

Project update

P10b: Economics and risks of raising non-replacement calves in a dairy business

This project aimed to analyse the economics and risks of raising non-replacement calves in a dairy business, with the view to selling them as dairy beef.

The market for dairy beef varies across regions, depending on the scale and infrastructure of the local beef supply chain including backgrounders, feedlots and processors.

This means the economics and risks of raising dairy beef tend to be regionally specific making it difficult to offer blanket recommendations.

The benefits and risks are also influenced by the existing dairy farming system and infrastructure for calf rearing. A year round calving system is likely to require less investment in modifying calf rearing systems than a farm operating with a batch calving system. For example herds with tight batch calving systems (such as in Victoria and Tasmania) may require up to three times the existing calf shed facilities to rear non-replacement calves.

Case study approach

A case study approach was chosen to provide relevant insights for farmers in the project group. Two case study farms were chosen from the Kempsey/Taree area where some dairy businesses had indicated they were keen to participate.

Farm 1: Year round calving system

Farm 2: Batch calving system.

For each farm, the study compared two scenarios:

- 'Base scenario': all cows joined to conventional dairy semen or dairy bulls with non-replacement calves sold at 3 weeks old.
- Change scenario: Sexed semen used to breed dairy replacements with the rest of the herd joined to beef semen/bulls and beef calves raised to various ages.

P10 Sustainable pathways for surplus calves

Dairy UP's P10 aimed to develop sustainable options for managing surplus calves born on NSW dairy farms such as male (bobby) calves or females that are not destined for the milking herd. It complemented [other Dairy Australia work to address the issue of surplus calves](#).

Designed to be regionally relevant and applicable to local communities, the Dairy UP project involved two phases:

- Consultation along the entire supply chain and collaborative design of alternative management pathways (Nowra, NSW community)
- An analysis of the economics and risks of raising non-replacement calves in a dairy business.

This document provides an update on the analysis of the economics and risks of raising non-replacement calves in a dairy business.

While P10 is now complete, work on this topic continues through a follow-on project [Growing Beef from Dairy](#) which funded jointly by Dairy Australia and MLA.

Market fluctuations

Market fluctuations during the study period highlighted the risks associated with variations in demand and price for dairy beef. When the project concept was being developed in 2022, demand for dairy beef was strong and project participants were confident they could make a profit from dairy beef. This confidence was challenged over during 2023 when demand (and price paid) for dairy beef weakened significantly.

To get an indication of risks, the analysis looked at best and worst case years and an average.

Key findings

Profitability (net return per head)

Beef market prices were the biggest contributor to variation in net return per head. The feedlot market (and beef market in general) is highly volatile and this has an impact on the prices paid for dairy beef calves.

Net returns varied from \$900/head in good years to a loss of **-\$600** in bad years, with about break even on average.

Net returns are also influenced by how long animals are reared before they are sold (from weaning through to 300-600kg).

Risk

Growing out animals to above 450kg can be more profitable but exposes the business to additional downside risk such as land limitations, higher feed costs, seasonal variation (drought, flood) and beef market fluctuations.

Accessing premium markets could reduce some of this risk, but this option varies across regions.

Payback period

The payback period for investment in infrastructure was shorter (1-7 years) for Farm 1 (year round calving) because needed only minor upgrades to accommodate rearing dairy beef calves.

The payback period for Farm 2 (batch calving) could extend to beyond 15 years as it needed more investment in calf rearing infrastructure.

Other considerations

The decision to rear non-replacement calves involves significant non-financial considerations such as animal welfare, ethics and social licence. For some, breaking even on average may be a reasonable balance for these benefits.

Other things to consider include:

- Effort involved in rearing non-replacement calves and the potential distraction from the core business of producing milk.
- Goals of individual farm business owners (specialist dairy farmer versus interest in diversifying)

- Role and availability of a specialist calf rearer.

Next steps

A decision support calculator developed during the project could be tested more widely.

The study authors recommended further analysis of the following situations:

- raising more surplus heifers for export (recognising this is not an option for every Australian dairying region).
- Tight single calving herds where infrastructure investment is greater.

Given dairy beef is an evolving industry, the report recommended updating results as new knowledge and options become available.

Collaborators

Thank you to the NSW farmers who generously shared their farm and business data for this study.

More info

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