FACTSHEET

Ewe wastage

Within a breeding flock, "ewe wastage" describes ewe loss before a ewe is old enough to be culled for age. Ewe wastage is premature culling for defects, death or going missing on farm. Most on-farm deaths occur over the lambing period and many are preventable.

Ewe wastage has a significant economic cost to farmers, because:

- More young ewes must be kept as replacements and are therefore not available for sale,
- Young ewes are generally less productive than mature ewes, and
- Keeping proportionately more replacements means more ewes must go to a maternal-breed sire and fewer to a terminal sire.

This factsheet outlines the steps farmers can take to reduce ewe wastage and guidance on how much is viable to spend addressing ewe deaths.

Information is predominantly based on a 2021/22 joint study undertaken by Massey and Lincoln Universities on 38 sheep farms (19 in the North Island, 19 in the South Island), involving more than 155,000 ewes. Farmers were interviewed about ewe wastage and their flock numbers were monitored for a year.

Reasons for culling ewes

Virtually all the farmers interviewed had a hard-and-fast policy of culling:

- Mixed-age and two-tooth ewes that failed to get in lamb, and
- Ewes of any age with bearings.

Other reasons that farmers culled ewes included:

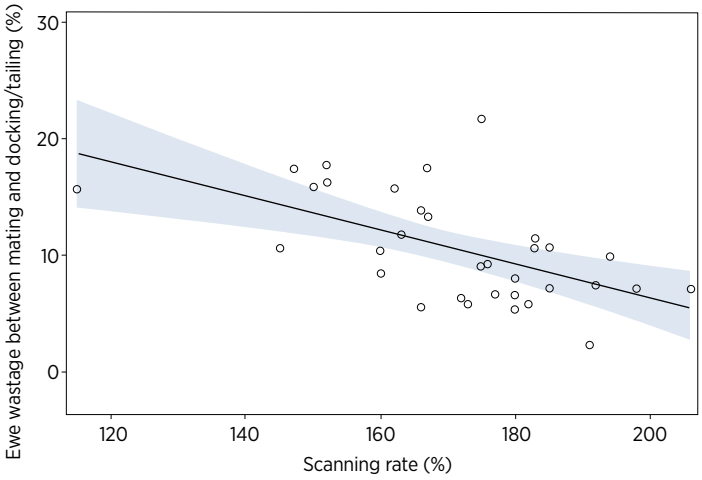
- Lambed, but failed to raise a lamb
- Udder defects
- Age
- Teeth or feet in poor condition
- Poor body condition
- Appearance or conformational issues – actual or perceived.

There was variation between farmers in their approaches to culling for these reasons.

Common on-farm factors affecting ewe wastage

- Flocks with high ewe pregnancy scanning percentages had lower ewe wastage. There were fewer non-pregnant ewes to cull and the flocks also tended to experience fewer ewe deaths.
- Hilly farms (i.e. with less than 25% flat land) had higher wastage.

Ewe wastage (via culling and death on farm) from mating to docking/tailing vs scanning percentage

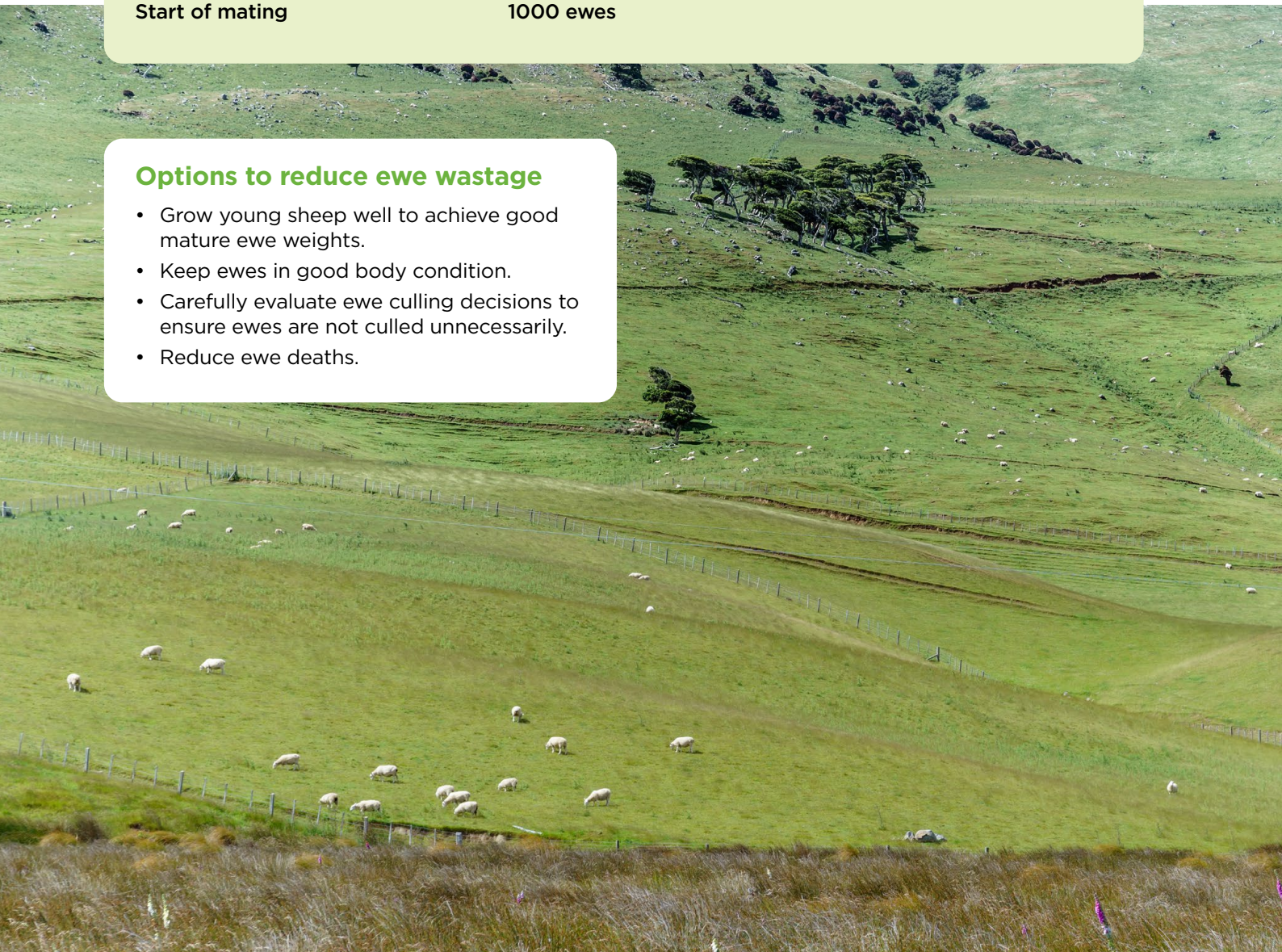


Factsheet 375. June 2025

Ewe wastage: timing of culling and deaths over a production year

The flow chart below shows a hypothetical breeding ewe flock of 1000 ewes across a production year. It is based on flock-average data from a 2021/22 Massey/Lincoln study of 34 New Zealand flocks.

Key seasonal times	Ewe numbers
Start of mating	1000 ewes
	↓
Pregnancy scanning	- 33 ewes – culled as non-pregnant - 17 ewes – culled for non-reproductive reasons - 18 ewes – dead/missing
	↓
Pre-lambing (set stocking)	932 ewes
	↓
	- 37 ewes – dead/missing
	↓
Docking/tailing	895 ewes
	↓
	- 22 ewes – culled wet-dries & dead/missing
	↓
Weaning	- 165 ewes – culled for age, poor teeth, udder defects, etc
	↓
Post weaning	708 ewes
	↓
	+292 replacements enter flock
	↓
Start of mating	1000 ewes



Options to reduce ewe wastage

- Grow young sheep well to achieve good mature ewe weights.
- Keep ewes in good body condition.
- Carefully evaluate ewe culling decisions to ensure ewes are not culled unnecessarily.
- Reduce ewe deaths.

REDUCING EWE DEATHS

On average, two thirds of the dead and/or missing ewes numbers occurred over lambing – between set stocking for lambing and docking/tailing. If you have more than 4-5% of your ewes dying or going missing annually, it should be possible to reduce this by following the steps below.

STEP 1

RECORD DEAD OR MISSING EWES

Accurately track ewe numbers throughout the year (such as at weaning, start of mating, pregnancy scanning, set-stocking, docking/tailing and shearing) and identify:

1. When in the season are ewes dying or going missing?
2. How many ewes are dying/missing at each point of the season?
3. If possible, record:
   a. Cause of death (such as dystocia, septicemia or cast), and
   b. Dead ewes' age and body condition.

STEP 2

DETERMINE THE BEST STRATEGIES TO REDUCE DEATHS

The timing and causes of death will vary from farm to farm. The data gathered during Step 1 will help you determine which strategies will be most effective for your operation. However, variations aside, the three main risk factors for ewe deaths and generic strategies to reduce them are:

1. Thin ewes (Body Condition Score (BCS) <3)

- Aim for ewes to always be BCS 3 or above.
- Ideally BCS all ewes at scanning, weaning and pre-mating.
- Separate and preferentially feed (or cull) light ewes.

2. Older ewes (5+ years old)

- Ensure older ewes are in good BCS and have good teeth.
- Consider keeping them as a separate mob and preferentially feeding/treating.

3. Lambing time

- In the weeks leading up to lambing, do a cast beat.
- During lambing, consider whether regular observation of ewes or a lambing beat is viable on your farm.

STEP 3

HOW MUCH CAN YOU SPEND?

The following economic modeling is based on ewe deaths of at least 4% annually and uses 2023/24 pricing data.

The dollar figures represent the amount you can afford to spend and breakeven on your investment. I.e. If you have 3000 ewes and spend $3360 to reduce ewe deaths by 20% (see first example below), you can expect to at least breakeven, and likely make a profit on the investment. This will be through increased lamb sales – both from the ewes being alive to produce a lamb to weaning, and because fewer replacement ewe lambs will need to be retained and will therefore be available for sale at weaning.

To reduce deaths by 20%:

- Multiply your total number of ewes by $1.12 to $2.66.
- E.g. If you have 3000 ewes, to reduce ewe deaths from 7% to 5.6%, you can afford to invest $3360-$7980.

To reduce deaths by 50%:

- Multiply your total number of ewes by $2.89 to $6.67.
- E.g. If you have 3000 ewes, to reduce ewe deaths from 8% to 4%, you can afford to invest $8670-$20,010.

Rule of thumb: The higher your ewe death percentage, the further towards the top end of the $ range you can afford to spend.

Conclusion

Ewe wastage is mainly impacted by management practices and most deaths occur over the lambing period.

Farmers with ewe deaths of more than 4% should record the timing and numbers of ewe deaths throughout the season and identify strategies effective for their system to reduce them. The three key management strategies are targeting thin ewes, targeting older ewes, and focusing on lambing time.

Economic modelling provides guidance on how much to spend addressing ewe deaths.

RESOURCES

Article: Study identifies ewe wastage numbers

www.beeflambnz.com/news/study-identifies-ewe-wastage-numbers

Podcast: Tackling ewe wastage

www.headshepherd.com/1087265/episodes/14832282-tackling-ewe-wastage-with-anne-ridler?t=0

ACKNOWLEDGEMENTS

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Note: Each farm's sheep flock cull and death numbers will differ from the numbers in this report. The key messages in this Factsheet relate to the critical times to watch out for wastage and options to mitigate.