

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 – 24 th March 2022	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha)	2122	1669	2103
Pasture Growth (kg DM/ha/d, last 2 weeks)	11	7	15
Rotation Length (days) – avg last 2 wks	26	29	27
Cows in Milk/Peak Cows	85/85	77/85	59/59
SCC	114	145	101
Empty rate (2021 mating)	11%	9%	3%
Production/cow/day (kg MS)	1.1	1.12	0.75
Production/ha/day (kg MS)	3.4	3.11	1.61
Production/ha - season to date (kg MS)	1121	1151	717
Milk FEI	8.9	9.3	4.6
Supplement Fed Currently (kg DM/cow/day)	2.6 – 3.2 PKE 1.3 - 3.9 Silage	2.3 - 3.5 PKE 3.9 Silage	0 - 3.7 Sil
Purchased Supplement Fed (kg DM/cow/season to date)	453 PKE 91 Purch Silage	423 PKE 196 Purch Silage	67 PKE
Homegrown Silage Fed (kg DM/cow to date)	185	161	251
Home Grown Silage on hand (kg DM/cow)	46	0	594
Average Body Condition Score	4.05	3.94	4.06
Worry Score (1 = Low, 10 = High)	5	6	5
Nitrogen – Season to Date (kg N/ha)	172	172	0
Rainfall (mm last 2 weeks)	94 mm		

CURRENT MANAGEMENT

- Pasture growth crashed before this weeks rain but we are expecting a big lift now, especially on the kikuyu
- The Current Farm herd is holding their condition so we will keep them all milking
- The Alternative Pastures herd has lost weight and we are not able to feed them enough so will get rid of all remaining culls and put the herd on OAD to hold condition. This farm is losing area due to the regrassing programme so stocking rate remains at 3.0 c/ha on the area in the round.
- The Low Emissions herd has responded to our silage feeding and started gaining condition. The decision to start kikuyu mulching 4 weeks ago has paid off with good quality regrowth now in front of the cows.
- Zinc is continuing with an expected rise in facial eczema spores
- The first of our regrassing paddocks was drilled today, others will be done late April after a later spray to control Poa. Establishment success will be compared between the different sowing dates.