

The cream is now ready for the churn, and is poured into it without any more preparation. A certain quantity of the ferment is added, which is strongly charged with lactic acid, and will replace with the fatty matter the lactic acid which would have been developed by the spontaneous fermentation of the cream. We know that this acid is needed to secure that the fatty matter gathered together under the name of *butter* should possess that special flavour which the consumers, our customers, cannot do without.

This ferment is added in a certain proportion as mentioned below. For this proportion we have first of all established a type or standard of acidity for cream and one for the ferment, as well as the typical or standard proportion the best fitted, under these conditions, to attain the best results. And in all our daily work, we vary this proportion, or percentage of ferment, according as we find that the acidity of the cream and the ferment of the day approach or recede, more or less, from these types. In this way, we preserve the same proportion of lactic acid with the fat, and we find a great uniformity of flavour in our butter one day with the other. The buttermilk besides, when tested by the acidimeter, shows the presence of a quantity of acid obviously the same, the variation not being more than .05 of 1 per cent.

A wooden stirrer minutely divides the ferment, and when pouring it into the churn, it is strained through a cheese-cloth, that it may be thoroughly mixed with the serum, and that not a trace of it may be found in the butter. The churning should occupy about 50 minutes, and the rest of the work is carried out as in the ordinary process in the summer.

By spontaneous fermentation, even when aided by the use of a pretty large percentage of ferment, say, 5 or even 10 per cent, we have never succeeded in getting the same richness and uniformity of flavour that this process of non-acetified cream always gives us.

The averages of the tables to which the reader is requested to refer, are taken from official record of the St. Hyacinthe Dairy-School for the years 1902, 1903.

The ferment has always been added to the cream in conformity with the *standards* given in the appendix.