Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed109 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: D. McGarry Locality: W.H.(Warwick) Wall, Appletrees

Date Desc.: Elevation: 08/01/87 198 metres Map Ref.: Sheet No.: 8837 N 1:50000 Rainfall: No Data Northing/Long.: 6663400 AMG zone: 55 Runoff: No Data 749800 Datum: AGD66 Easting/Lat.: Drainage: No Data

<u>Geology</u>

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

Erosion:

Soil Classification

Australian Soil Classification: Mapping Unit: N/A
N/A Principal Profile Form: Ug5.25
ASC Confidence: Great Soil Group: Grey clay

Confidence level not specified

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11 0 - 0.09 m Dark greyish brown (10YR4/2-Moist); ; Medium clay; Moderate grade of structure, 2-5 mm, Granular; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 8.2 (pH meter); Few, very fine (0.1mm) roots; Sharp, Smooth change to

very fine (0-1mm) roots; Sharp, Smooth change to -

A12p 0.09 - 0.25 m Dark greyish brown (10YR4/2-Moist); ; Medium heavy 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; Very firm consistence; Field pH 8.5 (pH meter);

A13p 0.25 - 0.4 m Dark greyish brown (10YR4/2-Moist); ; Heavy clay; Weak grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8.5 (pH meter);

Sharp, Smooth change to -

A14 0.4 - 1 m Very dark greyish brown (10YR3/2-Moist); , 10YR84, 0-2% , 0-5mm, Faint; Heavy clay;

Moderate grade of structure, 20-50 mm, Lenticular; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) 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 8.5 (pH meter); Few, very fine (0-1mm) roots;

B21 1 - 1.9 m Brown (7.5YR4/3-Moist); , 10YR32, 2-10% , 5-15mm, Distinct; Medium clay; Weak grade of

structure, 20-50 mm, Lenticular; 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; Field pH 8.5 (pH meter); Few, very fine

B22 1.9 - 2.85 m Brown (7.5YR4/3-Moist); , 7.5YR32, 2-10% , 5-15mm, Distinct; , 10YR84, 0-2% , 5-15mm, Faint;

Light medium clay; Strong grade of structure, 20-50 mm, Lenticular; Weak grade of structure, 5-10 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; Very few (0 - 2%), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm)

Morphological Notes

A11 The top 40cm is well compacted, but has low strength because of moisture. Carbonate

from 190cm.

Observation Notes

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

Site Notes

Soil Studies in the Lower Namoi Valley

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Recently flood irrigated. Dark grey/gingery brown/gingery brown with carbonate, drilled by first cotton hill off roadside. Self mulching. ? highest alluvium.

Soil Studies in the Lower Namoi Valley

EDGEROI Site ID: ed109 CSIRO Division of Soils (QLD) Observation ID: 1

Project Name: Project Code: Agency Name:

Laboratory Test Results:

Depth	рН	1:5 EC		hangeable			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+	Acidity)/kg			%
0 - 0.02	8.02A	0.832A	33.64B	14.6	2.12	2.36				
0 - 0.09	8.6A	0.17A	29.82B	16.25	2.12	2.38				
0.1 - 0.2	8.6A	0.171A	30.26B	16.17	1.84	2.42				
0.3 - 0.4	8.83A	0.186A	30.16B	16.79	1.46	3.5				
0.7 - 0.8	9.15A	0.266A	24.97B	17.86	1.42	6.54				
1.2 - 1.3	9.02A	0.459A	23.75B	18.79	1.68	8.74				
2.5 - 2.6	8.94A	0.588A	21.85B	17.75	1.38	8.46999				
						9				
Depth	CaCO3	Organic	Avail.	Total	Tota	l Total	Bulk	Particle	Size	Analysis
Бериі	04000	C	P	P	N	K	Density	GV CS	FS	Silt Clay
m	%	%	mg/kg	%	%	%	Mg/m3		%	· · · · · · · · · · · · · · · · · · ·
0 - 0.02	<0.1B	0.67C								16.8 69.1
0 - 0.09	0.1B	0.63C	40.8J							17.2 66.9
0.1 - 0.2	<0.1B	0.63C	32.7J							17.1 68
0.3 - 0.4	0.2B	0.55C	8J							16.8 68.8
0.7 - 0.8	0.9B	0.47C	20.4J							16.5 67.8
1.2 - 1.3	1B	0.36C	25.6J							16.5 70.5
2.5 - 2.6	1.2B	0.08C	16.9J							19.3 65.9
Depth COLE Gravimetric/Volumetric Water Contents										K unsat
- vp		Sat.	0.05 Bar	0.1 Bar	0.5 Bar		5 Bar 15 I		sat	
m					g - m3/r			mr	n/h	mm/h

^{0 - 0.02}

^{0 - 0.09} 0.1 - 0.2

^{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