

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed075 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	M. Korevaar	Locality:	stock route, near Bald Hill
Date Desc.:	11/03/85	Elevation:	198 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6668100 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	752700 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:	Fan	Slope Category:	Level
Slope:	0 %	Aspect:	No Data

Surface Soil Condition (dry): Self-mulching, Trampled

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Ug5.15
		Great Soil Group:	Grey clay

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.06 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy
A12	0.06 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7.3 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.6 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); , 10YR81, 0-2% , 0-5mm, Prominent; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Weak grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.3 (pH meter); Few, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.6 - 1.08 m	Very dark greyish brown (10YR3/2-Moist); , 10YR82, 0-2% , 0-5mm, Faint; Light medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 7.7 (pH meter); Common, very fine (0-1mm) roots;
B22	1.08 - 1.9 m	Brown (10YR4/3-Moist); , 5YR46, 2-10% , 5-15mm, Distinct; , 10YR72, 2-10% , 5-15mm, Prominent; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.2 (pH meter); Common, very fine (0-1mm) roots;
B23	1.9 - 2.82 m	Brown (7.5YR4/2-Moist); , 7.5YR46, 2-10% , 5-15mm, Distinct; , 10YR32, 0-2% , 0-5mm, Distinct; Medium heavy clay; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m ²) Medium (2-5mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 7.7 (pH meter);

Morphological Notes

A11 This core contains a quartz pebble at 25cm probably from road.

Observation Notes

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Parent Rock: alluvial sediment, clay, parna on fourth fan

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.02	7.71A	0.1A	22.53B	9.969999	4	0.8			
0 - 0.06	7.54A	0.23A	26.93B	10.35	1.92	1.63			
0.1 - 0.2	7.99A	0.113A	29.91B	10.96	1.18	1.93			
0.3 - 0.4	8.43A	0.324A	29.56B	11.68	1.04	5.23			
0.7 - 0.8	8.41A	0.67A	28.14B	12.41	1.15	8.17			
1.2 - 1.3	8.81A	0.833A	26.34B	13.34	1.45	10.86			
2.5 - 2.6	8.4A	0.817A	26.39B	12.23	1.44	11.29			

Depth	CaCO ₃	Organic C	Avail. P mg/kg	Total P %	Total N %	Total K %	Bulk Density Mg/m ³	Particle Size		Analysis	
								GV	CS	FS %	Silt Clay
m	%	%									
0 - 0.02	0.7B	1.88C									18.1 56.3
0 - 0.06	<0.1B	1.05C	34.1J								19.1 55.2
0.1 - 0.2	<0.1B	0.65C	10.8J								17.3 57.6
0.3 - 0.4	0.1B	0.55C	8J								17.2 58.7
0.7 - 0.8	0.2B	0.5C	11.2J								16.8 61.2
1.2 - 1.3	1.5B	0.12C	11.8J								16.5 66
2.5 - 2.6	<0.1B	0.1C	4.6J								14.9 65.9

[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