

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed054 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	W.T. Ward	Locality:	Auscott(Togo), Togo
Date Desc.:	05/01/87	Elevation:	191 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6670700 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	743100 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 plain	Slope Category:	Level
Slope:	0 %	Aspect:	No Data

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

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Ug5.24
		Great Soil Group:	Grey clay

Site Disturbance: Cultivation. Irrigated, past or present, Cultivation. Rainfed,

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.1 m	Grey (10YR5/1-Moist); Grey (10YR5/1-Dry); , 10YR72, 0-2% , 0-5mm, Prominent; Medium clay; 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; Strong consistence; 0-2%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Wavy change to -
A12	0.1 - 0.25 m	Grey (10YR5/1-Moist); , 10YR72, 0-2% , 0-5mm, Prominent; Medium clay; Moderate grade of structure, 100-200 mm, Prismatic; Weak grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) 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), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Grey (10YR5/1-Moist); , 10YR72, 0-2% , 0-5mm, Prominent; Medium clay; Moderate grade of structure, 100-200 mm, Prismatic; Weak grade of structure, 50-100 mm, Angular blocky; Smooth-ped fabric; Medium, (5 - 10) 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), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 1 m	Dark grey (10YR4/1-Moist); , 10YR72, 0-2% , 0-5mm, Prominent; Medium clay; Moderate grade of structure, 20-50 mm, Lenticular; 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 9 (pH meter); Few, very fine (0-1mm) roots;
A15	1 - 1.5 m	Dark grey (10YR4/1-Moist); , 10YR72, 0-2% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 50-100 mm, Lenticular; 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 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	1.5 - 2.84 m	Brown (10YR5/3-Moist); , 10YR62, 0-2% , 0-5mm, Distinct; , 10YR41, 0-2% , 0-5mm, Faint; Light medium clay; Weak grade of structure, 100-200 mm, Lenticular; Weak 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; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter);

Morphological Notes

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A11p A small quantity of gypsum at 85cm. Note carbonate nodules in topsoil. Possibly soil has

Observation Notes

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

Site Notes

This site has been recently cultivated and all the large cracks have been filled in. There are a few waterworn quartz gravels up to 40mm on the surface.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.02	8.55A	0.198A	27.18B	15.21	2.17	1.68			
0 - 0.1	8.5A	0.189A	24.96B	16.23	1.5	2.03			
0.1 - 0.2	8.79A	0.242A	25.41B	17.45	1.29	3.54			
0.3 - 0.4	9.01A	0.359A	23.57B	18.9	1.34	7.15			
0.7 - 0.8	9.22A	0.565A	19.31B	19.29	1.39	9.75			
1.2 - 1.3	9.16A	0.772A	16.18B	20.8	1.51	11.68			
2.5 - 2.6	9.16A	0.742A	13.98B	17.61	1.14	10.19			

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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