

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed231 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	M. Korevaar	<b>Locality:</b>	V.T.(Vic) Melbourne, Yarral
<b>Date Desc.:</b>	06/05/85	<b>Elevation:</b>	200 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6655300 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	750600 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>	Terrace flat	<b>Slope Category:</b>	Level
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Surface crust, Recently cultivated

#### 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>	Grey clay

**Site Disturbance:** Cultivation. Irrigated, past or present

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11p	0 - 0.12 m	Very dark grey (10YR3/1-Moist); ; Medium clay; Moderate grade of structure, 2-5 mm, Granular; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth
A12p	0.12 - 0.24 m	Very dark greyish brown (10YR3/2-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 8.3 (pH meter); Few, fine (1-2mm) roots; Abrupt, Irregular change to -
A13	0.24 - 0.55 m	Very dark grey (10YR3/1-Moist); , 10YR83, 0-2% , 0-5mm, Distinct; Medium clay; Weak grade of structure, 50-100 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Few, fine (1-2mm) roots;
A14	0.55 - 0.88 m	Dark brown (10YR3/3-Moist); , 10YR31, 2-10% , 0-5mm, Distinct; , 10YR41, 0-2% , 0-5mm, Distinct; Medium clay; Weak grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B2	0.88 - 2.05 m	Brown (10YR4/3-Moist); , 10YR41, 10-20% , 0-5mm, 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; Weak consistence; Few cutans, <10% of ped faces or walls coated; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
2B2	2.05 - 2.78 m	Dark brown (10YR3/3-Moist); , N20, 0-2% , 5-15mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Lenticular; 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; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules; Field pH 8.3 (pH meter);

#### Morphological Notes

#### Observation Notes

Parent Rock: alluvial sediment, clay, parna on third fan, Namoi

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**Site Notes**

The height of the cotton hill is 17cm. Core is on top of a cotton hill.

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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 - 0.02	8.61A	0.174A	26.19B	13.94	1.82	1.2			
0 - 0.1	8.37A	0.176A	24.23B	17.49	0.76	1.09			
0.12 - 0.2	8.57A	0.101A	23.3B	14.01	1.14	1.03			
0.3 - 0.4	9.1A	0.11A	24.58B	16.27	0.6	2.48			
0.7 - 0.8	9.37A	0.287A	18.94B	17.75	0.57	5.58			
1.2 - 1.3	9.41A	0.155A	14.44B	15.96	0.51	6.28			
2.5 - 2.6	9.21A	0.531A	18.16B	24.41	0.72	8.62			

0 - 0.02	0.2B	1.05C		23.8	59.6
0 - 0.1	0.1B	1.1C	24.5J	23.6	56.2
0.12 - 0.2	0.1B	1.05C	24J	24	56.4
0.3 - 0.4	0.1B	0.92C	8.5J	26.7	57.1
0.7 - 0.8	1.5B	0.61C	24.7J	28.5	55.9
1.2 - 1.3	0.2B	0.24C	21.9J	30.6	45.5
2.5 - 2.6	0.6B	0.25C	23.2J	20.7	66.9

[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
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method