



# FACT SHEET

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## MANAGING HOGGETS FROM PRE-MATING THROUGH TO TWO-TOOTHS

Despite the potential advantages of mating hoggets, nationally, only about one third of hoggets are put to the ram. This fact sheet sets out some guidelines for deciding whether to put hoggets to the ram and how to produce extra lambs without sacrificing a ewe's lifetime production.

### KEY POINTS

- Feeding is critical – you cannot overfeed pregnant hoggets.
- Select the correct sires. Genetics – not feeding – is the greatest determinant of lamb birthweight.
- Set monthly liveweight targets for hoggets that are to be mated.
- Monitor liveweights and compare actuals to targets.
- Ensure appropriate animal health plans are in place.
- Legume-based forages are an option to optimise post-lambing growth rates in both lambs and hoggets.
- Consider early weaning to give the hogget more time to recover before being mated as a two-tooth.

### DECIDING WHETHER TO PUT HOGGETS TO THE RAM

Managed correctly, hogget mating has the potential to enhance the productivity and profitability of the future ewe flock. But the inverse is also true. Not all farmers will be able to breed from their hoggets and for those that do, it should be a flexible policy based on feed availability.

Only consider mating hoggets when:

- The main flock is performing well (i.e. over 120% lambing) and you expect better returns from lambing hoggets than from putting more feed and labour into the mixed-age ewes.

- You are confident that you will be able to feed lambing hoggets well throughout pregnancy and lactation to wean good lambs and ensure hoggets can still achieve target weights at two-tooth mating. This means she needs to gain around 20 kg – or 135 g/day throughout her pregnancy. Given the conceptus (the placenta, foetus and fluids) weighs 10 kg, a hogget should weigh a minimum of 60 kg the day before she lambs and 50 kg the day after.
- Hoggets are up to target weight at mating (e.g. a minimum of 40 kg or 65 per cent of mature weight. This 65 per cent is the individual benchmark, not the mob average. Weigh each hogget and only mate those above target weight). Setting this target will minimise the chances of detrimentally affecting two-tooth performance. The heavier the ewe lamb at mating, the less pressure on winter feed resources to reach post-lambing target weights.

### BENEFITS AND RISKS

Benefits are:

- Higher 'return on feed consumed'. More lambs are produced from the same number of sheep.
- Greater culling power.
- Faster generation turnover so an opportunity for slightly faster genetic progress – this needs to be weighed up against selection of proven ewes to breed from, and the liveweight of replacements kept from hoggets. Genetics are not the sole driver of lifetime performance.
- Uses excess spring feed.
- Better fed hoggets (as a result of a decision to mate) can boost lifetime performance.

Risks/costs are:

- A mated and lambing hogget needs around 100 kg of extra dry matter over a one-year period compared with an unmated hogget.
- More labour required.
- In-lamb hoggets reduce management options for coping with feed shortages.
- Higher hogget death rates.

## WILL IT AFFECT HER TWO-TOOTH PERFORMANCE?

If well fed, two-tooth performance should not be affected. In a controlled study at Massey University those that lambed as a hogget were 6 kg lighter at two-tooth breeding when they were not preferentially fed. This resulted in a 12 per cent penalty on two-tooth lamb weaning weights, although this penalty was not permanent and as a four-tooth, weaning- weights did not differ. Other controlled studies have shown either no effect or a positive effect on two-tooth breeding performance when two-tooths that lamb as a hogget are of a similar liveweight to those that did not lamb. Combined, these results highlight the importance of adequate feeding in pregnancy and lactation.

If liveweight is not greatly affected by hogget breeding, then lifetime performance of a ewe can be increased by up to 20 per cent.

To be a top performer, set and meet liveweight targets. Monitoring of ewe lambs should begin from when they themselves are weaned until they are bred as hoggets. A suggestion is that hoggets should be at least 40 kg – or 65 per-cent of mature weight by mating to ensure:

- They have attained puberty and will be cycling
- They are grown out enough to lamb and re-breed successfully.

Underpinning these targets are some reproductive management targets.

1. Weigh all hoggets. If you are uncertain about the ability to feed the whole mob well, set a minimum weight limit and draft off and only breed the heavier individuals.
2. Introduce teaser rams 17 days before entire ram. The teasers will induce oestrus so more hoggets will be mated in the first 17 days of breeding. Teaser ram to hogget ratio should be a minimum of 1:100 as studies show that fewer teasers are less effective.
3. Mate for a maximum of 34 days.
4. Ensure mature ram:hogget ratio of 1:55.

