

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 - 20 th October 2021	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha) excl silage pdks	2222	1983	2129
Pasture Growth (kg DM/ha/d, last 2 weeks)	70	48	43
Rotation Length (days) – avg last 2 wks	26	24	26
Area out for silage	4%	0	0
Cows in Milk/Peak Cows	85/85	85/85	59/59
Production/cow/day (kg MS)	1.87	1.74	1.75
Production/ha/day (kg MS)	5.68	5.28	3.69
Production/ha/season to date	439	454	280
SCC ('000)	105	134	112
3 week Submission Rate	89%	84%	90%
Milk FEI	5.6	5.6	5.4
Supplement Fed Currently (kg DM/cow/day)	0	0	0
Purchased Supplement Fed (kg DM/cow/season to date)	159 PKE 81 Purch Silage	118 PKE 6 Purch Silage	66 PKE
Homegrown Silage Fed (kg DM/cow to date)	0	0	139
Average Body Condition Score (Milkers)	4.0	4.0	4.1
Worry Score (1 = Low, 10 = High)	3	4	4
Nitrogen – Season to Date (kg N/ha)	110	119	0
Rainfall (mm last 2 weeks)	31 mm		

CURRENT MANAGEMENT

- Pasture growth on the Alternative Pastures farm is lower this fortnight, possibly due to Poa Annua dying off, and a shorter rotation due to more silage out. These factors should lessen now that all paddocks are back in the round. Nitrogen (as urea) continues on the Current and Alt Pastures farms to maximise growth while conditions are good
- The Alt Pastures herd is underfed with residuals lower than 15-1600 target, so we will feed 2-3kg PKE/c/d until the pasture cover and residuals reach target.
- Low Emissions farm pastures continue to perform ok without N. The increased clover presence in these paddocks is noticeable. There is double the proportion of clover on this farm compared to the two N farms
- The Current Farm is growing well and has 1 pdk (4%) dropped out for silage harvest in the next two weeks.
- Mg supplementation will continue until early November.