Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed035** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: D. McGarry
Date Desc.: 08/07/86
Map Ref.: Sheet No. : 8837_N 1:50000
Northing/Long.: 6674200 AMG zone: 55
Easting/Lat.: 787300 Datum: AGD66
Locality: stock route, near Curramanga
Elevation: 348 metres
Rainfall: No Data
Runoff: No Data
Drainage: No Data

Geology

ExposureType: Undisturbed soil core
Geol. Ref.: No Data
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: No Data

Land Form

Rel/Slope Class: No Data
Morph. Type: No Data
Elem. Type: No Data
Slope: 1 %
Pattern Type: Flood plain
Relief: No Data
Slope Category: Very gently sloped
Aspect: 180 degrees

Surface Soil Condition (dry): Firm, Trampled

Erosion:

Soil Classification

Australian Soil Classification:
N/A
ASC Confidence:
Confidence level not specified
Mapping Unit: N/A
Principal Profile Form: Ug5.38
Great Soil Group: Brown clay

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Black (5YR2/1-Moist); ; Medium clay; Weak grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Field pH 6.5 (pH meter); Common, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Dark reddish brown (5YR2/2-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Field pH 6.5 (pH meter); Common, very fine (0-1mm) roots;
A13	0.25 - 0.65 m	Dark reddish brown (5YR2/2-Moist); ; 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; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	0.65 - 1 m	Dark reddish brown (5YR3/3-Moist); , 7.5YR32, 2-10% , 0-5mm, Prominent; , 7.5YR84, 0-2% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 5-10 mm, Prismatic; 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), Soft segregations; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 1.5 m	Dark reddish brown (5YR3/3-Moist); , 7.5YR32, 10-20% , 0-5mm, Prominent; , 7.5YR84, 2-10% , 0-5mm, Distinct; Light clay; Moderate grade of structure, 5-10 mm, Prismatic; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 8.5 (pH meter); Diffuse, Smooth change to -
2B2	1.5 - 3.03 m	Dark reddish brown (5YR3/3-Moist); , 7.5YR56, 20-50% , 0-5mm, Prominent; , 7.5YR32, 2-10% , 0-5mm, Prominent; Light clay; Moderate grade of structure, 10-20 mm, Prismatic; Moderate grade of structure, 5-10 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; Firm consistence; Field pH 8.5 (pH meter);

Morphological Notes

A11 The carbonate in layers 04 and 05 is fine earth and gives the B2 a sandy appearance. From 120cm there is an intimate mix of clay and very fine sand/silt (dark brown with yellow), which at 236-245cm is seen as fine (1mm) layering of silt and

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A12	clay bands. The profile characteristics vary beneath the sedimentary band, i.e. it is truncating two parts of the profile of different ages - so extra sample. Is this possibly a first terrace (Aloomba?) equivalent?

Observation Notes

Parent Rock: alluvial sediment, clay, mixed texture, with lime first terraced fan

Site Notes

Keith Thompson says sandy ridge 60m north of site.

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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	7.16A	0.074A	20.27B	7.1	2.14	0.01				
0 - 0.1	6.74A	0.139A	18.99B	9.36	1.3	0.27				
0.1 - 0.2	6.75A	0.085A	23.36B	12.49	0.8100001	0.48				
0.3 - 0.4	7.8A	0.065A	21.82B	13.26	0.55	0.88				
0.7 - 0.8	8.56A	0.178A	20.38B	12.24	0.67	0.95				
1.2 - 1.3	8.69A	0.182A	20.79B	14.71	0.61	1.28				
2.5 - 2.6	8.73A	0.165A	20.22B	17.8	0.61	1.8				

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	3.73C									21.4	33
0 - 0.1	<0.1B	2.07C	97.5J								22.4	38.4
0.1 - 0.2	<0.1B	1.39C	58.7J								19.6	48.4
0.3 - 0.4	<0.1B	1.22C	37.5J								20.5	49.7
0.7 - 0.8	2B	0.58C	39.1J								18.2	38.5
1.2 - 1.3	3B	0.27C	42.5J								29.7	34.7
2.5 - 2.6	0.5B	0.32C	37.6J								27.5	36.8

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 - 0.02									
0 - 0.1									
0.1 - 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