

ROUTINE AGRICULTURAL SOIL ANALYSIS REPORT

Job No:	XXXX
No of Samples:	3
Date Supplied:	dd, month, yyyy
Supplied by:	Valued Client

Sample ID:	Sample 1 28°49'02.9"S 153°17'57.1"E	Sample 2 #1 Soil	Sample 3 Good #1	Heavy Soil	Medium Soil	Light Soil	Sandy Soil
Crop:	Environmental	Analysis	Laboratory				
Client:	..	..	..	e.g Clay	e.g Clay Loam	e.g Loam	e.g Loamy Sand

Method	Nutrient	Units	XXXX/1	XXXX/2	XXXX/3	Indicative guidelines only- refer Note 6				
Morgan 1	Calcium	Ca	718	517	512	1150	750	375	175	
	Magnesium	Mg	263	198	107	160	105	60	25	
	Potassium	K	4.6	15	220	113	75	60	50	
	Phosphorus	P	1.1	1.1	1.8	15	12	10	5.0	
Bray1 Colwell Bray2	Phosphorus	P	4.7	11	10	45 ^{note B}	30 ^{note B}	24 ^{note B}	20 ^{note B}	
			20	47	17	80	50	45	35	
			10	23	22	90 ^{note B}	60 ^{note B}	48 ^{note B}	40 ^{note B}	
KCl	Nitrate Nitrogen	N	17	3.3	1.6	15	13	10	10	
	Ammonium Nitrogen		1.5	1.8	4.0	20	18	15	12	
	Sulfur	S	24	10	1.6	10.0	8.0	8.0	7.0	
1:5 Water	pH	units	7.08	6.46	6.95	6.5	6.5	6.3	6.3	
	Conductivity	dS/m	0.126	0.050	0.038	0.200	0.150	0.120	0.100	
Calculation	Estimated Organic Matter	% OM	1.6	1.8	2.1	>5.5	>4.5	>3.5	>2.5	
Ammonium Acetate + Calculations	Calcium	Ca	cmol ⁺ /Kg	6.51	4.57	4.33	15.6	10.8	5.0	1.9
			kg/ha	2924	2051	1944	6250	4300	2000	750
	Magnesium	Mg	cmol ⁺ /Kg	3.45	2.50	1.37	2.4	1.7	1.2	0.60
			kg/ha	938	682	374	580	400	290	150
	Potassium	K	cmol ⁺ /Kg	0.14	0.17	1.01	0.60	0.50	0.40	0.30
			kg/ha	125	153	886	470	380	300	200
	Sodium	Na	cmol ⁺ /Kg	0.95	0.19	0.10	0.3	0.26	0.22	0.11
			kg/ha	491	100	49	138	120	101	51
KCl	Aluminium	Al	cmol ⁺ /Kg	0.01	0.05	0.01	0.6	5	0.5	0.2
			kg/ha	2	10	2	108	90	81	27
Acidity Titration	Hydrogen	H ⁺	cmol ⁺ /Kg	0.00	0.12	0.02	0.6	5	0.5	0.2
			kg/ha	0	3	1	12	10	9	3
Calculation	Effective Cation Exchange Capacity (ECEC)	cmol ⁺ /Kg	mg/kg	0	1	0	6	5	5	2
			mg/kg	11.07	7.61	6.82	20	14	7	4
Base Saturation Calculations	Calcium	Ca	61.9	63.2	62.5	77	76	69	60	
	Magnesium	Mg	32.8	34.6	19.8	12	12	16	20	
	Potassium	K	1.4	2.4	14.6	3	4	5	8	
	Sodium - ESP	Na	9.1	2.7	1.4	2	2	3	3	
	Aluminium	Al	0.1	0.7	0.2	7	7	7	9	
	Hydrogen	H ⁺	0.0	1.6	1.5					
Calculation	Calcium / Magnesium Ratio	ratio	2.0	1.9	3.2	6.4	6.3	4.3	3.0	
DTPA	Zinc	Zn	0.4	1.1	0.6	6.0	5.0	4.0	3.0	
	Manganese	Mn	32	29	24	25	22	18	15	
	Iron	Fe	93	191	61	25	22	18	15	
	Copper	Cu	0.9	1.1	0.7	2.4	2.0	1.6	1.2	
CaCl ₂	Boron	B	0.32	0.28	0.66	2.0	1.7	1.4	1.0	
	Silicon	Si	73	48	47	50	45	40	35	
LECO IR Analyser	Total Carbon	C	0.93	1.03	1.20	>3.1	>2.6	>2.0	>1.4	
	Total Nitrogen	N	0.07	0.08	0.10	>0.30	>0.25	>0.20	>0.15	
Calculation	Carbon/ Nitrogen Ratio	ratio	15.0	13.2	11.9	10-12	10-12	10-12	10-12	
Calculation	Basic Texture		Clay Loam	Loam	Loam	..	..	..	..
	Basic Colour		Brownish	Brownish	Red	
Calculation	Chloride Estimate	equiv. ppm	77	30	24	

