

now make probably 20 per cent. more butter than any one else on the old system. They are selling their butter at 1s. 4d. per pound while others in the district are getting but 8d., 9d., or 10d. per pound.

271. Is there any recognised process of teaching dairying in the Lincoln Agricultural School?—There is an excellent little model dairy at the School of Agriculture fitted with a separator, a steam-power, and most of the appliances requisite for working a model dairy. As the dairy is not used to the full extent for educational purposes, I would suggest that, if the Government decide upon securing the services of an expert, arrangements might be made with the Board of Governors whereby the expert might give occasional exhibitions of butter-making, inviting the farmers from the surrounding districts to attend. By this means the dairy would be kept in constant work, to the great advantage alike of the students and the owners of cows in the immediate district.

272. Do you think it would be self-supporting?—Decidedly. I believe the Director suggested it to his Board. The nucleus is there. They have all the appliances. They could enter into arrangements with the farmers on the co-operative principle. No dairy-factory will ever succeed unless it is on the co-operative principle. That is a cardinal point. Unless the shareholders themselves are the suppliers there will always be some difficulty about the milk. Each one must have a direct interest in the factory.

273. Can you give us any estimate of the expense of establishing a fairly-appointed butter-factory?—I think the Tai Tapu Factory cost about £2,000.

274. Is that perfect in all respects—I mean as to its equipment?—Yes.

275. Are these arrangements made for cheese-making?—They do not make cheese.

276. How many cows would be requisite for such a factory?—I think, about a thousand cows; but that is only a matter of putting on extra separators. At the Tai Tapu Factory, I believe, they have about six hundred cows.

277. But if the central factory had been established, would it not be necessary to have the separators in central places?—Yes; as I have already indicated.

278. What would be the expense of establishing creameries?—The only expense would be that for a substantial building and separators, with small steam-power for driving the separators and cleaning the vessels—about £400 or £500 each would be sufficient.

279. Would it be difficult to find work for the whole day for the man in charge?—I think his time would be fully occupied. The man in charge should be competent to test the milk occasionally. This would become a matter of routine once he understood it. Then he would have to scald the vessels. I would not leave this work to the farmers. All the vessels should be scalded, for without scrupulous cleanliness good butter cannot be made.

280. That, you say, is a very important point?—Yes.

281. It has been stated as an important point that the cream should be ripe?—That is a matter of opinion; the new theory is that this is not necessary. I was reading lately in some English agricultural papers some experiments conducted by well-known professors, and the conclusion arrived at was that it is not necessary to ripen the cream before churning. There is a difficulty about the ripening theory for the reason that the exact time can be only approximately ascertained. It is like retting flax: if you leave flax too long in the water you weaken or destroy the fibre: it is a matter of detail and experience. Machines are now being made which separate and churn the cream at one act.

282. If cream stands a certain time in the vicinity of any bad odour it would be contaminated?—If sent straight from the separator to the churn that danger is escaped.

283. *Mr. Walker.*] Do you say that separated butter is better than old English butter?—Separated butter must be absolutely pure.

284. But what I want to know is whether it is as palatable, whether it possesses as good flavour, as good old English butter, and whether it will keep as well?—I cannot give a decided opinion as to flavour. I can vouch for its keeping. I once got some from the Edendale Factory, some of it made without salt and some a little salted. It was sent to me in a deal box. It was a week on the road, and after laying in my office for three weeks I found it to be as sweet as the best. This was in the month of August.

285. The milk of cows is very much affected by what is grown on the land—the plants and herbage that are found growing on the pasturage?—Yes; the English pasturage is, as a rule, very much older than that in New Zealand. That is probably a reason why first-rate English butter cannot be excelled.

286. The English pasturage is, in fact, the result of centuries?—Yes; it is often very old, and therefore it is that English butter, when well made, is not surpassed by any other. As regards pastures, I think, if we devoted the same care and attention to pastures here by top-dressing as they do at Home, our pastures would last longer.

287. *The Chairman.*] With regard to Mr. Grigg's farm, which has been mentioned, he never lets his pasture stand more than two or three years. The result is seen in the fact that his butter is selling at from 1s. to 1s. 6d. a pound, when ordinary butter is selling at 6d.?—It is well known that new pastures produce excellent butter, but some of the old pastures in England are famous for the flavour they impart to butter.

288. What assistance do you think we could ask the Government to give to the encouragement of dairy industry?—I think the agricultural interest is the most important of all interests in this colony, but, to my mind, it is one that receives the least attention. It has been left to take care of itself. We are now reaping the fruits of this neglect. I do not know that I should be prepared to ask for more than that the Government should import one or two competent experts to work model dairies. I do not think we would want any more than that.

289. To act as instructors?—Yes.

290. *Mr. Walker.*] You would not urge that Government should give a bonus?—Not for dairy-produce.