



## Rakaia

The trial was on a Rakaia dairy farm. It was started on 3 December 2007 and is ongoing. This report includes pasture dry matter readings recorded up to 16 May 2008. The trial area was irrigated ryegrass-white clover based pasture under normal dairying conditions. In rotation 1, plots were ungrazed for 35 days with measurements taken at Day 21 and Day 35.

After grazing there was no baseline taken (rotation 2) but the plots were measured again for total pasture dry matter after a further 18 days growth (DM Day 53) to compare treatments. From that point on at each grazing rotation, baseline pasture dry matter has been taken after grazing to allow pasture production to be assessed just prior to the next grazing. Urea and LessN were reapplied onto the appropriate plots after some grazings and this timing is indicated below.

LessN 40 performed similarly to Urea 80 at Day 21 and both these treatments caused statistically significantly greater pasture growth than Urea 40 which in turn performed statistically significantly better than Control. When the pasture was left for a further 14 days (Day 35) without grazing, the results still showed a similar pattern.

The pasture was then grazed and on Day 53, dry matter was again assessed for each plot. Although there was no baseline data for the level of pasture in each plot immediately after grazing, the total dry matter present at Day 53 showed an interesting pattern with the LessN 40 treatment statistically significantly outperforming the Urea 80 treatment. Due to the lack of baseline data for the Day 53 reading, this data was not included in the LessN brochure information.

For subsequent grazing rotations, baseline data was included to allow a measurement of actual growth between grazings. This is presented as rotation 3, 4, 5, 6 and 7 and treatments being reapplied to the appropriate plots at the start of rotation 3 and rotation 6. In rotation 5, dry matter recorded at Day 17 was significantly higher in LessN 40 treatment compared to Urea 80 treatment. The LessN 40 treatment gave statistically significantly increased dry matter production consistently compared to Urea 40 and similar (sometimes greater but not statistically significantly so) performance compared to Urea 80.

### Rotation 1 and 2

**Table of Pasture Dry Matter Production (kg/ha)**

Treatment	DM Day 21*	DM Day 35*	DM Day 53**
Control	996 <sup>a</sup>	1834 <sup>a</sup>	1327 <sup>a</sup>
Urea 40	1330 <sup>b</sup>	2385 <sup>b</sup>	1373 <sup>a</sup>
Urea 80	1845 <sup>c</sup>	3182 <sup>c</sup>	1598 <sup>b</sup>
LessN 40	1754 <sup>c</sup>	2992 <sup>c</sup>	1701 <sup>c</sup>

