Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed113 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: M. Korevaar Locality: stock route, near Green Timbers

Date Desc.: Elevation: 09/03/85 213 metres Map Ref.: Sheet No.: 8837 N 1:50000 Rainfall: No Data Northing/Long.: 6663100 AMG zone: 55 Runoff: No Data 760800 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 DataPattern Type:No DataMorph. Type:No DataRelief:No DataElem. Type:Terrace plainSlope Category:LevelSlope:1 %Aspect:No Data

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

Australian Soil Classification:Mapping Unit:N/AN/APrincipal Profile Form:Ug5.15ASC Confidence:Great Soil Group:Grey clay

Confidence level not specified

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11 0 - 0.06 m Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); ; Medium heavy clay; Strong grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores. Moderately moist; Strong

consistence; Field pH 7.2 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -

A12 0.06 - 0.2 m Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); ; Medium

heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 6.7 (pH meter); Common, very fine (0-1mm) roots; Clear,

Wavy change to -

A13 0.2 - 0.65 m Very dark greyish brown (10YR3/2-Moist); , 10YR82, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5)

clay; Weak grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.2 (pH

meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

B21 0.65 - 0.95 m Dark brown (10YR3/3-Moist); , 10YR72, 0-2% , 5-15mm, Distinct; , 10YR81, 0-2% , 0-5mm,

Distinct; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Roughped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Soft segregations; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH

meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

 $B22 \qquad 0.95 - 1.9 \ m \qquad \text{Dark brown (7.5YR3/4-Moist); , 10YR32, 20-50\%, 15-30mm, Distinct; , 10YR81, 0-2\%, 0-5mm, 10YR81, 10$

Distinct; Medium heavy clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; Many (20 - 50 %), Organic (humified), Coarse (6 - 20 mm), Veins; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.2 (pH meter);

Few, very fine (0-1mm) roots;

B23 1.9 - 3 m Brown (7.5YR4/4-Moist); , 10YR41, 20-50% , 15-30mm, Distinct; , 10YR83, 0-2% , 0-5mm,

Distinct; Light clay; Moderate 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.3 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

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3 - 4.3 m

Strong brown (7.5YR5/6-Moist); , 2.5Y32, 10-20% , 15-30mm, Distinct; Coarse sandy light clay; Massive grade of structure; Moderate grade of structure, 20-50 mm, Cast; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Common (10 - 20 %), Organic (humified), Coarse (6 - 20 mm), Veins; Field pH 8.5 (pH meter);

Morphological Notes

Epipedon, colour break at 95cm. Does not fit key well as peds more e than s. Visible

sedimentary structures at ~3m. At 120cm medium heavy clay has coarse sand in it.

Observation Notes

Parent Rock: alluvial sediment, mixed texture, with lime, basalt parna on fourth fan

Site Notes

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Project Name: Project Code: Agency Name:

Laboratory Test Results:

Depth	рН	1:5 EC		hangeable			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	К	Na Cmol (+)	Acidity //kg			%
0 - 0.02	6.75A	0.163A	13.79B	8.01	1.89	0.25				
0 - 0.06	6.92A	0.175A	17.89B	10.14	1.86	0.75				
0.1 - 0.2	7.34A	0.099A	16.31B	9.5	0.8	1.5				
0.3 - 0.4	9.07A	0.219A	16.79B	9.98	0.49	3.77				
0.7 - 0.8	7.73A	3.4A	16.48B	12.89	0.65	5.58				
1.2 - 1.3	8.72A	0.46A		12.65	0.68	6.91				
2.5 - 2.6	9.21A	0.543A	11.93B	9.62	0.49	7.89				
4 - 4.1										
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV CS	Size A	Analysis Silt Clay
m	%	%	mg/kg	%	%	%	Mg/m3	OV 00	%	One Olay
0 - 0.02	<0.1B	2.39C								27 39.8
0 - 0.02	<0.1B		31.3J							19.4 39
0.1 - 0.2	<0.1B	1.14C	7.7J							20 38.9
0.3 - 0.4	0.1B	0.77C	2.3J							24.5 45.7
0.7 - 0.8	1.1B	0.45C	14J							22.5 46.6
1.2 - 1.3	0.1B	0.24C	11.7J							16.2 39.7
2.5 - 2.6	0.6B	0.14C	8.8J							18.4 23.9
4 - 4.1			-							
Depth	COLE				olumetric V				sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar /g - m3/m	1 Bar 3	5 Bar 15 B	Bar mn	n/h	mm/h

0 - 0.02 0 - 0.06 0.1 - 0.2 0.3 - 0.4

0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.6 4 - 4.1

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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