

of it. See that the cows have access to good clean water, and last, but not least, be certain that everything used in handling the milk and cream is strictly clean, and use care in keeping the milk and cream from becoming contaminated with odors foreign to it. This may seem to some farmers a waste of time, but if they stop and give it a moment's thought they will be convinced that they depend upon their dairy for a large part of their income, and that there is no part of their work that they neglect as much as they do the cows, whereas they should put the best of their work right there. No farmer can afford to neglect his cows as so many are doing to-day. It is time for the patron and manufacturer to co-operate.—[American Cheesemaker.

Milk Fever Prevention.

An experienced English dairyman, Mr. John Gilbert, writes in the London Dairy, as follows:

Cures for milk fever are always doubtful, though they may be more easily effected now than years ago, but prevention is the better object to have in view. I have milked about eighty cows, and calved quite one hundred a year (as I buy in-calvers), and for the last twelve years, without one single sign of a case, though previously I had lost many. I may say that I had the tip quite by accident from, without doubt, the very best dairy farmer in England. The plan is too simple for many to believe in its effectiveness, but I will wager the odds of two to one annually that I do not have a single case. The plan is as follows:

Every cow coming in with her third calf or over shall be liberally fed on usual keep, according to time of year. In winter, she shall be kept in a box (loose) when expected to calve. She shall have one or two pints best linseed oil a day or so before calving, and again twelve hours after calving; bran mash an hour or so after calving, and bran mash, with chaff and hay, for two days. The cow and calf shall lie loose, but the cow shall not be milked for at least forty-eight hours after calving. In the case of a dead or weakly calf, about a quart may be milked four times in twenty-four hours.

And this is the whole secret. To many it may seem unnatural, but a heavy-milking cow is an unnatural animal. And is it natural to take from a cow just calved what the calf would not take until a month old? The strain on the system in replenishing the milk supply is, I think, the sole cause of milk fever, together with the neglected state of the bowels.

If any one will read this plan through very carefully, and then make up his mind to try it faithfully in every case, and immediately discharge even the best man in his employ who obeys his instructions in the slightest degree, I honestly believe the odds of my wager given above may be doubled with safety. I think it is one of the saddest sights to see a really good, favorite cow writhing and delirious with this terrible malady.

Points of a Good Milker.

There are several points that go to making ideal dairy cows. Different judges consider different points as indicative of the flow of milk, but perhaps the udder is the most reliable indication of milking qualities, as well as the value of the cow. True, some put stress on the color of the inside of the ear, length of the tail, shape of the head, neck, or of the body, but the rule seems to hold that poor producers have rarely well-developed mammary glands. The greater the development of that organ, the greater will be its product. Of late years breeders of dairy cattle have been led to give more heed to this point of importance in the selection and elimination of dairy cows.

An udder rich in flesh is not productive, and is recognized by the fact that the superfluous flesh it contains usually seems to drop, more or less, to the bottom, not making it pendulous. Such an udder is unsightly, and is likely passed on by the cow to her offspring. A productive udder depends on the number of secretive cells it contains, and not necessarily on its size. Its shape should be almost square, and well balanced and free from much flesh.

The front quarters of the udder are not infrequently very imperfectly developed, and is a common failing in whole breeds of dairy cows. The milk got from the fore and rear udder differs in quality and quantity according to the type of udder. It has been calculated that in ordinary-shaped udders there is a difference of 16 per cent. of the quantity of milk taken from these sources.

To show the difference actually existing in the different types of udders, let, say, a dozen cows be taken with their front udders noticeably undeveloped, and let the milk from the front and hind udders be separately weighed. It will be found that the rear udder produces 57 per cent. more milk than the front udder.

Again, take a well-balanced udder, the variation in quantity of milk got from the hind and front udders is quite insignificant.

These facts show conclusively that a well-balanced udder is of more value than merely to admire in the sale-ring or showyard. The average cow, of whatever breed, has an imperfectly-developed udder, especially in its fore part. Better development would certainly produce more milk, and consequently our cows would be of more intrinsic value in the dairy, for it is the last pound of milk that yields the greatest profit.

Much has been said about milk and udder veins of dairy cows and their relation and activity to the udder. As far as we know, the mammary secretion is entirely dependent upon the amount of blood passing through the glands. Changes in the condition or pressure of the blood influence the amount of milk secreted. Hence the necessity for restricting, limiting, and studying the quantity and quality of the food given to the dairy cow.

If, then, this be the relation of the milk veins to the udder, it will be readily seen that the development of the veins cannot be overlooked in our estimation of the value of the cow as a milk-producer.—[Agricultural Gazette.

Richness and Weight of Cream.

Let me know if the pounds of butter-fat given in the following is correct, according to test and inches of cream. There has been a great deal of dissatisfaction among the farmers sending to creamery this summer:

Inches of cream.	Pounds of cream.	Per cent. of butter-fat.	Total Lbs. of butter-fat.
119½	479	21	100.5
119½	479	24	114.9

Should there not be more pounds of cream for same number of inches when it tests higher? When cream tests twenty-two is it not supposed to make one pound of butter to an inch?

J. H.

Regarding the relation of inches of cream to the pounds of cream when the tests vary, I would say that the richer the cream or the higher it tests in butter-fat, the less the number of pounds of cream per inch. As the rich cream contains more fat, which is lighter than the skim milk, consequently the more fat present, the less it will weigh. A great many people have the mistaken idea that milk and cream which tests high in fat is heavier than poorer milk and cream. The very opposite of this is true, although the difference is scarcely noticeable on ordinary scales, except with a large quantity of milk or cream.

