

66. If the Government were to pass this Bill, do you think there would be sufficient people go in for beet-growing to make it a success?—If that Bill was to pass to-morrow I do not think you would get the beet-root industry established for some years, it is a matter of carrying on a campaign among the settlers to convince them and teach them.

67. We had evidence this morning that it was not a success in two or three places where it had been tried by the one witness, and that most of the fibrous roots were very rough?—I pointed out in my evidence that it might be due to want of knowledge of the soil, bad seed, and bad cultivation.

68. You could not grow beet two years in succession?—No wise man would plant beet this year and also the next in the same soil, and I would not advise him to do it.

69 *Mr Field.*] Mr Graham is away?—He has gone on a trip to Fiji, and he will be back in a few weeks.

70. The question of soil. What soil do beets like best the poor lands?—In this country the best results for sugar so far are got from poor lands.

71 Light soil or heavy soil?—Any kind of soil, it is a matter of experience which you get on best with.

72. What about growing in sandy soil or swamps?—In sandy soil you save a lot in cultivation. In Waikato the land is on the whole more or less of a light nature, but we have to fertilize. The beets I have grown have always been grown in stiff soil.

73. What about this question of growing within a certain distance of the sea?—It is not desirable, because sugar is obtained by the action of the atmosphere. It is not a chemical in the sense that it is got from the ground. Any land that is subject to the open-sea breezes is not suitable for it, as the leaves absorb the salt.

74. What is the cost of manure per acre where you require to fertilize?—Manuring is, of course, another thing experience would indicate to you. I have calculated a medium supply of 5 cwt. at 7s. per cwt.

75 Are beets subject to any blights?—I have no special knowledge of the subject, but settlers have written to me to the effect that they have not been touched by the fly. We have no pests in this country peculiar to the sugar-beet.

76. You think it would take some years to start this industry, and that the farmer would require to be educated?—Yes, to satisfy himself. It will take a few years to accomplish the education of the farmer.

77 What would be a fair-sized factory?—On the basis that I have calculated from, say, 5,000 acres annually, you would want a factory to deal with 750 to 1,000 tons per day.

78. *Mr. Okey*] What part of the year would the supply be required at the factory?—You start in the early winter months.

79. Would there be any need of a Sunday supply?—The factory would not stop, it would go night and day.

80. What do you think of the proposed bonus? You can get sugar at 2d. per pound, can you not?—I have no opinion to offer on the price of sugar.

81 You think we should not have competition from these large sugar companies?—This is the point: In the United States the effort to establish the sugar-beet industry has been one tremendous struggle against adversity. Mr E. H. Dyer, of California, who died quite recently, was the founder of the beet-sugar industry in America, and he fought and fought until he succeeded. The first great difficulty they experienced was the difficulty of cultivation, the second was that it was against the cane interests; but the beet is now triumphant. There is more beet-sugar manufactured in the United States than sugar from cane. I think it is a desirable industry to encourage. I have been in Fiji, and I have seen the work on the cane-plantations, and there it is done by coolies imported from India.

82. Beet is a white man's product?—It is the product of white labour, and beet-growers have shown that with reasonable protection they can hold their own against Asiatic growers. Again, sugar is purified or refined only in cool climates, and that is why the raw sugar is brought to New Zealand and refined at Auckland.

83. *Mr Buchanan*] You stated just now that poor land was better for beet-growing than rich land. Speaking to a well-known practical farmer in the Wairarapa a few days ago, who was born and reared in a district in France where you could not get out of sight of the chimneys of sugar-factories, he stated that the very strongest and best land was used for beet-sugar, and gives the best results, and even then they have to heavily manure, and give pretty long intervals between the crops of beet. What would you say to that?—I would say this that in France the people have had long experience and have gained much knowledge of beet-culture. It is produced there under the highest and most intense forms of agriculture, so they are able to get the best results on their lands. It stands to reason that with proper knowledge rightly applied the best lands must give the best results; every country proves that. France is probably the most noted country in the world for the intensity of its agriculture. I have a photograph of special interest at home of sugar-beet-roots grown in Waikato, which I was unable through the short notice to bring with me. With your permission, Mr Chairman, I should like to put it in, with a short explanatory note, both of which I will send along.

PAUL M. HANSEN, Director of the Auckland and Takapuna Tramway Companies, examined.
(No. 3)

The Chairman Will you be kind enough to give us your name?

Witness Paul M. Hansen. I may mention that I am not an agricultural person, nor have I ever manufactured sugar from beet myself, but I have been brought up in a district where it was manufactured, when I took a great interest in it, and got to know a good deal about it. A