

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed009 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.M. Roberts	Locality:	M.J. Hensley, Braeside
Date Desc.:	17/07/85	Elevation:	223 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6677400 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	763900 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 plain	Slope Category:	Very gently sloped
Slope:	1 %	Aspect:	270 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 - 0.08 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Medium clay; Moderate grade of structure, 2-5 mm, Angular blocky; Moderate grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A12x	0.08 - 0.3 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Medium heavy clay; Massive grade of structure; Weak grade of structure, 50-100 mm, Platy; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Rigid consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A13k	0.3 - 0.45 m	Brown (7.5YR4/2-Moist); ; Medium heavy clay; Moderate grade of structure, 5-10 mm, Angular blocky; Weak grade of structure, 5-10 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm)
A14k	0.45 - 0.6 m	Brown (7.5YR4/2-Moist); ; Medium heavy clay; Weak grade of structure, 5-10 mm, Angular blocky; Weak grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Earthy 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), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	0.6 - 1 m	Brown (7.5YR4/2-Moist); ; Medium heavy clay; Weak grade of structure, 5-10 mm, Angular blocky; Weak grade of structure, 5-10 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Ferruginous, Fine (0 - 2 mm), Veins; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 1.4 m	Dark yellowish brown (10YR4/4-Moist); ; Medium heavy clay; Weak grade of structure, 5-10 mm, Subangular blocky; Weak grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Tubules; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 9 (pH meter); Diffuse, Smooth change to -

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B23 1.4 - 2.53 m Brown (7.5YR4/2-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Weak grade of structure, 5-10 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Tubules; Field pH 9 (pH meter);

Morphological Notes

A11p Very dense plough layer at 10-25cm. Less calcium carbonate in this core.

Observation Notes

Parent Rock: , , parna on fourth fan

Site Notes

Fallow. Hills 15cm high. Very coarse massive blocky clay lumps just below soil surface (? plough layer).

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity		
m		dS/m				Cmol (+)/kg			%
0 - 0.02	8.32A	0.087A	32.74B	16.26	2.1	2.85			
0 - 0.08	8.41A	0.183A	27.98B	18.29	2.09	3.15			
0.1 - 0.2	9.14A	0.261A	31.71B	20.43	1.2	6.73			
0.3 - 0.4	9.29A	0.451A	26.87B	22.52	1.16	11.94			
0.5 - 0.6	9.14A	0.623A	24.03B	20.86	1.21	14.06			
0.7 - 0.8	8.97A	0.9069999A	25.82B	23.54	1.62	14.31			
1.2 - 1.3	8.55A	1.62A	26.75B	22.63	1.76	15.64			
2.43 - 2.53	8.91A	1.07A	23.32B	23.05	1.66	13.37			

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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