

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed048 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward	Locality: M.J.(Mick) Wilson, Dunrobin
Date Desc.: 30/06/86	Elevation: 258 metres
Map Ref.: Sheet No. : 8837_N 1:50000	Rainfall: No Data
Northing/Long.: 6672300 AMG zone: 55	Runoff: No Data
Easting/Lat.: 774800 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: Levee	Slope Category: Gently inclined
Slope: 3 %	Aspect: 180 degrees

Surface Soil Condition (dry): Self-mulching, Recently cultivated

Erosion:

Soil Classification

Australian Soil Classification: N/A	Mapping Unit: N/A
ASC Confidence: Confidence level not specified	Principal Profile Form: Ug5.15
	Great Soil Group: Brown clay

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Dark brown (7.5YR3/2-Dry); ; Light medium clay; Moderate grade of structure, 2-5 mm, Granular; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.25 m	Dark brown (7.5YR3/2-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular 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 9 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.7 m	Dark brown (7.5YR3/2-Moist); , 10YR72, 0-2% , 5-15mm, Distinct; , 10YR53, 0-2% , 0-5mm, Distinct; Medium clay; Strong grade of structure, 20-50 mm, Angular 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; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	0.7 - 1 m	Dark reddish grey (5YR4/2-Moist); , 10YR72, 0-2% , 5-15mm, Distinct; , 7.5YR42, 0-2% , 5-15mm, Distinct; Heavy clay; 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; Firm consistence; 0-2%, fine gravelly, 2-6mm, angular, Basalt, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 2 m	Reddish brown (5YR4/3-Moist); , 10YR73, 0-2% , 5-15mm, Distinct; , 5YR46, 0-2% , 0-5mm, Distinct; Light clay; Strong 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; Firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9 (pH meter); Diffuse, Smooth change to -
C	2 - 2.75 m	Brown (7.5YR5/4-Moist); , 5YR43, 0-2% , 0-5mm, Distinct; , 10YR73, 0-2% , 5-15mm, Distinct; Fine sandy light clay; Weak grade of structure, 50-100 mm, Prismatic; Strong grade of structure, 50-100 mm, Polyhedral; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter);

Morphological Notes

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A11p 10-20 possibly compacted by cultivation as it is in large lumps (KJS). Much granular soil from plough layer in cracks from 40-60cm. Orange fleck in soil uncertainly faunal origin.
A12 ine weak large wedges and are moderately developed. ?reddish brown terrace soil Q. Definitely too well developed to be floodplain levee as given in site description.

Observation Notes

Parent Rock: alluvial sediment, mixed texture, with lime, first terraced fan

Site Notes

Site on edge of levee bank next to drainage line.

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Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.02	9.24A	0.209A	28.04B	12.19	1.47	3.35			
0 - 0.1	8.16A	0.306A	32.03B	11.1	1.25	1.61			
0.1 - 0.2	9.17A	0.189A	27.79B	12.37	0.86	3.31			
0.3 - 0.4	9.37A	0.347A	20.01B	17.87	0.55	8.65			
0.7 - 0.8	9.17A	0.937A	13.14B	19.62	0.71	14.57			
1.2 - 1.3	8.95A	1.31A	13.8B	19.02	0.69	12.89			
2.5 - 2.6	9.19A	0.872A	10.38B	16.69	0.42	10.99			

[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