

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed026 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.M. Roberts	Locality:	B.L. Langfield, Bundaroo
Date Desc.:	19/07/85	Elevation:	220 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6675100 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	762500 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:	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:	Ug5.15
		Great Soil Group:	Brown clay

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.06 m	Dark greyish brown (10YR4/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Light medium clay; Moderate grade of structure, 2-5 mm, Granular; Earthy fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12k	0.06 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); , 10YR82, 2-10% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 20-50 mm, Lenticular; Moderate grade of structure, 2-5 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
A13k	0.25 - 0.5 m	Brown (7.5YR4/2-Moist); , 10YR82, 2-10% , 0-5mm, Distinct; , 10YR83, 2-10% , 5-15mm, Prominent; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	0.5 - 1.18 m	Brown (7.5YR4/2-Moist); , 10YR82, 2-10% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B22k	1.18 - 1.9 m	Brown (7.5YR5/2-Moist); , 7.5YR58, 2-10% , 5-15mm, Prominent; , 10YR31, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderate 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; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Veins; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 9 (pH meter);

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B23k 1.9 - 2.61 m Brown (7.5YR5/2-Moist); , 7.5YR58, 2-10% , 5-15mm, Prominent; , 10YR31, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderate grade of structure, 5-10 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 (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Veins; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter);

Morphological Notes

A11p One or two manganese-iron nodules found at 130cm, 3cm diameter [sic].

Observation Notes

Parent Rock: , , second (brown parna) terraced

Site Notes

Few waterworn coarse gravels up to 50mm on surface. Site subject to flood.

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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	8.56A	0.092A	32.85B	14.37	1.64	1.95			
0 - 0.06	8.31A	0.131A	21.23B	8.34	0.79	1.61			
0.1 - 0.2	9.08A	0.147A	25.42B	10.38	0.54	3.68			
0.3 - 0.4	9.29A	0.229A	26.5B	14.64	0.56	6.64			
0.7 - 0.8	8.06A	2.37A	21.66B	14.89	0.66	11.31			
1.2 - 1.3	8.71A	1.072A	21.97B	20.46	1.13	13.31			
2.5 - 2.6	8.97A	0.856A	17.71B	15.58	0.91	10.96			

[illegible][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