

## Future Dairy Farm Systems Project – NARF (Dargaville)

This project commenced June 2021. It will compare 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, 2.1 cows/ha

***This project is funded by DairyNZ, MPI (Sustainable Farming Fund) and Hine Rangi Trust.***

Update – 27 <sup>th</sup> January 2022	Current Farm	Alternative Pastures Farm	Low Emissions Farm
Avg Pasture Cover (kg DM/ha) excl silage pdks	1928	1686	2091
Pasture Growth (kg DM/ha/d, last 2 weeks)	10	6	7
Rotation Length (days) – avg last 2 wks	29	29	29
Cows in Milk/Peak Cows	85/85	85/85	59/59
Production/cow/day (kg MS)	1.27	1.57	1.18
Production/ha/day (kg MS)	3.92	4.48	2.53
Production/ha/season to date	911	948	596
Milk FEI	7.7	7.7	5.5
Supplement Fed Currently (kg DM/cow/day)	2.6 PKE 1.8-3.5 Silage	2.6 PKE 3.5 Silage	0 – 2.5 Silage
Purchased Supplement Fed (kg DM/cow/season to date)	293 PKE 80 Purch Silage	265 PKE 6 Purch Silage	67 PKE
Homegrown Silage Fed (kg DM/cow to date)	60	67	187
Home Grown Silage on hand (kg DM/cow)	169	92	661
Average Body Condition Score	4.0	4.0	4.0
Worry Score (1 = Low, 10 = High)	5	5	4
Nitrogen – Season to Date (kg N/ha)	171	172	0
Rainfall (mm last 2 weeks)	8 mm		

### **CURRENT MANAGEMENT**

- Dry conditions and 10cm soil temps of 22-30 degrees have dropped growth rates and cover further
- PKE is being fed to milk FEI limits on the Current and Alternative Pasture farms. Baleage is also being fed now as pasture intakes are dropping.
- The Low Emissions farm is feeding home grown baleage but this will reduce or halt if kikuyu growth lifts as residuals will rise quickly. It will be challenging to keep on top of the kikuyu at the low stocking rate on this farm.
- Alternative Pasture cows continue to milk better than the other farms due to significantly higher ME and Crude Protein content compared to kikuyu pastures.
- All farms will continue milking twice-a-day, but OAD and culling may be needed if rain does not arrive soon.
- Facial eczema spore counts are low but Zinc treatment has started in anticipation of a rise.