

take a true and correct sample of the milk. The best way is to take a dipper and catch, at three or four times, a little milk when it is run into the vat; empty this say twice out of one vessel into another so that it is properly mixed and fill the cream glass, and thus continue till the glasses are all filled, but I would advise to fill the glasses only two-thirds full; have the wood box just made so deep that exactly two-thirds of the glass will be on a level with the top of the cover, and when they are all filled to that extent set the box in a pail or tub of hot water to heat all the glasses to the same temperature; have the water in the pail about 100° and set the box and glasses into it and the temperature of the water and milk will soon equalize to 90° or 95°. Now, take it out of the hot water and fill up the other one-third of the glasses with cold water and set them in the tin box filled with the coldest water to be had, and set them away in a cool place. By treating milk in this way, the cream will rise in much less time and more perfectly than by testing the milk in glasses and set on a shelf, as it might happen to be.

Now, care must be taken to do everything correctly. Normal milk runs about 12% cream; with one-third of water added the percentage would be only 8% of cream; the glasses will show if everything is properly done, and this would give cheese-makers a very good idea as to the purity and quality of the milk they were receiving. Every farmer who keeps cows should have one of these cream testers and have a glass for every cow he milked, and he could test each cow's milk at the same milking so that the conditions would be as near equal as could be. I have no doubt but if every farmer would adopt this plan with his milk cows there would be some strange revelations made to him of a similar nature as was made in Egypt in the days of old when the lean cattle swallowed up the good ones and it did not seem to improve them any. I have no doubt but the day is not far distant when the good cows on the farm will not have the poor ones to carry, nor the good milk that goes to factories will have to pay for the poor milk before its owner gets anything. If farmers who are doing the best for the dairy cows and the dairy interests of the country understood how they were being treated by pooling their milk with others, and saw where their profits were going to pay for all the poor milk that comes into the factory, and the richer the milk from breeding or feeding, or good care, the more the man who owns the cows loses. If they only understood it the men who are putting the best milk into our factories would not submit to it one week, but the time is at hand when they will demand that every patron be paid fair value for what he sends to the factory.

DAIRYMAN.

The Balance of 1890, and All of 1891 for \$1.00

We want to double the circulation of the ADVOCATE in every locality, and have decided to present each of our old subscribers who will send in one new subscriber's name, together with \$1.00, a copy of our *Handsome Subscription Picture "Canada's Pride."* You may promise all new subscribers a copy of our handsome mammoth September number. Secure your subscriber's name at once, and send it in so that he will get the September number early.

The Milking Competition at London.

Absence from home in the Maritime Provinces since the end of June has hindered me from writing until now for the comfort of Mr. Guy, and the information of your readers who may have become interested in the milking competition at London and the correspondence which it has evoked. In the course of my journeyings through Quebec and Prince Edward Island particularly, I observed that Ayrshire blood had given form to many of the common cattle on the farms, and I learned from the farmers that the introduction of Ayrshire blood had meant cows yielding larger quantities of milk of better quality than formerly. I am concerned in protecting the reputation of that beautiful and useful breed against the imputation running through that part of Mr. Guy's letter which appeared in the June ADVOCATE. Ayrshires, Mr. Editor, will usually give a good account of themselves, even though the water in their milk be counted to have no rateable value. I am prepared to reassert what I wrote before (but I am not to be responsible for what Mr. Guy puts in quotation marks as mine), that "Water in milk has no real or rateable value, so far as I know, whether it be put there by a cow or a man."

Why is not by any means all water as your correspondent implies. The whey from the milk of Ayrshire cows contains about as large a per cent. of solids, and consequently no larger a per cent. of water, than the whey from the milk of other breeds. I do not quite perceive why Mr. Guy should want to teach that the whey from Ayrshire cows is all water. The solids that give whey its feeding value are the sugar, the casein, the albumen and the ash which the water holds in solution, together with the small quantity of fat which it holds in suspension in the form of tiny globules. The scale of valuation that was adopted and used at London gave credit for all of these solids that were contained in the whole of the milk, which of course included the part that would have become whey, if cheese had been made.

