

PDS Updates webinar Q&A: Optimising weaning age – Insights and outcomes from the PDS

Thursday 30 April 2026

This Q&A document supports the 'Optimising weaning age – insights and outcomes from the PDS' webinar, part of the national MLA Producer Demonstration Sites (PDS) Updates webinar series showcasing practical, producer-led projects delivering productivity and sustainability outcome.

The webinar presented on-farm findings and learnings from a Producer Demonstration Site project delivered in Esperance, Western Australia, through the ASHEEP & BEEF producer group. The project explored early weaning strategies in beef cattle systems, focusing on how altering weaning age can influence feed utilisation, cow condition, calf performance, and overall system efficiency under variable seasonal conditions.

The session highlighted key considerations for early weaning, including triggers for decision-making such as seasonal conditions, feed availability, and cow body condition, as well as practical management approaches for supporting early weaned calves through nutrition, supplementation and pasture allocation. Findings demonstrated that early weaning has the potential to improve cow body condition and reduce feed demand, while also identifying potential trade-offs in calf growth where nutritional management is insufficient.

This document includes responses to questions raised during the webinar and additional questions submitted by participants. The webinar was presented by Dr Enoch Bergman, veterinarian from Swan Veterinary Services, with contributions from lead producer Nick of Pasco Farms, who shared practical experiences and insights from implementing early weaning strategies within their production systems.

The responses are provided by a registered veterinarian and reflect professional observations from specific Producer Demonstration Sites and regional contexts. They are intended to inform discussion rather than replace herd-specific veterinary advice.

Q. We have had a number of twin calves this year. Does this equal or double the amount of energy and milk the cow must produce to feed both calves?

A. Not exactly. Findings from the PDS and broader industry observations show that while cows will increase milk production in response to twins, the energy and milk requirement is not double that of a single calf.

Twin calves are typically lighter, meaning their combined energy demand is less than two single calves. However, cows rearing twins are under greater nutritional pressure and are more likely to lose body condition, particularly when feed availability is limited.

This highlights the importance of monitoring cow condition in twin-rearing animals and adjusting management where required to maintain performance.

Q. What were the average calf weights and weaning age for the traditional weaning time?

A. Data presented from the PDS indicated that calves weaned at the traditional timing (i.e. the producers' standard weaning date) averaged approximately 300kg at weaning.

The traditional weaning age itself was not fixed across the group, as each participating producer nominated their usual weaning date based on their own system. Within the trial, this producer-defined timing formed the baseline, with early weaning implemented approximately 60 days earlier than this point.

As a result, traditional weaning ages varied between properties but reflected typical, established weaning practices for each enterprise, rather than a single standardised age.

Q. Does early weaning tend to benefit cow condition but reduce calf weights, with earlier weaned calves catching up later?

A. Findings from the Esperance PDS show that early weaning consistently improved cow condition and liveweight, as removing the calf reduced nutritional demand on the cow.

Early weaned calves were consistently lighter than later weaned calves at weaning, and in most cases within the PDS, this weight difference remained at later measurements. However, calves maintained adequate growth and condition when managed on a high plane of nutrition post-weaning, supporting overall performance.

Both PDS observations and broader industry evidence suggest that, under good nutritional management, earlier weaned calves can perform well, although full catch-up in weight is not guaranteed in all systems.

Additional research also indicates potential longer-term reproductive benefits, with some evidence of improved first-joining conception rates in heifers weaned earlier, likely linked to better management of body condition.

Overall, the PDS demonstrates a clear benefit to cow condition, while calf outcomes depend on post-weaning nutrition and may involve a trade-off in liveweight.

Q. What was the average weight of the early weaned calves?

A. Data presented from the PDS showed early weaned calves averaged approximately 243kg at weaning, compared to around 300kg for later weaned calves.

The difference reflects the younger age at weaning for the early weaned group. However, PDS observations highlighted that early weaned calves continued to gain weight post-weaning when managed appropriately, demonstrating that earlier weaning can be effective if nutrition is maintained.

