

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed041 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	D. McGarry	Locality:	Frank O'Neill, Llano
Date Desc.:	10/07/86	Elevation:	204 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6672800 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	755500 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:	1 %	Aspect:	325 degrees

Surface Soil Condition (dry): Hardsetting, Poached

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Ug5.4
		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 - 0.03 m	Dark greyish brown (10YR4/2-Moist); Grey (10YR6/1-Dry); ; Light clay; Massive grade of structure; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 6.5 (pH meter); Clear, Smooth change to -
A12	0.03 - 0.1 m	Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); ; Light clay; Moderate grade of structure, 10-20 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; Field pH 7.2 (pH meter); Few, very fine (0-1mm) roots;
A13	0.1 - 0.25 m	Black (10YR2/1-Moist); , 10YR51, 0-2% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 7.7 (pH meter); Few, very fine (0-1mm) roots;
A14	0.25 - 0.6 m	Very dark grey (10YR3/1-Moist); , 10YR62, 0-2% , 5-15mm, Distinct; , 10YR81, 2-10% , 0-5mm, Distinct; Medium clay; Weak grade of structure, 10-20 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; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	0.6 - 1 m	Dark brown (10YR3/3-Moist); , 10YR81, 2-10% , 5-15mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Medium (2 - 6 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 1.9 m	Dark brown (10YR3/3-Moist); , N20, 2-10% , 0-5mm, Distinct; , 10YR81, 0-2% , 0-5mm, Distinct; Heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter);
B23	1.9 - 2.78 m	Dark brown (10YR3/3-Moist); , N20, 2-10% , 5-15mm, Distinct; , 10YR81, 2-10% , 5-15mm, Distinct; Heavy clay; Strong grade of structure, 20-50 mm, Lenticular; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Medium (2 - 6 mm), Nodules; Field pH 8.2 (pH meter);

Morphological Notes

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A11 A most strong crust on the top 3cm of this soil. The crust is grey-white and composed of fine sand and silt. The profile is cracked to 25cm. Carbonate begins at 27cm. Darkish orange B2 begins at 60cm. Manganese coatings being at 100cm. The
A12 surface crust seems to be formed in situ through dispersion, i.e. is not a sedimentary feature. The whole soil has a dull grey look, mainly from greyish faces on peds from a little of layer 01 distributed through the profile. Two samples ta
A13 ken every 10cm for Ian Little.

Observation Notes

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

Site Notes

Vanes of 150 sheervane did not penetrate the surface. Two photos towards Boolcarrol Farm and towards Bald Hill. Mag bearing to Llano 316; to Boolcarrol 335. Deep ripping required to grow any crops.

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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