

## The Dairy.

### Salting the Milk in Cheese-making.

EDITOR CANADA FARMER:—I have been informed that the plan of salting the milk instead of the curds is a decidedly preferable one, but, before I try it, I should like your opinion about it. Also, please state what is the proper quantity of salt for the ordinary method.

Ingersoll.

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We much prefer salting the curds, for the simple reason that the butter is equally as good, and a very large saving is effected in salt and whey. The usual quantity of salt for the curd is from 3½ to 4 lbs. for every 1,000 lbs. of milk; when the milk is salted instead of the curd this quantity has to be increased to from 17 to 18 lbs. for every 1,000 of milk, and then of course the whey is as good as lost, for it cannot be utilized for feeding.

Since the above was in type we find the *Rural New Yorker* confirming our view. It says: It is true the salting of the milk distributes the salt evenly through the mass and avoids the labor of mixing the salt with the curds; but these advantages are not sufficient, it would seem, to recommend its adoption among dairymen, and if the value of the salt and whey be taken into account, the gain by this practice would hardly balance the loss. We have tried salting the milk, but have not discovered that any improvement is made in the quality of the cheese, nor do we know that any improvement is claimed by such manner of salting.

Some ten or fifteen years ago the salting of cheese by applying it to the milk was highly recommended by certain dairymen, and although many cheese-makers were induced to try the plan, they soon abandoned it, and of late we have heard but little of its advantages.

In salting cheese in the curds, care should be taken to have the salt free from lumps. It should be passed under a roller or ground in a mill made for the purpose, for unless it is reduced to a finely divided state, it will not be likely to be evenly distributed through the mass—a point which is always essential in salting cheese.

### The Annatto Plant.

Annatto, used so extensively by dairy men, in coloring their products, is a substance taken from the seed pod of the annatto plant, *bixa orellana*, of Brazil. The plant is an evergreen, and is grown in some green-houses as a curiosity.

The coloring matter is wholly upon the outside of the seeds, which are about the size of common raisin seeds, which they much resemble. They are contained to the number of forty or fifty in the pods.

The coloring matter is about as thick as common writing paper, and may be scraped off from the seeds, leaving the latter as clean and bright as buckwheat grain, and of about the same color. This outer covering, from which the color is extracted, is a portion of the dried pulp of the fruit, adhering to the seeds like the mucilaginous matter of unwashed pumpkin or squash seeds. It is entirely free from taste or odor, and appears to be pure color and nothing else.

Annatto, as it is received in the paste form, from Brazil, has a peculiar aromatic or nutty odor, which is derived from the flour or meat of the seeds. This flour is as white as the flour of wheat or other grain, but is not as dry and starchy, resembling in consistency more the meat of a fresh shagbark or butternut.

Annatto was formerly used principally by dyers, and the preparation of the paste is carried on by the native Brazilians in a very crude and careless manner, but since it has become one of the necessities of the modern dairyman, its mode of preparation and manufacture has been entirely changed. The pure, clean annatto seeds are used by the natives in their soups, and for flavoring foods, as we use caraway and other aromatic seeds in our cookery, and they are as harmless as ours, but the paste, or "basket" annatto, as it is usually called, because it comes packed in basket work or straw mats, like those used for dates, is quite another affair. It is coarse, crude and dirty, and really only fit for the dyer for whom it was originally prepared.

Since annatto has come into such common use in the dairy room, our merchants, who make a specialty of dairy supplies, have found it practicable to import the pure annatto seed and extract the coloring matter here in a neat

and scientific manner, and thus obtain a perfectly pure and harmless product, as much superior to the imported article in purity as is a clear crystal of gum arabic superior to the school boy's chewing gum, scraped from a log at the saw-mill.

### 'On Souring of Milk during Thunder Storms.

It is a fact, to the truth of which all housewives will testify, that immediately after a brilliant display of atmospheric electricity, milk which was sweet before will be found to be sour. The souring of milk is undoubtedly caused by the sugar of milk being changed into lactic acid. But what produces this change in so short a time? Under natural conditions, milk will remain sweet for at least a day, while during a thunder storm the change will take place in an hour's time.

A great number of reasons have been given for this rapid souring of milk, as the jarring of thunder, etc. But the simple explanation was the result of an experiment tried by an Englishman named Andrew Crosbee, about fifty years ago. The gentleman was endeavoring to produce crystals by decomposing a silicious solution by means of the electric current. After he had passed electricity through the solution several hours, he was astonished to find some oval bodies covered with bristles moving through the solution, and kicking out in every direction. At first it seemed as if electricity produced life, but further experiments showed that it simply hatched the germs already in the liquid, for if precautions were taken to exclude them, no animal life was produced by electricity.

These wonderful experiments set the scientific world to thinking and experimenting; and, as the result, Hællier, Pasteur and a host of investigators, have shown that the souring of milk is caused by the presence of a large number of minute plants called fungi. The presence of negative electricity is essential to the rapid development of these minute plants. By charging milk with positive electricity, it may be kept sweet for several weeks. This fact may prove to be of practical utility in the arts.

Now, during thunder storms everything is favorable to the growth of fungi. The air is warm, moist and charged with negative electricity. In a short space of time whole forests spring up in every pan of milk, and succeed in souring the milk and the temper of the housewife.

This explanation is given by Prof. W. K. Kedzie. It throws light upon a mystery. But how does thunder addle eggs upon which hens are sitting? That must be due to concussion or vibration, we suppose. Will not some profound Long Island buckwheat eater answer?—*Brooklyn Sun*.

