

Future Dairy Farm Systems Project – NARF (Dargaville)

This project commenced June 2021. It will compare 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 – 21 st February 2022	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha)	2118	1678	2221
Pasture Growth (kg DM/ha/d, last 2 weeks)	29	18	26
Rotation Length (days) – avg last 2 wks	27	28	23
Cows in Milk/Peak Cows	85/85	85/85	59/59
Production/cow/day (kg MS)	1.31	1.29	1.08
Production/ha/day (kg MS)	4.06	3.95	2.31
Production/ha/season to date	1016	1045	656
Milk FEI	8.4	8.3	4.2
Supplement Fed Currently (kg DM/cow/day)	2.6 – 3.2 PKE 0 - 3.5 Silage	3.2 PKE 3.2-6.4 Silage	0 – 2.5 Silage
Purchased Supplement Fed (kg DM/cow/season to date)	367 PKE 91 Purch Silage	343 PKE 76 Purch Silage	67 PKE
Homegrown Silage Fed (kg DM/cow to date)	129	161	223
Home Grown Silage on hand (kg DM/cow)	96	0	567
Average Body Condition Score	3.95	4.05	3.8
Worry Score (1 = Low, 10 = High)	5	4	3
Nitrogen – Season to Date (kg N/ha)	172	172	0
Rainfall (mm last 2 weeks)	1 mm		

CURRENT MANAGEMENT

- Hot dry weather has slowed growth again, particularly on the Alt Pastures farm
- The Current Farm is holding their weight and will continue on current feeding and rotation length
- The Low Emissions Farm is leaving excess kikuyu residuals so we will begin mulching 10% of the kikuyu pdks each week to try and improve pasture quality. These cows have plenty of silage on hand to feed through autumn and winter.
- The Alternative Pastures Farm is starting to use excess supplement to feed cows, and has 17% of the farm to be sprayed and regrassed so we will cull 10% of cows now to reduce demand.
- We will wait for 10cm soil temperatures to drop (they range from 22 to 27 degrees each day) before we spray paddocks out for resowing
- A further 14% of the Alt Pastures farm will be undersown to thicken up open fescue paddocks from last season
- One paddock on each of the other farms will be sown into perennial ryegrass for comparison