Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed223** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: G.M. Roberts
Date Desc.: 26/03/85
Map Ref.: Sheet No. : 8837_N 1:50000
Northing/Long.: 6656780 AMG zone: 55
Easting/Lat.: 752370 Datum: AGD66
Locality: stock route, by Auscott
Elevation: 201 metres
Rainfall: No Data
Runoff: No Data
Drainage: No Data

Geology

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

Land Form

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

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:
N/A
ASC Confidence:
Confidence level not specified
Mapping Unit: N/A
Principal Profile Form: Ug6.51
Great Soil Group: No suitable

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.04 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Light medium clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 7 (pH meter); Common, medium (2-5mm) roots; Abrupt, Smooth change to -
A12p	0.04 - 0.12 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); , 10YR86, 0-2% , 5-15mm, Distinct; Medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 6.8 (pH meter); Common, fine (1-2mm) roots; Clear, Smooth change to -
A13	0.12 - 0.22 m	Dark grey (10YR4/1-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Field pH 8.2 (pH meter); Common, very fine (0-1mm)
A14	0.22 - 0.55 m	Dark grey (10YR4/1-Moist); , 10YR83, 0-2% , 5-15mm, Faint; , 10R31, 0-2% , 0-5mm, Faint; Medium heavy clay; Massive grade of structure; Earthy 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, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 8.2 (pH meter); Common, very fine (0-1mm) roots;
A15	0.55 - 1 m	Dark grey (10YR4/1-Moist); , 10YR73, 0-2% , 0-5mm, Faint; , 10R31, 0-2% , 0-5mm, Faint; Medium heavy clay; Massive grade of structure; Earthy 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, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
A16	1 - 1.35 m	Brown (7.5YR4/2-Moist); , 10YR41, 20-50% , 5-15mm, Faint; , 10YR73, 0-2% , 0-5mm, Faint; Light medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Common, very fine (0-1mm) roots; Gradual, Smooth change to -

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2B1	1.35 - 1.65 m	Brown (7.5YR4/2-Moist); , 10YR41, 10-20% , 5-15mm, Distinct; , 10YR73, 2-10% , 5-15mm, Distinct; Medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots;
2B2	1.65 - 2.66 m	Strong brown (7.5YR5/6-Moist); , 7.5YR44, 20-50% , 15-30mm, Distinct; , 7.5YR41, 2-10% , 5-15mm, Prominent; Light medium clay; Strong grade of structure, 10-20 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter);

Morphological Notes

A11p Field pH for sample 8 estimated from lab pH.

Observation Notes

Parent Rock: alluvial sediment, clay, parna on fourth fan, Namoi

Site Notes

Roadside adjoining Auscott.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m				Cmol (+)/kg				%
0 - 0.02	7.34A	0.261A	17.96B	12.64	3.11	0.32				
0 - 0.04	8.03A	0.133A	18.6B	12.94	2.01	0.79				
0.04 - 0.1	7.59A	0.106A	16.68B	11.98	1.37	0.9399999				
0.12 - 0.2	8.31A	0.072A	19B	13.62	1.28	1.36				
0.3 - 0.4	8.9A	0.08A	17.7B	13.25	0.9399999	2.57				
0.7 - 0.8	9.19A	0.176A	14.07B	12.29	0.95	4.6				
1.2 - 1.3	8.99A	0.398A	10.03B	12.22	0.95	6.22				
1.5 - 1.6	9.13A	0.435A	9.21B	13.12	1	7.81				
2.5 - 2.6	9.3A	0.467A	8.469999B	9.84	0.36	8.04				

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.02	<0.1B	2.56C									16.7	51.9
0 - 0.04	<0.1B	2.28C	78.7J								18.2	53.5
0.04 - 0.1	<0.1B	1.26C	59.1J								16.8	50.6
0.12 - 0.2	<0.1B	0.84C	38.6J								20.1	57.1
0.3 - 0.4	<0.1B	0.63C	30.1J								18.2	53.9
0.7 - 0.8	<0.1B	0.48C	56.1J								17.6	50.2
1.2 - 1.3	0.8B	0.29C	50J								17	46.4
1.5 - 1.6	0.7B	0.26C	47.3J								18.9	49.8
2.5 - 2.6	2.3B	0.13C	22.8J								21.6	38.4

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m		g/g - m3/m3							mm/h	mm/h
0 - 0.02										
0 - 0.04										
0.04 - 0.1										
0.12 - 0.2										
0.3 - 0.4										
0.7 - 0.8										
1.2 - 1.3										
1.5 - 1.6										
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
P10_CF_Z	Silt (%) - Coventry and Fett pipette method