Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed062 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: G.M. Roberts Locality: E.V. Crawford, Glenklevin

Date Desc.: Elevation: 13/06/85 227 metres Sheet No.: 8837 N 1:50000 Map Ref.: Rainfall: No Data Northing/Long.: 6670200 AMG zone: 55 Runoff: No Data 765100 Datum: AGD66 Easting/Lat.: Drainage: No Data

**Geology** 

ExposureType: Undisturbed soil core Conf. Sub. is Parent. Mat.: No Data Substrate Material: No Data

Land Form

Rel/Slope Class:No DataPattern Type:No DataMorph. Type:No DataRelief:No Data

Elem. Type: Levee Slope Category: Very gently sloped

Slope: 0 % Aspect: No Data

Surface Soil Condition (dry): Self-mulching, Recently cultivated

**Erosion:** 

**Soil Classification** 

Australian Soil Classification: Mapping Unit: N/A
N/A Principal Profile Form: Ug5.15
ASC Confidence: Great Soil Group: Black earth

Confidence level not specified

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage, Cultivation. Rainfed,

Vegetation:

### **Surface Coarse Fragments:**

<u>Profi</u>	le N	lorp	hol	ogy
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A11p 0 - 0.1 m Very dark grey (10YR3/1-Moist); Dark grey (10YR4/1-Dry); ; Medium clay; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist;

Weak consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;

A12p 0.1 - 0.25 m Very dark grey (10YR3/1-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Many (>5 per 100mm2) Very fine (0.075-

1mm) macropores, Moderately moist; Very firm consistence; Field pH 7.5 (pH meter); Few, very

fine (0-1mm) roots;

A13p 0.25 - 0.7 m Very dark grey (10YR3/1-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Angular

blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.6 (pH meter); Few, very fine (0-1mm) roots; Gradual,

Smooth change to -

B21r 0.7 - 1 m Dark brown (7.5YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, 5-10 mm,

Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules;

Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots; Sharp, Irregular change to

B22r 1 - 1.42 m Dark brown (7.5YR3/4-Moist); , 7.5YR32, 10-20% , 15-30mm, Distinct; Medium heavy clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm

Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.8 (pH meter);

Few, very fine (0-1mm) roots; Sharp, Irregular change to -

B23k 1.42 - 2.75 m Dark brown (7.5YR3/4-Moist); ; Medium heavy clay; Moderate grade of structure, 5-10 mm,

Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Veins; Field

pH 8.8 (pH meter);

# **Morphological Notes**

A11p Visible crackdepth is 47cm. Calcium carbonate increases with depth, also the amount of

manganese, but decreases from 230cm.

#### **Observation Notes**

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# **Site Notes**

Paddock is fallow. Fungus beneath 80cm. Waterworn coarse stones on surface.

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# **Laboratory Test Results:**

Depth	рН	1:5 EC		hangeable			Exchangeab	le CE	С	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (	Acidity (+)/kg				%
0 - 0.02	7.5A	8.1999999 02A	E-22.29B	8.35	1.87	0.42					
0 - 0.1	6.46A	0.278A	16.75B	8.8	1.41	0.66					
0.1 - 0.2	7.25A	0.151A	22.24B	7.48	0.71	0.93999 99					
0.3 - 0.4	8.74A	0.113A	26.54B	10.91	0.64	1.93					
0.7 - 0.8	9.07A	0.165A	24.83B	11.01	0.74	4.1					
1.2 - 1.3	8.88A	0.249A	26.31B	11.11	1.06	5.02					
2.5 - 2.6	8.72A	0.268A	25.53B	9.82	1.27	5.49					
Depth	CaCO3	Organic C	Avail. P	Total P	Tota N	al Tot K			Particle CS	Size FS	Analysis Silt Clay
m	%	%	mg/kg	%	%	%		,	00	%	one only
0 - 0.02	<0.1B	1C									14.1 47.6
0 - 0.1	<0.1B	2.08C	31.4J								11.9 44.3
0.1 - 0.2	0.1B	1.06C	13.3J								14.2 49.9
0.3 - 0.4	0.3B	0.71C	10.1J								15.3 49.3
0.7 - 0.8	0.5B	0.61C	20.9J								15.3 52.3
1.2 - 1.3	0.3B	0.31C	20.2J								15.8 58.4
2.5 - 2.6	0.3B	0.06C	7.2J								14.5 57.7
Depth	COLE		Grav	vimetric/Vo	olumetric	Water Co	ontents		Ks	sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar /g - m3/		5 Bar	15 Bar	mm	n/h	mm/h

0 - 0.02 0 - 0.1 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.6

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#### **Laboratory Analyses Completed for this profile**

15A2\_CA Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for

soluble salts

15A2\_K Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts 15A2\_MG Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts 15A2\_NA Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts

19B1 Carbonates - manometric 3A1 EC of 1:5 soil/water extract 4A1 pH of 1:5 soil/water suspension

5A2 Chloride - 1:5 soil/water extract, automated colour

6B3 Total organic carbon - high frequency induction furnace, infrared

7B1 Water soluble nitrate - automated colour

9B1 Bicarbonate-extractable phosphorus - manual colour

P10\_CF\_C Clay (%) - Coventry and Fett pipette method Silt (%) - Coventry and Fett pipette method