

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed083 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	M.E. Heape	Locality:	Keith R. Hall, Mirrabooka
Date Desc.:	03/04/86	Elevation:	271 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6667600 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	774700 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): Surface crust, Trampled

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: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Very dark brown (10YR2/2-Moist); Very dark brown (10YR2/2-Dry); , 10YR62, 0-2% , 0-5mm, Faint; Light clay; Weak grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Very dark brown (10YR2/2-Moist); , 10YR62, 0-2% , 0-5mm, Faint; Medium 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; Very strong 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 brown (10YR2/2-Moist); ; Medium clay; Weak 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 strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 0.85 m	Very dark brown (10YR2/2-Moist); , 10YR72, 2-10% , 0-5mm, Distinct; , 10YR73, 0-2% , 0-5mm, Distinct; Light medium clay; Weak 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 strong consistence; 0-2%, medium gravelly, 6-20mm, subrounded, 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; Gradual, Smooth change to -
B21	0.85 - 1.9 m	Dark reddish grey (5YR4/2-Moist); , 5YR31, 2-10% , 5-15mm, Distinct; , 5YR81, 0-2% , 0-5mm, Distinct; Light medium clay; Weak grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Very firm consistence; 2-10%, coarse gravelly, 20-60mm, subrounded, 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;
B22	1.9 - 2.75 m	Dark reddish grey (5YR4/2-Moist); , 10YR31, 2-10% , 0-5mm, Distinct; , 5YR82, 0-2% , 0-5mm, Distinct; Light medium clay; Weak grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;

Morphological Notes

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A11 0.5-1cm is loose material (self mulching) with an abrupt, smooth boundary to layer 1. The amount of carbonate in layer 3 is less than 1%. Below 240cm both coarse fragments
A12 granules, but they are very few. Coarse fragments are apparently randomly distributed amongst clay almost throughout the whole profile. The majority (>80%) of these fragments are >8mm. Subsoil colour like MVpH.

Observation Notes

Parent Rock: alluvial sediment, mixed texture, with lime, clay fifth (eroded) fan

Site Notes

On edge of wheat field, in a corner rarely cultivated. Surface appears quite silty, coarse sandy. Thin surface crust over very hard upper subsoil. Few waterworn quartzite stones on surface (2-4cm diameter). Layers of basaltic gravel found b

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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	7.83A	0.102A	18.11B	5.99	1.27	0.52			
0 - 0.1	8.21A	0.131A	26.71B	6.73	0.57	0.72			
0.1 - 0.2	8.07A	0.08A	27.29B	8.309999	0.19	1.53			
0.3 - 0.4	8.98A	0.207A	27.17B	10.34	0.2	3.38			
0.7 - 0.8	9.13A	0.525A	23.3B	12.18	0.2	8.13			
1.2 - 1.3	8.92A	0.9030001A	20.99B	10.59	0.29	8.41			
2.5 - 2.6	8.76A	0.79A	20.34B	11.12	0.31	8.30999			

[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