forests and is self-explanatory.

It will be seen that the only tree planting of any consequence was confined to the Rotorua Region, where 5,568 acres on Kaingaroa Plains were afforested, as compared with 11,152 acres in the same locality last year.