

## Cheese Department

Makers are invited to send contributions to this department, to ask questions on matters relating to cheesemaking and to suggest subjects for discussion. Address your letters to the Cheese Making Department.

### Look After the Milk

During winter there has been more trouble with the milk than in the spring, and patrons have found it a little more difficult to keep milk. But it is during July and August that the greatest care needs to be taken. The dairyman, who has neglected to cool his milk, will find it difficult to cool his milk to the proper temperature. A good spring or well will help things out some. In any case the patron must give some attention to cooling the milk as soon as it is aerated. In fact the aerating and cooling can go on at the same time.

A few years ago aeration was all that was considered necessary in caring for milk for cheese making, except during hot weather. But that thing has been exploded, and the best authorities recommend cooling the milk to at least 60 degrees, and aerating at that temperature as nearly as possible. It will be found difficult to do this unless ice is available, or cold spring water. But most farmers have either the one or the other. If they have no spring water, they have well water that can be utilized for the purpose. Where there is running water the best way to cool the milk is to place the cans in a box, into which a continuous stream of water is running. Where the well is to be depended on, the cooling must be done by running water to cool the milk will have to be pumped. But by renewing the water frequently around the cans, a low temperature can be maintained.

There are those who claim that the aeration of milk is unnecessary, and that it is harmful. But this is doubtful. Aeration has been brought into disrepute by the careless manner in which it has been done. The aeration of milk should only take place where the atmosphere is pure and free from bad odors. A barnyard or a stable is no place in which to aerate milk. The less the milk is exposed under such conditions, the better. The aerating process should not be prolonged. A few minutes dipping or stirring when the milk is in the cans is all that is necessary. As soon as the milk reaches the temperature of the surrounding atmosphere, it is less stirring it receives the better.

It is never safe to say anything about the care of milk without emphasizing the need of cleanliness. If this were not for some fellow might rise up and say that cleanliness was not considered necessary by the writer. But it is necessary at

### FOR SALE AND WANT ADVERTISING

TWO CENTS A WORD, CASH WITH ORDER

FOR SALE, \$14.00—Brick cheese factory, 1000 lbs. capacity. The dairy; everything up-to-date; \$1.50 per hour for making.—J. L. Thomson, Hawkesbury, Ont.

OWNERS OF CHEESE FACTORIES AND CREAMERIES desiring to make direct shipments to Great Britain will have an opportunity of meeting a large British importer in July. Further particulars may be obtained by writing Box 2, Canadian Dairyman and Farming World, B. V.

CLEAN MILK.—By G. D. Belcher, M.D. In this book, the author sets forth practical methods for the exclusion of bacteria from milk, and how to prevent contamination of milk from the stable to the consumer. Illustrated, 400 illustrations. Cloth \$1.00. The Canadian Dairyman and Farming World. Our complete catalog of dairy books sent free on request.

all times and places in connection with the handling of milk. If the milk is not cleaned out of the cans in the milking, in the straining of milk, and in the care of the milking utensils, the keeping of milk would not be so much improved. Dirt and filth are responsible for a large share of the bad milk received at cheese factories. Many patrons years ago, when some of the things advocated today were not common, so much importance, got into a way of doing their work, and it is difficult to effect a change. A beginner is better material to work with than some of these old stagers, who imagine that the cheesemaker of to-day is a degenerate, as compared with the maker of fifteen or twenty years ago, because he cannot make cheese out of the same kind of milk. He can, however, and for that matter can make better cheese out of bad milk than his predecessor could. But his best efforts in this direction will not enable him to make a cheese out of bad milk that will command a high price. The market conditions have changed. The market demands a better quality than it did even ten years ago, and the factory or maker who cannot supply it must take second place. To get this better quality the maker must have better milk. Hence the supreme effort that is being made by instructors, makers and everyone else to secure better milk. It is not a need-task they are imposing on the patrons when they ask them to take the best possible care of the milk they supply their factory with. It is a work of necessity that must be done if Canada's reputation for producing a high quality of milk is to be maintained.—J. W. W.

### Dairying in New Zealand

During the past few weeks New Zealand has been receiving a little attention in Canadian dairying circles, chiefly in regard to its possibilities as a cheese producing country. Mr. John Tait of that country, who is at present in Canada, has some information on the subject that is of interest. When asked by the Canadian Dairyman and Farming World, if New Zealand was likely to become a strong competitor of Canada in the cheese trade, he stated that Canadians need have little to fear from that quarter. The country is small, the population is not large and his resources limited. Though the dairy industry largely in cheese production her output would have comparatively little effect on the market. Nevertheless, the cheese trade of New Zealand has grown considerably the past year or two, and is likely to grow still more.

At the beginning of the cheese season of 1907, a great many creameries put in equipments at considerable expense, and changed from butter-making to cheese-making, owing to the success of the new cheese concerns did not look far enough ahead, and found it difficult to get competent cheese-makers to manage their factories. Consequently the cheese turned out was not of the best quality. But, as a lot of money has been expended in changing over for a while. If the comparative cheese returns from the creamery and the cheese factory continue as they have been, more dairymen are likely to take cheese as their main product. As makers become more proficient in their work, the quality will improve. A dairy school will shortly be established, which will put in the direction of the cheese business. Last season the factories received from 11c to 15c a lb. for cheese. The ruling price for butter was 21c a lb.

