

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed019 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.M. Roberts	Locality:	Twynam Pastoral Co., Boolcarrol
Date Desc.:	13/09/85	Elevation:	188 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6675500 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	743200 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): Surface crust, Poached

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:	Grey clay

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.1 m	Dark grey (10YR4/1-Moist); Dark greyish brown (10YR4/2-Dry); ; Medium heavy clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Single grain grade of structure; Earthy fabric; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Common (1-5 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 7.2 (pH meter); Common, fine (1-2mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.25 m	Dark grey (10YR4/1-Moist); ; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Coarse, (10 - 20) 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; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, fine (1-2mm) roots;
A13k	0.25 - 0.55 m	Dark grey (10YR4/1-Moist); ; Heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Strong grade of structure, 5-10 mm, Lenticular; Smooth-ped fabric; Coarse, (10 - 20) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 2-10%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, fine (1-2mm) roots;
A14k	0.55 - 1.01 m	Dark grey (10YR4/1-Moist); , 10YR74, 2-10% , 5-15mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 2-10%, 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;
A15k	1.01 - 1.5 m	Dark grey (10YR4/1-Moist); , 10YR42, 2-10% , 5-15mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B21k	1.5 - 2.62 m	Brown (10YR5/3-Moist); , 10YR42, 2-10% , 5-15mm, Distinct; Medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -

Morphological Notes

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A11p

Observation Notes

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

Site Notes

Weak gilgai with few surface cracks.

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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	7.44A	0.139A	17.9B	9.62	2.11	0.76			
0 - 0.1	8.02A	0.173A	26.34B	13.83	1.19	2.34			
0.1 - 0.2	8.98A	0.186A	30.28B	15.18	0.74	3.93			
0.3 - 0.4	9.18A	0.367A	22.23B	16.54	0.82	8.37			
0.7 - 0.82	9.29A	0.626A	12.9B	14.39	0.9	11.43			
1.2 - 1.3	9.4A	0.715A	9.15B	12.24	0.85	9.2			
2.5 - 2.6	9.39A	0.724A	10.2B	13.47	0.75	10.81			

[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