

Whey Butter.

By Prof. E. H. Farrington, Wisconsin Dairy School, at the Convention of the Southern Wisconsin Cheese-maker's Association, February 16—17, 1905.

For the past few years the foreign cheese department at the Wisconsin Dairy School has been making some experiments in the use of a separator for skimming the whey obtained from Swiss cheese. This work has been very successful.

The whey from Swiss cheese often tests as high as one per cent. fat; this is at least 25 per cent. of the fat in the milk from which the cheese is made and by the old methods this amount of fat made a very small quantity of poor butter.

When the whey is drawn off from the kettles and allowed to stand in large tanks for the fat to rise on it and the whey sours, the fat ripens and in some cases becomes so rancid that the butter made from what is skimmed off by the gravity process, is not of very good quality. The whey by standing in these tanks a long time becomes very

sour and not only contaminates the patrons' milk, cans by returning it to the farms in the same cans the milk is delivered in, but its feeding value is diminished so that when it arrives at the farm it is not more than half as valuable for stock feeding as it would be if fresh and sweet from the kettle.

The old process of skimming the whey is also very wasteful as probably no more than half the fat in the whey is obtained. There are, therefore, at least five objections to the old methods of making whey butter:

I. The excessive loss in skimming.

II. The poor quality of butter made from the whey skimmed.

III. The contamination of the patrons' cans by returning the sour whey in them.

IV. The inferior feeding value of this sour whey when it arrives at the farm.

V. The general public nuisance that these sour whey tanks are to the factory and the community in which they are located.

It has been demonstrated by the work at the dairy school that all these objections can be easily overcome by running the sweet whey from the kettle through a cream separator at once. The cream thus obtained is sweet and

can be ripened so as to make butter of as good quality as the best creamery butter. The separator will also remove all but a very small trace of the fat from the whey so that there is almost no loss in the skimming. The whey can be returned to the farmers while it is sweet and will therefore not contaminate the cans during transportation. When this sweet whey arrives at the farm it is in as good condition as it can be for feeding to stock.

In the work done at the dairy school during the past few winters separator whey-butter has been made and put up in one pound prints. I have brought with me three pounds of such whey butter and one pound of creamery butter. These were all made at the dairy school during the past winter. Each of the packages is a one pound brick and I should like to have those interested in this question, examine these four pounds of butter and see if they can pick out the creamery butter from the whey butter.

This opportunity for inspecting the butter was accepted by all the members present and very few of them were able to distinguish any difference between the brick of creamery butter and those of whey butter. A great deal of interest in this matter was shown by those present to say nothing of the surprise expressed that it was possible to make butter of so good quality from whey.

The possibilities of an annual increase in the gross receipts of the Swiss cheese factories of the state by introducing the improvements suggested by the dairy school, may be understood from the following conservative estimates:

A Swiss cheese factory receiving 4000 pounds of milk per day will make 3600 pounds of whey testing about one per cent. butter-fat. If this whey is skimmed by a separator there may be made at least 36 pounds of butter from it and the quality of this butter equal to the best which sells for at least 20 cents per pound during the summer season. The value of this separator-made butter will therefore be \$7.20 per day.

The old method of making whey butter will not often yield so much as \$2.00 worth of butter from this amount of whey, so that a gain of at least \$5.00 per day may be made by substituting the new for the old methods of butter-making at Swiss cheese factories. This saving will amount to \$150.00 per month or at least \$1000.00 per factory per season.

It is estimated that there are 243 Swiss cheese factories in Green County alone, and a saving of \$1000 per factory each year makes a total of \$243,000 in that county. The number of Swiss cheese factories in other counties of

the state has not been carefully estimated, but if Green County has one-half the Swiss cheese factories of the state, the total possible gross receipts for this butter may be increased by nearly \$500,000 per year.

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