Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed015** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By:	D. McGarry	**Locality:**	Peter Campbell, Calatoota
Date Desc.:	07/01/87	**Elevation:**	290 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	**Rainfall:**	No Data
Northing/Long.:	6676800 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	780500 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: Brown clay

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); ; Medium clay; Moderate grade of structure, <2 mm, Granular; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Few, fine (1-2mm) roots; Sharp, Wavy change to -
A12p	0.1 - 0.2 m	Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Massive grade of structure; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Rigid consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
A13	0.2 - 0.55 m	Very dark greyish brown (10YR3/2-Moist); , 10YR74, 0-2% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 10-20 mm, Lenticular; Moderate grade of structure, 2-5 mm, Angular 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 9 (pH meter); Common, very fine (0-1mm) roots;
A14	0.55 - 1.05 m	Dark brown (7.5YR3/2-Moist); , 10YR74, 0-2% , 0-5mm, Distinct; Medium clay; Strong grade of structure, 20-50 mm, Lenticular; Moderate grade of structure, 2-5 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 9 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	1.05 - 1.9 m	Reddish brown (5YR4/3-Moist); , 10YR42, 2-10% , 5-15mm, Distinct; , 2.5YR66, 0-2% , 5-15mm, Prominent; Medium clay; Moderate 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 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 9 (pH meter); Gradual, Smooth change to -
B22	1.9 - 2.94 m	Brown (7.5YR4/4-Moist); , 10YR72, 2-10% , 0-5mm, Distinct; Light medium clay; Strong grade of structure, 100-200 mm, Lenticular; Strong 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 firm consistence; Few (2 - 10 %), Calcareous, Medium (2 - 6 mm), Soft segregations; Field pH 9 (pH meter);

Morphological Notes

A11p Layer .02 is a 10cm thick plough pan - very dry and hard. Layer .05 has abundant infilled root and faunal passages. Layer .06 has a weak prismatic structure (as a 3rd

Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed015** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

	structure), also the majority of the faunal and floral infilled channels
A12p	from .05 have stopped. Note that there are two levels of A11 sampled, but one each of B21 and B22. Q.

Observation Notes

Parent Rock: alluvial sediment, clay, second (brown parna) terraced

Site Notes

Topography flat to gently sloping. Cultivation obscures cracks to >800. Core intersects crack. Mr. Campbell reports soils N of Bulldog Creek are softer in top.

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed015 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

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	8.77A	0.167A	29.36B	15.8	1.45	0.67				
0 - 0.1	8.56A	0.18A	29.95B	19.29	1.47	0.87				
0.1 - 0.2	8.67A	0.177A	29.77B	22.3	1.03	1.31				
0.3 - 0.4	9.18A	0.208A	21.64B	27.47	0.85	3.67				
0.7 - 0.8	9.52A	0.326A	12.54B	28.72	0.83	8.719999				
1.2 - 1.3	9.42A	0.556A	8.87B	28.73	0.76	9.34				
2.5 - 2.6	9.36A	0.587A	8.65B	25.93	0.67	7.54				

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	1B	1.18C									19.6	56.5
0 - 0.1	0.8B	1.24C	18.7J								21.5	55.2
0.1 - 0.2	1.2B	1.06C	4.2J								20.6	56
0.3 - 0.4	1.7B	0.8C	9.7J								21.3	56.1
0.7 - 0.8	2.9B	0.68C	18.1J								23.5	55.4
1.2 - 1.3	1.4B	0.27C	31.8J								24.6	49.7
2.5 - 2.6	6B	0.16C	16.2J								19.6	48

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									
0.1 - 0.2									
0.3 - 0.4									
0.7 - 0.8									
1.2 - 1.3									
2.5 - 2.6									

Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed015** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

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