

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed021 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.M. Roberts	Locality:	Twynam Pastoral Co., Boolcarrol
Date Desc.:	06/02/86	Elevation:	192 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6675400 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	748700 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:	Levee	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 - 0.1 m	Dark brown (7.5YR3/2-Moist); Dark brown (7.5YR3/2-Dry); ; Light medium clay; Moderate grade of structure, <2 mm, Granular; Moderate grade of structure, 20-50 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 7 (pH meter); Common, very fine (0-1mm) roots;
A12p	0.1 - 0.25 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Moderate grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Rigid consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A13k	0.25 - 0.38 m	Brown (7.5YR4/2-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Moderate grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) 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 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A14k	0.38 - 1.02 m	Reddish brown (5YR4/3-Moist); , 7.5YR32, 2-10% , 5-15mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
B21	1.02 - 1.9 m	Reddish brown (5YR4/4-Moist); , 5YR43, 2-10% , 0-5mm, Distinct; Medium heavy clay; Strong grade of structure, 100-200 mm, Lenticular; Strong 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; Weak consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Laminae; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;

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B22 1.9 - 2.6 m Reddish brown (5YR4/3-Moist); , 5YR56, 2-10% , 5-15mm, Prominent; Medium clay; Moderate grade of structure, 100-200 mm, Lenticular; Strong 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; Weak consistence; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Veins; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Gradual, Smooth change to -

Morphological Notes

A11p This site could receive recent deposits of alluvium. Well structured B horizon.

Observation Notes

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

Site Notes

Prepared seed bed. Surface cracks hidden by seed bed. Near sunset a very low microrelief is seen, a ripple effect in surface, wavelength 4 metres depth approx 10 cm, running E/W while seed bed runs NE/SW.

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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	7.96A	0.162A	30.7B	13.02	2.6	2.57			
0 - 0.1	7.5A	0.162A	28.28B	14.04	2.89	2.5			
0.1 - 0.2	8.6A	0.125A	31.38B	14.57	2.1	3.9			
0.3 - 0.38	9.01A	0.17A	26.6B	13.36	1.81	7.41			
0.7 - 0.8	8A	1.75A	26.22B	14.91	1.83	12.56			
1.2 - 1.3	8.45A	1.3A	25.8B	17.47	2.13	15.64			
2.5 - 2.6	8.83A	1.155A	28.35B	17.08	1.79	15.29			

[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