



Ovine Abortion Special

Welcome to this special edition with reports and a summary of our ovine abortion data from this year's lambing time (December 2020 to May 2021). Now is the time to start planning vaccination and biosecurity measures for next year.

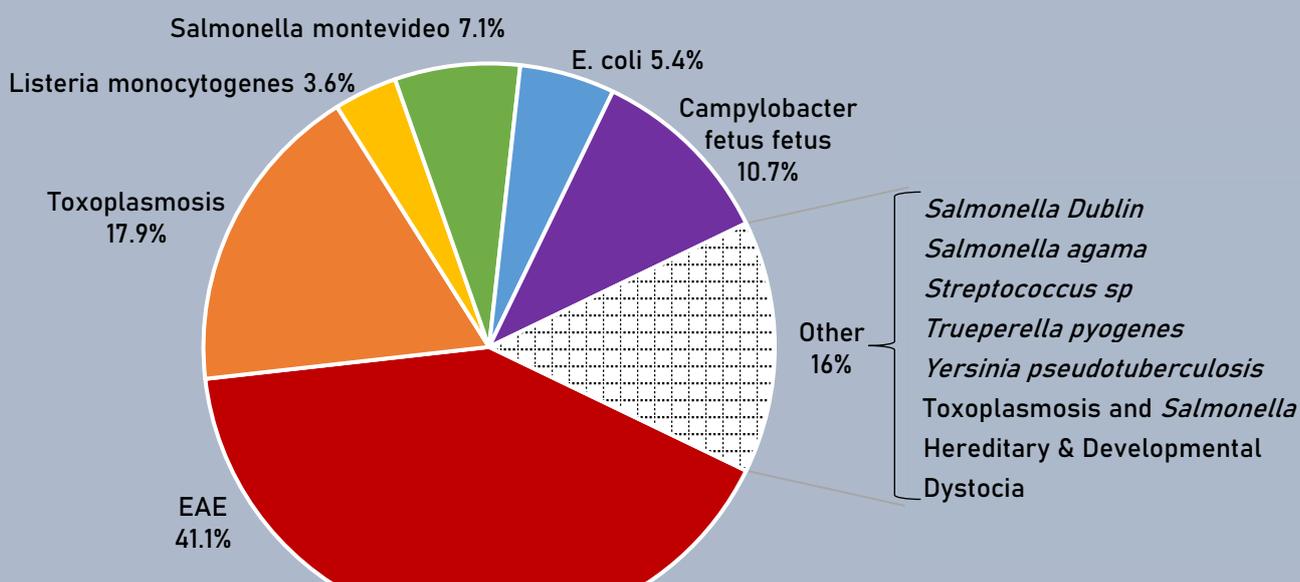


Figure 1. WVSC summary of ovine abortion diagnosis December 2020 to May 2021 (overall diagnosis rate: 63.6%)

Despite effective vaccines being available, Enzootic abortion (EAE) caused by *Chlamydia abortus* was the most common abortifacient at 41.1% of abortion submissions received. In common with previous years. This was followed by another disease which can be prevented by vaccine, toxoplasmosis (17.9%). Campylobacteriosis (10.7%) was the third most common diagnosis (Figure 2). Other bacterial infections made up a smaller percentage of positive diagnoses, some of these can be regarded as opportunist infections, for example listeriosis, where contamination of silage with *Listeria monocytogenes* can lead to abortion (3.6%). The source of the bacteria being soil contamination of the silage. Viral causes such as Border Disease, Bluetongue or Schmallenberg infection were not recorded by the WVSC this season. Border disease was recorded elsewhere in Wales but Bluetongue and Schmallenberg infection have not been recorded in Wales this season.

In 36.3% of ovine abortions submitted **no diagnosis** was reached. These include **non-infectious causes**, or

intercurrent diseases that impacted on the health of ewes carrying the foetus(es) to term.



