

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed080 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Site Information**

<b>Desc. By:</b>	D. McGarry	<b>Locality:</b>	Nineo
<b>Date Desc.:</b>	04/07/86	<b>Elevation:</b>	227 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6667800 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	766450 Datum: AGD66	<b>Drainage:</b>	No Data

**Geology**

<b>ExposureType:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	Flood plain
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	No Data	<b>Slope Category:</b>	Level
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

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

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>	N/A	<b>Mapping Unit:</b>	N/A
<b>ASC Confidence:</b>	Confidence level not specified	<b>Principal Profile Form:</b>	Ug5.16
		<b>Great Soil Group:</b>	Grey clay

**Site Disturbance:** Cultivation. Rainfed

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

A1	0 - 0.06 m	Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); ; Medium heavy clay; Moderate grade of structure, 2-5 mm, Polyhedral; 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 6.5 (pH meter); Common, fine (1-2mm) roots; Abrupt, Smooth change to -
AC	0.06 - 0.1 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Light clay; Massive grade of structure; Sandy (grains prominent) fabric; Smooth-ped fabric; Moderately moist; Firm consistence; Field pH 6.5 (pH meter); Common, fine (1-2mm) roots; Clear, Wavy change to -
2A11	0.1 - 0.25 m	Black (10YR2/1-Moist); Black (10YR2/1-Dry); ; Clay loam; Moderate grade of structure, 10-20 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; Field pH 6.5 (pH meter); Few, fine (1-2mm) roots;
2A12	0.25 - 0.55 m	(N2/0-Moist); ; Heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;
2A13	0.55 - 1.2 m	(N2/0-Moist); , 10YR81, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots;
2A14	1.2 - 1.75 m	Very dark greyish brown (10YR3/2-Moist); , 10YR31, 2-10% , 5-15mm, Distinct; , 2.5Y82, 0-2% , 0-5mm, Distinct; Medium heavy clay; 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; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Diffuse, Smooth change to -
2B2	1.75 - 2.45 m	Brown (7.5YR4/2-Moist); , 10YR31, 10-20% , 15-30mm, Distinct; , 2.5Y82, 0-2% , 0-5mm, Distinct; Medium heavy clay; 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; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Consolidated rock (unidentified), coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Sharp, Smooth change to -

**Morphological Notes**

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** ed080      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

A1      Top 1cm is coarse self mulching but not loose. From 6-10cm there is an obvious stratigraphic layer, composed of fine yellow/orange sand. Also from 19-22 there is a lighter (10YR3-4/1) layer which may be another wash - older than layers 01 and 02. This profile is very dry to 100cm. Core ends at 245cm in gravel (begins at 238cm). Sample taken at 227-237. Gravel composition is varied - basalt, sandstone, quartz, ironstone. Size is 5mm-50mm, dominantly rounded to subrounded.

AC

**Observation Notes**

Parent Rock: alluvial sediment, mixed texture, with lime, clay fifth (eroded) fan

**Site Notes**

On edge of wheat field, in a corner rarely cultivated, 10m from Galathera creek. Weakly structured topsoil, few large aggregates. Gravel at 240cm.

**Observation ID: 1**

Agency Name: CSIRO Division of Soils (QLD)

**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	7.03A	0.143A	16.38B	5.52	1.72	0.2			
0 - 0.06	6.36A	0.171A	12.21B	4.46	1.09	0.24			
0.06 - 0.1	6.38A	0.109A	7.38B	2.32	0.34	0.15			
0.1 - 0.2	6.74A	0.093A	14.79B	4.64	0.27	0.56			
0.3 - 0.4	8.02A	0.088A	26.24B	8.12	0.2	2.92			
0.7 - 0.8	8.78A	0.477A	24.11B	7.6	0.16	5.35			
1.2 - 1.3	8.65A	0.915A	23.7B	7.91	0.17	5.87			
2.27 - 2.37	7.09A	0.619A	11.53B	5.31	0.19	3.45			

[illegible][illegible]

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** ed080      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

**Laboratory Analyses Completed for this profile**

15A2_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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