

In carrying out inspection of dairy cows a careful clinical examination is made, special attention being devoted to the udder and its adjacent lymph-glands in order to detect any clinical indications of tubercular disease. Any cows showing clinical symptoms are at once condemned and slaughtered. But we do not trust entirely to a clinical examination. The additional precaution is taken to apply the tuberculin test to all cows whose appearance or condition raises the slightest doubt in the mind of the Inspector. Further, samples (about 1 pint) are taken from the mixed milk of individual herds and sent to the Wallaceville Laboratory for bacteriological and biological examination. The results of these laboratory examinations have, I must confess, rather pleasantly surprised me, for up to the present time we have been unable to detect the presence of the specific organism of tuberculosis in any one of them. For instance, from Dunedin eighty-one such samples were sent (five arrived broken and were useless), and every one examined proved free from infection, so far as could be ascertained. The *modus operandi* is to centrifugalize the milk, then pipette up that from the bottoms of the tubes, mix, centrifugalize again, then inoculate two guinea-pigs with the material pipetted from the bottoms of the tubes. In some cases a third centrifugalization is carried out. The guinea-pigs are inoculated intraperitoneally, and are killed and examined *post mortem* after an interval of about eight weeks. I do not pretend to say that the results of this method of milk-examination are always absolutely conclusive, but I do assert that they afford a valuable guide, and that when they are negative it can be accepted as a fact that the danger to human consumers of the milk is at any rate not serious.

As a result of clinical examination and the application of the tuberculin test there were condemned during last year from the Auckland supply thirty-six cows out of a total of 5,500; Wellington, ninety out of a total of 4,850; Christchurch, fifty out of a total of 5,380; and Dunedin, fifty-five out of a total of 2,407. In addition, owners of dairy herds were encouraged to voluntarily submit their herds to the test, and a number came under it, the average result not showing a large percentage affected. For instance, in the Wellington District, between May and November, 1911, 832 dairy cows were tested (many of these being suspected animals). Of these, forty-five or 5·4 per cent. reacted. It has been often suggested that all cows whose milk is directly used for human consumption should be compulsorily subjected to this test. I fully realize that if this were possible it would have the effect of ensuring an ideally clean milk-supply, so far as tubercular infection is concerned; but experience has shown that it would be most inexpedient to attempt it, and as I believe all those present understand the practical difficulties which are certain to arise were any attempt made to enforce it I will not occupy time by speaking further upon the point.

As it is, the methods now in operation do afford at least a very considerable degree of protection to consumers; and, as I have already stated, they compare, I believe, more than favourably with those in force in any other country in the world. In Great Britain, for instance, the percentage of tubercular cows in the herds is very much higher than here; yet in the City of Manchester, where during a visit to England in 1908 I was able to go carefully into the system of dairy-cow inspection in force, and which has one of the best systems of milk-inspection in the country, the work done does not in any way compare with that being done in New Zealand, so far as the elimination of dangerous cows from the herds is concerned. The following extract from the official report for 1907 of the Medical Officer of Health illustrates this when compared with the work done here in the condemnation of tubercular cows, as shown by the figures already given by me:—

“From returns supplied, chiefly by farmers themselves, the estimated number of cows at the 542 farms from which the milk was subjected to examination was 12,918, being an average of nearly twenty-four cows per farm. During the year the udders of 2,855 cows at the country farms have been examined for tuberculosis. Of the milk tested by Professor Delepine from 542 farms, forty-two were found to cause tuberculosis, giving a percentage of 7·7 farms sending tuberculous milk.

“As a result of following up the tuberculous mixed samples, thirty cows were found and proved to be suffering from tuberculosis of the udder; twenty-one of these cows were either slaughtered in my presence, or I examined the carcasses soon after. In eight cases the entire carcass was found to be fit for food, in three instances half the carcass was passed, and in the remaining ten cases the entire carcass was condemned; in the remaining nine cases the disposal of the cows could not always be ascertained, although in three of these cases the farmers replied to the letters of inquiry, giving the names of the persons to whom the cows had been sold, but when these buyers were written to no reply was forthcoming, so that it is difficult to say what became of these cows.”

That was five years since. At the present time the weeding-out of cows suffering from mammary tuberculosis is still going on, at an average rate of about thirty-six cows per annum. In the 1911 report on the health of the City of Manchester, the Corporation's Veterinary Inspector, Mr. J. W. Brittlebank, M.R.C.V.S., D.V.S.M., states,—

“It has been further stated that the main result of our operations is simply to remove the cows to other and unprotected areas. This no doubt does happen in some cases, but in so far as our own area is concerned every one of the forty-six cows found suffering from tuberculosis of the udder was slaughtered, and the carcass inspected by me as to its fitness for food either at the time of slaughter or shortly afterwards. Of these forty-six carcasses, thirty-three were condemned as unfit for food, nine were passed, and in four cases part of the carcass only was passed. Thus in the past two years seventy-one cows were discovered, and every one slaughtered.”

It should be noted that the population of Manchester is 637,520, or approximately 58·60 per cent. of the whole population of this Dominion. In Manchester approximately thirty-six tubercular cows per annum are condemned and slaughtered. In New Zealand, with less than double