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Method	Nutrient	Units	XXXX/1	XXXX/2	XXXX/3	Indicative guidelines only- refer Note 6
Total Acid Extractable	Calcium	Ca	1,952	1,104	1,266	1,000 - 10,000 Ca
	Magnesium	Mg	956	851	1,280	500 - 5,000 Mg
	Potassium	K	315	401	2,234	200 - 2,000 K
	Sodium	Na	350	104	<50	100 - 500 Na
	Sulfur	S	118	103	85	100 - 1,000 S
Total Acid Extractable	Phosphorus	P	191	397	254	400 - 1,500 P
Total Acid Extractable	Zinc	Zn	11	15	22	20 - 50 Zn
	Manganese	Mn	779	483	404	200 - 2,000 Mn
	Iron	Fe	10,063	13,730	11,712	1,000 - 50,000 Fe
	Copper	Cu	6.3	7.8	9.3	20 - 50 Cu
	Boron	B	<2	<2	3.2	2 - 50 B
	Silicon	Si	585	436	938	1,000 - 3,000 Si
Total Acid Extractable	Aluminium	Al	8,111	8,851	8,228	2,000 - 50,000 Al
	Molybdenum	Mo	<0.2	0.4	0.3	0.5 - 3 Mo
	Cobalt	Co	7.8	7.0	6.0	5 - 50 Co
	Selenium	Se	<0.5	<0.5	<0.5	0.1 - 2.0 Se
Total Acid Extractable	Cadmium	Cd	<0.5	<0.5	<0.5	< 5 Cd
	Lead	Pb	7.9	10	9.0	< 75 Pb
	Arsenic	As	<2	3.2	3.7	< 25 As
	Chromium	Cr	7	12	15	<25 Cr
	Nickel	Ni	3.8	3.7	8.7	<150 Ni
	Mercury	Hg	<0.1	0.1	<0.1	< 3.75 Hg
	Silver	Ag	<1	<1	<1	.. Ag

EAL Soil Testing Notes

- All results presented as a 40°C oven dried weight. Soil sieved and lightly crushed to <2 mm
- Methods from Rayment and Lyons, 2011. *Soil Chemical Methods*
- Soluble Salts included in Exchangeable Cations - NO PRE-WASH
- 'Morgan 1 Extract' adapted from 'Science in Agriculture', 'Non-Toxic Farming' and Lamonte Soil Handbook.
- Guidelines for phosphorus have been reduced for Australian soils
- Indicative guidelines are based on 'Albrecht' and 'Reams' concepts
- Total Acid Extractable Nutrients indicate a store of nutrients
- Contaminant Guides based on 'Residential with gardens and accessible soil including childrens daycare centres, preschools, primary schools, town houses or villas' (NSW EPA 1998).
- Information relating to testing colour codes is available on Sheet 2 - "Understanding you soil results"

Calculations

- For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm
- 1 cmol⁺/Kg = 1 meq/100g; 1 Lb/Acre = 2 ppm (parts per million); kg/ha = 2.24 x ppm; mg/kg = ppm
- Conversions for 1 cmol⁺/Kg = 230 mg/Kg Sodium, 390 mg/Kg Potassium, 122 mg/Kg Magnesium, 200 mg/Kg Calcium
- Organic Matter = %C x 1.75
- Chloride Estimate = EC x 640 (most likely over-estimate)
- ECEC = sum of the exchangeable cations cmol⁺/Kg
- Base saturation calculations = (cation cmol⁺/Kg) / ECEC x 100
- Ca / Mg ratio from the exchangeable cmol⁺/Kg results

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