

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 – 17 th November 2022	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha, excl silage pad)	2384	2273	2167
Pasture Growth (kg DM/ha/d, last 2 weeks)	111	90	85
Rotation Length (days)	20	23	2
Cows in Milk/Peak Cows	84/84	86/86	63/63
Area out for silage (% of farm)	25%	21%	28%
Production/cow/day (kg MS)	1.60	1.68	1.69
Production/ha/day (kg MS)	4.83	5.18	3.80
Production/cow – 2022/23 season (kg MS)	183	186	177
Production/ha – 2022/23 season (kg MS)	560	576	405
Supplement Fed (kg DM/cow/day)	0	0	0
Total Purchased Supplement Fed (kg DM/cow 2022/23 season)	388 PKE 212 Purch Silage	239 PKE 213 Purch Silage	163 PKE 0 Purch Silage
Homegrown Silage Fed (kg DM/cow STD)	0	0	221
Average Body Condition Score - Milkers	4.26	4.2	4.2
Worry Score (1 = Low, 10 = High)	2	2	2
Nitrogen – Season to Date (kg N/ha)	126	121	0
Rainfall (mm last 2 weeks)	87 mm		

CURRENT MANAGEMENT

- Warm wet weather meant we dropped out more silage today for harvest next week
- We now have 32% of Current Farm, 21% of Alt Pastures farm and 36% of Low Emissions farm out
- Close monitoring of residuals is important as things are changing so quickly each week
- SCC is sitting at 50-60,000 on all farms despite wet weather
- Sustain is continuing behind the cows at 0.8kgN/day of rotation, so 35-40kg/ha Sustain, on the Current and Alt Pastures farms while the forecast predicts rain.
- Our fertiliser trial has shown good responses to N on all farms this year, at 28kgDM/kgN averaged across the three sites.