where factories are in successful operation, that considerably more green feed should be grown—such as a mixture of tares, oats, peas, rye, and rape—to keep up the milk-supply at the back end of the season, when the grass begins to fail, or to want the necessary succulence demanded for milk-production. Hitherto the cows have been milked for about seven months, and dry five, through want of supplementary food-provision for the later period to the milking season. It is not necessary, and highly undesirable, that any farmers should keep a cow to look at: what is wanted is for the cows to give milk ten months instead of seven.

61. *Mr. Duncan.*] Would that interfere to any great extent with the producing qualities of the cow?—Yes, it will interfere, but in the right way, by inducing the cows to give a larger flow of milk, which is a step in the right direction.

62. *The Chairman.*] It will cause them to give more milk?—Yes, it would have a tendency to induce a larger flow of milk.

63. *Mr. Lawry.*] That is, over the whole period?—Yes.

64. Then they would give more milk in the ten months than they would in the seven?—Yes.

65. *The Chairman.*] Do you mean daily or in the aggregate?—I mean in the aggregate. It is folly to keep a cow for a period of five or six months without getting any return. A cow will give more milk if her milking season commences early in August, than if it begins late in September or October, for when the cold weather comes in the fall she has a greater tendency to dry up, and is therefore a boarder on the farmer too long without giving any return. Likewise, it does not do to keep a cow dry too long, as she has not then the tendency to be of the same use in her productive season.

66. *Mr. Lawry.*] Is it a fact that there is a stronger desire on the part of the factory-owners to have milk from Jersey cows than exists on the part of farmers?—That is so.

67. As a general rule the farmers have no great desire for Jersey cattle?—The farmers have no great desire to get the Jersey cows.

68. The general desire of the farmer is to keep the cow that will produce the most milk, irrespective of quality?—Yes.

69. *Mr. Duncan.*] What difference is there in the quality of the butter made from the milk of the Jersey cattle and that made from milk of the ordinary mixed breed?—There can be no doubt that any country making a specialty of butter-production would do well to have a blend of the Jersey breed in their herds, either by systematic crossing, or by the direct use of a certain percentage of Jersey cows, in order that the product may possess a touch of the desirable qualities which would be imparted to it through the Jersey influence. Unquestionably no other breed of cattle possesses such a high character of butter quality, flavour, colour, and grain, as does the Jersey. For the sake of all concerned, and as an inducement to farmers to breed and feed for a special purpose like butter-production, and to overcome the difficulty of quantity *versus* quality, all milk should be paid for according to its productive qualities. I may say that is being done by two factory companies in New Zealand, and I am anxious to get it initiated in the other butter-factories as soon as possible. It is not so difficult to value milk for butter-making purposes as for cheese-making purposes, for not only have you to take into account the amount of butter-fat, but the amount of other solids; and there are other points to consider which make it very difficult to solve. As far as practicable, it is necessary that some basis should be established and applied, so as to provide for the equitable payment for milk at all factories according to its real value for manufacturing purposes.

70. From that it would appear that there is a difference in the quality of cream?—Yes. There is a general productive character about it the same as about milk, but that is due more to the special breed of cow and individual influence.

71. *Mr. Lawry.*] And pasture?—The special breed of cow has more to do with the character of milk than what feed has to do with it.

72. *Mr. Duncan.*] With regard to feeding, what crops are injurious to butter-making?—The turnip-crop is just as bad as any you can grow, so far as the manufacture of cheese or butter is concerned.

73. Would not that apply to mangolds?—Not to such a great extent to mangolds.

74. *Mr. Tanner.*] Is beet an objectionable thing?—I have never had any experience in the feeding of beet.

74A. *The Chairman.*] Have you not arrived at a process by which the bad taste in butter caused by turnip-feeding can be entirely obviated?—Yes.

75. What is it?—In the butter we can obviate it by first heating the milk to a very high temperature before separating, and then having means of cooling the cream coming from the separator to a very low point—say about 40° Fahr. We may have to raise the heat of the cream up again at intervals, and cool it down, until we find that the objectionable taste is gone. We can obviate it entirely in that way.

76. *Mr. Lawry.*] That causes additional trouble and expense?—Yes; it means a little more expense in the first cost of the factory—that is, by bringing in a small refrigerator. There is no doubt that within the next three or four years you will find that almost every one of the butter-factories will have to resort to the introduction and use of a small refrigerator.

77. *Mr. Tanner.*] Is feeding with turnips confined to any particular districts, or is it general?—It is confined to particular districts.

78. What are they?—Principally in Southland.

79. *The Chairman.*] Has the heating of the milk or cream any effect, injurious or otherwise, on the butter?—It has a good effect on its keeping qualities.

80. *Mr. Tanner.*] It is rather an improvement?—Yes.

81. *Mr. Duncan.*] Up to what heat does the heat extend?—To about 150°.

82. *Mr. E. M. Smith.*] Are you aware that in Devonshire and Cheshire, two celebrated counties for making cheese and butter, the plan is to spread lime over the land? Would not that answer in New Zealand? Would it not sweeten the grass, and tend to produce a better class of milk and