

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed245 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	W.T. Ward	Locality:	stock route, near Fairview
Date Desc.:	01/06/88	Elevation:	233 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6675750 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	765800 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:	Fan	Slope Category:	Very gently sloped
Slope:	1 %	Aspect:	220 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

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

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Brown (7.5YR4/2-Dry); ; Light medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Dark brown (7.5YR3/2-Moist); ; Light medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.45 m	Dark brown (7.5YR3/2-Moist); , 7.5YR64, 0-2% , 0-5mm, Faint; Light medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to
A14k	0.45 - 0.95 m	Dark brown (7.5YR3/2-Moist); , 7.5YR64, 0-2% , 5-15mm, Distinct; Light medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Weak grade of structure, 5-10 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	0.95 - 1.7 m	Reddish brown (5YR4/4-Moist); , 2.5YR56, 0-2% , 0-5mm, Distinct; , 7.5YR54, 0-2% , 0-5mm, Distinct; Light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Weak grade of structure, 5-10 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Gypseous, Medium (2 - 6 mm), Crystals; Field pH 8.8 (pH meter); Diffuse, Smooth change to -
B22	1.7 - 2.85 m	Reddish brown (5YR4/3-Moist); , 2.5YR56, 0-2% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 10-20 mm, Lenticular; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8.8 (pH meter);

Morphological Notes

A11 Polished wedges are more prominent below 170cm. Roots at 250-260cm follow slickensides. There are very few very small carbonate nodules at 240cm. I think that this

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is well drained, slightly watersorted aeolian clay. Compare ed025.

Observation Notes

Parent Rock: aeolian sediment, clay, parna on fourth fan

Site Notes

Very dry, hard and cracked.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
		Ca	Mg	K	Na	Acidity			
m		dS/m				Cmol (+)/kg			%

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

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
		C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		

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

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 - 0.1
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