

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 – 8 th September 2022	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha)	2174	2204	2076
Pasture Growth (kg DM/ha/d, last 2 weeks)	45	59	38
Rotation Length (days)	35	33	35
Cows in Milk/Peak Cows	84/86	82/86	61/63
Production/cow/day (kg MS)	1.94	1.94	1.74
Production/ha/day (kg MS)	5.62	5.57	3.49
Production/cow – 2022/23 season (kg MS)	59	62	48
Production/ha – 2022/23 season (kg MS)	183	192	110
Supplement Fed Milkers (kg DM/cow/day)	2.1 – 4.3 PKE	2.2 – 4.4 PKE	0 PKE
Purchased Supplement Fed (kg DM/cow 2022/23 STD)	385 PKE 212 Purch Silage	237 PKE 213 Purch Silage	163 PKE 0 Purch Silage
Homegrown Silage Fed (kg DM/cow STD)	0	0	221
Average Body Condition Score - Milkers	4.3	4.1	4.2
Worry Score (1 = Low, 10 = High)	5	3	6
Nitrogen – Season to Date (kg N/ha)	68	70	0
Rainfall (mm last 2 weeks)	36 mm		

CURRENT MANAGEMENT

- Pasture growth and pasture covers have been relatively steady over the last month. Italian ryegrass plants undersown into kikuyu pastures are now dominating.
- We have been following in our spring rotation plan. With pasture utilisation improving (due to drier weather) we will speed up all farms to a 28 day rotation.
- All supplement feeding will now stop as we anticipate cows can be fully fed on the pasture allocated. We don't anticipate restarting PKE feeding until summer unless wet conditions return in the next week or two.
- Pre-mating heat recording has commenced. A few light conditioned cows (mainly heifers) are on once-a-day milking to help hold condition.
- Ammo 36 continues to be applied at 100 kg/ha behind the cows. This will soon switch over to using Sustain at 70 kg/ha.