

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed208 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	W.T. Ward	Locality:	Arthur V. Melbourne, Mountain Valley
Date Desc.:	15/01/87	Elevation:	290 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6650600 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	781000 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:	Hillcrest	Slope Category:	Very gently sloped
Slope:	2 %	Aspect:	300 degrees

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Uf6.31
		Great Soil Group:	No suitable

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dusky red (2.5YR3/2-Moist); Reddish brown (5YR4/4-Dry); ; Light medium clay; Strong grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 20-50%, coarse gravelly, 20-60mm, angular, Basalt, coarse fragments; Field pH 6 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Reddish brown (5YR4/4-Moist); , 2.5YR34, 0-2% , 0-5mm, Distinct; Light 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; Very firm consistence; 50-90%, cobbly, 60-200mm, subrounded, Basalt, coarse fragments; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Red (2.5YR4/6-Moist); , 5YR63, 10-20% , 5-15mm, Distinct; Light medium clay; 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; Strong consistence; 50-90%, coarse gravelly, 20-60mm, subangular, Basalt, coarse fragments; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots;
B2	0.55 - 0.8 m	Dark red (10R3/6-Moist); , 5YR63, 20-50% , 5-15mm, Distinct; Light medium clay; 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; Strong consistence; 50-90%, coarse gravelly, 20-60mm, subangular, Basalt, coarse fragments; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots;

Morphological Notes

A11 Sampling down drill hole was done by hand. No photographs were taken. Query a stony krasnozom on Garawilla basalt.

Observation Notes

Parent Rock: residual, basalt, Garrawilla Volcanics

Site Notes

Surface is very stony to rocky. Big shearvane test not possible due to stones. This site is just off the top of a basaltic hillock (rounded top). Tips break off proline, in basalt; a very stony red basaltic soil. Sampled by hand below 30cm.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol	(+)/kg		
0 - 0.02	6.49A	0.098A	7.22B	3.2	1.92	0.03			
0 - 0.1	6.42A	0.119A	5.99B	2.95	1.06	0.11			
0.1 - 0.2	6.89A	0.064A	7.17B	3.56	0.71	0.1			
0.3 - 0.4	7.3A	0.033A	8.83B	4.81	0.29	0.17			
0.7 - 0.8	7.23A	0.029A	8.76B	7.76	0.28	0.48			

Depth	CaCO ₃	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
m	%	%	mg/kg	%	%	%	Mg/m ³	GV	CS	FS	Silt Clay
0 - 0.02	<0.1B	3.39C									15.9 24
0 - 0.1	<0.1B	0.55C	55.6J								14.7 26
0.1 - 0.2	<0.1B	1.8C	27.1J								13.5 29
0.3 - 0.4	<0.1B	0.69C	16.8J								12.5 51.6
0.7 - 0.8	<0.1B	0.64C	46.9J								18.5 43.3

[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