

Dairy Department.

HINTS FOR THE DAIRY.

The best temperature for the milk to be for the yielding of cream, as shown by the experience of the best butter-makers of a district celebrated for the high quality of the butter made is 60 degrees, or between this and 62 degrees. If milk be raised to the temperature of boiling water, or nearly this, it will yield a much larger amount of cream than if the temperature be at 60 or 62 degrees, but the butter so made from it will not keep for any length of time. The cream that rises first from the milk is the best for butter-making purposes. Good—at least the best—butter cannot be made from cream which is allowed to remain in milk till it is old. Cream rises best from shallow vessels.

The temperature at which the cream is to be churned should be like that at which the cream has been raised from the milk; it should not be allowed to exceed 64 degrees. It is a mistake to bring the butter too quickly. A consideration of the facts of the case will show the reason for this. The globules of butter in the cream are covered with a thin pellicle of casein; the object is to get rid of this as completely as possible; but it requires time to do this. Quick churning will bring butter, no doubt, more quickly, but as the casein will be in greater quantity than if the churning was more slowly done, the butter will not keep so well.

Much has been said as to the different methods of butter-making, some advocating churning of the whole milk, and some of the cream, and some of the cream and milk combined. A very eminent authority, who experimented largely on the churning of all these mixtures, states that (1) that cream alone is more easily churned than a mixture of cream and milk; (2) that the addition of some water, during churning, facilitates the process, especially when the cream is thick and the weather hot; (3) that the butter made from sweet cream had the finest flavor when fresh, and keeps the longest; (4) that scalded cream yields the largest amount of butter, but that it does not keep long; (5) that the most economical mode is to churn the milk and cream in a condition slightly acid, and that it yields a large amount of excellent butter.

There are different modes of preparing annatto for the coloring of cheese and butter—the following is one: Mix with one and a third gallons of boiling water one pound of annatto, half a pound of concentrated potash, one and a third ounces of saltpetre. Carrot juice yields a good color for the purpose, but it requires to be used when pretty fresh. When the butter is obtained from a cow properly fed there will be no fault to find with its color.

The salting or powdering of butter requires to be done with great care. The following is the mode adopted in the dairies in which the celebrated Kiel butter is made. The salt that is used is of the first quality—clean and dry. The butter is made into lumps about thirty or forty pounds in weight; and over the surface of each lump, some one-and-a-half or two pounds of salt is sprinkled, or at the rate—say three-and-a-half pounds of salt to one cwt. of butter. Allowed to lie for a short time, it is then worked slightly in with the hand. The second working is made with lumps of five or six pound weight, the salt being well kneaded in, when the lumps are allowed to lie for twelve hours. The last working is very complete, so as to get rid of all the fluid which ought to be expelled before the third or last working is begun, a little salt, at the rate of one pound to the cwt. is added; no working of the butter in cold water is allowed. Under ordinary circumstances the proportion of salt to butter when made for market in this country is one ounce to the pound of butter; half this quantity when the butter is to be used at once. In Scotland, as is

well known, what is called "fresh butter" is largely used, having no salt at all in its composition. This system certainly affords a crucial test of the flavor of the butter, although to the palates of a large majority of butter eaters in England the flavor of saltless or unpowdered butter is insipid and flat.

The quality of the water used for washing the butter in preparing it for market is stated to have an effect upon the butter; hard spring water being the worst, soft water being the best. On this point we require more detailed information, although the facts stated in support of this opinion seem very conclusive, and it certainly is a reasonable thing to suppose that the quality of the water used for this purpose would have some influence more or less decided.

In making the Kiel butter no working of the butter in water is allowed. The following is the method adopted for preparing the butter for market: As the butter is taken from the churn it is slightly pressed, to get rid of a portion of the whey, and then put on trays and carried into the cellar, where it is made ready for market. A long trough, and which is provided with a few holes at the bottom of the lower end is placed in an inclined position, and is previously washed with hot and finally with cold water. The dairymaid taking up some five or six pounds in her hands, which are also washed in hot and finally cold water keeps pressing the butter against the sides of the trough until the whey, &c., is fully expressed; as the butter gets extended in the process it is then rolled up and again pressed against the trough. The processes of pressing and rolling up are repeated again and again till the butter is perfectly freed from whey. One churning is finished right off before another is begun.—*Mark Lane Express.*

NOTES FROM CHEESE-MAKERS.

