

**Cheese Department**

Makers are invited to send contributions to this department, to ask questions on matters relating to cheese making, or to suggest subjects for discussion. Address letters to the Cheese Department, Farm and Dairy.

**Can We Reduce Bacteria?**

Dr. Connell, Lanark Co., Ont.

No matter how cleanly we milk we still get bacteria entirely out of our milk. But the cleaner we are the fewer bacteria we undoubtedly will get. With great care we can get an average in the mixed milk of about under 200 bacteria per c.c. To secure such a low bacteria count strict attention must be paid to every detail such as grooming of eating udders, cleanliness of milker's hands and garments, small methods and clean non-dusty milking machines. The average of a certain supply of certified milk in Toronto is under 1,000 bacteria per c.c. as delivered to customers; it often averages as low as 200 bacteria per c.c. in midsummer.

The more careless the conditions of milking the larger the number of bacteria there will be present at the end of milking. Under ordinary conditions the mixed milk from a herd averages then from 15,000 to 60,000 bacteria per c.c. Take the same herd at the end of the milking and you change the bacterial content of the milk very materially. These added bacteria must then come from somewhere outside the udder, such as the dirt and hair of the cow in the milking place, from milker's hands or garments, or from milk cans and cans. Any one or all of

these may prove to be sources of seeding. Any dust or dirt containing manure particles or particles of decomposing food carries with it large numbers of bacteria of the taint-producing type.

**DECOMPOSE THE MILK**  
These bacteria tend to lead to changes in the milk, such as they have already set up in the manure or decaying food. Thus while it is not possible to obtain milk free from bacteria we can, by attention to cleanliness in all respects, markedly reduce the number of bacteria seeding the milk.

Seeding can occur at periods after milking if the milk is not properly protected. Hence milk should be kept in a place free from dust, protected from flies and other insects and from animals. By such attention to cleanliness in milking and after care, the possibility of the milk being seeded with taint-producing forms of bacteria is greatly lessened. It has been proven that these bacteria come mainly from "dirt" in some form—as manure-laden dust, dust from decaying food, remnants of whey or milk left in seams or crevices of cans or pails to ferment, and such like sources.

**Carelessness is Expensive**

Herz McKay, Dairy Instructor, W. Ontario.

How does over-ripe milk compare with normal milk for cheese making? We conducted experiments at the Guelph Dairy School that throw light on this subject.

The method of conducting the experiments was to make the milk which was delivered in an over-ripe condition into cheese and on the following day when the milk was in a normal condition make this also into cheese and compare results.

We conducted 12 experiments. Seven were with over-ripe milk, using 16,413 pounds of milk testing 3.46 per cent. of fat and 2.36 per cent. casein. The loss of fat in the whey was .26 per cent. There were five tests made with the normal milk, using in all 6,408 pounds of milk containing an average per cent. of fat of 3.38 and casein of 2.31. The loss of fat in the whey was .23 per cent.

**ADVANTAGE OF SWEET MILK**

The over-ripe milk remained in the whey an average of 51 minutes; the normal lots two hours and 29 minutes. The average yield of curd was 88.96 per lb. 1,000 lbs. milk for the over-ripe lots and 91.44 lbs. from the normal. In the first case it took 11.17 lbs. of milk to make one pound of cheese and in the second case 7.8 lbs. The quality of the cheese as indicated by the average score was:

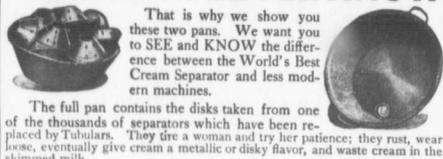
	Close	Color	Texture	Flavor	Finish
Normal	36.25	14.87	14.89	17.81	93.98
Overripe	35.83	14.2	14.29	17.63	91.73
	.42	.69	.62	.17	1.91

The normal milk made 2.48 lbs. cheese per 1,000 lbs. milk more than did the over-ripe milk. Roughly speaking there is a loss of 2.5 lbs. cheese for every 1,000 lbs. milk delivered to the factories in an over-ripe condition. Surely this is strong enough argument to induce producers of milk to make some special effort to take proper care of their milk during the warm weather.

