

## Tuberculosis in Cattle

**How it is Transmitted to People—Extent of Disease and How to Guard Against it—Cleanliness and Ventilation of Stables**

Tuberculosis is one of the most common diseases that attack cattle. It is also the most common, and perhaps most dreaded malady with which man has to contend. Further, the disease is contagious, and is readily transmitted from cow to cow in a herd, or from cattle to man. Its ravages are generally slow and for a considerable time may be imperceptible, so that it is frequently well advanced before any symptoms are noticeable. Bovine tubercles usually gain entrance to the human system through the eating of diseased meats, or the drinking of milk obtained from cows whose udders are tuberculous. As a consequence, pulmonary tuberculosis, the most common form in man, is not usually transmitted from cattle. Nevertheless, medical authorities state that very many cases of tuberculosis may be traced directly to this source of infection.

### Extent of Disease

Bovine tuberculosis statistics are necessarily incomplete, and perhaps this partly explains the apathy and scepticism of farmers as to the danger of the disease. It is known, however, that dairy cattle and pure bred cattle are more susceptible to the disease than are the beef types, especially if they are housed for some months every year. It is known, too, that the disease may be found in every agricultural community in America, and in a number of European countries. In the United States, Government experts assert that ten per cent. of dairy animals, and one per cent. of beef animals are affected by tuberculosis. This means an estimated economic loss annually to the farmers of the United States of \$14,000,000. There is no reason to suppose that the loss in Canada is any less proportionally.

In fact, there is every reason to suppose that conditions are much worse in Canada. Canada has no effective system of inspecting meats for home consumption; the tuberculin test is quite unknown in many districts; and cattle are frequently housed for half the year in dark, ill-ventilated stables. Is it to be supposed where such primary safeguards are neglected that the economic loss will not be much greater than in a country where care is taken? Is it not of vital importance to Canadians to stop the sale of millions of dollars worth of diseased meat and dairy products every year? Of course, the country can ill afford to have such tremendous losses in its food supply. The logical remedy is, therefore, to take steps to stamp out the disease.

### The Remedies

What then can be done to remedy such an evil? In the first place, there is an almost general need for better lighted and better ventilated stables. In the second place, the tuberculin test should come into universal use. This should be followed by the segregation of animals reacting from the test, and if the cases are advanced, their slaughter may be advisable. And thirdly, a comprehensive system of meat inspection for the home market is an immediate necessity.

In so far as the first question is concerned, what is chiefly required is a little more common sense along with additional window glass, and some simple system of bringing fresh air into the stables. Concerning the tuberculin test, it is an almost unfailling indication of the presence of tubercles, if it is carefully and skillfully used. As an illustration of its accuracy the results obtained by the United States Bureau of Animal Industries may be cited. During fifteen years some 400,000 cattle were tuberculin tested. In this number there were 37,000 reactions,—that is, diseased cattle—the large majority of which were dairy cattle. In all 24,784 of these animals were slaughtered, and in 98.39 per cent. of them were found lesions of tuberculosis. A number of the States report even higher percentages. The tuberculin test is therefore an almost unfailling indication of the presence of the disease; it is inexpensive, and it is harmless.

### Railways Liable For Fires

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to the Railway Act and placed considerable powers in the hands of the Board of Railway Commissioners. Thus the Board was empowered to formulate and enforce regulations with respect to such matters as the following: (1) The use and inspection of fire protective appliances on steam locomotives; (2) the reporting of fires by employees of the railway companies; (3) the maintenance of efficient fire patrols along railway lines, during the summer months, except in cases where oil locomotives are used; (4) the keeping of railway rights-of-way clean, and where necessary, providing fire guards; (5) the providing of fire rangers and patrols; (6) the screening of the windows of smoking cars and compartments; (7) the removal of coals from ashtrays of locomotives; and other minor matters.

