

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** we007 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:		Locality:	
Date Desc.:	08/02/89	Elevation:	175 metres
Map Ref.:	Sheet No. : 8737_N 1:50000	Rainfall:	No Data
Northing/Long.:	6664300 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	708800 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

Erosion:

Soil Classification

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

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark grey (10YR4/1-Moist); Very dark grey (10YR3/1-Dry); ; Light clay; Moderate grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.25 m	Very dark grey (10YR3/1-Moist); ; Light clay; Strong grade of structure, 20-50 mm, Angular blocky; 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; Strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Very dark grey (10YR3/1-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Angular blocky; 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; Strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
A14	0.55 - 1 m	Black (10YR2/1-Moist); , 10YR42, 2-10% , 5-15mm, Distinct; Light clay; Weak grade of structure, 50-100 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; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.5 (pH meter);
A15	1 - 1.3 m	Very dark greyish brown (10YR3/2-Moist); , 10YR43, 0-2% , 5-15mm, Distinct; Light clay; Weak grade of structure, 50-100 mm, Lenticular; Weak grade of structure, 50-100 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; 0-2%, fine gravelly, 2-6mm, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.8 (pH meter); Diffuse, Smooth change to -
B2	1.3 - 2.73 m	Brown (10YR5/3-Moist); , 10YR41, 2-10% , 5-15mm, Distinct; Light clay; Moderate grade of structure, 100-200 mm, Lenticular; Weak 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; Very firm consistence; Few (2 - 10 %), Calcareous, Medium (2 - 6 mm), Soft segregations; Field pH 8.8 (pH meter);

Morphological Notes

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A11 Originally bu009. The profile contains abundant grit to about 55cm. Below this there is grit and coarse sand in patches and in cracks to 180cm. There is definitely a break,
A12 than below. The grits below 130cm in the second core are rounder. This is like the Bingara pits and is probably watersorted aeolian clay, with alluvial grits.

Observation Notes

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

Site Notes

Flatweed, tumbleweed, no trees. Soil like middle terrace.

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Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol	(+)/kg		
0 - 0.1	7.68A	0.158A	21.36B	20.87	1.43	3.5			
0.1 - 0.2	8.31A	0.145A	21.53B	20.7	0.8	5.91			
0.3 - 0.4	8.41A	0.463A	21.12B	21.52	0.72	9.67			
0.7 - 0.8	7.72A	1.624A	20.42B	19.81	0.95	16.38			
1.2 - 1.3	8.75A	0.801A	17B	19.45	0.76	12.61			
2.5 - 2.6	9.11A	0.809A	10.64B	18.93	0.74	13.92			

Depth m	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS	Silt Clay
0 - 0.1	<0.1B	1.04C	55.3J								12.2 59.9
0.1 - 0.2	<0.1B	0.73C	27.3J								11.9 64.2
0.3 - 0.4	<0.1B	0.67C	41.2J								13.1 62.9
0.7 - 0.8	<0.1B	0.63C	45.7J								15.1 61.4
1.2 - 1.3	0.8B	0.4C	29.3J								13.3 56.7
2.5 - 2.6	1.3B	0.05C	9.8J								13.4 52.5

[illegible]

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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