Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed145 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: E. Veldhuis Locality: V.T.(Vic) Melbourne, Yarral

Date Desc.: Elevation: 06/05/85 200 metres Map Ref.: Sheet No.: 8837 N 1:50000 Rainfall: No Data Northing/Long.: 6658600 AMG zone: 55 Runoff: No Data 752500 Datum: AGD66 Easting/Lat.: 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: Mapping Unit: N/A
N/A Principal Profile Form: Ug5.17
ASC Confidence: Great Soil Group: Grey clay

Confidence level not specified

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments:

Profile Morphology

Very dark greyish brown (10YR3/2-Moist); Dark grey (10YR4/1-Dry); ; Light medium clay;
Moderate grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine

(0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7.8 (pH meter); Few,

very fine (0-1mm) roots;

A12 0.1 - 0.25 m Very dark greyish brown (10YR3/2-Moist); Dark grey (10YR4/1-Dry); ; Medium clay; Moderate

grade of structure, 50-100 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, fine (1-

2mm) roots;

A13 0.25 - 0.43 m Very dark greyish brown (10YR3/2-Moist); , 10YR71, 0-2% , 0-5mm, Distinct; Medium clay;

Moderate grade of structure, 50-100 mm, Subangular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 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, fine (1-2mm) roots;

A14 0.43 - 1 m Very dark greyish brown (10YR3/2-Moist); , 10YR42, 0-2% , 0-5mm, Faint; , 10YR71, 0-2% , 0-

5mm, Distinct; Medium clay; Weak 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; Firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Few,

very fine (0-1mm) roots;

A15 1 - 1.7 m Very dark greyish brown (10YR3/2-Moist); , 10YR61, 0-2% , 0-5mm, Distinct; Medium heavy

clay; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2%), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-

1mm) roots; Diffuse, Smooth change to -

2B2 1.7 - 2.69 m Strong brown (7.5YR5/6-Moist); , 5YR34, 2-10% , 5-15mm, Prominent; , 5YR41, 2-10% , 0-5mm,

Distinct; Clayey sand; Single grain grade of structure, <2 mm; Moderate grade of structure, 5-10 mm, Cast; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Few

cutans, <10% of ped faces or walls coated, distinct; Field pH 8 (pH meter);

Morphological Notes

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

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Eve	hangeable	Cations		Exchangeable	CEC		ECEC	ESP
Бериі	рп			Mg	K	Na	Acidity	CEC	•	LCLC	LJF
m		dS/m		J		Cmol (+)					%
0 - 0.02	8.55A		26.57B	16.86	2.41	1.26					
0 - 0.1	8.07A		23.01B	15.04	1.51	1.26					
0.1 - 0.2	8.28A		24.56B	16.87	1.58	1.46					
0.3 - 0.4	8.91A		25.96B	20.55	1.04	3.73					
0.7 - 0.8	9.11A	0.471A	19.1B	22.42	0.82	8.7					
1.2 - 1.3	9.14A		18.67B	23.79	0.92	10.09					
2.5 - 2.6	9.19A	0.206A	7.46B	10.38	<0.01	5.48					
Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	P	article	Size	Analysis
э ор		C	P	P	N	K	Density	G۷	CS	FS	Silt Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%	•
0 - 0.02	<0.1B										20.1 62
0 - 0.1	0.1B	0.84C	46.4J								19.6 61.5
0.1 - 0.2	0.1B	0.85C	35.9J								17.1 60.5
0.3 - 0.4	0.9B	0.56C	11.1J								16.6 64
0.7 - 0.8	1.3B	0.45C	16.6J								17.4 68.6
1.2 - 1.3	0.6B	0.42C	43.1J								20.7 71
2.5 - 2.6	0.1B	0.09C	15.3J								11.2 31.4
Depth	COLE		Grav	imetric/V	olumetric V	Nater Cont	tents		Ks	at	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar 15	Bar		_	_
m				g	/g - m3/m	3			mm	ı/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 Silt (%) - Coventry and Fett pipette method