Stock and Dairy.

BUTTER-MAKING.

The following condensed exposition of butter making, as practised by our best butter makers at the present time, we copy from the *Country Gentleman:*

The production of milk for butter making is essentially the same as that for cheese making. There is this difference to be observed, however: For cheese, we must look principally to the quantity of caseine in the milk; for butter, we must consider the yield of cream entirely. Cows must be selected accordingly. For both purposes, the same care as to cleanliness, quality of feed, purity of water, and gentle treatment of the cows should be observed. The milk in both cases needs to be aired and cooled soon after milking.

From this point, quite different handling is required. For cheese, we constantly agitate the milk to keep the cream from rising; for butter, we must set the milk to rest as soon as possible, and not only avoid all stirring, but not allow it to be even jarred. The more perfect the rest, the more completely the cream will rise.

It is still a subject of debate as to whether the cream rises better in deep or shallow dishes. But it is certain that it will rise in either kind of vessel, if all the other conditions are right.—The tendency is toward setting milk in deep pans and in large masses.

There is no dispute as to the propriety of cooling the milk, or of keeping it in a moist atmosphere and in a light room. Moisture prevents the cream from drying on the surface and making flacky butter, while light is essential to develop the color so much desired.

The temperature, it is asserted, may be allowed to go lower for butter than for cheese.—We would not allow it to go below 55 degrees for butter, and believe it would be better to keep it at 60°. The best temperature for churning is admitted to be between 60 and 65°, the latter for cold and the former for hot weather, making a mean temperature of 62 to 63° as the proper point. Possibly different dairies may require a slightly different temperature.—The cream should be allowed to become slightly sour, if a good keeping quality is required, but care should be taken that the cream does not get too old and seriously injure the flavor.—Sweet cream makes the best flavored butter, but the yield is smaller and it does not keep so well.

The best method of churning has not yet been determined. Many patent churns have been presented to the public, but none of them have been an improvement on the old-fashioned dash churn. There is some dispute as to what causes the separation of the butter from the milk. Some say it is the concussion; some that it is the incorporation of the air with the cream. Certain it is that agitation is necessary. Forcing air through the cream while agitating it makes the butter separate quicker, but it injures the quality. What is wanted is some method that will agitate every particle of cream alike, making the butter all come at once, and of the same texture. By every method yet devised, there is some cream at the sides, corners or ends, that does not get so much churning as the rest. This lessens the yield, and makes the quality uneven. At least a half hour should be consumed in churning.—Where the milk is churned it is allowed to change somewhat. The yield of butter is larger, but it contains more caseine, and is, therefore, inferior. More power is required to churn with.

If the butter comes firm and solid, and separates freely from the milk, but little working will be required to expel the buttermilk. The less it is worked the better, if the buttermilk is got out and the salt is evenly incorporated. It is better to wash the butter than to work it too much without; but whether worked or not, the buttermilk must be expelled, or it will injure the flavor and the keeping quality. Indeed, it is asserted that pure butter will keep almost indefinitely without salt. But such butter can not be produced by the ordinary process. So salt must be added to make it keep. The quantity used by our best butter-makers varies from one-half to one ounce of salt to one pound of butter. Some salt considerably higher and go entirely by the taste. Enough salt should be used to convert the remaining buttermilk and water into brine, or the butter will soon lose its flavor and become rancid.

Butter factories, as well as cheese factories, are becoming popular. Some skim all the cream they can, and then feed the milk to hogs or calves. Some skim only the night's milk, and make the milk into cheese. A very few make skim-milk cheese, for which, however, there is but a very limited demand.

FACTS IN DAIRYING.

The increase in the demand for dairy products, both in this country and in England, has been steady through a series of years. The milk product per year is little affected by accidents such as have an influence on other crops; and the dairyman's lands also improve from year to year. The system of associated dairies, (suggested first by Jesse Williams, of Rome, in 1850) in spite of the enormous production it has thrown upon the market, seems to have built up a demand faster than can be supplied. Formerly this country exported butter, but of late it is all consumed at home, and the price is higher than in London. The export of cheese has increased but little since 1861, but the home production has increased from 103,000,000 lbs. in that year, to 240,000,000 in 1869, an average annual increase of about 13,000,000 lbs.

In making fancy butter, there are three essentials, color, texture and flavor. "The color must be a rich golden yellow; the texture, firm, tenacious, waxy; and that nutty flavor and smell which imparts so high a degree of pleasure in eating it." Butter of the very highest quality will bring one dollar a pound readily. A Philadelphia maker who receives this price gave Mr. J. B. Lyman these facts as to his management: He feeds on clover or early mown hay, cuts fine, moistens, and mixes in corn meal and wheaten shorts; feeds often and a little at a time; uses no roots except carrots; keeps his pastures free from weeds; keeps the temperature of the milk room at about 58; skims clean; stirs the cream in the cream pot; churns once a week; just before the butter gathers he puts a bucket of ice-cold water into the churn; in working he works out all the buttermilk without the use of the hand, absorbing the drops with a fine linen cloth wrung from cold water, and at the second working handles delicately with fingers as cold as may be; salts nearly an ounce to the pound; packs in one pound balls.

