

cream is violently agitated, and broken down into the smallest particles. The churning works away for nearly an hour, until some small particles of butter begin to appear, or, in the language of the dairy, the butter begins to come.

There is a considerable art connected with this apparently simple manipulation. The churning must not be too rapid and violent, nor must it be too slow and gentle. In the first case, and especially in summer, it would ferment and become ill-tasted,—in the latter it would not form at all. The temperature should be carefully regarded. In summer it will be necessary to immerse the pump churn,—the one that has been thus described, about a foot deep in cold water, or to throw water over the revolving churn. In winter it will be necessary to add a little warm water. The manipulation is continued, until the particles of butter which have begun to come accumulate, and unite at the bottom of the churn, and form a solid mass of butter, and to which, at length, there are no farther additions. The butter is then removed into another vessel, and the fluid—the *butter-milk*, is set aside for the pigs.

After the butter is formed, the usual practice is to wash it in several waters until all the milk with which it is yet mixed is removed; but care should be taken not to knead or beat it too much, and the less it is handled, after being once made, the better. Some advise that the milk should be forced out of the cavities of the butter by means of a flat, wooden ladle, furnished with a short handle.

In the neighbourhood of *Epping*, which has long been celebrated for the quality of its butter, the following is the common process:—the milk, after standing twenty-four hours, is *fleeted*, or skimmed, and the skimmed milk is drawn off into vessels of an increased depth, which is called *doubling*. There it remains for twelve or twenty-four hours more, as the weather permits, during which time, as the cream rises, it is fleeted two or three times. It is then *trebled*, or put into deep tubs, where it is again occasionally skimmed, and kept so long as any cream forms on the surface. The butter made from these after-fleetings is of a paler color and inferior quality to that made from the first cream; it is, therefore, usually churned apart. In making the first quality, when the butter is come, the dairy-woman throws it first into clean water, and then upon a board, and with her hand squeezes out all the water; sprinkling, at the same time, a little salt over the whole mass, which is then divided into pounds, and they, as they are weighed, are again squeezed and rolled out to the length of about fourteen inches. So far, the method nearly accords with that in most other districts; but there is this peculiarity in the management of the *Epping* dairy-women, that they consider a small proportion of acid, either natural or artificial, necessary to ensure a good churning; and for this purpose they either mix sour cream with the sweet, or they employ lemon juice, and sometimes rennet. This practice merits attention on dairy farms which possess pasture of a short and sweet nature; but where the herbage is coarse, or the cows are fed on roots, or other succulent artificial food, the fresher the cream is churned, the more valuable will be the butter.

Butter, thus freed from the remaining milk, is called *fresh butter*; and, when sold on the spot or in the neighbouring markets, is formed into rolls weighing half a pound, or a pound, or into lumps of 24 ounces, termed *dishes* in Somersetshire and some other parts of England. Where it is intended to be kept, or sent to a distance, it is salted by

the process immediately to be described, and is put into casks, containing 28, 56, or 84 lbs., and usually denominated half firkins, and tubs. Previously to putting the butter into these vessels, especial care must be taken that they are well seasoned by frequent washing and exposure to the air for two or three weeks. As it is very difficult to season new firkins, it will always be preferable to employ those which have been already used where they can be returned to the dairy owner. The most speedy method of seasoning the firkin is by the use of unslaked lime, or a large quantity of salt and water well boiled; with which it should be repeatedly scrubbed, and afterwards thrown into cold water, to remain there three or four days until wanted. It should then be scrubbed as before, and well rinsed with cold water; and, before the butter is put in, every part of the inside of the firkin should be well rubbed with salt.

The ordinary process of *salting butter*, after the milk has been forced out of it in the manner already described, is, to work into the butter one or two ounces of salt, so thoroughly that it shall be equally incorporated with the mass; for if it be not equally mixed in every part, the butter acquires two colours, becoming yellow where the salt has fallen, and white where it has not, and in some places is termed "pyety" or "pinsowed." The salt employed for this purpose should be of the purest kind, well dried and broken down, but not completely pulverized. If the salt is pure, the butter will retain its flavour as long as it is wanted, but bad salt will soon cause it to become rancid. Dr. Anderson recommends the following preparation as not only preventing the butter from becoming tainted or rancid, but also improving its colour, while it imparts a sweeter or richer taste than could have been effected by the use of the common salt only.

