

indigenous resources for timber production, it has been deemed necessary to institute, in addition, experimental underplanting and interplanting of the indigenous forests and cut-over lands with timber-producing exotics. It is no less an essential activity than the experimental indigenous forests themselves.

UTILIZATION.

It is a truism that the forests are unable to contribute their full share to the welfare of the country unless the wood they produce is fully and economically utilized. New Zealand has long passed the time since its indigenous forests grew more wood than the country required, and the necessity for efficiency in harvesting and conversion is therefore the greater. What of the future? It is not impossible that the exotic forest capital resource now being established will yield a surplus over the country's demands, even allowing that the supplies of virgin indigenous timber will be rigidly economized. Such a possibility calls for a twofold study of national significance—one, economic, covering basic industrial and transport factors, and the other, research, covering the scientific utilization of the entire range of wood products ranging from fuel to cellulose derivatives. Their economical production in order to compete in the world's market is the objective which is now being pursued.

Taken at their face value, the difficulties appear insuperable. High wages, heavy transport costs, excessive chemical costs, onerous power-costs, badly-spaced trees, poor-shaped logs, knotty timber, high forest investments, expensive maintenance—these are but a few of the difficulties hindering the development of overseas markets. But if no local protected market is available, must the surplus be left to decay? Or is there a residual value to all concerned? This is one of the numerous questions which it is hoped to answer.

CHAPTER I.—MANAGEMENT.

1. AREAS UNDER CONTROL.

The total area of forests controlled by the State Forest Service is now 8,354,861 acres, as against 8,122,690 at the end of the year 1937–38, an increase of slightly less than 250,000 acres. Actually the year's proclamations in terms of the Forests Act aggregated 259,825 acres, but during the same period 26,675 acres were withdrawn from reservation. The dedication of bush-clad Crown lands as State forests is steadily proceeding as from time to time new tracts of country are examined and classified as unsuitable for farming purposes.

TABLE 1.—SCHEDULE OF AREAS OF STATE FORESTS AS AT 31ST MARCH, 1939.

Forest-conservation Region.	Permanent State Forests.		Provisional State Forests.		Totals.	Percentage of Total Area of Region under Reservation.
	Ordinary.	National Endow- ment.	Ordinary.	National Endowment.		
	Acres.	Acres.	Acres.	Acres.	Acres.	
Auckland ..	372,042	82,430	121,147	14,006	589,625	6·86
Rotorua ..	443,945	246,216	133,073	77,039	900,273	17·91
Wellington ..	1,064,162	65,891	31,523	7,649	1,169,225	7·81
Nelson ..	581,603	121,615	982,725	629,493	2,315,436	33·04
Westland ..	621,183	163,304	500,999	423,882	1,709,368	44·24
Canterbury ..	433,046	3,647	..	..	436,693	4·39
Southland ..	529,101	56,234	635,166	13,740	1,234,241	7·27
	4,045,082	739,337	2,404,633	1,165,809	..	..
Totals ..	4,784,419		3,570,442		8,354,861	12·58