

Farmers Demand Better Mail Service.

The East Middlesex Farmers' Institute, at the recent annual meeting, adopted, unanimously, resolutions in favor of Government regulation of the telephone service reaffirming their approval of free rural mail delivery, and asking that hereafter rural post offices receive a daily mail service. In the discussion, several strong speeches were made in support of these propositions, particularly the latter. Cases were cited where in old and well-settled farming communities farmers are only receiving their mail two and three times per week, while in the city, a few miles distant, people have their mail delivered at their homes twice daily. In many cases farmers have to go long distances to their local post offices, and then to have only a service twice or thrice weekly, with business of importance at stake, is coming to be regarded as an imposition which should not be endured, and for which there is no good justification, when the resources of the Government are considered. The action of the East Middlesex Institute is, therefore, commendable, and should be adopted by farmers' meetings generally. Copies of the resolutions adopted should, in all cases, be forwarded to the local member of Parliament, and also to the Postmaster-General. Personal representations by letter, pointing out specifically the needs of communities for a better mail service, should also be made, and will materially aid in securing what is desired. People can hardly expect, if their requirements are not made known, to have them promptly met.

DAIRY.

New York City Milk Supply.

The past ten years have shown wonderful advancements in the betterment of the milk supply for human consumption. Five years ago the trend was to fix the value of milk by its food contents—the solids it contains—and for all practical purposes this was estimated from the fat contents of the milk. This, however, did not satisfy the public, especially the medical profession, which is deeply interested in the subject. It was felt that milk should not only contain the maximum food value, but that it should reach the consumer in as sweet, pure and clean a condition as possible; or, in other words, that it should be fresh and clean. The cleanliness of milk is ascertained by a bacteriological examination to determine the number (colonies they are called) of bacteria in a cubic centimetre of milk. A cubic centimetre is one-thirtieth of an ounce.

That the public at large is taking a greater interest in a pure-milk supply for large cities, is evidenced by publications on the subject appearing in the American monthly magazines and in the New York City daily press. As the largest city on this continent, it is interesting to know how the citizens of New York are supplied with that very necessary article of diet, milk. The consumption in Greater New York every day is approximately 1,500,000 quarts, besides the condensed milk and cream, of which a large quantity is used. It is distributed by 3,500 wagons and 11,500 stores. With the ever rapidly-increasing population of New York an increased quantity is required each year—about 1,500,000 quarts.

Of the 1,500,000 quarts distributed in New York every day, about 450,000 quarts are bottled, and the bottled milk includes about 6,500 quarts of certified milk and 2,000 of inspected milk. About 1,000,000 quarts are sold from stores every day. Certified and inspected milk is produced under the direction of the Medical Society of the County of New York, which has formulated stringent rules for the production on the farm, looking to absolute cleanliness. An agent of the Society inspects the premises before a permit is given. The Society gives to the producer a metal cap, bearing its name, with which to seal the top of each bottle. It makes weekly bacteriological examinations of the milk to see that it does not contain more colonies of the bacteria than are allowed by their rules—in case of certified milk, 30,000; inspected, 60,000.

Right here it may be said that the Board of Health of New York City does not consider milk unhealthy which contains a million bacteria per cubic centimetre. The minimum fat in inspected milk is four per cent.

The certified milk sells at from 13 to 15 cents a quart. Nearly all groceries and delicatessen stores sell milk (dipped milk)—that which is dipped from forty-quart cans—and some sell bottled milk, though comparatively very little of it. The usual price of bottled milk is eight cents a quart, and of dipped milk five cents a quart, in summer, and six in winter. In thickly-populated sections of the city some "dipped milk" is sold as low as four cents a quart, but this is done as a "leader."

The milk supply of Greater New York is drawn from a radius of from 400 to 450 miles of New York City, and includes the States of New York, New Jersey, Pennsylvania, Connecti-

cut and Massachusetts, and a small quantity comes from Canada at points adjoining this country. There are 20,000 cows kept within the city limits, principally in the suburbs.

