Project Name: **Soil Studies in the Lower Namoi Valley**
Project Code: **EDGEROI** **Site ID:** **ed216** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: D. McGarry
Locality: Department of Agriculture, Myall Vale Research Station
Date Desc.: 15/03/85
Elevation: 199 metres
Map Ref.: Sheet No. : 8837_N 1:50000
Rainfall: No Data
Northing/Long.: 6655680 AMG zone: 55
Runoff: No Data
Easting/Lat.: 749630 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): Surface crust, 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. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); , 10YR83, 0-2% , 0-5mm, Faint; Medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy 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, Fine (0 - 2 mm), Nodules; Field pH 8.2 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.1 - 0.3 m	Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); , 10YR54, 0-2% , 0-5mm, Faint; Medium clay; Moderate 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; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.3 (pH meter); Common, very fine (0-1mm) roots; Clear, Irregular change to -
B21	0.3 - 0.55 m	Dark brown (7.5YR3/2-Moist); , 10YR64, 0-2% , 0-5mm, Faint; Medium clay; Weak grade of structure, 10-20 mm, Lenticular; 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; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8 (pH meter); Common, very fine (0-1mm) roots;
B22	0.55 - 1.1 m	Dark brown (7.5YR3/2-Moist); , 10YR64, 0-2% , 0-5mm, Faint; Medium clay; Weak grade of structure, 20-50 mm, Lenticular; 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; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.2 (pH meter); Common, very fine (0-1mm) roots; Gradual, Smooth
2B21	1.1 - 1.9 m	Dark brown (10YR3/3-Moist); , 10YR32, 2-10% , 0-5mm, Faint; , 10YR64, 2-10% , 0-5mm, Distinct; Medium clay; Weak grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Common, very fine (0-1mm) roots;
2B22	1.9 - 3.1 m	Brown (7.5YR4/4-Moist); , 10YR33, 20-50% , 15-30mm, Distinct; , 10YR31, 2-10% , 0-5mm, Faint; Light medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 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 (pH meter);

Morphological Notes

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Observation Notes

Parent Rock: alluvial sediment, clay, parna on third fan, Namoi

Site Notes

Core taken at the edge of the paddock.

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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	8.18A	0.094A	24.85B	7.9	1.83	0.15				
0 - 0.1	7.75A	0.222A	23.13B	7.23	2.07	0.26				
0.1 - 0.2	8.17A	0.126A	23.82B	7.06	1.3	0.41				
0.3 - 0.4	8.46A	0.14A	25.46B	7.78	0.62	0.61				
0.7 - 0.8	8.51A	0.155A	21.71B	11.02	0.72	0.89				
1.2 - 1.3	8.58A	0.166A	19.41B	11.79	0.64	1.67				
2.5 - 2.6	8.57A	0.139A	19.72B	11.45	0.51	2.38				

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	1.18C									21.6	54.4
0 - 0.1	0.2B	1.59C	58.1J								21.7	56.1
0.1 - 0.2	0.2B	1.17C	10.3J								21.9	55.6
0.3 - 0.4	1.1B	0.87C	15.5J								24.1	57.5
0.7 - 0.8	1.3B	0.78C	28.5J								24	58.3
1.2 - 1.3	0.7B	0.51C	24.9J								26.7	59.1
2.5 - 2.6	<0.1B	0.25C	29.9J								25.4	55.4

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