

the industry in Waikato (Exhibit 2). The company would pay £1 per ton for the roots, but they would pay the farmer only 10s. for the roots supplied, and the other 10s. would go into the company for shares. I have here a cutting from the *New Zealand Herald* containing a report from Wellington of the 14th July, 1906. It might be interesting to hand this in to the Committee, because it refers to the sugar-beet industry. 'Mr B. C. Aston is preparing a report on sugar-beet for the Minister of Agriculture. In addition to the Waikato experiments he recommends that the Department should undertake trials in other districts with various classes of fertilizers, according to locality. As far as climate is concerned, he does not see why sugar-beet could not be grown anywhere in New Zealand, provided the soil is favourable. The Waikato has the advantage of a large amount of sunlight, and a soil of medium texture, and rather free from saline ingredients. Sugar-beet absorbs salt and alkalies very readily, for it was originally a seaside plant, and those substances prevent the crystallizing of sugar. One per cent. of salt will prevent the crystallizing of 5 per cent. of sugar. Another use of the sugar-beet is for taking alkalies from land, and this was being done with some success in America. Beets will grow vigorously in salty soils, where nothing else will thrive, and thus the ingredients poisonous to other plants may be gradually removed. Land of this class is comprised in the Maniototo Plain, between Taieri and Naseby. This is the bed of an ancient lake which left salty deposits when it dried up. Sugar-beet could be grown to clear the soil, and the roots, while they effected valuable scavenging, would be serviceable as feed for cattle.' I should now like to give you some figures which I have submitted to reliable and practical farmers in our district, and I believe they can be taken in the aggregate as a fair cost of cultivating an acre of land in sugar-beets. Take, for instance, the paddock we are going to lay down is in grass. Skimming the ground, say, per acre, 6s., cultivation twice, so as to stir up the weeds and keep the rotting process going, 3s. per acre, main ploughing, not less than 6 in. deep, 8s. per acre; subsoiling from 6 in. to 8 in., 8s. per acre (this subsoiling depends upon the class of country you are working: in clay or heavy soil it is absolutely necessary to subsoil), discing, 1s. 6d.; tine-harrowing, two strokes, 2s., seed and manure drilling, 2s., seed, say 5 lb. per acre, at 2s. per pound, 10s., fertilizers, artificial (this depends greatly on the soil), say 5 cwt. to the acre, at 7s. per cwt., £1 15s.; hand-hoeing and weeding, say £2 per acre (in this connection you would chop out the roots to about eight or nine inches between); harvesting, say (safe estimate), £2 per acre. That will come to about £7 15s. 6d. per acre. I have not added to that the rent of land valued at £20 per acre, at 5 per cent., £1. Total cost to produce one acre of sugar-beets, £8 15s. 6d. In America the cost varies from £6 to as high as £10 per acre. From my own growing my calculations have always worked out at 20 tons per acre. Average crop, say, 18 tons to the acre, at 16s. per ton at the factory, £14 8s. In regard to the two items hoeing and harvesting, these are estimates only, and would be subject to some fluctuation. I have endeavoured as far as I could to make out fair calculations, so as not to mislead the Committee and public. That leaves, roughly, a net profit of £5 12s. 6d. per acre. I have to add to this, in addition to the above, the farmer will have his root-pulp back, which should be worth not less than 2s. per ton, and with careful cultivation he is more likely to get 20 tons per acre than 18 tons, and where the factory would pay £1 per ton for roots the farmer would net on the above £11 4s. profit per acre, but, of course, increased yield would increase the cost somewhat. I have not considered railway or river freights. A great advantage arising from the beet-culture is the increased productivity of the soil afterwards. That is shown by the American State Colleges' experimental farms, and Mr Graham demonstrates it in his pamphlet. I have here from farmers in the Waikato a number of letters referring to this question of sugar-beet in the Waikato, which I will hand in (Exhibits 3-7). The gentleman who gave evidence before me stated that he had, without success, attempted to grow beets at Te Kowhai. I have a letter written on the 12th October, 1901, from the President of the Farmers' Club in that district, Mr S. Fullerton, which I will also hand in (Exhibit 8). I should like to put in a copy of a letter of my own written to Mr Tucker, in reply to the difficulties he points out. Mr Tucker is a farmer at Cambridge. (Exhibit 9.) In evidence given before a parliamentary Committee in 1877 Mr Joyce was asked the question, 'Is the sugar considered to be equal in quality to that made from the sugar-cane?' and he replied, "No, it is not supposed to be of quite such good quality." That is an absolutely incorrect statement, because sugar is a chemical, no matter what it is made from. I would like to put in at this stage a portion of a letter from the German and Austrian Consuls in support of my statement. It was written to the Chairman of the Waikato Beet-root Growers' Association in 1901: "We will get you the best seed—that is the easiest. We cannot supply you with a sample of beet-root sugar. We do not think—in fact, we are sure none is coming to this market; the Colonial Sugar Company is taking good care of that. As we told you before, sugar is sugar. Refined sugar is refined sugar, whether made from cane, beet, or old boots, for the matter of that; it sweetens according to the degree it is refined, notwithstanding all that you read in the ignorant Press to the contrary. We shall be very pleased to help you and the farmers in every way we can." I should like to point out some of the objections which have been urged to the industry. One of the difficulties has been the necessity for deep cultivation; another objection is the labour of thinning out and transplanting, another objection is carting on the roads (say, 5 acres, at 20 tons to the acre—that is 100 tons to be carted), another objection is the sea-air, as chlorides and alkalies in either the air or soil destroy the sugar in the beet-root, and another objection might be urged, the railway freight on the roots. At Maffra, in Gippsland, Victoria, the industry has been a failure. The failure has been due in the first instance to insufficient cultivation, secondly to improper harvesting, and not sufficient roots, as well as faults in the manufacture of the sugar. Another objection was that the factory was put down in a rich district where the land was held in large blocks mostly by graziers as cattle-fattening runs. At present the Victorian Government own the plant. I should like to read an extract from the *Melbourne Age*. It is a short extract dealing with the question of that failure. "At a meeting