



Breaking the silence of the lambs

Mature ewes are more relaxed and show better mothering abilities, which increases the survival rate of their lambs.
Photo: Nakkie van Wyk

The reality of pre-weaning mortalities in sheep

by Anri Strauss

Farmers sometimes need to have conversations about the finer management practices required to optimise production. Pre-weaning mortality rate is one of those difficult topics where theory and practice do not always meet.

Research indicates that the pre-weaning mortality rate on a farm should be less than 5%. In reality, according to data from South Africa, Canada, New Zealand, and Israel, it is often between 10% and 20%. That's a big difference! Knowing your own herd average is the starting point, and there are a number of calculations you can use to evaluate your stats.

EXAMPLE



Here is an example for calculation purposes.

Of 50 ewes mated, a total of 68 kids were born from 44 ewes, and eight lambs died before weaning.

Parameter	Calculation
Pregnancy percentage (%)	44 pregnant/50 mated = 88%
Lambing percentage, calculated per ewe mated (%)	68 lambs/50 mated = 138%
Lambing percentage, calculated per ewe kidded (%)	68 lambs/44 kidded = 154%
Weaning percentage, calculated per ewe kidded (%)	60 lambs weaned/44 ewes kidded = 136%
Pre-weaning mortality (%)	154% - 136% = 18%

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There are five factors that affect the pre-weaning mortality rate.



1. Parity

Mature ewes stress less during parturition, allow more suckling, and groom newborn lambs better compared to young ewes. Mature ewes show better mothering abilities, increasing the survival rate of their lambs. However, increasing parity typically comes with increased litter sizes, which may have a negative effect on lamb survival.



PRACTICAL TIPS:

- Keep and observe young ewes in separate pens. When letting young ewes out into groups, keep the groups small (<10 per group).
- In extensive systems, let young ewes lamb in separate camps together with a few mature ewes with excellent mothering abilities so they can learn from the mature ewes.
- Help young ewes that are struggling to understand what to do with a lamb by putting them into small pens (1,5 m x 1,5 m), but put other ewes into neighbouring pens as standing alone will only increase stress levels.



2. Litter size, sex, and birth weight

Mortality rates increase with increasing litter size due to a decrease in lamb birth weight and/or a decreased ability of the ewe to provide sufficient milk for the lambs. Female lambs also tend to be smaller than male lambs, which may influence their survivability.



PRACTICAL TIPS:

- Feed ewes to support optimal foetal growth and milk production.
- Ensure that lambs drink enough (a lamb that is hungry will not settle to sleep and will bleat constantly).
- Give creep feed to the lambs from day five.
- With multiple lambs, take one away if the ewe is not able to raise them herself and give it to a foster ewe or hand-rear it (in my opinion, triplets should be raised by their mothers, but as soon as you get quadruplets you can help out).



3. Nutrition during pregnancy

Nutrition during the last six weeks before lambing is critical. Studies have revealed that feeding increased metabolisable energy to 120% of normal rates during the last trimester showed no difference in birth weights but significantly improved lamb vigour and growth rates. Approximately 70% of the foetus's growth will occur during the last trimester, and mammary development is greatest during this time. As the foetus grows, the ewe's rumen capacity decreases due to the increasing size of the uterus, so ewes eat less. To counter this, a more nutrient-dense ration with a good fraction of bypass protein should be fed.

Colostrum quantity and quality are also affected by nutrition and mineral status during the last trimester. This determines the start that every lamb will get. Do not spare costs on your dry ewes, as this is where your efficiencies are set for life.

**PRACTICAL TIPS:**

- Feed an energy-dense ration with increased levels of bypass protein and organic minerals to ensure good lamb growth, quality colostrum, and a ewe that lambs in a good body condition.
- Limit hay intake for young ewes and ewes carrying triplets or more lambs. Rather opt to feed a complete ewe ration for this group.
- Ensure that the ration contains ample calcium, as a ewe's calcium requirements double during the last trimester.

**4. Disease**

Lambs with poor immunity are likely to die within the first eight weeks of life. To ensure optimum immunity of the lamb, the ewe should produce top-quality colostrum and the lamb must drink it.

**PRACTICAL TIPS:**

- Ensure that ewes are fed correctly during the last trimester to have enough colostrum, and that the ration contains all the necessary minerals in inorganic and organic forms.
- Ensure that ewes receive their booster vaccines during the last trimester.
- Ensure that lambs drink enough colostrum during the first 12 hours after birth.

**5. Management**

There are multiple management factors to consider, many of which will be discussed in subsequent articles, but here are some practical tips to keep in mind.

**PRACTICAL TIPS:**

- Most deaths (up to 66% of mortalities) occur during the first three days after lambing, so keep ewes close to home during this time.
- If a lamb does not suckle within two hours after birth, feed it between 30 ml and 60 ml colostrum with a stomach tube and monitor. If the lamb doesn't get up and suckle, give it colostrum again, or consider hand-rearing.
- Ensure proper hygiene when working with newborn lambs and keep lambing pens clean and dry.
- Wash feed and water buckets daily and check water twice daily. Provide water to lambs with their creep feed.
- Mark lambs with ear tags within the first day, or mark ewes and lambs with animal-approved spray paint.
- Focus on farm biosecurity.

Conclusion

These tips are easily followed, even on farms with a small workforce and few resources. Focus on one recommendation at a time. These tips will increase your lamb survival rate and your profit! 🐑