

Future Dairy Farm Systems Project – NARF (Dargaville)

This project commenced June 2021. It 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, 2.1 cows/ha

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

Update – 7 th April 2022	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha)	2,061	1,684	2,051
Pasture Growth (kg DM/ha/d, last 2 weeks)	22	19	27
Rotation Length (days) – avg last 2 wks	26	25	26
Cows in Milk/Peak Cows	85/85	72/85	59/59
SCC	147	133	127
Production/cow/day (kg MS)	1.11	1.04 (OAD)	0.85
Production/ha/day (kg MS)	3.45	2.70	1.83
Production/ha - season to date (kg MS)	1,174	1,189	742
Milk FEI	8.0	7.6	4.9
Supplement Fed Currently (kg DM/cow/day)	2.1 – 3.2 PKE 2.3 Silage	2.5 - 3.1 PKE 4.2 Silage	4.0 Silage
Purchased Supplement Fed (kg DM/cow/season to date)	485 PKE 94 Purch Silage	456 PKE 240 Purch Silage	67 PKE
Homegrown Silage Fed (kg DM/cow to date)	176	104	265
Home Grown Silage on hand (kg DM/cow)	0	0	409
Average Body Condition Score	3.9	3.9	3.8
Worry Score (1 = Low, 10 = High)	4	5	3
Nitrogen – Season to Date (kg N/ha)	172	172	0
Rainfall (mm last 2 weeks)	5 mm		

CURRENT MANAGEMENT

- Pasture covers have been holding steady on the Current and Low Emissions farms, despite kikuyu paddocks behind the cows being mulched and under-sown with Italian ryegrass
- Cows on the Current and Low Emissions farms have lost a bit of condition. The Current farm cows will all go on once a day milking (OAD), while on the Low Emissions farm the early calving/light conditioned cows will go on OAD while the others will stay on twice a day milking
- The Alternative Pastures farm herd have been on OAD for a fortnight. They require around 7 kg imported supplement/cow/day at present. We will have to dry at least some cows off soon to avoid breaching our self-imposed imported supplement limits (800 kg DM/cow)
- Most of the culls have already gone out of the Alternative Pastures farm to reduce feed demand. Culls on the other farms will likely be taken out in the next fortnight or so
- Zinc is continuing at the full recommended rates. A recent milk zinc test (through Fonterra) showed all herds were well below recommended rates. We are not too concerned as spore counts are still low, however we will continue to monitor spore counts to ensure they don't rise