

53. And in the bush at the head of the Freshwater River going to Mason's Bay?—Not at present, because it is too far away.

54. Do you know the silver-pine?—Yes, in the wood, but not in the tree.

55. Do you know the pine called "yellow-pine" in Westland: in Stewart Island I think they call it "bog-pine"?—Yes.

56. It is mostly very small, although it is an extremely durable wood?—Yes.

57. It is not big enough to cut for railway-sleepers?—No.

58. *The Chairman.*] Where the kahikatea has been cut and milled, is the land then found to be good agricultural land?—Yes, some of the best in the district when drained. It is not swamp land, but just wet land, and the soil is good when drained.

59. If land containing kahikatea bush were locked up indefinitely it would tend to bar the development of the dairying industry?—I should think so.

60. *Mr. Murdoch.*] Do you know of any other wood in this locality which would be suitable for butter-boxes when artificially treated?—No, but I think this brown-birch would be worth trying.

61. *Dr. Cockayne.*] Why should you not try the *Fagus fusca* as well?—We have not any within easy distance. The nearest is at Five Rivers and Burwood.

DUNEDIN, TUESDAY, 11TH MARCH, 1913.

ALEXANDER BATHGATE SWORN and examined. (No. 5.)

1. *The Chairman.*] We were very pleased to receive your letter, Mr. Bathgate, on this question, and shall be glad to hear any further remarks you wish to offer?—I wrote that letter in order to interest you on the question of afforestation in Central Otago. A little has been done at Ranfurly and Naseby, but operations should be prosecuted more vigorously in that district, as the country in the Molyneux Valley, from Alexandra up to Lake Hawea, is eminently suitable for fruitgrowing, and afforestation will still further improve it. Supplemented by irrigation, its future will be beyond question. A large part of that area could be cultivated by the dry-culture methods adopted in some of the States of America, and the Dunedin Expansion League has urged the appointment of an expert on this matter. Whenever the lease of one of the grazing-runs falls in it should be divided into smaller areas and dealt with on the methods I suggest, afforestation reserves being made in connection therewith. There is no other land in the district available for afforestation; and in the future there will be a great demand in the district for timber for fruit-boxes. The first planting in this district was on low land at Naseby, but I would like to see, in the Molyneux Valley especially, a reserve half-way up the mountain-sides for planting purposes. I think the larch would grow to a very considerable elevation, and pines. Severe frosts occur in that district. As to water-conservation, in that dry country it is necessary to preserve the water-supply for irrigation requirements, and under afforestation operations the flow of the river would be augmented. The Manuherikia River never runs dry, but many of the streams do in summer. It is not necessary that timber for fruit-cases should be of first-class quality. *Pinus radiata* might be planted, as it is quick growing, and would make excellent timber for the purpose. The poplar also does well there, and I suggest that this tree should be planted where the country has been subjected to dredging operations. Thirty years ago some land forming part of the High School endowments at South Taieri were placed on the market, and the plan showed afforestation reserves, but nothing has been done there in that direction. Afforestation would prove beneficial to the valley by providing breakwinds.

2. What is the area?—32 acres, 55 acres, 49 acres, and 22 acres. But they are only 5 chains in width, and it is a pity they were not much wider.

3. Would not small areas like that be better dealt with by the local bodies?—Probably it would be better. As to afforestation for national purposes, undoubtedly the country near Hawera in the North Island should be planted, and a broad belt along the sea-coast would prove a great shelter, and enhance the value of the land. Jutland is a case in point where such plantations have been made with much advantage. The local bodies hitherto have not been very much encouraged to plant trees; there is difficulty in getting the trees from the Government at present. Afforestation operations should not be dependent on a yearly vote of Parliament, but should be based on a system that would not be likely to be curtailed should a financial stringency arise, or change of Government take place. When the Department has trees available for planting, local bodies and settlers might be notified of that fact by advertisement—the price should be a low one—and I feel sure the opportunity would be largely availed of. I am strongly of opinion that the Government should appoint a forestry expert, and in saying that I am not reflecting on the men in charge of the nurseries, who are capable men. I know two of them, Mr. Goudie and Mr. Roberts, but I do not think they claim to be all-round forestry experts. The Indian Government appoint men at £1,000 a year as experts in forestry, and others skilled in chemistry, botany, and the nature of soils.

4. Have you any knowledge as to the destruction said to be done to the native forests and plantations by the imported deer?—No, excepting that there is no doubt that when they become numerous the deer do a great deal of damage to the forests. The same remark applies to the rabbits, that are doing much damage to the undergrowth, practically eating it out, especially at Tapanui.

5. In afforesting Central Otago would it not be necessary to erect rabbit-proof fences to protect the plantations?—I am afraid it would be until the trees grew up. After a time the fencing could be moved to another block.