

Future Dairy Farm Systems Project – NARF (Dargaville)

This project compares the productivity, profitability and impact on people and the environment on three farms, being:

1. **Baseline (Current) Farm** – Kikuyu & ryegrass based pastures with up to 190 kg N/ha/annum, 3.1 cows/ha
2. **Alternative Pastures Farm** – Tall 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, 2.3 cows/ha

This project is funded by DairyNZ, MPI (Sustainable Food & Fibre Futures) and Hine Rangī Trust.

Update 5 th September 2024	Baseline Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha)	2393	2403	2256
Pasture Growth (kg DM/ha/d, last 2 weeks) *	57	61	44
Rotation Length (days, last 10 days)	33	29	32
Cows in Milk/Total Cows	79/83	81/85	57/64
Production/cow/day (kg MS/cow)	2.09	1.77	2.07
Production/ha/day (kg MS/ha)	5.55	4.92	4.08
Production/cow season to date (kg MS/cow)	53	59	55
Production/ha season to date (kg MS/ha)	164	181	129
SCC ('000)	42	40	79
Supplement Offered (kg DM/cow/day)	PKE 2.6	0	0
Purchased Supplement Fed season to date (kg DM/cow)	PKE 210 Baleage 21	PKE 196 Baleage 20	PKE 82
Homegrown Silage Fed to date (kg DM/cow)	0	0	28
Homegrown Silage on hand (kg DM/cow)	0	0	54
Average Body Condition Score (Milkers)	4.3	4.2	4.4
Manager Worry Score (1 = Low, 10 = High)	3	3	3
Nitrogen to date – 2023/24 Season (kg N/ha)	72	68	0
Rainfall (last two weeks)	68 mm		

*Pasture growth rates are calculated using uncalibrated platometer readings

CURRENT MANAGEMENT

- Good soil conditions and pasture growth continue to provide higher than normal pasture covers for this time of year. We are close to shutting up silage paddocks on all 3 farms.
- All herds are now on pasture only feeding. Supplement use is 40-80% lower than last year season-to-date. This time last year all herds were receiving 5-6kg/c/d PKE, as well as silage on the Low Emissions farm.
- Target residuals are sitting at 1600kgDM/ha for Italian rye/kikuyu paddocks, and 17-1800kgDM/ha on fescue and perennial ryegrass paddocks to try and improve persistence on these species. As residuals rise above these levels we will drop paddocks out for silage harvest.
- All paddocks have now had an application of S through Ammo36, so we have changed back to Sustain at 60kg/ha. This rate is lower than normal reflecting the excellent growing conditions. N use is 10% behind last year season-to-date.
- All cows have been metrichecked with 4% treated. Tail painting for pre-mating heats began today. PSM is 1st October.