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has been questioned only by Mr. Perrin, who states in his report (page 39), "I do not agree with the great-age theory as applied to the kauri and other New Zealand timber trees. . . . I was only, however, three days in the kauri forests, so that I tremble at my own temerity in thus attacking fables of hoary antiquity." I prefer to accept the opinions of such able experts as Blair, Balfour, Buchanan, Kirk, and others, who have frequently made use of the annual-ring system in estimating the ages of trees.

estimating the ages of trees.

Mr. J. W. Hall, of Parawai, Thames, has devoted considerable time to the cultivation of native trees during the last thirty years, and the results attained in the growth of several species

are as follows :-

Name.		Girth.		Height.	When planted.	Present Age.
		Ft.	in.	Ft.		Years.
Kauri (Agathis australis)		1	10	36	1877	24
,, ,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1	11	34	1878	23
Puriri (Vitex littoralis)		4	4	39	1872	29
, , , , , , , , , , , , , , , , , , , ,		2	10 	36	1877	24
Matai (Podocarpus spicata)	٠	0	$7\frac{\vec{1}}{2}$	14	1877	24
$\Gamma otara (Podocarpus totara) \qquad$		2	9	42	1873	28
, , , , , , , , , , , , , , , , , , , ,		2	4	39	1873	28
Miro (Podocarpus ferruginea)		1	1	16	1876	25
Kahikatea (Podocarpus dacrydioides)		1	6	35	1876	25
Rimu (Dacrydium cupressinum)		1	10	33	1873	28
" " " " " " " " " " " " " " " " " " " "		1	11	35	1874	$\overline{27}$
" "		1	6	22	1878	$\overline{25}$
Kawaka (Libocedrus doniana)		1	11	24	1875	$\frac{-6}{26}$
Canekaha (Phyllocladus trichomanoid	es)	1	7	32	1876	$\frac{-5}{25}$
" " "		$\bar{1}$	9	30	1878	$\frac{23}{23}$

All the above were planted as seedlings of an average height of 6 in., and the measurements

were taken on the 7th August, 1901.

These records, although of considerable interest, are of little value in determining the approximate age when any of the species will be matured for felling. As before mentioned, comparatively rapid growth is made in their early stages up to a certain point, when further development is almost imperceptible. Blair gives the approximate age of a mature rimu as 400 to 650 years, a totara as 470 to 800 years, a kauri as 600 to 3,600 years, and a kahikatea as from 370 to 600 years. Accepting these figures as a rough estimate, or even allowing one-half the period he mentions as a fair average for the maturing of any one of the species named, would the Department be justified in planting any of the above trees with a view to providing for the wants of the future, when two, or even three, crops of exotic trees, such as oak, larch, spruce, Oregon pine, redwood, or eucalypti, could be produced within the same period that one crop of native trees would take to reach maturity.

Not only this, but it is well known that most of our native timbers are comparatively worthless to the sawmillers when, say, only 12 in. in diameter. All the exotic trees mentioned are, however, useful either as fencing-posts, rails, sleepers, or for ordinary building purposes when a comparatively small diameter only has been reached, and thus the necessary thinnings from such plantations can be utilised with profit. Such is not the case, however, with rimu, kauri, and other native trees. To produce marketable timber free of knots trees must be planted so thickly together that the formation of side branches of a large diameter is impossible. When a too crowded state is reached thinning must be resorted to, otherwise in the struggle for existence they will interfere with one another to such a degree that all will be more or less worthless through want of space for natural development. For what purpose, then, can the thinnings of an artificially formed native-tree plantation be utilised? In the first instance, at least twelve hundred young trees must be planted per acre, but by the time maturity is reached there will probably be only a hundred of these remaining as the final crop. As already shown, these thinnings are of no commercial value—except, perhaps, as firewood—so that no less than eleven hundred trees must of necessity be wasted.

No easily and cheaply raised exotic trees would be suitable to act as "nurses" to these, owing to their inability to withstand the requisite amount of shade and moisture necessary for our native trees to flourish; and even if a suitable "shade-bearer" could be found its rate of growth would be so much superior to the varieties composing the ultimate crop that it would practically take possession of the soil, as do all introduced species from the Northern to the Southern Hemisphere. Further, there is the attendant labour in preventing the suppression of native trees by the undergrowth necessary for their establishment during, say, a period of twenty years, the cost of which alone would render the proposal prohibitive.

I believe, however, that puriri, totara, Fagus, and kowhai should be planted by the State in certain favourable localities and in comparatively small numbers, thus affording an opportunity of obtaining accurate data for future guidance. The value of these timbers is unequalled for certain technical purposes, and from close personal observation I am convinced they will produce useful timber within a century.

Replanting with Exotic Trees.

However desirable it would seem to regenerate our native forests, the difficulties and attendant high cost (without reasonable prospect of an adequate return) renders the proposal prohibitive, at any rate so far as extensive operations are concerned, and we must therefore look to other countries for suitable trees to provide our future timber-supply.

During the seven years this Department has been inaugurated a vast amount of information has been gained regarding the results of the more common kinds of exotic timber trees in varying soils, situations, and under widely different climatic conditions. This information has unfortunately