

## Ewes in better condition at joining conceive more lambs

This section covers these topics;

*The impact of ewe CS on reproductive rate*

*The variability between flocks in responsiveness of reproductive rate to improved ewe condition.*

*The benefits of minimising joining duration*

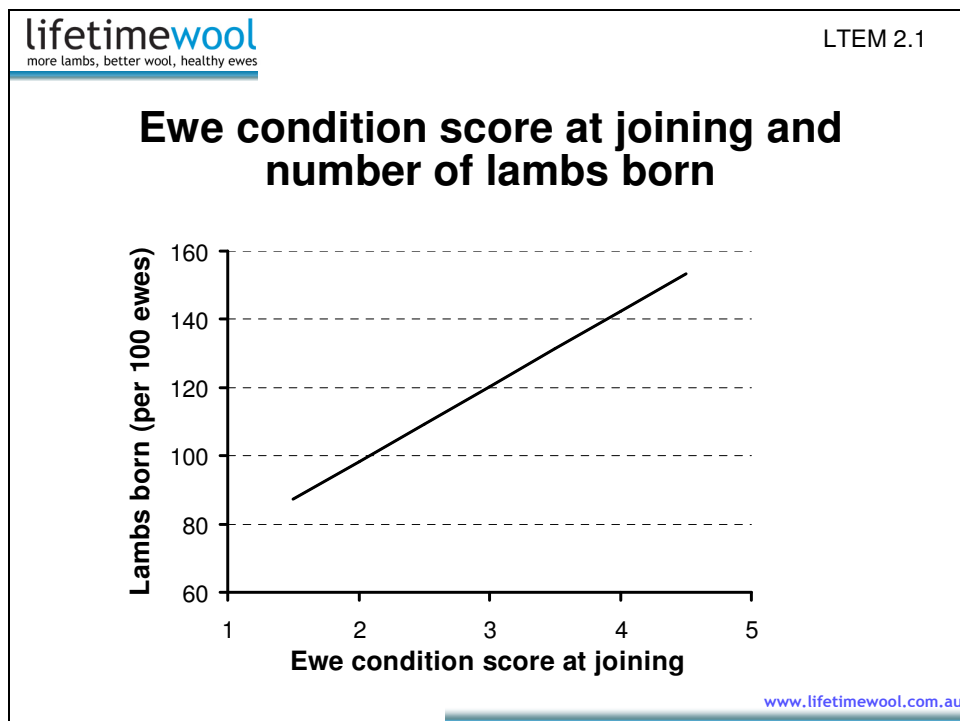
**Worksheet:** How to determine the responsiveness of your flock's reproductive rate to improved ewe condition and nutrition.

### The impact of ewe CS on reproductive rate

Ewes in higher Condition Score (CS) at joining conceive more lambs and therefore have a higher reproductive rate (measured as foetuses/100 ewes joined).

Ovulation rate at joining is largely determined by ewe condition at joining. The CS of a ewe at the point of joining is a more reliable predictor of reproductive rate than changes in condition prior to joining. Ewes should be in CS 3+ at day 17 of joining (end of the first cycle).

