

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na013 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	D. McGarry	Locality:	stock route, by rail overpass
Date Desc.:	23/02/88	Elevation:	217 metres
Map Ref.:	Sheet No. : 8837_S 1:50000	Rainfall:	No Data
Northing/Long.:	6644720 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	768950 Datum: AGD66	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 flat	Slope Category:	No Data
Slope:	0 %	Aspect:	No Data

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

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Ug5.16
		Great Soil Group:	Grey clay

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); ; Medium heavy clay; Weak grade of structure, 50-100 mm, Angular blocky; Moderate grade of structure, <2 mm, Granular; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.2 m	Dark brown (7.5YR3/2-Moist); ; Medium heavy clay; Weak grade of structure, 50-100 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Clear, Smooth change to -
2A11	0.2 - 0.55 m	Dark brown (7.5YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 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, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Common, very fine (0-1mm)
2A12	0.55 - 1 m	Dark brown (7.5YR3/2-Moist); , 7.5YR42, 2-10% , 5-15mm, Distinct; Medium heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; Moderate grade of structure, 20-50 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; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
2B21	1 - 1.9 m	Dark reddish grey (5YR4/2-Moist); , 7.5YR32, 20-50% , 15-30mm, Prominent; , 7.5YR42, 2-10% , 0-5mm, Prominent; Medium clay; Strong grade of structure, 50-100 mm, Lenticular; Weak grade of structure, 20-50 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; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter);
2B22	1.9 - 2.55 m	Dark reddish grey (5YR4/2-Moist); , 7.5YR32, 10-20% , 15-30mm, Prominent; Medium clay; Strong grade of structure, 50-100 mm, Lenticular; Weak 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; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (pH meter);

Morphological Notes

A11 Wedge structure begins about 50cm. A clear, smooth ?genetic transition at 20cm separates the more massive moist surface from well-structured material beneath. This is possibly a relatively recent deposit on the surface (WTW). Note several s

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na013 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

A12 mall carbonate nodules and suggestion of horizontal depositional fabric. The top could be A1a.

Observation Notes

Parent Rock: alluvial sediment, clay, parna on third fan

Site Notes

Very nice surface soil here, dark brown and very well self-mulched. Self-mulch layer is 8-10cm deep and very soft. Rounded carbonate nodules, 0.5-2cm diameter, on soil surface. There is some suggestion of a recent burial to 25cm, but this c

Agency Name: CSIRO Division of Soils (QLD)

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
							Cmol (+)/kg		
0 - 0.02	7.72A	0.172A	29B	15.65	4.28	0.33			
0 - 0.1	7.98A	0.237A	26.49B	17.5	1.48	2.5			
0.1 - 0.2	8.16A	0.229A	28.01B	17.72	1.31	2.85			
0.3 - 0.4	9.03A	0.238A	25.66B	18.95	1.01	7.46			
0.7 - 0.8	8.98A	0.466A	22.07B	20.75	1.24	10.79			
1.2 - 1.3	9.03A	0.617A	20.05B	23.57	1.37	12.66			
2.45 - 2.55	9.21A	0.624A	10.42B	22.39	0.77	12.84			

Depth m	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis
	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	Silt Clay
0 - 0.02	<0.1B	1.78C								16.5 62.1
0 - 0.1	<0.1B	1.37C	29.4J							16.7 60.2
0.1 - 0.2	0.4B	1.07C	17.6J							16.8 61.2
0.3 - 0.4	0.1B	0.72C	21.4J							15.8 60.2
0.7 - 0.8	2.2B	0.65C	38.5J							16.7 60
1.2 - 1.3	1B	0.45C	46.5J							16.9 57.4
2.45 - 2.55	4.8B	0.2C	17.6J							16.4 49

[illegible]

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na013 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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