

arising out of my recent remarks upon that subject, I beg leave to reply to them in mass through your columns; and to meet all the inquiries it will be necessary to say something upon feeding in general.

Grain food is given to cows and sheep to add to the effect of grass, hay or fodder. It is costly, and it is therefore necessary to know precisely what its effect is upon the product of milk, butter, flesh, fat or wool, before one can determine precisely how beneficial or profitable it may be. To determine this one must know the cost and product from grass, hay or fodder alone, and then the increased cost and increased product from certain rations of grain food of whatever kind it may be. For instance, let us compare the following methods of feeding with the results, as I take them from the memoranda of my dairy. In 1879 I was selling milk, and during that year I found the following results from the feeding. 80 pounds of green fodder, or 20 pounds of hay, worth 10 cents, gave 7 quarts of milk, worth 28 cents; 60 pounds of green fodder, or 15 pounds of hay, worth 7½ cents, and 9 pounds or 9 quarts of mixed corn meal, bran and cottonseed meal, worth 14 cents, total 21½ cents, gave 11 quarts of milk, worth 44 cents, so that 11½ cents of extra food gave 16 cents worth of milk. But I got part of the cost of the feed back in the greater value of the manure. Then I found I was losing money, because the rich feeding increased the cream in greater proportion than it increased the milk, for while on the fodder alone the cream was 15 per cent; on the feed it was 25 per cent. Since then I have been making butter, and I have found the following results: Fodder or hay, worth 10 cents, gave ¾ pound of butter, worth 30 cents; fodder and feed, worth 21½ cents, gave 1½ pounds of butter, worth 60 cents. Then 11½ cents, worth of extra feed returned 30 cents in butter, and in addition added something to the value of the butter.

Increasing the feed to 12 pounds a day gave me no more butter, but a little less milk and the trouble of an attack of garget with one of the cows. I never dare go further in that respect, although one cow, which on that feeding gave 12½ pounds of butter in a week, would, I feel sure, have gone over 14 pounds in the week, but I was not in the testing business and was making butter for profit.

Less feed than the nine pounds, three quarts or three pounds at a feeding, did not pay so well as the full feeding, and from that I have reached this rule, viz: Full feeding gives more profit than partial feeding. By "full feeding" I mean the full ascertained limit of what an animal will consume, with profit, for the largest product. And in my dairy I have some cows that will take a little more, and some must have a little less, than the average ration. This is made up by cutting the hay or fodder, green or dry, into a large box; wetting it and sprinkling the meal over it, mixing it, and then dividing it out with a bushel basket, this being the standard feed; some cows getting a little more and some a little less, as I know they require, for the best results as to yield and thrift. My cows are all kept in good sleek condition.

The noon feeding of meal is given dry, but this is to save labor. I consider the feed is worth at least one-fourth more, and the cows will safely take more of it and do better on it, when it is fed with the cut fodder.

As regards feeding sheep and lambs, I have found the lamb can be much better fed through the ewe than directly. I never gained anything by feeding meal to young lambs, further than giving them a very little mixed corn, oats and bran ground together, and fed in a trough to which the lambs could gain access. Even this I consider dangerous to them, and not so beneficial as to give the extra food to the dams, because while the lambs get the benefit from the richer and more abundant milk, the ewes are improving in condition and getting ready for market soon after the lambs are taken away.

But there is danger in this too without the greatest care. I have lost some of my best ewes by garget, after taking away the lambs, for want of milking them and gradually drying them off. So that great watchfulness must be exercised in this respect. I would give a ewe that is nursing a good lamb and is in good thrift, a pint of the mixed meal—cotton-seed, bran and corn meal, or an equivalent—every day, and some large ewes could safely take twice as much. Of cotton-seed meal alone I should not hesitate to give a pint a day, in two feeds, to a ewe, but I would not give any to a lamb under three months old, excepting under circumstances that would justify it, as for instance if the lamb were to be kept for stock, and were large and thrifty, and of a large breed and from high kept stock. Milking ewes need as much care as milking cows. They are quite as much subject to garget when highly fed, and should therefore be fed with caution, and gradually, until the lamb is sure to take all the milk and dry the udder every time it sucks. This is rarely done with good ewes until the lamb is two weeks old, and not then sometimes; so that the ewes should be watched carefully when on high feed, and if there is more milk, an extra lamb may be given to her, or the feed may be reduced if possible. It will not do to treat a flock kept for market lambs and for mutton in the same off hand manner as one kept for wool or stock and on pasture alone. In the former case the owner should conform to the old shepherd's maxim, "count and examine the flock twice every day." I beg to apologize to those of your readers who have desired a reply to their questions by mail, for giving the information in this way. Doubtless it may serve the purposes of others as well, and I cannot really find the time to write private letters. My will consents, but time forbids.

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All lambs that are being prepared for the butcher should have half a pint of white pease a day.

The *London Live Stock Journal* announces the publication of the Herd Book of the National Pig Breeder's Association of England. The volume contains 106 pages, and records the pedigrees of 274 pigs, consisting of Berkshires, Blacks, Large Whites, middle Whites, small Whites and Tamworths, arranged in the above order. From an American stand point this seems like a small number of pedigrees with which to close the first volume of a national record intended to embrace all the useful breeds of pigs in England.

The Council of the Polled Cattle Society, Banff, North Britain, at a late meeting, resolved to offer a gold medal valued at £10 to be competed for at the Chicago Fat Stock Show in November next, and to be awarded to the best steer, cow or heifer of the Aberdeen-Angus breed.

Heber Humfrey, Secretary of the British Berkshire Society, writes that the first volume of the British Berkshire Herd Book is nearly half printed.

The work will be as near uniform in appearance with the American Berkshire Record as can be, only different in color. Breeders on this side of the Atlantic await its issue with much interest.

While the most of the farmers of Central Illinois are rejoicing in the prospect of more than an average corn crop, in some localities more rain seems to be needed to bring the crop forward. And yet along the river in Sangamon Co., hundreds of acres have been overflowed this month, and the growing corn almost wholly destroyed.

The hay and oats harvests are about over. Both have done well and the product generally saved in good condition. All who can afford to do so are stocking and holding their wheat for better prices.

PHIL. THURTON.