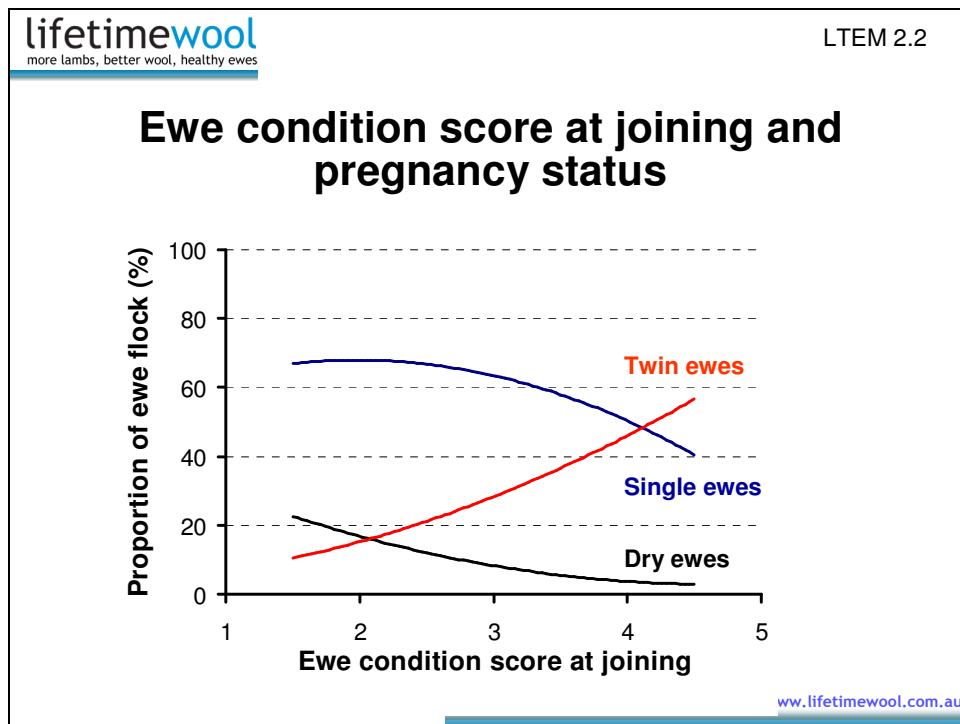
The reproductive rate increases with increasing ewe CS. It is linear between CS 1.5 and 4.5. The average response is about 20 extra lambs per 100 ewes for an additional CS at joining. The response in ewe reproductive rate to increased ewe CS at joining outlined in LTEM 2.1, is much greater than previous extension programs have promoted.



The higher reproductive rate is due to fewer dry ewes and more ewes conceiving twins.

1. At CS 3, there should be no more than 10% dry ewes in most Merino flocks and less than 5% dry ewes in cross-bred flocks.

- In flocks scanning around 150%, more than 50% of ewes carry twins and less than 5% will be dry.



The variable responses in reproductive rate between flocks and what is the potential lambing%?

The response in reproductive rate (foetuses/100 ewes joined) varies for different flocks. The key factors affecting the responsiveness of flocks are their genetics and time of lambing. In the lambing flocks studied the later lambing were more responsive.

It is critical to understand the responsiveness of your flock's reproductive rate (foetus/100 ewes joined) to increased ewe condition at joining. Knowing your flock's response is important in making decisions about feeding ewes leading up to joining. Whether your ewe flock is responsive (+30 lambs/CS) or less responsive (+10 lambs/CS) to improving CS at joining, can affect the profitability of ewe management options approaching joining by \$1 to \$3 per ewe, depending on the value of extra lambs.

Establishing the link between ewe CS at joining and subsequent lambing performance for your flock will help with future management decisions. The flocks involved in the lifetimewool demonstration phase tagged 50 high CS (CS 3 and above) and 50 low CS (CS 2.7 and below) and scanned the ewes for 0, 1 or 2 foetuses.

The results in LTEM 2.5 show that the extra foetuses scanned varied from 13-60%. This highlights the need to determine the responsiveness of your own flock. The lifetimewool on-farm demonstration sites in 2005 had an average response of about 24 extra foetuses scanned for each additional CS at joining.

## LTEM 2.5

### Farmer case studies - ewe condition score at joining and scanning performance

Farm/location	Low CS (< 2.7)	High CS (> 3.3)	Difference
Skipton	112	164	+ 52
Edenhope (maidens)	74	112	+ 38
Ararat	124	149	+ 25
Edenhope	78	106	+ 28
Edenhope	110	130	+ 20
Ararat	132	147	+ 15
Dunkeld	92	103	+ 11

### Length of Joining

Joining duration is the number of days that ewes are exposed to rams. Ewes cycle every 17 days. It is recommended that joining duration for flocks lambing in winter/spring be no longer than 34 days (2 cycles).

Ewes joined in prior to January 1<sup>st</sup> should be teased (14days) prior to joining with rams for 34 days.

Extended joining periods (>34 days) typically results in less than 10% more ewes conceiving and produce only 2-4% more lambs that reach 12 months of age. This is due to the poor rate of survival to 12 months of age for late born lambs. (LTEM 2.7)

