

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed089 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	K.J. Smith	Locality:	C. and H. Freer, Greenbah
Date Desc.:	31/03/85	Elevation:	193 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6666100 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:	No Data	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:	Ug5.15
		Great Soil Group:	Grey clay

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11p	0 - 0.05 m	Very dark grey (10YR3/1-Moist); Dark grey (10YR4/1-Dry); ; Medium clay; Weak grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Rough-ped fabric; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 8.3 (pH meter); Common, fine (1-2mm) roots;
A12	0.05 - 0.1 m	Very dark grey (10YR3/1-Moist); Dark grey (10YR4/1-Dry); ; Medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Moderately moist; Very firm consistence; 2-10%, fine gravelly, 2-6mm, subrounded tabular, Quartz, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
A13	0.1 - 0.25 m	Very dark grey (10YR3/1-Moist); , 10YR82, 0-2% , 0-5mm, Faint; Medium heavy clay; Weak grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, 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;
A14	0.25 - 0.4 m	Very dark grey (10YR3/1-Moist); , 10YR83, 0-2% , 0-5mm, Faint; Medium clay; Weak grade of structure, 10-20 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, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Common, very fine (0-1mm) roots; Clear, Wavy change to -
A15	0.4 - 1 m	Very dark grey (10YR3/1-Moist); , 10YR83, 0-2% , 0-5mm, Faint; Medium heavy clay; Moderate grade of structure, 50-100 mm, Lenticular; 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; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
A16	1 - 1.43 m	Very dark grey (10YR3/1-Moist); , 10YR33, 0-2% , 0-5mm, Faint; , 10YR83, 0-2% , 0-5mm, Faint; Medium heavy clay; Weak grade of structure, 50-100 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Argillaceous, Medium (2 - 6 mm), Veins; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed089 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

B2 1.43 - 2.75 m Brown (7.5YR4/4-Moist); , 10YR33, 0-2% , 15-30mm, Distinct; , 10YR74, 0-2% , 0-5mm, Faint; Medium heavy clay; Weak grade of structure, 50-100 mm, Angular blocky; Moderate grade of structure, 5-10 mm, Cast; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Argillaceous, Coarse (6 - 20 mm), Veins; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;

Morphological Notes

A11p Parts of Ap are non-wetting. Grey clay over light brown clay, poorly structured

Observation Notes

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

Site Notes

Recently cultivated. Rig feels ploughpan ? at 15-20cm.

Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations		Exchangeable Acidity		CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na			%
						Cmol (+)/kg			
0 - 0.02	8.32A	0.279A	21.55B	9.01	1.86	0.93999			
						99			
0 - 0.05	7.89A	0.307A	23.4B	13.27	2.4	1.25			
0.05 - 0.1	8.34A	0.232A	21.8B	12.95	1.74	1.48			
0.1 - 0.2	8.96A	0.172A	24.34B	14.77	1.14	2.2			
0.3 - 0.4	9.2A	0.247A	21.53B	17.1	0.85	4.69			
0.7 - 0.8	9.28A	0.392A	18.38B	19.2	1.23	8.27			
1.2 - 1.3	9.34A	0.495A	17.81B	19.39	1.28	9.09			
2.5 - 2.6	9.47A	0.436A	11.35B	15.33	0.92	7.28			

Depth m	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size		Analysis	
	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS %	Silt Clay
0 - 0.02	0.3B	1.1C									11.5 49.9
0 - 0.05	0.7B	1.21C	46.4J								13.3 53
0.05 - 0.1	0.5B	0.94C	34.5J								11.2 52.4
0.1 - 0.2	0.5B	0.57C	12.7J								12.5 53.7
0.3 - 0.4	1B	0.49C	3.8J								12.1 57.6
0.7 - 0.8	1.4B	0.48C	16.8J								13.5 64
1.2 - 1.3	2.1B	0.36C	30.6J								15 65
2.5 - 2.6	3.1B	0.13C	19J								13.2 54.3

[illegible]

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed089 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

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