

point of butter—the better will it keep while there, and the better will it keep when brought into the warmer temperatures of the brokers' stores and warehouses. This, of course, applies to its treatment before shipment as well as during transit. Actual freezing is not an absolute essential for the safe transit of butter, but it is much safer than consigning it to cool-chambers at present carrying temperatures.

“In my opinion you should recommend a range of temperatures from 25° Fahr. as a minimum, to 35° Fahr., as the maximum. From the printed regulations for the guidance of the New Zealand Shipping Company's commanders and refrigerating engineers, as to temperatures of chambers of vessels in which frozen-meat, dairy-produce, and fruit, are stowed, I observe that the instructions regarding dairy-produce read thus: ‘Cheese and butter must each be placed in separate chambers, and the greatest precaution taken in the stowage of cases to insure free circulation of cold air; the temperature of chambers must never exceed 52° nor go below 38°.’ The Shaw-Savill and Albion Company (Limited), in their instructions to their commanders and engineers, say that the temperature of the butter-chamber is to be maintained at 35° to 45°. From what I have said, it is almost unnecessary for me to say that I consider these temperatures far too high to insure the safe transit of the bulk of our New Zealand butters, and I feel sure that much more satisfactory results would have been obtained during the past shipping season had shippers sent their butter in the freezing-chambers. It is impossible for the shipping companies to carry out the instructions of individual shippers; and I would consider it a great favour if you interview, or call a meeting, of persons interested in the trade in New Plymouth or surrounding district, with a view to obtaining a consensus of opinion as to the temperature to be maintained for each class of produce—butter and cheese. By some such means as this we would be in a position to get this one great impediment cleared from the way, and we would also be working in concert with the opinion expressed by your London consignees.

“Feeling that you are as much interested as I am in the landing of the produce in good condition, I am sure you will exercise a little trouble in this matter, as it is one of great moment to your district.

“I shall be glad to attend any meeting you may convene for the purpose referred to, or you may consider me at your service in supplying further information connected with the subject at issue.

“I have, &c.,

“JOHN SAWERS.”

OPINION ON FACTORIES VISITED AND PRODUCTS OF SAME.

Twenty-one of the factories visited were thoroughly clean and sweet, twelve fair, and four very dirty.

At the factories where the makers are careless, untidy, and indolent, I invariably find the milk-suppliers following suit, and consequently not as particular about the care of their milk and cleaning of milk-cans as they should be. Cleanliness on the part of the makers and milk-suppliers is one of the great requisites in the making of first-class cheese and butter. If there is one place more than another where absolute cleanliness ought to prevail, it is a cheese- or butter-factory. Dirt will accumulate very rapidly, and the manufactory become, in a very short time, an exceedingly filthy place. When it is known how susceptible milk is to changes, and to take taint, it must be obvious that very little neglect in the matter of thorough cleanliness will in a short time become a great evil. To avert the evils which are sure to arise from the want of washing, scouring, and scalding, there is only one good rule: “Keep clean.” Most of the factories are, however, models of cleanliness, and those working them are worthy of the highest praise for the exactitude and perseverance they display in carrying out this virtue; and, were it prudent, I would willingly mention them, for they are furnishing a good example to the others. It is also very pleasing to again note an improvement in the quality and uniformity in our dairy factories' productions, as compared with 1891-92 season. I gather this from reports furnished me by different buyers and brokers, here and in England, and what I have had the opportunity of seeing myself. There is, however, still room for improvement, more especially in the quality of our butter for export; and let me say here that I am perfectly satisfied that to effect this improvement will require an almost complete change in the present methods of treating milk and cream—not only in vogue here, but in other lands. Our remoteness from market, and the consequent age of the product before it reaches the hands of the retailer, necessitate an alteration in our system of working from that practised in other countries nearer the centre of consumption. The change indicated will take the form of the pasteurization or sterilization of the milk (perhaps of the cream) before separation, the speedy and effective cooling of the cream to a low degree as it leaves the separator, by means of small mechanical refrigerators, and, in all probability, the churning of the cream sweet. I have no doubt that mention of this will call forth considerable comment and criticism; but the change will live and grow in favour. This matter will be treated more fully when issuing bulletin on “Practical Butter-making.”

I cannot do better than give some of the notes from my diary, on the condition of the buildings and productions of some of the factories visited:—

No. 1. “Factory anything but clean; maker has a fair knowledge of the business, but altogether too careless; cheese mealy and dry, showing signs of too much acidity, and the appearance of the cheese anything but ‘catching’ to the eye.

No. 2. “Cheese fair in quality and uniformity. Everything clean and tidy; maker proved an apt scholar.

No. 3. “Cheese very irregular in shape, appearance, and quality, some of them being far too sweet and others quite sour. Factory buildings and plant not good, and not arranged with a view to economy in labour; factory and utensils kept fairly clean. Tested all the milk twice, and, save in two cases, found same good; highest per cent. butter-fat, 3·8; lowest, 3·1; maker very anxious to acquire information.