Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed099 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: D. McGarry Locality: stock route, at Edgeroi

Date Desc.: Elevation: 03/06/86 247 metres Map Ref.: Sheet No.: 8837 N 1:50000 Rainfall: No Data Northing/Long.: 6665100 AMG zone: 55 Runoff: No Data 770500 Datum: AGD66 Easting/Lat.: Drainage: No Data

Geology

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

Land Form

Rel/Slope Class: No Data Pattern Type: No Data Morph. Type: No Data Relief: No Data Elem. Type: Terrace plain Slope Category: Level Slope: 0 % Aspect: No Data

Surface Soil Condition (dry): Self-mulching, Trampled

Erosion:

Soil Classification

Australian Soil Classification: Mapping Unit: N/A
N/A Principal Profile Form: Ug5.16
ASC Confidence: Great Soil Group: Grey clay

Confidence level not specified

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11 0 - 0.1 m Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); ; Light clay; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very strong consistence; Field pH

6.5 (pH meter); Common, very fine (0-1mm) roots;

A12 0.1 - 0.25 m Black (10YR2/1-Moist); Black (10YR2/1-Dry); , 10YR62, 0-2% , 0-5mm, Faint; Medium heavy

clay; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very

strong consistence; Field pH 6.5 (pH meter); Common, very fine (0-1mm) roots;

A13 0.25 - 0.55 m Black (10YR2/1-Moist); , 10YR62, 0-2% , 0-5mm, Distinct; Medium heavy clay; Moderate grade

of structure, 20-50 mm, Lenticular; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 8.5 (pH meter); Few, very

fine (0-1mm) roots;

 $A14 \qquad 0.55 - 1.1 \ m \qquad \text{Very dark grey (10YR3/1-Moist); , 10YR52, 0-2\%, 5-15mm, Distinct; , 10YR83, 0-2\%, 0-5mm, and the state of th$

Faint; Heavy clay; Weak grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

B21 1.1 - 1.9 m Dark greyish brown (10YR4/2-Moist); , 10YR31, 2-10% , 5-15mm, Distinct; , 10YR83, 0-2% , 5-

15mm, Distinct; Medium clay; Moderate grade of structure, 50-100 mm, Lenticular; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence;

Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (pH meter);

B22 1.9 - 2.78 m Dark greyish brown (10YR4/2-Moist); , 10YR31, 2-10% , 5-15mm, Distinct; , 10YR73, 2-10% ,

15-30mm, Distinct; Medium clay; Weak grade of structure, 100-200 mm, Lenticular; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (pH meter);

Morphological Notes

Fine soft carbonate below 40cm. Much carbonate from 230 to bottom of core but not

much above. Some development of prismatic structure from 130-220. Manganese is

common on faces of peds 100-220cm.

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Observation Notes

Parent Rock: alluvial sediment, mixed texture, with lime, fifth (eroded) fan

This site could not be at target on Woodstock as a large reservoir is built there. The site is on the closest undisturbed ground. There are some very small surface cracks but they are not deep (2cm).

Soil Studies in the Lower Namoi Valley EDGEROI Site ID: ed099 CSIRO Division of Soils (QLD)

Observation ID: 1

Project Name: Project Code: Agency Name:

Laboratory Test Results:

Depth	рН	1:5 EC		hangeable			Exchangeable	CE	c	ECEC		ESP
m		dS/m	Ca	Mg	К	Na Cmol (+	Acidity -)/kg					%
0 - 0.02	6.34A	0.137A	15.55B	5.01	1.65	0.17						
0 - 0.1	6.73A	0.141A	17.82B	5.56	1.14	1.01						
0.1 - 0.2	7.94A	0.097A	25.47B	6.77	0.43	2.55						
0.3 - 0.4	9.08A	0.411A	30.89B	8.38	0.27	6.68						
0.7 - 0.8	8.89A	0.828A	24.73B	7.3	0.34	7.61						
1.2 - 1.3	8.84A	0.805A	23.39B	7.03	0.45	8.01						
2.5 - 2.6	9.06A	0.652A	23.39B	5.63	0.36	7.76						
Depth	CaCO3	Organic	Avail.	Total	Total	Tota	l Bulk	ı	Particle	Size	Analysi	s
		С	P	Р	N	K	Density	G۷	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 000	.0.40	0.040									45.5	
0 - 0.02	<0.1B <0.1B		1001									32.5
0 - 0.1 0.1 - 0.2	<0.1B		12.3J 1.6J								13.9 14.4	
0.1 - 0.2	2.3B	1.16C 1.14C	1.6J <1J								14.4	
0.3 - 0.4	2.3B 2.9B	0.56C	<1J									43.6
1.2 - 1.3	0.4B	0.56C 0.17C	<1J								16.1	_
2.5 - 2.6	4.8B	0.17C	<1J								_	41.5
2.5 - 2.6	4.00	0.10	<10								10.8	41.5
Danish	0015		0		- I 4! - N	W-4 O			1 7 -	_4	V	
Depth	COLE	Sat.	0.05 Bar	0.1 Bar	olumetric V 0.5 Bar	vater Cor 1 Bar		Bar	Ks	at	K unsa	ıt
m		Sat.	u.ua Bar		0.5 Баг /g - m3/m		a par 13	Dal	mm	ı/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