

## 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 30 <sup>th</sup> November 2023	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (excl silage pdks, kg DM/ha)	2128	2210	2029
Pasture Growth (kg DM/ha/d, last 2 weeks)	86	85	70
Rotation Length (days)	23	23	26
Cows in Milk/Peak Cows	80/81	82/85	61/61
Production/cow/day (kg MS)	1.55	1.61	1.37
Production/ha/day (kg MS)	4.49	4.77	3.00
SCC ('000)	42	79	70
Supplement Offered (kg DM/cow/day)	0	0	0
Purchased Supplement Fed to date (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)	151	137	83
Average Body Condition Score (Milkers)	4.1	4.1	4.0
Manager Worry Score (1 = Low, 10 = High)	3	3	3
Nitrogen to date – 2023/24 Season (kg N/ha)	180	181	0
Rainfall (last two weeks)	16 mm		

### **CURRENT MANAGEMENT**

- High pasture growth has continued. We have been dropping paddocks out of the rotation for silage to manage the pasture surplus and keep pasture utilisation high. The odd paddock has been mown to tidy up behind the cows.
- Heading into December pasture allocation will continue based on a 28 day grazing rotation on all farms. Taking silage paddocks out speeds this up.
- We have used around 180 kg nitrogen/ha since 1 June on the two farms that receive nitrogen.
- By comparing the pasture growth on the Current Farm with the Low Emissions Farm we get an estimate of nitrogen response. This has been relatively high this season at 17.7 kg DM/kg N applied.