

Creamery Department

Butter Makers are invited to send contributions to this department, to ask questions on matters relating to butter making and to suggest subjects for discussion. Address your letters to the Creamery Department.

Valuable Experimental Work

(Concluded from last week.)

It readily deteriorated in flavor. Of course the milk, and frequently the whey, was old and this may have had much to do with the keeping quality of the butter. However, it suggests the necessity for a thorough investigation of the whole subject and this we purpose doing during the season of 1908, under regular factory conditions. It would be wisdom on the part of factorymen to await these results.

Another thing we learned during our experiments was that by increasing the speed of the separator slightly you can separate, and separate efficiently, fully 60 per cent. more of whey than the machine is rated to separate of milk that is, a machine with a rated capacity of 3,000 lbs. will readily separate 5,000 lbs. of whey. Of course, this calls for a cover with a larger inlet tube.

MAKING OF CHEESE FROM RICH AND POOR MILK

During the session just closed we were afforded a splendid opportunity of investigating this point, as we were able to obtain milks varying in fat content from 3 to 4 per cent. On several occasions we put like quantities of different grades of milk into different vats and made them up separately. When the cheese were made the yields differed so much that when they were placed side by side they resembled a flight of stairs. Let us give an example, which could be multiplied many times if space afforded:

Lbs. Milk	Fat	Lbs. Cheese	Fat in Whey
125	3.0	27.0	2
125	3.4	29.5	2
125	3.8	35.5	2

Furthermore, there was a marked difference in quality, the cheese from the richer milk being quite superior to that from the poorer. The lesson is obvious. We should certainly pay in cheese factories according to quality and not by the peeling system.

This work was conducted by an instructor in cheese making, Mr. G. G. Publow and, needless to say, was carefully and skillfully done.

A COMMON AND UNSUSPECTED CAUSE OF CREAM TESTING LOW IN THE FALL WHEN THE MILK IS RICH

One other investigation of considerable interest to creamery-men.

While it is well known that changing the cream screw or the speed of feed, or a difference in the richness of the milk, will alter the richness of the cream, these do not furnish a reason for the cream supplied to our cream-gathering creameries so commonly testing lower during the fall of the year than during the summer, despite the fact that the milk has increased in richness.

Under the direction of our instructor in butter-making, Mr. Stonehouse, we made an investigation of this subject, with the result that we fully satisfied ourselves that this apparent anomaly is really due to the partial cooling of the milk, during the

cool weather of this season of the year, before it is put through the hand separator. The following data will serve to illustrate this point:

Machine	Temp. of Milk	Cream Test of	Sk. Milk Test of
A.	80	27	.10
B.	95	31	.10
B.	80	35	.08
C.	95	38	.06
C.	85	40	.025
	95	43	.025

The different letters represent different makes of machines.

In all cases we took the same milk and divided it, separating one portion at the lower temperature and one at the higher temperature, as indicated.

The explanation of the foregoing no doubt lies in the fact that as the milk becomes more viscous or syrupy in its consistency and as a result does not flow out the skim milk tubes so readily, thus causing a larger percentage to be taken as cream.

Considerable other work was done which may be taken up at a little later date.—J. W. Mitchell, Supt.

Butter Scoring Contest

The Pennsylvania State College has established a butter scoring contest. The first contest this season, held in April last shows an improvement over a year ago. The score ranged from 90 to 94 points. One lot of dairy butter scored 93. The average per cent. of moisture was 12.57 ranging from 10 to 15 per cent.

The most common faults were old milk and cream. Some samples had a decided butter color flavor, others were a little defective in body, soft and lacking the proper grain, due mostly to high churning temperatures. Some garlic flavor was noticeable.

Twenty-two tubs were entered in the contest, which is starting this season with increasing interest.

The World's First Creamery Butter Maker

To Mr. M. VanDeusen belongs the honor of being the first creamery butter maker in the world. In a recent issue of Hoard's Dairyman is given an interesting sketch of his career. He is now eighty-six years old and was born at Kinderhook, New York. His earlier years were spent in acquiring an education and in familiarizing himself with the details of successful dairying on his father's farm.

In 1868 he went to Manchester, Iowa, where he engaged in buying and selling butter on the market. In 1872 he returned east but was shortly afterwards engaged as butter-maker for a company that was formed at Manchester, to manufacture butter from cream brought in by farmers in the surrounding district.

