Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: cu003 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward Locality: stock route, 400m W of Cubbaroo Road

Date Desc.: Elevation: 30/05/85 171 metres Map Ref.: Sheet No.: 8737 S 1:50000 Rainfall: No Data Northing/Long.: 6651500 AMG zone: 55 Runoff: No Data 701100 Datum: AGD66 No Data Easting/Lat.: Drainage:

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 DataPattern Type:No DataMorph. Type:No DataRelief:No Data

Elem. Type: Levee Slope Category: Very gently sloped Slope: 1 % Aspect: 180 degrees

Surface Soil Condition (dry): Surface crust, Trampled

Erosion:

Soil Classification

 Australian Soil Classification:
 Mapping Unit:
 N/A

 N/A
 Principal Profile Form:
 N/A

 ASC Confidence:
 Great Soil Group:
 Brown clay

Confidence level not specified

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

Vegetation:

Surface Coarse Fragments:

<u>Profile</u>	Morp	<u>hology</u>
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A11 0 - 0.1 m Dark brown (7.5YR3/2-Moist); Brown (7.5YR4/2-Dry); ; Light clay; Strong grade of structure, 20-50 mm, Subangular blocky; Weak grade of structure, 2-5 mm, Platy; Rough-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm),

Nodules; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots;

A12 0.1 - 0.25 m Dark brown (7.5YR3/2-Moist); ; Light clay; Strong 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; Strong consistence; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;

A13 0.25 - 0.55 m Dark brown (7.5YR3/2-Moist); ; Medium clay; Strong grade of structure, 50-100 mm, Subangular

blocky; Moderate 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; Strong consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;

A14 0.55 - 0.9 m Dark brown (7.5YR3/2-Moist); ; Light medium clay; Weak grade of structure, 50-100 mm,

Subangular blocky; Moderate grade of structure, 2-5 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; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH

8.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

B2 0.9 - 2 m Brown (7.5YR4/4-Moist); , 7.5YR32, 0-2% , 5-15mm, Distinct; Light clay; Moderate grade of

structure, 50-100 mm, Lenticular; Moderate grade of structure, 5-10 mm, Prismatic; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Very few (0 - 2 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.5 (pH meter);

Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

C 2 - 2.55 m Brown (10YR4/3-Moist); , 7.5YR32, 0-2% , 0-5mm, Distinct; Light clay; Weak grade of structure,

100-200 mm, Prismatic; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Sandy (grains prominent) 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 %),

Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8 (pH meter);

Morphological Notes

A11 The carbonate nodules in cu00301 and cu00302 are subrounded and are clearly

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Observation Notes

Parent Rock: alluvial sediment, clay, first terraced fan, Namoi

Site Notes

Bodgy measure of crack depth. Upper slope of gentle levee leading down to abandoned channel with Pilliga grey box. Surface beneath weak crust is very well structured.

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Laboratory Test Results:

Depth	рН	1:5 EC		nangeable Mg	Cations K	Na Ex	changeable Acidity	CEC	ECEC	ESP
m		dS/m	Ca i	vig	N.	Cmol (+)/				%
0 - 0.1 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.55										
Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk			Analysis
m	%	C %	P mg/kg	P %	N %	K %	Density Mg/m3	GV C	S FS %	Silt Clay
0 - 0.1 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.55										
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 15	Bar	mm/h	mm/h
0 - 0.1 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.55										

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Laboratory Analyses Completed for this profile