ture both by the leafy canopy covering the earth, and the decaying leaves on the surface of the ground retaining the rain, and regulating its distribution. In addition to the benefits derived by the presence of forest-lands in ameliorating the climate, decreasing excessive evaporation, and consequent dryness of soil, the effects of heavy gales would be greatly diminished, in being split up by striking forest areas, as well as their becoming charged with moisture, and thereby considerably lessening their damaging effects on crops and vegetation generally. This would be of special benefit in Canterbury, where the heaviest gales are usually hot ones. For these reasons, the conservation of existing forests, especially on steep mountain-sides and at the sources of rivers and streams, should not be overlooked; and it is to be hoped that effective means will be adopted to reserve larger areas than any reservations yet made in such localities, even if the timber is at present or ever likely to be of commercial value. Steep, forest-clad hills being suddenly cleared of their vegetation, the shallow layer of soil would soon follow, by being swept down to the rivers by heavy rains, and future planting become a work of great difficulty or even an impossibility in such localities; and this would be succeeded by the drying-up of springs, lessening of streams and rivers during dry periods, and the increase of storm-water in times of rain.

Let us now consider what indigenous trees are suitable for timber-planting. In consequence of nearly all New Zealand trees being surface-rooters, the effects of wind and sun on the surface of newly-formed plantations would be certain death in a very short time. The only method likely to succeed is by replanting existing forests that have been already cleared of the largest marketable timber, of which there are thousands of acres in the colony, and a system of judicious thinning of saplings, especially in Fagus woods. Such bush-land usually contains a fair sprinkling of good growing timber, but not of sufficient value to warrant their being left to nature without utilising the intervening spaces. Patches of undergrowth between these trees could be partially cleared and replanted by natives, and from my experience in raising and growing nearly all our forest flora during the last fifteen years I have no doubt they would do well, provided animals of all descriptions were carefully excluded. There are, however, two kinds at least that will grow under the same conditions as exotic trees—viz., totara and five of the species of Fagus. I cultivate these trees in ordinary garden soil without any particular treatment, and find they do remarkably well, especially Fagus, which makes, on an average, thirty inches of vertical growth per annum. The extensive forests of Fagus which prevail in both Islands will renew themselves without artificial means being adopted if moderate precaution is exercised in felling and hauling the mature timber already existing in large quantities; and judicious thinning of the young saplings would be of much service in securing a more even crop of timber, and regulating the growth so that crops could be obtained at relatively short periods. Many people may say that our beeches are not worth preserving for timber, but against this there is evidence of much carelessness in selecting trees. It is well known the best results can only be obtained by felling mature trees at the proper seasons. Perhaps no class of native timbers requires so much care in selecting as the beeches, if the timber is required for outside purposes. Trees past maturity are always found to be decayed at the heart, while immature ones are useless for most purposes. Even leaving aside durability, there is the value of their bark for tanning purposes, all varieties, I believe, being more or less suitable for this purpose. But for climatic purposes alone it would be judicious to maintain and extend our beech forests, as they occur throughout both Islands at the source of most of our important rivers, and on high country generally up to over 4,500ft., in all covering an area greatly exceeding that of our lowland bush-country. I am fairly safe in asserting that this is the only genus of New Zealand trees likely to survive for any indefinite period of time. Another advantage of growing beech timber is that it is not attacked by rabbits. Here let me call your attention to what is, I consider, the greatest difficulty in creating new forests in this colony. I refer to the rabbit-pest. True, we can enclose our areas with netting, but it is almost impossible to prevent a stray rabbit from gaining admittance to the enclosure, and the damage done in a single night to a young plantation is much more than one could estimate.

Totara is very slow in the South, and I am not inclined to recommend it for planting except in the North Island, where it may probably produce timber before the millenium. But I am probably rash in making such an assertion; I had quite forgotten that Mr. Freyberg was interviewed by a representative of a Dunedin paper lately, and that that gentleman threw a considerable amount of light on the growing of totara. One or two of his statements show how absurd our ideas have been, and what a delusion we have been labouring under with regard to the propagation and growing of this tree. I may say that I do not concur in that gentleman's opinions. I have already pointed out that it is impossible to plant the majority of New Zealand trees except in bush-clad lands, and will now say a few words regarding the age some of our forest-trees must obtain before reaching maturity. The following table taken from the "Forest Flora," and the late Mr. W. N. Blair's book on "Building Materials of Otago," will show the approximate ages of our commonest timbers:—

Name.	Approximate Ages.	Name.	Approximate Ages.
	Years.		Years.
Manuka	100 to 250	Red-pine (rimu)	400 to 650
Rata	200 to 450	Yellow-pine	300
Broadleaf	340 to 700	Silver-birch	150 to 330
Pokaka	200	White-birch	80 to 180
Miro	150 to 300	Kauri	600 to 3,600
Totara	470 to 800	Cedar	150 to 400
Black-pine (matai)	270 to 400	Red-birch	130 to 300
White-pine	370 to 600		