Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed068 Observation ID: 1

Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: W.T. Ward Locality: B. & M.(Bevan) O'Regan, Moema

Date Desc.: Elevation: 16/12/86 312 metres Map Ref.: Sheet No.: 8837 N 1:50000 Rainfall: No Data Northing/Long.: 6669700 AMG zone: 55 Runoff: No Data 781650 Datum: AGD66 Easting/Lat.: Drainage: No Data

Geology

ExposureType: Conf. Sub. is Parent. Mat.: Undisturbed soil core No Data Geol. Ref.: **Substrate Material:** No Data No Data

Land Form

Rel/Slope Class: No Data Pattern Type: No Data Morph. Type: No Data Relief: No Data

Very gently sloped Elem. Type: Slope Category: Pediment Aspect: 310 degrees Slope: 1 %

Surface Soil Condition (dry): Loose, Trampled

Erosion:

Soil Classification

Australian Soil Classification: N/A Mapping Unit: Principal Profile Form: Dv5.43 ASC Confidence: **Great Soil Group:** Solodic soil

Confidence level not specified

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments:

<u>P</u>	r	<u>of</u>	ile	M	or	р	h	<u>ol</u>	0	g١	L

A11	0 - 0.1 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); , 5YR21, 0-2% , 5-15mm, Distinct; Loamy
		sand; Weak grade of structure, 10-20 mm, Subangular blocky; Single grain grade of structure;
		Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine
		(0.075-1mm) macropores, Moderately moist; Loose consistence; Very few (0 - 2 %),
		Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Field pH 6.5 (pH meter); Few, very fine (0-

A12 0.1 - 0.2 m Brown (7.5YR5/2-Moist); ; Loamy sand; Weak grade of structure, 5-10 mm, Subangular blocky; Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Field pH 6 (pH meter);

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

A21 0.2 - 0.45 m Very pale brown (10YR7/3-Moist); ; Loamy sand; Weak grade of structure, 2-5 mm, Subangular

blocky; Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 6.5 (pH meter); Few, fine (1-

2mm) roots;

Light grey (10YR7/2-Moist); , 7.5YR32, 10-20% , 15-30mm, Prominent; Loamy sand; Single grain A22 0.45 - 0.6 m

grade of structure, <2 mm; Weak grade of structure, 5-10 mm, Subangular blocky; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist, Very weak consistence; Common (10 - 20 %), Ferromanganiferous, Coarse

(6 - 20 mm), Nodules; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth

0.6 - 1 m Strong brown (7.5YR5/6-Moist); , 10YR72, 20-50% , 30-mm, Prominent; Loamy sand; Strong B21a grade of structure, 10-20 mm, Prismatic; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field

pH 7 (pH meter); Few, very fine (0-1mm) roots;

Dark red (2.5YR3/6-Moist); , 7.5YR56, 10-20% , 5-15mm, Prominent; , 10YR71, 20-50% , 15-B22g 1 - 1.3 m

30mm, Prominent; Sandy clay loam; Strong grade of structure, 20-50 mm, Prismatic; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, fine (1-2mm) roots; Diffuse,

Smooth change to -

Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed068 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

B23 1.3 - 2.73 m Dark red (2.5YR3/6-Moist); , 7.5YR58, 20-50% , 30-mm, Prominent; , 10YR61, 10-20% , 15-

30mm, Prominent; Sandy clay loam; Moderate grade of structure, 100-200 mm, Prismatic; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Veins; Field pH 8.5 (pH meter); Few, very fine

(0-1mm) roots:

Morphological Notes

A11 The concretions in the A22 are coloured 10YR7/3 on the top and 7.5YR3/2 on the

bottom. Manganese stain starts at 240cm, and carbonate laminae also start at 240cm. The lime veins at 250cm are coloured 10YR8/2. Manganese stains also appear be tween 250-260cm. Pilliga Sandstone. Samples 01 and 02 were found to be oily in the

laboratory. This oil might have affected chemical analyses.

Observation Notes

Parent Rock: residual, sandstone, Pilliga Sandstone, weathered

Site Notes

A12

Pediment, near foot, leading to valley plain. Trampling is by brush clearing tractors. Vegetation: cypress, mollee box, mulga, shrub (rounded leaf, sprawling habit, sample).

Soil Studies in the Lower Namoi Valley EDGEROI Site ID: ed068 CSIRO Division of Soils (QLD) Observation ID: 1

Project Name: Project Code: Agency Name:

Laboratory Test Results:

Depth	рН	1:5 EC		hangeable	Cations K		Exchangeable	CEC	ECEC	E	SP
m		dS/m	Ca I	Mg	N.	Na Cmol (+	Acidity)/kg			9,	%
0 - 0.02	6.97A	0.097A	1.23B	0.35	0.57	<0.01					
0 - 0.1	5.76A	0.099A	0.76B	0.16	0.3	0.05					
0.1 - 0.2	5.72A	0.054A	0.66B	<0.1	0.13	< 0.01					
0.3 - 0.4	6.8A	0.024A	0.43B	<0.1	0.18	<0.01					
0.5 - 0.6	7.1A	0.017A	0.41B	0.14	0.08	<0.01					
0.7 - 0.8	7.9A	0.038A	9.27B	10.01	1.32	8.0					
1.2 - 1.3	8.4A	0.073A	4.89B	5.84	0.77	0.89					
2.5 - 2.6	8.76A	0.278A	3.38B	7.33	0.74	1.84					
Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle	Sizo	Analysis	
Бериі	Cacos	C	P Avaii.	P	N	K	Density	GV CS	FS	Silt (
m	%	%	mg/kg	%	%	%	Mg/m3		%	•	,
0 - 0.02	<0.1B	0.66C								2.8	3.7
0 - 0.1	<0.1B	4.93C	20J							2.8	6.2
0.1 - 0.2	0.1B	2.38C	10.7J							2.9	5.3
0.3 - 0.4	<0.1B	0.17C	2J							4.8	3.1
0.5 - 0.6	<0.1B	0.1C	5.6J							4.6	4.5
0.7 - 0.8	<0.1B	0.14C	<1J							3.9	59.5
1.2 - 1.3	<0.1B	0.06C	2.7J							6.8	39.8
2.5 - 2.6	0.1B	0.04C	4.7J							5.8	31.8
Depth	COLE		Grav	imetric/Vo	olumetric \	Nater Con	tents	К	sat	K unsat	
•		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar 15 B	3ar			
m				g/	g - m3/m	3		m	m/h	mm/h	

^{0 - 0.02}

^{0 - 0.02} 0 - 0.1 0.1 - 0.2 0.3 - 0.4 0.5 - 0.6 0.7 - 0.8 1.2 - 1.3 2.5 - 2.6

Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed068 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

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