### FACTORIES HAVE NO SALESMEN

There are no cheese markets in

New Zealand, and the plan of selling is quite different from what it is here. The factories employ no salesmen. The selling is done by the directors of the company. The season's make is practically all sold before it is made. The directors receive orders from the buyers. They meet and decide which one they will accept for the season's make. The price is governed by the grade, so much for first grade, so much for second, and so on. For butter, the difference in the price between first and second grades is about 2 cents a lb. Sometimes the buyer would offer a little extra for No. 2 to land the business. The bids for No. 1 grade are usually pretty uniform. The buyer's price is usually 10c. at the nearest grading station.

There are seven shipping ports at which grading stations are established. There are cold storage warehouses at these points, where the product is stored and the grading done. The factories send in their products subject to the order of the buyer. It often happens that the buyer will often ask for more cheese to be shipped than is covered by the factory's make for the month; cheese of the following month is put in to make up the quantity. This frequently is not sufficiently cured to ship, but the onus is on the buyer, who owns the cheese for the season, and can do as he likes with it. But this is not carried on to a large extent. All factories are registered and have a number, and often their own brand, which is also registered. The grading system has been very effective in improving the quality. Mr. Tait says that the quality has been more improved than by inspection at the factories. During 1906 only 2 per cent of the butter graded second quality, which is a very good record. The standard calls for a dry butter. Often either choice butter will be put in second grade because of having a little more moisture than the standard is likely to be modified somewhat in the near future, as the trade is demanding a butter with more moisture in it.

### DAIRY FARM INSPECTION

New Zealand is entering upon an elaborate system of dairy farm inspection, for which an appropriation of \$60,000 a year has been made. The inspectors will look after the sanitary condition of dairy farms and the health of the cattle. There has been a system of factory inspection for some years, but not before. This standard is likely to be modified somewhat in the near future, as the trade is demanding a butter with more moisture in it.

Some of the laws in New Zealand affecting dairymen would appear very drastic in Canada. There is a 16-hour day act in force in connection with factory help. In a cheese factory, if it requires more than 10 hours to do the day's work, the helper gets extra pay. There is tendency, therefore, to rush things through, without regard to quality. Then no company can accept milk from anyone but its shareholders. To supply milk to a factory, a farmer needs to have some shares in the company. This tends to keep patrons tied up to one factory, and the maker has better control over the milk supply. Mr. Tait gives a good instance of how this law works out. A company not well versed in the law, recently accepted milk from a non-shareholder. At the end of the season, when the bonus for the year's business was given out, this party did not get any, because he was not a shareholder. As he was a large patron, his share amounted to about \$100. He immediately sued

for it, and as the company had broken the law by accepting the milk, it had to liquidate, and reorganize.

Dairying is having the same effect in increasing the value of lands as in Australia. As high as \$250 an acre has been paid for good dairy farms without a building of any kind on them. There is no winter feeding. It is only because of this fact that the business can be made to pay. But the buyer usually makes good, and has been making money of late years.

### Restricting Bacterial Development in Milk

If the cows are kept thoroughly clean, if the stable is well lighted, well ventilated, and kept in a sanitary condition, if the milkers wear clean clothes, have clean hands and milk into clean pails, it is not difficult to obtain fresh milk which contains, relatively, only a few germs. At ordinary temperatures, however, these increase with wonderful rapidity. Milk may contain from 2,000 to 20,000 times more germs at the end of 24 hours than it did at the beginning. In order to prevent this rapid growth it is advised that milk producers and dealers resort to cooling milk to a low temperature. In handling milk commercially for direct consumption, an effort is made to cool it as soon as practicable, and to retain it at a low temperature until it reaches the consumer.

However, there is danger in keeping milk too long, even though it be held at low temperature. Milk more than a week or ten days old should be viewed with suspicion, even though apparently in good condition. Milk that has not been stored at 68 degrees F. From this standpoint the suggestion arises that instances of ice cream poisoning are perhaps due to the preservation of cream for several days at a low temperature, such treatment keeping the milk sweet, but favoring the development of species of bacteria that are, at higher temperatures, choked by the lactic organisms.—The Professor at the Milking Station.

Give the whey butter business a wide berth until more is known about it.

## CANADIAN NATIONAL EXHIBITION

TORONTO, ONT.  
Aug. 29 to Sept. 14, 1908  
\$50,000.00

### In Prizes and Premiums

#### ENTRIES CLOSE:

|                        |                   |
|------------------------|-------------------|
| Live Stock             | Wednesday, Aug. 5 |
| Men's and Women's Work | " " 5             |
| Natural History        | " " 5             |
| Agricultural Products  | " " 5             |
| Home Industries        | " " 5             |
| Floral                 | " " 5             |
| Decorative             | " " 5             |

For Price Lists, Entry Blanks, and all Information, Address:

J. O. ORR, Manager, CITY MARKET, TORONTO

GRAND MUSICAL TREAT

Band of Royal Artillery, Westlich, England

Twice Daily

Cheap Excursions and Reduced Rates from everywhere