

Creamery Department

Butter makers are invited to send contributions to this department, to ask questions on matters relating to butter making and to suggest subjects for discussion. Address letters to Creamery Department.

Weight of a Gallon of Cream

What is the weight of a gallon of cream? Our buyer calculates it as 10.25 lbs.—G. W. R., Wellington Co., Ont.

Your correspondent does not state the richness of his cream.

The weight of a gallon of cream will vary slightly according to the percentage of fat it contains and the amount of air and gas in it. According to the specific gravities of sweet, fresh, separator creams of different richness,

given by Farrington & Wall in "Testing Milk and its Products," one gallon of cream testing 10 per cent. will weigh 10.23 lbs.; testing 15 per cent., 10.12 lbs.; 20 per cent., 10.08 lbs.; 25 per cent., 10.02 lbs.; 30 per cent., 9.96 lbs.; 35 per cent., 9.90 lbs.; 40 per cent., 9.86 lbs.; 45 per cent., 9.80 lbs.; 50 per cent., 9.74 lbs.

The authors of this book also state that "the specific gravities of the cream given in the table refer to fresh separator cream only. Considerable air is incorporated during the separation, and cream of this kind is therefore lighter than gravity cream of corresponding fat contents."

The weight of a given volume of cream varies slightly, according to the percentage of fat in the cream

and the amount of air and gas incorporated. Conversely the volume of given weight of cream varies slightly for the same reason. In actual work, however, not much error will creep in, if 10 pounds of cream testing 25 to 30 per cent. fat be considered as a gallon.—J. F. Singleton, Creamery Instructor, Kingston, Ont.

Good Butter Making Methods

Mrs. Chas. Cucklin, Simco Co., Ont.

Firmer butter is secured when churning a thick than a thin cream, hence we take a reasonably thick cream. We use a hand separator. It is the easiest, quickest and cleanest method of skimming milk. We can get more cream and butter by using the separator than from any of the old methods and with less labor.

We cool the cream from each separation before mixing it with every bit of cream it takes us two days to gather enough cream to churn. We let the cream ripen for 24 hours, stirring it frequently. It takes from 15 to 30 minutes to churn at about 60 degrees F. The buttermilk is then drawn out, the butter washed in the churn with fresh cold water and salted at the rate of one ounce to the pound to which the butter thoroughly until every bit of water is out of the butter, except that which is thoroughly incorporated. We let the butter stand in a cool place until it hardens, then print. We weigh each pound of butter separately to be sure that we have full weight. We prefer printing the butter to packing in tubs, as those who buy from us on the market see our names on the wrappers, and come back knowing that they will get good butter and full weight.

Increase Profits by Cooling Cream

With little or no increase in investment or labor it would be possible for patrons of creameries to increase their earnings by simply giving a little more attention to the care of their cream. The best quality is absolutely necessary if we are to get the highest possible price for our cream. The only practical method in the hands of the farmer for checking the growth of the small organisms in the cream, called bacteria, which causes it to sour and decay, is by cooling it down to a low temperature immediately after it comes from the separator.

To show the value of quick cooling upon the keeping quality, a sample of milk was kept at 98 degrees Fahrenheit (the same temperature at which it was drawn from the cow) and it curdled in 18 hours. The same size sample of the same milk was cooled to 70 degrees Fahrenheit and it did not curdle until 48 hours had elapsed. Another sample was cooled to 50 degrees and it kept for 10 days without curdling. Although these figures would not be the same for all samples of milk, it brings out the fact that bacteria which cause milk to sour grow very slowly at low temperatures.

To bring out the fact that it is possible to cool the cream much quicker by placing the can in cold water than by allowing to stand in the air, a four-gallon can of cream at 98 degrees Fahrenheit was placed in water having a temperature of 64 degrees. The cream cooled to the temperature of the water (64 degrees) in two hours. Another can of the same size, containing the same amount of cream, at the same temperature, was allowed to stand in the air having a temperature of 45 degrees (10 degrees lower than the temperature of the water) yet it did not cool down to 64 degrees until 10 hours had elapsed.—B. V. C.

Have you forgotten to renew your subscription to Farm and Dairy?

Education Must Come First

G. H. Benckendorff, Madison, Wis.

Education must come first, if any permanent reform, ignorance is usually responsible for the unclean and unsanitary condition of a creamery. Let the owner of a factory and the factory operator realize the importance of a clean building and equipment and there will soon be an improvement. Let the patrons be convinced of the importance of herd improvement of well ventilated, well constructed barns, and that it is to their own advantage to deliver good raw material, and the quality of the butter will soon improve.

An enthusiastic buttermaker can do a great deal of good in his community. Granting that the conditions under which he is working are not always of the best, still it remains true that if he is filled with the proper spirit he will be able to change these conditions very materially. An enthusiastic buttermaker working with an enthusiastic cooperator will do much to solve the problems which confront them from time to time.

An Egg Station at a Creamery

S. G. Hanson, Nanaimo Co., B.C.

We have, in conjunction with our creamery, an egg station. It started just one year ago. The benefit of co-operation in this connection is well shown, when I tell you that I have made 10 cents a dozen more through selling cooperatively than when I sold my own eggs to grocers and to hotels. In any community where there are 2,000 hens it will pay well to cooperate in selling produce and in buying supplies.

We buy our wheat from the Northwest, 400 tons at a time. The bank advances the money. We can pay cash or give notes when we take delivery of our special lots. Wheat is selling in Victoria and locally at \$2.50 a cwt. Our wheat cost us last week \$1.75.

If we sell in the highest market and buy in the cheapest we can make money. But if, as many farmers do, we sell in the cheapest and buy in the dearest market, we will for ever be in the local storekeeper's debt, as so many in some districts always are.

Comment on Composite Samples

M. J. Lewis, Victoria Co., Ont.

We take composite samples and test our cream once a month. We use liquid formalin for preservative and never have any trouble in getting a satisfactory test. So far we have always used the pipette for taking the sample but, as it is probably out of the scales next spring. As a general rule, we have no trouble with our patrons through dissatisfaction over the test. The tests are fairly uniform from month to month. If a test varies noticeably from the month before, we will make two or three tests to satisfy ourselves that we are right and then keep that sample to test before the patrons in case he is dissatisfied with our results.

For some time we have been thinking of taking aliquot samples,—that is a sample proportionate in weight to the amount of cream delivered. If all patrons would take a uniform cream, the same size of sample each day would be all right, but they do not. It takes very little to change the present system of taking samples, we can never be sure that we are giving the patrons credit for exactly what they deliver.

Strained Relations.—Two microbes sat on the pretty shelf, and watched with expressions pained, the milkman's stunts; and both said at once: "Our relations are getting strained!"

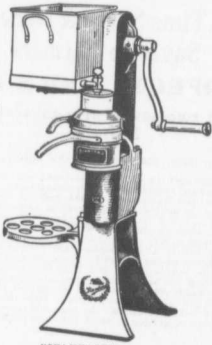
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