

SAWMILLING SECTION.

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Special Summary on Sir David Hutchins' Report, by Chas. E. Wheeler.

Sir David Hutchins' report on the Kauri Forests of the North, and Forest Management, is a bulky compilation of two hundred pages. As it is entitled "New Zealand Forestry, Part 1," we may expect further productions from Sir David's prolific pen. Though we anticipate that our practical sawmilling readers will not completely agree with the official forester's views, especially his very optimistic estimates regarding the reproductive power of New Zealand forests, the importance of the report, and Sir David Hutchins' good standing as a forester, warrant a fairly lengthy summary of the document.

Commencing with a historical review, the author deplores the burning and waste of our kauri forests.

"It has taken the calamity of this great war to rouse attention to the fact that careful demarcation and judicious redemption may still restore a large part of the Kauri forests. Kauri seed remains long dormant in the ground; Kauri seedlings endure most evils short of being burnt, and fire-protection is so easy that it will go with forest-development and scarcely be thought of. The task now before the country is to build up national forest estates by raking into the national net every acre of Kauri forest or land where Kauri forests can profitably be restored!"

"Kauri, with half a million acres of demarcated forest, could still pay the cost of the war—perhaps twice over.

An energetic policy of demarcation and redemption, put in force at once, would find half a million acres of restorable Kauri forest without much difficulty. It would mean little more than sixteen times the area of the Waipoua Forest. From inquiries which I have made at the Lands Department and a study of the coloured land-tenure map (May, 1916) issued by the Lands Department, it seems clear that demarcation and redemption can certainly secure half a million acres of restorable Kauri forest in Coromandel Peninsula and Hokianga (north and east of the Waipoua and Waramara Forests)."

Sir David Hutchins refers to the methods of forest management in France and Germany, and claims that this half million acres of Kauri forest, cultivated as he suggests, would settle 6,666 families on the soil, earning good wages. Working half on small farms, and half in the forest, as in Europe, the population supported would be some 1,000,000. The country would be opened up with roads and parcelled out into farms and demarcated forest, the latter enclosing some small valley farms suitable to *la petite culture* (home farming) scattered throughout the demarcated forest areas.

"I here take a general average of 200 acres of

forest to support a family. But if we take European figures the employment in valuable forest, such as Kauri forest, would be at the rate of one family per 75 acres. Probably about 200 acres per family may be taken as a general average of employment when once New Zealand forests were got into order as cultivated forests. Further, with the powerful sun of New Zealand latitudes, the ample rainfall, and generally rich soil, together with the unique timber market of the Southern Hemisphere, both forest production and population may be expected to eventually rise higher than in Europe. It seems quite reasonable to expect that with its normal area of 16,000,000 acres of national forest there will eventually be a permanent forest population in New Zealand of between 1,000,000 and 2,000,000 souls. The small English war-insurance forestry scheme of 2,000,000 acres only (with 1,770,000 as a war precaution) is calculated to permanently settle on the land 25,000 families—say, 125,000 souls—or in the proportion of one man per 71 acres."

Kauri, a Quick Grower.

Discussing the Kauri rate of growth, Sir David quotes the experience of the Hon. E. Mitchelson with some trees planted in his garden at Remuera. "At twenty-three years of age the following diameters: Kauri, 10in.; Totara, 13in.; Rimu, 8in.; Puriri, 9in. I remeasured these trees in 1916 and found the growth well maintained." Other authorities (Capt. Campbell Walker, Mr. J. C. Firth, and Dr. Hochstetter) are quoted as showing their opinion that the Kauri rate of growth is double the average rate of normal timber-growth in the pine forests of Europe. The author spent a day in measuring the growth-rings of felled Kauris near Dargaville, and his conclusions support the contention that Kauri is a rapid grower. "Kauri," he concludes, "grows in thickness nearly twice as fast as the five chief European forest-trees, and in height-growth 2.3 times as fast. It grows about as fast as the quick-growing Cluser-pine of Southern Europe." This leads him to give the following advice: "Conserve the native trees, for they grow about twice as fast as European forest-trees; but if one has to go to the expense of planting, use introduced trees, and take the risk of disease or other failure."

Gum Bleeding.

Sir David deals very comprehensively with the practice of gum-bleeding or resin-tapping. He shows that this is regularly done in European forests, while in India it is being practised increasingly, with the best results. If properly conducted it cannot injure the timber. In fact, Sir David suggests that it may