

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 – 18 th October 2023	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha)	2262	2261	2089
Pasture Growth (kg DM/ha/d, last 2 weeks)	69	65	50
Rotation Length (days)	27	27	24
Cows in Milk/Peak Cows	80/82	84/84	61/61
Production/cow/day (kg MS)	1.92	1.93	1.68
Production/ha/day (kg MS)	5.55	5.85	3.71
SCC ('000)	65	108	135
Supplement Offered (kg DM/cow/day)	0-2.9 PKE	0-2.8 PKE	1.9 Silage 3.2 PKE
Purchased Supplement Fed (kg DM/cow)	497 PKE	468 PKE	189 PKE 113 Baleage
Homegrown Silage Fed (kg DM/cow)	0	46 Baleage	512 Baleage
Homegrown Silage on hand (kg DM/cow)	0	0	0
Average Body Condition Score (Milkers)	4.15	4.18	4.10
% cows below 4.0	3%	6%	8%
Manager Worry Score (1 = Low, 10 = High)	3	3	5
Nitrogen to date – 2023/24 Season (kg N/ha)	127	125	0
Rainfall (last two weeks)	26 mm		

CURRENT MANAGEMENT

- Pasture growth has dropped slightly this fortnight and we have had to put silage paddocks into the grazing rotation. We are expecting growth rates to lift in the warmer weather from now on.
- PKE will only be fed where residuals are below target or on very wet days.
- Topping will begin behind the cows on fescue paddocks. This is to maintain quality and palatability over the spring, which is important in maintaining milk production per cow.
- Production per cow on the Low Emissions farm is lower than the other two farms, this could be due to lower pasture crude protein content on the pastures without N fertiliser.
- Mating is going very well and submission rates are on target.
- Mastitis infections are dropping now that the ground is drying out. It has been a challenging spring for mastitis.
- 70 kg/ha Sustain continues behind the herds while conditions are suitable on the Current and Alternative Pastures farms in an effort to drive surplus for silage.