Q. Is there any data or thoughts on calf eating quality? For example: The early-weaned dams with better weight gain may result in higher marbling potential of next year's calves due to improved in-utero nutrition?

A. The PDS did not directly measure eating quality or carcass traits such as marbling, so no project-specific data is available to confirm this relationship.

However, Enoch Bergman noted that there is existing evidence, particularly from Wagyu production systems, demonstrating the importance of whole-of-life nutrition, where any check in growth can negatively impact final marbling outcomes. On that basis, the concept that improved nutrition (including during gestation) could influence marbling potential is biologically plausible, although not specifically validated within this project.

Within the PDS, calves in both early-weaned and traditionally managed groups generally continued to grow, although early-weaned calves typically did so at a slower rate than those remaining on their dams. It remains unclear whether this would have any measurable impact on intramuscular fat development.

From a cow performance perspective, early weaning was observed to provide clear benefits. Cows that had calves removed early maintained and improved body condition earlier and for longer into the season, which is consistent with broader research linking body condition score at calving to improved reproductive performance. While the current dataset has not yet demonstrated a strong difference in subsequent conception, there is strong supporting evidence that improved maternal condition should contribute positively over time.

In summary, while there is no direct evidence from this study on eating quality outcomes, the observed improvements in cow condition and the broader understanding of nutrition's role in lifetime performance suggest there is a theoretical basis for potential benefits, warranting further investigation.

Q. Were there any setbacks with health, such as diarrhoea, pink eye or pneumonia? How was that managed?

A. No significant health setbacks were reported throughout the project. Across all participating properties, calves remained in good health during both the weaning and post-weaning periods, with no notable incidences of diarrhoea, pink eye, pneumonia or other health issues observed.

This outcome was attributed to the consistent use of established yard weaning protocols, which were already well embedded across the producer group and widely practiced within the region.

Management approaches were uniform and included:

- holding calves in the yards for 5–7 days post-weaning

- feeding high-quality hay
- providing booster vaccinations and trace elements
- transitioning calves onto high-quality conserved feed after yard weaning.

Importantly, these same protocols were applied to both the early-weaned calves and the traditionally weaned group (weaned approximately 60 days later), with no observable differences in health outcomes between the two mobs.

It was also noted that the project did not push weaning weights to extreme lows (e.g. 130–150kg as sometimes demonstrated elsewhere). Most calves were weaned at moderate weights, although in some cases early weaning did occur at relatively lighter weights (e.g. around 187kg), providing useful insights into how far systems could be pushed without compromising health. Even under these conditions, no negative impacts on calf health were identified.

Overall, the findings reinforce that when supported by sound nutrition and standard animal health practices, early weaning can be implemented without increased health risk to calves.

Q. What were the lightest weaning weights achieved, and in drought conditions, how early is too early to wean (in terms of age or weight thresholds)?

A. Within the PDS, early weaning was generally undertaken at moderate weights, rather than at extreme low thresholds. The lightest average weaning weight observed in the trial was approximately 187kg, which was considered to be pushing the lower end of what producers were comfortable implementing under commercial conditions. Most producers were already weaning relatively early compared to broader industry averages, so the trial deliberately extended this further to test system limits.

Outside of the project, Enoch Bergman noted that research and practical experience – particularly from drought conditions in Queensland and the United States – shows that calves can be weaned much earlier and lighter in emergency situations. In severe droughts, calves have been successfully weaned as early as 6 weeks of age, at very low bodyweights.

However, this approach requires intensive nutritional management and is considered a last-resort strategy. Key considerations include:

- providing highly digestible rations, particularly with high protein levels (around 17–18%)
- ensuring adequate energy (carbohydrate) intake
- close monitoring and active management to maintain growth and health.