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

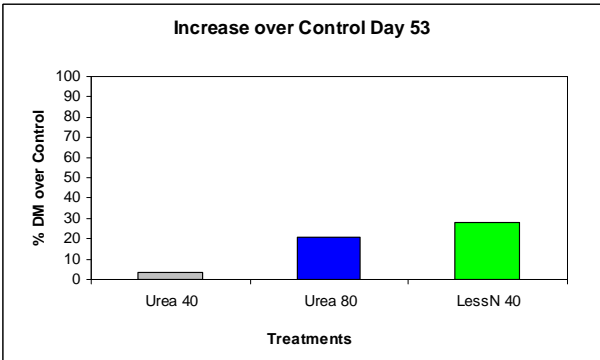
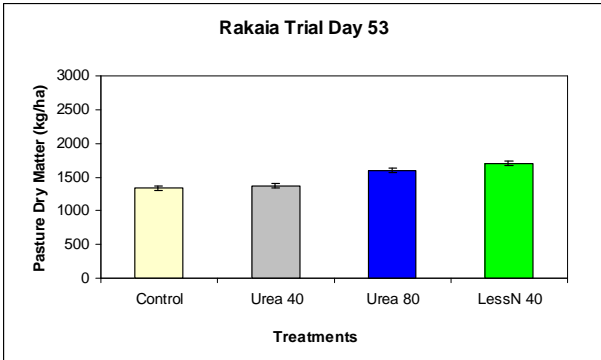
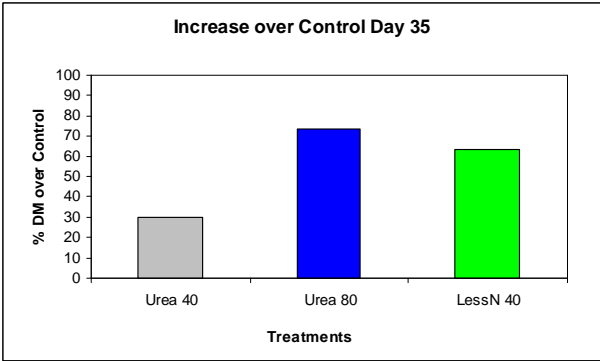
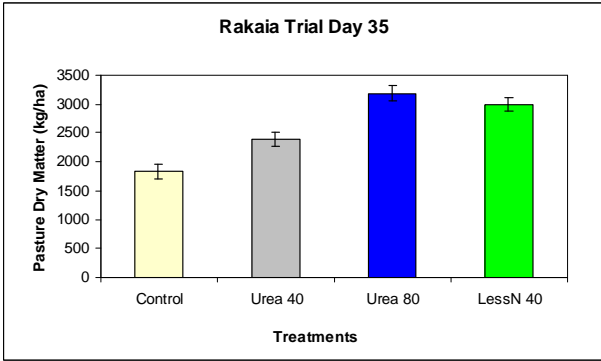
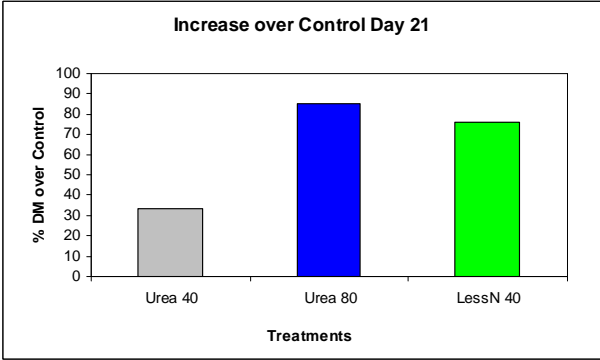
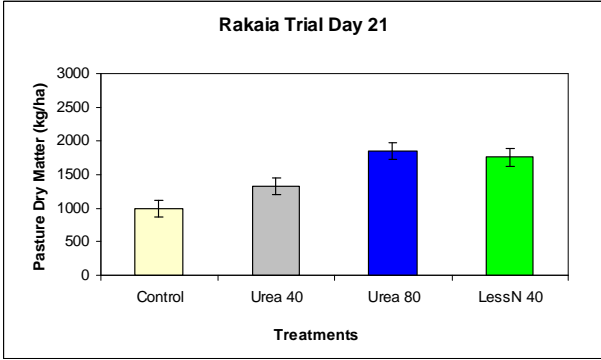
\*\* This Day 53 measurement is a total dry matter presence measurement following grazing after Day 35 without a baseline having been taken.



# Rotation 1 and 2

Graphs of Pasture Dry Matter Production (kg/ha)

Graphs of the Increase over Control (%)