Not long since I received a letter from a cheese-maker in a factory in New England, containing the following queries: "Will you please tell me what advantage there is in letting a curd 'change' before taking it out? In cooking I raise the heat to 96 or 98 degrees, but before the acid is perceptible the curd gets hard. Would the curd do as well if the heat was not carried so high—and why does it become so hard? Will a curd that is taken out perfectly sweet, cure as fast and become ready for market as soon as one that is changed? The reply to the first question of my correspondent would be—much every way. From 1861 down to the year 1865, the great complaint of cheese-dealers, shippers, and English consumers, was the porosity, bad flavor, and ill-keeping quality of American cheese. These three ailments seemed to exist together almost invariably. How to avoid these ills became the study of cheese-makers, but up to about 1865 the agency of acidity or souring the curd to a certain extent, to accomplish this purpose, was little understood and less practiced. Thoughtful cheese-makers noticed that sour cheeses were invariably solid, and this observation led them at length gradually to experiment and see whether this same acidity, which in the form of sour cheese was very objectionable and damaging, might not be used to advantage if carried to a certain limit and kept well under control. The result was successful beyond the highest expectations of the few cheese-makers who here and there had been investigating the matter. At first the idea met with opposition, sometimes with ridicule, but it has won its way into almost universal practice. A proper degree of acidity or souring or "changing" in the curd before removing it from the whey, or at least before salting, results in a cheese close and solid in texture, purer and clearer in flavor, and of a character to retain that purity of flavor in our warm climate a much longer time than it otherwise would. With such cheese, too, there is far less trouble from huffing or bulging and from getting out of shape, than with softer descriptions of cheese. To the second question advanced by this cheese-maker, I will give a moment's attention. Ordinarily the hardening of the curd takes place at the same time that the acidity or "change" mildly puts in an appearance. Indeed the former is an indication of the presence of the latter. And yet the hardening may occur without the souring, at least to a good degree,

for the term "hardening" is too general and indefinite a term when applied to curd, to enable one cheese-maker to determine just what is the condition of a curd which another maker calls "hard" unless he can see and handle it. If I was troubled with curds hardening prematurely, I would use less heat, and apply it very slowly and gradually. Many good cheese-makers believe that a temperature of 90 degrees to 94 degrees gives better results in cheese-making than to warm the curd to 98 degrees or 100 degrees, always provided the milk is in a condition to give full and ample time in elaborating it into cheese. The third question proposed has been partially answered in the remarks that have preceded. Curds taken out when perfectly sweet, cure faster than those which are allowed to sour a little; indeed, such cheeses are generally ripe and ready for the knife when thirty days old. If not promptly used then, they deteriorate in quality and assume a sharp flavor—go into a species of decay, in fact. Cheeses thus made are quite unfit for export, but frequently are better liked by retailers in our home market than the closer-made, and more tasteless ones which suit the foreign market so well. Where such cheeses are preferred, and meet with ready sale and full prices, it is more profitable to manufacture them, because a slightly larger yield of cheese is obtained from the milk than by the other process.—*Country Gentleman.*

MANAGEMENT OF DAIRY COWS.

Col. Wm. Sweet, of South Paris, Vt., read a paper at the last meeting of the Vermont Dairymen's Association on the above subject, of which the following brief synopsis was made by the *Maine Farmer*:

