

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed003 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	D. McGarry	Locality:	Twynam Pastoral Co., Boolcarrol
Date Desc.:	21/05/85	Elevation:	190 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6677750 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	747300 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): Loose, Recently cultivated

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: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.06 m	Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); , 10YR82, 0-2% , 0-5mm, Faint; Heavy clay; Strong grade of structure, 2-5 mm, Granular; Moderate grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Few (<1 per 100mm2) 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 7.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A12	0.06 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); ; Heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Earthy fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 7.8 (pH meter); Few, very fine (0-1mm)
A13	0.25 - 0.7 m	Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; 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; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
B2	0.7 - 1.05 m	Brown (7.5YR5/4-Moist); , N30, 2-10% , 5-15mm, Distinct; , 10YR81, 0-2% , 0-5mm, Distinct; Light medium clay; Weak grade of structure, 10-20 mm, Lenticular; Moderate grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.2 (pH meter); Common, very fine (0-1mm) roots; Abrupt, Smooth change to -
2B2	1.05 - 1.9 m	Dark reddish brown (5YR3/3-Moist); , N30, 2-10% , 5-15mm, Distinct; , 5YR58, 0-2% , 5-15mm, Distinct; Light medium clay; Moderate grade of structure, 10-20 mm, Lenticular; Moderate grade of structure, 10-20 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.1 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -

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3A1 1.9 - 3.16 m Dark grey (10YR4/1-Moist); , 5YR46, 2-10% , 5-15mm, Distinct; , 10YR82, 0-2% , 0-5mm, Distinct; Light medium clay; Strong grade of structure, 10-20 mm, Lenticular; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm²) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 7.7 (pH meter); Few, very fine (0-1mm)

Morphological Notes

A11p Visible crack depth is 50cm. There appear to be two buried soils here. The upper one is predominantly brown, perhaps truncated then buried B horizon. The lower one is grey with faunal and root passageways infilled with brown clay The dark
A12 colour may indicate that it is an old A horizon. Both these buried layers are most strongly pedal with highly polished ped faces and slickensides.

Observation Notes

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

Site Notes

Beneath 2cm there is evidence of poor drainage (light grey colour).

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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