

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed350 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward	Locality: J.Amos/R.Simpson, Woodville
Date Desc.: 30/10/87	Elevation: 296 metres
Map Ref.: Sheet No. : 8837_N 1:50000	Rainfall: No Data
Northing/Long.: 6660350 AMG zone: 55	Runoff: No Data
Easting/Lat.: 781290 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: Gently inclined
Slope: 2 %	Aspect: 180 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: Ug5.15
	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 - 0.1 m	Dark reddish brown (5YR3/3-Moist); Dark reddish brown (5YR3/3-Dry); ; Light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Quartz, coarse fragments; Field pH 7 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Dark reddish brown (5YR3/3-Moist); , 5YR31, 0-2% , 5-15mm, Distinct; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, coarse gravelly, 20-60mm, angular, Ironstone, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Dark reddish brown (5YR3/4-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, Prismatic; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, coarse gravelly, 20-60mm, angular, Ironstone, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 0.9 m	Dusky red (2.5YR3/2-Moist); ; Medium heavy clay; Weak grade of structure, 100-200 mm, Lenticular; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, medium gravelly, 6-20mm, subangular, Ironstone, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B2	0.9 - 2 m	Dark red (2.5YR3/6-Moist); ; Medium heavy clay; Weak grade of structure, 100-200 mm, Lenticular; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, coarse gravelly, 20-60mm, subrounded, Sandstone, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

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C 2 - 2.77 m Very pale brown (10YR7/3-Moist); , 7.5YR56, 10-20% , 15-30mm, Prominent; , 7.5YR56, 2-10% , 5-15mm, Prominent; Light medium clay; Massive grade of structure; Moderate grade of structure, 2-5 mm, Cast; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm²) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Basalt, coarse fragments; Field pH 8.8 (pH meter);

Morphological Notes

A11 Ironstone at 10cm plus some quartz, subrounded, on surface. About 3cm of granular structure at the surface. Subrounded ferruginous sandstone pebble at 150cm. Fragments of weathering basalt at 190cm.

Observation Notes

Parent Rock: residual, from basalt, with colluvium from sandstone, non-calcareous Purlawaugh Formation

Site Notes

Sites 347-352 are spaced at 2m intervals; 353 is 90m from 352. 350 is at the crest of the second puff on the transect.

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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 - 0.1	7.6A	0.144A	17.52B	14.15	1.31	0.49			
0.1 - 0.2	8.15A	9.100001E-02A	22.08B	19.23	0.52	1.13			
0.3 - 0.4	8.98A	0.252A	12.62B	27.2	0.4	3.28			
0.7 - 0.8	9.18A	0.665A	5.84B	34.86	0.34	9.51			
1.2 - 1.3	8.87A	1.123A	6.62B	31.51	0.29	9.13			
2.5 - 2.6	8.66A	1.165A	7.67B	47.14	0.2	15.18			

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
m	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS	Silt Clay
0 - 0.1	<0.1B	1.78C	14J								
0.1 - 0.2	<0.1B	1.11C	1.4J								
0.3 - 0.4	3.9B	0.61C	<1J								
0.7 - 0.8	4.8B	0.62C	<1J								
1.2 - 1.3	6B	0.17C	<1J								
2.5 - 2.6	8.5B	0.9C	6.1J								

[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