Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed217 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: M. Korevaar Locality: Department of Agriculture, Myall Vale Research

Station 200 met

Date Desc.: 19/03/85 Elevation: 200 metres Map Ref.: Sheet No.: 8837_N 1:50000 Rainfall: No Data Northing/Long.: 6656850 AMG zone: 55 Runoff: No Data 751030 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 flatSlope Category:LevelSlope:0 %Aspect:No Data

Surface Soil Condition (dry): Self-mulching, Recently cultivated

Erosion:

Soil Classification

Australian Soil Classification:Mapping Unit:N/AN/APrincipal Profile Form:Ug5.17ASC Confidence:Great Soil Group:Grey clay

Confidence level not specified

Site Disturbance: Cultivation. Rainfed

Vegetation:

A14

Surface Coarse Fragments:

Profile Morphology

A11p 0 - 0.1 m Dark grey (10YR4/1-Moist); Grey (10YR5/1-Dry); Medium heavy clay; Strong grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per

100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field

pH 8.2 (pH meter);

A12p 0.1 - 0.24 m Very dark grey (10YR3/1-Moist); Dark grey (10YR4/1-Dry); ; Medium clay; Moderate grade of

structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Subangular blocky; Earthy fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 7.5 (pH meter); Common, very

fine (0-1mm) roots; Abrupt, Irregular change to -

A13 0.24 - 0.55 m Very dark greyish brown (10YR3/2-Moist); , 10YR41, 0-2% , 5-15mm, Faint; Medium heavy clay; Weak grade of structure, 10-20 mm, Lenticular; Moderate grade of structure, 5-10 mm,

clay; Weak grade of structure, 10-20 mm, Lenticular; Moderate 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); Common very fine (0.1mm)

Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Common, very fine (0-1mm)

0.55 - 0.9 m

Very dark greyish brown (10YR3/2-Moist); , 10YR62, 0-2% , 5-15mm, Faint; Medium heavy clay; Moderate grade of structure, 20-50 mm, Lenticular; Moderate grade of structure, 10-20 mm, Subangular blocky; 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, Medium (2 -6 mm), Nodules; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;

Diffuse, Smooth change to -

B2 0.9 - 1.86 m Very dark grey (10YR3/1-Moist); , 10YR74, 0-2% , 0-5mm, Distinct; , 10YR72, 0-2% , 0-5mm,

Faint; Medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH

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

2B2 1.86 - 2.2 m Strong brown (7.5YR4/6-Moist); , 10YR33, 10-20% , 5-15mm, Distinct; , 10YR74, 0-2% , 0-5mm,

Faint; Medium clay; Moderate grade of structure, 5-10 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, Medium (2 -6 mm),

Nodules; Field pH 8.5 (pH meter); Gradual, Smooth change to -

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2C2 2.2 - 3.03 m

Strong brown (7.5YR5/6-Moist); , 7.5YR53, 20-50% , 15-30mm, Distinct; , 10YR73, 0-2% , 0-5mm, Faint; Light clay; Weak grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter);

Morphological Notes

Observation Notes

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

Site Notes

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Project Name: Project Code: Agency Name:

Laboratory Test Results:

Depth	рН	1:5 EC			e Cations		Exchangeable	CEC		ECEC	ESP
m		dS/m	Ca I	Mg	K	Na Cmol (+	Acidity +)/kg				%
0 - 0.02	8.39A	0.102A	27.65B	13.48	1.83	1.28					
0 - 0.1	8.21A	0.151A	26.02B	15.53	1.84	1.55					
0.1 - 0.2	8.38A	0.129A	25.27B	14.88	1.64	1.74					
0.3 - 0.4	9.06A	0.118A	24.22B	16.03	1.02	3.4					
0.7 - 0.8	9.13A	0.194A	20.38B	16.45	1.08	5.66					
1.2 - 1.3	9.08A	0.282A	17.79B	13.93	0.91	7.74					
1.9 - 2	9.23A	0.307A	18.07B	14.15	0.93999 99	7.01					
2.5 - 2.6	9.06A	0.201A	14.38B	8.29	0.39	5.46					
Depth	CaCO3	Organic C	Avail. P	Total P	N	Tota K	Density	P: GV	article CS	FS	Analysis Silt Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%	
0 - 0.02	<0.1B	0.77C									17 65.5
0 - 0.1	<0.1B	0.99C	52.2J								18.4 66.7
0.1 - 0.2	<0.1B	0.93C	48.3J								18.4 67.2
0.3 - 0.4	<0.1B	0.55C	39.5J								12.3 67.4
0.7 - 0.8	0.2B	0.55C	66J								20 68.6
1.2 - 1.3	0.1B	0.39C	48.2J								22.2 64.6
1.9 - 2	0.9B	0.41C	50.2J								21.9 66
2.5 - 2.6	<0.1B	0.14C	30.3J								26.1 43.5
Depth	COLE	COLE Gravimetric/Volumetric Water Contents K sat									K unsat
m		Sat.	0.05 Bar		0.5 Bar y/g - m3/m	1 Bar 3	5 Bar 1	5 Bar	mm	/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 1.9 - 2 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