This first creamery building in the world was erected at Spring Branch three and one-half miles from Manchester, Iowa, and was ready for business on April 1st, 1872. It contained only two rooms, one of which was utilized for the storing of milk in cans, the other contained a churn and Bennett's butter worker.

In this building Mr. VanDeusen made a superior article of butter, which commanded the highest price on the New York market. Success crowned his efforts and through his influence creameries were organized in all the surrounding states. During the Centennial Exposition in 1876, butter from the Spring Branch Creamery took the highest award and was known on the New York and Chicago markets as "Premium."

Such is the beginning of an in-

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Easily and Thoroughly Cleaned Skimming Devices

To keep the skimming devices perfectly clean is of first importance, otherwise the quality of the cream suffers—profits diminish.

The majority of skimming devices are hard to clean. Some next to impossible to clean perfectly. But the Empire cones are easier than any others to keep clean and sweet.

They are of sheet steel, six in number, pressed into shape after fourteen distinct operations. They are accurate to a fraction, fit to a nicety—and it's utterly impossible to put them together wrong.

Light and nice to handle. The surfaces are smooth as china, with no cracks, joint, seam or rivet to catch the albumen and impurities of the milk which stick like glue if given a chance.

Nothing could be simpler than to take our brush and wash out these cones, as shown in picture. Inside and outside, every part readily accessible—easier to clean the Empire cones thoroughly than

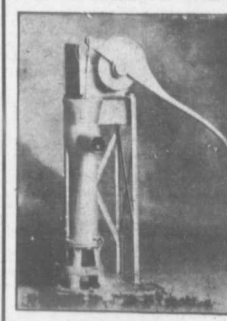
to half-clean other skimming devices.

Yes! we will gladly send you this Frictionless Empire, with its easier cleaned skimming devices, its lighter bowl, its simpler and smoother running mechanism, its frictionless bearings, and guaranteed to skim as close as any other Separator made, for free trial in your own dairy.

Any way, we ask you as a favor to drop a postal for a FREE DAIRY BOOK which should be in the hands of everyone interested in dairying.

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THE DAULEY WHEY PUMP

overcomes every opposition that can be raised against the use of a Check Whey Pump. It is guaranteed to work perfectly under all conditions, cannot clog. Check does not come in contact with the whey or any part of the mechanism of the Pump, which is very simple and cannot get out of order.

These Pumps have been in constant use since 1905, giving perfect satisfaction although subjected to most severe tests.

WILLIAM LOCKER, Pres. Prince of Wales Cheese Factory, Campbellford, Ont., writes on July 1, 1907: "The Whey Pump that I ordered from you is giving good satisfaction. You will find enclosed check to balance amount of bill for Pump."

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dusty that is as important a factor in dairying in the United States as the cheese factory is in Canada.

A creamery association in Alberta declared a dividend of 5 per cent. on last year's operations.

Few are made rich and many poor in a mining country. In a dairying country few are made poor and many rich.

At the recent National Creamery Butter Makers' Convention at St. Pauls, Minn., gathered cream butter scored 96 points strictly on its merits from a commercial standpoint. It is needless to say that this butter was not made from cream kept a week on the farm and taken from a separator that was not washed more than once or twice a week. If properly managed, from the man who milks the cows, and cares for the cream, from the driver who takes it to the creamery, to the butter-maker, as good butter should be made from gathered cream from whole milk delivered to a creamery. Dairymen are gradually learning this.



This Butter Mould Given Free

In return for one new subscription to the Canadian Dairyman and Farming World, at \$1.00 A YEAR

ADDRESS "THE CIRCULATION DEPT." The Canadian Dairyman and Farming World PETERBOROUGH, ONT.

Cheese

Makers are this department relating to subjects for discussion. The Cheese 1

The Action

Keep

In the 24h consin Exp valuable wng the effe the action effect of ru as follows:

Milk kept o may require to coagulate the same time in c shown that 8 hours at to coagulate of acid, while same temper of time in a lated in 19 ml of acid.

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The Dairy made war (sanitary stan to keep the paragraph gion why they In taking tion of past writer felt the means to to some ext coming rusty ed properly a it should go paratively sw will not tak quickly as wh unheated and that all the in milk cans

W

It gives that smooth, firm, richness and good colour cheese, only possible with full-flavoured It dissolves and is not in the whey. By bag or b at all grocers

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