

of the Maffra Agricultural Society on Friday a paper was read by Mr F E Lee on the sugar-beet industry. The money invested so far, he said, was gone beyond redemption, but against this there was a complete plant. Farmers had gained knowledge in the cultivation of the roots, and had become acquainted with the value of the by-products for cattle-fodder, and from the experiments that had been conducted could gauge the value of the crops their land would yield. Chief amongst the causes of the failure of the undertaking was the insufficient cultivation of the land, and inability to harvest the crop and deliver the roots at the proper time. He would recommend a minimum price to be paid of 15s. per ton for beet containing 12 per cent. of sugar, and that the Government give a bonus of 2s. per ton. He thought beets could be profitably grown at 17s. per ton. The average of the thirty-five experimental plots grown this season was 13·45 tons per acre. On the motion of Mr J McDonald it was decided, 'That the Government be asked to send an officer to inspect this district, with a view of acquiring an area of land for closer settlement, upon which sugar-beet would be grown.' Since the above, the latest advices from Melbourne indicate that the Victorian Government's efforts this year to re-establish the industry are very satisfactory, over 900 acres are under crop. In a parliamentary paper published by the New Zealand Government in 1897 a report was put in of beet cultivation in California, and I think it would be advisable to put in a portion of that report to this Committee. It deals with a specific case. (Exhibit 10.) I should like to say that for sugar purposes any beets which produced less than 12 per cent. of saccharine would not be desired at any factory. I have from the State Experiment Station at Laramie, Wyoming, United States of America, the official document issued by the University of Wyoming, which I will put in (Exhibit 11). These are the market rates of sugar-beets at Grand Island, Nebraska, and are the results at the factory in 1892. On 12 per cent. sugar at 12s. per ton they paid £9 per acre. On 16 per cent. of saccharine matter at £1 per ton they gave £15 per acre. On 20 per cent. of saccharine matter they paid £1 8s. per ton for the roots. That gave a return of £21 for the acre. The by-products are valuable, and beet-pulp is used as a cattle-feed. Here I have an official statement from the Oregon State Experiment Station of 1898. I will hand it in (Exhibit 12). I have at times also been in correspondence with the University and State Agricultural Experiment Stations of Washington, Ohio, and Wisconsin, U S.A., and have studied many of their official Bulletins on sugar-beet-root culture. Now comes the question of the illustration of roots. Evidence has been given before your Committee to the effect that Waikato produces finger-and-toe roots. There are various reasons for it, but the main reason is want of proper cultivation. The ideal beet-root looks like a parsnip. If the tap-root strikes a hard subsoil it turns round and becomes crooked and the growth is interrupted. That is one of the causes making for the finger-and-toe condition of the root. Now, another cause is worked-out ground that has not been properly fertilized or rested. Another cause may be that your seed is inbred too much. You want to remember that the sugar-beet is a highly cultivated product, and is in fact a thoroughbred. We have very little chance of getting seed sent out to New Zealand that is reliable. I should like to put in two photographs, because they bear out what I have stated (Exhibit 13). I have here another illustration of typical roots grown in the United States with the tops cut off (Exhibit 14). I should like to say from the evidence that I have now given you, you can see that the cultivation necessary is of a special character and it would be necessary before the farmers attempted to grow beets for sugar purposes to be quite satisfied as to what they would have to do. I would suggest that the New Zealand Government take up this question, and that they send some one who would go to the United States to study the industry and come back and report to the country itself, or, instead, get an expert from either the United States or Germany. In view of the past failures that have been made in other parts of the world, that seems to me a correct position to take up. With that statement I conclude my evidence, gentlemen.

1 *Mr Okey*] I think the Committee should thank Mr Young for the way in which he has put the question before them. I should like to ask your opinion as to what you consider the best mode of carrying on this work—whether it should be a co-operative concern for growing and for manufacturing?—The position is that wherever attempts at co-operation have been made they have not succeeded. I am speaking of the United States. The feeling is growing in the States, and it is recognized, that eventually the industry must become a co-operative one.

2. You mean that a factory must be established that cannot carry on without the aid of the settler, and they have to enter into binding agreements, which must be clear against the land itself, to fulfil their part to grow the roots?—It will eventually come to that, unless a company grew the roots itself. From my knowledge of it, my opinion is that there is little chance of establishing it on a co-operative basis in this country, as the capital required is so large.

3. You will see by the Bill that it is proposed to give a bonus. Who should get this bonus, the manufacturer or the grower, or should it be divided?—The proper way would be to give the bonus to the parties who manufacture the sugar and put it on the market. The risk is not taken by the settler; the risk is taken by the people who put their money into the concern, because they would have £100,000 or more in it.

4. You would suggest that the company should enter into an agreement with the grower that they would take the roots at a certain price?—Yes, in this way: I understand that capitalists are now prepared to establish the industry in New Zealand, where the climatic conditions are such that the farmers will grow a specific amount of roots for what they call a "campaign." In Waikato we have had Russian and German experts testing our soil and our water, and your own departmental chemists have clearly stated that our soils are free from alkalies and salt ingredients, which is a very essential feature for sugar-beet-root growing for commercial purposes.

5. What amount of land would it take to keep one of these factories running?—It would require 5,000 acres in annual cultivation for a factory to deal with 750 to 1,000 tons per day—that is, 20,000 acres would be involved on a four-year course.