

**WIDESPREAD TB (M. BOVIS) INFECTION WITHIN
A LARGE RED DEER HERD**

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INTRODUCTION:

When asked to present a TB case report I considered this case would be worth description, as it involved a large herd in which the infection became widespread. Although of catastrophic proportions I consider the sequence of events shows that in some situations, there may be some hope of progress for those farmers who find themselves with a widespread T.B infection within their herd.

HISTORY:

I performed the first whole herd test on this herd in April 1982. Apparently all deer had been TB tested prior to settlement on this property. It is known that 1 reactor was found in one group and obviously not accepted. The remaining in-contacts were accepted. Deer had originated from both North and South Islands. Some were helicopter caught, and some farm reared, but all I believe were farmed for some time prior to arrival.

The herd was farmed as a partnership which we shall call A & B on an area of about 30 hectares, stocked initially with about 200 Deer.

SEQUENCE OF EVENTS:

Whole Herd Test 5/4/82 196 Clear Test
This test was carried out shortly after arrival.

14/3/83	20	Sale Test	Clear
18/3/83	14	Sale Test	Clear
08/8/83	14	Sale Test	1 Reactor (MA Hind)

The remaining 13 were sold as it was believed the reactor was unlikely to be tuberculous (these 13 have since had many tests with no reactors).

Autopsy - MAF - NVL (No visible lesions)

A selection of nodes were sampled

M. bovis - Grown after 4 weeks culture.

13/10/83 54 tested 1 reactor
Autopsy MAF NVL No culture attempted.

16/3/84 72 tested Clear

11/4/84 MA hind lost condition and was found dead.

Autopsy - All mesenteric Lns' were greatly enlarged. Many abscessed with 'cording' to bowel and discharging directly into Lumen. Lungs and pleural surface were involved with many small abscesses throughout the lung and the beginnings of pleural adhesions. Mediastinal Lns' oedematous. This animal had been scouring.

<u>ZN Smear</u>	-	Acid fast positive
<u>M. bovis</u>	-	Grew after 4 weeks

At this stage we knew we had a problem, and 'hoped' this was the only culprit. From about the beginning of 1984 some degree of mob isolation was discussed and attempted. However, cross grazing did occur. Once I had seen the autopsy of the MA hind described previously we considered a 60 day test program, commencing at the end of the rut. This was carried out in an attempt to pick up all new infections.

24/5/84	20 hinds	Sale Test	Clear
15/6/84	200 tested		12 hinds reacted
17/8/84	320 tested whole herd		2 reactors MA Hind Stag

At this stage we were optimistic and thought maybe the infection was under control. A & B had already decided to split their partnership and go their separate ways. My recommendation was that both resulting herds be grouped in as small as possible mobs and not mixed. To the best of my knowledge this was carried out although inevitably some cross grazing and fence contact occurred.

A Retained approximately 200 Deer and remained on the original farm.

12/10/84	Whole herd test 200	8 reactors	7 hinds 1 stag
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No further testing was carried out over the calving period. Between 20/9/84 and 23/1/85, 50 18-mth-old dairy heifers were rotationally grazed behind a mob of approximately 60 yearling hinds (these had been clear tested as weaners). These heifers were moved into paddocks sometimes the day after the deer were moved out.

On 14/1/85, one un-thrifty yearling deer was removed from this mob - she was scouring and treated for yersiniosis and I believe kept separate. Euthanasia was carried out as scouring persisted. M. bovis was cultured from a gut lesion.

1/2/85	70 (including 60 yearlings) tested	60 reacted (56 yearlings)
14/2/85	50 heifers tested (2 had retropharyngeal LN lesions)	4 reacted
27/2/85	95 deer tested	11 reactors (1 2-yr-old 8 MA 2 WRNS)
28/2/85	102 tested	21 reactors (4 WRNS 3 2-yr-olds 14 MA)
15/4/85	43 tested	3 reactors MA hinds

By 17/6/85, all reactors had been slaughtered and most non-reactors sold.

17/6/85	41 tested	Sold
19/8/85	3 tested	Sold

3/10/85	33	Sharefarmer deer	Sold	Clear
10/10/85	8	Sharefarmer deer	Sold	Clear
Feb 86	8 stags, 2 reacted.			

Due to fawning, holidays, weaning and mating a decision was made not to whole herd test again till end of mating.

DISCUSSION:

No conclusion can yet be drawn. However, we can say:

- (1) Serious financial loss occurred. This loss goes deeper than merely the cost of hinds slaughtered.

Consider: (i) Farmers intention to breed up herd
(ii) 50/50 sex ratio at calving
(iii) 80% calving rate.

Then the production loss from approximately 50 hind reactors in the fifth year of farming, would be
118 hinds to stag (includes original 50)
36 hind fawns
104 stag fawns

- (2) We know we have reduced the TB reactor rate and presumably the M. bovis herd infection and farm contamination.
- (3) As B herd is still being farmed in groups, I hope by the time this case report is presented, I can say we had a whole herd clear test in 1986.

FINAL COMMENT:

It can be seen that in excess of 180 deer have been slaughtered between the A/B and A + B farming enterprises. Whether the path taken by A or by B was the correct way to approach this problem I do not know. Farmer A is not now on D.C.P notice, but has no deer. Farmer B is still on D.C.P. notice, but hopefully is close to a TB clear herd. What I do know is that TB test negative animals were sold from both these farms. It is unfortunate for the industry that legislation allowed this to happen and I only hope that all those negative TB test deer sold were truly negative.