

## MILK CONTROL IN ILLINOIS.

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The problem of proper control and regulation of a milk supply presents so many different angles and is indulged in by so many different agencies that considerable misunderstanding is sometimes the end result. The lack of appreciation on the part of one group, of the efforts of another group, or the inability to comprehend the magnitude of the problem as a whole has often led to discord and grief.

There are two factors concerned in milk control,—regulatory measures and educational measures. Regulatory measures are concerned mostly with matters of fraud; they are necessary to prevent a small minority of dairymen and dealers from practicing unfair methods. Such measures however are never progressive. Of necessity there is a certain lag between the advancement of dairy science and regulatory measures concerning the industry. For the improvement of a milk supply, therefore, educational measures must be relied upon, whereby voluntary and self-imposed regulations and precautions are important factors.

The federal government is concerned with the betterment of milk supplies in two ways. The county farm advisors take a more or less active part in educational work according to the locality, whether essentially dairying or not, and according to the personal interests of the individual advisor. The federal government also spends about \$300,000 annually in Illinois, in co-operation with the State Department of Agriculture for the eradication of bovine tuberculosis.

The State government functions through its various departments and the universities as follows:

## DEPARTMENT OF AGRICULTURE.

Animal Industry—tuberculosis testing.  
Dairy Husbandry—educational work.  
Foods and Dairies—regulatory work.

## DEPARTMENT OF PUBLIC HEALTH.

Sanitary Engineering—pasteurizing plants.  
Communicable Diseases—prevention of milk borne epidemics.  
Laboratories—laboratorial examinations.  
All Divisions—educational program.

## UNIVERSITY OF ILLINOIS.

Research and Educational programs.

The department of Agriculture is naturally interested in milk from the economic standpoint, and numerous laws and regulations are enforced by them.

The Division of Animal Husbandry, in co-operation with the federal government, is attempting to eradicate bovine tuberculosis. Two counties are already free from the disease. The present state appropriation is \$1,000,000 annually for the reimbursement of farmers for animals killed, the state and federal government each paying a third and the farmer taking a third of the loss.

The agricultural interests usually regard bovine tuberculosis as an economic problem entirely without public health significance, and legislation from that view point was enacted in 1911 and is still in effect: "Be it enacted by the people of the State of Illinois, represented in the General Assembly: That it shall be unlawful for any city, village, incorporated town, county or other corporate authority in the State of Illinois by ordinance, rule or regulation other than may be established by the law of this state, to demand, fix, establish or require the tuberculin test to be applied to dairy animals as a means or measure of regulating and purifying milk, skimmed milk, cream and dairy products of said animals in any manner whatever, and every such ordinance, rule, by-law or regulation heretofore or hereafter passed, demanded, fixed, established or required by any such authority other than the State of Illinois, is hereby declared to be void and of no effect."

From many studies, however, it appears that bovine tuberculosis is a public health problem. In New York City, Dr. Park found among children suffering from tuberculosis, 25 per cent were infected with the bovine type of organisms. Ordinary market milk may contain large numbers of tubercle bacilli, from 10 per cent of the

samples as shown in studies in Chicago and Washington to 50 per cent in New Haven. Without efficient pasteurization, therefore, such milk is an actual menace.

The Division of Dairy Husbandry is engaged in an educational program for the more economical production of dairy products, for the production of a better quality of dairy products and for the encouragement of a greater per capita consumption. Meetings of dairymen are held, literature is distributed, and co-operative programs with the various dairying interests are carried out. The Division consists of a superintendent, a secretary and a such additional help as may be required from time to time.

The Division of Foods and Dairies is concerned chiefly with regulatory measures. It administers numerous laws dealing with stock foods, fertilizers, paints and oils as well as food for human consumption, so that only a part of its activities are devoted to milk. The Dairy and Food law contains a dozen provisions in regard to milk and milk products such as adulteration, labelling skim milk, testing for butter fat, licensing, etc. This is amplified by other laws, such as the Sanitary Inspection of Establishments, Dairy Products Frauds, Regulating the use of words "Butter", "Cream" and "Dairy", as well as various rules and regulations. About forty inspectors, eighteen chemists, and two bacteriologists besides the necessary clerks and assistants, devote their time to this work.

The State Department of Public Health is charged with the duty of safety in milk. Products that might pass the requirements of the Department of Agriculture may be condemned by the Department of Public Health and vice versa.

With the exception of the ordinance in regard to pasteurizing plants, no regulatory measures have been promulgated other than rules and regulations regarding the handling of milk where contagious diseases exist. Practically all of the work of the State Department of Public Health is of an educational nature, even where regulatory laws exist.



The Division of Sanitary Engineering enforces the Milk Pasteurization Plant Law passed by the legislature in 1925. For several years the Department has been actively promoting an educational campaign for the use of pasteurized milk as a means of safety from contagious disease. It was found upon investigation that many concerns were capitalizing this propaganda without furnishing absolutely safe milk. In few instances was there intentional fraud, but more often a lack of appreciation of many details in the operation of the plant. The Milk Pasteurization Plant Law defines pasteurization and gives the State Department of Public Health authority to inspect plants, to make minimum requirements for their operation and to prohibit the term "pasteurized" on milk that is not properly treated. Considerable time will be necessary to educate the plant operators and allow them opportunity to replace faulty equipment. The program will be accomplished through educational efforts to use the teeth of the law only in exceptional instances of willful neglect.