"Their profitable winter management becomes a question of much importance; and as it costs as much to keep a poor cow as it does to keep a good one, the farmer must see to it that he has good cows, as from no others can the best results be expected. A certain amount of food is necessary to maintain life; what is given beyond this goes to make milk and flesh, and from these profit in the shape of butter and milk. If our cows are not gaining or earning something, the farmer is losing by keeping them; therefore we must ascertain what the best food is for them, and what food will give the largest yield. The profits are determined by the amount of hay, roots, and grain consumed, and the less the number of animals, the larger the profits, since there is less risk, less labor, and less capital employed for the same production. There is a greater profit in keeping ten cows, averaging ten quarts of milk per day for the year, than in keeping twenty cows, averaging five quarts daily. It is not an impossible thing for cows to give ten quarts per day through the year, but our poor cows do not give, upon an average, five quarts per day. Mr. Sweet here spoke of the value of cutting and steaming food for cows, and quoted from several authorities recommending the practice. The general statements of these extracts were, that upon hay alone cows would not consume enough for their maintenance, and also give a profitable yield of milk. This must be done by the assistance of such food as is rich in albumen, oil, and phosphoric acid, regard being had to their comparative cost. Those who have experimented in feeding milk cows have used, with the best results, five pounds of rape cake and two pounds of shorts for each cow, daily, together with a sufficient quantity of bean straw, oat straw, and shells of oats—the whole mixed and steamed and given warm. This gave a yield of twelve quarts per day from each cow, for eight months in the year. The experience of those farmers who have given steamed food a thorough trial is that it makes a saving of 33 per cent. Coming to his own method of managing cows, Mr. Sweet remarked that he formerly fed his best hay to his oxen; the result was that in the Spring his cows were poor and weak. It took part of the Summer for them to get up their flesh, and give their usual amount of milk. He found out this was the wrong course of feeding. The cow would pay for good keeping, and pay promptly; consequently he had fed his cows well, and their returns are satisfactory. Red and white clover, red top, and timothy, form the best Summer or Winter food for milk cows. Corn fodder, especially for the 'hard place,' from August to November is a most useful crop. Also feeds the after crop of mowing fields, but does not feed it close. Dairy cows should have a warm, well-ventilated, light stable, plenty of good food, good water, regularity in feeding, and kind treatment. As to feeding roots, he had found potatoes too expensive, turnips affected the milk, and carrots

Two bushels white winter wheat, 1st prize, J McNair, Richmond Hill; 2nd, John Tennant, Brantford; 3rd, Wm Forfar; 4th, Thos Stock, Watertown.

Two bushels red winter wheat, 1st prize, Wm Forfar; 2nd, N A Forfar, Ellesmere; 3rd, J Shearer, Niagara; 4th, D Lockwood, Sydney.

SPECIAL PRIZE—For the best two bushels new variety hybridized fall wheat, exhibited by the original producer, 1st prize, Wm Forfar.

Two bushels Fife spring wheat, 1st prize, Wm T McEvers; 2nd, C Carruthers, Grafton; 3rd, P Scripture, Colborne.

Two bushels spring wheat of any other variety, 1st prize, N Westington, Coburg; 2nd, T McEvers; 3rd, Wm Eagleson, Coburg.

Barley, (two rowed), two bushels, 1st prize, A McKenzie, Whitby; 2nd, Thomas Gibson, Markham; 3rd, John Pratt, Coburg.

Barley, (6 rowed), two bushels, 1st prize, S Rennie, Scarboro; 2nd, W Thompson, Whitby; 3rd, W Madden, Napanee.

Winter Rye, two bushels, 1st prize, J B Aylesworth, Newburg; 2nd, S Breman, Odessa; 3rd, J Vanover, Kingston.

Oats, (white), two bushels, 1st prize, Wm Thompson; 2nd, Walter Riddell, Coburg; 3rd, F Gibson.

Oats, (black) two bushels, 1st prize, S Rennie; 2nd, John Dack, Pittsburg; 3rd, J Richardson, Louth.

Small Field Peas, two bushels, 1st prize, S Rennie; 2nd, D H Grass, Kingston; 3rd, O Gass, Kingston.

Marrowfat Peas, two bushels, 1st prize, J Cullis, Coburg; 2nd, A Black, do.; 3rd, R Leon, do.

Field peas, two bushels of any other kind, 1st prize, C Foster, E Flamboro; 2nd, Wm Madden; 3rd, J B Aylesworth.

Bushel of small white beans, 1st prize, B Spooner, Kingston; 2nd, Wm Gardner, Kingston; 3rd, Walter Riddell.

Bushel of large white field beans, 1st prize, J Richardson; 2nd, Wm Eagleson; 3rd, A Bond, Storrington.

Two bushels of Indian corn in the ear (white) 1st prize, H O Brown, Niagara; 2nd, A Bond; 3rd, R Spooner.

Two bushels of Indian corn in the ear (yellow) 1st prize, A S Patterson, Sophiasburg; 2nd, H O Brown; 3rd, J B Aylesworth.

