

TUBERCULOSIS CASE REPORTS: M. Bovis Infections tested clear

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INTRODUCTION:

Since 1978 I have been involved with investigating a number of tuberculin reactor situations in the Mid & South Canterbury areas. Initially this work was undertaken as a Veterinary Officer in the Animal Health Division and some of this work has been reported at earlier Deer Courses (Beatson & Hutton, 1981; Beatson et al, 1984; Beatson, 1985). For the last eighteen months I have been working in general practice and have been involved further with dealing with deer herds with tuberculin reactors. The following is a brief outline of two herds that we have been working with in our practice and the approach that has been taken in each of the situations.

HERD ONE:

Background history

This herd started in deer farming in 1977 with deer captured from the surrounding bush. There had been a slow build-up in deer numbers with capturing and natural increases. Also, a small number of deer were purchased from existing deer herds. There had been no tuberculin testing undertaken prior to one stag dying in April 1984. This stag had not been seen to show any clinical signs of disease before death and the owner thought that it had died from Malignant Catarrhal Fever. Fortunately the dead animal was presented for necropsy and this revealed extensive lesions in the thoracic cavity consistent with tuberculosis. This was later confirmed on histology and culture to be caused by Mycobacterium bovis.

On traceback it was established that this stag had been purchased in 1980 from a known Tb infected herd and although it had been tested prior to purchase it had not been tested again. Immediate arrangements were made to test the whole herd and table 1 is a summary of the tuberculin testing that has been carried out. When testing commenced the herd was made up of 53 adult stags, 47 adults hinds and 43 weaner calves.

TABLE 1

<u>DATE TESTED</u>	<u>TOTAL TESTED</u>	<u>REACTORS</u>	<u>TUBERCULOUS</u>	<u>NGL</u>
25.6.84	143	4	3	1
18.2.85	83	8	2	6
27.6.85	174	0	0	0
29.8.85	166	0	0	0
23.12.85	34	0	0	0

DISCUSSION:

There are a number of points to note with the testing of this herd.

1. The stag only had direct contact with the other adult stags in the herd.
2. At no time have there been any reactors in the hind group.
3. Careful investigation of the herd history left little doubt that the infection source was the purchased stag.

Keeping these points in mind, attention was directed toward the stag group. This included selected slaughter of deer purchased from the same source as the original infected stag and more testing of the stag group. At this point it must be accepted that it is still too early to be totally confident of success, but the results of testing so far have given us some reason for continuing with the original plan. A further whole herd test is due later in June 1986.

HERD TWO

Background history

This herd was also established by capturing deer from the surrounding bush area and in the early years before his numbers were big enough to farm them on their own the owner had an agistment arrangement with the owner of herd one! As soon as it was found that herd one had Tb, attention was given to establishing the history of herd two considering their common origin. At the time of the first test the herd consisted of 8 adult stags, 10 adult hinds, 6 weaner stags and 4 weaner hinds. Table 2 is a summary of the testing that has been carried out.

TABLE 2:

<u>DATE TESTED</u>	<u>TOTAL TESTED</u>	<u>REACTORS</u>	<u>TUBERCULOUS</u>	<u>NGL</u>
2.8.84	28	14*	2	1
3.9.84	20 CCT	0**	0	4
27.6.85	24	0	0	0
29.8.85	24	0	0	0
28.2.86	40 CCT	0	0	0

* not all reactors were slaughtered, these three were the only adult stags that reacted.

** the whole herd was subjected to a CCT and this included all of the remaining reactors, four of these were then slaughtered.

DISCUSSION

This herd represents one of the more difficult situations where the testing Veterinarian is presented with a mixture of bovine Tb and

non-specificity. Although it would seem that a tremendous risk was taken initially this was not taken lightly and no economic considerations influenced the decisions made in approaching the problem. Following careful and thorough investigations it was established that there was a clear link between the stag reactors and those in herd one so these were immediately slaughtered. At the same time it was decided to remove all of the non reactor adult stags and these were sent to slaughter with no lesions found. It was also seen that no contact had been made between this stag group and the hinds and because of this and other evidence, consideration was given to the use of the CCT.

Although the CCT was carried out at an interval of only 32 days, it was a valid test at the time (we know that this should have been done at 90 days and hence the reason to retest using the CCT on 28.2.86. Despite getting the "clear" test on 3.8.84, a selection of deer were slaughtered (these all having been "reactors" to the primary test 2.8.84). These proved to be negative to gross, histological and culture examinations for bovine tuberculosis and gave us some confidence to hold the remaining "reactors" in isolation until further testing could be undertaken.

Subsequent testing has shown on the basis of the tuberculin test that these deer have remained test negative and hopefully are in fact "Tb free". The herd is due to be retested again in June 1986.

SUMMARY

When the testing Veterinarian is confronted with "reactors" in a deer herd, he/she must use all the skills available in resolving the situation for the client. This is nothing new as he/she is doing similar work when giving advice to the client in every day situations. What is new to some of us is the disease tuberculosis. However, we now have some excellent guidelines and other sources of information on which to base our investigations and I strongly urge all Veterinarians to make themselves familiar with these if they have not already done so. In the investigation I personally place a lot of emphasis on history and cannot stress this point too strongly. We must be prepared to spend considerable time and effort in this initial stage so that an adequate plan can be formulated to approach the problem with.

The two case reports that I have outlined illustrate to some extent how this approach can be put into practice. They show how each herd is different despite apparently common origins. This difference between herds is most important to remember when conducting your investigation as no two situations will be the same. The current Tb guidelines are just that: "guidelines", and do not replace your own ability and knowledge of the situation. In herd one the owner was keen to salvage as many of his stags as he could (in contrast herd two was able to slaughter the cohort group immediately). This did not mean that we did not have a plan to cull some of the stags from herd one, and this was carried out. Had we been unsuccessful in testing the stag group clear, then an option would have been to slaughter this group and protect the more valuable hind herd which had shown no signs of infection to date.

Finally, I would like to reinforce my comments by urging all Veterinarians to take a professional approach to their tuberculin testing and not to regard it as just another job! We have been given an excellent opportunity to use our hard earned knowledge and skills in this field and the opportunity must not be lost through a lack of appreciation by our profession.

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