

Ovine abortion storms associated with *Chlamydophila pecorum*

A request for help from veterinary practitioners

Background

Over the past two seasons the Ministry for Primary Industries (MPI) has assisted with three South Island ovine abortion storm investigations in which histopathology, PCR testing, and immunohistochemistry point to the involvement of *Chlamydophila pecorum*. *C. pecorum* can be isolated from the digestive tract of clinically normal animals. Clinical manifestations reported worldwide include polyarthritides and keratoconjunctivitis in calves and lambs, and sporadic bovine encephalomyelitis (SBE) in calves. While *C. pecorum* has been recognised as a sporadic cause of abortion in sheep, goats and cattle overseas it has not previously been linked to abortion storms.

MPI wishes to work with veterinary practitioners and pathologists nationwide to determine if *C. pecorum* is an emerging cause of ovine abortion storms.

How have NZ cases presented?

- Hoggets (2 flocks), a combined mixed age / two-tooth flock (1 flock)
- Abortions commencing 5 – 7 weeks before planned start of lambing
- Generally well developed / fresh lambs
- No obvious gross pathology in lambs
- Grossly, some but not all placentas showed mild intercotyledonary thickening with pale white opaqueness
- Evidence of co-infection with Border Disease Virus (BDV or “Hairy Shaker”) (1 flock)
- On histology, lesions can be present in various tissues and the intercotyledonary placenta
- NOT a feature: retained placentas, sick or dead ewes

How will MPI help in the 2020 season?

Where commercial laboratory investigations have not arrived at a diagnosis for the usual aetiological agents (following submission of the full range of appropriate samples in accordance with commercial laboratory guidelines), or if requested by a pathologist based on histological evidence (and appropriate samples have been submitted) MPI will fund *C. pecorum* PCR at the commercial laboratory. If a case is

PCR positive MPI may fund immunohistochemistry at an overseas laboratory. BDV testing at the commercial lab may also be funded.

How can you help?

Veterinary practitioners can help by submitting a full range of appropriate samples, from at least two fresh foetuses, to your commercial laboratory for all abortion investigations. These should include:

- Fetal stomach contents (aseptically collected)
- Fetal blood or fluids (pleural or peritoneal)
- Fixed tissues (placenta, liver, lung, kidney, spleen, brain, heart)

This ensures that any cases fitting the MPI definition can be thoroughly worked-up. You do not need to do anything else, but if your case transpires to be *C. pecorum* positive, you will be contacted by MPI with a view to completing a questionnaire so that MPI can better understand flocks that are being affected.

Who decides which cases will be tested?

MPI and commercial laboratories will work together to select abortion submissions for further *C. pecorum* testing.

What will MPI do with this information?

Data from this year's abortions will be analysed, provided back to commercial laboratories and veterinary practitioners, and may be used to inform further studies.

Further Reading:

Williams S (2019). The challenges of an unusual abortion outbreak in a ewe flock. *Proceedings of the Society of Sheep and Beef Cattle Veterinarians of the New Zealand Veterinary Association*, pp 69-74.