Early weaning at very low weights is typically driven by the need to protect cow condition when feed resources are critically limited. Removing the calf reduces nutritional demand on the cow, helping prevent excessive weight loss and reducing the risk of both cow and calf welfare declines. Without intervention, cows may naturally wean calves under severe stress, often resulting in poorer outcomes for both animals if calves are not subsequently managed.

In summary:

- Commercial PDS conditions: Early weaning successfully implemented down to ~187kg, with no adverse health impacts.
- Drought/emergency scenarios: Weaning can occur as early as ~6 weeks, but only with high-input nutritional support.
- Key threshold for success: Not just weight or age, but the ability to provide adequate nutrition and management post-weaning.

This reinforces that while very early weaning is possible, its success depends heavily on the capacity to support calves nutritionally, making it a strategic tool rather than a standard practice.

Q. Was the joining time the same across the sites?

A. No, joining periods varied between producers, reflecting individual management systems.

However, there were some common trends across the group:

- most producers operated a 9–10 week joining period for cows
- heifers were typically joined for around six weeks, with some extending to 6–8 weeks
- in several cases, joining periods were tighter, particularly where producers used fixed-time AI or single cycle programs (e.g. four week joinings).

For the project, many of the animals were first calvers, so the initial joining period was generally around six weeks or tighter.

Overall, while not standardised across sites, joining lengths aligned closely with typical industry practice, with a tendency toward shorter, more controlled joining periods in some herds.

Q. Was creep feeding trialled in the project, and what worked best to trigger rumen development in calves?

A. Creep feeding was not a formal component of the PDS, as the project focused on the impact of early weaning (cow–calf separation) rather than supplementation strategies.

However, it was noted that creep feeding has the potential to play a useful role in acclimatising calves to supplementary feeds prior to early weaning. From a practical perspective, supporting rumen development involves:

- introducing easily digestible energy sources (e.g. grain-based feeds)
- ensuring access to adequate fibre, which supports rumen function
- gradually transitioning diets to avoid digestive upsets.

While some producers may utilise feed additives to manage rumen adaptation, these were not specifically evaluated in this project.

Overall, creep feeding can be a valuable transition tool, particularly where calves will be early weaned onto supplementary diets. However, within this PDS, the primary driver of outcomes was early weaning itself, rather than pre-weaning supplementation.

Q. Did early weaning translate to higher or earlier subsequent pregnancies?

A. This is a longer-term outcome and is still being assessed. At the time of weaning, the next pregnancy is already in utero, so early weaning does not influence that current pregnancy. Any impact would only be seen in subsequent joining periods, meaning there is a long lag before results can be fully evaluated.

Data collection is ongoing across the project, including tracking subsequent pregnancy outcomes and calf performance, however linking that data has taken time and some datasets are still being consolidated. Results are expected to be included in the final report.

While the project has not yet demonstrated a clear effect, it was observed that early weaning helped cows maintain body condition earlier and for longer, which is well understood to support reproductive performance.

A key learning from the PDS was the importance of consistent measurement and data capture. Many producers adopted improved systems such as under-crush scales and electronic ID readers, reinforcing that reliable data is critical to evaluating longer-term impacts like fertility outcomes.

Q. Is there any impact on lactation in the following season with longer dry periods from early weaning?

A. This was not directly measured within the PDS; however, based on producer observations, no negative impacts on subsequent lactation are expected.

Enoch Bergman noted that any effect is likely to be indirect and linked to cow body condition, rather than the extended dry period itself. Early weaning effectively increases the time between lactation cycles (similar to a longer “dry period” in dairy systems), which can be beneficial if it allows cows to recover condition before the next calving.

In practice, the key benefit observed was that cows maintained and rebuilt body condition earlier and for longer, particularly heading into challenging periods (e.g. summer feed gaps). This improved condition at calving is expected to support milk production and overall performance in the following season.

Within the Esperance production system, this was especially evident where cows weaned earlier could take advantage of available late spring feed, resulting in visibly better condition leading into autumn calving.

