

or pressing vats are 6 inches deep and 17 inches over. This cheese will not be more than  $4\frac{1}{2}$  inches deep when properly pressed, and the weight will be about 36lb. There are other classes which would sell, but these are the best. We need one factory where prime Stilton would be made, and these would all be sold in the colony.

There are a number of first-class cheese-makers wanted at the present time. The success or non-success of the factory depends upon the manager. He must be a man of experience, and one who is able to keep the factory books in good order. The nearest and, I had almost said, the only way to success, is for the Government to allot 1,000 acres of land and build a factory. Four hundred cows could be kept, and milk bought of farmers near. Here students would be taught cheese- and butter-making, milk-condensing, and Wiltshire bacon-curing. The four processes would all be taught at the same time. The immense advantage to the factories would be, when they required first or second hands they would be supplied with competent persons. I feel persuaded that all the factories would contribute to its support. If the land was good it would do more than pay the working expenses. The untold enduring wealth of New Zealand lies upon the surface, and the cow is the first factor in the way of securing it.

There is another point of considerable importance which every farmer ought to duly consider before he enters into the dairy project: What do I make of rearing my calves and fattening my bullocks? A calf, twelve months old, is worth 24s.; a four-year-old bullock I have seen sold for £5, and that frequently. Now calmly study facts. The farmers who supplied Edendale Factory with milk during thirty-two weeks reared a number of calves, and their milk value was £6 10s., and they do not hesitate to say their cows are of an inferior description. Take the report of the Ashburton Factory: Here the farmer received 3d. per gallon for his milk; the average quantity for each cow was 418 gallons; add to this the Sunday milk and the milk kept at home three weeks before the factory opened and six weeks after it closed, and the value of each cow was £6 18s. 6d. It would not be difficult to show that her value was not less than £7 10s. Then take the Hamilton Factory, Waikato. The factory was at work eight months, and the farmers received 4d. per gallon for their milk; in every case the value of the cow depends upon its merits as a milker, and the farmer's judgment in its selection. The average value of Captain Steele's dairy is £8 2s. 9½d.; the captain stated the value of his cows to be not less than £10. Mr. Coates, who supplied the factory with milk, received £7 7s. 2½d. He adds the Sunday milk kept at home produced butter which sold for £20; this added £1 5s. to each cow, which brought up the average to £8 12s. 2½d. Any farmer, looking at these figures, will see clearly that the most inferior cow will make more money in thirty weeks than a bullock will make in four years, at least at the prices we witnessed in Taranaki and Gisborne.

This year there has been a great demand for small huckel cheese, weighing from 10lb. to 12lb. Ashburton had many applications which could not be met. This class of cheese is for India, China, the Cape, and other warm regions.

There is another question which often crops up, but no satisfactory answer has been returned. How much cheese may we expect from 10lb. of milk? Most of the best cheese-makers in England say, when we average the season's make, we find it about 1lb. of cheese to a gallon—that is, 10lb. What are the results of experience in New Zealand? The Waikato Factory state definitely that they have made 15oz. to every gallon; Temuka have made 17½oz. from 11lb. of milk; Edendale produced 125,408 gallons of milk, and made 129,255lb. of marketable cheese: a clear gain of 3,203lb. of cheese over gallons of milk. Then Ashburton has given us a lucid statement: 10½lb. of milk produced 1lb. of sound marketable cheese. The quality of Ashburton milk is the lowest, and therefore we may infer the quantity and quality of the cheese will be the lowest. It is not so, for milk rich in butter is often poor and deficient in the properties which make cheese. The quality of the milk has more to do with the weight of cheese produced than people generally are aware of. All cheesemakers know, or should know, when white whey runs from the press there is something wrong; that not only the weight of the cheese but the riches of the curd is running to the pig-trough, and will be found in fat hogs if not in the cheese. This is a state of things to be studied and avoided. The cause of white whey is not difficult to find: inferior rennet is one cause; the state of the milk when the rennet is mixed is another cause; but the manner of handling the fine delicate slip curd for the first thirty minutes has more to do with it than any thing else. The American "agitators," in the hands of inexperienced persons, are sure to produce thick white whey. I have seen them going like the paddle-wheels of an ocean steamer, and the invariable results are loss of weight and of quality. The tender slip curd ought to be handled with great care to avoid such a result, and the injury it inflicts upon the enterprise. We must not lose sight of the fact that the milk delivered in the first three months of the season is much inferior in quality to that which is delivered in the last three months. When the cows have newly calved and give large quantities, it is poor, and 10lb. will not make more than 14oz. of cheese; in the latter part of the season the same quantity will make 18oz. The average of the Temuka Factory this season is 17½oz. to 11lb. of milk. So it is clear that, while it suits the purpose of people to sell their milk when plentiful and poor, it is a gain to them, but a great loss to the factory. Every contributor of milk ought to be an interested shareholder, and none but such should contribute. Then, connected with the withdrawal of milk, there is another serious loss: to manage 800 gallons of milk will take three men, and a strong boy to feed the pigs and assist in the factory; withdraw half of the milk after three months, the same expenses are going on as with 800 gallons; the boiler and engine require the same attention in the case of 400 gallons as 800 gallons; the former would cost 1d. per lb. to manufacture, the latter 2d. Unhesitatingly do we state, unless the farmers supply milk for the whole season, and do it honestly, no factory can prove the success which it is desirable they should.

There is another matter of considerable importance which ought not to be lost sight of, that is, keeping the cheese in the curing-room. The prevailing notion is that the longer cheese is kept the better it will be; this is a great mistake. Some cheese is matured in three months, others