

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed108 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	E. Veldhuis	Locality:	Auscott Ltd, Auscott
Date Desc.:	07/05/85	Elevation:	196 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6663500 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	747100 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	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

A11p	0 - 0.12 m	Dark brown (7.5YR3/2-Moist); ; Medium clay; Moderate grade of structure, 2-5 mm, Granular; Moderate grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.2 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A12	0.12 - 0.25 m	Dark brown (7.5YR3/2-Moist); , 10YR71, 0-2% , 0-5mm, Distinct; 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Dark brown (7.5YR3/2-Moist); , 10YR71, 0-2% , 0-5mm, Distinct; 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) Fine (1-2mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, fine (1-2mm) roots;
A14	0.55 - 0.9 m	Dark brown (7.5YR3/2-Moist); , 10YR33, 0-2% , 5-15mm, Faint; , 10YR71, 0-2% , 0-5mm, Distinct; Light medium clay; Massive grade of structure; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, fine (1-2mm) roots; Gradual, Smooth change to -
B21	0.9 - 2.4 m	Brown (7.5YR4/4-Moist); , 10YR31, 2-10% , 5-15mm, Distinct; Light medium clay; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 8.7 (pH meter);
B22	2.4 - 2.82 m	Yellowish brown (10YR5/4-Moist); , 7.5YR42, 10-20% , 5-15mm, Faint; , N20, 0-2% , 0-5mm, Distinct; Light medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter);

Morphological Notes

Observation Notes

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

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Site Notes

Height of cotton hills 15cm. Site description after rain but the cores were collected a day earlier.

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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	8.4A	0.171A	24.83B	14.12	1.6	0.73			
0 - 0.1	8.47A	0.152A	23.86B	17.23	1.18	0.8			
0.12 - 0.2	8.74A	0.121A	25.26B	17.31	1.16	1.3			
0.3 - 0.4	9.1A	0.164A	25.54B	19.18	0.43	2.85			
0.7 - 0.8	9.3A	0.343A	17.65B	18.73	0.32	6.28			
1.2 - 1.3	9.31A	0.546A	17.27B	20.72	0.96	8.64			
2.5 - 2.6	9.13A	0.634A	15.34B	17.67	0.72	7.66			

Depth m	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis
	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	Silt Clay
0 - 0.02	0.1B	0.9C								17.5 59.3
0 - 0.1	0.1B	0.84C	22.1J							17.7 59.5
0.12 - 0.2	0.1B	0.74C	16.8J							16.6 59.1
0.3 - 0.4	0.5B	0.6C	8J							17.6 59.7
0.7 - 0.8	1B	0.42C	13.3J							18.6 61
1.2 - 1.3	1B	0.18C	24.8J							18.2 66.1
2.5 - 2.6	1.7B	0.16C	19.6J							16.6 59.9

[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