The Division of Communicable Diseases promulgates and enforces rules and regulations for handling milk on premises where contagious diseases exist. This supervision extends from the farm, where regulations are made for handling and disposing of milk under such conditions, to the consumer, who is prohibited from returning milk bottles, except as specified. Many investigations are made of milk borne epidemics and the source of the disease discovered and eliminated as a future menace. Since willful contamination of milk with disease organisms seldom exists, the campaign is entirely educational in nature. Usually the offending party is entirely ignorant of his part in the epidemic. Eight district health superintendents and two quarantine officers are available for this work as calls arise.

The Division of Laboratories is empowered by the Civil Administrative Code "to make examinations of milk," etc. "as may be deemed necessary for the protection of the people of the State." The activities of the Division are entirely educational in character. From time to time a bacteriologist has been sent to various

cities to make a complete check on the milk supply, with the hope of improving its safety. Assistance has been lent to the Division of Communicable Diseases in solving the cause of epidemics and to the Division of Sanitary Engineering in checking pasteurization plants. In regard to the latter work, money has been appropriated for the establishment of a complete laboratory mounted upon an automobile truck, which can travel from one community to another.

In 1922 the State Department of Public Health initiated an educational program for the improvement of milk supplies, especially through pasteurization. With the assistance of various other interested agencies, a milk ordinance was formulated which would be applicable to the smaller cities of the state. To date 54 cities have passed this ordinance.

The University of Illinois assists very materially in the improvement of milk through its educational programs. While the various departments of the University have less direct contact with the milk industry than do the other state agencies, they exert a tremendous effect for the good.

Municipal control of milk supplies consists of enforcing the various state laws and regulations, supplemented by such local ordinances as may be passed. In every instance authority for such work is vested in the local health department. There are a few instances of very excellent municipal milk control and several instances of great neglect.

The city of Chicago has a very excellent milk supply. For the past ten years it has been pasteurized, with the exception of certified milk, while very recently steps have been taken to insure its production from cattle free from tuberculosis. Not only are frequent inspections of dairy plants made but a force of men is available for farm inspections where necessary. According to the last available report 25 inspectors were assigned to this work. Many hundreds of samples of milk are examined in the Chicago public health laboratory.

Cities outside of Chicago exhibit a varying amount of interest in the quality of their milk supplies. Rockford

has two full time food and milk inspectors, a good laboratory and a well defined educational program, while Cicero has neither a food and milk inspector nor a laboratory. From a recent survey on health activities in Illinois cities of 10,000 inhabitants or over, the following information is taken.

	Food and Milk Inspectors.	Laboratory.
Rockford .....	2 full time	Yes.
Peoria .....	1½ full time	Yes.
Evanston .....	1 full time	Yes.
Springfield .....	1 full time	Yes.
Decatur .....	1 full time	Yes.
Aurora .....	1 part time	Yes.
Quincy .....	1 part time	Yes.
Oak Park .....	1 part time	Yes.
Bloomington .....	1 full time	No.
East St. Louis .....	1 full time	No.

Other cities of this class reported very little activity in the matter of milk regulation.

The most worth while control is that obtained through the activities of the dairy interests themselves. Almost without exception such self-imposed regulations are more stringent than the law requires. The larger dairy-ing concerns spend immense sums of money for the improvement of their products. For instance, the Bordens Farm Products Co. of Illinois reports the following.

“(a) MILK PRODUCTION FIELD:

1. Carrying out the various sections of the ordinances of the City of Chicago pertaining to milk production on the farm.
2. Veterinary, physical and sanitary inspection of all dairy herds and buildings on the farm.
3. Local lay sanitary inspection of all dairy herds and buildings.
4. Laboratory control of production by finding abnormal conditions and cooperating with farmer toward correction.

“(b) SALES FIELD:

1. Educational work in schools, clubs and civic bodies toward greater sales of the farmer's product.
2. Lecture work at any point where assistance may be rendered.
3. Furnish literature on milk to libraries, schools, etc.”

In Rockford all pasteurizing plants pay for milk not only on the basis of butter fat, but also on the absence of dirt. The installation of apparatus for the reductase test is contemplated so that the quality of milk may still further be determined. In Springfield, 95% of the milk is not only pasteurized but is also obtained from tuber-



culin tested cattle, this being accomplished by the dairy interests themselves without regulatory stimulation. In most of the cities of the state from 50 per cent to 95 per cent of the milk is pasteurized, and thus rendered safe by the efforts of the dairy interests. Credit must also be given to such concerns as the Frederick C. Mathews Co. for very extensive educational programs in connection with their other work and the various associations of persons interested in the milk industry. It is much to the discredit of certain manufacturers of apparatus that they allow their short sighted commercial instincts to overcome better judgment and sell to dairymen apparatus that complies neither with the latest advances of scientific knowledge nor the law and which must be replaced at great expense to the dairyman as soon as an inspector visits the plant.

Recapitulation: The federal government is co-operating with the State for the eradication of bovine tuberculosis as an economic measure, greatly to the advantage of public health; the State Department of Agriculture administers numerous regulatory measures from the economic standpoint, while the State Department of Public Health is concerned with an educational campaign for safe milk; several cities in the State amplify the above activities by regulation of their own; the milk industry itself is expending large sums of money for supervision of its product.

The next step in the milk campaign is an improved raw supply. This will be obtained by the combined efforts of State and city authorities together with the producer and the distributor all working together.