Overall, while not formally quantified, the indication is that early weaning, by improving body condition and extending recovery time, would be expected to support, rather than negatively impact, subsequent lactation performance.

Q. Were market implications for the animals considered in the project?

A. Market impacts were not formally assessed within the PDS. However, producer observations highlighted some important considerations depending on the production system.

For enterprises that yard wean and sell calves shortly after weaning, early weaning can result in lighter sale weights, with limited opportunity to recover that weight prior to market. In these systems, this may present a downside unless there is capacity to retain and further grow out calves.

Conversely, in operations that background or finish cattle (e.g. grass-finished systems), early weaning was seen as less of a constraint, as producers are able to recover weight post-weaning and capture value later in the production cycle.

It was also noted that, in some cases, earlier weaning across the system may provide producers with greater flexibility to retain calves for longer, particularly if it improves overall feed availability and cow condition.

A further consideration raised was the potential downstream benefit for feedlots, where calves that have had more time to adjust post-weaning may perform better, particularly in relation to respiratory health.

In summary, while not directly measured, the market implications of early weaning are highly system-dependent, with outcomes influenced by whether calves are sold immediately or retained and grown out.

Q. What is the optimum heifer body condition score for mating success?

A. On the standard 1–5 body condition score (BCS) scale, the recommended target for heifers at joining is around BCS 3 (range 2.5–3.5). This reflects heifers in moderate condition—neither too lean nor overly fat.

On the 1–9 scale, this equates to approximately BCS 6–6.5.

Maintaining heifers within this range supports optimal conception rates and reproductive performance, while avoiding the negative impacts associated with animals that are under-conditioned or excessively fat.

Q. Do you have an opinion on the optimal early weaning window, rather than simply weaning 60 days earlier than normal?

A. From a producer perspective (noting this reflects individual experience rather than a specific PDS finding), Enoch Bergman indicated that early weaning is best guided by calf weight and cow condition, rather than a fixed number of days.

In his system, a practical target is to wean calves at approximately 200–275 kg, with a preference to ensure the lighter end of the mob is lifted to around 200 kg before weaning. Tightening the calving window can assist in achieving more uniform weights and simplify management.

Rather than adopting a single “optimal” timing, the key takeaway was that early weaning is highly system-specific. Producers are encouraged to test earlier weaning (e.g. 40–60 days ahead of their normal timing) within their own operation to understand the impacts on performance and management. Access to weighing and data collection was highlighted as critical to making informed decisions.

It was also noted that early weaning may be particularly beneficial for certain groups, including:

- First-calf heifers, which are still growing and more sensitive to nutritional pressure
 - Older or compromised cows (e.g. poor teeth), especially when feed is limited
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Q. If feed availability and cow body condition are both good, is it better to wean early or at the normal time?

A. This ultimately depends on the production system and what you are trying to achieve. From a practical perspective, if there are no feed limitations and cows are in good condition, there may be little advantage in early weaning. In these situations, calves will typically grow better on the cow, and keeping them on longer can maximise individual animal weight gain – particularly where the marketing system rewards heavier sale weights.

However, the benefit of early weaning comes from how the saved resources are utilised. If removing calves earlier allows a business to:

- Improve overall herd efficiency
- Increase stocking rate or total kilograms of beef produced per hectare
- Or better manage feed across the system

then early weaning can still be a valuable tool, even in good seasons.

A key takeaway highlighted was that early weaning only delivers a benefit if the resources it frees up are actively used elsewhere in the system. Without this, there is generally no advantage, and maintaining calves on cows may be the better option.

In summary, when feed and condition are not limiting:

- Maintain traditional weaning if the goal is maximising calf growth and sale weight
- Consider early weaning if it enables greater whole-system efficiency or productivity

The decision should be aligned with business objectives, feed utilisation and market pathway, rather than applied as a fixed rule.

