

other hand, the milk is thin, comparatively free from grains of butter, and drains freely through a cloth strainer, it is all right. Churn slowly, test as above frequently, and lower the temperature of the contents of the churn by cold water, towards the end of the operation, particularly in hot weather: the warmer the weather, the sooner with the butter mass together.

3rd, Draw off the buttermilk through a sieve, and pour into the churn plenty of cold water. The main point is to get the temperature low enough to permit of the butter being agitated without causing it to gather.

Having sufficiently chilled the butter, fasten up the cover of the churn, and turn the handle slowly; drain off the water, and repeat the operation with fresh cold water, until it runs off as clear as it went in.

A quantity of cold brine should be prepared for the last washing; allow the butter to stand in this for ten or fifteen minutes, giving the handle a few turns from time to time, and then drain off as before.

Brine may be substituted for water in the first washing, and with advantage, for salt coagulates the albumen of the butter, and the water used afterwards dissolves the coagulum. Use plenty of water in these washings: butter that will mass together in a small quantity of liquid will preserve its grain distinct in a large quantity.

4th, As to salting: pulverise the salt thoroughly, sprinkle one-third of it over the butter, which has been drained from the last washing and should now be lying spread uniformly on the bottom of the churn; then, tip the mouth of the churn towards you as far as you can without disturbing the butter, and, with a jerk, tip it enough farther to throw the butter over on to the side of the churn. What was the top face of the butter, and was sprinkled, is now beneath, and the fresh face presented must be sprinkled with half of the remaining quantity of salt. By a dexterous movement, throw the butter to the opposite side, and sift on it the remaining salt. Rock the churn from side to side, gently, to mix the salt, and let the whole lie quietly for half an hour to dissolve the salt. After this, put on the cover, turn the handle slowly, and the butter will gather in lumps, the surplus brine exuding under the motion. The butter is now fit for packing.

Clotted cream.—Mr. Lynch quotes Professor Long as saying that the principal advantage of making butter after this fashion (Devonshire) is that "when, from unknown causes, the cream has made a practice of taking a long time to change into butter, the annoyance may in future be prevented by this plan:" which I showed to be the case two years ago, when the milk of M. Séraphin Guévremont's cows had persistently refused to yield any butter for more than two months; v. Journal, p. 67, v. 1886.

In making butter after this mode, a small quantity of cold water should be put into the pan before the milk. In winter, after scalding, the milk should be allowed to cool gradually, as when cooled rapidly the cream is apt to be thin.

Our author recommends that the heat should not be carried higher than from 140° F. to 145° F., "having in view the quality of the butter." Now, as I have always carried the heat of the water in the *dain-marie* up to from 165° F. to 170° F., at which heat the coagulation of the albumen is perfect, I fear I cannot agree with Mr. Lynch. If people will persist in scalding on an iron *back*, instead of in a water medium, no doubt these higher heats will cause the butter to have a fire-flavour: in a waterbath there is no such danger.

The Mark Lane Express says, on this subject: "We find the Devonshire system of scalding milk strongly advocated by Professor Tanner but whatever other merits that system may possess, it has not the important one of producing butter

pure and free from any admixture of casein." True enough, for casein is not coagulable by heat; still if we get rid of the albumen, by this means, as we do, one enemy at least is gone. And surely when we consider that there is, in this system, a positive impossibility of the souring of the cream on the milk—in which case the effect of the heat would be to make "curds and whey" and not clotted cream—the plan is worth following out in small dairies. Besides, the butter comes, even in winter in two minutes, at the outside. I have tasted Devonshire butter of no very high quality, it is true, but positively bad butter of this kind I never saw, whereas there are plenty of *creameries* that turn out, *fade*, mawkish, un-eatable stuff in plenty.

Winter Dairying.—We cannot all practise butter-making in winter, for fear of swamping the market; but I can conceive of no more profitable plan, for those farmers who possess sufficient energy and skill, than to employ the dead season of the year in making butter and soft cheese of the best quality. The cows intended for this purpose should calve about the 1st of October, and be warmly kept in well ventilated stables all the winter. I do most sincerely believe that a cow in milk should never stir out of doors from the first of November to the first of April. Dry off your cow at least six weeks before the time of calving, particularly if she is a great milker: it is of the greatest importance to her future yield that she should go into winter quarters in good condition, to say nothing of the benefit it will be to the calf. When drying off, take care that the cow is really dry before you finish with her: most of the *lost quarters* I have seen so many of during the last three years, were caused by carelessness towards the end of the drying off.

Food for milch-cows.—"The perfection of feeding is pasture-feeding at its best. Summer weather; rich upland slopes, sweet grasses, unmixed with weeds, for food; water, pure and abundant; fields roomy; shade, convenient; quietness, comfort, and plenty:—all the essentials of health and comfort are here."

"Such is pasture at its best. The reality in practical life too seldom approaches it. Scant, weedy, innutritious grass, giving in a day's travel all over it too little food to produce milk without robbing flesh; bad water, and not too plentiful either; no pleasant shade without long tramping after it; flies all day; dogs for drivers, and kicks from milkers—Poor brutes! All of them! Such is pasture at its worst."

Very good indeed Mr. Lynch! Three-fourths of the pasture in most parts of the province where I have lately wound is of the latter character, and nothing astonishes me more than to hear it claimed as a dairy country. Nothing can be more absurd than the idea of a dairy-farm without an acre of permanent pasture, and that is the state of nine-tenths of the farms at Sorel, unless you like to call miserable bush-runs pasture. Is it not true that by the 1st July the cows have nothing to eat but the roots that they drag up from the ground? By August, here and there, a stubble is cleared, and there the "poor brutes" of cows get a little picking of couch-grass and other weeds. But how many farmers grow green crops of any sort to fill up the vacuum between July and the time when the cattle are stabled—say November? One in twenty? No, not one in fifty! I must speak out: the farming of the light lands all round Sorel is a disgrace to any country. The system is to sow down with timothy and clover, mow and sell the hay, as long as there is any, and then pasture. The clover soon disappears, after the first mowing, and what sort of a pasture can be expected from timothy on any land, let alone on sand? The Guévremonts, I am proud to say, have, under my instruction, begun to increase their summer provision by sowing a few acres of mixed grasses—clovers, fescues, and ryegrass; and I do trust that as their neighbours