

## 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.***

<b>Update – 2<sup>nd</sup> December 2021</b>	<b>Current Farm</b>	<b>Alternative Pastures Farm</b>	<b>Low Emissions Farm</b>
Avg Pasture Cover (kg DM/ha) excl silage pdks	2061	2071	2155
Pasture Growth (kg DM/ha/d, last 2 weeks)	40	39	33
Rotation Length (days) – avg last 2 wks	23	26	26
Area out for silage	9%	0	5%
Cows in Milk/Peak Cows	85/85	85/85	59/59
Production/cow/day (kg MS)	1.55	1.67	1.57
Production/ha/day (kg MS)	4.71	5.08	3.30
Production/ha/season to date	647	663	419
3 week Submission Rate	89%	84%	90%
Milk FEI	4.9	5.2	5.1
Supplement Fed Currently (kg DM/cow/day)	0 – 2.6	0	0
Purchased Supplement Fed (kg DM/cow/season to date)	173 PKE 81 Purch Silage	143 PKE 6 Purch Silage	66 PKE
Homegrown Silage Fed (kg DM/cow to date)	0	0	139
Home Grown Silage on hand (kg DM/cow)	117	132	487
Average Body Condition Score (Milkers)	4.1	4.1	4.1
Worry Score (1 = Low, 10 = High)	4	3	5
Nitrogen – Season to Date (kg N/ha)	160	160	0
Rainfall (mm last 2 weeks)	0 mm		

### **CURRENT MANAGEMENT**

- Pasture growth rates have dropped due to no rain in the last 18 days. However, the warm weather conditions are bringing kikuyu back to life a bit earlier than usual.
- Rotation length will be extended to around 30 days on all farms in response to the lower pasture growth rates, to optimise pasture growth.
- PKE supplementation has started again on the Current farm and will also commence on the Alternative Pastures farm in response to lower pasture covers and less area being allocated to cows due to the slower grazing rotation. Silage will be fed if we encounter milk FEI limits.
- The last of the silage paddocks have now been harvested. The lower stocking rate on the Low Emissions farm has allowed a significant amount of silage to be harvested (487 kg DM/cow).
- Nitrogen applications stopped 10 days ago.