

The samples classed as "below average" must be regarded as doubtful, being either good milk more or less skimmed or watered, or naturally poor milk deficient in either butter-fat or other solids.

In drawing up this table I have been careful to use the terms employed in the Bulletins on Milk, issued by the Inland Revenue Department, and in forming an opinion on the samples I have been guided by the provisional standards adopted by the Chief Analyst for Canadian milk. It is, however, open to question whether milk samples from different parts of Canada should all be judged by one standard. As pointed out in Bulletin No. 1 the average in Canada for the total solids in milk is at least one-half of one per cent. lower than the standard adopted in the State of Massachusetts for milk "of good standard quality."

The averages obtained for the above forty-six samples are as follows:—

Total solids...	13.52
Butter fat.....	4.57
Other solids	8.95

These figures, it will be seen, are very much higher than the averages for both market and normal samples from nearly all those towns of Eastern Canada for which averages are given in Bulletins Nos. 1, 2, 9 and 11.

The above averages contain the results of two watered samples and one partly skimmed, together with at least seven analyses of doubtful samples. On the other hand they include several samples in which the fat was abnormally high, rendering it probable that in some instances the milk was not properly mixed before taking the sample. But even if we exclude the samples consisting in part of cream, it will be found that the general averages for both fat and other solids are markedly higher than the averages obtained for genuine samples of whole milk analyzed in the Department Laboratory at Ottawa. In making these comparisons it should not be forgotten that the present is just the time of year when the highest averages may be expected. The obvious practical result of judging exceptionally rich milks by standards adapted for milk of average quality is that a larger proportion of adulterated samples escape detection.

I may add that the method employed for the analysis of these samples was essentially the one in use in the Inland Revenue Laboratory at Ottawa—a method which in my hands has been found to yield results practically identical with those obtained by the method in use in England by the Society of Public Analysts.

I have the honour to be, Sir,

Your obedient servant,

EDGAR B. KENRICK, *Analyst.*

BULLETIN No. 22.—FERTILIZERS, 1891.

E. MIALL, Esq.,
Commissioner of Inland Revenue.

SIR,—In submitting the following report regarding the agricultural fertilizers, which are offered for sale in the Dominion of Canada this year, it becomes necessary to advert to the amendment which the Fertilizers Act underwent during last session of Parliament, and which were assented to on the 24th April, 1890. The following are the principal changes which these amendments have caused in the administration of the Act and the trade in fertilizers:

1. Every manufacturer or importer is obliged to declare to the department, and describe on the packages, the nature of the materials from which the fertilizer has been manufactured.

2. A fee of \$3 must be paid for the analysis of each sample submitted to the department.

3. In publishing the results of the analysis, a statement must be given at the same time "showing the relative value of each fertilizer calculated from its contents in fertilizing ingredients at their current market value."

The following is a list of the fertilizers sent in for analysis this year, containing the same information as in former reports, with the addition of that received from the manufacturers regarding the materials contained in, or used in the production of, the various qualities.