**Table A: Meet liveweight targets - an example.**

Age	When	Hogget live-weight	Min growth rates (grams/head/day)
3 months	Weaning	28 kg	
7 months	To first mating (65% mature LW)	40 kg	120 g
12 months	To end pregnancy	60 kg	100 g
15 months	To weaning first lamb	At least 55 kg	135 g
18 months	To 2nd mating	65 kg	150 g

## WEANING TO MATING

Feed as a growing animal. A suggested target is to grow the hogget at around 120 g/hd/day from a 28 kg weaning weight to 40 kg mating weight in four months. For example, born 15th September, weaned 15th December, mated 15th April.

## MATING

There is a positive impact of liveweight and body condition score on reproductive performance. Target a minimum body condition score of 2.5. During tugging, hoggets should be gaining weight to get the best flushing effect.

## SHEARING

Avoid shearing or other significant events in the four weeks before breeding. Research shows that mid-pregnancy shearing has been found to increase lamb birthweight of singletons but not multiples. This did not increase lamb survival in relatively mild October lambing conditions.

## MATING TO PRE-LAMB

Throughout pregnancy, hoggets should be gaining at least 135 g/d. This will improve placental development, lamb birth weight, vigour and milk production and allow the young ewe to grow herself.

Poor levels of feeding throughout pregnancy will increase the risk of birth difficulty, lamb losses and lightweight two-tooths.

## PRE LAMBING

Research results indicate that separating singleton and multiple-bearing ewes for lambing increases lambing percentage. The chance of a hogget successfully rearing her lamb is positively related to her weight at set-stocking.

## LAMBING

Debate exists whether intervention at lambing actually improves lamb survival rates. Avoid unnecessary interference with ewe:lamb bonding immediately after birth. If intervention is to be used, hoggets need to be adapted to the presence of the farmer in the lambing paddock.

## LACTATION

The hogget needs to be gaining liveweight during lactation and after weaning her lamb(s). High quality pasture, above 1200 kg DM/ha, is needed. Alternatively, legume-based forages can be used, including Lucerne and clover/herb mixes.



### **WEANING TO SECOND MATING**

As hoggets have less time between weaning and breeding at a two-tooth than mixed-aged ewes, consider weaning lambs at eight to ten weeks of age if lambs are 20 kg or more. Hoggets under 50 kg at weaning will have difficulty reaching 60 kg by two-tooth mating if fed poor quality summer pasture. Gaining 10 kg over three to four months requires a growth rate of at least 120 g/head/day. If faster growth is needed to reach the target two-tooth mating weight them a summer forage crop should be considered.

### **LAMB AT THE RIGHT TIME**

The target of 100 lambs weaned per 110 hoggets mated will be most easily and profitability met if hoggets lamb in mid to late spring rather than early spring. This means that the hogget will:

- Be consuming surplus feed.
- Be on a rising plane of nutrition to meet her condition score target for re-mating as a two-tooth.
- Not be competing for feed with other higher earning stock (e.g. MA ewes).

Alternative legume-based swards are more likely to be growing and therefore suitable for use.

### **ANIMAL HEALTH**

Vaccinate with Toxovax (once) and Campylovexin (twice) prior to mating. Consider a pre-lamb vaccination for clostridial diseases, iodine and/or selenium supplement if environmental conditions require it and a pre-lamb anthelmintic if faecal egg counts are high. The use of fertility drugs, e.g. Androvax, is not recommended for hoggets.

Any animal health issues e.g. facial eczema, need to be dealt with as these will negatively impact on hogget lambing percentage.

### **BREED EFFECTS**

Results from a large survey indicate that in comparison to straight-bred Romneys, composites containing Finn or East Friesian genetics display a higher conception rate, twinning rate and lambing rate. In addition, the Elite Lamb project showed that Finn and East Friesian-crosses start cycling earlier and have a longer breeding season than most other breeds.

In a controlled study, only 76 per cent of the Romney hoggets showed oestrus during mating, while 100 per cent of the ½ Finn-½ Romney and ½ East Friesian-½ Romney did. The Finn-cross averaged five cycles between March and September, the Poll Dorset-cross 3.1 while the Romneys averaged 2.3. This means that the timing of hogget mating when using traditional breeds is important.

### **RAM**

A mature ram to ewe hogget ratio of at least 1:55 is required. This shows the importance of having enough ram power with hoggets as they are 'shy' breeders. Some thought should also be given to choice of sire. Sires from larger breeds should be avoided as these might increase the chance of dystocia. Use experienced rams over hoggets and run them in small, easy-contour paddocks. Hogget rams are less effective than either two-tooth or mature rams with ewe hoggets.

## ACKNOWLEDGEMENTS AND MORE INFORMATION

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## B+LNZ RESOURCES

 [www.knowledgehub.co.nz](http://www.knowledgehub.co.nz)

- Keyword search: 'hogget lambing' to display the full suite of resources available to view/download.

## PDF DOWNLOADS

- Lactation, lamb growth and the lamb weaning decision fact sheet
- Growing great lambs resource book

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