There are 1,223 dealers selling milk. As is usual in a business of such vast proportions, the greater part of the milk trade is in the hands of "leaders" in this business. One firm delivers close to 75,000 bottles in a day in Greater N. Y., and another over 40,000. There are also "leaders" in the can trade, who deliver forty-quart cans to the groceries and delicatessen stores.

The price paid each month for milk is fixed in the preceding month by the N. Y. Milk Exchange, an incorporated body, composed of about 100 of the leading dealers of New York. The price is usually two to two and one-half cents in summer, and from three to three and one-half cents per quart in winter. An American quart is about one-fifth less than the imperial. The freight and five cents a can for ferriage are deducted from this price. New York is an island. The North River runs on the New Jersey side of it, and the East River on the other side. There are but two railroads entering the city, consequently the most of the milk is brought over on the ferries in large four-horse wagons; hence the charge of five cents a can ferriage. The freight depends upon the distance from which the milk is shipped. If within a radius of 40 miles from the city, the freight per 40-quart can is 23 cents, for 100 miles 26 cents, for 190 miles 28 cents, and for any distance beyond 190 miles 32 cents.

The milk supply of this city is made at 15,000 farms, and is gathered at some 450 receiving stations (or creameries as they are called) which are scattered in different sections of the State, and are usually owned by the dealers in the city.

The "milk trains," contrary to the old custom, are run on express time, and often exceed in speed the fastest passenger train. Some milk is bottled on the farm, though the greater part of that intended for bottle delivery is shipped in cans to save freight, and is bottled in the city in the large plants of the dealers. The milk trains begin to arrive about nine o'clock in the evening, and continue to arrive until near midnight. It is a sight to see the enormous wagons drawn up at the long platforms at which the milk is received, and crossing over the ferry with the empty cans and returning with the full ones. The milk is iced in transit by the railroad. Blocks of ice are placed on the cans, and if any ice is left over on arrival the railroad people give it to the milkmen to place on or around the cans in transporting them across the city.

The milk supply is controlled by the Department of the City of N. Y. Board of Health, of which the chief official is the health commissioner, appointed by the mayor. The health commissioner is also president of the Board of Health. Each borough into which Greater N. Y. is divided has its local board of health, but the head office is in Manhattan—Old New York before consolidation.

The Board has thoroughly-equipped laboratories and a very large staff of employees. Among them are thirteen inspectors, whose duty it is to inspect milk on its arrival in the city, at the groceries and delicatessens, and on wagons in transportation across the city, or while being delivered to customers. They have power to seize and condemn any milk that does not comply with the law. Two of these inspectors are employed by the State Board of Agriculture, but are paid by the city and are under its directions, as the jurisdiction of the health commissioner of New York City does not extend beyond its limits.

One of the most stringent laws of the Board is that the milk on arrival must not exceed 50° F. in temperature, and must not be at any higher temperature when exposed for sale in stores. When milk is at 50° F. the growth of bacteria is retarded; at 80 to 95 bacteria multiply very rapidly. If the inspectors find the milk exceeds 50, either on arrival or in stores, they turn it into the river or gutter.

The use of preservatives is not permitted, and a constant warfare is waged against their use. Formalin is that which is most often used by those who try to avoid the law. Formalin in the milk renders the casein less digestible, especially by children. The adding of gelatine to cream to thicken it is a favorite device.

The sale of skim milk is prohibited. While it is known that the fatty substances of whole milk are necessary for infants, there seems no good reason why so valuable an article of diet as skim milk, which could be sold so much cheaper than whole milk, should not be permitted to be sold, except for fear that it might be palmed off as whole milk. Skimming, or adding water or skim milk to whole milk, is punishable by fine. The Health Department uses the Babcock test to determine if milk has been adulterated.

