

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed004 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	E. Veldhuis	<b>Locality:</b>	Twynam Pastoral Co., Boolcarrol
<b>Date Desc.:</b>	17/05/85	<b>Elevation:</b>	194 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6677750 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	750100 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>	No Data
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Terrace plain	<b>Slope Category:</b>	Level
<b>Slope:</b>	0 %	<b>Aspect:</b>	No Data

**Surface Soil Condition (dry):** Self-mulching, 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>	Ug5.25
<b>Site Disturbance:</b>	Cultivation. Rainfed	<b>Great Soil Group:</b>	Grey clay

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11p	0 - 0.1 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); ; Medium heavy clay; Moderate grade of structure, 2-5 mm, Granular; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 8.1 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Wavy change to -
A12x	0.1 - 0.25 m	Brown (7.5YR4/2-Moist); Brown (7.5YR4/2-Dry); , 10YR84, 0-2% , 0-5mm, Distinct; Medium heavy clay; Massive grade of structure; Earthy fabric; Fine, (0 - 5) 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 8.3 (pH meter); Few, very fine (0-1mm) roots;
A13x	0.25 - 0.4 m	Dark brown (7.5YR3/2-Moist); , 10YR81, 0-2% , 0-5mm, Distinct; Medium heavy clay; Weak grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Earthy 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); Few, very fine (0-1mm) roots;
A14	0.4 - 1.1 m	Dark brown (10YR3/3-Moist); Very dark greyish brown (10YR3/2-Dry); , 10YR73, 0-2% , 0-5mm, Distinct; Light medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B21	1.1 - 1.9 m	Brown (7.5YR4/4-Moist); Dark reddish brown (5YR3/4-Dry); , 10YR31, 20-50% , 0-5mm, Faint; , 5YR58, 0-2% , 0-5mm, Prominent; Medium clay; Massive grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Soft segregations; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots;
B22	1.9 - 3 m	Brown (10YR4/3-Moist); Dark reddish brown (5YR3/4-Dry); , 5YR58, 0-2% , 0-5mm, Prominent; Light medium clay; Massive grade of structure; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Soft segregations; Field pH 9 (pH meter);

#### Morphological Notes

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** ed004      **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

A11p

**Observation Notes**

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

**Site Notes**

Due to cultivation the surface cracks are not visible. The penetrometer finds big cracks.

**Observation ID: 1**

**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	7.91A	0.205A	32.19B	12.87	2.57	2.45			
0 - 0.1	8.62A	0.178A	27.74B	12.49	1.69	4.9			
0.1 - 0.2	9.21A	0.197A	31.78B	13.73	1.34	3.4			
0.3 - 0.4	9.32A	0.267A	36.46B	15.58	0.85	5.57			
0.7 - 0.8	9.08A	0.746A	30.29B	14.99	0.68	8.4			
1.2 - 1.3	8.74A	1.415A	27.94B	15.9	0.78	13.76			
2.5 - 2.6	9.08A	1.066A	25.4B	16.09	0.71	14.55			

[illegible][illegible]

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI      **Site ID:** ed004      **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