

Renew Biological Fertilizer in Dairy Pasture between Spring 2010 and Autumn 2011

Small randomised complete block experiment in the Derwent Valley.

Renew biological fertilizer was applied to the soil surface at various rates on established pasture.

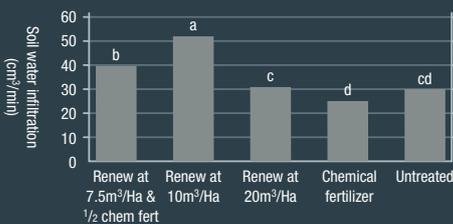
Application of Renew biological fertilizer led to:

- ✓ Significantly greater infiltration rates
- ✓ Increased biological activity
- ✓ Increased soil depth

There was no significant difference between treatments for total production or increases in pasture height and no significant difference between treatments for percentage pasture consumption by dairy cows or percentage decrease in pasture height pre and post-consumption.

Renew biological fertilizer has the potential to improve soil health in dairy pasture and maintain pasture yield and height for dairy cow consumption.

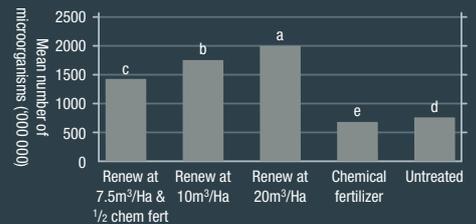
Average soil water infiltration between Spring 2010 & Autumn 2011 (Isd = 5.26¹)



Average soil moisture between Spring 2010 and Autumn 2011 (Isd = 0.82¹)



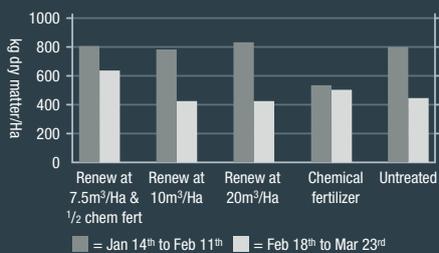
Average number of soil microorganisms between Spring 2010 & Autumn 2011 (log10 Isd = 0.02^{1,2})



Average soil depth between Spring 2010 & Autumn 2011 (Isd = 3.13¹)



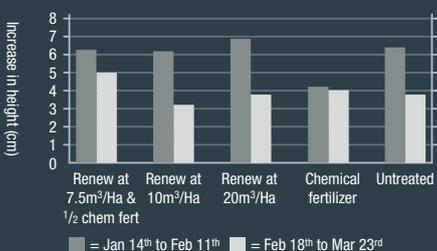
Increase in dry matter (kg/Ha) between Jan & Feb 2011 (Isd = 293³) Feb & Mar 2011 (Isd = 234³)



Average kg dry matter of pasture consumed per Ha between January & March 2011 (Isd = 173¹)



Increase in pasture height between Jan & Feb 2011 (Isd = 2.33³) Feb & Mar (Isd = 2.00³)



Measurements in August 2011 will include:

- Soil nutrient analysis;
- Soil bulk density;
- Soil organic matter and carbon; and
- Pasture quality.

Trial data will be updated annually. The trial will be running for three years.

¹ Data analyzed using Repeated Measures in Genstat for Windows 13th Edition.

² Data was log₁₀ transformed prior to analysis.

³ Data analysed using General ANOVA in Genstat for Windows 13th Edition.



Biological Fertilizer

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