The control of infectious abortion in sheep

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Infectious abortion can be an important cause of lambed losses in some flocks. In this article Senior Veterinary Pathologist Dr. S. M. Dennis describes the symptoms of infectious abortion diseases and gives some recommendations for their control.

By S. M. DENNIS, Ph.D., B.V.Sc., Senior Veterinary Pathologist

The infectious causes of abortion known to occur in Western Australia are vibriosis, brucellosis, listeriosis and toxoplasmosis.

Definition
Infectious abortion in sheep may occur at any time in the last six weeks of pregnancy, but most cases occur two to three weeks before term, and merge imperceptibly into premature births, stillbirths and the production of weak, full-term lambs that die within the first few days of life.

Flock History
The usual history is that abortions occur suddenly in a flock without any record of exposure to the disease.

The first sign of trouble may be finding one or two ewes with the afterbirth hanging out or simply finding an aborted lamb in the paddock, the yards or the shed. On many properties, however, these early signs are missed.

Normally, these diseases are self-limiting in that they appear and disappear in a flock the same year. For this reason, it is not recommended that an affected flock should be disposed of.

Spread of Infection
Most of the infectious agents causing abortion in sheep are acquired by the intake of feed or water contaminated by infected sheep.

Organisms are excreted in large numbers from the vagina at the time of abortion and cause contamination of the soil, feed and possibly water. After ingestion by susceptible ewes the infecting organisms enter the bloodstream and invade the pregnant uterus, where they multiply in the placental tissues (afterbirth) and usually cause the death and premature expulsion of the lamb.

The cycle is then repeated by other ewes becoming infected. In order to prevent this from occurring or to reduce it to a minimum, it is recommended that all aborting ewes be isolated.

Control
The control measures currently recommended are based on general hygienic principles and are aimed at preventing the spread of infection by—

- Prevention of ewe-to-ewe transmission
- Observation of ewes for early signs of abortion
- Collection and destruction of lamb carcasses and placentae (afterbirth).

The main aim is to prevent the ewe-to-ewe transmission of infection. Any procedure that brings or tends to bring ewes together during pregnancy is to be discouraged as it will favour the ewe-to-ewe transmission of these infecting organisms and thereby help the spread of abortion. This includes such procedures as dam or soak watering, hand feeding, and yarding for any purpose.
All watering points should be elevated and all yarding kept to an absolute minimum.

It is important to remember that all the aborted fluids, placental membranes, the lamb and the post-abortion discharges contain many millions of the infecting causative micro-organisms which under cold wet conditions can live for three months or more on pastures. *Above all else, these infected fluids and tissues must be kept away from the watering and feeding places of the other pregnant ewes.*

For this reason, all aborting, suspected or aborted ewes should, if possible, be separated and isolated in a special paddock, preferably a small one, for about 30 days, or at least until all discharges have ceased. Close this paddock for an additional 90 days after the end of lambing before re-stocking it.

Breeding flocks should be regularly checked at least once a day and kept under as close observation as possible. Ewes should be carefully watched for any warning signs that abortion has occurred, such as—

- Fly strike around the vulva (the discharging fluids readily attract blowflies)
- Vaginal discharges
- Visible afterbirth hanging out
- Sick or even dead ewes.

The first sign of trouble may be finding an aborted lamb. Crows may be helpful as indicators in this regard.

All lambs dead for any reason (aborted, premature, stillborn, full-term, etc.), and placental membranes (afterbirths) should be collected and burnt, buried or dropped into a 44-gallon drum containing disinfectant.

What part foxes and crows play in spreading an outbreak is not known but evidence is accumulating to suggest that they may be implicated. For this reason, also, it is advisable to destroy the lamb carcasses and membranes.

**Further Investigations Required**

At present there are no specific control and preventive measures that may be recommended for controlling the infectious causes of abortion and perinatal lamb mortalities in sheep. The Animal Health Laboratory is now investigating these diseases and hopes to formulate adequate control measures.

We request your co-operation with this work by reporting promptly any abortion or suspected abortion or increased perinatal lamb mortalities to the nearest Department of Agriculture veterinary surgeon, stock inspector or agricultural adviser. Alternatively, personally send or bring the lambs and placental membranes directly to the Animal Health Laboratory at South Perth as quickly as possible.
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