As I have said, the authority of the Board of Health extends over the milk only when and after it reaches the city, but the readers of the "Farmer's Advocate" need not be told that, to ensure a clean, pure milk, the beginning must be made

at the farm. It is a deplorable but undeniable fact that too many farmers have a deep-rooted objection to taking proper precautions in the production of milk. Dr. Darlington, President of the N. Y. City Board of Health, has found by experience that a little persuasion is good, but that forceful measures are sometimes better. He and his State inspectors are constantly visiting the farms where the milk is produced and the creameries where it is received. If they find milk is being produced at the farm under unsanitary conditions, or that preservatives are being used, the farmer has pointed out the error of his ways, and suggestions are made to him for the betterment of such conditions. Often a word to the wise is sufficient; but if the farmer is obdurate and will not comply with the requirements of the Health Board, an inspector camps on his trail. A visit is paid to the creamery which receives his milk, and the one in charge is told of the inadvisability of receiving any more milk from that particular farm. If the farmer ships his milk to the city by rail, it is followed by the inspector and promptly dumped into the river when it reaches here. Dr. Darlington believes in persuasion first, as he has no desire to put anyone out of business, but if the health of the people of this great city, especially that of infants, is jeopardized by unsanitary or unwholesome milk, drastic measures have been and will be applied by the Health Board impartially to the farmer, the middleman or the seller.

All raw milk, as contrasted with condensed milk, sold in New York, must contain not less than three per cent. fat and twelve per cent. total solids. By this it is presumed that the ratio of fat to solids other than fat are as one to three, and this is the usual ratio necessary to comply with the legal requirements of each State in this country. In England it is 3 per cent. fat and 8.5 per cent. solids other than fat. I would like to know where there is any large quantity of milk which contains not more than 3 per cent. of fat and has 9 per cent. solids other than fat. If there is I do not know it, and I am pretty familiar with the milk situation and milk analyses. Will some of your readers enlighten me? Let them look at the public tests and examine the ratio of fat to solids other than fat, and see if it accords with the usual legal rate of the United States—one to three. I am perfectly aware I am raising "a leading question," but it is one worthy of being discussed.

A strange condition of affairs in this State exists, caused by the existing laws in regard to the fat in milk. By the laws, as they are now, the farmer's cows can produce milk containing less than 3 per cent. fat. The producer can deliver such milk to the receiving station, and he cannot be successfully prosecuted for selling it; but the moment the receiver sells this milk he can be successfully prosecuted for selling milk below the legal standard. But the dealer or his agent at the receiving station are fully alive to the situation. A "clarifier" is run at the creamery, or at the N. Y. City depot, to clarify the milk. It is nothing more or less than a centrifugal separator. The cream is separated from the milk, and ALL the cream and skim milk, or separated milk, are supposed to be added together again. But are they? I will leave your readers to decide this question by stating the facts. In certain sections of this and other States milk is delivered at the receiving stations containing 5 per cent. fat; frequent analyses by the Babcock of bottled milk sold at 8 cents a quart, rarely show more than 4 per cent. fat, and often between 3 per cent. and 4 per cent. What became of the fat that was in the milk between the time it reached the receiving station and its delivery to the consumer? It has been repeatedly asserted in print, and not denied, that at certain receiving stations eleven 40-quart cans of whole milk will be received, and when it has been clarified 1 can of cream and 10 cans of whole milk will be in its place. Yet the legal requirement of 3 per cent. fat has been complied with.

The Board of Health has an appropriation of \$30,000, with which it employs trained nurses to visit the thickly-populated parts of the city where the poorer classes live, and teach them how they can best care for their milk, how to pasteurize it, and how to modify it. During the past winter I delivered a lecture in New York, Brooklyn and Long Island City, under the joint auspices of the Boards of Health and Education, on "Milk from the Farm to the Table," illustrated by stereopticon views. The audience was very large on each occasion, and seemed very much interested in the subject. The lecture was educational.

Dr. Darlington is a progressive, energetic, painstaking official. His department has happily been removed by him from politics, and a vast amount of good has been accomplished. This is evidenced by the fact that at the present time but 10 per cent. of the samples of milk taken by the inspectors as suspicious (not 10 per cent. of the whole) are condemned as adulterated or deleterious, whereas five years ago 33 per cent. of suspicious samples were condemned.

As a natural result, the death rate among in-