Q. What is the stocking rate increase potential from early weaning?

A. Stocking rate impacts were not directly measured within the PDS; however, indicative modelling based on external resources was undertaken to estimate potential benefits.

Based on this modelling, early weaning was estimated to support an increase in stocking rate of approximately:

- ~6% when weaning two months earlier, or
- around 3% per month earlier.

These figures were derived from back-of-the-envelope calculations, estimating theoretical feed savings from removing calves earlier and reallocating those resources elsewhere in the system.

It is important to note that these estimates assume feed availability is consistent throughout the year, which may not reflect all production environments. In regions such as Esperance, where feed quality can decline rapidly as pastures dry off, the timing and utilisation of feed becomes a key consideration.

While indicative only, the modelling suggests that early weaning has the potential to increase stocking rates, provided the feed saved is effectively utilised within the system.

Q. In a grass-based system, would early weaning be detrimental if supplements cannot be used?

A. The suitability of early weaning in a grass-based system depends on feed availability and overall system capacity, rather than supplementation alone.

Early weaning decisions should be driven by a combination of factors, including:

- amount and quality of pasture available
- availability of supplements (if required)
- seasonal conditions
- overall production system and objectives.

If pasture is adequate and of good quality, there may be no advantage in early weaning, as calves will generally perform well remaining on their dams. In strong seasons, there is typically no urgency to wean early.

Conversely, in poor seasons where pasture is limited, early weaning can be an important tool to reduce nutritional pressure on cows, even if supplementation options are limited. In these cases, earlier action may help preserve cow condition and avoid more severe impacts later.

In summary, early weaning is a flexible management decision, best triggered by feed conditions and system constraints. It is not inherently detrimental without supplements, but its success depends on whether the available feed (pasture or otherwise) can adequately support calves post-weaning.

Q. Are smaller confinement areas better for stopping calves from walking fence lines (& losing weight)

A. This was not assessed in the PDS. Industry guidance indicates that weaning stress is more strongly influenced by weaning method than yard size.

MLA and extension guidance emphasise that minimising stress (e.g. through yard weaning or low-stress methods) improves animal health and weight outcomes.

Behaviour such as fence walking is primarily related to separation stress, and reducing this through better management (e.g. familiarising calves with feed and water, low-stress handling) is more effective than simply reducing pen size.

For more information:

- [Weaning | Meat & Livestock Australia](#)
 - [Wean early | MBFP | More Beef from Pastures](#)
 - [Weaning age and projected liveweights | MBFP | More Beef from Pastures](#)
 - [Weaning beef calves](#) – NSW DPI
 - [Early weaning of beef calves | Health and welfare | Beef | Livestock and animals | Agriculture Victoria](#)
 - [MLA Weaner management guide](#) – Meat & Livestock Australia
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Q. Is there literature about late weaning leading to improved longer term calf performance?

A. This was not investigated within the PDS. Available Australian guidance indicates that while later weaning can increase pre-weaning weights, it does not necessarily improve whole-of-system performance.

MLA's More Beef from Pastures states that the key driver of productivity is efficient feed utilisation, with benefits achieved when pasture is consumed directly by the calf rather than through the cow-calf unit, particularly later in lactation (MBfP – Wean early).

Similarly, NSW DPI guidance notes that while calves may remain on cows longer in good seasons, this is only advantageous where cow condition is maintained, as prolonged lactation increases nutritional demand and can impact reproductive performance if feed becomes limiting (NSW DPI – Weaning beef calves).

Australian extension and MLA-aligned material also highlight that lactation significantly increases cow energy requirements, meaning feed is less efficiently converted into saleable product compared to feeding calves directly (FutureBeef – Managing cow reproduction).

Overall, Australian research and extension resources consistently show that nutrition, feed allocation and whole-of-system management are the primary drivers of long-term performance, rather than simply extending time on the cow.

