

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 25 th January 2024	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (excl silage pdks, kg DM/ha)	2122	2123	2106
Pasture Growth (kg DM/ha/d, last 2 weeks) *	41	43	40
Rotation Length (days)	28	27	31
Cows in Milk/Peak Cows	78/81	81/82	61/61
Production/cow/day (kg MS)	1.27	1.24	1.28
Production/ha/day (kg MS)	3.60	3.61	2.85
Production/cow season to date (kg MS/cow)	287	299	255
Production/ha season to date (kg MS/ha)	816	872	568
SCC ('000)	62	104	72
Supplement Offered (kg DM/cow/day)	PKE 2.3	PKE 2.2	0
Purchased Supplement Fed to date (kg DM/cow)	578 PKE	517 PKE	219 PKE 70 Baleage
Homegrown Silage Fed to date (kg DM/cow)	0	46 Baleage	560 Baleage
Homegrown Silage on hand (kg DM/cow)	233	238	110
Average Body Condition Score (Milkers)	3.95	3.97	3.90
Manager Worry Score (1 = Low, 10 = High)	5	5	5
Nitrogen to date – 2023/24 Season (kg N/ha)	188	181	0
Facial Eczema Spore Count (spores/g)	20,000 (Rye) 0 (Kikuyu)	5000	0
Rainfall (last two weeks)	15 mm		

*Pasture growth rates are calculated using uncalibrated platometer readings

CURRENT MANAGEMENT

- Pasture growth is slowing as soils dry out
- Cow condition has is holding or dropping slightly, and lighter cows will be put on OAD milking to prevent further weight loss.
- PKE is being fed on the Current and Alternative Pastures Farms, to FEI limits. This will be decreased if we get good rain and better growth.
- With the lower stocking rate on the Low Emissions Farm it is unlikely we do not need supplement at present.
- The chicory crop is ready for grazing and pasture area will be reduced, (so rotation lengthened) on the Alt Pastures Farm while cows are on the crop
- Zinc continues at a low dose (1/2 rate) with caramillo through the dosatron.