

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** we006 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward	Locality:
Date Desc.: 16/02/89	Elevation: 175 metres
Map Ref.: Sheet No. : 8737_N 1:50000	Rainfall: No Data
Northing/Long.: 6671400 AMG zone: 55	Runoff: No Data
Easting/Lat.: 713400 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: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); , 10YR62, 0-2% , 0-5mm, Distinct; Light clay; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 7 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
A12	0.1 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); ; Light clay; Weak 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; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Very dark greyish brown (10YR3/2-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 1 m	Very dark greyish brown (10YR3/2-Moist); , 10YR63, 0-2% , 0-5mm, Distinct; Light medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped 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; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots;
A15	1 - 1.3 m	Dark grey (10YR4/1-Moist); , 10YR63, 0-2% , 0-5mm, Distinct; , 10YR53, 2-10% , 5-15mm, Distinct; Light medium clay; Weak grade of structure, 50-100 mm, Prismatic; Weak grade of structure, 10-20 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; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.8 (pH meter); Diffuse, Smooth change to -
B2	1.3 - 2.66 m	Brown (10YR5/3-Moist); , 10YR42, 0-2% , 5-15mm, Faint; Light clay; Weak grade of structure, 50-100 mm, Prismatic; Weak grade of structure, 100-200 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.8 (pH meter);

Morphological Notes

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A11 Originally bu008. 0-10cm separated as it is possibly surface wash. It has a more sandy appearance than the remainder. Carbonate concretions start at 30cm. Fine grit and fragments to note.

A12

Observation Notes

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

Site Notes

Nardoo, rushes.

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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	7.26A	0.118A	21.12B	13.92	1.72	0.95			
0.1 - 0.2	8.12A	0.096A	22.12B	14.8	0.79	1.75			
0.3 - 0.4	8.89A	0.146A	20.66B	15.8	0.72	5.6			
0.7 - 0.8	9.14A	0.315A	16.49B	15.6	0.79	11.5			
1.2 - 1.3	8.7A	1.155A	14.24B	16.08	0.86	16.55			
2.5 - 2.6	9.11A	0.776A	9.690001	15.06	0.86	16.36			

Depth m	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS %	Silt Clay
0 - 0.1	<0.1B	1C	36.4J								12.2 47.2
0.1 - 0.2	0.4B	0.61C	13.4J								13.3 49.5
0.3 - 0.4	0.2B	0.49C	10.1J								12.8 46.9
0.7 - 0.8	0.7B	0.39C	20.4J								12.3 44.1
1.2 - 1.3	1.6B	0.32C	23.3J								13.8 47.5
2.5 - 2.6	0.4B	0.06C	15.5J								14.1 48.8

[illegible]

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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