

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed239 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	D. McGarry	Locality:	stock route, west of Green Timbers
Date Desc.:	18/10/85	Elevation:	212 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6661150 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	759850 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:	Hillslope	Slope Category:	Level
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry): Self-mulching, Trampled

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:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.07 m	Very dark grey (10YR3/1-Moist); Very dark greyish brown (10YR3/2-Dry); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderate grade of structure, 5-10 mm, Granular; Rough-ped 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, subangular, Quartz, coarse fragments; Field pH 6.5 (pH meter); Common, fine (1-2mm) roots; Abrupt, Irregular change to -
A12	0.07 - 0.25 m	Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); , 10YR73, 0-2% , 0-5mm, Distinct; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) 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 6.5 (pH meter); Few, fine (1-2mm) roots;
A13	0.25 - 0.55 m	Very dark grey (10YR3/1-Moist); ; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, fine (1-2mm) roots;
A14	0.55 - 0.85 m	Very dark greyish brown (10YR3/2-Moist); , 10YR31, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; 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), Soft segregations; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.5 (pH meter); Common, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	0.85 - 1.4 m	Dark greyish brown (10YR4/2-Moist); , 10YR32, 2-10% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.2 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B22	1.4 - 2.13 m	Dark greyish brown (10YR4/2-Moist); , 10YR31, 2-10% , 0-5mm, Distinct; , 7.5YR54, 0-2% , 0-5mm, Distinct; Medium heavy clay; Moderate grade of structure, 20-50 mm, Lenticular; Moderate 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; Firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Laminae; Field pH 8.2 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Irregular change to -

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Morphological Notes

Observation Notes

Parent Rock: residual, basalt, mixed texture, with lime Nandewar Volcanics

Site Notes

Mag bearing to shed, 174 degrees; to Bald Hill, 331 degrees; Green Timbers mail box, 98 degrees. In stock route next to cultivated field. Rock fragments encountered at depth - ?similar to site 131.

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Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0 - 0.02	6.88A	0.054A	14.41B	10.91	0.98999 99	0.26				
0 - 0.07	7.1A	8.899999E-02A	17.18B	12.24	<0.01	0.71				
0.1 - 0.2	7.59A	0.057A	19.21B	13.45	<0.01	1.2				
0.3 - 0.4	8.79A	<0.1A	19.4B	13.1	<0.01	1.8				
0.7 - 0.8	8.27A	0.878A	17.87B	13.93	<0.01	3.09				
1.2 - 1.3	8.55A	0.381A	20.9B	16.34	<0.01	3.8				
1.6 - 1.7	8.25A	0.306A	23.81B	16.53	<0.01	4.33				

Depth m	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS %	Silt Clay
0 - 0.02	<0.1B	1.74C									21.1 39.4
0 - 0.07	<0.1B	0.99C	2.1J								21.6 44.3
0.1 - 0.2	<0.1B	0.71C	1.3J								22.6 47.1
0.3 - 0.4	0.5B	0.66C	<1J								22.7 47.7
0.7 - 0.8	1.8B	0.36C	1J								24.6 48.5
1.2 - 1.3	0.2B	0.1C	1.3J								21.7 56.9
1.6 - 1.7	<0.1B	0.18C	1J								19.8 58.3

[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