

The Control of Ovine Brucellosis

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The Sheep Society has previously donated time to ovine brucellosis. Seminars in 1972, 1973 and 1974 discussed the significance, pathogenesis, diagnosis and control of the disease and a sub-committee comprising Professor Bruere, Dr. Quinlivan and Mr P. Marshall was formed in 1972 to investigate the importance of ovine brucellosis to the sheep industry and to report to members. This they did in 1973.

The conclusions of the sub-committee included:

- (a) That bovine brucellosis was a significant disease that warranted control. They emphasized that many people while commenting on *Br. ovis* as a cause of abortion in ewes and its fertility effects on mating rams have ignored the cost to the ram breeder and commercial farmer of culling rams infected with brucellosis.
- (b) The sub-committee also considered that a voluntary eradication scheme based on the manual and pathological examination of the ram's genitalia combined with the general use of the complement fixation test was feasible.

The proposal of the sub-committee was essentially as follows:—

Initial examination

All rams within the flock over the age of six months must be physically examined and bled for the complement fixation test on two occasions, no less than two months or more than five months apart. If nothing suggestive of infection with ovine brucellosis is found at either examination the flock can be considered to be free of ovine brucellosis.

Positive reactors

All positive rams found should be culled, except for rams known to have been recently vaccinated. However, flocks with vaccinated rams returning positive reactions to the CFT could *not* be registered as being free of ovine brucellosis, so these should be kept to a minimum.

The remainder of the flock should be retested at monthly intervals until a full negative test is achieved.

Suspicious reactors

Suspicious reactors to the CF test should be isolated and retested.

Maintenance examinations

Sires — annually all ram sires should be physically examined and subjected to the CF test for ovine brucellosis.

Ram hoggets — Annually all ram hoggets should be physically examined and any with lesions suggestive of brucellosis should be bled for the CF test.

Isolation of flocks

In applying to be put under test the owner has to declare that he will keep his flock separate from all other sheep and that he will not introduce any rams without giving his veterinarian prior notice. It is not intended

that these requirements should be unduly restrictive and every effort should be made to minimise any inconvenience they might cause.

Introduction of rams from other registered flocks

A ram from another registered flock should not constitute any danger unless there has been a breakdown in this flock. Normally no testing will be necessary.

Introduction of sheep from unregistered flocks

Rams introduced from any unregistered flock must be isolated for six weeks and then give a negative CF test before being allowed to mix with the remainder of the flock. This includes rams that have been leased out for use during the mating season.

Ewes may be capable of transmitting infection for several months after mating with infected rams. Ewes introduced from an unregistered flock should not be joined with the rams in a tested flock until at least six months after they were last mated in their flock of origin.

It may be that an owner wishes to use introduced sheep immediately. The dangers of this should be pointed out to him. However, it may be possible to join the introduced sheep with part of the flock if he is prepared to isolate the introduced sheep and those with which they are joined and to submit them to whatever tests might be necessary.

These proposals were sent to the N.Z.V.A. and the Ministry of Agriculture and Fisheries for comment. Neither party was immediately favourable to the proposal. The Ministry objections centred around two main points. The first was that the importance of the disease was not in their minds established. The second objection was one of priorities. They claimed that their facilities at that time (1973) were fully extended in the control of *Br. abortus* in cattle.

An official control scheme lapsed at that time but we and other veterinarians began applying the principles of the eradication scheme to many flocks. From this we have confirmed the Tasmanian experience that the scheme will eradicate the infection from a property with minimal ram wastage. Unfortunately time precludes a full discussion of our case records. Suffice to say that the complement fixation test has given remarkably consistent results. Our evidence for this is that repeated testing of flocks has consistently identified known vaccinated rams, a small proportion of which are present in some of the flocks we service.

Because of interest by ram breeders and possibly 'Norwesters' comments in the N.Z. Farmer, the Ministry are now processing an escalating number of serum samples for the complement fixation test. Approximately 34,000 serum samples from rams were tested last year. The Ministry is justifiably concerned that their money and resources should be used wisely and at present are examining the situation with a view to a possible official control scheme. They are still not convinced of the

economic significance of the disease but intend to obtain this information shortly. They are however in a position where *Br. abortus* eradication scheme is winding down releasing more facilities that could be used in a *Br ovis* control programme.

There are a number of possibilities for such a scheme but inevitably it would be similar to that outlined by the sub-committee. However such a scheme could be either voluntary (as envisaged by the sub-committee) or compulsory. From their experience with other voluntary disease control schemes such as manosidosis control the Ministry are more in favour of a compulsory eradication scheme providing them with greater overall control of the situation. If a compulsory eradication scheme is adopted then the role of the veterinarian may be in jeopardy.

The veterinarian should be the person who examines the rams, takes the blood samples and decides the appropriate action and this audience is fully aware of the disastrous situation that would result if he were not.

Therefore it is essential that the Sheep Society form a sub-committee to liaise with the Ministry of Agriculture and Fisheries and submit a formal proposal to ensure the veterinarian involvement in any scheme which evolves.

Further, all veterinarians should inform their clients, especially ram breeders, that such a scheme may eventuate and endeavour to eradicate the disease from more flocks using the voluntary scheme outlined. Only in situations of extreme risk should the use of *Br. ovis* vaccines be contemplated as the continued use of these will hinder any attempts at eradication.

In this day of preventive medicine, it would appear unrealistic to go on living with a disease for which there are some very useful control measures although we shall probably never be certain of the disease's significance from all economic aspects.

Eradication of ovine brucellosis would also assist in the export of stud sheep from New Zealand.