

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** cu002 **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.: 24/05/88	Elevation: 171 metres
Map Ref.: Sheet No. : 8737_S 1:50000	Rainfall: No Data
Northing/Long.: 6648200 AMG zone: 55	Runoff: No Data
Easting/Lat.: 698550 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: 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: Grey clay

Site Disturbance: Cultivation. Irrigated, past or present, Cultivation. Rainfed,

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark brown (10YR3/3-Moist); Dark greyish brown (10YR4/2-Dry); ; Light clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Moderate grade of structure, 50-100 mm, Angular blocky; Rough-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 6 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); , 10YR4/3, 0-2% , 0-5mm, Distinct; Light clay; Moderate grade of structure, 20-50 mm, Prismatic; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.5 m	Very dark greyish brown (10YR3/2-Moist); , 10YR4/3, 0-2% , 0-5mm, Faint; Light medium clay; Weak grade of structure, 50-100 mm, Angular 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 8.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to
A14k	0.5 - 1 m	Very dark greyish brown (10YR3/2-Moist); , 10YR4/3, 0-2% , 0-5mm, Distinct; Light medium clay; Weak grade of structure, 50-100 mm, Lenticular; Moderate grade of structure, 10-20 mm, Angular 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; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B2	1 - 1.8 m	Reddish brown (5YR4/4-Moist); , 10YR3/3, 10-20% , 5-15mm, Prominent; Light clay; Weak grade of structure, 50-100 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Field pH 9 (pH meter); Diffuse, Smooth change to -
C	1.8 - 2.7 m	Reddish brown (5YR4/4-Moist); , 10YR3/3, 2-10% , 5-15mm, Prominent; Light clay; Massive grade of structure; Earthy fabric; Few (<1 per 100mm ²) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Field pH 7.5 (pH meter);

Morphological Notes

A11 0-3cm is sandy clay, probably representing recent flood addition to a prior soil, but not thick enough to recognize separately. Profile below 1m depth is sandy also. Compare MVpH, a sandy version. Prominent vertical worm burrows in lower part of the soil, partly infilled with inwashed A horizon.

A12

Observation Notes

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Parent Rock: alluvial sediment, mixed texture, with lime, parna on third fan, Namoi

Site Notes

The core is a sandy version of MVpH, compare cu001. Surface is also sandy, suggesting that there is very little recent flood deposit.

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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 - 0.1
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 - m ³ /m ³				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