**Off-paddock systems**

**Making the right choice case study**

**David and Jenny Macdonald – Gordonton**

**FARM PROFILE**
- **Location:** Gordonton, Waikato
- **Cow numbers:** 280 Kiwicross
  - Stocking rate 3.8 cows/ha
- **Production:**
  - Average 377kg MS/cow
  - Average profit $4192/ha
- **Milking platform:** 74ha
- **Barn:** Redpath shelter
  - 99m x 21m = 2079 m²
  - 7.4 m²/cow plus 6m wide covered internal feeding race.

**The farm system**

David and Jenny Macdonald have always successfully sought high profit from high pasture utilisation.

They became farm owners in 2001 after 50/50 sharemilking using a successful low cost, high profit, high pasture eaten strategy.

With the addition of a Redpath shelter they increased their farm from a system-2 to system-3 farm (with 20% of the feed used imported).

The majority of imported feed comes from their support block nearby.

Grass makes up the core (80%) of the cows’ diet with 1.0 t DM/cow of imported supplement (maize silage and PKE) fed in the shelter to add to grazed pasture.

The herd starts calving in mid-July. In-calf rates have always been close to industry targets and this hasn’t changed with the move to using the shelter. The start of calving is not expected to change.

During the autumn (March, April, May) the cows are brought indoors at night and fed maize silage. This helps slow down the autumn grazing rotation.

During June and July the cows are on-off grazed each day and can be indoors for up to 20 hours per day during bad weather. Supplement is fed indoors.

During calving the springers will on-off graze and many calve indoors.

Milking cows generally aren’t indoors unless they need supplementing.

After balance date (Sept/Oct) through to March no cows are indoors.
**Why build the barn?**

The Macdonald’s farm at Gordonton has some poorly drained areas which makes wintering on farm tricky. They are also exposed to the usual Waikato dry summers. After farming through several wet springs followed by dry summers they found they had lost some of their enjoyment of farming. This led to a thorough examination of their farming options which included options such as moving farms, putting on a sharemilker and investing in off-paddock infrastructure.

David recalls ringing a DairyNZ staff member, who knew their farm, and asking if they thought building off-paddock infrastructure was a good idea. The answer he got was that it should be considered.

**How did they decide what to build?**

David and Jenny chose to build a Redpath shelter because it was a means of reducing the pasture damage created by the milking herd grazing wet soils in late winter and early spring. They wanted cows standing off-paddock. They also wanted to improve the herd’s body condition score at calving.

The effluent system needed to be upgraded to meet consent requirements. Covering the stand-off area made sense to reduce the cost of the effluent upgrade.

They wanted a soft bedding option and the Redpath shelter provided that plus more area/cow than other shelters. Also, the cows they saw in the Redpath shelter were not as dirty as cows housed in other options.

The shelter was built in 2012.

**The result**

With the shelter built, the Macdonalds changed from system-2 (6% imported feed) to system 3 (20% imported feed) and increased imported feed by 0.7 t DM cow, mainly as maize silage.

This has seen milksolids production increase from 1186kg MS/ha to 1400kg MS/ha, with only a small (+5 cow) change in herd size.

Milksolids per cow has increased by 30kg/cow to 377 kg/cow but operating expenses have also increased from $4.27 to $4.42/kg MS.

Overall operating profit has remained the same as before the Redpath shelter was built and the farm system changed. It remains 63 percent greater than the average for the Waikato district.

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**Key learnings**

The Macdonald’s emphasise keeping the focus on profitability and grass utilisation. For profitable farming, grass and supplements cannot be wasted.

**Dave and Jenny’s advice for farmers**

1. Consider using ventilation to reduce the indoor summer temperature for the herd. This enables cows to get shade inside during hot summer days.

2. A reliable source of the correct bedding material is important. Dry hardwood and not too finely shredded.

3. Use teat sealants and dry cow therapy for all cows expected to be wintered on the bedding.

4. In the planning and construction phase do your homework on the correct height and placement of rails in the feeding area to prevent injury to cows while feeding.

5. Consider a nib wall on the concrete feeding platform to prevent feed being pushed out of reach.