

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed210 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: D. McGarry	Locality: R.M.(Ross) Fordham, Wonga Plains
Date Desc.: 10/06/86	Elevation: 427 metres
Map Ref.: Sheet No. : 8837_N 1:50000	Rainfall: No Data
Northing/Long.: 6650400 AMG zone: 55	Runoff: No Data
Easting/Lat.: 786500 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: Pediment	Slope Category: Gently inclined
Slope: 3 %	Aspect: 0 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification: N/A	Mapping Unit: N/A
ASC Confidence: Confidence level not specified	Principal Profile Form: Ug5.32
	Great Soil Group: Brown clay

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.03 m	Reddish brown (5YR4/4-Moist); Reddish brown (5YR4/4-Dry); ; Fine sandy light clay; Weak grade of structure, 2-5 mm, Platy; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 7 (pH meter); Common, very fine (0-1mm) roots; Sharp, Smooth change to -
A12	0.03 - 0.1 m	Dark reddish brown (5YR3/3-Moist); , 5YR44, 0-2% , 0-5mm, Distinct; Light clay; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 6.7 (pH meter); Common, fine (1-2mm) roots;
A13	0.1 - 0.25 m	Dark reddish brown (5YR3/3-Moist); ; Light clay; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 2-10%, coarse gravelly, 20-60mm, subangular, Basalt, coarse fragments; Field pH 7 (pH meter); Few, very fine (0-1mm) roots; Sharp, Irregular change to -
B2	0.25 - 0.5 m	Yellowish red (5YR4/6-Moist); , 5YR33, 2-10% , 5-15mm, Distinct; Loam; 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; Firm consistence; 0-2%, medium gravelly, 6-20mm, subangular, Consolidated rock (unidentified), coarse fragments; Field pH 7.2 (pH meter); Abrupt, Irregular change to -
C1	0.5 - 1 m	Light brownish grey (2.5Y6/2-Moist); , 7.5YR56, 2-10% , 15-30mm, Prominent; , 5YR34, 2-10% , 0-5mm, Distinct; Loam; Massive grade of structure; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.7 (pH meter);
C2	1 - 1.9 m	Light brownish grey (2.5Y6/2-Moist); , 7.5YR56, 2-10% , 30-mm, Prominent; , N20, 0-2% , 5-15mm, Distinct; Silty loam; Massive grade of structure; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.7 (pH meter);
C3	1.9 - 2.68 m	Light brownish grey (2.5Y6/2-Moist); , N20, 0-2% , 5-15mm, Prominent; Silty loam; Massive grade of structure; Moderately moist; Rigid consistence; Field pH 8.7 (pH meter);

Morphological Notes

A11 0-3 is a thin sandy wash. 210.04 has a piece of basalt and piece of sandstone. 30-40 structure is disrupted by drilling and uncertain. 210.05 first colour is rock. This is below sandstone and looks like Garawilla but not shown as such by Du

A12 lhunty. Field textures of samples 4-7 estimated from lab results.

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Observation Notes

Parent Rock: residual, basalt, sandstone Garrawilla Volcanics

Site Notes

Hard surface. Abundant sandstone and basalt rocks on surface. 500m upslope from stream. Site is 20m from a small basaltic

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Ca	Exchangeable Mg	Cations K	Exchangeable Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.02	6.58A	0.057A	8.11B	8.61	0.86	0.29				
0 - 0.03	6.38A	0.17A	5.65B	5.67	0.81000	<0.01				
					01					
0.03 - 0.1	6.62A	0.114A	8.66B	6.65	0.82	<0.01				
0.1 - 0.2	7.06A	0.049A	7.26B	6.54	0.42	0.13				
0.3 - 0.4	7.51A	0.047A	4.27B	7.46	0.22	0.76				
0.7 - 0.8	8.98A	0.118A	2.3B	7.28	0.09	1.64				
1.2 - 1.3	9.62A	0.363A	1.35B	8.12	0.15	2.76				
2.5 - 2.6	9.81A	0.374A	<0.1B	5.95	0.26	2.5				

Depth m	CaCO ₃	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
	%	%	mg/kg	%	%	%	Mg/m ³	GV	CS	FS	Silt Clay
0 - 0.02	<0.1B	1.74C									10.1 32.2
0 - 0.03	<0.1B	1.39C	74.2J								6.2 19.5
0.03 - 0.1	<0.1B	1.73C	16.6J								9.2 26.1
0.1 - 0.2	<0.1B	1.4C	12.1J								9.4 24.8
0.3 - 0.4	<0.1B	0.57C	3.8J								9.1 24.4
0.7 - 0.8	<0.1B	0.11C	<1J								12.7 25
1.2 - 1.3	10.3B	0.17C	<1J								10.8 25.8
2.5 - 2.6	3.1B	0.19C	<1J								14.4 23.8

[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