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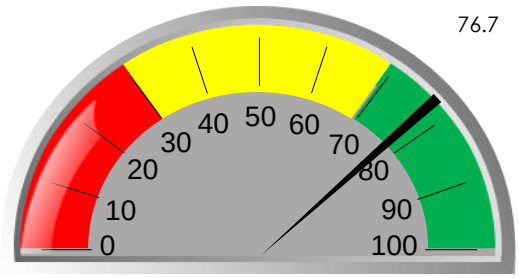
MICROBE WISE

Name: **Upper Torrens Land Management Project** Sample: **Knox Microbe** Analysis no.: **1160-8-MWSE** Date: **23/05/2016**

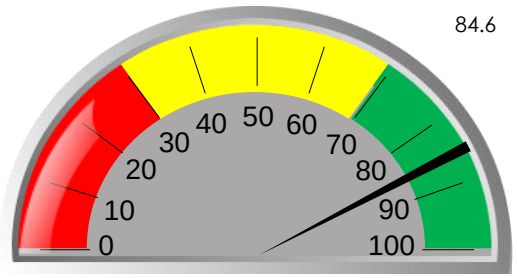
Customer name	Upper Torrens Land Management Projec	**Date received**	23/05/2016
Client name	K Thompson	**Agent**	Microbiology Laboratories A
Sample name	Knox Microbe	**Advisor**	
Crop		**Authorised by**	Microbe Labs Laboratory
Date sampled	20/05/2016	**Analysis no.**	1160-8-MWSE

Soil Indicators

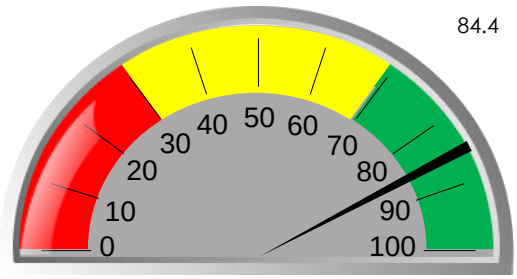
Nutrient solubilisation rate



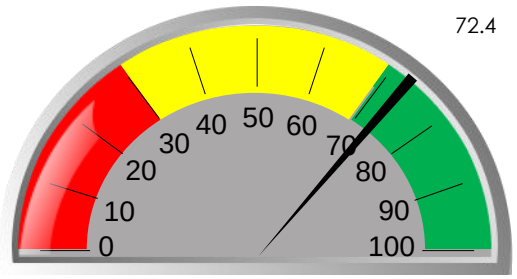
Nutrient cycling rate



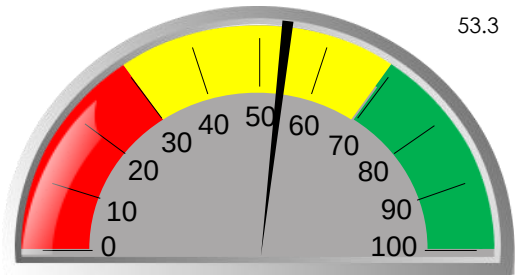
Disease resistance



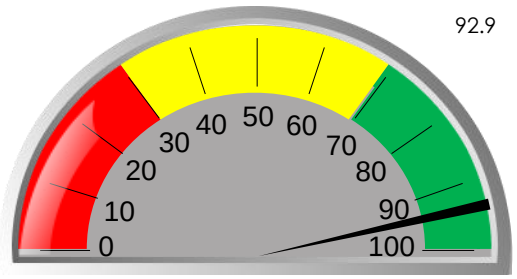
Drought resistance



Nutrient accessibility (VAM)

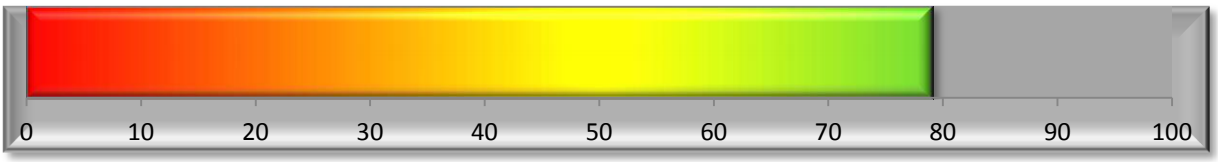


Residue breakdown rate



Overall microbial balance

79.0



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Name: **Upper Torrens Land Management Project** Sample: **Knox Microbe** Analysis no.: **1160-8-MWSE** Date: **23/05/2016**

Key Microbe Groups

Group	Biomass (mg/kg) Yours	Guide
Total microorganisms	**40.1**	50.0
Total bacteria	**9.5**	15.0
Total fungi	**29.0**	33.8
Bacteria		
Pseudomonas	**1.052**	1.000
Actinomycetes	**1.875**	1.000
Gram positive	**3.662**	4.000
Gram negative	**5.792**	11.000
Methane oxidisers	**0.000**	0.500
Sulphur reducers	**0.000**	< 0.005
True anaerobes	**0.074**	< 0.005
Eukaryotes		
Protozoa	**1.699**	1.300
Mycorrhizal fungi (including VAM)	**5.330**	10.000

Useful indicators	Yours	Guide
Microbial diversity	**52.0**	80.0
Fungi : Bacteria	**3.1**	2.3
Bacterial stress	**0.4**	< 0.5

Nutrients held in microbes	Concentration (mg/kg) Yours	Guide
Nitrogen (N)	**2.721**	3.450
Phosphorus (P)	**1.204**	1.500
Potassium (K)	**0.401**	0.500
Sulphur (S)	**0.401**	0.500
Calcium (Ca)	**0.401**	0.250
Magnesium (Mg)	**0.401**	0.250
Carbon (C)	**18.618**	22.688

Key *BDL = Below Detectable Limit (0.001 mg/kg)

Poor **Fair** **Good**

Comments

All Soil Indicators were good. Except for Nutrient Accessibility, which was fair due to intermediate levels of Mycorrhizal fungi. The total mass of microbes in your sample was fair to good. Biomasses of other key desirable microbe groups ranged from fair, to good. True anaerobes were elevated, which indicates that this soil was recently waterlogged, or compacted. Microbial diversity was fair to good, but could be improved. The fungi to bacteria ratio was elevated due to higher fungi compared to bacteria and needs to be balanced. These results suggest that management practices should initially focus on building general microbial biomass but mainly Gram negative bacteria. Re-test periodically, and once biomass has improved concentrate on building microbial diversity and biomasses of any key desirable groups that remain low.

Explanations

The Microbe Wise test measures the biomasses of key microbial groups directly from your sample. It uses molecular ('DNA type') technology to analyse the unique cell membrane 'fingerprint' of each microbe type to identify and quantify key groups important to soil processes. This method is more accurate and precise than other methods, such as direct microscopy or plate culture, because it uses chemical extraction to remove the maximum amount of microbial material from the sample and is repeatable to 0.01% between replicate analyses. It measures organisms that are alive or recently dead (within a few days). Always compare your results with a control sample. Guide values are included as a help, but because a large number of factors affect microbiology the guide levels may not be optimal for your specific conditions. Visit **www.microbelabs.com.au** for more information.

Disclaimer

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