

FEATURES

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LAMB DEATHS

Introduction

Surveys on lamb deaths have indicated that they can be as high as 30% at which level sheep farming becomes uneconomical. Studies in SA have shown that the main causes are starvation (50%), difficult births (25%) and only 25% as a result of diseases, predation, local deficiencies, and genetic defects.

Starvation:

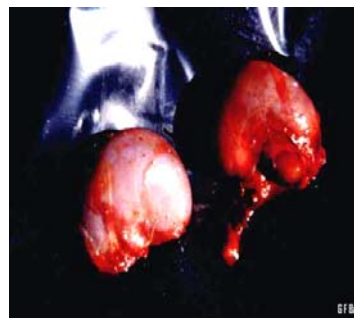
Starvation of newborn lambs can be due to a variety of different causes:

• Poor nutrition of ewes:

Ewes on a low level of nutrition in the last month of pregnancy will give birth to weak lambs with a low birth weight. The ideal weight for newborn lamb is dependent on the breed but the average weight should be 3-4 kg. Weak lambs struggle to drink, and are especially vulnerable during cold weather conditions. These lambs die because they have no fat reserves and may be too weak to suckle. Heavy worm infestations of ewes contribute their poor condition. During pregnancy ewes shed the high numbers of worm eggs due to

reduced resistance. This is referred to as the "peri-parturient relaxation of resistance" or PPRR and this is the a critical time for deworming and vaccinating ewes. Heavy tapeworm infections can actually kill pregnant ewes if they are on poor nutrition. Old lands are unsuitable for grazing heavily pregnant ewes as they offer poor nutrition, often have poisonous plants and provide no shade or shelter.

Photo 1: Lambs which die of starvation have no fat reserves around the kidneys. (Courtesy Prof G Bath)



• Poor mothering abilities:

this causes ewes to abandon lambs or refuse to feed them. These lambs may have to be hand-reared or they will die. Mothering abilities are breed-associated and genetically inherited.

Ewes must be selected for good mothering abilities. Hand-reared lambs should therefore not be used for breeding.

• Udder problems:

Ewes with deformed or damaged udders/teats, or mastitis, cannot feed their lambs properly.

• Management problems:

The crowding of ewes and their lambs in camps, mixing with other species such as cattle, moving or disturbing ewes with newborn lambs may cause lamb losses.

Weak newborn lambs usually live a maximum of 7 days. They are listless, lie down most of the time and die eventually. Lambs dying of starvation show flat abdomens, and on post-mortem have no milk in their stomachs or any fat reserves around the kidneys or the heart. The presence of the soft slippers on the underside of the hooves shows that the lamb has not walked after birth, due to weakness or dying shortly after birth.



Weak lambs should be given a 20% glucose solution (40-100ml) which can be injected into the abdomen or given per stomach tube. Colostrum can be stored in a freezer and used for feeding orphan or rejected lambs.

Difficult births (dystocias)

Lambs often die after difficult births due to suffocation in the birth canal. On a post mortem it will be clearly seen that the lungs were never filled with air. The heads of these lambs are often swollen as a result of being trapped in the birth canal. The cause of difficult births is usually lambs being too big or weakness of the ewe. Fat overfed ewes may also have lambing difficulties.

Photo 2: A lamb which died after a dystocia . Note the “slippers” on the feet which show that it has never walked (Courtesy Prof G Bath)



Diseases causing lamb deaths

Enzootic abortion

Enzootic abortion is an infectious condition caused by the organism *Chlamydia*

psittaci. It is transmitted from sheep to sheep and is usually introduced by new sheep coming into the flock. The disease causes abortions in late pregnancy, or resorption which is indicated by a low lambing percentage. Premature, stillborn or weak lambs can also be seen. Infected lambs are often too weak to stand or drink, may either have pneumonia or joint infections. The diagnosis of enzootic abortion is made based on the history and examination of the aborted foetuses by a vet or a veterinary laboratory. Serology of unvaccinated flocks can confirm the presence of the disease. Vaccination of ewes 6 weeks before the breeding season will prevent abortion and lamb losses.

