

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. **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, 2.3 cows/ha

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

Update 22 nd February 2024	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (excl silage pdks, kg DM/ha)	1953	1909	1883
Pasture Growth (kg DM/ha/d, last 2 weeks) *	29	29	13
Rotation Length (days)	32	28**	31
Cows in Milk/Peak Cows	71/81	72/82	61/61
Production/cow/day (kg MS)	1.27	1.39	0.96
Production/ha/day (kg MS)	3.61	3.81	2.13
Production/cow season to date (kg MS/cow)	302	322	287
Production/ha season to date (kg MS/ha)	913	971	638
SCC ('000)	59	85	90
Supplement Offered (kg DM/cow/day)	PKE 1.8 Baleage 7.2	PKE 2.0 Baleage 7.8	Baleage 0-2.3
Purchased Supplement Fed to date (kg DM/cow)	PKE 640	PKE 567	PKE 219 Baleage 70
Homegrown Silage Fed to date (kg DM/cow)	74	121	567
Homegrown Silage on hand (kg DM/cow)	154	183	106
Average Body Condition Score (Milkers)	3.96	3.97	3.86
Manager Worry Score (1 = Low, 10 = High)	5	5	4
Nitrogen to date – 2023/24 Season (kg N/ha)	188	181	0
Facial Eczema Spore Count (spores/g)	10000	2500	2500
Rainfall (last two weeks)	0 mm		

*Pasture growth rates are calculated using uncalibrated platemeter readings

CURRENT MANAGEMENT

- Pasture growth and covers are dropping rapidly in the hot dry weather
- All remaining culls will be removed from the Current and Alt Pastures farms in the next week
- Supplement is now needed on all farms to keep cows milking without losing weight.
- Grazing residuals are being carefully managed on the fescue pdks to avoid damaging the plants – cows are moved to kikuyu pdks after 2-3 hours grazing on fescue/cocksfoot
- **Alt Pastures farm rotation length is 40 days on fescue and cocksfoot pdks, and 26 days on the kikuyu dominant pdks.
- Seed mixes are being planned in preparation for regrassing in March if weather permits
- PD is done with empty rate in all herds at 10% or below