Bovine tuberculosis control in Western Australia: past, present and future

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BOVINE TUBERCULOSIS CONTROL IN WESTERN AUSTRALIA—past, present and future

By M. R. GARDINER, Chief, Animal Division

TWENTY YEARS AGO, tuberculosis was a widespread and serious disease in the dairy cattle of Western Australia. Besides having a marked depressing effect on the economy of the dairying industry, bovine tuberculosis was a constant hazard to humans coming in contact with it.

Today the situation has changed radically. The present control of bovine tuberculosis in the South-West Land Division and eastwards to Esperance can be regarded as a major achievement of the veterinary profession.

The successful control programme was based on:

• A highly accurate diagnostic test (intradermal tuberculin test) made it possible to identify the great majority of infected animals.
• A series of Compensation Acts allowed infected cattle to be removed without financial strain to owners, and
• A testing contract scheme assured private veterinary practitioners a specified number of cattle to be tested annually in specified areas.

The Compensation Funds were supported by levies, first on milk and later on slaughtered animals, with equal contributions by the State Government. The present Cattle Industry Compensation Fund Act is an amalgamation of the Dairy Cattle and the Beef Cattle Compensation Acts and certain aspects of the Milk Act. It ensures farmers a fair compensation for cattle that may have to be removed for slaughter as positive reactors to the tuberculin test.

An indication of the progress made in controlling bovine tuberculosis is seen in the annual incidence of disease during the last 10 years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of cattle tested</th>
<th>No. of reactors</th>
<th>% Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1958/59</td>
<td>18,469</td>
<td>147</td>
<td>0.74</td>
</tr>
<tr>
<td>1959/60</td>
<td>18,800</td>
<td>118</td>
<td>0.62</td>
</tr>
<tr>
<td>1960/61</td>
<td>22,554</td>
<td>136</td>
<td>0.60</td>
</tr>
<tr>
<td>1961/62</td>
<td>98,383</td>
<td>765</td>
<td>0.80</td>
</tr>
<tr>
<td>1962/63</td>
<td>71,864</td>
<td>420</td>
<td>0.59</td>
</tr>
<tr>
<td>1963/64</td>
<td>55,961</td>
<td>325</td>
<td>0.58</td>
</tr>
<tr>
<td>1964/65</td>
<td>128,598</td>
<td>379</td>
<td>0.30</td>
</tr>
<tr>
<td>1965/66</td>
<td>114,639</td>
<td>236</td>
<td>0.21</td>
</tr>
<tr>
<td>1966/67</td>
<td>134,764</td>
<td>205</td>
<td>0.15</td>
</tr>
<tr>
<td>1967/68</td>
<td>183,596</td>
<td>174</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Until August, 1961, most of the cattle were tested under the authority of the Milk Act although some herds were tested independently by Government veterinary officers. On August 1 of that year, the Dairy Cattle Industry Compensation Act brought the butterfat areas into the tuberculin testing scheme for the first time. The rise in incidence during the financial year 1961-62 was due to this widespread testing of previously untested cattle. The
actual incidence of positive reactors in that year in the butterfat areas was 0.86 per cent. and in the wholemilk areas, 0.56 per cent.

On July 1, 1964, the Beef Cattle Industry Compensation Act was introduced and in 1964–65, cattle were tested under the three separate authorities. The marked decline in positive reactors in that year reflected the generally lower incidence of tuberculosis in the 68,332 beef cattle tested.

In February 1966, the Dairy Cattle and Beef Cattle Compensation Acts, and the relevant section of the Milk Act, were repealed and were replaced by an amalgamated Cattle Industry Compensation Act. This now operates as the sole testing authority.

Although tuberculin testing was compulsory, not every herd was included in the scheme and many herds under test were tested only at irregular intervals. It was difficult for practitioners to locate all cattle herds, particularly the small ones, while the regular testing of herds was hard to achieve unless and until really effective Government/practitioner co-ordination was achieved.

Even so, the great majority of herds tested in these years have had no reactors although in every year a few herds have had many reactors to the tuberculin test. Thus in 1967–68, a large herd at Keysbrook had a 12 per cent. incidence of infection and more than half the 42 reactor cattle were generalised cases.