Let two parts of the best common salt, and of sugar and saltpetre each one part, be completely blended together by beating, and add one ounce of this mixture to every pound of butter; incorporate it thoroughly in the mass, and close it up for use.

It will be necessary to keep butter, thus prepared, for two or three weeks before it is used, otherwise it will not taste well; but, if properly cured, according to the above prescription, it will continue so perfectly sweet for three years, as not to be distinguished from newly made salted butter. It is said that in Holland the salt for butter that is intended to be kept, is mixed with the milk before it is churned, by which means both its flavour and preservative qualities are more effectually imparted.

Before the butter is put into the firkin, it should be made as dry as possible. A thin layer of salt should then be strewed on the bottom of the cask, and each successive layer of the butter thoroughly moulded into that beneath it. When the cask is full, some more salt should be strewed over it, and the head put on. If the butter had been previously well freed from the milk, and the salt moulded into it, quite dry, it will not shrink in the cask. This is always regarded as one criterion of the goodness of the butter.

Butter is a most valuable article of commerce. It is produced in the greatest perfection in Holland and in England, and from the former more than 100,000 cwt. is yearly exported to England alone. The whole quantity that is manufactured in England is consumed at home. More than 400,000 cwt. of butter is imported from Ireland every year, a great part of which is consumed in Great Britain, and the rest exported to our West India possessions, except a little to Portugal and South America.

Of the average quantity of butter produced from one cow or from a dairy of cows, it is impossible to form any accurate estimate. It would vary with the breed, the pasture, and the management. Four gallons of milk will probably produce about a pound of butter—and a good cow, in order that dairy husbandry may remunerate the farmer, should yield about 200 lbs. in the course of the year. 200 lbs. at 10d. per lb., would produce £2 6s. 8d.; the calf would probably sell for 20s., and there would be considerable feed for the pigs, while a valuable quantity of skim-milk cheese could be manufactured. A cow, including pasture and hay, can scarcely be provided for from less than three acres of tolerably good land, the rent of which, with the taxes, costs, casualties, and servants' wages and food, will scarcely leave more than a moderate remuneration to the farmer.—*Complete Grazer.*

EXTRACTS FROM A CORRESPONDENT.

"It is to be regretted that practical farmers do not contribute more to such a work as you have undertaken. I feel no scruple in asserting, that every farmer in the province would be benefited by the perusal of the many valuable articles that appear in your Journal, still if every intelligent farmer in the province would not only take in the work, but write for its columns such successful experiments as they may have made, or such useful facts as they may be in possession of,—the work of improvement would go on with rapid strides, and the character of the country would very soon change, and the sun-beams of prosperity would shine on the countenance of our farmers, with a resplendency that would speak louder than words, that their profession was one of the most lofty and noble that could possibly attract the attention of mankind.

Although I am not a farmer, I shall at all times feel a pleasure in advancing the prosperity of your praiseworthy enterprise, and shall for the present mention a single fact, which lately came under my notice.

Two farmers in this neighbourhood prepared their seed wheat in the following manner,—one dissolved a pound of arsenic and thoroughly mixed it with eight bushels of wheat, and distributed the application throughout the whole mass, he then limes it in the usual manner,—he has just commenced harvesting 55 acres, thus prepared, and thinks there is not one head of smutty wheat in the whole, and expects upwards of 40 bushels per acre. He has practised this mode of preparing his seed for the last seven years, and has not had any smutty wheat, whereas his neighbours have had plenty and to spare.

The other party prepares the seed thus,—he takes his seed to the river, and washes it in a tub, and changes the water very often, until it runs off quite clear, he then puts the wheat thus washed, into bags that he cleaned the day before, and carries it to the granary, and soaks it a few hours in strong brine, and afterwards dries it with lime,—he also has a good crop, which is quite free from smut.

CHATHAM, July 25, 1843.

If there is a man who may eat his bread at peace with God and man, it is that man who has brought that bread out of the earth by his own honest industry. It is cankered by no fraud—it is wet by no tear—it is stained by no blood.