

shows in England prizes are offered for cows weighing below 1,000 lbs., and for cows weighing more than 1,000. Every one will admit that that is on the right principle, but it does not go far enough. For instance, a cow weighing 1,050 lbs. has no right to compete with a cow weighing 1,500. In all the experiments which have been conducted, it has been found that as an animal increases in weight it requires more to keep it; and it has also been found that there is a regular increase in the amount consumed proportionately to the increase in weight of various animals. There may be exceptions to this, but they are very few.

I would propose, in order to equalize the different weights of animals, that every cow competing should be weighed. Now, we may assume that the average dairy cow would weigh 1,000 lbs., and that the average amount of butter per day produced would be 1 lb. Since we know the above to be a fact we can figure it out almost mathematically. Assuming that an average dairy cow weighs 1,000 lbs., and eats 40 of ensilage, and produces 1 lb. of butter, a cow weighing 1,100 would eat $\frac{40}{100} \times 11 = 44$ and produce $\frac{1}{100} \times 11 = 1\frac{1}{10}$ lbs. of butter. While a cow weighing 900 lbs. would only eat 36 lbs. and produce $\frac{9}{100}$ lb. of butter. If this be the case, and I don't think it can be denied, we will, therefore, be in a position to equalize the results from different-sized cows and different amounts of food consumed by the weight of an animal. Therefore, I would propose adding $\frac{1}{10}$ of a lb. of butter to the result of the test for each 100 weight less than 1,000 lbs., deducting $\frac{1}{10}$ of a lb. for every 100 lbs. over 1,000 lbs.

As to the length of time for the test, I don't think that one or two days is long enough, and I think ten days would be too long, therefore five days would be nearer correct. As the dairy test would be one of the most interesting parts of the exhibition I would recommend putting the cows in the test into a separate building.

Owing to the amount of work required in conducting these tests, and as the fat gives milk almost its entire commercial value, I would suggest that only the fat of the milk be taken into consideration, and that 20 points be allowed for each pound of fat. Also that one point be allowed for each and every 10 days after the first 30 days after calving. The prizes should be subscribed to by all the different dairy associations and the amount of their grants duplicated by the different fair boards.

Summing up the matter in a concise form, I beg to make the following suggestions:

1. Make the test of 5 days' duration.
2. Award prizes to herds and not to individual cows.
3. Weigh all cows competing, and add 1-10 of a lb. of butter for every 100 lbs. weight less than 1,000 lbs., and deduct 1-10 of a lb. for every 100 lbs. weight over 1,000 pounds.
4. Compute the results from the fat only.
5. Allow 20 points for each pound of fat.
6. Allow 1 point for every 10 days after the first 30 days after calving.
7. All animals competing should be placed in a separate building.
8. Prizes be given by the various dairy associations duplicated by a similar amount from the fair boards.

If these few suggestions meet with the approval of interested parties we would be pleased to have them express their views upon the matter.

W. E. B.

The appropriations for the Department of Agriculture at Washington amount to \$3,182,902 annually, including \$720,000 for Agricultural Experiment Stations.



ONTARIO NEWSPAPER MEN'S COT.

The Food Cost of a Pound of Butter

Some Interesting Data and Facts Regarding the Feed and Care of Cows

To the Editor of FARMING:

The following is the amount of food given to Calamity Jane during the seven days she made the 22 3 pounds of butter in the official test, just previous to the provincial dairy test: 160 pounds of ensilage, 84 pounds of hay, 140 pounds of roots, 60 pounds of carrots, 25 pounds of oil cake, 16½ pounds of oat chop, 4 pounds of pea meal and 84 pounds of wheat bran. The cost of the 22 3 pounds of butter in seven days (as per schedule of prices named by the Holstein Friesian Association for these tests) was \$1 57³/₁₀₀ or seven cents per pound, not reckoning the skim-milk, and, of course, it is nothing but "square-toed" justice that a cow should receive credit for all she produces when charged for all she consumed.

This is certainly a cheap showing, but it might have been better. In this schedule of prices, hay is valued at \$8 per ton. We would have to draw it six miles to get \$5 per ton for clover and then lose the fertility. If the sole aim had been to see how cheaply butter could be made during this period without regard to the future production of the cow, butter could have been produced still cheaper. In fact, there would be hardly any limit to the cost, if the cow were allowed to take it out of herself. At the same time the cost was low, partly because the test was commenced six days after calving, and the cow was in a condition to make butter cheaply. If to this we had fed a semi-starvation ration it would make the butter very much cheaper.

This will bring out clearly some of the factors entering into a short food test. And, whilst the same is all right in theory, may be very misleading in practice. We were not free in a food test to make butter at the lowest possible cost by feeding a semi-starvation ration, even if we had a mind to do so. The provincial dairy test took place the following week. And it was to our great advantage to feed a building-up ration, and in this ration the most was fed the last two or three days. The pea-meal was added the last two days, and other portions of the ration increased. Before this, on the third day of the test, butter was produced at a little over 6c. per pound. The cow started this test just six days after calving at sixty-four pounds of milk a day. On the seventh day of the test she gave seventy-four and a half pounds. This increase would of come without an increase of feed at that time after calving.

There are several things to be considered in feeding a cow. Butter may be, and generally is, produced too cheaply when the cow is fresh, and this is one of the great faults of our dairymen. A cow is too often allowed to take it out of herself at the expense of her production six months