

Table 4.—Proportion per 1000 lbs.—Continued.

NAME OF FODDER CROPS.	Straw.	Dry substances.					Fertilizing value per 2200 pounds consumed.
		Dry substances.	Sugar.	Digestible protein.	Digestible fat.	Nutritive equivalent.	
Full wheat straw.....		857	326	15	7	176	4 00
Rye ".....		857	298	11	6	201	4 00
Springbarley ".....		857	362	21	7	155	4 80
Oat ".....		857	342	17	10	160	4 80
Vetches.....		810	290	38	5	153	6 60
Pease.....		840	340	36	5	142	6 40
Bean.....		840	342	61	6	114	8 60
Maize.....		850	367	16	6	162	
Clover-haulm.....		840	250	47	10	143	9 00

Having elucidated the subject so far, from general principles, let us see what has been obtained from milch cows, in the colder regions of the province of Quebec; on what food rich milk is thus obtained, in each of the twelve months in the year, and how such rations are prepared, in accordance

Table 5.—MILK RETURNS ETC., FROM CANADIAN-JERSEY COWS (registered)

FROM DECEMBER 1888 TO NOVEMBER 1889.

Register No.	DATE.		AGE.	lbs. of milk per day per cow		Proportion of Jersey blood.	Month.	Number of cows milked.	Total lbs.
	Birth.	Last calving.		May.	Nov.				
16	1887	4 1889	2	22	13	1888	Decemb 1888.	34	1567
19	1885	12 1888	3	28	13	1889	January 1889	4	2493
15	1886	1 1889	3	41	14	1889	February	4	3258
17	1886	3 1889	3	37	19	1889	March	6	4696
21	1885	3 1889	4	41	17	1889	April	11	7964
13	1885	11 1889	4	36	22	1889	May	12	8686
18	1884	2 1889	5	45	18	1889	June	12	8762
14	1883	3 1889	6	46	18	1889	July	12	8819
22	1883	10 1889	6	40	21	1889	August	11	8645
12	1882	15 1889	7	42	.....	1889	September	11	8338
11	1882	14 1889	7	22	18	1889	October	11	7145
10	1879	9 1888	10	18	25	1889	November	10	5425
									76,788 lbs.

(\*) This average may be a little low, the cows having been weighed but once and under special circumstances.

with the above given principles. We can thus better compare and appreciate the value of scientific European teachings, as applied to America, in its most northerly regions.

We have, in Table 5, the exact yield of a herd of twelve head, six of which are too young to count as matured ani-

mals. In fact, this herd hardly represents 10 adult cows, although I allow that number, making the average 7578 lbs of milk per annum, per matured cow.

Table 6 shows what was the average ration per day, and what its cost would be with most farmers. It also shows the profit and loss account, taking milk at the low average price of 1 cent per lb through the year, and allowing the manure—liquid and solid which, with us, is all saved—to go as a fair compensation against the labor account.

TABLE 6.—PROFIT AND LOSS ACCOUNT FOR HERD, 1888-1889.

The exact cost to us of our winter ration for 210 days averaged per cow (see details below, foot note 2),... \$ 18 38

The cost of green food for 155 days in summer, we estimate at \$10 per cow, being the full crop value of our meadows, etc.....\$10 00  
to which we add the cost of 3 lbs of bran  
per day, actually paid..... 3 26

13 26

Total cost of food.....\$ 31 64

The account therefore stands thus :

7500 lbs milk at 1 cent.....\$75 00

Food consumed..... 31 64

Net profit per cow(1)...\$43 36

(1) It should be stated here that this herd had been poorly cared for until it was placed, in October 1888, under the special care of the Reverend Sisters of the Sacred Heart Hospital, at Quebec. Here, arrangements were made by which the cows are thoroughly milked, even three times a day when needed, and the food and milk weighed very carefully, the latter at each milking throughout the year, and an official return made monthly to the Department of Agriculture, at Quebec. The improvement still going on can best be judged from the milk returns obtained in the months of November, December, January and even to the 15th of February, in the years 1888-1889 and 1889-1890, showing a large increase in the milk production of the same months, in 1889 and 1890 respectively.

Table 6a.—COMPARATIVE YIELD OF MILK FOR 1888-89 AND 1889-90.

	1888	Total milk	1889-90	Total milk	Increase
November.....	1443 lbs.		Nov. 1889.....	5425 lbs.	3982 lbs.
December.....	1567 "		December.....	3858 "	2291 "
January 1889.	2493 "		January 1890.	5074 "	2581 "
Febry. 1st to 15th.....	1661 "		Febry 1st to 15th.....	2790 "	1129 "
Total.....	7164 lbs.			17147 lbs.	9883 lbs.

(2) The rations have varied, at different times, from uncontrollable circumstances. They were, from November 1888, to 20th of March 1889 composed as follows, per day per cow.

10 lbs Common meadow hay finely chaffed (450 lbs per day for 46  
131 " Ensilage.....(612 lbs do "do  
36 lbs straw finely chaffed } made into a warm mash and given  
50 " Cotton seed meal } to 30 milking cows.  
50 " Bran.

After the 20th of March, the ensilage having given out was replaced by 50 lbs Cotton seed meal and 30 lbs of bran to be 46 animals.

This winter (1890) the Canadian Jerseys receive :

25 lbs Ensilage at \$2.50 a ton = 3c.12.  
5 " Hay at 8.00 a ton = 2c.  
36 " Straw at 4.00 a ton =  
75 lbs Cotton seed meal 25.00 a ton =  
50 " Bran 14.00 a ton = 6c.18  
fed to 22 milch cows of various breeds, size etc.

Average cost of ration per day, for cows in milk..... 11c.30

At the following prices: hay, \$3 a ton, straw, \$4, ensilage, \$2-50, cotton seed meal, \$25 and bran at \$14.00, our winter rations for the