

Future Dairy Farm Systems Project – NARF (Dargaville)

This project compares the productivity, profitability and impact on people and the environment on three farms, being:

1. **Current Farm** – Kikuyu & ryegrass based pastures with up to 190 kg N/ha/annum, 3.1 cows/ha
2. **Alternative Pastures Farm** – Fescue & cocksfoot based pastures, up to 190 kg N/ha, 3.1 cows/ha
3. **Low Emissions Farm** – Kikuyu & ryegrass based pastures, designed to reduce methane emissions by 25% and nitrous oxide by 50%, no nitrogen applied, 2.3 cows/ha

This project is funded by DairyNZ, MPI (Sustainable Food & Fibre Futures) and Hine Rangī Trust.

Update 14 th November 2023	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Area out of Rotation / total eff area (ha)	12%	16%	19%
Avg Pasture Cover (excl silage pdks, kg DM/ha)	2186	2226	2134
Pasture Growth (kg DM/ha/d, last 2 weeks)	98	101	72
Rotation Length (days)	24	23	22
Cows in Milk/Peak Cows	82/82	82/82	61/61
Production/cow/day (kg MS)	1.70	1.61	1.45
Production/ha/day (kg MS)	4.89	4.80	3.18
SCC ('000)	75	110	46
Supplement Offered (kg DM/cow/day)	0	0	0
Purchased Supplement Fed (kg DM/cow)	499 PKE	468 PKE	219 PKE 118 Baleage
Homegrown Silage Fed (kg DM/cow)	0	46 Baleage	512 Baleage
Homegrown Silage on hand (kg DM/cow)	0	0	0
Average Body Condition Score (Milkers)	4.15	4.2	4.1
Manager Worry Score (1 = Low, 10 = High)	3	3	3
Nitrogen to date – 2023/24 Season (kg N/ha)	165	164	0
Rainfall (last two weeks)	11 mm		

CURRENT MANAGEMENT

- Pasture growth has jumped to spring flush with warmer drier soils
- Surplus management is dynamic at present with paddocks being harvested and others being dropped out as residuals rise above target
- Some fescue paddocks are still being topped behind the cows.
- We will continue applying Sustain at 50kg/ha behind the cows on the Current and Alternative Pastures farms, while rain is in the forecast.