

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** cu004 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	W.T. Ward	Locality:	J. R. (Jeff) Carolan, Scotsburn
Date Desc.:	31/05/88	Elevation:	170 metres
Map Ref.:	Sheet No. : 8737_S 1:50000	Rainfall:	No Data
Northing/Long.:	6649600 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	698900 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:	Flood plain
Morph. Type:	No Data	Relief:	No Data
Elem. Type:	No Data	Slope Category:	Level
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry): Surface crust

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:	N/A

Site Disturbance: Cultivation. Rainfed, Complete clearing. Pasture, native or improved, cultivated at some stage,

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Dark grey (10YR4/1-Dry); , N20, 0-2% , 5-15mm, Faint; Light clay; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.3 m	Dark brown (7.5YR3/2-Moist); ; Light clay; Strong grade of structure, 10-20 mm, Subangular blocky; Strong grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to
A13k	0.3 - 0.6 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; Moderate grade of structure, 20-50 mm, Lenticular; 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), Soft segregations; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
A14	0.6 - 1.1 m	Dark brown (7.5YR3/2-Moist); ; Light medium clay; Moderate grade of structure, 20-50 mm, Lenticular; Moderate grade of structure, 50-100 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 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B2	1.1 - 2 m	Brown (7.5YR4/2-Moist); , 5YR42, 0-2% , 5-15mm, Faint; Light medium clay; Moderate grade of structure, 50-100 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; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
C	2 - 2.59 m	Reddish brown (5YR4/4-Moist); , 7.5YR52, 0-2% , 0-5mm, Faint; , 7.5YR42, 2-10% , 5-15mm, Distinct; Light clay; Massive grade of structure; Smooth-ped fabric; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 9 (pH meter); Few, coarse (>5mm) roots;

Morphological Notes

A11 One large tree root at 160cm, 3cm diameter; another below 230cm runs to bottom of core. The top 30cm (?and the soft carbonate at 30-60cm) is relatively recent flood

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A12 recent accumulation of alluvium, too thin to bury the soil effectively

Observation Notes

Parent Rock: alluvial sediment, clay, sand first terraced fan, Namoi

Site Notes

In flood channel north of levee bank. Weak surface crust to self-mulching. Many small surface cracks but no large ones.

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
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 - 2.59

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle			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 - 2.59

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
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Laboratory Analyses Completed for this profile