

Pre-Lamb Strategies To Reduce Early Lamb Mortality

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Some of the more important factors that influence lamb survival are

- Toxoplasmosis
- Campylobacter
- Feeding during pregnancy
- Iodine
- Vitamin E/Selenium

Toxoplasmosis.

- This parasite is everywhere and all properties will be infected.
- Cats are important in the lifecycle. Toxoplasma eggs are passed in cat faeces and infection is picked up by sheep from the soil or contaminated feed. It does not spread between sheep.
- Ewes abort or have weak lambs if they become infected while pregnant
- On average it will cause a 3% lamb loss between scanning and tailing. It can however cause large outbreaks in unvaccinated ewes.
- Vaccination involves 1 vaccination as a hogget or 2T. This should give lifetime protection.

Campylobacteriosis

- This bacteria is on most farms.
- Some ewes are carriers and maintain the infection from year to year.
- Also causes abortions or weak lambs.
- Scanning and tailing analysis and trials have shown that vaccinated ewes on average have approximately a 10% better lamb survival between scanning and tailing.
- A blood test on ewes can determine whether or not your property is infected.
- Vaccination involves a sensitizer and booster (booster at least a month pre-tup) as 2Ts. Annual boosters are probably not necessary in most cases but if vaccinated as hoggets a booster as a 2T is advised.

Feeding during the last 70 days of pregnancy

Underfeeding will impact on lamb survival and growth rate to weaning. It will

- Increase the lambing spread. More will be born early and more late.
- Reduce newborn lamb vigour
- Reduce birth weight
- Increase time to stand and the number that never stand
- Increase the time ewes take to tend lambs
- Reduce udder development and milk production

Lambs born to merino ewes underfed in late pregnancy have as hoggets

- Lower fleece weights
- Greater fibre diameter
- These effects are permanent

Iodine

- An important component of Thyroid hormone which is involved in growth and metabolism.
- A deficiency can cause poor fertility and increase lamb mortality.
- Goitrogens in brassicas can prevent the uptake of Iodine and increase its requirement.
- Iodine deficiency can be confirmed by blood testing for Inorganic Iodine &/or weighing thyroids of dead newborn lambs.

Veterinary LSD® Liquid.

Contains Vitamins ADE & C and Selenium, Iodine and Chromium in a soluble suspension.

- The anti-oxidant properties of Vit E and Selenium prevent free radical damage to cell membranes. Moderate deficiency of one or the other can cause membrane damage and hence 'leaky' membranes. (Extra fluid in body cavities). Severe deficiency will cause cell death (White Muscle Disease).
- D McFarlane in 1966 (NZVJ) determined that excessive fluid in body cavities affected the ability of newborn lambs to survive.
- Recently this excessive fluid has been found to be greater in newborn lambs with the lowest Vit E levels (serum). There was no association between Se and volume of fluid in body cavities.
- There was a significant reduction in fluid found in lambs born to ewes treated with LSD® prior to lambing.
- Overseas trials have shown that lambs from Vit E treated ewes stood up to 10 minutes earlier and suckled up to 25 minutes earlier than lambs from untreated ewes.
- Treated ewes mothered their lambs sooner than controls.
- A North Canterbury FITT trial found lamb survival from LSD treated hoggets was significantly better than that of Potassium Iodide or Iodine injected or control hoggets.
- OptiLamb analysis suggest a better scanning performance and lamb survival on properties that have used LSD®.

Where do we find natural vitamin E?

- It is high in fresh green grass and colostrum.

What feeds are low in vitamin E?

- Mature plants
- Brassicas
- Stored hay, silage, baleage, grain, pellets, meals
- Pastures from iron rich soils.

What dietary factors increase the need for extra vitamin E?

- High polyunsaturated fatty acid (PUFA) diets. Spring pasture is high in PUFAs.

- High nitrate pastures and crops. These increase the requirement for vitamin E.

Why might ewes/cows in late pregnancy have a low intake of vitamin E and pass on insufficient vitamin E to their lambs/calves prior to birth.

- Low vitamin E in feed. – winter pasture (old grass), brassica feeding, stored supplements – hay, grain, silage etc
- Increased requirement – PUFAs (spring pasture) Nitrates.
- Increased demand – pregnancy. High environmental stressors – inclement weather, shearing, crowding, mustering (Vit E = stress vitamin).

Properties of Veterinary LSD® Liquid.

- Unlike vitamin powders it is stable in sunlight and water. Can be added to trough water, dosatron, Peta dispenser etc. Powders lose potency once they are mixed.
- It is stable if left in a back pack for up to 40 days.