

Future Dairy Farm Systems Project – NARF (Dargaville)

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

1. **Baseline (Current) Farm** – Kikuyu & ryegrass based pastures with up to 190 kg N/ha/annum, 3.1 cows/ha
2. **Alternative Pastures Farm** – Tall 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 Rangi Trust.

Update 15 th May 2025	Baseline Farm	Alternative Pastures Farm	Low Emissions Farm
Average Pasture Cover (kg DM/ha)	2,033	1,824	2,235
Pasture Growth (kg DM/ha/d, last 2 weeks) *	59	39	70
Rotation Length (days, last 10 days)	45	51	40
Cows in Milk/Total Cows	50/68 OAD	0/68 Dry	55/55 OAD
Production/cow/day (kg MS/cow)	0.69	-	0.96
Production/ha/day (kg MS/ha)	1.27	-	1.92
Production/cow season to date (kg MS/cow)	429	398	450
Production/ha season to date (kg MS/ha)	1,287	1,188	1,000
SCC (000)	177	-	204
Supplement Offered (kg DM/cow/day)	0	0	0
Purchased Supplement Fed season to date (kg DM/cow)	PKE 583 Baleage 214	PKE 538 Baleage 254	PKE 331
Homegrown Silage Fed to date (kg DM/cow)	340	239	360
Homegrown Silage on hand (kg DM/cow)	0	0	52
Average Body Condition Score (Milkers)	4.23	4.63	4.43
Nitrogen to date – 2024/25 Season (kg N/ha)	161	150	0
Managers Worry Score (1 = Low, 10 = High)	4	5	2
Rainfall (last two weeks)	38		

*Pasture growth rates are calculated using uncalibrated platemeter readings

CURRENT MANAGEMENT

- All herds are now dried off, with our Low Emissions herd having achieved 1000kgMS/ha, and 450kgMS/c. This herd sat at over 2.0kgMS/c/d from calving until November reflecting the excellent weather and high clover levels last spring.
- We have now finished our mulching and Italian sowing. Kikuyu paddocks that have recovered from mulching are growing 60 – 70 kg DM/ha/day so we will mow to target grazing height behind the low stocked Low Emissions Herd to ensure the Italians are not swamped by high kikuyu residuals.
- Pasture cover on the Alternative Pastures farm is behind target, mainly due to having 22% of the farm out with regrassing, and no supplement available. We have now applied N to all fescue and cocksfoot pastures to boost growth rates. N will be applied to kikuyu paddocks in June.
- BCS is above target in the Alt Pastures (dried off early) and Low Emissions herds, but behind target in the Baseline herd. We may need to use PKE in June to catch this herd up as we do not have any supplement allowance left this season.
- Zinc supplementation has now finished, as spore counts are low. Blood testing will show any mineral deficiencies. Teat seal and selective DCT has been administered to prevent any infections while on the feed pad.