Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed352** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: W.T. Ward
Date Desc.: 19/10/86
Map Ref.: Sheet No. : 8837_N 1:50000
Northing/Long.: 6660350 AMG zone: 55
Easting/Lat.: 781290 Datum: AGD66
Locality: J.Amos/R.Simpson, Woodville
Elevation: 296 metres
Rainfall: No Data
Runoff: No Data
Drainage: No Data

Geology

ExposureType: Undisturbed soil core
Geol. Ref.: No Data
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: No Data

Land Form

Rel/Slope Class: No Data
Morph. Type: No Data
Elem. Type: Hillslope
Slope: 2 %
Pattern Type: No Data
Relief: No Data
Slope Category: Gently inclined
Aspect: 180 degrees

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:
N/A
ASC Confidence:
Confidence level not specified
Mapping Unit: N/A
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); Reddish brown (5YR4/3-Dry); ; Light 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 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, medium gravelly, 6-20mm, subangular, Ironstone, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A12	0.1 - 0.24 m	Dark reddish brown (5YR3/3-Moist); ; Light clay; Moderate grade of structure, 50-100 mm, Prismatic; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A13	0.24 - 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, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, 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 - 0.8 m	Dark reddish brown (5YR3/4-Moist); ; Medium clay; Weak grade of structure, 100-200 mm, Lenticular; Moderate grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, angular, Ironstone, coarse fragments; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B2	0.8 - 2.1 m	Dark red (2.5YR3/6-Moist); ; Medium heavy clay; Weak grade of structure, 100-200 mm, Lenticular; Weak grade of structure, 20-50 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; 0-2%, medium gravelly, 6-20mm, angular, Consolidated rock (unidentified), coarse fragments; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Field pH 9 (pH meter); Diffuse, Smooth change to -

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C	2.1 - 2.61 m	Light grey (2.5Y7/2-Moist); , 5YR56, 20-50% , 15-30mm, Prominent; , 5YR32, 0-2% , 5-15mm, Distinct; Medium clay; Massive grade of structure; Weak grade of structure, 5-10 mm, Cast; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; Field pH 8.8 (pH meter);

Morphological Notes

A11	0-10cm granular structure mostly at 0-3, then tails off to 10cm, passing gradually to lower A1. Slickensides begin at 55cm. Coarse fragments at 120-130 are ironstone and iron-stained basalt. There are several small basalt fragments, and som
A12	e quartz pebbles at 110, suggesting a possible break here. Very little carbonate between 93 and 120cm, and no visible carbonate below 180cm. Much dark reddish brown (5YR3/2) insect frass(?) at 230-240cm, in fissures and pores.

Observation Notes

Parent Rock: residual, from basalt, Purlawaugh Formation

Site Notes

Sites 347-352 are spaced at 2m intervals; 353 is 90m from 352. 352 is on the flank of a third puff on the transect.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.1	7.53A	0.131A	19.55B	14.53	1.07	0.58				
0.1 - 0.2	8.06A	0.1A	23.51B	16.77	0.49	0.74				
0.3 - 0.4	8.76A	0.195A	16.52B	21.3	0.42	1.9				
0.7 - 0.8	9.23A	0.628A	5.69B	25.39	0.32	9.55				
1.2 - 1.3	8.84A	1.163A	6.92B	28.36	0.27	10.4				
2.5 - 2.6	8.8A	1.054A	6.47B	36.48	0.2	13.39				

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1	<0.1B	1.9C	6.5J									
0.1 - 0.2	<0.1B	1.25C	<1J									
0.3 - 0.4	1.7B	1.05C	<1J									
0.7 - 0.8	6.6B	0.47C	<1J									
1.2 - 1.3	9.8B	0.28C	<1J									
2.5 - 2.6	12.6B	0.63C	2.7J									

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
m		g/g - m3/m3						mm/h	mm/h
0 - 0.1									
0.1 - 0.2									
0.3 - 0.4									
0.7 - 0.8									
1.2 - 1.3									
2.5 - 2.6									

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca2+,Mg2+,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