

Future Dairy Farm Systems Project – NARF (Dargaville)

This project commenced June 2021. It 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, 3.0 cows/ha
2. **Alternative Pastures Farm** – Fescue & cocksfoot based pastures, up to 190 kg N/ha, 3.0 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 Rangi Trust.

29 th July 2021	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Average Pasture Cover (kg DM/ha)	1939	2169	1992
Pasture Growth (kg DM/ha/d, last 2 weeks)	10	22	4
Rotation Length (days)	43	46	63
Production/cow/day (kg MS)	1.51	1.78	1.59
Production/ha/day (kg MS)	2.13	2.00	1.23
Production - Season to date (kg MS/ha)	25	20	14
Cows in Milk/Peak Cows	53/84	45/84	31/60
Average Body Condition Score (Dries)	5.1 Dries 4.6 Milkers	5.1 Dries 4.7 Milkers	5.0 Dries 4.7 Milkers
Supplement Fed (kg DM/cow/day)	0 – 3 (milkers)	0	0 – 4 (milkers)
Supplement Fed - Season to date (kg DM/cow)	47 PKE	43 PKE	66 PKE 13 Baleage
Worry Score (1 = Low, 10 = High)	7	5	3
Nitrogen – Season to Date (kg N/ha)	44	43	2
Rainfall (mm last 2 weeks)	51 mm		

CURRENT MANAGEMENT

- Average pasture cover has fallen below target on all farms due to low pasture growth rates. Pasture growth on the fescue and cocksfoot pastures is higher than the ryegrass/kikuyu pastures
- Rotation length has got too fast too early on the Current farm. To claw this back the area allocated to cows will be reduced to 60 sq.m/cow for milkers and 30 sq.m for dries. PKE feeding will increase until the FEI limit is encountered and purchased baleage will be added in as needed
- We are happy to run a faster rotation length on the Alternative Pastures farm as we anticipate higher growth rates during late winter/early spring. Pasture allocation is 100 sq.m/cow for milkers and 50 sq.m for dries. No supplement will be fed at present
- Cows on the Low Emissions farm are being allocated 80 sq.m/cow for milkers and 40 sq.m for dries. Baleage is being fed as needed to keep residuals in the right zone
- To ensure sulphur is not limiting pasture growth we are switching from Urea to Ammo 36 at 100 kg/ha behind the cows on the Current and Alternative Pastures farms

For more information including past updates and field day handouts, go to www.nddt.nz