

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** na021 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	D. McGarry	Locality:	University of Sydney, I.A.Watson Research Farm
Date Desc.:	26/02/88	Elevation:	223 metres
Map Ref.:	Sheet No. : 8837_S 1:50000	Rainfall:	No Data
Northing/Long.:	6647050 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	770400 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:	Very gently sloped
Slope:	1 %	Aspect:	95 degrees

Surface Soil Condition (dry): Surface crust, Recently cultivated

Erosion:

Soil Classification

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

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.1 m	Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); ; Light clay; Moderate grade of structure, 5-10 mm, Granular; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A12	0.1 - 0.25 m	Very dark grey (10YR3/1-Moist); , 10YR63, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A13	0.25 - 0.55 m	Very dark greyish brown (10YR3/2-Moist); , 10YR63, 0-2% , 0-5mm, Distinct; Light medium clay; Weak grade of structure, 10-20 mm, Lenticular; Weak grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A14	0.55 - 0.8 m	Dark greyish brown (10YR4/2-Moist); , 10YR63, 0-2% , 0-5mm, Distinct; Light clay; Moderate grade of structure, 10-20 mm, Lenticular; Weak 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), Soft segregations; Field pH 9 (pH meter); Gradual, Smooth change to -
B2	0.8 - 2.1 m	Brown (10YR4/3-Moist); , 10YR21, 0-2% , 0-5mm, Prominent; Light clay; Moderate 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; Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 - 6 mm), Soft segregations; Field pH 9 (pH meter); Gradual, Smooth change to -
C	2.1 - 2.4 m	Brown (7.5YR4/4-Moist); ; Light clay; Massive grade of structure; Weak grade of structure, 10-20 mm, Angular blocky; Sandy (grains prominent) fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (pH meter); Abrupt, Smooth change to -
2B2	2.4 - 2.98 m	Brown (10YR4/3-Moist); , 7.5YR54, 0-2% , 0-5mm, Distinct; Medium clay; Moderate grade of structure, 50-100 mm, Lenticular; Weak grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Firm consistence; 2-10%, medium gravelly, 6-20mm, rounded tabular, Basalt, coarse fragments; Field pH 9 (pH meter);

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Morphological Notes

A11p The profile has abundant fine earth calcium carbonate down to 2m (fizzes strongly). The sediment infills in levels 2,3 and 4 are sandy but also have abundant fine earth and calcium carbonate. The topsoil is much less structured and is sandier than other profiles on the plain.

A12

Observation Notes

Parent Rock: , , parna on third fan

Site Notes

Rain.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
		Ca	Mg	K	Na	Acidity			
m		dS/m			Cmol (+)/kg				%
0 - 0.02	8.9A	0.169A	24.18B	13.46	1.54	1.78			
0 - 0.1	8.86A	0.192A	21.87B	15.01	1.47	3.87			
0.1 - 0.2	9.07A	0.25A	18.94B	15.66	1.22	4.89			
0.3 - 0.4	9.44A	0.405A	12.28B	24.17	0.9	10.08			
0.7 - 0.8	9.62A	0.665A	3.53B	23.92	1.26	17.43			
1.2 - 1.3	9.45A	0.955A	2.61B	24.67	1.43	23.37			
2.3 - 2.4	9.53A	0.688A	1.92B	14.93	0.58	10.08			
2.5 - 2.6	9.34A	0.877A	3.63B	24.25	0.88	17.13			

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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