

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 – 15 th June 2023	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha, excl silage pad)	2266	2303	2229
Pasture Growth (kg DM/ha/d, last 2 weeks)	41	42	38
Rotation Length (days)	63	65	69
Cows in Milk/Peak Cows	0/83	0/85	0/63
Supplement Fed (kg DM/cow/day)	4.5 PKE	3.3 Baleage	2.2 Baleage
Purchased Supplement Fed (kg DM/cow 2023-24 season)	44 PKE	0	0
Homegrown Silage Fed (kg DM/cow 2023/24 season)	0	40 Baleage	22 Baleage
Homegrown Silage on hand (kg DM/cow)	0	0	446
Average Body Condition Score (Milkers)	4.8	4.8	4.7
Worry Score (1 = Low, 10 = High)	3	2	3
Nitrogen – 2023/24 Season (kg N/ha)	3	3	0
Rainfall (mm last 2 weeks)	35 mm		

CURRENT MANAGEMENT

- Pasture cover has been slowly lifting, though the cooler weather in the last week has slowed pasture growth rates. We will now move to an 80 day rotation to ensure we achieve our targeted >2400 kg DM/ha average pasture cover by calving.
- We are pretty happy with the average cow conditions score, however around 10% of herd on all farms have a 4.0 condition score. These low condition score cows that are calving in July will be split off and preferentially fed for the next 3 weeks. Not worrying about later calving cows at present.
- We will target feeding around 11 kg DM/cow/day to the main herd. We will hold rotation length and use PKE to top up any pasture deficit on the Current and Alternative Pastures Farms. Cows on the Low Emissions Farm will continue receiving baleage.
- We will increase the Sustain application rate to 80 kg/ha, going on behind the cows on the Current and Alternative Pastures Farms. With the longer rotation some paddocks have not received nitrogen for some time so we will apply 40 kg Sustain/ha to a proportion of paddocks that are in the middle of the feed wedge.
- The next week will see the team getting calf sheds ready, only another three weeks for them before it all starts again.