Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed213 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward Locality: stock route, at Galathera tank

Date Desc.: Elevation: 11/03/85 209 metres Map Ref.: Sheet No.: 8837 N 1:50000 Rainfall: No Data Northing/Long.: 6664000 AMG zone: 55 Runoff: No Data 759500 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 DataPattern Type:No DataMorph. Type:No DataRelief:No DataElem. Type:Terrace flatSlope Category:LevelSlope:1 %Aspect:No Data

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

**Erosion:** 

**Soil Classification** 

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

Confidence level not specified

Site Disturbance:

Vegetation:

**Surface Coarse Fragments:** 

Profile Morphology

A11 0 - 0.06 m Dark brown (7.5YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong

consistence; Field pH 6.8 (pH meter); Common, very fine (0-1mm) roots; Sharp, Wavy change to

A12 0.06 - 0.25 m Dark brown (7.5YR3/2-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm,

Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded tabular, Quartz, coarse fragments; Field pH 8 (pH meter); Few, very fine

(0-1mm) roots;

A13 0.25 - 0.55 m Dark brown (7.5YR3/2-Moist); , 10YR72, 0-2% , 0-5mm, Distinct; Medium clay; Weak grade of

structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded tabular, Quartz, coarse fragments; Very few (0 - 2%), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9.2 (pH meter); Few, very fine (0-1mm) roots;

Diffuse, Smooth change to -

B21 0.55 - 1.17 m Brown (7.5YR4/2-Moist); , 5R31, 10-20% , 5-15mm, Distinct; , 10YR81, 0-2% , 5-15mm,

Prominent; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.7 (pH meter); Few, very

fine (0-1mm) roots; Diffuse, Smooth change to -

B22 1.17 - 1.53 m Greyish brown (10YR5/2-Moist); , 5R31, 20-50% , 15-30mm, Distinct; Light medium clay;

Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Very firm

consistence; Field pH 7.7 (pH meter); Diffuse, Smooth change to -

B23 1.53 - 2.4 m Dark reddish brown (5YR3/2-Moist); , 5R31, 2-10% , 5-15mm, Prominent; , 10YR81, 0-2% , 0-

5mm, Distinct; Medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Gypseous, Fine (0 -

2 mm), Crystals; Field pH 7.5 (pH meter);

**Morphological Notes** 

**Observation Notes** 

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Project Name: Project Code: Agency Name:

Parent Rock: , , parna on third fan

Site Notes

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## **Laboratory Test Results:**

Depth	рН	1:5 EC		hangeable			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (	Acidity +)/kg			%
0 - 0.02	6.85A	0.228A	11.41B	5.45	1.64	0.81000 01				
0 - 0.06	8.27A	0.264A	15.25B	7.46	0.72	2.8				
0.1 - 0.2	9.11A	0.349A	17.36B	8.15	0.41	5.44				
0.3 - 0.4	8.15A	1.92A	18.46B	9.58	0.6	7.82				
0.7 - 0.8	8.21A	0.996A	18.37B	10.33	0.7	7.82				
1.2 - 1.3	8.54A	0.617A	14.83B	7.79	0.54	6.55				
2.3 - 2.4	8.04A	0.112A	20.83B	11	0.74	9.71				
Depth	CaCO3	Organic C	Avail. P	Total P	Tota N	ıl Tota K		Particle GV CS	Size FS	Analysis Silt Clay
m	%	%	mg/kg	-	%	%		0, 00	%	One Olay
0 - 0.02	<0.1B	2.34C								18.4 30.2
0 - 0.06	0.1B	0.93C	7.3J							19.1 37.5
0.1 - 0.2	1.3B	0.75C	<1J							21.1 39.5
0.3 - 0.4	0.6B	0.51C	5.7J							24.6 46
0.7 - 0.8	<0.1B	0.27C	10.8J							25.6 48.8
1.2 - 1.3	<0.1B	0.16C	8.6J							17.3 38.9
2.3 - 2.4	0.2B	0.1C	8.9J							16.6 57.8
										K unsat
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar g - m3/r		5 Bar 15 B		n/h	mm/h

0 - 0.02 0 - 0.06 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.3 - 2.4

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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