Figure 2. Campylobacter lesions in a foetal liver

The most common non-infectious cause is pregnancy toxæmia, for which no data is recorded. Every lambing season, for housed ewes, the length of housing, quality of feed and husbandry will vary. This can impact on pregnancy toxæmia and vaginal prolapses and should be **monitored by observation and blood testing for BHB and calcium**.

Intercurrent disease such as the 'iceberg' diseases, ovine pulmonary adenocarcinoma (OPA) and Johne's disease can impact on pregnancy and cause late abortion, for which no direct abortion diagnosis is recorded. Again, **observation for thin ewes and monitoring by postmortem examination** will reduce the likelihood of these diseases impacting on lambing percentage. **Fasciolosis** is another disease linked to late abortion but has not been as prevalent in most flocks last autumn and winter, especially after treatment, recommended for late winter or after housing.

If ewe mortality is a feature of an abortion outbreak, it is advisable to submit a ewe carcase as well as abortion material to investigate potential underlying causes such as fasciolosis. Ewe mortality may also be a feature of some outbreaks of salmonellosis. Please phone to discuss if you are unsure.

Another important factor that has an impact on abortion diagnosis is **quality of samples submitted**. Severely autolysed or mummified foetuses are unlikely to provide a diagnosis. The submission of placenta (including cotyledons) is essential for the diagnosis of EAE. Also, contamination of foetal submissions by faeces and bedding will reduce the chances of a diagnosis. It would be better to wait and submit fresh samples with placenta in all instances to optimise the chances of diagnosis.

Salmonella Montevideo caused 22 ewes to abort on one farm in February. Ewes became transiently ill following abortion but then recovered. No pathognomonic lesions were seen in aborted lambs, but the *Salmonella* species was cultured from foetal stomach contents of five foetuses in two submissions four days apart. *S. Montevideo* is a potential zoonosis so strict hygiene for people handling infected animals was recommended as well as strict hygiene around the lambing shed.

S. Montevideo abortion was also diagnosed in twin foetuses from a 360-ewe flock, where five abortions occurred. Interestingly both twins also tested positive for toxoplasma infection. Standard advice was provided for both abortifacients.

Salmonella Agama caused 12 abortions in a 300-ewe flock in North Wales. It was cultured from foetal stomach contents of one foetus submitted. This salmonella serotype is often associated with badgers, but no information about the presence of badgers on this farm was forthcoming.

Salmonella Dublin abortion was diagnosed on one occasion in February in a 300-ewe housed flock. Three ewes aborted emphysematous lambs. This serotype is regarded as being host adapted to cattle, so close contact

with cattle was queried. Apparently 25 ewes were bought in before lambing and six were scanned as empty. This was another possible means of introduction of the organism.

Yersinia pseudotuberculosis was isolated in pure growth from the stomach contents of an aborted lamb in a flock where three ewes were reported to have aborted. It is an opportunist environmental organism which is known to cause disease in sheep. It may cause single abortions and is occasionally associated with abortion storms. *Y. pseudotuberculosis* may be carried in the intestinal tracts of many domestic and wild animals and birds including clinically normal sheep. It can also cause enterocolitis in lambs, usually under one year of age. **Predisposing factors include heavy environmental contamination, inclement weather, poor nutrition, changes in diet and management procedures.**

Many of the common causes of abortion in sheep including *Chlamydia abortus*, toxoplasma (Figure 3), *Campylobacter sp.* and *Listeria monocytogenes* are recognised **zoonotic** agents. Similarly, *Y. pseudotuberculosis* should also be regarded as a potential zoonosis.



Fig 3. Toxoplasma lesions on aborted sheep placenta.

COMING SOON: New tests available at the WVSC
We have been working behind the scenes and hope to have sheep serology ELISA testing for antibodies to EAE, Toxoplasmosis and Sheep Scab very soon.
Please contact us for more information.

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Please check the eligibility for **free carcase collection** via this website:

ahvla.defra.gov.uk/postcode/pme.asp

The suitability of submissions for a postmortem exam. must always be discussed with the WVSC duty vet.