Plainly, the drafting of such regulations is of great importance. To make them unnecessarily burdensome to the railway, would be an injustice, which, in the end, might render the law obsolete; while to formulate regulations that would require cumbersome administrative machinery might make the law equally ineffective. The services of the Commission of Conservation were therefore offered to

Chairman Mabce of the Board of Railway Commissioners, to aid in the preparation of such regulations. The offer was accepted, and Dr. B. E. Fernow, Dean of the Faculty of Forestry at the University of Toronto, was appointed special representative of the Commission of Conservation for this work. A Committee composed of Hon. Clifford Sifton, Hon. Senator Edwards and Dr. Fernow, will also further as much as possible the general work of the Railway Commission in this regard.

Hon. Clifford Sifton also urged very strongly the necessity for appointing an officer of rather high rank and professional qualifications, to act as Chief Fire Inspector for the Dominion. Such an official would have charge of the administration of the forest fire law.

At the present time these regulations are being drafted and will, no doubt, be put in force during the coming summer.

### Decline of Shad Fishery

The shad fishery of the Maritime Provinces is dwindling away to very small proportions. Some idea of the falling off in catch may be had when it is stated that the quantity caught has declined from 10,036 barrels in 1903 to 5,242 barrels in 1910.

The fishery is confined to the bay of Fundy and its tributary waters. The chief causes of the decline are the catching of the fish when they go up the rivers in the spring to spawn, and the lack of fishways in dams on streams flowing into the Bay—a circumstance which prevents the fish going up into fresh water to deposit their spawn. The catching of the spawning shad is the more indefensible because, when the fish are ready for spawning, their flesh is foul and unfit for human consumption.

The Dominion Government appointed the Dominion Shad Fishery Commission to enquire into the cause of the decline in the fishery in 1908. This Commission made a thorough investigation of the subject and recommended what steps should be taken to rehabilitate the fishery, but so far no action has been taken by the Government.

### Grants of Water-Powers

The water-powers of Canada are among the most valuable possessions the country has. To safeguard the rights of the public, the Commission of Conservation has adopted the following principles to guide it in formulating the opinions it gives on questions relating to the disposal of water-powers:

- No unconditional titles shall be given to water-powers, but every grant or lease of powers shall be subject to the following conditions:
  - (a) Development within a specified time.
  - (b) Public control of rates.
  - (c) A rental charge subject to revision from time to time.

### Tripling the Yield

“Here, listen to this quoted verbatim from the latest bulletin on the subject published by the Department of Agriculture at Washington:]

“The Farmers’ Co-operative Demonstration Work now carried on in twelve States, employs 375 travelling agents, and has many thousands of demonstration farms. It is proving by results on thousands of farms that preparation of the soil so as to make the best seed bed adds 100 per cent. to the average crop on similar lands with an average preparation in the old way; that the planting of the best seed makes a further gain of 50 per cent.; and that shallow, frequent cultivation produces an increase of another 50 per cent., making a total gain of 200 per cent., or a crop three times the average crop produced on those farms where the plan and methods of demonstration work have not been adopted.”

Think of it. A crop three times the average. And all you have to do is to make a little better seed bed, exercise a little more care in the selection of your seed, and do a little cultivating. But the seed bed must be properly prepared. It is more than half way to the production of a three-times-better crop. Remember—the proper preparation of the seed bed.”—From *Canada Monthly*, April, 1911.

### Federal Health Department

The Federal Government expended \$377,485 for public health service in 1910. Of this sum the Department of Agriculture spent \$146,781; the Department of Indian Affairs \$125,121; the Department of the Interior \$86,969, and the Department of Internal Revenue \$38,613. It has been suggested that the public health service be placed under one department. This would undoubtedly make for economy and greater efficiency.

The Commission of Conservation will, during 1912, add to the effectiveness of its annual agricultural survey of the Dominion by selecting illustration farms in several localities in each of the provinces. With the co-operation of the farm owners, the Commission hopes to illustrate the direct advantages attained by practising scientific farming. The personal-contact method of assisting the farmer is rapidly growing in favour.

The eastern slope of the Rocky Mountains is rich in minerals. The Geological Survey of Canada estimate that 22,200,000,000 tons of coal may be mined from that region. Anthracite coal is now being mined near Banff, on the eastern slope.