Photo 3: A weak lamb born to a ewe infected with enzootic abortion. (Courtesy Prof G Bath)



Lamb dysentery

Lamb dysentery occurs sporadically in SA, caused by *Clostridium perfringens* B. The disease only occurs in the first 7-14 days of life. Affected lambs show pain, listlessness, bloody

diarrhoea and die very quickly. On post mortem the stomach is filled with blood and shows ulceration. The condition can be prevented by vaccination with a clostridial vaccine containing type B. The ewes must be vaccinated twice with a 3-4 week interval, the booster being given a month before lambing. Multi-component vaccines such as Covexin 10, Ovivax 6 or Tasvax PK Plus are suitable, depending on specific requirements

Colibacillosis

Although *E. coli* infections are much more common in calves than lambs, the disease may cause problems when ewes lamb in camps under intensive conditions. The lambs develop diarrhoea, dehydration and rapid death within the first week of life. The use of the *E. coli* vaccine will reduce the prevalence but only if lambs get sufficient colostrum

Tetanus

The use of elastrators to castrate and amputate the tails of lambs, creates ideal conditions for the development of tetanus. The wounds become infected with *Clostridium tetani* bacteria which multiply in the strangulated tissue and produce the tetanus toxin. The toxin causes spastic paralysis which later leads to the death of the lamb. The ideal age for tail amputations and castration is 3 weeks of age when the lambs have a high level of colostrum immunity.

The ewes must be vaccinated with a *C. tetani* containing vaccine at least twice, the booster given 2-3 weeks before lambing, to give optimal antibody levels.

Suitable vaccines are **Ovivax 6** or **Covexin 10**.

Orf

Orf is a condition caused by a virus which causes a wart-like growth on the skin. The lesions occur especially around the mouths of lambs as well as on the udders of ewes. Suckling lambs

refuse drink because of the discomfort caused by the sores. Ewes can develop mastitis and refuse to feed their lambs. A vaccine is available but management factors like preventing ewes feeding on thorny shrubs can also reduce the incidence.

The orf vaccine is applied by scratching the skin with a needle and dropping the vaccine onto its surface.

Rift Valley fever (SDK)

RVF is a virus disease which occurs sporadically in SA. The last outbreaks were in 1970 and although the virus is still present in mosquitoes the optimal conditions need for the multiplication of the specific mosquitoes have not occurred for the last few decades i.e. early heavy summer rains which result in the formation of pans. Under these conditions the specific mosquitoes which transmit RVF multiply to enormous numbers. The mosquitoes which transmit RVF have a preference for livestock - sheep, cattle and goats. Up to 100%

pregnant animals can abort, and large percentages of young lambs, kids and calves may die. It is estimated that millions died during the outbreaks in the 1970s. Effective vaccines are available and must be administered in the spring.

Other causes of abortions

Other causes of abortions in sheep and goats are *Brucella melitensis*, *Coxiella burnetti* and *Toxoplasma gondii*. In Angora goats habitual abortions occur as a result of metabolic stress or genetic defects caused by inbreeding.

Genetic defects

A low percentage of birth defects may occur in flocks due to genetic causes. Malformed jaws, limbs, skin and lack of an anus are the most common. Deformed lambs that survive should not be used for breeding. Certain viruses, such as Akabane virus which is prevalent in the summer, can cause foetal abnormalities. Vaccination with blue tongue vaccine in the first two months of pregnancy can cause brain and nervous system deformities. The vaccine should be used in the second half of pregnancy when it doesn't cause problems.

Summary of prevention of lamb losses

1 Examine ewes at weaning for dry or hard udders, teats

which are too large or which don't have openings. These ewes should be culled.

- 2 Vaccinate ewes with Enzootic Abortion vaccine before the breeding season
- 3 Ensure good nutrition of pregnant ewes and deworm them 4-6 weeks before lambing. **Ovivax 6** deworms and vaccinates simultaneously.
- 4 Give a booster injection of a multicomponent clostridial vaccine such as **Covexin 10** a month before lambing to protect the ewe and the lamb.
- 5 Supervision by a shepherd during lambing will identify poor mothers and difficult lambers.
- 6 Lambing camps must be hygienic and provide shelter against the wind.
- 7 Don't crowd lambing ewes or disturb them unnecessarily.
- 8 Cull ewes that don't raise lambs successfully and don't breed from their offspring.

Condition	Cause	Age	Control
Coccidiosis	Coccidia (<i>Eimeria, Isospora</i>)	Feedlot lambs (3-5 months) Less often at 2-8 weeks	Treatment and medication of feed
Pulpy kidney	<i>C. perfringens D</i>	Lambs 2-12 months	Vaccination at 4-5 months with Tasvax PK Plus or broader spectrum like Ovivax 6 or Covexin 10.
Septicaemic pasteurellosis	<i>P. haemolytica</i>	Lambs 2 -12 months	Vaccination of lambs 1-2 weeks old or of ewes during pregnancy
Pneumonia	<i>P. haemolytica</i>	Suckling lambs from 2 weeks to 2 months Lambs in feedlots	Vaccination of ewes during pregnancy Vaccination of lambs 1-2 weeks old or of ewes during pregnancy