

Shearing crossbreeds in mid-pregnancy — Considerable animal welfare and production benefits

Key points

- Thousands of lambs die soon after birth each year
- By increasing the birth weights of twins and triplets, losses can be greatly reduced
- Shearing crossbred ewes in mid-pregnancy (around day 70) can increase the birth weights of their lambs by around 0.4 kg and their weaning weights by around 1.0 kg
- The birth weight response does not appear to occur in ewes which are very light (<50 kg) or very heavy (>70 kg). Nor does it occur in those with very low (<1–1.5) or very high (>4) condition scores.
- Ewes produce about 0.2 kg more wool a year if they are mid-pregnancy shorn
- To protect winter-shorn ewes from exposure, they should be shorn (depending on the region) with genuine winter combs, winter combs with lifters, or blades
- They also must have good shelter and adequate feed after shearing

Each year, in New Zealand, more than 15 per cent of lambs die before weaning. Most of them die within a few days of birth. This is a huge waste of a potentially valuable resource.

Losses are highest in very light lambs, with starvation and exposure the most common causes. A significant number of small weak lambs also die from dystocia.

At a birth weight of 2.1 kg, the mortality rate is about 13 per cent. Mortality declines by more than 1 per cent for every 200 grams extra lamb birth weight until 4.1 kg, when it drops to around 2 per cent.

Once birth weights reach 5.1 kg, death rates due to starvation and exposure drop away to almost zero.

In recent years, sheep farmers have made increased use of high fecundity genes. This, combined with better pre-mating feeding, has led to a dramatic increase in the number of twins and triplets, as well as the national lambing percentage.

Because individual birth weights tend to fall as litter sizes increase, this increase in multiple births could lead to more deaths of small lambs at, or soon after, birth.

A solution

Shearing ewes in mid-pregnancy can increase lamb birth weights, especially in multiple-bearing ewes. This results in an improvement in lamb survival and in due course, farm lamb production.

Indeed, mid-pregnancy shearing has been proven to have significant animal welfare benefits. Many lambs are saved from an early death, as are ewes which might otherwise have become cast during lambing.

Ewe losses from dystocia are also reduced, if shearing is accompanied by scanning and differential (reduced) feeding of single-bearing ewes.

There are many farm production benefits: farmers have more lambs to draft, or from which to select replacements; fleece weights and quality improve; and lamb weaning and drafting weights are increased.

Recent trials at Whatawhata and Massey University have examined various aspects of this.

A 2-year trial at Whatawhata found that shearing in early to mid-pregnancy increased the birth weight of singles by 0.2 kg in one year and the birth weight of twins by 0.2 kg in both years.

The Massey trials found responses of up to 1.0 kg in combined birth weight of twins, with an average of 0.4 kg, and in singles up to 0.8 kg. They also showed that the response was greatest when ewes were in lighter condition (<CS 3) in early pregnancy and lamb birth weights were likely to be low.

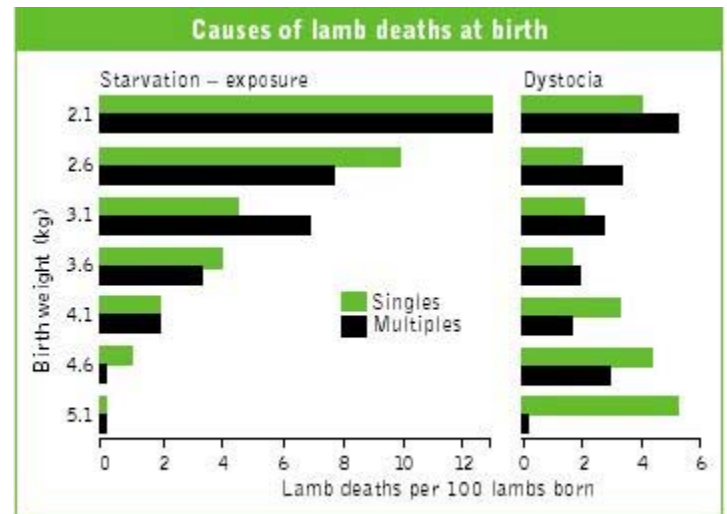
A large field trial at Massey with more than 1000 twins showed that mid-pregnancy shearing of ewes increased lamb survival by 3 per cent. In other trials at both Riverside and Tuapaka, twins tended to have 3–4 per cent higher survival rates.

In some trials, singles had higher losses, due to increased birth weight and dystocia. These losses can be reduced by differential (reduced) feeding of single-bearing ewes following scanning.

The increase in foetal growth is not due to increased feed intake following shearing. Invermay trials showed that ewes used their own body fat to support the increased foetal growth. Shorn ewes had 15 per cent less body fat at day 140 of pregnancy than unshorn ewes.

The birth weight response does not appear to occur in ewes which are very light (<50 kg) or very heavy (>70 kg). Nor does it occur in those with very low (<1–1.5) or very high (>4) condition scores.

By weaning or slaughter, the birth weight advantages resulting from mid-pregnancy shearing are generally magnified. For example, the average weaning weight in the Massey trials was 0.9 kg for twins (cf 0.4 kg for birth weight) and in the Whatawhata trials by 1–1.4 kg in both singles and twins (cf 0.2 kg for birth weight).



Lamb deaths from dystocia and starvation-exposure classified according to birth weight.

In addition, there are wool production and quality benefits. Ewes shorn in mid-pregnancy produce 0.2 kg more wool each year. Also, their wool has better colour and fewer cotts.

Timing of shearing and management

The best lamb birth weight response is likely to be when ewes are shorn between days 50 and 100 of pregnancy, with the optimum time being around day 70. This means pregnancy scanning can be done at the same time.

Scanning enables the ewes to be split into dry, single and multiple mobs for differential feeding during the latter stages of pregnancy.

Preferential feeding of multiples leads to improved ewe condition, early colostrum production, better milk yields and faster lamb growth. Reduced feeding in the singles mob reduces the risk of birth difficulties which could otherwise be a problem in these ewes.

Ewes shorn during winter need to be protected from exposure. Depending on the region, genuine winter combs, winter combs plus lifters, and blades will leave sufficient wool to protect ewes from all except the worst weather.

After shearing, they should be put in sheltered paddocks with adequate feed. Shelter is essential to prevent cold stress, especially if the weather is bad. Wind and rain accentuate heat loss and in extreme conditions can cause death due to hypothermia.