

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** we010 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward	Locality:
Date Desc.: 07/02/87	Elevation: 176 metres
Map Ref.: Sheet No. : 8737_N 1:50000	Rainfall: No Data
Northing/Long.: 6660400 AMG zone: 55	Runoff: No Data
Easting/Lat.: 708200 Datum: AGD66	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 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): Firm

Erosion:

Soil Classification

Australian Soil Classification: N/A	Mapping Unit: N/A
ASC Confidence: Confidence level not specified	Principal Profile Form: N/A
	Great Soil Group: Red-brown earth

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Brown (7.5YR4/2-Dry); ; Clay loam; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 6 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A12	0.1 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); ; Clay loam; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.45 m	Very dark greyish brown (10YR3/2-Moist); , 10R56, 0-2% , 5-15mm, Distinct; Light clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	0.45 - 1 m	Dark yellowish brown (10YR4/4-Moist); , 7.5YR56, 0-2% , 0-5mm, Faint; , 10YR31, 0-2% , 0-5mm, Distinct; Light clay; Moderate grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 1.7 m	Strong brown (7.5YR5/6-Moist); , 10YR53, 2-10% , 5-15mm, Distinct; , 10YR41, 0-2% , 0-5mm, Faint; Light clay; Weak grade of structure, 20-50 mm, Prismatic; Moderate grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
C	1.7 - 2.33 m	Strong brown (7.5YR5/6-Moist); , 10YR53, 2-10% , 5-15mm, Faint; Fine sandy clay loam; Massive grade of structure; Weak grade of structure, 50-100 mm, Prismatic; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 7 (pH meter);

Morphological Notes

A11 Originally bu012. Paler colour at surface suggests recent flood accumulation. Baked clay (colour 2) at 28cm with charcoal suggests burnt root. The soil has well developed low-angle fissures but these are not slickensides. Colour 2 at 70-80cm

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A12 m is diffuse. This seems to be a slow-draining Queerbri. The soil seems to resemble both
rbe and brown clayand in some respects is like ed180.

Observation Notes

Parent Rock: alluvial sediment, clay, sand second terraced fan, Namoi

Site Notes

Site is slightly higher than 009. Sandy hill at homestead extends gently in this direction. Stopped hole at 233cm because the drill was well into parent sands. This level stands 2-3ft above 009 but is clearly the same material, lacking floo

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Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.1	6.09A	0.159A	11.19B	8.32	1.57	0.35			
0.1 - 0.2	7.22A	0.08A	19.39B	9.51	0.77	0.48			
0.3 - 0.4	8.08A	0.074A	16.03B	8.95	0.48	0.62			
0.7 - 0.8	8.54A	0.144A	14.92B	10.74	0.57	0.77			
1.2 - 1.3	8.3A	0.056A	8.66B	8.49	0.46	0.6			
2.2 - 2.3	7.5A	0.058A	8.25B	5.87	0.39	0.48			

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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
P10_CF_Z	Silt (%) - Coventry and Fett pipette method