

HYGIENE

City Milk Standards in their Relations to Health.

(Correspondence.)

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[THE intimate relations frequently existing between disease and milk supplies are daily becoming better appreciated by both the profession and general public: but much needs to be yet investigated and communicated before even medical men thoroughly comprehend the real significance of good milk, both as a carrier of disease, and as the most important of all the articles of a dietary in disease. We congratulate our readers in having so well-placed before them in MEDICAL SCIENCE, this subject by a gentleman who has long conducted the *Dairyman*, and as an analyst has had the opportunity of practically investigating the whole subject.—ED.]

Various regulations have been proposed with a view to prohibiting this or that kind of food, as for instance distillery slops, slaughter house refuse, and other forms of waste. It is often overlooked that the object of feeding such refuse is to increase the flow of milk at the expense of its quality and especially is this the case where low prices prevail.

There is no easier way of demonstrating the truth of this proposition than by quoting the example of the public milch cow competitions. Formerly it was the practice to give the prizes to those cows which gave the largest quantity of milk without the slightest regard to the quantity of total solids, or the proportion of butter fat contained in the milk, or the distance from calving or the length of time the cow had been in calf. In such competitions the milk would seldom average above 11-50 or 11-75 per cent. of total solids of which less than 3 per cent. was butter fat. The cause was not far to seek, and was invariably found in the mode of feeding, which consisted of rations composed of sloppy food of low nutritive value supplemented with roots.

In the present day feeders work with very different rations, composed mainly of grains rich in oil and nitrogenous matter supplemented with just enough coarse fodder and roots as to make the whole digestible and profitable. Whereas under the old system it took about 11 or 11 1/4 lbs. of such milk to make one of cheese or about 30 to 34 to make one of butter, we can get with modern economic rations, one pound of cheese from six or seven pounds of milk, or one pound of butter from fourteen to twenty-two pounds of milk.

If throughout a working season of six months Ontario creameries can make one pound of butter from twenty-five pounds of milk, and Quebec creameries can produce the same quantity of butter from 22 1/2 pounds of milk, surely there is nothing unjust in asking that our city milk supplies should show a higher average per cent. of butter fat than they now do. A recent document issued by the Inland Revenue analyst, reports the following as the averages of quality obtained at the places of examination:

PROPORTION OF BUTTER FAT.

	Highest.	Lowest.	Average.
Halifax.....	5.40	3.00	4.24
St. John.....	4.62	3.43	3.91
Quebec.....	4.18	3.02	3.54
Montreal.....	5.17	2.80	3.82
Ottawa.....	5.29	3.62	4.26
Toronto.....	4.50	2.52	3.38
Total average.....			<b>3.86</b>

MILK SOLIDS AVERAGE.

Halifax.....	12-72
St. John.....	12-45
Quebec.....	12-39
Montreal.....	12-29
Ottawa.....	12-93
Toronto.....	12-08
Total average.....	<b>12.48</b>

From these data the analyst draws the conclusion that we should not adopt a standard higher than 12 per cent. of total solids, of which 3.5 per cent. should be butter fat. Surely if cheese factories and creameries can obtain milk from grass-fed cows for six months throughout the provinces of Ontario and Quebec of higher average quality than the city supplies examined by the official analysts it is only reasonable that we should expect as good milk for city use in summer, and in winter one of slightly improved quality when cows are fed on grain and other nutritious food, and prices are higher.

Before adopting its milk standard of 13 per cent. total solids, of which 3.7 per cent. is butter fat, the State of Massachusetts investigated milks from a much wider range of territory with the following results: