

# Factsheet:

## Sustainable Sheep Systems -

### When to Wean?

#### Summary

- Weaning date is a key management tool as it can be used to influence lamb growth rates, ewe body condition score (BCS) and allows more strategic grazing resource allocation.
- Evidence from a variety of sources supports that 12-13 weeks (84-91 days) is the optimal weaning age on grass based systems.
- After 14 weeks lamb milk intakes are negligible and so lambs are simply competing with ewes for the best feed and will do better weaned where they can get priority pasture.
- Monitoring of ewe, lamb and pasture performance is essential in influencing weaning decisions with earlier weaning (~10 weeks) beneficial in situations where lamb performance, ewe BCS, pasture quantity or quality is poor or depleting.
- For a flock that started lambing on 10<sup>th</sup> April 2022 with an average birth date of 20<sup>th</sup> April (+10 days) then 13 week weaning would be the 20<sup>th</sup> of July. Considerations on when to wean should, however, start as early as 15<sup>th</sup> June (8 weeks).



*Photo credit: Neil McGowan*

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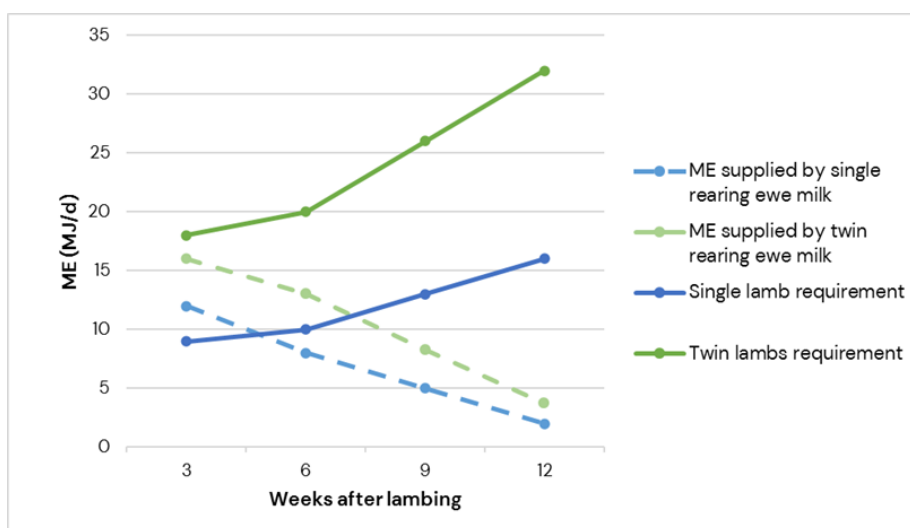
## Shifting from a reliance on milk, to a reliance on pasture

In the first 4 weeks of life, lambs are almost solely dependent on ewe milk supply. Milk yield peaks at 2-3 weeks for twin rearing ewes and 3-5 weeks for singles. 50% of twin and 40% of single ewe milk production occurs in the first 4 weeks of lactation.

Shown in the Figure 1 below, lambs then begin to increasingly rely on pasture, or supplements, to meet their nutritional needs for optimal performance with twin lambs consuming ~35% of their energy requirements as pasture, or supplementary feed, by 6 weeks. This is a greater reliance than single lambs at 22%.

Milk yields peak earlier and decline faster in twin rearing ewes compared to singles but by 12 weeks the difference in yield is marginal. Shown in Figure 1, milks contribution to lamb intakes by this point is negligible with lambs simply competing with ewes for the best pasture.

**Figure 1. Energy requirements of single and twin reared lambs in relation to dam milk supply\***



\*Theoretical energy requirements for lambs growing at 250g/day. Adapted from B+LNZ 400+ Guide

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## Weaning decisions

Evidence from a variety of sources including the Sheep KPI project and that of Beef and Lamb New Zealand (B+LNZ) supports that 12-13 weeks (84-91 days) is the optimal weaning age on grass based systems.

Consider weaning lambs from 10 weeks. The ability to do so is a key management tool as it can be used to influence lamb growth rates, ewe body condition score (BCS) and allows more strategic grazing resource allocation and utilisation. Consider:

- Ewe body condition score – If ewes are lean (<2.5 BCS) then weaning earlier will provide more time for ewes to regain condition before next tupping.
- Lamb performance – If lambs are growing at less than 200g/d, they may benefit from weaning.
- Pasture quantity - If grass growth is poor, then consider weaning. Once weaned, ewe intakes can be restricted to free up more grass for lambs. This is valuable during drought conditions.
- Pasture quality – If quality has depleted on the grazing platform, then consider weaning. Lambs can be moved to better quality pasture or rotationally grazing on the same ground with ewes or cows cleaning up residuals.
- Lambed hogg recovery – these ewes need to not only regain BCS but also need time and priority grazing to achieve target weight (85% of mature weight) by 2<sup>nd</sup> mating for optimal performance (64kg for 75kg mature weight ewe).

## Monitoring lamb performance

Monitor lamb growth rates. Assess whether lambs achieved an 8 week target of >20kg (min 285g/day, target >320g/d) and whether they are on target to achieve 30kg (target 240g/d – 300g/d) by 13 weeks (90 days).

If lamb growth rates are below 200g/d then consider weaning, ideally over 25kgs. Lambs can then be provided with priority grazing to promote performance.

The sheep KPI project has highlighted the importance of 8 week weights as a predictor of lamb performance to weaning. Lambs that do not reach 85% (17kg) of the 20kg target weight (eq. 285g/day) continue to struggle up to and beyond weaning. Weaning these light lambs at 8 weeks and introducing them to high quality feed has shown positive results.

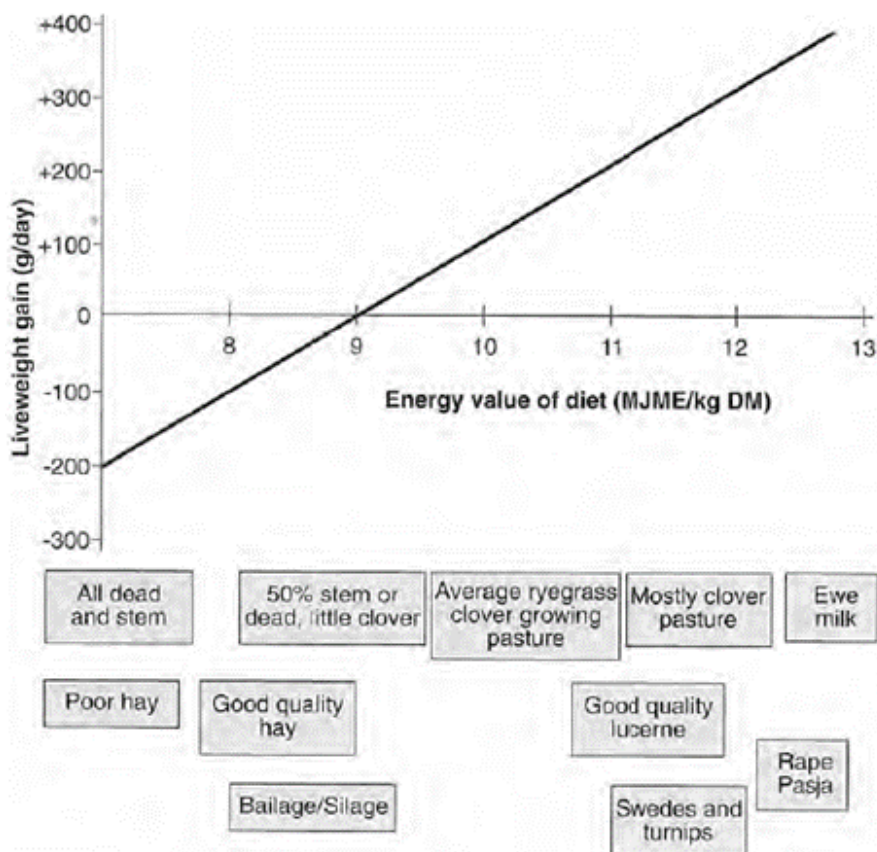
It is important to note that weaning check is likely to be more pronounced for early weaning at 8-10 weeks, especially if pasture quality isn't optimal. Having high quality pasture, or supplementary feeding, for lambs to go on should be top priority.

## Competition for pasture quality in the sward

Shown in Figure 2 below, energy value of the diet drives lamb growth rates. Meaning it is essential to have green leafy pasture in front of lambs at all times to optimise performance.

Pasture quality generally starts to decline as summer progresses with a build-up of stem and dead material in the sward. Shifting left on the bottom axis of the graph. This is somewhat inevitable in set stocked systems. In rotational systems targeting residuals of 4-5cm resets pasture quality.

**Figure 2. Liveweight gain of a 30kg lamb on differing feed energy values**





The issue, however, is that in both systems un-weaned lambs will have to consume their share of the poorer quality pasture (<6cm) in the base of the sward meaning lamb performance will not be optimised. As such lambs would be better off weaned where they can be given priority grazing, be that the best quality fields or allowed to be more selective on the same block.

Aim to allow lambs to only eat the top third of pasture so that they can be selective consuming only the best pasture (ideally 11+ ME). To graze lower than 6cm will impact performance. Leader follower systems where cows or dry ewes follow lambs work well as lamb performance can be promoted whilst still achieving residuals to maintain pasture quality.

## Competition for pasture quantity

Shown in Table 1 below, once weaned, ewes can be taken from a set stocked system where they consume well above maintenance requirements on to a rotational system where intake can be rationed effectively. This allows substantially improved pasture utilisation which is particularly valuable in dry summers where pasture is limiting. Ewes can be tightened up and lambs given priority.

On farms with limited quality pasture this also means that fit ewes can be tightened up on poorer pasture to free up more of the better pasture for lamb finishing.

**Table 1. Rotational grazing facilitates pasture allocation and improved utilisation**

Grazing system	Ewe intake - % body weight/d	Ewe intake - kgDM/day	Pasture utilisation (%)	Ewe allocation – kgDM/d	Feed required
Rotational	2	1.4	70	2	
Set stocking	4 (to appetite)	2.8	50 (50% wasted)	5.6	2.8 x more

*\*70kg ewe at BCS 3.5 fed maintenance.*

B+L NZ notes that under severe drought conditions, weaning lambs as early as 6 weeks (provided they are over 16kg) is beneficial. As, once weaned, lambs can be fed full allocation and ewes restricted. Ensuring lambs get full allocation is worth 4kg in weaning weight compared with restricted feeding (giving 20-30% less than full appetite) in feed from 9-12 weeks or 7kg if restricted from 6-12 weeks.

Continue to monitor pasture covers and ewe BCS. At some point in late summer / autumn it may be important to reverse priority grazing in favour of ewes to ensure target BCS is met (~8 weeks to gain 1 BCS) and there are sufficient covers for tugging.



*Photo credit: Daniel Stout*

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## Late weaning

If everything is going right with lambs achieving target growth rates, ewes are fit and pasture quality and quantity in front of them is good then consider delaying weaning to 14 weeks.

One additional consideration would be to delay weaning of well grown singles to 16 weeks so to increase sales of lambs off dam. This avoids weaning check for many lambs. Lambs with adequate fat cover can be drafted straight for sale at over 38kg pre-weaning with greater killing out percentages often observed.

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## Weaning management

Lambs are fragile at this stage. Weaning causes a great deal of stress for lambs which in turn impacts lamb growth rates 'weaning check'. This is often further compounded with lambs being moved to new environments and diets. Even a change of grass quality will need adapting to.

Best practice:

- Keep lambs in the same field. Move the ewes away.
- Avoid in dietary changes immediately after weaning.
- Introduce lambs to any new feeds a week pre-weaning.
- Don't vaccinate or drench on the day of weaning.

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## Author

Daniel Stout

SAC Agricultural Consultant

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## References

Beef + Lamb NZ, 400+ Guide (2010)

SAC Consulting GrazeUp, Forage First Sheep Systems (2021)

AHDB, Feeding the ewe (2018)

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Visit the FAS Sustainable Sheep Systems webpage to watch the webinar and access the other webinars, technical notes and podcasts produced through the series: [Sustainable Sheep Systems | Helping farmers in Scotland | Farm Advisory Service \(fas.scot\)](#)



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