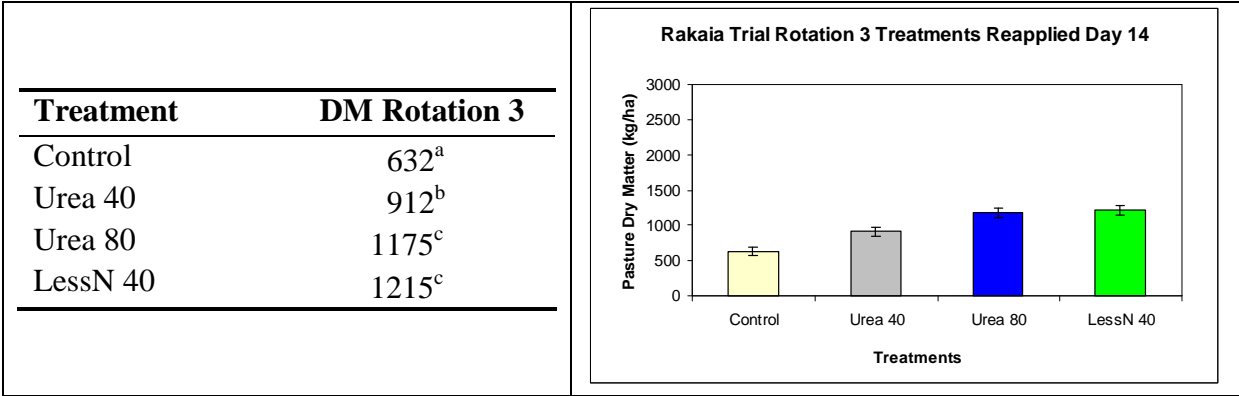




**Rotation 3**

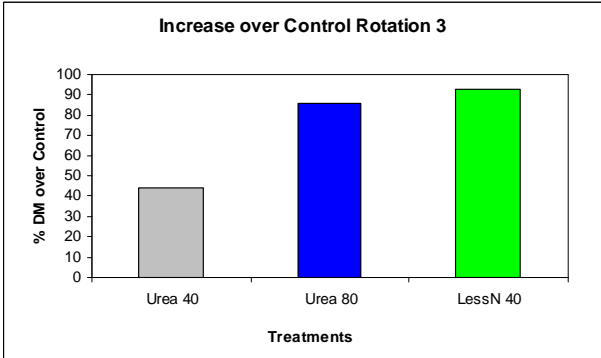
**Graph of Pasture Dry Matter Production (kg/ha)**

Treatments were reapplied for this rotation period.



**Rotation 3**

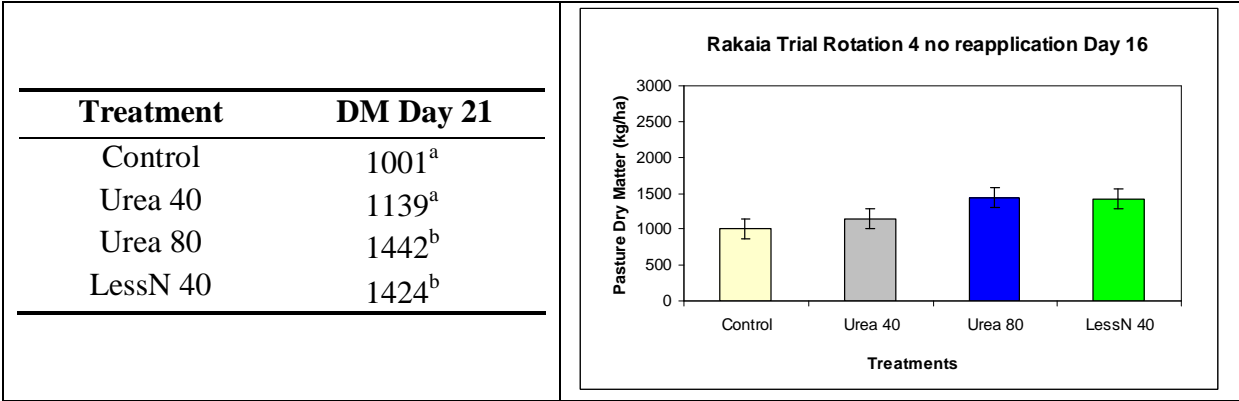
**Graph of the Increase over Control (%)**



