

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed057 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.M. Roberts	Locality:	C. and H. Freer, Greenbah
Date Desc.:	31/07/85	Elevation:	196 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6670500 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	751400 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:	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:	Ug5.15
		Great Soil Group:	Black earth

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.1 m	Dark grey (10YR4/1-Moist); Greyish brown (10YR5/2-Dry); ; Light medium clay; Moderate grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 6.7 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.25 m	Dark greyish brown (10YR4/2-Moist); , 10YR82, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Coarse, (10 - 20) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.3 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.5 m	Dark greyish brown (10YR4/2-Moist); , 10YR82, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 10-20 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; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B21k	0.5 - 1 m	Brown (7.5YR5/4-Moist); , 10YR82, 0-2% , 5-15mm, Distinct; , N30, 10-20% , 5-15mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderate grade of structure, 10-20 mm, Lenticular; Smooth-ped fabric; Earthy 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter);
B22	1 - 1.5 m	Brown (7.5YR5/4-Moist); , 10YR82, 0-2% , 15-30mm, Distinct; , N30, 10-20% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Strong grade of structure, 10-20 mm, Lenticular; Smooth-ped fabric; Medium, (5 - 10) 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, Coarse (6 - 20 mm), Nodules; Field pH 8.8 (pH meter); Clear, Smooth change to -
B23	1.5 - 2.8 m	Reddish brown (5YR5/3-Moist); , 10YR82, 2-10% , 15-30mm, Distinct; , N30, 10-20% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 10-20 mm, Lenticular; Strong grade of structure, 5-10 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 firm consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 8.8 (pH meter);

Morphological Notes

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A11p Heavy plough layer 10cm to 40cm. Increased ferruginous mottles - plus worm casts from 180-280cm.

Observation Notes

Parent Rock: alluvial sediment, clay, parna on fourth fan

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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	7.53A	0.062A	14.24B	9.26	1.38	1.25			
0 - 0.1	7.72A	0.116A	17.34B	10.54	1.27	1.88			
0.1 - 0.2	8.19A	0.095A	20.07B	11.28	0.85	2.75			
0.3 - 0.4	9.23A	0.244A	21.03B	10.08	0.52	4.52			
0.7 - 0.8	8.43A	1.29A	23.26B	13.62	1.14	10.88			
1.2 - 1.3	8.81A	1.071A	26.34B	12.42	1.48	11.15			
2.5 - 2.6	8.43A	0.96A	25.36B	13	1.32	12.95			

[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