

We find in a late number of the North British *Agriculturalist* an interesting experiment, illustrative of the subject, of special feeding and quality of Milk made by Dr. Stephenson Macadam, and reported by him to the Pharmaceutical Society of Edinburgh, Scotland. This experiment was upon ewes. Ten ewes, with lambs, were selected and placed in a pasture with abundant grass, in May. The milk taken from each ewe was kept separate and analyzed separately. After the sheep had been some weeks upon this good grass, the ewes were milked, and the following table gives the results of the analyses of the ten samples :

IN 100 PARTS BY WEIGHT :

Ewe No.	Total Solids.	Fat in Solids.	Solids not Fat.	Ash in Solids.
1.....	17.45	5.02	12.43	0.79
2.....	18.77	6.56	12.21	0.81
3.....	20.25	8.94	11.31	0.82
4.....	21.01	9.56	11.45	0.95
5.....	17.76	5.30	12.46	0.87
6.....	18.76	6.63	12.13	0.81
7.....	18.94	7.37	11.57	0.73
8.....	17.04	5.37	11.67	0.93
9.....	17.44	4.56	12.88	0.93
10.....	20.13	8.46	11.67	0.89
Average of all.....	18.75	6.77	11.97	0.85
Lowest.....	17.04	4.56	11.31	0.73
Highest.....	21.01	9.56	12.88	0.95

These analyses show the remarkable richness of ewes' milk, when fed only upon grass. To test the effect of richer food, arrangements were made to give other food besides the pasture to certain ewes. Numbers 1, 2 and 3 were each fed daily with one pound linseed cake for ten days ; Nos. 4, 5, and 6 with a pound of cotton cake ; Nos. 7, 8, and 9 with a pound of oats ; while No. 10 was given only grass. All ran in pasture except when eating their allowance of other food. At the end of the ten days the ewes were again milked, and the ten samples gave the following results on analysis :

Analysis of milk from ewes fed on artificial food in addition to natural pasture

IN 100 PARTS BY WEIGHT.

Ewes.	Total Solids.	Fat in Solids.	Solids in not fat.	Ash in Solids.
Linseed Cake { No. 1.....	21.32	9.79	11.54	0.87
2.....	18.67	6.63	12.24	0.85
3.....	16.28	4.67	11.67	0.87
Cotton Cake { 4.....	22.17	10.15	12.02	0.84
5.....	19.33	7.63	11.70	0.88
6.....	20.65	8.56	12.09	0.91
Oats..... { 7.....	19.43	6.96	12.48	0.87
8.....	22.20	10.48	11.72	0.96
9.....	20.13	4.41	11.72	0.77
10.....	20.75	9.80	11.35	0.88
Average of all.....	20.11	8.27	11.35	0.89
Lowest.....	16.28	4.67	11.84	0.77
Highest.....	22.20	10.48	12.48	0.96

The difference in composition of the milk from the extra feeding is not uniform, but it will be perceived that the average total solids were increased from 18.75 to 20.11 per cent., which may be considered a great change to be made in ten days ; but in what constituent of the milk was the change made ? If we examine the table, we shall find the change to be made almost wholly in the fat ; the average fat was increased from 6.77 per cent. to 8.27 per cent. But the greatest change was