

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 Farming Fund) and Hine Rangi Trust.

Update – 18 th November 2021	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha) excl silage pdks	2229	2210	2272
Pasture Growth (kg DM/ha/d, last 2 weeks)	68	60	65
Rotation Length (days) – avg last 2 wks	20	23	21
Area out for silage	13%	0	32%
Cows in Milk/Peak Cows	85/85	85/85	59/59
Production/cow/day (kg MS)	1.69	1.66	1.64
Production/ha/day (kg MS)	5.14	5.05	3.45
Production/ha/season to date	580	593	373
3 week Submission Rate	89%	84%	90%
Milk FEI	5.6	5.0	5.6
Supplement Fed Currently (kg DM/cow/day)	0	0	0
Purchased Supplement Fed (kg DM/cow/season to date)	173 PKE 81 Purch Silage	143 PKE 6 Purch Silage	66 PKE
Homegrown Silage Fed (kg DM/cow to date)	0	0	139
Home Grown Silage on hand (kg DM/cow)	70	132	313
Average Body Condition Score (Milkers)	4.1	4.1	4.2
Worry Score (1 = Low, 10 = High)	3	4	5
Nitrogen – Season to Date (kg N/ha)	149	149	0
Rainfall (mm last 2 weeks)	77 mm		

CURRENT MANAGEMENT

- Soil conditions are still wet in some areas and are holding up silage harvesting.
- Pasture growth has improved with warm temperatures and sunshine finally appearing.
- No-N paddocks look good on the fertile Kaipara Clay soils, but urine patches are showing up strongly on the lighter sandy soils. The strong clover presence is keeping ME up on these paddocks.
- Silage is being harvested on Low Emissions and Current Farm paddocks, where dry enough.
- Feed demand is significantly lower on the Low Emissions farm due to the lower stocking rate, so we will likely need to close up more paddocks now that silage paddocks are coming back in the round
- The few non-cyclers will be vet checked and bulls have been in herds for 7 days.
- Copper, Cobalt and Selenium are going through Dosatron, Magnesium has just finished.
- Sustain at 50kg/ha will continue while soil moisture conditions are favourable