Meeting A Sustainable Future
Farmer Profile

Tony Dodunski – Beaumaris Dairies: Selwyn Te Waihora

Farming challenge:

This farm is part of the Selwyn Hinds Meeting a Sustainable Future project. Beaumaris Dairies' focus within the project has been on addressing the following environmental challenges:

- managing phosphorus
- Mahinga Kai
- waterway management
- reducing water logging

Farm business philosophy

"Farming in an environmentally sensitive area, part of our business philosophy is to embrace and actively engage in ways to reduce our environmental footprint. Through being part of this project we are learning and being exposed to new ideas and systems of reducing our footprint while maximising profit."
Tony Dodunski, Beaumaris Dairies.

Introduction - Beaumaris

Beaumaris Dairies Ltd is a family owned farm purchased at the start of the 2017/18 season, with Tony Dodunski managing the business. The farm is in the Cultural Sensitive Zone in Selwyn Te Waihora (Central Canterbury), and therefore has different focuses compared to some other farms in the catchment. The farm is on heavy, poorly drained soils.

The farm is 180 effective ha, and has an extensive drainage network throughout. A feedpad has been built on farm to assist with managing the heavy soils.

Beaumaris aims to be a top performing farm, that is a good place to work, and can maximise profit in a resilient way. Running an efficient system in terms of nutrient cycling is important, as is maintaining the assets on the farm and presenting it tidily.

Relevant Farm Characteristics		
Soil • 71% Gamm PAW_{0-60} 108 • 21% Nixo PAW_{0-60} 162 • 5% Bur PAW_{0-60} 123 • 3% Gree PAW_{0-60} 135 • Very poorly drained	**Rainfall & Irrigation** • Average 744 mm annually • Groundwater wells • 66% pivots, 22% rotorainer, 4% k-line, 3% travelling irrigator, 5% dryland	**Effluent System** Stone wedge and sump, with 3,800m^3 storage pond. Feed pad has separate 430m^3 bunker with weeping wall, connected to main system. Laurel sprinkler system for application. • 62% pastoral area
Farm System and Performance		
Effective Hectares • 180 milking platform • 221.5 total area	**Team** • 3.4 FTE (role description • 195 cows/FTE, • 80,500 kgMS/FTE	**System** • 3.7 cows/ha • 12.7t tDM/ha pasture harvested • 3.2 tDM/ha imported supplements • 2.7 tDM/ha grazing off • 18.6 tDM/ha total feed eaten

Further info on Overseer versions, information sources etc can be found at the end of this document

Key environmental information

Nitrogen Loss to Water kgN/ha
Baseline 2009-2013: 32
Current 2018/19: 17 (-47%)
Target 2022: 23 (-30%)

Purchased Nitrogen Surplus
Current 2018/19: 158

Greenhouse Gases
12,481 kg CO2e/ha/yr (2018/19)
10.1 kg CO2e/kgMS (2018/19)

Catchment and Mahinga Kai

Being in the Cultural Sensitive Zone for Selwyn Te Waihora increases the need to focus on Mahinga Kai. Mahinga kai species and habitats are protected at Beaumaris Dairies through waterway management and planting of native vegetation.

Environmental Targets and Requirements

The farm is in the nutrient allocation zone of Selwyn Te-Waihora Catchment under Plan Change 1. Under this Plan Change, the farm is required to operate at or below their baseline nitrogen (N) loss figure (2009/10 to 2012/13) which needs to be consistent with the Industry Agreed Good Management Practices from the 2017/18 season. A further 30% reduction from their baseline figures is required by 2022.

Beaumaris is also in the Cultural Sensitive Zone and therefore needs to develop strategies to incorporate Mahinga Kai on the farm as required by Plan Change 1.

Challenges

On this farm, N is not the main environmental limitation due to the soil type, irrigation system, and infrastructure. The focus within the project has therefore been on the following areas that pose an environmental challenge:

- Reducing phosphorus losses
- Meeting Mahinga Kai requirements
- Waterway management
- Reducing water logging

Mitigations

Implemented to Date

- 4,000 trees and shrubs planted in the 2017/18 season, to increase the area already planted by the previous owner.
- Sediment traps installed in November 2017 to reduce the water quality risk at the bottom of the hollows before they enter the drain.
- A 700 cow concrete feed pad was constructed in 2018 to mitigate any pasture damage and capture nutrients during high rainfall events.

Potential strategies to reduce environmental footprint:

- Develop strategies to incorporate Mahinga kai on the farm
- Pivot and irrigation efficiency can be improved, including pivot testing.
- Continue to be selective about which paddocks fodder beet is grown in leaving a buffer of at least 5m of grass between drains and critical source points (low points where surface water enters the drain)
- One option to reduce N leaching from the system is to adjust Nitrogen fertiliser on the effluent block considering the nutrients added from effluent.

Further Information

For further information on this farm and the changes they are making, as well as the project:

- Virginia Serra, DairyNZ. Project Lead for Meeting a Sustainable Future, 021 932 515 virginia.serra@dairynz.co.nz
- Meeting a Sustainable Future Partner Farms Page
- Meeting a Sustainable Future project page

Information Sources:

Figure	Season/s	Source
Soil Data	-	OverSeer FM / ECan GIS
Baseline N loss	2009-2013	Overseer
Current N loss	2018/19	Overseer FM 6.3.1: Mar 2020
Physical Farm System	2018/19	DairyBase
Financial Info	-	Not included as farm was in first season

For information on DairyBase, click here

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