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HOW WE MAY DISPOSE OF TUBERCULOUS CATTLE*

The Various Methods of Disposal Explained. Full Report of the Committee (Senator W. C. Edwards, Chairman, Dr. J. R. Mohler, Dr. F. Torrance) on Disposition of Tuberculous Animals—International Commission on Control of Bovine Tuberculosis.

IN the work of control and eradication of tuberculosis in animals it is first of all of the utmost importance to establish the presence of the disease in all the affected cattle, since only by such a procedure will it be possible to guard the healthy and newly born animals from infection. Fortunately we are in a position to determine with considerable certainty the vast majority of occult cases of tuberculosis in cattle, even the incipient cases, with the aid of tuberculin, and the clinical cases by physical examination, and this alone constitutes a great advantage in the work of suppression of the disease.

THE TUBERCULIN TEST

The tuberculin test should therefore be considered as a very important step in the eradication of tuberculosis. As a matter of fact all the recognized authorities on the subject are agreed on this point. Once the tuberculous animals are recognized, consideration must be given to the most suitable and economical way of eradicating the disease from the herd. This naturally brings up the question of the disposition of the tuberculous animals, and in adopting any particular method one should be guided by the extent of the infection in the herd, the condition of the affected animals, the sanitary qualities of the premises, and last but not least, the owner's intelligence and knowledge of the subject. The latter information is necessary to determine if reliance can be placed on the owner to carry out minutely all the details which are essential in executing any particular method of eradication that may be decided upon.

The owner's cooperation in this work is without doubt a very essential feature of this great task. For this reason a campaign of education of the farmers and stock raisers relative to the control of tuberculosis in which all the advantages of the eradication of tuberculosis must be impressed on them, would greatly facilitate this important campaign. It is a well known fact that any voluntary method of suppression by the herd owners themselves would bring about better and quicker results than when compulsory measures are enforced upon them by legislative enactments. Nevertheless the time has arrived when a campaign looking towards the control of this disease should be entered upon by the general government as well as the state and province. This campaign must reach in the first place all the clinical pulmonary forms of tuberculosis; then tuberculosis of the udder, intestines and uterus.

THE BANG SYSTEM EXPLAINED

Having removed these exceedingly dangerous cases the balance of the tuberculous herd may be treated by the Bang system, which consists of

*One of the greatest problems facing cattle breeders today and especially breeders of dairy cattle, is the form tuberculosis attack. Stockmen generally should be informed from the report of the International Commission on the Control of Bovine Tuberculosis have already been published in Farm and Dairy. Copies of the complete report have been printed by the Commission of Conservation for the Dominion.

the establishment of two herds of cattle, one containing the animals which react to tuberculin, and the other those that proved to be healthy. Each class of cattle is kept entirely separate from the other, in different stables when possible, and under the care of separate attendants, using separate utensils. The calves born of the diseased cows are removed from their mothers at birth and placed in the stable with the healthy animals where they are reared upon the milk of healthy cows or upon other milk which has been properly pasteurized. In this way the healthy portion of the herd constantly increases while the diseased

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animals are disposed of as rapidly as may be deemed necessary until finally all of them are gone and the remaining herd is composed entirely of healthy cattle. The tuberculin test is applied to the healthy herd at regular intervals, annually or semi-annually, in order to detect any cases of latent tuberculosis or recent infection which may appear.

OSTERTAG'S METHOD

A modification of the Bang system is Ostertag's method of suppressing tuberculosis. This system demands only a clinical examination of the original herd with the elimination of all open cases of tuberculosis. The calves from the remaining cows are immediately removed and brought up on pasteurized milk in the same manner as in the Bang system and a new herd is thus established from the young stock. Healthy nurse cows could be used for these calves instead of feeding them on pasteurized milk. The tuberculin test is applied to this new herd at stated intervals in order that any cases of tuberculosis which may develop therein may be discovered promptly.

Neither of these systems, however, has met with much favor in this country as it required a considerable length of time and care to create a herd free from tuberculosis by either of them. Nevertheless the inauguration of Bang's or Ostertag's method in herds of valuable animals whether they be dairy or beef breeds is unquestionably of an economic value and in such cases either of these systems should be encouraged. On the other hand, in ordinary beef or dairy herds the practice of Bang's or Ostertag's method in this country has not met with much encouragement, owing to the extraordinary supervision, time and labor as well as the loss of market milk from the reacting cows which it involves.

In such herds the best ultimate results have thus far been obtained by the obligatory disposal of all the clinically affected cows and giving the dairymen the alternative either to pasteurize the milk from the remainder of his herd, or to be forced to refrain from selling the raw milk from the infected herd at all. In case he adopts the former method the herd composed of diseased and healthy cattle should be placed in quarantine under the supervision of sanitary authorities, and no sales should be permitted from the herd excepting for immediate slaughter. The alternative method will compel him to dispose of his tuberculous animals in case he refuses to pasteurize the milk. The suppression of tuberculosis could be greatly facilitated and the cooperation of many of the herd owners could be gained by a provision by which a certain percentage of indemnity could at least for a term of years be paid for the condemned animals. The scale for such an indemnity should be arranged in accordance with the final disposition of the carcass under competent inspection.

THE MANCHESTER SYSTEM

Another method of eradication should receive serious consideration as being of value in some localities. This is known as the Manchester system which is either the Ostertag or Bang system applied to localized areas or even individual farms, from which centres the work progresses to surrounding or neighboring districts and farms. Inasmuch as the animals affected with clinical tuberculosis are the greatest sources of danger in the dissemination of the disease, compulsory reporting of such cases should be inaugurated by the state, as is now done in many places in the control of human tuberculosis. Mandatory reporting of these cases and their prompt slaughter are very essential, as only by the elimination of these exceptionally dangerous cases can it be hoped to take up all the other details by which a successful control of bovine tuberculosis may be accomplished.

Having regard to the disposition of pure bred cattle, or valuable animals kept for either breeding or dairy purposes, we strongly recommend a system requiring the removal of all clinical tuberculous animals from the herd, the segregation of all calves from the remaining cows in order to establish a new, clean herd, the use of tuberculin tested nurse cows or pasteurized milk for these calves, and the periodic application of tuberculin to this newly established herd, as the only thoroughly reliable one.—(Signed) W. C. Edwards, Chairman, John R. Mohler, Frederick Torrance.