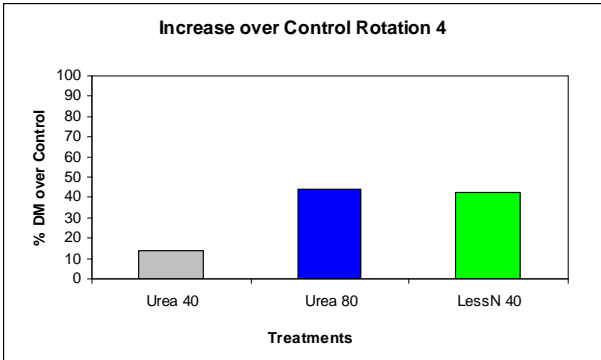


**Rotation 4**  
**Graph of Pasture Dry Matter Production (kg/ha)**

Without reapplication of treatments



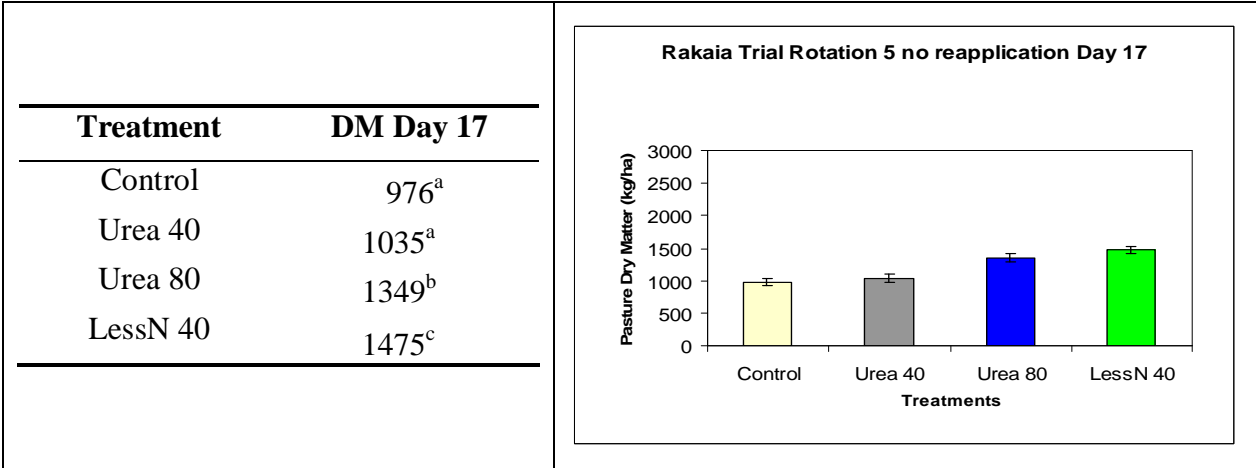
**Rotation 4**  
**Graph of the Increase over Control (%)**



