

Renew Biological Fertilizer in Hops between Summer 2010 & 2011

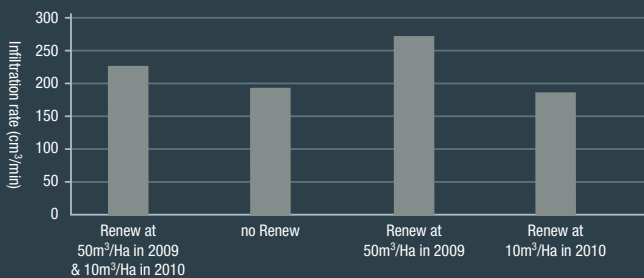
Demonstration trial at Hops Products Australia, Bushy Park.

In 2009, the soil was deep ripped in both directions with a Yeomans™ soil renovator and cross ploughed with a tyned ripper one month before application of 50m³ of Renew and was then power harrowed after Renew application. The hops are Southern Hallertau and were planted as sets taken from cuttings one month after application of Renew. In 2010, 10m³ of Renew was applied to the soil surface. Application of Renew biological fertilizer led to:

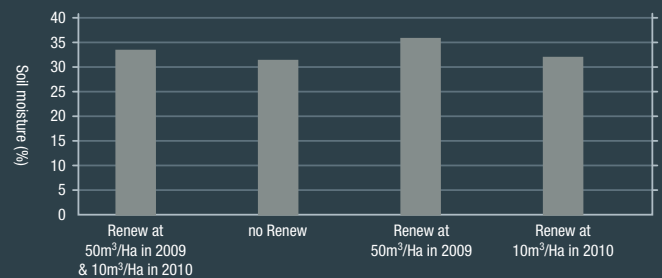
- ✓ Increased soil infiltration rates
- ✓ Improved soil water holding capacity
- ✓ Increased soil biological activity
- ✓ Increased soil depth
- ✓ A greater percentage of soil organic matter and carbon
- ✓ Improved soil structure
- ✓ Improved nutrition

Use of Renew lead to a healthier soil and a greater soil volume for young hop roots.

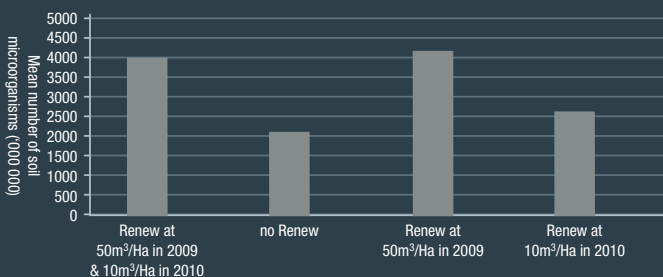
Average water infiltration rate (cm³/min) between summer 2010 and summer 2011



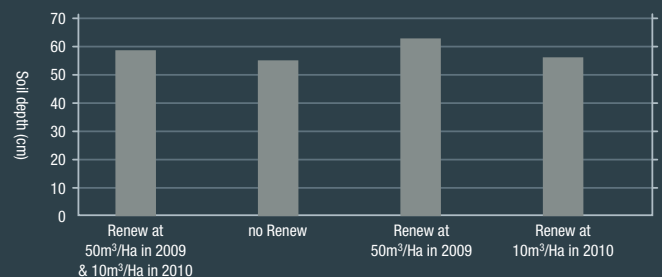
Average soil moisture between summer 2010 and summer 2011



Average number of soil microorganisms between summer 2010 and summer 2011



Average soil depth measured at 4000kPa between summer 2010 and summer 2011



Soil analysis June 2011. Chemical fertilizer was applied to the whole paddock

Measurement	Renew at 50m ³ in 2009 and 10m ³ in 2010	No Renew	Renew at 50m ³ in 2009	Renew at 10m ³ in 2010
pH (1:5)	7.14	7.09	7.17	6.73
Total Organic Carbon (%)	2.17	2.02	2.30	1.82
Organic matter	3.34	3.11	3.54	2.80
Cation exchange capacity (meq/100g)	15.9	17.1	17.6	18.3
Calcium (% CEC)	80.7	78.4	79.1	69.1

Magnesium (% CEC)	11.9	11.7	12.6	9.50
Potassium (% CEC)	5.70	8.20	6.70	6.60
Sodium (% CEC)	1.80	1.70	1.60	1.70
Al + H + other (% CEC)	0.00	0.00	0.00	13.0
Base saturation	100	100	100	87
Electrical conductivity (1:5 dS/m)	0.09	0.11	0.10	0.13
Soil bulk density	0.92	0.93	0.92	0.97



Biological Fertilizer

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