

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed221 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	E. Veldhuis	Locality:	V.T.(Vic) Melbourne, Yarral
Date Desc.:	28/03/85	Elevation:	199 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6656200 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	749910 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): Self-mulching, 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 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); , 10YR31, 20-50% , 15-30mm, Distinct; Medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; 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, subrounded, Quartz, coarse fragments; Many (20 - 50 %), Argillaceous, Coarse (6 - 20 mm), Veins; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A12p	0.1 - 0.26 m	Very dark greyish brown (10YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); , 10YR31, 20-50% , 15-30mm, Distinct; Medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Many (20 - 50 %), Argillaceous, Coarse (6 - 20 mm), Veins; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -
A13	0.26 - 0.55 m	Very dark greyish brown (10YR3/2-Moist); , 10YR32, 2-10% , 5-15mm, Distinct; , 7.5YR84, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Coarse, (10 - 20) 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), Nodules; Field pH 7.7 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 0.86 m	Very dark grey (10YR3/1-Moist); , 10YR62, 2-10% , 5-15mm, Distinct; Medium heavy clay; Weak grade of structure, 10-20 mm, Subangular 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), Nodules; Field pH 8.4 (pH meter); Few, very fine (0-1mm) roots; Gradual, Tongued change to -
B2	0.86 - 1.49 m	Brown (7.5YR4/4-Moist); , 10YR33, 2-10% , 5-15mm, Distinct; Fine sandy light clay; Weak grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; 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 %), Argillaceous, Medium (2 - 6 mm), Veins; Few (2 - 10 %), Calcareous, Medium (2 - 6 mm), Nodules; Field pH 8.5 (pH meter); Abrupt, Smooth change to -

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C 1.49 - 2.69 m Strong brown (7.5YR5/6-Moist); , 10YR34, 2-10% , 0-5mm, Distinct; Clayey sand; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm²) Fine (1-2mm) macropores, Moderately moist; Very weak consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 7.1 (pH meter);

Morphological Notes

Observation Notes

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

Site Notes

Height of cotton hill is 27cm. Core is from centre of hill. Neither hand sheervane nor penetrometer collected as the soil was so fragmented.

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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	7.87A	0.092A	16.7B	8.25	1.2	0.47			
0 - 0.1	8.16A	9.100001E-02A	20.03B	8.83	1.23	0.71			
0.1 - 0.2	8.14A	0.115A	19.17B	8.59	1.26	0.72			
0.3 - 0.4	8.68A	0.149A	22.5B	12.07	0.75	1.6			
0.7 - 0.8	9.08A	0.228A	18.05B	12.39	0.68	3.94			
1.2 - 1.3	9.02A	0.254A	16.17B	11.52	0.66	4.8			
2.5 - 2.6	8.46A	0.219A	13.32B	8.18	0.38	3.72			

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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