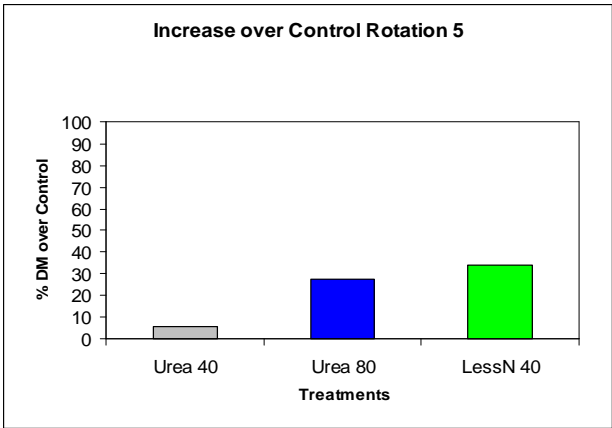


**Rotation 5**  
**Graph of Pasture Dry Matter Production (kg/ha)**

Without reapplication of treatments



**Rotation 5**  
**Graph of the Increase over Control (%)**

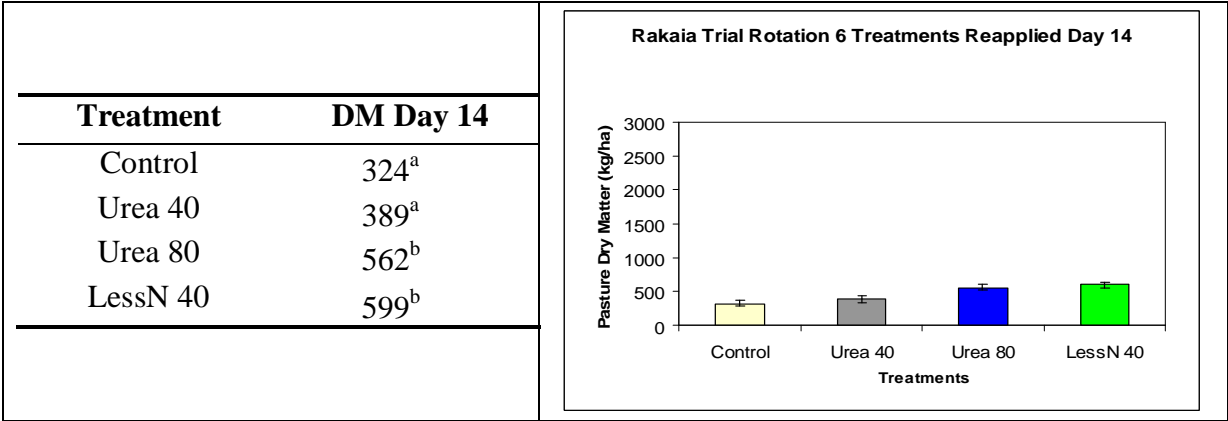




**Rotation 6**

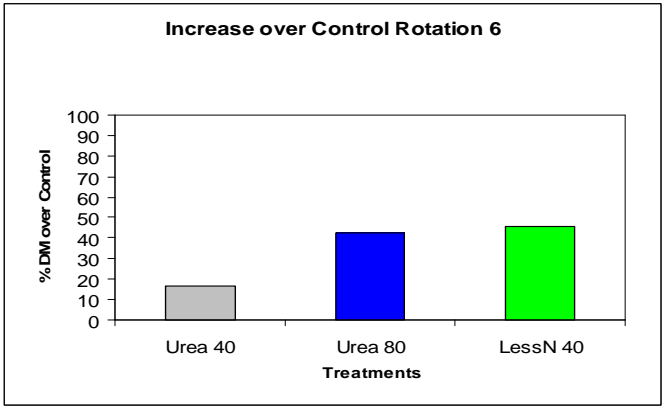
**Graph of Pasture Dry Matter Production (kg/ha)**

Treatments were reapplied for this rotation period.



**Rotation 6**

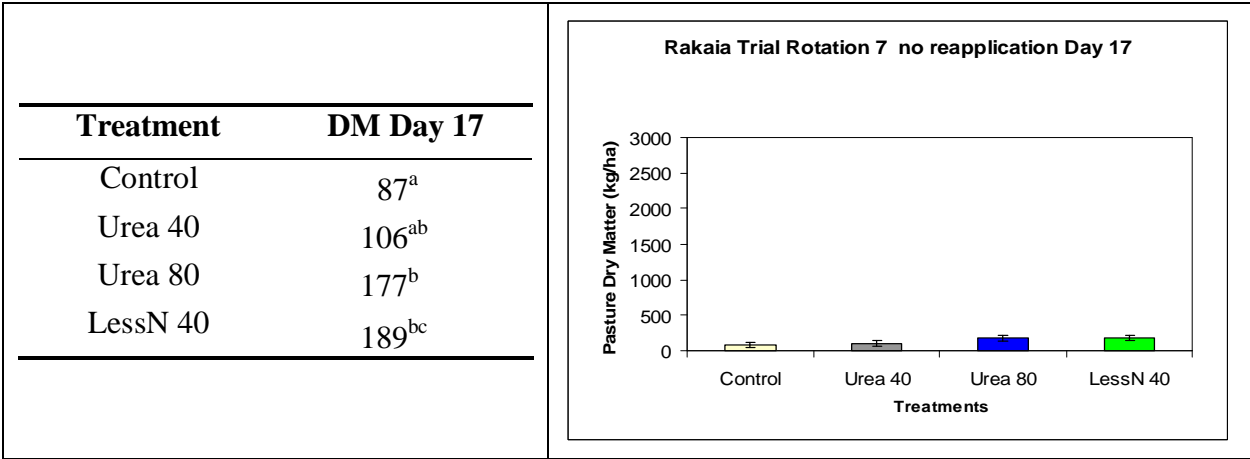
**Graph of the Increase over Control (%)**



**Rotation 7**

**Graph of Pasture Dry Matter Production (kg/ha)**

Without reapplication of treatments



**Rotation 7**

**Graph of the Increase over Control (%)**

