

## HOW THE PUBLIC MILK SUPPLY IS MANAGED IN COPENHAGEN: LEADING THE WORLD.

IT is well to insist on a good standard of milk, free from water adulteration, but to rely upon milk because it shows full specific gravity, as is commonly done, is as unsafe as to rely upon a chemical analysis only in the case of drinking water. The chemical composition and physical qualities of milk are such as render a variety of pollutions possible and even probable, which may be most injurious to the health of the consumers, especially of infants. Milk is subject to such pollutions from the moment it is formed in the udder of the cow to the moment when, after more or less manipulation, it is consumed. While the milk can be infected in the cow itself, as for example, by tubercle bacilli, or polluted by certain ethereal oils from the fodder, the pollutions to which it is exposed after having left the udder are numerous. It can immediately come into contact with dirty teats and udders, slovenly dairymaids with virulent microbes on their hands or clothing, or be polluted by the foul air of the cow houses, the minute odorous particles of which milk so easily and freely absorbs. After being taken from the cow houses the milk may be polluted by contact with many animate and inanimate substances, not to mention the virulent microbes in ordinary dirt—those of cholera, diphtheria, typhoid fever, scarlet fever, and foot and mouth disease—of which experience has but too often furnished proofs as striking as sad.

In consideration of all this the Copenhagen Milk Supply Company undertook in 1878 to supply the inhabitants of the Metropolis of Denmark and more especially the infant population with pure and unadulterated milk. The following is a synopsis of the rules and regulations, as given in the Glasgow Sanitary Journal, from a pamphlet published under the supervision of the Danish Government and presented to the members of the late International Congress of Hygiene in London: It was decided in the Company's statutes in the beginning that any profits exceeding 5 per cent. were to go towards reducing the price of milk and improving the business generally; the undertaking thus assuming not only a common mercantile, but also a hygienic and philanthropic character. On this account the Company placed itself under the control of experts and persons having no pecuniary interest in the matter. These persons form a committee of control whose members have no share in the business.

During the past year 22,000 examinations as to the density, and an equal number as to the specific gravity, of the various kinds of milk and cream have been made in the Company's dairy alone. Every evening, samples are taken of each contractor's milk and cream, and submitted to analysis. Each morning, before the delivery of the milk, samples are taken of each sort of milk and cream and sent to Professor Bohr, who publishes monthly the results of his daily analyses, giving the highest, lowest and average figures.

The Company does business only with such contractors as give a moral guarantee that the Company's rules for the feeding and treatment of the cows be strictly carried out, and whose farms have a superior and healthy stock of cattle; and the price paid for milk is higher than the farmers could possibly obtain elsewhere. The cows on the various farms are examined every fortnight by competent veterinary surgeons, seven in number, who report on the condition of the cattle, the state of cleanliness in which both cows and cow-houses are kept, health of the cows, the feed, how much milk is yielded, &c., and an inspector is regularly sent out to examine thoroughly the state of the farms. The Company sends out, too, a head dairymaid to control the milking. Her attention is especially directed to securing cleanliness during milking, and to the cooling of the new milk.

**FEEDING AND MANAGEMENT.** The food of the cows must be of such a nature and quality that no bad taste or taint may be imparted to the milk by it. Brewer's grain and similar refuse from distilleries are strictly forbidden, as also every kind of fodder which is not fresh and in good condition. Turnips and rutabagas are absolutely forbidden; carrots and man olis are permitted up to a limited amount, when at least  $3\frac{1}{2}$  kilograms of corn, bran, and cake are given along with them. Cows supplying infant's milk get only carrots. Rape seed cake is the only oil cake used, and  $\frac{3}{4}$  kilograms is the utmost limit, along with at least  $2\frac{1}{2}$  kilograms of corn