

merely use up the nitrogen presented to them in the soil. This, also, may account for the failures to obtain a profitable benefit from clover manuring made by some farmers.

Is this, then, an argument in favor of purchasing highly phosphatic foods, as bran for instance? No, I think not, for that would be turning the animal from its proper purpose of production, and into a sort of animated manure factory, and even while it might be counted profitable for a few years, must eventually fail to arrest the impoverishment of the land in bone earth. The much more perfect plan, as well as the most practical and the cheapest in the long run, is to purchase the required phosphate to balance the waste from the soil, and it is sometimes found necessary to purchase the potash also, as without it in abundant supply perfection in growing cannot be attained. It is quite reasonable, however, that we should purchase back the bran of the wheat, because it is a refuse and only particularly useful for feeding, and because it is a highly phosphatic food containing most of the phosphate of the wheat, and greatly assists the animal in the assimilation of the fodders. It is not always necessary, but it is sometimes wise from the standpoint of economy, as it may be the most profitable course to pursue in the circumstances in which we may find ourselves. Since it has been undoubtedly demonstrated that the feeding value of our crops can be increased three-fold in flesh, fat and bone-producing elements by the use of pure phosphate in conjunction with the manures of the farm, the possibilities of the production on the farm in a favorable climate of all, or nearly all, the feeding stuff for the stock in any line are quite within the scope of practical economy. In figures it might be put thus: If a field of hay is worth, say \$10 per acre in actual feeding value for flesh, fat and bone (and milk production), and for an expenditure of from \$2 to \$3 per year can be increased in feeding value to be worth \$30, and better soil, better animals and better product result, would not that be more economical than buying feed stuffs and forcing the life energy of the animals to produce extra manure in an ineffectual attempt to keep up the fertility of a farm soil, probably already run below the point of proper production?

Every man must be his own mentor as to whether he shall purchase cattle to feed or breed for his own use, and it seems idle to discuss that in a general way, as circumstances alter cases. If all concluded to buy, there would be none to sell. It is more to the point to learn the art of breeding, rearing and feeding cattle profitably. Those who cannot do it under possible circumstances had better purchase their stock from those who can, and in the meantime bend their energies somewhat to improving their education on that point. Some may be so situated that they cannot raise their own stock profitably. Such will always buy if they are wise, and not continue in a losing game. No hard and fast rule can apply, and I have not in my former writing suggested that it should. The simile of the manufacturer does not apply, as manufacturers are not producers of raw material as farmers

are. By all means let us have profitable farming, but if it is to be secured to the few by despoiling the many, so that the poor may grow poorer as the rich grow richer, general good will not result.

In my writings I aim to elucidate the most advanced ideas, and a charge of being old-fashioned or behind the age rather embarrasses me, as I am at a loss whether to take it seriously or as a by play. In my article on "Intensive Farming," on page 312, May 17th, of FARMING, I did not ignore the matter of "profit," and I am surprised that Mr. MacPherson should suggest that I am impractical from anything I there said, but my respect for the editor's blue pencil protects me from going into detail on all the phases of a subject in one article even when my natural modesty is at fault.

## CORRESPONDENCE.

### AWARDING PRIZES IN A MILK TEST.

A BRITISH VIEW OF THE SUBJECT—THE RIGHT METHOD NOT YET OBTAINED.

Editor of FARMING:

"I have just read the article in your issue of the 7th June on the above subject. It is one of special interest to me, not only because I am anxious to discover a means of awarding prizes to milking cows which shall be fair to all competitors, but also because the present system of judging at the dairy shows in England, which system appears from your article to have been adopted in Canada, was originally suggested by myself.

This system may not be perfect, in fact, in the last journal of the British Dairy Farmers' Association I advocated certain changes, some of which the association have decided to adopt at the dairy show in October next, and if a still better system can be suggested the association would be certain to give it due consideration.

