

Intensification: Is it the answer?

Key Farmer Messages

- ◆ Understanding the strengths and limitations of your farming environment is important in deciding how and where to invest profitably.
- ◆ Think laterally about what makes your farm unique and try and identify alternatives that interest you and have the potential to be profitable.
- ◆ Be aware that farm intensification and herd homes/covered barns have impacts that need to be assessed and understood.
- ◆ Monitor and assess performance to ensure you achieve expectations.

Introduction to the farm

Key Facts

- **Location** - 3km SW of Edgecumbe, 6 km from the coast
- **Area** - 152ha milking platform
 - * 75ha irrigated
- **Landscape** - flat land prone to liquefaction. A mix of poorly drained sandy loam and shallow free draining sandy loam with limited water holding capacity.
- **Production system** - peak milking 460 cow Jersey herd, seasonal production system, producing up to 159,000 kgMS; calving 20th July. Purchase in 600 kgDM/ cow (barley, maize & grass silage).
- **Climate** - 1350mm average annual rainfall, but up to 3000mm/year, subject to periods of intense rainfall from sub-tropical storms.



Planning for the Unexpected

Bruce and Judy Woods are dairy farmers on the Rangitaiki Plain in the Bay of Plenty. As they farm close to the coast, serious flooding is a risk, exacerbated by sub-tropical cyclones that sweep through the Bay of Plenty.

Bruce was one of the first farmers in this area to set up a pivot irrigator to beat the summer dry periods. Now, as he further intensifies production, he is leading the way with a covered barn to minimise the impact of wet periods and to increase productivity. Both these strategies ensure his pastures remain a key component of year-round cow nutrition.

What have Bruce & Judy done?

The focus is on growing the scale and profitability of the business. In this district, high land prices and low turn-over of properties has meant that a policy of intensification has been pursued. Initially, irrigation of the drought-prone sandy soils was undertaken, and this has recently been upgraded and expanded to now cover 75ha. The possibility of irrigating the whole plat-



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form is under evaluation.

The second step involved leasing land for making supplements and wintering the herd off the farm. But this had some drawbacks - although the leased block was handy, it was on similar soils. In a dry season, little supplement could be made and had to be accessed elsewhere, and the amount of available grazing was limited. So the costs remained but benefits were unreliable.

Thinking around the issues, Bruce decided further intensification was possible if greater certainty could be provided around feed management and supply, pasture management, and soil management.

The decision was made to construct a 4200m² covered feeding facility to hold the herd from 20th May through until mid September. The expectations for this investment are that pasture and soil damage through wet-season treading will be significantly reduced; pasture persistence will be enhanced and re-grassing costs reduced; and feed utilization will potentially be improved by 10%.

Why was the change needed?

Bruce is farming land his family settled. Thinking about succession, the plan involves retaining these historic linkages and enabling future generations to participate in the business. Intensification is seen as a means to that goal.

But the environment is challenging and there is the threat of the changing climate. Being at the bottom of a catchment and in a region renowned for sub-tropical storm events, it is common for flooding to occur. The extent of this can be compounded as the land settled following the 1987 Edgecumbe earthquake. When conditions are right, the pasture really grows, but the sandy soils have limited water holding capacity and are weakly structured so pastures are susceptible to treading. There may also be issues with nitrate leaching and P loss in sediment.

Construction of the covered feeding facility provides Bruce with more confidence about how he can manage through these challenges.

What does this mean for the farm in the future?

There will be a lot of learning and analysis around the impact and benefits of this investment in the covered feeding area. The answers are not clear cut, but there has been a lot of thought and strategic analysis that has already occurred. What is certain is that Bruce will be constantly reviewing how the whole system is functioning and how the benefits from the feeding facility can be optimized.

Advice for other farmers

- Both flooding and drought limit pasture productivity, MS production and profitability on this Bay of Plenty farm
- New technology can be a big investment, so do your home work, and think about the real benefits for your situation. And always monitor and review.
- Intensification doesn't come without challenges. Nutrient loading from effluent, animal husbandry and the return on investment all need to be considered.
- Some landscapes and environments are much more challenging.



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