

# AN UNUSUAL ENZOOTIC ABORTION OUTBREAK

J. Earl

Banovallum Veterinary Group, Prospect Street, Horncastle, Lincs.

Approximately sixty ewes from a group of one hundred and sixty triplet bearing ewes in a well-managed lowland flock of 820 sheep suffered an abortion storm at the end of February 1998. A further ten ewes in separate groups also aborted. The flock was not a closed flock at that time, nor were the sheep vaccinated against either toxoplasmosis or enzootic abortion.

The ewes were all housed eight weeks before lambing at the beginning of January, and divided into groups according to the scanning results. There was no direct contact between groups of ewes carrying different numbers of lambs.

Laboratory investigation of several of the abortions revealed large numbers of chlamydia on the placentae, and enzootic abortion was diagnosed. All other cultures and serological tests returned negative results. E.A.E. had not previously occurred on the farm as far as was known.

The cause was therefore evident, but the question being asked was why was the storm just affecting the pen with the triplet bearing ewes? Logically, bearing in mind the epidemiology of E.A.E., sheep in other groups should also have contracted chlamydia the previous year, but in fact the other groups were barely affected.

A visit to look at the on-farm situation supplied three fresh pieces of information:

1. the triplet bearing ewes were all contained in a single large pen;
2. a few ewes were being treated for pregnancy toxæmia, two ewes having died. The shepherd believed that the ewes had lost excessive amounts of body condition since they were housed, despite the "usual" level of supplementary feeding. However, the stress of carrying triplets did not seem to be enough to explain the incidence of enzootic abortion.
3. the first abortion had occurred only a few days after housing, but the next had not been until five and a half weeks later. Therefore, the first abortion after housing could have infected other ewes, incubated and caused abortions this same year that the ewes were infected - this is unusual, but not unheard of, for enzootic abortion (Blewett *et al.*, 1982).

The first ewe would have contracted E.A.E. the previous year, and the ten ewes that aborted in other groups could have contracted the infection the same way. However, it is also conceivable that the infection could have been transmitted by fomites from the first ewe in the triplet pen to ewes in other pens.

The role, if any, of the pregnancy toxæmia in the outbreak is not fully understood. Flock nutrition had not been as good as expected and firstly might have contributed as a stress factor to the sheep being more susceptible to the infection as well as leading to twin lamb disease itself. One other possible role of

nutrition in this outbreak of E.A.E. is that of hunger - if the ewes were underfed, then perhaps many were eating straw bedding contaminated with infected uterine discharges, but this is speculative.

The treatment regime involved:

- (i) Isolation of ewes;
- (ii) No fostering of lambs on to affected ewes;
- (iii) Dietary improvement.

The possibility of treatment with oxytetracycline or tilmicosin was discussed, but because of the economic situation and some concerns about handling heavily pregnant ewes already thought to be in a delicate state, it was declined.

The flock is to be run as a closed flock from now on, vaccination against E.A.E. will be practised, and a maximum of forty ewes will be held in a single pen after housing.

### Reference

Blewett, D.A., Gisemba, F., Miller, J.K., Johnson, F.W.A. and Clarkson, M.J. (1982). Ovine Enzootic Abortion: The acquisition of infection and consequential abortion within a single lambing season. *Veterinary Record*, 111, 499-501