Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed400 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward Locality: Twynam Pastoral Co., Boolcarrol

Date Desc.: Elevation: 04/12/85 188 metres Map Ref.: Sheet No.: 8837 N 1:50000 Rainfall: No Data Northing/Long.: 6674740 AMG zone: 55 Runoff: No Data 742380 Datum: AGD66 Easting/Lat.: Drainage: No Data

<u>Geology</u>

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 DataPattern Type:No DataMorph. Type:No DataRelief:No DataElem. Type:Terrace plainSlope Category:LevelSlope:0 %Aspect:No Data

Surface Soil Condition (dry): Surface crust

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: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments:

<u>Profil</u>	<u>e Morp</u>	hology
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A11s 0 - 0.03 m Brown (10YR4/3-Moist); Brown (10YR5/3-Dry); ; Sandy clay loam; Weak grade of structure, 50-100 mm, Platy; Earthy fabric; Moderately moist; Strong consistence; 2-10%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Abrupt, Wavy change to -

A12b 0.03 - 0.14 m Dark brown (7.5YR3/2-Moist); Dark brown (7.5YR3/2-Dry); ; Light medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Moderately moist; Strong

consistence; 2-10%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Clear,

A13b 0.14 - 0.36 m Dark brown (7.5YR3/2-Moist); Dark brown (7.5YR3/2-Dry); , 10YR64, 2-10% , 0-5mm, Faint;

Light clay; Moderate grade of structure, 10-20 mm, Platy; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Moderately moist; Strong consistence; 2-10%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm),

Soft segregations; Gradual, Smooth change to -

B21k 0.36 - 0.55 m Brown (7.5YR4/3-Moist); , 10YR74, 2-10% , 0-5mm, Distinct; Light clay; Moderate grade of

structure, 10-20 mm, Platy; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft segregations; Clear,

Smooth change to -

B22yk 0.55 - 1.45 m Brown (7.5YR4/4-Moist); , 10YR82, 2-10% , 5-15mm, Distinct; , 10YR74, 2-10% , 0-5mm,

Distinct; Light clay; Weak grade of structure, 20-50 mm, Platy; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Moderately moist; Strong consistence; Few (2 - 10 %), Gypseous, Medium (2 -6 mm), Crystals; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Soft

segregations; Abrupt, Smooth change to -

 $2B2k \qquad 1.45 - 2.4 \ m \qquad Brown \ (7.5YR4/4-Moist); \ , \ 10YR74, \ 2-10\% \ , \ 15-30mm, \ Prominent; \ , \ 10YR21, \ 2-10\% \ , \ 0-5mm, \ Prominent; \ , \ 10YR21, \ 2-10\% \ , \ 10YR21, \ 10YR21, \ 2-10\% \ , \ 10YR21, \$

Distinct; Medium clay; Weak grade of structure, 50-100 mm, Platy; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Earthy fabric; Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Soft segregations; Diffuse,

Smooth change to -

2C 2.4 - 3.14 m Strong brown (7.5YR5/6-Moist); , 5YR42, 10-20% , 5-15mm, Prominent; , 10YR21, 2-10% , 0-

5mm, Distinct; Silty clay; Massive grade of structure; Strong grade of structure, 2-5 mm, Cast; Earthy fabric; Smooth-ped fabric; Moderately moist; Strong consistence; Very few (0 - 2 %),

Gypseous, Fine (0 - 2 mm), Crystals;

Morphological Notes

A11s All soil samples to I.P.L. The A13 is separated by its slight carbonate content. Uncertain

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A12b ate. Cast granules at 300 cm appear organic but it is manganese and humus stain on

outside of casts that give colour.

Observation Notes

Parent Rock: alluvial sediment, mixed texture, with lime, clay parna on fourth fan, Namoi

Site Notes

Profile R1. Full easting, northing, elevation: 42380.74740.188m.

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Laboratory Test Results:

Depth	рН	1:5 EC		hangeable			changeable	CEC	ECEC	ESP
m		dS/m	Ca I	Mg	K	Na Cmol (+)/	Acidity kg			%
0 - 0.03 0.03 - 0.14 0.14 - 0.36 0.36 - 0.55 0.55 - 1.45 1.45 - 2.4 2.4 - 3.14										
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density		cle Size	Analysis Silt Clay
m	%	%	mg/kg	%	%	%	Mg/m3		%	
0 - 0.03 0.03 - 0.14 0.14 - 0.36 0.36 - 0.55 0.55 - 1.45 1.45 - 2.4 2.4 - 3.14										
Depth	COLE		Grav	imetric/Vo	lumetric W	ater Conte	ents		K sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar g/g	0.5 Bar g - m3/m3	1 Bar	5 Bar 1	5 Bar	mm/h	mm/h
0 - 0.03 0.03 - 0.14 0.14 - 0.36 0.36 - 0.55 0.55 - 1.45 1.45 - 2.4 2.4 - 3.14										

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Laboratory Analyses Completed for this profile