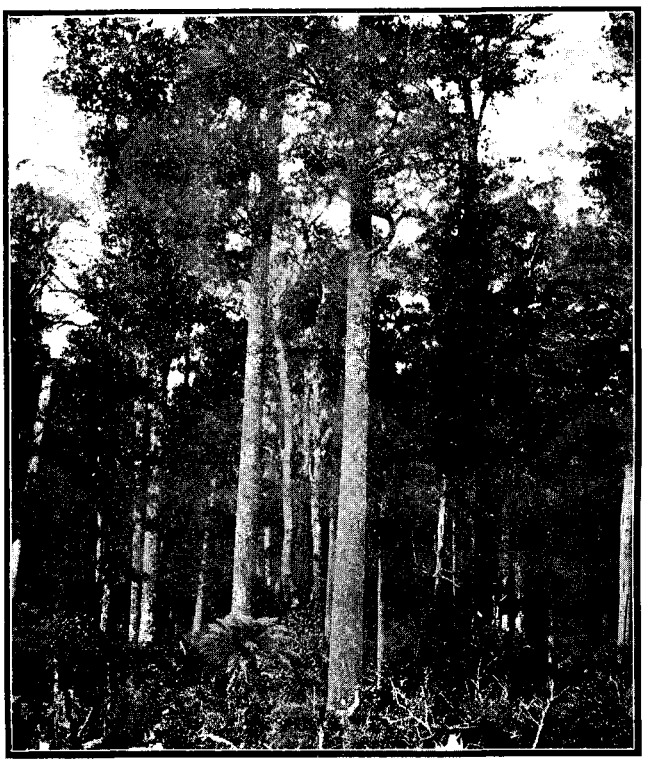
the present average budgeted appropriations—over the 5,000,000 acres of waste lands within twenty-five years, instead of in two hundred years. No more can be said concerning this important project, however, until a definite procedure has been perfected, which it is anticipated will be in two years' time. The operation of sustained forest-cropping on these lands, it may be noted, would make New Zealand the principal wood-goods supplier to the Empire.

Wider Use of our Indigenous Forests.

Forestry, in general, comprises not only the management of timber resources and the selected growing of future supplies, but also includes their conservation by wise use when the time of cutting arrives. A question of paramount importance, therefore, is, Can the waste material in the various phases of forest operations be economically utilized? The problem of maximum utilization is much more difficult to solve in New Zealand than in most countries, due to our small population, comparative lack of secondary industries, the growing inaccessibility of the native commercial forests, the small size of manufacturing units, and the relatively scattered consuming centres.



STAND OF MATAI ON AREA RECENTLY ACQUIRED BY FOREST SERVICE IN HAWKE'S BAY.

The Forest Service believes that the present wastage can be largely eliminated, and definite achievement has been made in forest-product researches and their application in industry and use. Results are recorded under the following headings:—

Timber Mechanics.—Determination of the mechanical and physical properties of five species of timber. Green tests conducted on redwood and black-beech, and air-dry tests on redwood, black-beech, Douglas fir, matai, and miro. Green tests on structural timbers of insignis pine completed, and air-dry tests commenced. Cross-arm tests of air-dry beech and hinau. Design of a new standard cheese-crate for export service. Further testing and extension of types of butter-boxes suitable for export service; routine tests and specifications for box-binding in connection therewith. Strength tests on standard-sized buggy-spokes of manuka, ironbark, and hickory. Complete strength and physical tests of New Zealand and foreign manufactured plywood.

Timber Physics.—Detailed microscopic investigation of heart-wood and sap-wood zones in rimu. Microscopic study of insignis pine commenced. Study of fibres of New Zealand native and exotic wood for suitability for paper-manufacture commenced.

Wood-preservation.—Open-tank treatments developed for all native and exotic timbers suitable for fence-posts. Installation of treated experimental fence-posts.

Derived Products.—Examination of New Zealand native and exotic woods suitable for paper-making commenced on a laboratory scale. Bleeding of kauri-trees and utilization of bled gum commenced.

Industrial Investigations.—Statistical survey of timber and allied industries for past twenty years completed. Effect on butter of nails, wires, &c., exposed on inner surface of boxes. Suitability of sap rimu as a butter-box wood. Prevention of tainting of butter packed in wooden boxes. Studies of floating properties of New Zealand timbers commenced.