An important point in cheese-making is to keep the temperature at 70°, as nearly as possible. The variations of the seasons have an important effect—that of 1859 was particularly favorable. That of 1871 was unfavorable, as was that of 1868 in England. An invention which would regulate the temperature of factories at 70° would be of great value to the dairy interest.—*Homestead.*

HOW TO MAKE A CHEAP CELLAR-BOTTOM.

In sections of the country where there is an abundance of cobble-stones, collect a few loads of them about four or five inches in diameter, grade the bottom of the cellar, lay the cobbles in rows, and ram them down one-third their thickness into the ground, so that they will not rock or be sunk below the line of the rows by any heavy superincumbent pressure, such as the weight of a hogshead of molasses or tierce of vinegar. The bottom of the cellar should be graded so that the outside will be at least two inches lower than the middle. A mistake sometimes occurs by grading the cellar-bottom in such a manner that the centre will be two or three inches lower than the outside. When this is the case, should water enter from the outside, it will flow directly towards the middle. A straightened board should be placed frequently on each row of stones as they are being rammed, so that the upper sides may be in a line with each other. After the stones are laid and well rammed down, place a few boards on the pavement to walk on; then make a grouting of clear sand and water lime, or Rosendale cement, and pour it on the stones until all the interstices are filled. As soon as the grouting has set, spread a layer of good cement mortar one inch thick over the top of the pavement, and trowel the surface off smoothly. In order to spread the mortar true and even on the surface, lay an inch board one foot from the wall on the surface of the pavement, stand on the board, and fill the space with mortar even with the top of the board; after which move the board one foot, fill the space with mortar and trowel it off smoothly. Such a floor will cost less than a board floor, and will endure as long as the superstructure is kept in repair.

A floor made in the foregoing manner on the ground in the basement of a barn, a piggery, or a stable, would be rat proof, and would be found cheaper and more serviceable than a plank floor. The work should be done in the former part of the growing season, so that the cement may have sufficient time to become dry and hard before cold weather. *Industrial Monthly.*

DIFFERENCE IN MILK.

That the cream of different cows, when mixed, does not produce butter at the same time, with the same amount of churning, has been fairly illustrated in the family of Mark Hugles, West Grove, Pa., recently. They had an Alderney heifer in a good flow of milk, and an old cow, a stripper; their cream, when worked together, in was observed, did not make butter enough for the bulk of the cream. The buttermilk looked rich, and seemed to collect a cream upon it. They put the buttermilk in the churn again, after having the butter first come and make about five pounds. They churned two or three pounds more butter in the churn, showing that the heifer's cream had made butter first, and that the cream of the old cow needed more churning.

ADVANTAGES OF THROUGH-BRED OVER COMMON STOCK.

A correspondent of the *American Live Stock Journal* says: "No man can properly estimate the advantages which will accrue to the farmer by keeping good in preference to poor stock. In 1831, my father removed from Bourbon county, Kentucky, to this (Vermilion county). At that time there were very few Short-Horns in the State; but we had an English stock of cattle even then—the Teeswater and Longhorns. My father, when he came to Illinois, brought twenty-one cows and heifers, said to have been the finest herd of cattle which up to that time had ever crossed the Ohio river at Cincinnati. The produce of this stock gradually spread all over this part of the country, and certainly made a grand improvement on the common stock. Then land was worth $1.25 an acre, and we could afford to raise common stock, and with a free and unlimited 'range,' and corn at ten cents per bushel, we could afford to raise common stock. But now our farms are worth from $60 to $100 per acre, and we are compelled to resort to better stock. When the interest on one acre is $10, and it takes two to two and a half acres to graze a two or three year old steer, we must have the best stock to secure a reasonable compensation, and cannot afford to fool away our time on mongers. There is a vast difference between the compact massive Short-Horns or their grades, and the leggy, lathy steers with which the country abounds. The former will come in one year ealier for market, besides bringing a better price, because they have more good meat in the right place, and of infinitely better quality. I have heifers at two years old which weigh 1450 pounds, and some a little under two years which weigh 1300 pounds, and have cows which weigh from 1900 to 1986 pounds, (this last being *Jessie Hopewell.*) Now, no one can approximate such weights, in such time, with common stock; and even for beef purposes, if a man is going to raise cattle merely for beef, it will pay handsomely to provide himself with thoroughbred stock.

ASHES AS A CATTLE FEED.

