Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed222** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By:	D. McGarry	**Locality:**	V.T.(Vic) Melbourne, Yarral
Date Desc.:	25/03/85	**Elevation:**	199 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	**Rainfall:**	No Data
Northing/Long.:	6656840 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	750420 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:	Terrace flat	**Slope Category:**	Level
Slope:	0 %	**Aspect:**	No Data

Surface Soil Condition (dry): Self-mulching, Recently cultivated

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: Grey clay

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.11 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); , 10YR52, 0-2% , 0-5mm, Faint; Medium clay; Moderate grade of structure, 5-10 mm, Granular; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Abrupt, Irregular change to -
A12	0.11 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); , 10YR76, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm)
A13	0.25 - 0.55 m	Very dark greyish brown (10YR3/2-Moist); , 10YR53, 0-2% , 0-5mm, Faint; Medium heavy clay; Weak grade of structure, 10-20 mm, Lenticular; Moderate grade of structure, 5-10 mm, Angular 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 7.8 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 0.93 m	Brown (7.5YR4/4-Moist); , 10YR32, 10-20% , 15-30mm, Distinct; , 7.5YR54, 0-2% , 0-5mm, Faint; Medium heavy clay; Weak 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; Firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.2 (pH meter); Diffuse, Smooth change to -
B2	0.93 - 1.7 m	Brown (7.5YR4/4-Moist); , 7.5YR42, 2-10% , 5-15mm, Distinct; , N40, 0-2% , 5-15mm, Faint; Light clay; Massive grade of structure; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.3 (pH meter); Diffuse, Smooth change to -
C	1.7 - 2.68 m	Strong brown (7.5YR4/6-Moist); , 10YR31, 0-2% , 0-5mm, Faint; Clayey coarse sand; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 8.3 (pH meter);

Morphological Notes

Observation Notes

Parent Rock: alluvial sediment, clay, sand parna on fourth fan, Namoi

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Site Notes

Height of cotton hill is 27cm. Sample is from top of cotton hill.

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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 - 0.02	8.53A	0.12A	21.49B	11.64	1.23	0.68				
0 - 0.1	8.43A	0.256A	21.87B	10.11	0.96	0.78				
0.11 - 0.2	8.64A	0.136A	21.43B	11.1	0.71	1.27				
0.3 - 0.4	8.81A	0.188A	18.93B	12.62	0.62	2.69				
0.7 - 0.8	9.13A	0.298A	13.77B	13.1	0.47	4.96				
1.2 - 1.3	9.26A	0.328A	9.37B	10.09	0.43	5.14				
2.5 - 2.6	9.21A	0.172A	7.47B	8.059999	0.27	5.52				

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 - 0.02	<0.1B	0.83C									21.5	52.4
0 - 0.1	0.5B	0.87C	18.8J								18.9	52.9
0.11 - 0.2	0.3B	0.71C	17.7J								19.8	52.5
0.3 - 0.4	0.8B	0.59C	17.8J								20.8	52.6
0.7 - 0.8	1.3B	0.68C	29.2J								21.8	53.1
1.2 - 1.3	2B	0.15C	20.8J								22.8	43.9
2.5 - 2.6	<0.1B	0.07C	8.9J								17.9	30.3

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 - 0.02									
0 - 0.1									
0.11 - 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
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method