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J Shilkin

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REMARKABLE SUCCESS OF BOVINE T.B. ERADICATION CAMPAIGN

Less than 20 years ago Perth dairy herds had the highest T.B. incidence of any Australian capital city and half of the Kalgoorlie cattle had the disease. Why this was so and how the eradication campaign has reduced the incidence of less than 0.3 per cent. in 128,000 cattle is discussed in this article.

By J. SHILKIN, B.V.Sc, H.D.A., Assistant Chief Veterinary Surgeon

FOR many years before 1946 dairy herd inspections had been carried out by the Department of Agriculture and animals obviously affected with T.B. were destroyed and compensation paid. In some cases testing of individual herds was carried out but only on a very limited scale.

In the light of present knowledge the inspections could not have been expected to achieve very much because for every animal which was obviously infected there could easily have been 100 or more affected without showing any symptoms at all.

However, the improvement in the efficiency of the diagnostic tests enabled more positive steps to be taken and in 1946 amendments to the Milk Act provided for the compulsory testing of all whole milk herds in the State and for compensation to be paid for affected animals.

That such action was fully justified was shown by the number of cases of bovine T.B. in children in the Perth and Kalgoorlie areas particularly. These cases necessitated a special ward at the Childrens Hospital.

There was a marked shortage of veterinarians in Australia at that time and several officers were recruited in the United Kingdom primarily for the purpose of undertaking the testing.

Compulsory tests got under way in 1947, and the metropolitan area was the first to be brought into the scheme. The incidence in the local herds was very high—in fact considerably higher than in any of the other capital cities of Australia. Just under half of the cattle in these herds were affected, while in Kalgoorlie 50 per cent. of the cattle were found to have the disease.

Because at that time the bulk of the milk from those herds was being consumed in the raw state it was little wonder that a considerable number of cases of tuberculosis occurring in children were of the bovine type.

However, it should not be assumed from this that every cow with T.B. excretes tubercle bacilli in the milk. Only a very...
More than 128,000 cattle were tested in the past 12 months for an overall incidence of less than 0.3 per cent.

small proportion would be dangerous in this way, but under the circumstances existing at the time the bulk of the milk coming from these dairies would probably have contained tubercle organisms.

Following the disposal of reacting animals and the short interval retesting of herds until they were free from the disease, the number of new cases in children rapidly declined until within only a few years the necessity for the special ward at the Childrens Hospital ceased to exist, while the incidence of the disease in children in the Kalgoorlie district was also reduced to negligible proportions, once testing was undertaken there.

The expansion of the metropolitan area after the War and the consequent closing down or removal of many of the metropolitan dairies, together with the subsequent introduction of pasteurisation of milk supplies generally, also played a part in the reduction of the bovine disease in humans.

Apart from considerations of human health however, the disease was responsible for considerable economic loss in cattle. With testing reduction in condemnations at abattoirs because of T.B. was quite marked and was further reduced later as a result of the extension of testing to country areas.

I have been asked from time to time why the incidence of T.B. in the metropolitan and Kalgoorlie areas was so high. Although there is no reliable information available to account for this situation, I feel sure that the introduction of cattle from the Eastern States during the early days of the Colony at a time when no veterinary services were in existence, and there were consequently no quarantine restrictions, was primarily responsible. It would seem very likely that either there would have been a definite temptation to unload cull cows on the new colony or that unwittingly some bad cases were introduced at that time. It is quite possible for animals in very good condition, particularly if well fed, to be badly affected with the disease.

Most of the cattle introduced would have been located in the metropolitan area because of the lack of development elsewhere, and with the conditions of dairying in the metropolitan area from that time on the disease would have become well established. The weekly market at Subiaco flourished for many years, and this was the main source of replacement for both metropolitan and Kalgoorlie herds. It is easy therefore to understand how the disease spread to, and within these areas.

In 1958 the testing was handed over to private veterinary practitioners wherever possible. The purpose of this was two-fold. Firstly to enable the small staff of Departmental veterinarians to undertake the type of work that was properly their function, and secondly to provide some encouragement for the establishment of private practitioner services in country districts. At this stage other States had been using private practitioners for routine T.B. testing for some time, and the new arrangements in this State helped a good deal in the establishment of private practitioners, particularly in the South-West.

The cost of testing in W.A. is borne by the compensation funds under the various acts, and there is no direct charge to the farmer for testing.

The testing of whole milk herds has continued at regular intervals since 1947, and although reactors are still found, the incidence is now very low, only 0.31 per cent. in nearly 17,000 head of cattle tested.
Progress of eradication in whole milk herds

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle Tested</th>
<th>Reactors Revealed</th>
<th>Percentage of Reactors</th>
<th>Compensation Paid</th>
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<tbody>
<tr>
<td>1947-48</td>
<td>12,889</td>
<td>2,964</td>
<td>23.00</td>
<td>£48,740</td>
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<tr>
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<td>23,066</td>
<td>2,725</td>
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<td>16,612</td>
<td>546</td>
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<tr>
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<td>25,758</td>
<td>740</td>
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<tr>
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<td>378</td>
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<td>222</td>
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<td>232</td>
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<td>1963-64</td>
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</table>

in the last 12 months. The number of whom milk herds under regular test is approximately 680.

In 1960 it was decided to extend the eradication scheme to butterfat herds and the Dairy Cattle Industry Compensation Act was passed in that year. Testing started in the latter half of 1961, and a regular routine of testing was quickly established. Under this Act approximately 1,700 herds are under test and the incidence of reactors was only 0.33 per cent. in more than 48,000 head of cattle tested during the past 12 months.

Because many dairy and beef cattle were running together, and because it was also known that there was a fairly high incidence of T.B. in some beef herds, it was a logical development to extend the testing to beef cattle, particularly in the South-West areas. The Beef Cattle Industry Compensation Act was passed at the end of 1963, and testing of beef cattle started late last year. The general incidence has been low as was considered likely, but some herds have had quite large numbers of reactors. The testing of beef herds presents more difficulties than the dairy herds, because beef cattle are not always so easy to handle, and many farmers have inadequate or no facilities. The distances between herds in

some areas also create problems for the veterinarian. Despite these factors testing is proceeding satisfactorily and to the 30th June a total of 63,332 cattle in 586 herds had been tested for an incidence of 0.26 per cent.

The overall incidence in the total of more than 128,000 head of cattle tested during the last 12 months period was therefore just under 0.3 per cent.

The progressive T.B. eradication programme has had two important effects. Firstly it has materially assisted in reducing the public health hazard among children, particularly at a time when the risk was considerable, and secondly it has reduced the economic loss resulting from the condemnation of cattle at abattoirs.

There is however an additional advantage which may be of considerable importance in the future. Countries which import our foodstuffs are becoming increasingly inclined to specify conditions relating to hygiene and freedom from disease as has already happened with meat. Should these requirements be extended to dairy products—and this appears to be quite a possibility in the foreseeable future—we will be in a much more favourable position to meet their requirements because of the eradication programmes already undertaken.
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