

5. The general conclusion would seem to be, that *the food does not affect the quality of milk to any appreciable extent so long as the animals are in good condition.* This applies more particularly to rations fed for short periods—from 21 to 28 days—but in the case of Lot III it may be said to be true for 49 days.

6. It is a waste of food to give more than the animal can assimilate. Find the capacity of the cow for economic production and feed to that capacity.

7. A poor ration may give profitable returns for a while, but will end in depletion of the cow's vitality and injure milk secretion.

8. The cost of food fed is an important item in the profitable returns from a dairy, and an extra amount of some cheap food in the ration, such as ensilage or bran may prove a profitable investment. For instance in the case of Lot I, by putting 20 lb. straw in the place of 6 lb. hay and 5 lb. bran, and reducing the ensilage from 50 lb. to 30 lb. per day, we reduced the cost of the weekly food from \$1.78 to \$1.22, but we also decreased the value of their production in butter-fat (besides loss of skim-milk) from \$3.98 to \$2.31; in other words by reducing the cost of the food 32 per cent., the value of fat was reduced 42 per cent., besides causing the cows to lose in weight. (For details of this experiment see College Report for 1891.)

EXPERIMENT OF 1892. This experiment was conducted somewhat differently from that of last year. The number of cows was the same but they were divided into two groups instead of three, and two rations only were used. The experiment lasted from April 4th to June 12th, a period of ten weeks. The cows used were H. No. 2, A. No. 3, and No. 13 in Lot I. A. No. 2, No. 4 and No. 2 comprised Lot II. The rations were: No. 1, 50 lb. ensilage, 1 lb. bran, 5 lb. hay (uncut). No. 2, 50 lb. ensilage, 5 lb. pea meal, 3 lb. oatmeal, 2 lb. barley meal, 5 lb. hay (uncut). No. 1 ration cost 6.35 cents per day and No. 2 15.83 cents.

Lot I was fed for five weeks on ration No. 1, then changed to ration No. 2, which was fed to them for five weeks. Lot II commenced on ration No. 2 and were then changed to ration No. 1. They were fed on each ration for five weeks. The milk from each cow was weighed morning and evening. The per cent. of fat, water and solids not fat in the milk of each cow was determined on four days of each week. On two days of each week the milk from each lot was set in the Cooley creamer. The skim-milk was tested; the cream from each lot was churned separately; the butter-milk was tested; the quality of the butter was noted and a sample sent to the laboratory for analysis, determination of melting point and Iodine number. The cows were weighed at the beginning and close of each period of feeding.

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