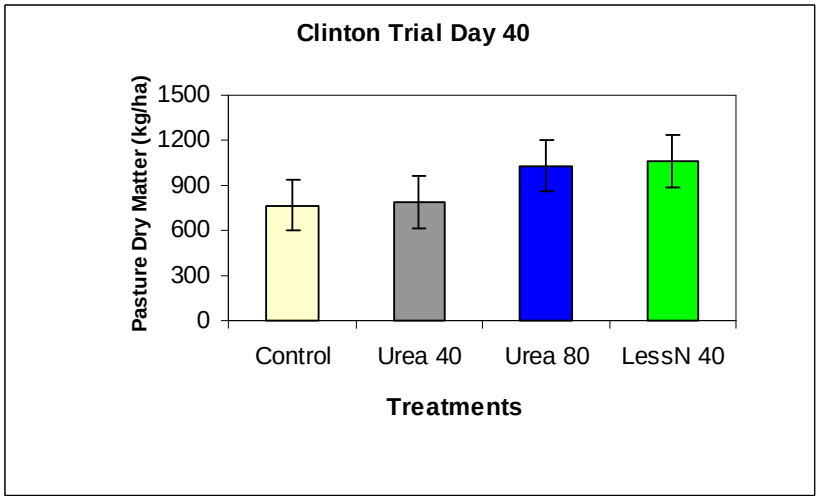
Clinton

The trial was on a Clinton (South Otago) dairy farm. The trial area was a non-irrigated ryegrass-clover based pasture under normal dairying conditions. Residual pasture dry matter base line was recorded on 5 February 2010 (soil temperature 19.5^{0}C) and pasture growth was assessed on 17 March 2010 (soil temperature 11^{0}C).

LessN 40 produced the highest dry matter compared to all other treatments. LessN 40 and Urea 80 preformed similarly at Day 40 but neither of these treatments caused statistically significantly greater pasture growth than Urea 40 and control treatments. Pasture growth rates were reasonably slow due to moisture deficit and falling soil temperature.

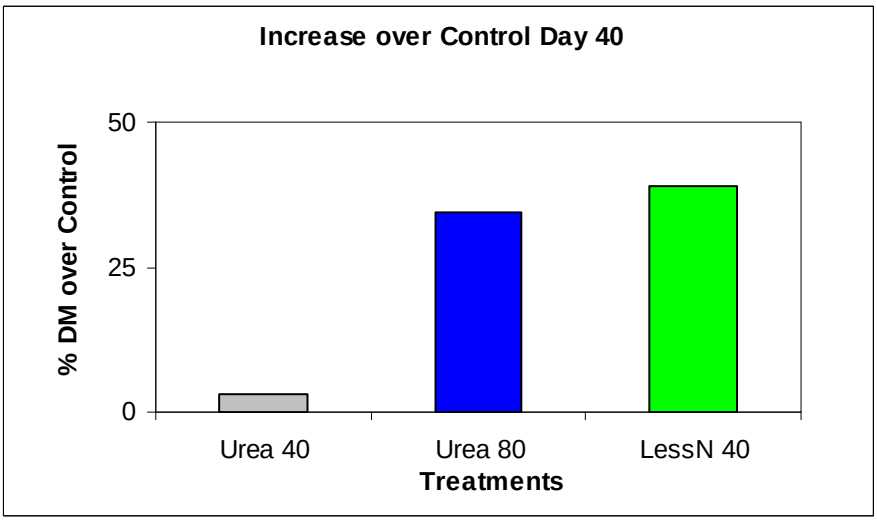
Table and Graph of Pasture Dry Matter Production (kg/ha) Day 40

Treatment	DM *
Control	764[a]
Urea 40	787[a]
Urea 80	1028[a]
LessN 40	1062[a]



* Treatments that share the same letter are not statistically significantly different from each other (95% confidence level).

Graph of the Increase over Control (%) Day 40



DONAGHYS
PERFORMANCE FIRST

Soil test report

The trial was carried out on a Warepa silt loam (yellow grey to yellow brown earth intergrade) on a terrace area. The initial soil test gave apparently erroneously high available N reading (2240 kg/ha) and the soil was tested again post-trial. Available N was still showing as high but much closer to normal expected levels. The marginally high available nitrogen level may be one further reason for a reasonably low N response (kg dry matter grown per kg N applied) but low soil moisture and cooling conditions would have contributed significantly to this All other soil test levels suggested that other nutrients and pH level were unlikely to have held back nitrogen response and control plot pasture growth.

Analysis		Level Found	Medium Range	Low / Medium / High
pH	pH Units	6.2	5.8 - 6.3	
Olsen Phosphorus	mg/L	35	20 - 30	
Potassium	me/100g	0.70	0.50 - 0.80	
Calcium	me/100g	12.0	6.0 - 12.0	
Magnesium	me/100g	1.18	1.00 - 3.00	
Sodium	me/100g	0.16	0.20 - 0.50	
CEC	me/100g	18	12 - 25	
Total Base Saturation	%	76	50 - 85	
Volume Weight	g/mL	0.91	0.60 - 1.00	
Sulphate Sulphur	mg/kg	12	7 - 15	
Available Nitrogen (15cm Depth)*	kg/ha	220	100 - 150	
Anaerobically Mineralisable N*	µg/g	162		
Base Saturation %		K 3.8	Ca 65	Mg 6.4	Na 0.8
MAF Units		K 13	Ca 14	Mg 24	Na 6