

Factsheet

Sustainable Sheep Systems

Sheep Abortions - Toxoplasmosis



**Farm
Advisory
Service**

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The definition of an abortion is the expulsion of a foetus and placenta before term.

Toxoplasmosis is an infectious disease which is the second most commonly diagnosed cause of abortion in sheep in the UK (with enzootic abortion being the most common cause).



What causes Toxoplasmosis & its effect on a flock

Toxoplasmosis is caused by the protozoan parasite *Toxoplasma gondii* which is an intestinal parasite of cats, with all warm-blooded animals including sheep being intermediate hosts. Although infection can result in abortion or the birth of weak lambs, toxoplasmosis in a flock often manifests as increased barren rates or a protracted lambing period due to returns at tugging time.

An infected cat will produce millions of *T. gondii* oocysts (eggs) in their faeces. At this stage the parasite is very stable and depending on climatic conditions, are a source of infection for all warm-blooded animals for up to 12-18 months. Sheep are infected when they consume feed, forage or water that has been contaminated with cat faeces (and therefore oocysts).

If infection occurs before or in early pregnancy, ewes are more likely to reabsorb the pregnancy resulting in more empty ewes at scanning. As the pregnancy progresses, abortion is the more likely outcome. After day 70 of pregnancy, the ewe is more likely to give birth to a live but infected lamb. Live but infected lambs may appear weaker or be born with siblings that are dead or appear to be underdeveloped.

T. gondii is also a zoonotic pathogen and therefore can be passed from animals to humans posing a particular risk to pregnant women. It is important that pregnant women avoid contact with ewes during lambing time because of this reason.

Once a ewe has been infected, she develops immunity which protects them against the disease in future pregnancies.



Figure 1: Toxoplasmosis can result in mummified lambs
(Credit: SRUC Veterinary Services)

Importance of Diagnosis

Abortions and high barren rates can be caused by many things – both infectious and non-infectious - for this reason it is important to seek out an accurate diagnosis to allow an appropriate control plan to be put in place.

Any cause of abortions and high barren rates on the farm can affect the farm business financially as there may be less lambs to sell; affect the flock as there may be less lambs to select replacements from; and it can affect the mental health of people working with the flock as lambing will be a challenging time especially if there are multiple lamb losses.

If you are concerned about high barren rates at scanning or experience sheep aborting in your flock, it is important to contact your vet to investigate. Blood sampling barren ewes and collecting aborted lambs and placenta is the best way to investigate.

Samples of aborted material, including dead lambs and placentas, can be submitted to a veterinary laboratory for diagnosis. If you have had multiple abortions on-farm it is important to submit multiple samples if available, to ensure a quick and accurate diagnosis.

The graph below shows the percentage of each cause of sheep abortion diagnoses made by SRUC in Scotland in 2022.

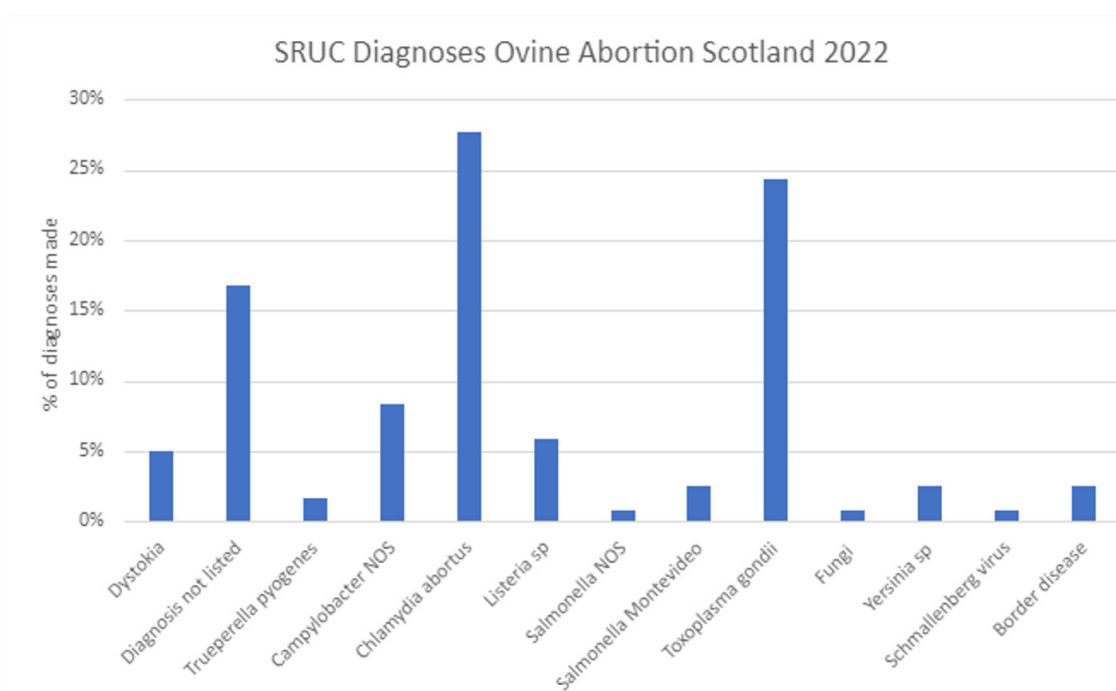


Figure 2: SRUC Sheep Abortion Diagnoses in Scotland 2022 (SRUC, 2022)

Control - Treatments and Prevention

Toxoplasmosis does not spread horizontally between sheep in a flock. However, the swift isolation of any aborted ewes and disposal of their aborted material (placentas, dead lambs, and birth fluids) plus disinfection of the abortion site is recommended as at this stage the cause of abortion is unknown and could have potential to spread through the flock.

You can blood test a proportion of a flock or group to determine if exposure to toxoplasmosis has taken place. Keeping a closed flock does not always protect against toxoplasmosis since infection is via oocysts shed by cats.

Vaccination can be used as a preventative tool against toxoplasma abortion in flocks. There is currently only one live vaccine available in the UK. Vaccines are administered to ewes at least 3 weeks ahead of tupping. Replacement ewe lambs can be vaccinated from 5 months old, and non-pregnant sheep can be vaccinated at any time. One vaccine lasts many years, therefore generally only one vaccine is required in the lifetime of a ewe. Once the entire flock is vaccinated once, only replacements coming into the flock require vaccination.

Decoquinat is licenced for use to assist in the prevention of abortions and perinatal losses due to toxoplasmosis and can be added to feed in the face of an outbreak or where risk is high.

Another prevention method is to minimise the number of cats on the farm and neuter cats to prevent males travelling large distances between farms. Ensure sheep feedstuffs are not accessible by cats to avoid faecal contamination.

Further Information & References

1. [Moredun \(2009\) Toxoplasmosis \(Control of Toxoplasmosis abortion in sheep\)](#)
2. [SRUC \(2022\) SRUC Veterinary Investigation Laboratory](#)
3. [SRUC \(2022\) Ovine Abortion Season 2022 So Far](#)

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Visit the FAS Sustainable Sheep Systems webpage to access webinars, technical notes and podcasts produced through the series: [Sustainable Sheep Systems | Helping farmers in Scotland | Farm Advisory Service \(fas.scot\)](#)



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