Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed162 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.: 21/03/85 Elevation: 200 metres Sheet No.: 8837_N 1:50000 Rainfall: No Data Map Ref.: Northing/Long.: 6656200 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:Ug5.15ASC Confidence:Great Soil Group:Grey clay

Confidence level not specified

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); Very dark greyish brown (10YR3/2-Dry); ; Medium

heavy clay, Moderate 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; Firm consistence; 2-10%, fine gravelly, 2-6mm, subrounded tabular, Quartz, coarse fragments; Field

pH 8 (pH meter); Few, fine (1-2mm) roots; Abrupt, Irregular change to -

A12p 0.1 - 0.17 m Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); ; Medium

heavy clay; Moderate 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; Weak consistence; 0-2%, fine gravelly, 2-6mm, subrounded tabular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 7.7 (pH meter); Few, very

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

A13x 0.17 - 0.52 m Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Weak grade of structure, 20-

50 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 7.5 (pH meter); Common, very fine (0-

1mm) roots; Abrupt, Smooth change to -

A14 0.52 - 1.16 m Very dark greyish brown (10YR3/2-Moist); ; Medium heavy clay; Weak grade of structure, 10-

20 mm, Lenticular; Weak 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; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; 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 -

B21 1.16 - 2.3 m Brown (7.5YR4/4-Moist); , 10YR33, 10-20% , 5-15mm, 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 %), Organic (humified), Fine (0 - 2 mm), Veins; Very few (0 - 2 %), Calcareous,

Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Diffuse, Smooth change to -

2B22 2.3 - 2.98 m Strong brown (7.5YR5/8-Moist); ; Coarse sandy light clay; Massive grade of structure; Strong

grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Many (20 - 50 %), Organic (humified), Very coarse (20 - 60 mm), Veins; Very few (0 - 2 %),

Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.7 (pH meter);

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Morphological Notes

Ap2 horizon appears to be compacted. Second colour of B2b is restricted to crack infill. A11p

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:

Laboratory rest itesuits.												
Depth	pН	1:5 EC		hangeable Mg	Cations K	Na	Exchangeabl Acidity	e CE	C	ECEC		ESP
m		dS/m	Ca i	wig	N.	Cmol (%
0 - 0.02	8.33A	0.143A	25.42B	12.44	1.71	0.51						
0 - 0.1	8.55A	0.1A	23.72B	11.03	1.47	0.69						
0.1 - 0.17	8.74A	0.08A	21.85B	10.85	1.38	0.74						
0.3 - 0.4	8.44A	0.081A	20.95B	11.19	0.74	1.3						
0.7 - 0.8	8.57A	0.196A	18.32B	11.95	0.8	2.95						
1.2 - 1.3	8.69A	0.196A	17.71B	13.09	0.89	4.69						
2.5 - 2.6	8.82A	0.205A	14.04B	8.89	0.52	4.43						
Depth	CaCO3	Organic	Avail.	Total	Total	Tota	al Bulk		Particle	Size	Analysis	.
		C	P	Р	N	K	Density	, GV	cs	FS	Silt	
m	%	%	mg/kg	%	%	%	Mg/m3			%		•
0 - 0.02	<0.1B	0.81C									19.1	-
0 - 0.1	<0.1B		39.2J								17.1	56.1
0.1 - 0.17	0.1B	0.62C	36J								16.6	-
0.3 - 0.4	<0.1B		32.5J								16.2	
0.7 - 0.8	1.2B	0.47C	47.3J								16.9	-
1.2 - 1.3	0.2B	0.27C	47.7J								21	60.7
2.5 - 2.6	0.3B	0.12C	28.4J								13.3	42
Depth	COLE	LE Gravimetric/Volumetric Water Contents							Ks	at	K unsa	t
m		Sat.	0.05 Bar	0.1 Bar g/	0.5 Bar /g - m3/m	1 Bar 3	5 Bar	15 Bar	mm	ı/h	mm/h	

0 - 0.02 0 - 0.1 0.1 - 0.17

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