

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. **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 Rangī Trust.

Update 31 st October 2024	Baseline Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha)	2,203	2,146	2,480
Pasture Growth (kg DM/ha/d, last 2 weeks) *	83	78	72
Rotation Length (days, last 10 days)	23	21	23
Cows in Milk/Total Cows	82/82	83/84	61/61
Production/cow/day (kg MS/cow)	1.89	1.88	2.08
Production/ha/day (kg MS/ha)	5.68	5.61	4.64
Production/cow season to date (kg MS/cow)	166	169	170
Production/ha season to date (kg MS/ha)	503	509	385
SCC	40,000	60,000	49,000
Supplement Offered (kg DM/cow/day)	0	0	0
Purchased Supplement Fed season to date (kg DM/cow)	PKE 215 Baleage 21	PKE 199 Baleage 20	PKE 82
Homegrown Silage Fed to date (kg DM/cow)	0	0	28
Homegrown Silage on hand (kg DM/cow)	166	140	105
Average Body Condition Score (Milkers)	4.21	4.00	4.30
Nitrogen to date – 2023/24 Season (kg N/ha)	129	123	0
Pasture ME (MJ ME/kg DM)	11.8	11.2	11.9
Managers Worry Score (1 = Low, 10 = High)	2	2	2
Rainfall (last two weeks)	33		

*Pasture growth rates are calculated using uncalibrated platometer readings

CURRENT MANAGEMENT

- The excellent spring conditions continue with regular showers maintaining high pasture growth
- Quality is just starting to fall with seedhead emergence on the Italian ryegrass beginning. We are harvesting more silage today and have dropped a couple more paddocks out for harvest in 2 weeks. Proactive surplus management is our key to maintaining quality and milk production in the next month.
- High clover levels on the Low Emissions farm have boosted energy intakes, with these cows milking at over 2kgMS/c/d since early August.
- Chicory crops on the Alternative Pastures farm were sown on 25 October, and pest management is vigilant with high populations of springtail and caterpillars around this season.
- Calves are all weaned and gone to grazing.
- Sustain application continues at 60 kg/ha while there is enough moisture.