

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed219 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	M. Korevaar	<b>Locality:</b>	Department of Agriculture, Myall Vale Research Station
<b>Date Desc.:</b>	20/03/85	<b>Elevation:</b>	200 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6656260 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	750710 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 flat	<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>	Ug5.15
		<b>Great Soil Group:</b>	Grey clay

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11p	0 - 0.1 m	Dark greyish brown (10YR4/2-Moist); Greyish brown (10YR5/2-Dry); ; Medium clay; Strong grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subangular tabular, Quartz, coarse fragments; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
A12p	0.1 - 0.18 m	Very dark grey (10YR3/1-Moist); Dark greyish brown (10YR4/2-Dry); , 10YR82, 0-2% , 0-5mm, Distinct; Medium clay; Strong grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 7.8 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
A13	0.18 - 0.45 m	Very dark grey (10YR3/1-Moist); , 10YR44, 0-2% , 0-5mm, Faint; , 10YR82, 0-2% , 0-5mm, Distinct; Medium clay; Weak 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, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots; Gradual, Irregular change to -
B21	0.45 - 1 m	Very dark grey (10YR3/1-Moist); ; Medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 1.3 m	Dark brown (7.5YR3/4-Moist); , 10YR31, 10-20% , 5-15mm, Distinct; Medium heavy clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; Field pH 8.2 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
B23	1.3 - 2.12 m	Brown (7.5YR4/4-Moist); , 10YR41, 10-20% , 5-15mm, Distinct; , 10YR76, 2-10% , 5-15mm, Prominent; Medium heavy clay; Moderate 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; Firm consistence; Few (2 - 10 %), Calcareous, Medium (2 - 6 mm), Nodules; Field pH 8.3 (pH meter); Clear, Smooth change to -

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2B2      2.12 - 3.07 m      Strong brown (7.5YR5/8-Moist); , 10YR44, 10-20% , 15-30mm, Distinct; , 10YR41, 2-10% , 5-15mm, Distinct; Light clay; Massive grade of structure; Strong grade of structure, 5-10 mm, Subangular blocky; Smooth-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm<sup>2</sup>) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %), Argillaceous, Coarse (6 - 20 mm), Veins; Field pH 8.2 (pH meter);

**Morphological Notes**

**Observation Notes**

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

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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	8.42A	0.102A	26.33B	11.09	1.64	0.64			
0 - 0.1	8.26A	0.142A	25.07B	12.02	1.39	0.87			
0.1 - 0.18	8.28A	0.136A	26.03B	11.94	1.45	0.78			
0.3 - 0.4	8.58A	0.086A	23.32B	12.27	0.88	1.49			
0.7 - 0.8	8.61A	0.133A	22.01B	12.48	0.91	2.83			
1.2 - 1.3	8.63A	0.163A	22.27B	12.2	1	3.85			
1.7 - 1.8	8.81A	0.207A	19.58B	11.83	0.78	4.08			
2.5 - 2.6	8.92A	0.112A	14.46B	7.94	0.36	3.14			

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**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