

# Magnificent Maidens

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Maiden ewes represent a large part of your ewe flock, at an average of  $\approx 30\%$  of breeding ewes. They are your best genetics, however getting good reproductive outcomes from maiden ewes remains a challenge for many producers. The traditional maiden ewe is one that goes to the ram for the first time at 19 months of age. However, in a maternal composite, first-cross ewe or shedding ewe-based system it is more likely to be a ewe joined at 7-9 months of age. The principles are the same for whichever of these two classes you are working with.

## The size of the gap

The difference between the reproductive rate of maidens and their older counterparts is usually around 20%. This can be considerably higher in some cases. The aim of management of maiden ewes is to close the gap between their performance and that of the older ewes. Research into the reproductive performance of ewes has largely focussed on mature ewes. There has been an increased focus on ewe lambs more recently, however limited work has investigated the reproductive performance of traditional maidens joined at 19 months of age.

## The Magnificent Maidens Producer Demonstration Site (PDS)

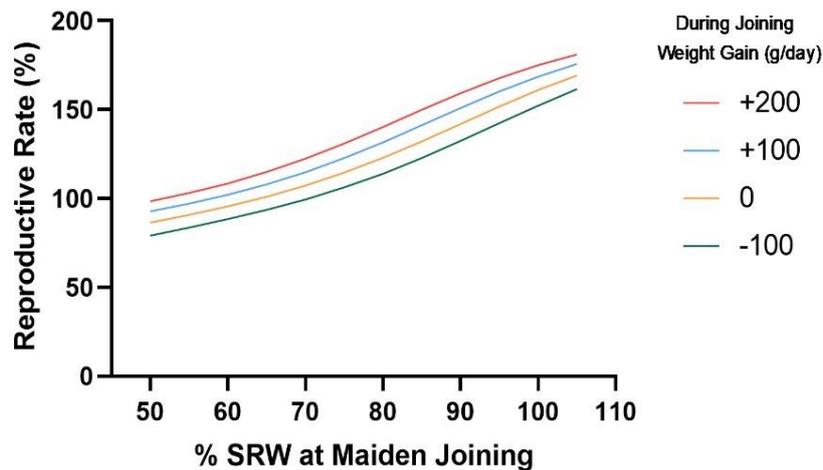
With the valued support of MLA, we are running a PDS project around the country to help understand and demonstrate the key factors that are required for achieving successful reproductive outcomes from maiden ewes joined at 19 months of age. Each host property involves two groups of at least 200 maiden ewes. One group of ewes is allocated to 'normal' treatment i.e. fed as per traditional management for maidens at the farm and the second group is allocated to 'best-bet' management, where ewes are fed 30% greater energy and protein than the 'normal' group. The 'best-bet' management group aims to demonstrate the value of adopting current best-practice management for maiden ewes. Data including weights and condition scores at key stages of the reproductive cycle plus pregnancy scanning results are collected until ewes are at least 2.5 years old.

## Hitting targets at joining

The current 'best-guess' targets are to hit standard reference weight (SRW) by the time the rams go in. If you don't know what the SRW is for your flock, you can calculate it using the tool available [here](#).

Preliminary data analysis from the Magnificent Maidens PDS sites found that reproductive rate increased by an average of 2.2% for every 1kg increase in weight

at joining. This aligns with previous research using Merinos. Data from the PDS sites also showed that reproductive rate increased by an average of 7.3% for every 100g/day increase in weight gain during joining. Preliminary economic analysis showed that improvements in joining weight could be profitable when feed supply was less than \$0.03/ME. These findings suggest that you should look to increase ewe weight at joining when feed is cheap to maximise the reproductive benefit. Also aim to increase weight gain during joining to increase reproductive rates.