### Butter Packing.

We wish to impress upon the minds of Western dairy-men and makers of butter the necessity of paying strict attention to this great interest, which is yearly growing in magnitude, if they wish to compete with other sections. The packing and packages used are almost as essential points as making, and this fact should be remembered. Of course all butter is not alike, and it cannot be sold at the same price, but a little more care and attention paid in this respect (packing) would do considerable toward bringing about more uniformity in prices. Very often commission merchants receive complaints from country shippers, stating that their butter was as good as their neighbors', which was sold as choice, and probably two to five cents higher than theirs. This may be so in their estimation, but other parties may differ; their neighbors' butter may have been put in more desirable packages (probably new tubs) while theirs was packed in jars or old tubs. Then again, their butter may have been streaked—probably only the least trifle, while their friends' may have been straight and uniform in color—all of which would naturally tend at times to make a wide difference in price and create dissatisfaction. Parties should be careful and pack butter uniform in color, and should particularly remember the fact that streaked lots, no matter how sweet and choice, cannot be brought into competition with lots running uniform in color, the latter always commanding a much quicker sale at a fair premium and in every way compensating dealers for their extra labor and care.

The packing and packages used are, however, of no ordinary account in the matter of realizing the best market prices, and during hot weather particularly should shippers be especially careful in regard to packages. Jars should be avoided as much as possible, costing more freight, besides being a package not easily handled. In handling at the stations and express offices, and even in forwarding, jars are often placed on top of each other, and as there are

no covers for protection, the quality is materially damaged by defacement and the price is considerably lessened. Parties should be careful to pack their butter solid, completely filling the packages, and spread a piece of clean, new bleached cotton cloth over it, dipped in brine, neatly tucked in at the edges, so that when removed it will not damage appearance. Another fact to which we wish to call the attention of farmers and makers of butter is that they should buy their own package and pack their own butter in original packages, so as to do away with this country second-handed re-packing business, which causes so much streaked butter.—*N. Y. Com. Bulletin*.

### Philadelphia Gilt Edged Butter.

Many judges of good butter aver that the best butter that can be found in the United States is made near Philadelphia. But if the same degree of neatness and care be observed in other localities where the cows are supplied with as good grass, there will be no difficulty in making an article fully equal to Philadelphia print butter. The milking is done quietly and rapidly, the same milkmaid always attending to the same cow. The spring house is usually of stone, on a side hill, the floor covered with running water, and, therefore always cool and free from odor. Deep tin pans, painted on the outside, with bails for handling, are filled to the depth of three inches, placed on an oak floor, surrounded with cool, clear water of a temperature of fifty-eight degrees. The cream is taken off in twenty-four hours, kept in deep vessels holding two gallons, and stirred whenever a new skimming is added. A barrel churn is used, the churning lasting an hour, when a little cold milk is added to cause the butter to gather. The buttermilk drawn off, ice cold water is added twice, a few turns given to the churn each time and the last water is scarcely colored with milk. A gentle rocking of the churn soon collects the butter, which is left two hours to drain off the remaining water through a small hole made for the purpose. The butter is worked by a corrugated wooden roller revolving on a shaft supported over the centre of the table, which also revolves under the roller. The roller does not quite touch the table, so there is no crushing of the particles, but a separation which permits the water or milk to flow away. A cloth wrung dry in cold spring water is repeatedly pressed upon the butter until not a particle of moisture is seen upon it as it comes from the roller, and the butter begins to adhere to the cloth. That is called "wiping" the butter. An ounce of salt to three pounds of butter is then thoroughly worked in by the aid of the same machine. It is then weighed in pound prints, deposited in trays and set in water to harden. The next morning it is wrapped in damp cloths, each pound by itself, put in a tin case upon wooden shelves, with two compartments of pounded ice to keep it cool, and surrounded by a cedar tub, it is sent to market and sold at \$1 a pound.—*New York Herald*.

SOMETHING ABOUT CREAM.—There is a new discovery in the science of setting milk for cream, which bids fair to eclipse everything yet invented for bringing cream to the surface in the least possible time, thereby preventing the loss caused by the variation of temperature and the time required to raise the cream, as well as storage and labor. The plan looks very feasible, but has yet to be proved practicable. It is this: strain the milk into cans leaving some space in the top, then fit on covers air tight and pump the air all out of the top of the can over the milk with an air pump; this will cause a powerful suction through the milk, and aid greatly in bringing the globules of cream to the surface. Farmers try this and report in the *Cultivator*. The idea is just presented to me, and I have not had time to try it.—*Cor. Boston Cultivator*.

NOVEL METHOD OF MAKING BUTTER.—Dr. E. W. Sylvester, Wayne county, N. Y., recently related his experience with a French method for making butter, to which his attention was called several years ago. It consisted of putting the cream in a canvas bag, and enclosing that in still another bag, so as to prevent the cream from escaping and any foreign matter from entering; then placing the bag in the ground two feet deep when the earth was dry, covering it over, allowing it to remain twelve hours. This he did, and at the expiration of the prescribed time found the inner bag full of the most excellent butter. After receiving the same attention as butter gathered from an ordinary churning, it was pronounced by competent judges a superior article. Since this first venture he has repeated the experiment, sometimes with success and sometimes with failure. Consequently he explains the churning as due to electric currents passing underground, the whole law of which not having yet been attained accounts for the failures.