

Ewe management and body weight at joining

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Introduction

Lamb marking percentage is one of the factors determining the success and profitability of a sheep enterprise for either Merino or prime lamb production.

Farmers will consider many factors when choosing a joining date. These could include:

- when the season breaks or dries off in the district;
- markets for early prime lambs;
- fitting in with crop enterprises;
- the likelihood of supplementary feeding in winter in late pregnancy;
- weather conditions at lambing.

Early weaning will make consideration of all these factors easier.

High body weight or increasing fat score/body weight at joining can ensure a high lamb-marking percentage. When lambs are weaned by 14 weeks, it gives more scope for ewes to regain any body weight or fat reserves lost during lactation.

Fat score and body weight at joining

Static body weight is body weight measured at any one point in time. **Dynamic body weight** measures changes in body weight.

If weaning has been early, ewes will have regained body reserves and achieved high static body weight before pasture deteriorates in quantity and quality over summer.

Body weight usually declines later in autumn but an early break in the season will see a dynamic increase in body weight. Recent research has shown that change in fat score (dynamic weight)

before and during joining had little effect on conception rates. The fact that they reached the joining target was more important than whether they were gaining or losing fat score.

An increase of 1 fat score unit will correspond to an increase in body weight of 7–8 kg, regardless of frame size. One extra fat score unit in Merino ewes at joining results in about 13 extra lambs born per 100 ewes joined.

There is considerable variation between flocks in this response so it is important to determine if this response is profitable for any given flock.

Producers wishing to ensure high lamb-marking percentages should target a fat score 3 for their ewes at joining.

Ewes joined at high static weights and at fat score 5, and who maintain this fat score throughout gestation, are likely to experience difficult births and pregnancy toxaemia.

Daylength – effect on ovulation

Body weight is not the only factor affecting ovulation. The time of year is also important. Decreasing daylength triggers breeding activity, that is, the oestrus cycle. Also, studies with Merino sheep show that higher ovulation rates occur in autumn. Research has shown that 33 per cent more Merino lambs were weaned per ewe joined in autumn compared with lambs weaned per ewe joined in spring.

High conception rates are therefore a combination of factors including the date of joining in relation to seasonal feed supply.

- Early weaning gives ewes the potential to regain body weight but also relies on this date in relation to the break in the season or drying-off of the season.
- Ewes joined in December in southern NSW rely on high body weight/fat score to give multiple



ovulation coming out of spring, as daylength is not yet decreasing.

- Ewes joined in February in southern NSW may have a lower static body weight and lower fat score; they benefit from decreasing daylength.
- Provided an early autumn season break, ewes joined in April benefit from a dynamic increase in both body weight and fat score as well as from positive effects from decreasing daylength.

Twin scanning

Ultrasound scanning allows ewes bearing single lambs to be managed, reducing the incidence of difficult birth through overfeeding in late pregnancy. Ultrasound scanning can also be used to determine time of lambing, similarly to the ram harness; however, throughput is slower during the scanning process.

Identification of twin-bearing Merino ewes by ultrasound scanning will allow selection of paddocks that provide better nutrition for these animals in late pregnancy. This will improve the weight and quality of fleece on their progeny through effects on the ratio of secondary to primary follicles throughout their lifetime.

Twin-bearing ewes ideally should be lambled in groups of less than 250. By managing twin-bearing ewes separately, from scanning at 90 days to lamb marking or weaning, similar growth rates can be achieved for twin lambs as for single-born lambs.

Use of twin scanning and the ram harness facilitates early weaning and thus the regaining of ewe body condition before the next joining.

Where scanning for twin-bearing ewes is practised, nutritional management of those ewes before lambing is made easier by regular fat scoring to ensure adequate body fat reserves for late pregnancy and lactation. Target fat score during pregnancy should be 3 score. Overfat ewes (4 to 5 score) in late pregnancy eat less and are likely to suffer pregnancy toxemia. Reducing the fat score of these ewes to 3 between days 90 and 120 will increase their lambs' birth weights and likely survival.

Ewes of fat score 2 or less have insufficient body fat reserves for successful lactation. It is difficult and uneconomic to change ewes from 2 to 3 score in late pregnancy by supplementation. The desired fat score of 3 for pregnancy should be achieved soon after joining.

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