Some key points to reaching weight targets at joining:

1. Know what your target is – have an actual weight you are aiming to reach.
2. Graph it out, starting at a birthweight of 4 to 6 kg, depending on your genotype, and ending with your target weight at joining. Graphing it out helps you to think about when it is going to be easy to put weight on and when it is going to be hard. This allows you to set sub-targets and monitor your progress.
3. Monitor progress against your target by weighing 50 sheep regularly. Regular monitoring enables early action to be taken if weight gains are not reaching targets, for example if stubbles are not providing as much nutrition as thought. It also enables animal health issues such as worm burdens or flystrike to be treated promptly.
4. Know what they need – doing a regular feed budget and ensuring paddock or supplementary feed is meeting energy requirements is a key strategy to meeting your weight target at joining. You can find feed budget tables [here](#).

### **A short joining allows precision management**

Most ewes will conceive within two cycles (i.e. 35 days or 5 weeks).

Joining for longer periods is generally not recommended because the extra 2-4% lambs conceived complicate management due to delays in marking and

weaning, which can increase worm burdens, generate a greater 'tail' of lambs which have lower weight and are at greater risk of mortality and delay recovery of ewe condition score before the next joining.

If you normally join for longer than 5 weeks, have a think about tightening up how long the rams are in for to allow for precision management of ewes and lambs to boost survival and productivity.

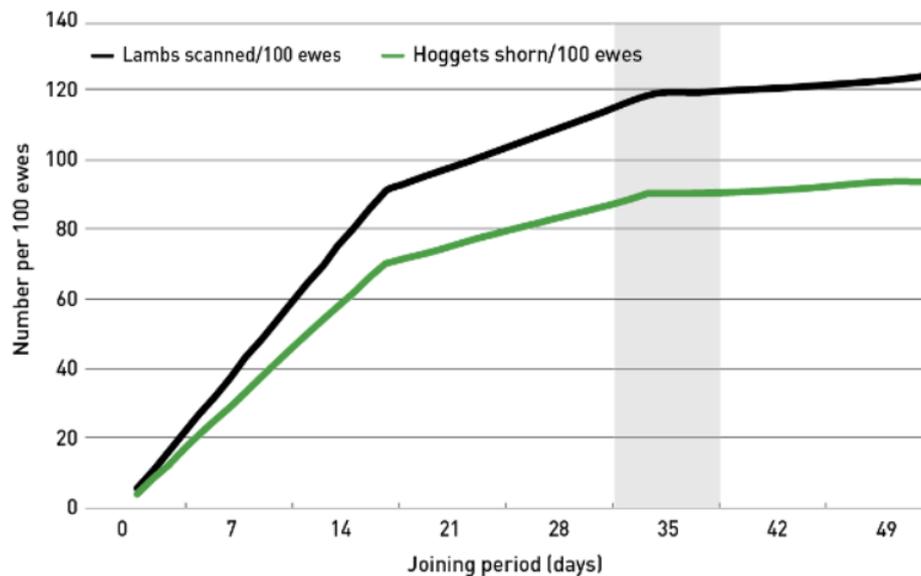


Figure 10.2 Length of joining – few extra lambs after 5 weeks.

Source: LifetimeWool, adapted by AWI

## Project resources

If you haven't already, make sure to check out the 'Magnificent Maidens' space on [The Hub](#). Here you can find recordings from the three-part **online course** held for the project. The course presented the science behind joining maiden ewes plus early results and learnings from the project. You'll also find **case study videos** featuring our PDS host producers. The case study videos discuss how the producers manage their maidens, the gap between performance of maidens and older ewes on their farm, and what they've got out of participating in the PDS project.

The **Head Shepherd podcast** featured Charlie Wooton, who completed his Honours project utilising the Magnificent Maiden's PDS. Charlie's project investigated the impacts of weight and condition score at joining, and weight gain from pre- to post-joining on the reproductive rate of maiden ewes. Tune in and have a listen to the podcast [here](#).

## Upcoming events

Keep an eye out for a general webinar and field days that will be held in early/mid 2025.