For more information:

- [MLA More Beef from Pastures – Early weaning](#)
- [MLA More Beef from Pastures – Weaner throughput module \(PDF\)](#)
- [NSW DPI – Weaning beef calves](#)
- [FutureBeef – Managing cow reproduction](#)

Q. What's the cost difference? Is buying in grain, silage and hay cheaper than running the cow/calf unit?

A. This was not quantified in the PDS and will vary significantly between enterprises.

Australian industry guidance indicates that lactating cows have significantly higher feed requirements than dry cows, and that feed is often more efficiently utilised when calves are fed directly rather than via milk production.

As a result, early weaning can reduce whole-system feed demand and improve efficiency, although it may increase short-term feeding costs.

A partial budget or feed budgeting approach is recommended to compare these trade-offs within individual production systems.

Supporting resources available include:

Feed demand and efficiency (biological driver of cost)

- [FutureBeef – Nutrient requirements of beef cattle](#)
- [Agriculture Victoria – Feed requirement tables](#)

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Efficiency of feeding calves vs feeding through the cow

- [MLA – More Beef from Pastures \(Early weaning\)](#)
- [NSW Local Land Services – Early weaning advice](#)
- [Agriculture Victoria – Early weaning](#)

Economic analysis tools (MLA & GRDC aligned)

- [MLA MBfP – Partial budget template](#)
- [MLA eTools \(feed & enterprise calculators\)](#)
- [GRDC – Farm business management manual](#)

Feed budgeting and cost comparison tools

- [Agriculture Victoria – Beef tools & calculators](#)

Q. What is the youngest age you should wean a calf in a commercial model. I have no intention of retaining weaners to keep in the herd.

A. The PDS did not define a minimum weaning age; however, Australian best practice provides clear guidance.

- Under typical commercial conditions, calves are generally weaned at 6–9 months of age.
- Early weaning can be successfully implemented at around 100–120 days (3–4 months), provided calves are at least ~100kg liveweight and have access to high-quality nutrition.
- In more extreme seasonal conditions (e.g. drought), calves may be weaned as early as ~6–8 weeks, but this requires intensive feeding and management and is generally considered a last-resort option.

The key consideration is not just age, but whether calves:

- have a functional rumen
- are eating solid feed reliably
- can be supported with adequate nutrition post-weaning.

For commercial systems where calves are sold rather than retained, the decision should be based on animal readiness, feed availability and market requirements, rather than aiming for a minimum age alone.

Supporting resources

- [MLA More Beef from Pastures - Weaner throughput](#)
- [MLA More Beef from Pastures - Weaning age & weights](#)
- [NSW DPI – Weaning beef calves](#)

Q. What was the average weight of the early weaned calf at the time of the normal weaning? Effectively how did early-weaned calves compare in weight at the traditional weaning date.

A. The average weight of calves weaned at the traditional time over the PDS was 300 kg. Early-weaned calves were, on average, 18 kg lighter at the time of normal weaning. The average time between the two weaning events was 50 days.

Q. What was the average early and late weaning age?

A. Within the PDS the weaning ages were not standardised across sites. The average age at weaning across the three years of the project was 258 days for the traditionally weaned calves and 208 days for the early weaned calves.

- Traditional weaning age was determined by each producer based on their normal practice.
 - Early weaning occurred approximately 60 days earlier than each producer's nominated weaning date.
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Q. What months are you calving?

A. Calving months were not standardised across the project and were determined by each producer's individual production system and joining period. Calving start dates within the PDS dataset ranged from Mid-February to early-April.

Within the Esperance region where the project took place:

- Weaning typically occurs in November.
- Cows calve in the following autumn, aligned with the seasonal feed break.

This reflects a system where calving timing is strategically matched to seasonal conditions and feed availability, rather than a single prescribed calving window.

PDS projects are a great opportunity for producers to test practical innovations on-farm and share learnings with their region— visit the mla.com.au/pds or contact MLA for more information on how to get involved.

If you have any questions, please feel free to email pds@mla.com.au and we will work with the team to assist with your enquiry.