

## 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 – 14 <sup>th</sup> December 2022	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha, excl silage pad)	2169	2176	2208
Pasture Growth (kg DM/ha/d, last 2 weeks)	70	65	68
Rotation Length (days)	25	27	28
Cows in Milk/Peak Cows	83/84	85/86	62/62
Area out for silage (% of farm)	0%	0%	8%
Production/cow/day (kg MS)	1.35	1.59	1.61
Production/ha/day (kg MS)	4.02	4.88	3.58
Production/cow – 2022/23 season (kg MS)	219	229	219
Production/ha – 2022/23 season (kg MS)	671	706	501
Supplement Fed (kg DM/cow/day)	0	0	0
Total Purchased Supplement Fed (kg DM/cow 2022/23 season)	400 PKE 212 Purch Silage	258 PKE 213 Purch Silage	163 PKE 0 Purch Silage
Homegrown Silage Fed (kg DM/cow)	0	0	221
Homegrown Silage on hand (kg DM/cow)	265	332	290
Average Body Condition Score	4.1	4.2	4.1
Worry Score (1 = Low, 10 = High)	3	3	1
Nitrogen – Season to Date (kg N/ha)	148	142	0
Rainfall (mm last 2 weeks)	66 mm		

### **CURRENT MANAGEMENT**

- Good pasture growth over the last fortnight has helped get pasture covers back up after significant areas were recently harvested for silage.
- With continuing wet weather, we anticipate pasture growth will exceed demand for the rest of December. We will drop more paddocks out for silage as surpluses become apparent. This later cut silage will likely be poorer quality, however still useful for dry cows.
- We will continue to allocate 1/28<sup>th</sup> of each farm for grazing/day, a 28 day rotation which will speed up if paddocks are dropped out for silage.
- Some PKE was fed last week on the Current and Alternative Pasture Farms to keep cows adequately fed after silage paddocks were cut. We don't anticipate needing this again for some time.
- We will use the last of the Sustain (urea) we have on hand this week. We will not purchase more as further applications are likely to just spur on kikuyu growth if the wet and warm conditions continue.