Permit me a quotation from Mr. Guy's letter: "If water is added to milk by a milk vendor it can be detected by analysis and he is liable to be punished for a misdemeanor."

By Chapter 425 of the Laws of 1889 of the State of Wisconsin it is enacted that if it shall be proven that the milk sold or offered for sale or furnished or delivered as pure, wholesome, and unskimmed milk contains less than three per centum of pure butter fat the said milk shall be held, deemed, and adjudged to have been unmerchantable, etc. That would indicate that over there the law makers desire to keep the cows from being guilty of a misdemeanor.

Again Mr. Guy puts in quotation marks, "the standard of points as given by me from the Ohio Farmer are erroneously calculated and not applicable to this Province," and credits me with having written the sentence. What I did write and what was printed in the ADVOCATE was, "the tables of points which he gives are erroneously calculated from standards of valuation, etc." The tables were made up by Mr. Guy, evidently by adding together the percentages of butter fat, and of the solids other than fat, and counting the total sum thus obtained as the total quantity of solids in the milk without any regard to the quantity of milk given. I do not understand why Mr. Guy should wish to

have milk valued by its *quality* as shown by analysis only, without regard to the *quantity* of the yield. Ayrshire cows usually give a large enough *quantity* of milk to make even their most blind friends or opponents willing to accord them fair play in that regard.

But then the standards of valuation which Mr. Guy credits to the Ohio Farmer, I presume are those of the British Dairy Farmers' Association. They agree, except in this, that Mr. Guy's letter does not mention the last part of the standard of the British Dairy Farmers' Association, viz.: "If the milk contains less than three per cent. of fat, a reduction is made of ten points." Probably this part of the scale of points was not quoted by the Ohio Farmer, but it exists as part of it, and its application might have convinced Mr. Guy that other standards provided for an "unfair and absurd way of judging" according to his notions. That the last-quoted rule of the scale of points is a fair, though unusually an unnecessary one, may be inferred from the facts brought out by the Dominion Chief Analyst, Thos. Macfarlane, Esq., in his Bulletin No. 11, on Summer Milk. At about the same time during which he conducted the analysis for the ADVOCATE milking competition he analysed samples of milk furnished to him at London from many patrons of no less than sixteen cheese factories. He found the average per cent. of butter fat to be 3.80. To claim that milk that has less than three per cent. of fat is specially adapted for cheese making is on a par with the claim of the man who wanted to sell what he called a "coon dog." "Is he good on coons?" asked the intending purchaser. "Of course he is." "Have you tried him much?" "Well, no, but I find he's good for nothing else, so I guess he must be good for coons."

An insignificant error in the copying of figures, with I suppose the slight alterations, gave Mr. Guy a chance to quibble at the figures without trying to gainsay the conclusion. Let me correct the details of my previous illustration, which was merely used to show that Mr. Guy was using figures while evidently mistaken as to their meaning. Take the points, as stated by him, from the Ohio Farmer's standard, at his own figures of 582.06 due to the Ayrshires and 580.63 due to the Jerseys, then if the points claimed by Mr. Guy for each be divided equally merely to bring the figures to something near a cash value in cents for the milk, the Ayrshires will stand with 160.61 (not 160.68 as previously stated), as against 160.21 for the Jerseys. Now, if Mr. Guy will calculate the per cent. of profit on the value of feed consumed by the Ayrshires, \$1 48.8, when their milk is valued at \$1.60.61 (not \$1.60.68 as previously stated), he will find that it shows 7.93 per cent. (not 8 per cent. as previously stated), and if he will calculate the per cent. of profit on the value of feed consumed by the Jersey, \$1.20.07, when their milk is valued at \$1.60.21 (as previously stated), he will find that it shows 33.43 per cent. (not 33 per cent. as previously stated).

Mr. Editor, I would not have taken up so much space replying to the strange statements and reasonings of Mr. Guy, but for my desire to prevent the valuable, excellent, and serviceable Ayrshires from being injured in reputation and misrepresented by the pens of their friends.

A meeting of the Breeders of Dairy Cattle was