

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 Rangī Trust.

23 rd September 2021	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Average Pasture Cover (kg DM/ha)	2361	2102	2233
Pasture Growth (kg DM/ha/d, last 2 weeks)	62	66	54
Rotation Length (days) – avg last 2 wks	27	19	28
Area out for silage	7%	14%	21%
Cows in Milk/Peak Cows	85/85	85/85	58/59
Production/cow/day (kg MS)	2.09	2.08	1.79
Production/ha/day (kg MS)	6.28	6.21	3.61
Production/ha/season to date	281	307	185
SCC ('000)	124	123	86
Milk FEI Zone	A	A	A
Supplement Fed (kg DM/cow/day)	0	0	0
Purchased Supplement Fed (kg DM/cow/season to date)	156 PKE 81 Purch Bale	118 PKE 6 Purch Bale	66 PKE 139 HG Bale
Average Body Condition Score (Milkers)	4.1	4.2	4.2
Worry Score (1 = Low, 10 = High)	5	3	3
Nitrogen – Season to Date (kg N/ha)	86	100	0
Rainfall (mm last 2 weeks)	106 mm		

CURRENT MANAGEMENT

- Good pasture growth has allowed additional paddocks to be dropped out for silage this week on the Current and Low Emissions farms. This will effectively speed up the rotation length on those farms to around 25 days. The faster rotation length on the Alternative Pastures farm is to control the emergence of fescue seed head
- Weather permitting, the silage paddocks that were closed up two weeks ago will be cut within the next 10 days
- Soil conditions are probably the wettest they have been all winter, however a lack of pugging damage in previous rounds means most paddocks are still reasonably firm under foot
- Sustain (Urea) is being applied behind the cows on the Current farm at 65 kg/ha and at 50 kg/ha on the Alt Pastures farm
- Pastures on the Low Emissions farm (receiving no N) which were looking a bit yellow through early September have now perked up
- Mating starts 1st October. Light conditioned heifers and the odd light conditioned cow are on once-a-day milking to enhance condition prior to mating