

COLLECTION

An endeavour is made in all parts of the supply area to reduce to a minimum the time between milking and collection and to effect economies in transport. These matters have received the attention of the Milk Council and the co-operation of the vendors. The practice is to collect twice a day. The evening's milk is brought in in the evening, and in most cases pasteurized on arrival. It is delivered next morning and, as the Council's regulations require delivery before 7.30 a.m., is available for many breakfast tables. The morning's milk is brought in early in the day, pasteurized on arrival, and delivered forthwith to hotels, restaurants, milk-bars, and other wholesale purchasers. In many cases producer-vendors are able to deliver raw milk to the consumer immediately after milking—that is, the morning's milk is picked up and delivered before breakfast.

The collection of the milk is under the control of the vendors. Except in the case of the Takapuna Dairies, the suppliers of each vendor are scattered. They are not zoned, but several companies may draw on the same neighbourhood. In order to minimize expense some of the companies co-operate by arranging that one carrier shall draw all the milk for two companies along certain roads and another carrier will draw all that along other roads. That co-operation is limited in its operation, and, unless the collection of the whole milk-supply of the area is controlled by one authority, it will probably not be possible to avoid appreciable wastage of man-power and materials.

There are two other matters that require attention. The first is that all milk ought to be collected from the cooling-room of the dairy, but if in particular cases there are serious difficulties in regard to that, then in such cases it should be collected from properly-covered roadside stands within a short time of being placed there by the dairy-farmer. The second matter is that all milk should be collected and conveyed to the vendors in properly-covered vehicles—that is, in vehicles with an awning stretched over the truck that protect the milk from sun and dust and yet leave air space around the cans. This is not the general practice in Auckland. The only cases in which it is possible to compute the cost of collection are those in which the milk is delivered to the companies. An Auckland cost of 0.68d. per gallon compares favourably with the costs in other areas. Owing to the much smaller quantities handled the cost of collecting must be much higher in the cases of raw-milk vendors and producer-vendors.

TREATMENT

Approximately 84 per cent. of the milk sold in the Auckland area is pasteurized. The proportion of that delivered retail is lower. It amounts to about 70 per cent. The reason for the difference is that the large companies pasteurize all the milk they distribute, but the producer-vendors sell the milk raw that they produce. If a producer-vendor purchases milk from one of the companies, that milk will be pasteurized. The wholesale trade is a trade exclusively in pasteurized milk.

A considerable proportion of the milk that is pasteurized is also bottled, but there is also a considerable proportion that is distributed to householders by the can-and-dipper method. Exact figures are not available, but, as stated above, probably only from 40 per cent. to 50 per cent. of pasteurized milk distributed to householders is bottled.

The plants at present in operation cannot be regarded as satisfactory. One pasteurizing-plant, but one only, is quite up to date and is operating successfully. One bottling-plant is also up to date. But in no one treating-house is the whole equipment satisfactory. Arrangements are being made by some of the companies to carry out extensive replacement, and if the educative force of the health authorities' representations and the pressure of public opinion continues to be felt a very much improved condition will obtain in the not distant future.

The Milk Council has set a high standard both as regards quality and as regards safety in the milk-supply. It has required that the butterfat content of milk sold shall not be less than 3.5 per cent. It has also prescribed that the bacteria plate count in the case of pasteurized milk shall not be more than 20,000 and in the case of unpasteurized milk not more than 100,000.

In order to secure compliance with the provisions of the Food and Drugs Act and the requirements of the Milk Council and to protect the public health, both the officers of the Health Department and those of the Milk Council take frequent tests of the milk as it comes into the treating-houses and as it is distributed to consumers. Some of the companies also have tests made regularly. The results of these tests cannot be regarded with equanimity. The results of some of the tests are significant, though it must not be concluded that the percentage results of any series of tests or any number of such series correctly represents the average condition of the milk delivered to the purchaser. Every series includes a number of samples drawn from suspected sources and samples taken to follow up unsatisfactory results. But in a progressive community in which the safeguarding of public health occupies a prominent place among social purposes, even allowing for the fact just mentioned, the results now quoted are disturbing. The Health Department handled 4,309 samples from the Auckland Central Health District for the year 1942, and of these, 13 per cent. failed to comply with the statutory requirements. Of 210 plate counts made by the Milk Council's Analyst between 15th and 27th April (inclusive), 1943, 53 samples exceeded the prescribed 100,000.

The combination of high standards and frequent testing, with due warning and occasional prosecution, seems insufficient to ensure a high standard in practice. The Auckland system of inducing a high standard differs from that adopted in Wellington in at least three respects. The Wellington pasteurizing and bottling plant is of higher standard than that which the several plants in Auckland attain. The system of daily sampling of each supplier's milk is carried out in Wellington is decidedly better than the system of testing adopted in Auckland. And in Auckland there is no immediate relation between a low standard and economic loss to the individual supplier concerned as there is in Wellington. If milk is properly graded and the price paid varies with variation in grade, there is a powerful influence continuously operating to maintain a high standard.

One matter requires special mention here. As explained earlier in this chapter, during four autumn and winter periods the Auckland metropolitan area has received a substantial quantity of milk from cheese-factories situated at various distances from the city. What this means so far as quality is concerned may be indicated by reference to the fact that in 1942 a considerable quantity was purchased from one factory, and that source of supply was later condemned by the Health Department. The minimum time required by the Foods and Drugs Act for milk under the reductase test is 4 hours, and the maximum for the bacteria plate count prescribed by the Milk Council for unpasteurized milk is 100,000. The Milk Council's Analyst supplied a return of tests made of 54 samples taken from the supply from one of the outside dairies between 18th March, 1943, and 9th April, 1943. Of the 54 samples, methylene blue discoloured in 15 cases in 15 minutes, 20 in from