Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed433** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By:	M.E. Heape	**Locality:**	stock route, near Oakvale
Date Desc.:	24/03/86	**Elevation:**	267 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	**Rainfall:**	No Data
Northing/Long.:	6666700 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	774200 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 plain	**Slope Category:**	Level
Slope:	0 %	**Aspect:**	180 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
N/A
ASC Confidence:
Confidence level not specified

Mapping Unit: N/A
Principal Profile Form: Ug6.1
Great Soil Group: Brown clay

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Very dark grey (10YR3/1-Moist); Dark grey (10YR4/1-Dry); ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.2 m	Very dark grey (10YR3/1-Moist); ; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 7 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
A13	0.2 - 0.55 m	Very dark grey (10YR3/1-Moist); , 10YR52, 2-10% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 2-10%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	0.55 - 1 m	Brown (7.5YR4/2-Moist); , 7.5YR32, 0-2% , 0-5mm, Faint; Light clay; Weak grade of structure, 100-200 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very strong consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 1.35 m	Brown (7.5YR4/2-Moist); , 10YR22, 2-10% , 5-15mm, Distinct; Medium heavy clay; Weak grade of structure, 50-100 mm, Angular blocky; Weak grade of structure, 10-20 mm, Cast; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Field pH 8.5 (pH meter); Sharp, Wavy change to -
2B21	1.35 - 3.05 m	Brown (7.5YR4/2-Moist); ; Medium heavy clay; Strong grade of structure, 100-200 mm, Lenticular; Moderate grade of structure, 20-50 mm, Prismatic; 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, Coarse (6 - 20 mm), Nodules; Field pH 8.5 (pH meter);

Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed433** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

2B22	3.05 - 4.2 m	Dark reddish grey (5YR4/2-Moist); ; Medium clay; Moderate grade of structure, 100-200 mm, Lenticular; Weak grade of structure, 20-50 mm, Prismatic; 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), Nodules; Field pH 8 (pH meter); Diffuse, Smooth change to -
2C	4.2 - 4.75 m	Brown (10YR4/3-Moist); ; Medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 20-50%, coarse gravelly, 20-60mm, subrounded, Consolidated rock (unidentified), coarse fragments; Field pH 7.5 (pH meter); Abrupt, Smooth change to -

Morphological Notes

A11 Rare modern bone at 370cm, at 370cm 1 pebble (sandstone?) and a fragment of basalt. Topsoil texture is "with sand".

Observation Notes

Parent Rock: alluvial sediment, clay, mixed texture, with lime parna on third fan

Site Notes

Slope 30 min. south. Some surface cracks visible here and there. Firm surface, breaking easily to coarse self-mulching. Gravelly at base.

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed433 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.1	7.53A	0.102A	22.14B	9.43	0.73	1.41				
0.1 - 0.2	7.49A	0.102A	23.98B	10.17	0.42	1.9				
0.3 - 0.4	7.76A	0.08A	24.94B	11.95	0.28	4.26				
0.7 - 0.8	9.17A	0.272A	22.16B	12.64	0.31	7.27				
1.2 - 1.3	8.92A	0.833A	21.6B	11.19	0.42	7.2				
2.5 - 2.6	9.02A	0.679A	17.75B	9.89	0.38	6.84				
3.5 - 3.6	9.11A	0.626A	20.07B	9.25	0.35	7.62				
4.5 - 4.6	8A	0.427A	14.96B	8.61	0.31	6.67				

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	1.48C	4.4J								10.1	36.5
0.1 - 0.2	<0.1B	1.23C	2.8J								9.7	37.3
0.3 - 0.4	1.9B	0.97C	1.8J								9	37.9
0.7 - 0.8	5.9B	0.49C	1.7J								11.2	40.7
1.2 - 1.3	2.9B	0.17C	1.2J								13.9	43.2
2.5 - 2.6	1.6B	0.11C	2.1J								13.6	43.1
3.5 - 3.6	3.7B	0.07C	2.8J								15.9	41
4.5 - 4.6	<0.1B	0.04C	6J								12.2	34.8

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										
3.5 - 3.6										
4.5 - 4.6										

Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed433** **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