In any system of judging a milking cow by points it is essential, in England at least, to remember that the cow's milk may be used in three different ways: First, for sale in the large towns; secondly, for the manufacture of butter; thirdly, for the manufacture of cheese. If only the first consideration had to be taken into account it would be sufficient to give points merely for volume of milk, provided the milk were not of inferior quality. And this system of judging is largely adopted, a standard of 12 per cent. solids, and not less than 3 per cent. or 3.25 per cent. of fat being usually fixed as the minimum quality permissible. But when the butter-producing power of cows is alone called in question—as, for example, in the Jersey tests—the milk is weighed separated, and the cream churned, and the points are awarded mainly for the actual weight of butter produced.

The Dairy Farmers' Association, in fixing their standard of points, endeavored to take into consideration all three ways in which the cow's milk might be used.

Bearing these facts in view, it does not appear to me that Dr. Babcock's system would be an improvement upon the present system; nor do Prof. Dean's figures altogether represent what would actually be found in practice. Dr. Babcock's system would probably be fair were the butter-making capacity of the cow alone in question; or even the cheese-making capacity, perhaps. But it would be quite impossible in England to neglect that very valuable factor, the quantity of milk. Let me illustrate my meaning. Suppose two cows, "A" and "B," are competing. "A" yields in a given time 100 lbs. of milk, containing 3.15 per cent. fat, and "B" yields in the same time 70 lbs. of milk, containing 4.50 per cent. of fat. The question we have to decide is, What is the relative value of these two cows to the farmer? As milk is sold here irrespective of quality, it is evident that, for milk-selling, "A" would be much the more valuable cow. They would both produce the same amount of butter, while, as regards cheese, the production of "A" would be slightly more than that of "B."

The monetary value of the produce may be tabulated as follows:

FROM "A."		
100 lbs. milk at, say, 6c. per gallon....	60	c.
Or 3½ lbs. butter at 20c.....	70	
Or 8.60 lbs. cheese at 8c.....	69	
	311.99	
Average value of produce.....	60	
FROM "B."		
70 lbs. milk at, say, 6c. per gallon....	42	c.
Or 3½ lbs. butter at 20c.....	70	
Or 7.95 lb. cheese at 8c.....	63	
	311.75	
Average value of produce.....	58	
Difference 8c. or 1c. more than "B."		

If we judge these cows by Dr. Babcock's system, we find the results are "A" 40.5 points, "B" 37 points, or a difference of only 1-10 "B" in favor of "A."

Adopting the standard of the British Dairy Farmers' Association the relative merits of the cows would be—

	A.	B.
Points for milk.....	100	70
" " fat.....	63	63
" " other solids.....	30	26
	199	159

Difference in favor of "A" = 40 points, or 1 more than "B."

We must look at this subject from a practical point of view. The farmer does not want to know how much more valuable 300 lbs. of one milk is than 300 lbs. of another. The question he wants answered is, Of two cows giving milk, varying both in quantity and quality, which, think you, is the more valuable of the two cows "A" and "B"? With the former you obtain a profit over the other, whether you sell the milk, make butter, or make cheese. It is true this average profit is only 1-7th more for "A" than for "B," but it can be obtained in at least two directions, either by selling the milk or by making cheese, and might therefore be more justly expressed as 2-7th. Hence, I think, a standard which makes out the difference in favor of cow "A" to be only 1-10th that of cow "B" is even worse than the old standard of the British Dairy Farmers' Association.

The imperfection of the old standard lies chiefly, perhaps, in not giving sufficient value to the fat; but this might be remedied. This seems to be Dr. Babcock's view, and the points he suggests, so far as they go, deserve careful consideration. But, my object in writing is to point out that they do not go far enough, and to urge upon those who are considering a new standard the necessity of taking into account the volume of milk yielded. The subject is a difficult one, and needs mature consideration, and I shall watch with interest the progress of this discussion."

I am, sir, yours etc.,

FRED J. LLOYD,

Consulting Chemist,

British Dairy Farmers' Association, etc.,  
Agricultural Laboratory, 4 Lombard Court,  
London, 23rd June, 1898.