It is obvious that such herds are tremendously dangerous to other cattle properties, if individual infected animals are dispersed by sale or other movement.

In spite of the good control so far achieved in this State, there has been no possibility or thought of eradicating the disease by the measures used up to 1967. At best only a maintenance of a low level of infection with sporadic outbreaks of disease on individual farms could be expected.

A new impetus was given to the idea of eradication of bovine tuberculosis in Australia with the formation of the National Committee for the Eradication of Bovine Tuberculosis and Brucellosis in 1967. Partly as a result of this all States have drawn up plans for eradication, and in some, the first stages have been initiated.

In Western Australia we are well placed to make rapid progress and the entry of tuberculosis cattle into the State can be totally prevented under the recently amended Stock Diseases Act regulations.

In 1967, the Department of Agriculture took its first steps towards tightening up its anti-tuberculosis programme. The supervision of testing work was decentralised and placed under District Veterinary Officers. This has facilitated the detection of all cattle herds, even the very small ones, and has made certain that all herds not only come under test but are subject to regular re-test every two years.

Before 1967–68, herds with very few reactors were not often re-tested at an early date, so that some cows incubating the disease at the time of testing went on to develop active tuberculosis and to spread the disease throughout that herd and in other herds they entered.

The present Department of Agriculture policy is that all herds that contain active cases of tuberculosis are re-tested at 60 day intervals until they are free of the disease. They are kept under quarantine until that time. Generally such herds which pass under Government control are retrated by Government Veterinary Officers until free.

Ideally, no herd should be regarded as completely free until it has passed two tests for tuberculosis at 60-day intervals. It is anticipated that an Accreditation Scheme will be introduced in the near future, based on individual properties or on Shires. When this happens, the movement of untested or positively reacting cattle onto such properties or into such Shires will be prohibited, and a rigid policy requiring two negative tests at 60-day intervals will be enforced.

Any herd with many reactors will be regarded as a problem herd, and even now is re-tested at frequent intervals until it can pass two tests, at a 60-day interval, with no reactors.

In 1967–68, 174 cattle reacted to the tuberculin test on farms while another 70 cattle were condemned for tuberculosis at country or metropolitan abattoirs. Thus more than a quarter of all known tuberculosis cattle were revealed only on abattoir inspection. In practically no case could these cattle be traced back to their...
farms of origin. Many of these farms must be escaping the tuberculin testing programme.

A modest effort inside abattoirs to co-ordinate the identification of such cattle with a trace-back system will give enormous dividends at relatively low cost.

A successful tail-tagging system has been devised in Western Australia and is expected to be brought into use by regulation about the end of this year. By this system, a tuberculous animal may be immediately traced back to its property of origin so that action can be taken at the source to eliminate the disease.

Already all pigs over 10 weeks of age require body tattooing and if, in the abattoir, they reveal tuberculosis, their properties of origin can be identified at once and remedial action taken. The pig is an important reservoir of bovine tuberculosis.

Active eradication of tuberculosis will first be undertaken in the ways described above in the South West and agricultural areas. It will be far more difficult to achieve eradication in pastoral areas such as the Kimberleys. We are usually able to identify by brands the stations of origin of cattle revealed as tuberculous by the meat inspectors. Last year 40 cases of generalised tuberculosis, originating from 15 Kimberley stations, were reported in the northern meatworks.

We hope, however, that tuberculin testing of Kimberley cattle will be initiated as soon as certain practical difficulties can be surmounted, probably within the next two or three years.

The overall objective is to eradicate bovine tuberculosis in the agricultural districts by 1973 and in the Kimberleys and other pastoral areas as soon thereafter as possible.
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"Who does the yielding?"
"Both do! Wheat yields more bushels to the acre and weeds can't survive with Linuron 50. They yield completely."

"I like that!"
"My bigger wheat crop more than covers the extra cost of Linuron 50 over hormone sprays. So I get a bigger profit."

"I like that, too."
"I like the ease of it. Simply sow the wheat . . . and when the weeds emerge you spray with Linuron 50. No more weeds to compete with young wheat for moisture and fertiliser. Linuron 50 controls weeds hormones can't touch. For barley and oats, too—spray Linuron 50."

"Hope I'll be as good as Linuron when I'm fifty."

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