ALBRECHT AND REAMS SOIL ANALYSIS REPORT

Sample — 25th February 2008 — *Lab Job No. ???*

			WPM Soil sample #	**801**	*Desirable Level Heavy Soil*	***Desirable Level Medium Soil***	*Desirable Level Light Soil*	*Desirable Level Sandy Soil*
			Block ID:	??				
			Crop:	Wheat				
			Client:	???				
	Nutrient		Units	*???*				
Soluble Salts & Morgan Extract	Calcium	Ca	ppm	**118**	*1150*	***750***	*375*	*175*
	Magnesium	Mg	ppm	**59**	*160*	***105***	*60*	*25*
	Potassium	K	ppm	**289**	*113*	***75***	*60*	*50*
	Phosphorus (Morgan)	P	ppm	**1.3**	*15*	***12***	*10*	*5*
	Phosphorus (Bray 1)	P	ppm	**7**	*45 note 8*	***30 note 8***	*24 note 8*	*20 note 8*
Colwell Bicarbonate +Dyes Extract	Phosphorus (Colwell)	P	ppm	**55**	*80*	***50***	*45*	*35*
	Phosphorus (Bray 2)	P	ppm	**45**	*90 note 8*	***60 note 8***	*48 note 8*	*40 note 8*
	Nitrate	N	ppm	**16.6**	*15*	***13***	*10*	*10*
	Ammonium	N	ppm	**9.3**	*20*	***18***	*15*	*12*
	Sulphate Sulphur	S	ppm	**62**	*40*	***30***	*25*	*25*
	pH (1:5 water)		units	**4.65**	*6.5*	***6.5***	*6.3*	*6.3*
	Conductivity (1:5 water)		µS/cm	**113**	*200*	***150***	*120*	*100*
Immediately Available	Calcium	Ca	cmol⁺/Kg	**0.71**	*15.6*	***10.8***	*5.0*	*1.9*
		Ca	kg/ha	**318**	7000	**4816**	2240	840
		Ca	ppm	**142**	3125	**2150**	1000	375
	Magnesium	Mg	cmol⁺/Kg	**0.49**	*2.4*	***1.7***	*1.2*	*0.6*
		Mg	kg/ha	**132**	650	**448**	325	168
		Mg	ppm	**59**	290	**200**	145	75
	Potassium	K	cmol⁺/Kg	**0.94**	*0.6*	***0.5***	*0.4*	*0.3*
		K	kg/ha	**821**	526	**426**	336	224
		K	ppm	**367**	235	**190**	150	100
	Sodium	Na	cmol⁺/Kg	**0.04**	*0.30*	***0.26***	*0.22*	*0.11*
		Na	kg/ha	**20**	155	**134**	113	57
		Na	ppm	**9**	69	**60**	51	25
	Aluminium	Al	cmol⁺/Kg	**1.62**	*0.6*	***0.5***	*0.5*	*0.2*
		Al	kg/ha	**326**	108	**90**	81	27
		Al	ppm	**146**	54	**45**	41	14
Acidity Titration	Hydrogen	H^+	cmol⁺/Kg	**1.57**	*0.6*	***0.5***	*0.5*	*0.2*
		H^+	kg/ha	**31**	12	**10**	9	3
		H^+	ppm	**16**	6	**5**	5	2
Percent Base Saturation	Calcium	Ca	%	**13.2**	*77.0*	***76.0***	*69.0*	*60.0*
	Magnesium	Mg	%	**9.1**	*12.0*	***12.0***	*16.0*	*20.0*
	Potassium	K	%	**17.5**	*3.0*	***3.5***	*5.0*	*8.0*
	Sodium	Na	%	**0.7**	*1.5*	***2.0***	*3.0*	*3.0*
	Aluminium	Al	%	**30.1**	*6.5*	***6.5***	*7.0*	*9.0*
	Hydrogen	H+	%	**29.3**				
SMP	BUFFER pH (Not $CaCl_2$)		units	**6.12**	*6.7*	***6.7***	*6.7*	*6.7*
Micronutrients DTPA-HVot $CaCl_2$ Extracts	Zinc	Zn	ppm	**2.2**	*6.0*	***5.0***	*4.0*	*3.0*
	Manganese	Mn	ppm	**21.2**	*25*	***22***	*18*	*15*
	Iron	Fe	ppm	**188.2**	*25*	***22***	*18*	*15*
	Copper	Cu	ppm	**3.9**	*2.4*	***2.0***	*1.6*	*1.2*
	Boron	B	ppm	**0.90**	*2.0*	***1.7***	*1.4*	*1.0*
Acid Extract	Molybdenum	Mo	ppm	**0.46**	*2.0*	***1.7***	*1.4*	*1.0*
	Cobalt	Co	ppm	**2.20**	*40*	***30***	*25*	*20*
	Selenium	Se	ppm	**0.5**	*2*	***1.5***	*1*	*0.5*
$CaCl_2$ Extract	Silicon	Si	ppm	**24.0**	*50*	***45***	*40*	*35*
	Texture	t		**Clay**	..	**..**	..	..
	Colour	c		**Red**	..	**..**	..	..

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Cation Exchange Capacity — cmol⁺/Kg

Suggested 14

Yours **5.37**

Calcium/ Magnesium Ratio

Suggested ***6.33***

Yours **1.44**

Organic Matter — %

Suggested ***4.5***

Yours **8.75**

Total Carbon — %

Suggested ***2.6***

Yours **5.00**

Total Nitrogen — %

Suggested ***0.25***

Yours **0.44**

Carbon/ Nitrogen Ratio — *ratio*

Suggested ***10 to 12***

Yours **11.3**

Calcium is a must for this soil

When adding calcium to soil available phosphate will be lowered

Notes:

1: Cation Exchange Capacity = sum of the exchangeable Mg, Ca, Na, K, H and Al; Sodium % = ESP (Exchangeable Sodium Percentage)

1a: Soluble Salts included in exchangeable Cations - NO WASHING/ REMOVAL OF SOLUBLE SALTS

2: Albrecht Methods from Rayment and Higgins, 1992. Australian Laboratory Handbook of Soil and Water Chemical Methods.

3: Reams available nutrient testing adapted from 'Science in Agriculture' and 'Non-Toxic Farming' and Lamonte Soil Handbook.

4. All results as dry weight; ppm = mg/Kg air dried @ 65˚C and crushed to ensure homeogenity (ie. ring mill)

5. For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm

6. 1 cmol+/Kg = 1 meq/100g; 1 Lb/Acre = 2.24 ppm (parts per million); **1 kg/ha = 2.24 x ppm**; 1 Lb/Acre = 1 kg/ha

7. Conversions for 1 cmol⁺/Kg = 230 mg/kg Sodium ; 391 mg/kg Potassium ; 122 mg/kg Magnesium ; 200 mg/kg Calcium.

8. Guideline values for phosphorus have reduced in accordance with Australian soils

9. Acid Extract is concentrated nitric acid digest of soil at ratio 1:5; soil:acid

10. Organic Matter = (%C Total Carbon) x 1.75

11. Colwell Phosphorus only determined on alkaline soils (ie. pH >7)

12. .. Denotes analysis not requested