Bale of hops, not less than 112 lbs, 1st prize, Wm Moss, London; 2nd, Arthur Wilson, West Nissouri; 3rd, N Sprague, Sophiasburg.

EXTRAS—D H Grass, crown peas, 1st prize, CLASS 29—SMALL FIELD SEEDS, FLAX, HEMP, &c.

JUDGES—John Rennie, Allensburgh; Angus McLellan, Williamsburg; John Martin, Mount Forest; W C Beatty, Onaga.

Timothy seed, bushel of, 1st prize, J Richardson, Louth; 2nd, D Lockwood, Sidney; 3rd, D A Lee, Kingston.

Clover seed, bushel of, 1st prize, W M Smith, Burford; 2nd, A Mackenzie, Whitby; 3rd, John Smith, Burford.

Alsike clover seed, half bushel of, J Richardson; 2nd, D Lockwood; 3rd, H M Thomas, Brooklyn.

Flax seed, bushel of, 1st prize, J Richardson; 2nd, W Benham, Guelph; 3rd, D Campbell, Charlottetown.

Sweedish turnip seed, from transplanted bulls, not less than 12 lbs, 1st prize, A Crumb, Darlington; 2nd, J Foley, Darlington; 3rd, R D Foley, do.

Belgian field carrot seed, 12 lbs white, 1st prize, H R Beith, Darlington; 2nd, A Crumb, do; 3rd, R D Foley, do.

Mangle wurzel seed, 12 lbs of long red, 1st prize, A Bond, Kingston; 2nd, R D Foley.

Mangel wurzel seed, 12 lbs of yellow globe, 1st prize, A Bond; 2nd, J Pratt, Coburg; 3rd, Walter Riddell, do.

Tares, bushel, 1st prize, Walter Riddell; 2nd, Geo. Croft, Guelph; 3rd, Wm Thompson, Whitby.

Buckwheat, bushel, 1st prize, Charles Foster, East Flamboro; 2nd, Wm Gardner, Kingston township; 3rd, J Richardson, South.

Millet, bushel, 1st prize, John Smith.

Tobacco leaf, 10 lbs, cured, growth of Ontario, 1st prize, A Shaw, Portsmouth; 2nd, E Shearer, Niagara; 3rd, F Friendship, Kingston township.

Broom corn brush, 28 lbs, 1st prize, R Spooner, Kingston township.

Flax, 112 lbs, scutched, 1st prize, D Campbell, Charlottetown.

Hemp, dressed, 112 lbs, 1st prize, E Law, Kingston.

EXTRAS—1st prize—J Williamson, Kingston, early dawes onion seed; A Bond, Kingston, white mustard.

Dobbs thinks that instead of giving credit to whom credit is due, the cash had better be paid. We think so too.

H. Collard; Alex. Robb, J Fleming, own; 3rd, J & Cunning, & Shannon; L D Saw, Whitelaw, ore drills of, 1st prize, C machine, for, 1st prize, C, "Com- Vm Jamison, NES FOR HAR- TS FOR USE, IER POWERS. ampton; John Coburg. and 1st prize, J amsville; 3rd, and 1st prize, Sawyer; 3rd, diploma and 1st Grout & Co., ampton; George Davis, jr., ivale; 3rd, H prize, Barker ker, Glenvale. 1st prize, Peter Napanee; 3rd, rator, 1st prize, L D Sawyer; and separator, and, J Watson, Higgins, Mon- son; 2nd, Max- Fleury, Aurora. stock, 2nd prize, Watson; 2nd, Whitelaw. 1st prize, John H Sells, Vienna; prize, W H Way, L Cunningham; on. market, 1st prize al purposes" for allbridge, Belle- law. DOOLS AND IMPL- AND USE. Grant, Grimbsy; Johnston Brown, ed, 1st prize, F M David Bateman, 1st prize, Chown 1st prize, S Skin- Dick, Orilla; 2nd, 1st prize, Tuttle, cutting, pulling, s, hand or horse Johnston, London; and 1st prize, U A Walker, Kings- DUCTIONS. s, HOPS, ETC. Newburg; James Weston; and Aron or the best 25 bush- of the Province of f 1871, 1st prize, J ed, by the Associa- 3rd, T McEwers, 2nd and 3rd prizes