TABLE prepared by Dr. S. M. Babcock, embodying the results of experiments by Dr. Van Slyke, of the experimental station of Geneva, N. Y., and showing the relation of fat to casein, and yield of cheese in normal milks containing different amounts of fat.

Per cent of fat in milk.	Average per cent of fat.	Average per cent of casein.	Lbs. of casein per lb. of fat.	Fat lost from 100 lbs. of milk.	Per cent of fat in milk lost in whey.	Lbs. of cheese from 100 lbs. of Milk.	Green cheese for lb. of fat in milk.
From 3·0 to 3·5	3·35	2·20	·66	·32	9·55	9·14	2·73
" 3·5 " 4·0	3·72	2·46	·66	·33	8·33	10·04	2·70
" 4·0 " 4·5	4·15	2·70	·65	·32	7·70	11·31	2·73
" 4·5 " 5·0	4·74	3·05	·64	·28	5·90	12·85	2·71
" 5·0 " 5·25	5·13	3·12	·61	·31	6·00	13·62	2·66

The results of the large number of experiments conducted and here epitomized establish this fact, that the fat contents of milk are a true indication of the value of that milk for the purpose of cheese-making. Milk with 4·74 per cent of fat gives a proportionately better yield of cheese per 100 lbs. than milk with 3·74 per cent of fat. In the first instance 12·85 lbs. of cheese, in the latter 10·04 lbs. of cheese.

By Mr. McMillan :

Q. Is it possible to get milk with so much butter-fat that you cannot convert it into cheese?—A. I know that milk of the richness of 5 per cent to 5·25 per cent of butter-fat, can be used without any loss of butter-fat in the whey. In fact, as a matter of experiment, it has been found that there has been a smaller percentage of loss of butter-fat in the whey with the richer milk than with the poorer milk The above table shows over 9 per cent of the fat lost in the whey with milk 3·35 per cent fat, while the loss is reduced to 6·0 per cent in the richer milk of 5·0 per cent butter-fat. I do not know that any extensive experiments have been conducted with milk with 7 or 8 per cent of butter-fat, such as some Jerseys might give. Such milk would make an exceedingly rich cheese, and if the price of the cheese were according to its richness or amount of butter-fat, an exceedingly valuable cheese would result. But milks containing such a high percentage of butter fat are not met with in ordinary practice. All that I have said is quite true with regard to milks which might be supplied to creameries and cheese factories. It is of the greatest importance that this definite knowledge should be widely disseminated, because until a short time ago, the accuracy and reliability of the "Babcock method" for cheese making was a disputed point. This work will lead to the wider adoption of the Babcock test and put the whole question of purchasing and selling of milk on a more business-like and equitable basis.

By Mr. Rowand :

Q. You consider the Babcock a perfectly reliable test?—A. I consider it perfectly reliable in every way.

By Mr. McMillan :

Q. When you spoke of examining soils, you mentioned about the preparation of a soil map. In going over Ontario, would that be possible? Are there not large tracts of country dotted over with drift, with a topping of boulder clay, soils that would make it very difficult to make a proper map?—A. Undoubtedly there are great difficulties in mapping out the areas of this country. Much territory could not be satisfactorily mapped, but I think several of the largest areas could be mapped, as for instance Manitoba, the North-west Territories and British Columbia. There are also some portions of Ontario and Quebec and the Maritime Provinces that might also be worked up in this way, but I recognize the difficulty that there would be in certain portions of the older provinces, in making such maps. The work is one of the future. For many years it would be necessary to accumulate chemical and physical data, as well as information respecting limits of areas, before even a commencement could be made at the maps.