### DAIRY FARMING IN MANITOBA.

Office of C. C. Macdonald, Dairy Superintendent, Winnipeg, July 4th, 1898.

Editor of FARMING:

DEAR SIR,—I have read with deep interest, in your esteemed paper of June 28th, an article on grain farming *versus* dairying, by Mr. Joseph E. Gould, and I cannot help offering my hearty congratulations to Mr. Gould for his splendid article, and also to FARMING for having such an able correspondent as Mr. Gould is. Every word uttered in that article is a gospel truth, and I would like to see this article read by every farmer in Manitoba and the great Northwest generally.

What I know of Ontario, having lived there the earlier part of my life, I know that every illustration that Mr. Gould brings out is a cold, hard fact, and the same state of affairs is fast coming about in Manitoba, in regard to grain-growing. Manitoba, as yet, in most parts of the province, has produced good crops of wheat, but there are some of the older settled parts that are not growing the same crop that they used to grow, and some of the farmers of the province are long will see where they have made the same fatal mistake that the Ontario farmers have, of draining the land of its fertility by continually

cropping without fertilizers. It would almost make an Ontario farmer's blood grow cold to see the enormous quantities of straw that are burned in this province from the threshing machine, instead of having it worked up into manure by stock.

Dairying is making rapid strides in Manitoba, but there are still many farmers in the province who do not take kindly to it; but it is earnestly hoped that these will see dairy light before it is everlastingly too late to repair the damage done by continual draining of fertility.

I think that FARMING should be in the hands of every farmer in Manitoba, and I trust that the time is not far distant when we will see it adorning every home in the province.

Wishing you every success,

I am, yours very truly,

C. C. MACDONALD.

### HO FOR OMAHA.

Editor of FARMING:

It, as is claimed, the 11th Mississippi Exposition is to be second only to the World's Fair, then Canada should be well represented in the live stock show to be held there on Oct. 3rd to 20th. If, as has been stated, it will cost \$200 for a carload of stock, there is not likely to be much done if left to individual effort, as not only is the cost high, but it would be very tiresome and hard on stock for such a long trip if the usual delays were made. If it is desirable and practical that Canada should be represented, then the officers of the Dominion Cattle Breeders' Association should take the matter up. With liberal arrangements as to freight, etc., no doubt a train load of the various breeds of cattle, sheep, hogs and horses might be gotten together; a special low rate obtained for a train load; arrangements made with the various railways, so that the special train would be sent through without delay, and stockmen given convenient arrangements for watering stock, etc. Possibly our Minister of Agriculture might bear part of the cost for freight as was done at the World's Fair. If anything is to be done it must be started quickly, as entries close 10th Aug. We know where there is one carload if favorable rates are named.

GRO. RICE.

Curries, Ont.

### A RECORD BREAKER.

Editor FARMING:

I notice in the *St. George Sentinel*, of June 2nd, that Mr. G. W. Clemons gives an account of a Holstein cow that gave 420 lbs. of milk in seven days, and would like to know if her equal can be found in the province. But he don't tell us how much he was feeding her at the time the record was made. He might have been feeding all she could possibly stand.

I think I not only have her equal, but her superior, all things being considered. My cow is a full-bred Jersey, and without any extra feed, and after giving milk about six weeks, she gave, in seven days, four hundred and thirteen pounds of milk that will test away up. The highest record for one day was sixty-two pounds. She can be fed to beat this record by several pounds.

N. H. SHELLEY,

Charing Cross, Ont.

June 23rd, 1898.

### DAIRYING IN THE TERRITORIES.

Mr. Samuel Flack, Red Deer, Alta., in sending us his subscription, states that the creamery business in that district is a decided success. It is under the control of the Dominion Dairy Department. The amount of butter manufactured last season, beginning June 1st and ending Sept. 30th, was 30,153 lbs., and during the past winter 11,103 lbs. It will be gratifying to many to know that dairying is progressing so favorably in the West. Mr. Flack is a dairyman of experience and a graduate of the Guelph Dairy School, and will, no doubt, give a good account of himself in the West.