

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed349 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	W.T. Ward	<b>Locality:</b>	J.Amos/R.Simpson, Woodville
<b>Date Desc.:</b>	08/10/87	<b>Elevation:</b>	296 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6660350 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	781300 Datum: AGD66	<b>Drainage:</b>	No Data

#### Geology

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

#### Land Form

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

**Surface Soil Condition (dry):** Self-mulching

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	N/A	<b>Mapping Unit:</b>	N/A
<b>ASC Confidence:</b>	Confidence level not specified	<b>Principal Profile Form:</b>	Ug5.15
		<b>Great Soil Group:</b>	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 (5YR3/2-Moist); Reddish brown (5YR4/3-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 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, medium gravelly, 6-20mm, angular, Ironstone, coarse fragments; Field pH 7 (pH meter); Common, very fine (0-1mm)
A12	0.1 - 0.25 m	Dark reddish brown (5YR3/2-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 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Dark reddish brown (5YR3/2-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, Subangular 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; Very few (0 - 2 %), Calcareous, Medium (2 - 6 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 0.9 m	Reddish brown (5YR4/3-Moist); , 5YR33, 20-50% , 15-30mm, Distinct; , 5YR53, 0-2% , 0-5mm, Distinct; Medium heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Rigid consistence; 0-2%, fine gravelly, 2-6mm, subangular, Ironstone, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 - 6 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B2	0.9 - 2 m	Yellowish red (5YR4/6-Moist); , 5YR31, 0-2% , 0-5mm, Distinct; Medium heavy clay; Strong grade of structure, 50-100 mm, Lenticular; 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; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Ironstone, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 - 6 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth
C	2 - 3.13 m	Light grey (2.5Y7/2-Moist); , 5YR46, 10-20% , 15-30mm, Prominent; Light clay; Massive grade of structure; Weak grade of structure, 5-10 mm, Cast; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Field pH 8.5 (pH

#### Morphological Notes

A11 There is possibly a stone line at 55cm, as there are several pieces of ferruginous gravel

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A12                                      Great soil group - ? red clay. 349 is on the flank of the second puff on the transect.

**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. 349 is on the flank of a puff.

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Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol	(+)/kg		
0 - 0.1	6.33A	0.113A	10.68B	12.52	1.14	0.54			
0.1 - 0.2	7.07A	0.064A	12.55B	15.98	0.57	1.45			
0.3 - 0.4	9.02A	0.183A	15.12B	29.02	0.37	4.54			
0.7 - 0.8	8.96A	0.729A	10.31B	36.15	0.34	10.3			
1.2 - 1.3	8.99A	0.899A	9.15B	29.91	0.3	11.23			
2.5 - 2.6	8.83A	0.884A	8.05B	44.37	0.15	13.87			

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	2.03C	23.6J								
0.1 - 0.2	<0.1B	1.41C	8.5J								
0.3 - 0.4	0.9B	1.09C	<1J								
0.7 - 0.8	1.1B	0.87C	<1J								
1.2 - 1.3	5.8B	0.26C	<1J								
2.5 - 2.6	18.7B	1.3C	4.8J								

[illegible]

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**Laboratory Analyses Completed for this profile**

15A2_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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