Dead lambs: a dead loss

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DEAD LAMBS — A DEAD LOSS

RESULTS OF A SURVEY OF LAMB MORTALITIES IN W.A.

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During the past year the Animal Health Laboratory has continued its survey into the causes of abortion in sheep and perinatal lamb losses. This article records the results of this work.

LAMBS and specimens from lambs were submitted to the Animal Health Laboratory from 229 properties situated in 121 areas in this survey during 1964. Post-mortem examination was carried out on 1,422 lambs and specimens from 61 lambs were also examined.

Since the survey was commenced in 1963, a total of 2,179 lambs together with specimens from another 208 lambs have been examined.

Classification of Lambs According to Time of Death

All lambs examined were classified according to time of death and all were placed in one of three main categories, namely—

APD—Anteparturient death (died before the birth process began).

PD—Paturient death (died during the birth process).

PPD—Post-parturient death (died after birth).

Just over one-third of the lambs (34.1 per cent.) examined were born dead, nearly one-quarter (23.8 per cent.) died during birth and a little more than two-thirds (71.2 per cent.) died after birth (or during the first seven days of life).

The greatest single cause of death, accounting for nearly half of all the deaths, was premature birth. Of the 1,422 lambs examined, 69.9% died before birth (APD) and 21.8% died during birth (PD). The remaining 8.3% died after birth (PPD).
lambs examined, was classified as starvation/mismothering (43.8 per cent.). These deaths were mainly the result of mismothering. The starved lambs walked and were active, but did not suck and usually died within the first three days of life. A number of these deaths were complicated by exposure, bacterial infection or predator attack.

The second largest group was classified as neo-natal weakness, which was responsible for just over one-quarter (26.8 per cent.) of the post-parturient losses. These lambs died from a number of causes, infectious and non-infectious, or both. Clinically they were seen as weak full-term lambs that breathed but were unable to rise and walk, with death occurring within a few minutes to a few hours of birth.

Parturient deaths as a result of dystocia (difficult birth) or prolonged birth were responsible for nearly one-quarter of the lamb deaths examined. The most important class of parturient death was that occurring at the end of a birth of long duration; this accounted for just over one-third (38.5 per cent.) of the losses occurring during the birth process. These lambs were usually larger than normal and invariably had swollen heads.

The classifications of lamb deaths over the past two years are given in Fig. 1 and Fig. 2.

**Weight of Lambs**

The weight of the lambs examined varied between 0.5 lb. and 20.0 lb. with an average of 7.13 lb. Most of the weights
fell between 5 lb. and 9 lb., the range accepted for viability for Merinos.

Non-Infectious Causes

The non-infectious causes of perinatal lamb mortalities encountered on a flock basis were:
- clover disease*;
- starvation/mismothering;
- dystocia or difficult birth and prolonged birth;
- neonatal weakness;
- exposure;
- predators;
- congenital abnormalities.

* Slightly more than half the properties (51.5 per cent.) which submitted lambs during 1964 had a history of and/or revealed signs of clover disease.

Predators

Predators only accounted for 2.5 per cent. of the losses and did not play a significant part in the deaths of the lambs examined. The figure, however, was nearly double that obtained in 1963 (1.3 per cent.). Predators have been responsible for only 2.08 per cent. of the deaths of the 2,179 lambs examined in this survey to date.

The predators, mainly foxes and crows, appeared to act simply as scavengers and mainly confined their attention to dying or dead lambs. This is illustrated by the fact that one-third of all the lamb carcasses showed evidence of predator mutilation after death. This is further emphasised by the fact that 54 per cent. of the lambs which died from starvation/mismothering (the major cause of lamb death in W.A.) showed mutilation after death.

Infectious Causes

The results showed that 15 (6.5 per cent.) of the properties which submitted lambs were infected with a known abortion-producing disease. Nine of these were due to a major flock disease and six to a flock disease of minor significance.

In addition, 113 of the lambs (8 per cent.) examined showed evidence of infection (individual infection and not a flock infection). Over the past two years, 7.8 per cent. of all the lambs examined have shown evidence of individual infection.

Pathological Findings

Post-mortem examination of the lambs revealed a number of pathological conditions, some of which were—
- broncho-pneumonia,
- enteritis,
- hernia,
- ruptured liver,
- jaundice,
- enlarged thyroid gland,
- encephalitis or inflammation of the brain,
- focal myocarditis or inflammation of the heart,
- scattered abscesses in the liver, kidneys and lungs,
- navel-ill and peritonitis,
- as well as a range of congenital abnormalities.

Perinatal Lamb Losses

Results of the survey have indicated that the causes of perinatal lamb losses in Western Australia in order of importance are:
- Starvation—mismothering—exposure complex
- Dystocia or difficult birth and prolonged birth.
- Flock and individual infections.
- Predators.
- Congenital abnormalities.

Continuation of the Survey

Farmers who suspect abortion losses, or who find a number of stillbirths, weak lambs dying soon after birth or increased perinatal losses, are requested to contact their nearest Department of Agriculture veterinary surgeon, stock inspector, agricultural adviser or private veterinary surgeon without delay. Alternatively, it is strongly advised that any suspect lamb or lambs, preferably more than one, together with their membranes, should be despatched, or better, brought directly to Animal Health Laboratory for diagnosis.

Packing and Despatch of Lambs

The best specimens for examination are lambs together with their placentae (afterbirth or membranes). Wherever possible, the placental membranes should be forwarded as these are usually more informative than the lamb carcasses on their own. The quicker the lambs reach the Animal Health Laboratory after death, the better. If possible you should bring the lambs directly to the laboratory.
A safe and effective method of packing dead lambs for despatch to the Animal Health Laboratory yourself. If this is impossible then send the lamb carcasses by rail or bus.

A safe and effective way of packing the lambs is by wrapping each lamb with its membranes separately in a plastic bag (a urea inner plastic lining is ideal). Enclose all the separately wrapped lambs in a plastic bag then place inside two super bags (one inside the other) and close with a needle and twine. Address the package to:

Chief Veterinary Pathologist, Animal Health Laboratory, Department of Agriculture, South Perth.

and be sure to mark it "URGENT-PERISHABLE." Lambs wrapped like this have arrived safely over the past two years without leakage.

Acknowledgments

Investigations of this nature are impossible without the co-operation of many people. We wish to thank all the farmers who have co-operated in this survey.

Have you a lambing problem?

If so, some of the articles in this issue will be of special interest to you. They may even help to pinpoint your problem—the first step towards overcoming it.

If you need help with lambing or fertility problems, consult the Department of Agriculture.

Any farmer who marks less than 70 per cent. lambs has a lambing or sheep fertility problem.
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