Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed045** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By:	G.M. Roberts	**Locality:**	S.L. Gourley, Eurowie
Date Desc.:	16/07/85	**Elevation:**	233 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	**Rainfall:**	No Data
Northing/Long.:	6672600 AMG zone: 55	**Runoff:**	No Data
Easting/Lat.:	766600 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:	Levee	**Slope Category:**	Very gently sloped
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); Grey (10YR5/1-Dry); ; Light medium clay; Strong grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.25 m	Dark brown (7.5YR3/2-Moist); ; Medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded tabular, Quartz, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.5 m	Dark brown (7.5YR3/2-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Earthy 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), Soft segregations; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B21k	0.5 - 0.65 m	Brown (7.5YR4/4-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Veins; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B22k	0.65 - 1 m	Brown (7.5YR4/2-Moist); ; Medium clay; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; 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 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B23	1 - 1.9 m	Brown (7.5YR4/4-Moist); ; Medium heavy 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; Firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots;

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B24	1.9 - 2.76 m	Brown (7.5YR4/2-Moist); ; Medium heavy clay; 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; Firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots;

Morphological Notes

A11p Visible crackdepth is 56cm.

Observation Notes

Parent Rock: , , second terraced fan

Site Notes

Few water worn quartz gravels on surface, 60mm diameter.

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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 - 0.02	7.84A	0.069A	19.83B	6.37	1.6	0.93				
0 - 0.1	7.57A	0.176A	17.52B	7.2	1.14	1.42				
0.1 - 0.2	8.82A	0.165A	21.2B	8.93	0.77	2.74				
0.3 - 0.4	9.35A	0.232A	19.5B	9.5	0.62	5.32				
0.5 - 0.6	9.38A	0.323A	19.9B	11.32	0.84	7.68				
0.7 - 0.8	8.54A	0.966A	20.45B	11.59	1.12	8.95				
1.2 - 1.3	8.94A	0.702A	22.94B	12.9	1.3	10.25				
2.5 - 2.6	9.04A	0.616A	21.09B	14.64	1.27	11.08				

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	0.78C									26	40.8
0 - 0.1	0.1B	1.06C	35.8J								24.7	39.9
0.1 - 0.2	0.3B	0.58C	17.6J								25.1	42.7
0.3 - 0.4	0.9B	0.45C	6.3J								25.8	47
0.5 - 0.6	0.9B	0.33C	8J								23.5	51.9
0.7 - 0.8	0.9B	0.16C	12.9J								22.2	55.6
1.2 - 1.3	0.6B	0.08C	11.9J								19	62.7
2.5 - 2.6	3.5B	0.1C	8.8J								15	65.2

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										
0.5 - 0.6										
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