One of our substantial subscribers, in a recent conversation, gave his experience in training neat stock affected with the habit of eating wood, chewing bones, &c. His cattle were one spring affected this way; they became thin in flesh, refused to eat hay, and presented a sickly appearance. He had no impression that their food lacked the constituents for making bone, but his neighbours used bone meal without noticing any good results whatever. At last, he put about four bushels of leached ashes in his barnyard, and threw out to them about a shovelful each day. They all ate as if with evident relish. After turning them out to pasture, he put one peck of dry ashes per week on the ground in the pasture. They ate all up, and gnawed off the grass where it had been lying. The cattle began to improve, gaining flesh and looking better than they had done for several years. He says this morbid appearance was unnoticed years ago, from the fact that the ground was new and ashy from the burning of the woods and land clearings. Latterly he gives one quart of ashes mixed with the same quantity of salt to twelve head of cattle, about once a week.

Horticultural.

SOIL FOR POT PLANTS.

Any one intending to keep plants in the house the coming winter should have a pile of earth getting ready for use. A very good plan is to cut sods in early summer, and pile them up in the garden or back yard; on this heap I throw all the suds and waste water from the house, and when it gets dry, I soak it with water from the well or cistern, so as to cause the sods to rot. People passing by ask me what is that big mound in the garden. I tell them that is plant-food of the very best kind. Have a pile of manure, and also soak that well so as to rot it, and prevent burning dry. Then in the fall I will collect leaf mould from the woods, mix the rotten sods, manure, mould, and some sand together, chop the mixture as fine as possible, and run it through a sieve to take out all the lumps, sticks and unbroken stuff; and if plants won't grow and flourish in that soil, there is no use trying. The older the sod heap is, the better it becomes, for then the grass roots get completely rotted, making a rich, light, open soil, in which the plants delight to revel. Any one that has kept over one pot-plant knows that common unmanured soil soon becomes hard with frequent watering, so that fine, delicate roots cannot push through it well. So if you want your plants to grow well, give them good food. This mixture is splendid for flower beds and borders; although too late for this season, it would be well to remember the operations for another year. Mix up a heap of sods, manure, and leaf-mould now, soak it with suds and water through the summer, leave it out all winter, and it will be fit for use next spring.—*Ed.*

SEEDS FOR MULCHING.

All know how the soil in flower-beds becomes packed by frequent watering in hot weather to keep the plants in good growing condition, and that it is not always convenient to stir the ground every day to keep it open. So some resort must be had to mulching, or covering the ground with something to keep the moisture from escaping. Dry leaves, manure, straw or hay are mostly used for this purpose; but these are often unsightly, especially in front yards, the observed of all observers. This season I have used sods, skimmed thin off the surface and turned upside down among the growing plants. Have plunged pots into the ground containing oleanders, carnations, roses and others, covering the pots with inverted sods, and they do not require near so much watering as if left bare, and there is not the appearance of a straw heap around them. Strewing the ground with grass, hay or unrotted manure is liable to seed down the flower-bed with noxious weeds—the dislike of every careful and tasteful gardener.—*Ed.*

THE CURRANT.

This excellent fruit is so easily propagated and so universally met with, that it very seldom receives that attention that it merits. There is no more healthy fruit than the currant; some that we may enjoy for a longer time, and some more agreeable to the palate. In the early summer, when other fresh fruits are almost unknown, we know something of its value in the pie and tart. Throughout the entire summer, when every fruit at all in season is so highly relished, none is more acceptable and none more highly prized by the good mistress of the household. On through the whole of August, and even later still, we may have its bright red and white berries as an ornament to our gardens and a luxury on our tables, especially as regards the black currant, which is the latest. And currant preserves, jams, wines and jellies are among the most precious stores of the prudent housewife. Black currants preserved either as jam or jelly is invaluable in the chamber of sickness. There is nothing better for the chest, lungs and lumbago. A careful cultivation of the border or bed planted with currants will repay the owner manyfold.

We give from an exchange the method of a correspondent in cultivating his currants:

"About fifteen years ago, I received as a present cuttings of the following varieties:—White Grape, White Dutch, White Crystal, Cherry Mays, Victoria, Large Red Dutch, and Black Naples. After planting in the usual manner, I took particular pains to cultivate them well. Every spring, the ground has been top-dressed profusely with ashes, leached and unleached, well incorporated with the soil under and around the bushes, and has been kept from grass and weeds. Immediately after this application they are mulched with barnyard or chip manure. The result has been that I have never failed of a large crop of the finest and largest fruit, and entirely free from the worm. Near these bushes (perhaps 16 rods away) I have some of the old common varieties, which have not been similarly treated, but left to take care of themselves, and, as a consequence, they are nearly destroyed by the worms, the leaves during the past two summers being entirely destroyed. I have come to the conclusion, therefore, that the larvæ of the currant worm lie dormant during winter in the ground near the bush they intend to attack the next season, and that mixing wood-ashes with the soil destroys them. I do not profess to be an entomologist, but I certainly arrive at no other conclusion. I am now growing quite a number of bushes in the tree form, namely, one bush only in each place, six feet apart each way. The advantages consist of easier cultivation, easier gathering, and larger and finer fruit."