

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed147 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	D. McGarry	Locality:	Clive Jones, Thornbro
Date Desc.:	09/05/85	Elevation:	206 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6658500 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	758000 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:	Terrace flat	Slope Category:	Level
Slope:	0 %	Aspect:	No Data

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:	Ug5.16
		Great Soil Group:	Grey clay

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.09 m	Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); ; Medium clay; Moderate grade of structure, 2-5 mm, Granular; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 7.8 (pH meter); Common, fine (1-2mm) roots;
A12x	0.09 - 0.18 m	Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); ; Medium clay; Weak grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Rough-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, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Common, very fine (0-1mm) roots;
A13	0.18 - 0.55 m	Very dark grey (10YR3/1-Moist); ; Medium clay; Moderate grade of structure, 10-20 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, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Common, very fine (0-1mm) roots;
A14	0.55 - 0.95 m	Very dark grey (10YR3/1-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 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, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Common, very fine (0-1mm) roots; Clear, Smooth change to -
B21	0.95 - 1.6 m	Brown (7.5YR4/4-Moist); ; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Veins; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Clear, Smooth change to -
B22	1.6 - 2.8 m	Brown (7.5YR4/4-Moist); ; Medium heavy clay; Strong grade of structure, 10-20 mm, Lenticular; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Common cutans, 10-50% of ped faces or walls coated, prominent; Very few (0 - 2 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Field pH 8.7 (pH meter); Abrupt, Smooth change to -

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2B2 2.8 - 3.3 m Brown (7.5YR4/4-Moist); ; Light clay; Weak grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Angular blocky; Rough-ped fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 2-10%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Veins; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter);

Morphological Notes

A11p Very large cracks on surface. Sunflower recently harvested. Surface condition dry (good fine self-mulching top), subsoil reddish, slight reddish tint to field topsoil. ?old alluvium. Topsoil is quite dark. From 280cm, a break to sandy clay
A12x with large infilled cracks. This appears to be discontinuous with upper soil material. No bedding of sand grains evident. Compacted (?by cultivation) from 9-18cm.

Observation Notes

Parent Rock: alluvial sediment, clay, mixed texture, with lime parna on fourth fan

Site Notes

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Project Code: EDCERO1 Site ID: 3d
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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 Cmol (+)/kg	Acidity		%
0 - 0.02	8.1A	0.095A	20.81B	12.78	2.72	0.39			
0 - 0.09	8.11A	0.111A	20.5B	14.58	2.08	1.34			
0.1 - 0.18	8.77A	0.098A	23.95B	15.64	1.51	1.96			
0.2 - 0.3	9.17A	0.18A	22.45B	16.38	0.95	3.68			
0.7 - 0.8	9.38A	0.313A	18.07B	17.13	1.09	7.27			
1.2 - 1.3	9.09A	0.4A	16.91B	17.64	1.22	7.89			
2.5 - 2.6	9.21A	0.49A	18.42B	19.68	1.37	7.47			
2.9 - 3	9.34A	0.436A	15.01B	15.89	1.07	6.28			

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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