One hundred and nineteen and three-fourths inches of cream testing 21 per cent. butter-fat would weigh 479 pounds, reckoning four pounds to the inch, and this is the factor which is commonly employed in creameries, although 4.1 is more nearly correct. If the factor 4.1 were used, then subscriber would be credited with 490.975 pounds of cream.

The same results would be obtained in the second case, although theoretically there would be slightly less pounds of cream from the same number of inches, when the cream tested 24 per cent. fat, as compared with a test of 21 per cent.

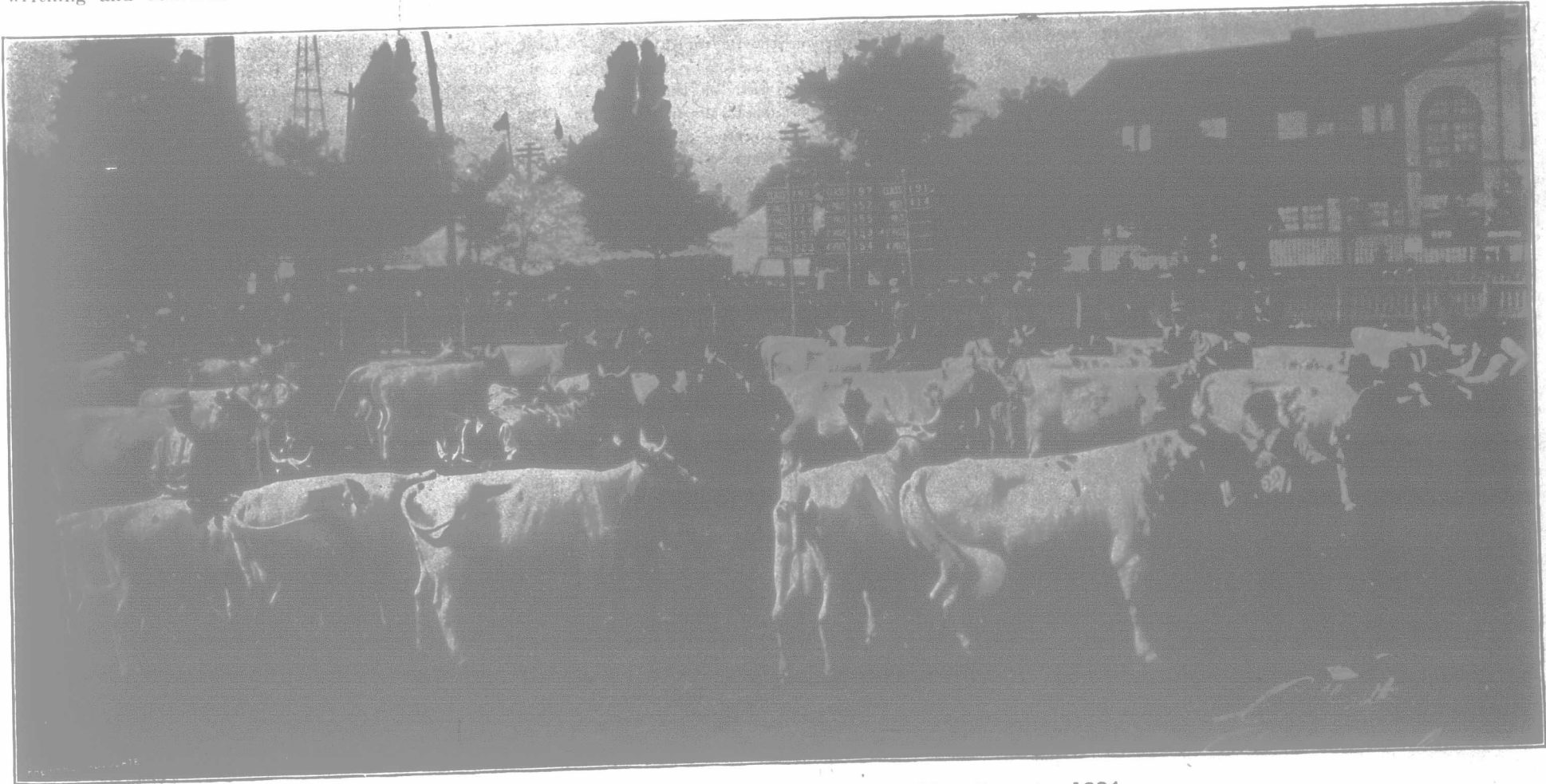
Cream which tests 21 per cent. fat is supposed to make one pound of butter to the inch. This, however, varies under different conditions, but is near enough for all practical purposes.

Ontario Agricultural College. H. H. DEAN.

Bad Cheese Boxes.

Mr. A. McD. Allan, formerly of Goderich, Ont., who has spent a great deal of time in Great Britain and on the continent looking after Canadian fruit exhibits and exports, says: "THE BOXES THAT CARRY CANADIAN CHEESE TO ENGLAND ARE A DISGRACE TO CANADA AND THE CHEESE THAT IS IN THEM. Englishmen put up their goods in packages that indicate the quality of the contents, and that is what they look for in others. That is exactly where Canadians fail. It is worth while for factorymen to know that any box they send will sell for from two to three times as much there as it costs here—if it gets there. So that any box that will stay together till it reaches there, no odds what its cost, is more profitable than one that does not get there at all except in kindling wood.

"Now, it would pay factorymen to quit using those rough, flimsy tin boxes altogether. For five or six



Ayrshire herds being judged at the National Exhibition, Toronto, 1904.