**Correction**—In the photograph of O. A. C. dairymen appearing on this page of Farm and Dairy last week the names should have been read from left to right and not from right to left as then stated. Of course



**What You See You Know**



The full pan contains the disks taken from one of the thousands of separators which have been replaced by Tubulars. They try a woman and try her patience; they rust, wear loose, eventually give cream a metallic or disky flavor, and waste cream in the milk.

The other pan contains the only piece used inside the marvelously simple, wonderfully clean skimming, everlastingly durable

**SHARPLES Dairy Tubular Cream SEPARATOR**

What a difference! Take your choice, of course, but remember that mistakes are unpleasant and costly and must eventually be corrected. Why not ask those who have discarded other separators for tubulars? Their advice is a valuable one; they have paid good money for experience—they know the difference.

Write for a full, free trial. Other separators taken in part payment of tubulars. Get prompt attention. Ask for Catalog 253.

**The Sharples Separator Co.**  
Toronto, Can. Winnipeg, Can.

our readers will understand that this is not a true photograph, but that the heads were simply attached to the bodies on another photograph by the artist.

**Prospects for the Cheese Make**

Reports have been received from practically all of the dairy instructors in Eastern Ontario, in reply to a number of questions sent out by the dairy branch of the Department of Agriculture. These questions aimed at finding out the condition of the cows, the output of cheese to the last of May, in comparison with last year and the prospects for milk supply and total output of cheese in comparison with 1911.

These replies point to a promising season, although conditions have not been ideal. Cows generally went to pasture in poor condition this year, and the make of cheese until nearly the end of May has been considerably lighter than last year due partly to the late season. In some places late winter, owing to the very high prices, farmers sold themselves short of feed, and will not be able to feed so well this summer. The poor season last year, followed by a severe winter and late spring, is showing its effects in many parts, not only in a lack of feed during winter and spring but many new meadows are patchy. The high price of concentrates has also been a serious drawback. Wherever the silo is much in evidence conditions generally are favorable. Meadows seem good generally, especially old ones, and if favorable conditions attend the output of cheese this year should exceed last year's output.

The quality of cheese has been decidedly superior, several instructors reporting the finest cheese for last month their districts have ever turned out. This has been due to the cooler weather during May, and a very marked improvement in ice-houses and tanks made by farmers in many parts.

Don't forget seeing your friends and having them join in a club of subscribers to Farm and Dairy.

**The Only Right Way**

Cheese and butter problems can be solved in one way only, namely, the scientific way, which may be summed up as follows: Keep observation of the fact, accurate record of the fact, correct inference from the fact. This is the method adopted in all sciences in order to know the truth, which alone can make men free and masters of the situation in which they find themselves. Any other attitude than that of "a hunter after truth" is intolerable for one who would master the problems which daily confront the makers of cheese and butter.—Prof. H. H. Dean, O.A.C., Guelph.

**A Trip to the Coast via Canadian Pacific Railway**

At this season of the year a great many are planning their summer vacation. What could be more delightful than a journey through the Canadian Rockies to Vancouver? A trip of this nature affords the traveller an opportunity of learning the wonderful resources and opportunities throughout Western Canada, besides enjoying the world's greatest scenery in the Canadian Rocky Mountains, where the Canadian Pacific have established palatial hotels which afford every possible comfort to the tourist.

The Canadian Pacific is the logical route to the West, affording the finest equipment and fastest train service—no other all-Canadian Route—no change of cars—all equipment is owned and operated by the C. P. R.; affording the highest form of efficiency—dining-car service up-to-date in every particular; also operating modern electric-lighted compartment library observation cars on transcontinental trains—only lines operating through standard and tourist sleeping cars to Winnipeg and Vancouver.

It would be to the advantage of any person contemplating a holiday trip of any description to consult nearest C. P. R. Agent for illustrated literature and full particulars, or write Mr. G. Murphy, District Passenger Agent, Toronto.

**NOTHING in cheese making is more important than salting the curd.**

The flavor—even color—sweetness—keeping quality and market price—all depend on the way the curd is salted, and on the salt used.

**WINDSOR CHEESE SALT**

Makes Prize Cheese

It gives a smooth, rich flavor to the cheese—dissolves slowly—stays in the curd—and makes the cheese keep as good cheese should.

Windsor Cheese Salt is cheapest in the end because it goes further.