

factory on both ends of every cheese, and on both ends of every package containing such cheese, and on two sides of every package containing such butter, and one side of every pat or print of butter, with the words, "New Zealand full-cream factory cheese," or "New Zealand factory" or "creamery butter," as the case may be, with the name of the factory where manufactured; and, if the same is for export, to compel all owners of cheese- or butter-manufactories to invoice the same, and clear the same through the Customs, as New Zealand "full-cream factory cheese," or New Zealand "factory" or "creamery" butter. Make it a contravention of the Act for any other manufacturers of cheese or butter not the legitimate product of a cheese- or butter-manufactory, or not made exclusively from milk supplied to a cheese- or butter-manufactory, to use such brand, or to use the word "factory" or "creamery."

JOHN SAWERS,
Chief Dairy Instructor.

MONDAY, 12TH SEPTEMBER, 1892.—(Mr. T. MACKENZIE, Chairman.)

Mr. M. MURPHY, F.L.S., in attendance and examined.

Dairy Industry Bill.

1. *The Chairman.*] The first evidence the Committee would like to obtain from you is that which relates to the Dairy Industry Bill, afterwards we could go into other matters?—I think there have been some amendments made in the Bill.

2. In clause 4, line 36, "farms, buildings" have been struck out; but before that I should say we have struck out "three" on the first line of page 2?—The first thing I would refer to is on the bottom line of the first page—that is, "Milk containing not less than $3\frac{1}{2}$ per cent. of butter-fat." That is too high. A large number of tests made at Lincoln College during the summer months did not average more than 3 per cent. I think if you make it $3\frac{1}{2}$ it will lead to trouble: 3 per cent. will be quite enough as a minimum.

3. *Mr. Wright.*] The Act is intended to govern the minimum?—Three per cent. is quite enough. Then with reference to cheese, I suggest that the words "full-milk cheese" should be used in the definition.

4. Instead of "full-cream cheese"?—Yes; I think this term "full milk" will be better understood. With reference to the other classes, they might all come under three headings—namely, "full-milk cheese," "part-skim cheese," and "skim cheese." I suggest this instead of three-quarter-, half-, and quarter-skim, because it would be utterly impossible to decide what is three-quarter-, what half-, and what quarter-skim. "Full-milk" cheese is intelligible by itself, "part-skim" would be that from which any portion of cream had been taken.

5. Then you would only have three divisions?—That is all.

6. "Skim cheese" means cheese made from milk from which the cream has been extracted. You would strike out the rest of the words—namely, "From milk containing less than $1\frac{1}{2}$ per centum of butter-fat?"—Yes. A creamery is not a factory; a creamery should be defined as a place where new milk is received, and the cream extracted to be forwarded to the factory, and made into butter. The moment, however, you begin manufacturing butter or cheese in a creamery it becomes a factory. A creamery does not need the same supervision as a factory. It is, of course, possible that milk suppliers might wish to make skim cheese at a creamery. I do not advocate this course, because I believe that it will pay better to give the skim milk to calves and pigs. Experiment has shown that, with the addition of a little linseed mucilage, separated milk is almost if not quite equal to new milk for feeding young stock. A few lines further down "pure milk" means the "whole of the milk of the cow." I would stop there. In line 22, after the word "milk," I would add "the whole of the milk as it comes from the cow."

7. *The Chairman.*] You suggest that all the words after "milk" should be struck out?—Yes; also strike out the words ending "milking," and insert the words, "as it comes from the cow." Then, in clause 4, line 35, I would strike out all the words, "after ingress to all," letting only the the word "factories" remain.

8. Would you make this clause to read, "to all factories, creameries, farms," &c.?—I would let them have power to enter all factories. I would strike out everything else in the clause after the the word "all" in line 35. In clause 5 I would strike out the word "creamery;" the word "creamery" occurs twice there. In line 40, after the word "package," I would insert the words "at the port of shipment."

9. *Mr. Wright.*] In clause 6, would you not be inclined to allow any one to call his place of business "a factory"?—No, I would not; for I consider that such a concession would be detrimental to the development of the factory system on a large scale, and consequently the production of large quantities of butter of uniform quality.

10. I take it that this Bill is intended to encourage the factory system. Why should any one person, having fifty cows, say, not have a right to brand "Factory" when he uses factory appliances?—There are exceptions to all objections; but it would open the door to abuses, and would hinder the extension of the factory system, and would not be so good for the country. On the other hand, where the cream of a large number of cows—say, two or three thousand—was manipulated together, there would be a greater bulk of butter made of a uniform quality. Clause 6, after the words "not less than," I would add "750 gallons of pure milk," should be allowed to brand his butter "Private Factory."

11. *Mr. Lawry.*] Where there is a lot of creameries in one district do you think it is better to have the cream conveyed to one centre, or to have the butter manufactured at each creamery?—Creameries are only fitted up with separators, and therefore butter could not be manufactured by them. To establish a factory in every district would require an expenditure of not less than £2,000 in each; it is a question of expenditure. In Auckland they have adopted the practice of conveying