

## 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 – 29 <sup>th</sup> June 2023	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha, excl silage pad)	2221	2321	2097
Pasture Growth (kg DM/ha/d, last 2 weeks)	23	22	15
Rotation Length (days)	80	78	77
Cows in Milk/Peak Cows	0/83	0/85	0/63
Supplement Fed (kg DM/cow/day)	4.3 PKE	4.2 PKE	4.5 Baleage
Purchased Supplement Fed (kg DM/cow 2023-24 season)	104 PKE	51 PKE	
Homegrown Silage Fed (kg DM/cow 2023/24 season)	0	56 Baleage	87 Baleage
Homegrown Silage on hand (kg DM/cow)	0	0	384
Average Body Condition Score (Milkers)	4.75	4.75	4.8
Worry Score (1 = Low, 10 = High)	6	6	7
Nitrogen to date – 2023/24 Season (kg N/ha)	13	14	0
Rainfall (mm last 2 weeks)	104 mm		

### CURRENT MANAGEMENT

- Another 100mm of rain has kept soils waterlogged and growth rates remain slow, particularly on the paddocks without N.
- Despite our slow rotation and low grass demand we will not achieve target pasture cover at calving next week. The winter has been difficult and the challenge of feeding cows on pasture without pugging remains. On wet days cows are grazing for 2 hours, then off to feed pad for the afternoon, and sacrifice areas overnight.
- The Low Emissions farm has lowest cover and growth so we will slow to 100 days to ration pasture out longer. Increased baleage feeding will fill the intake gap.
- Herds have not hit BCS calving targets despite relatively high supplementary feeding. Light cows did well being separated and ad lib fed the last 2 weeks, but main mobs have struggled. The pasture intakes have likely been low due to low DM percentage and high wastage. We will continue feeding above maintenance where possible to try and boost BCS as much as possible.
- Discipline in rotation length will be the key to getting through the spring. We will hold areas and use PKE and baleage to top up intakes. On-off grazing will continue when needed.
- Mg is being applied to supplement and via trough.
- 2kg zinc sulphate will be applied to hoof mats each day at entrance to standoff pads and cowshed.
- 80kg/ha Sustain is being applied every month to paddocks when soil conditions are suitable.
- Staff appraisals are completed and the team are ready for calving.