Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed368 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward Locality: Frank O'Neill, Llano

Date Desc.: Elevation: 28/01/87 197 metres Map Ref.: Sheet No.: 8837 N 1:50000 Rainfall: No Data Northing/Long.: 6674410 AMG zone: 55 Runoff: No Data 751900 Datum: AGD66 Easting/Lat.: Drainage: No Data

**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 Data
 Pattern Type:
 No Data

 Morph. Type:
 No Data
 Relief:
 No Data

 Elem. Type:
 Fan
 Slope Category:
 Level

 Slope:
 0 %
 Aspect:
 No Data

Surface Soil Condition (dry): Self-mulching, Recently cultivated

**Erosion:** 

**Soil Classification** 

Australian Soil Classification: Mapping Unit: N/A
N/A Principal Profile Form: Ug5.16
ASC Confidence: Great Soil Group: Brown clay

Confidence level not specified

Site Disturbance: Cultivation. Rainfed

**Vegetation:** 

**Surface Coarse Fragments:** 

**Profile Morphology** 

A11p 0 - 0.12 m Dark brown (7.5YR3/2-Moist); Brown (7.5YR4/2-Dry); ; Medium clay; Moderate grade of

structure, 2-5 mm, Granular; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 6.5 (pH meter); Few, very fine (0-

1mm) roots; Clear, Smooth change to -

A12 0.12 - 0.25 m Dark brown (7.5YR3/2-Moist); , 10YR74, 0-2% , 0-5mm, Distinct; Medium 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; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 7.5 (pH meter);

Few, very fine (0-1mm) roots;

A13 0.25 - 0.7 m Dark brown (7.5YR3/2-Moist); , 10YR74, 0-2% , 0-5mm, Faint; Medium clay; Moderate grade of

structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 20-50 mm, Lenticular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-

1mm) roots; Diffuse, Smooth change to -

B2 0.7 - 0.97 m Dark reddish grey (5YR4/2-Moist); , 7.5YR32, 10-20% , 15-30mm, Distinct; Light medium clay;

Weak grade of structure, 50-100 mm, Lenticular; Moderate 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; Very few (0 - 2 %),

Calcareous, Fine (0 - 2 mm), Soft segregations; Field pH 9 (pH meter); Few, very fine (0-1mm)

roots;

Morphological Notes
A11p Llano 9. Boolcarrol. Core reaches B and has clearly developed wedges.

**Observation Notes** 

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

**Site Notes** 

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## **Laboratory Test Results:**

| Depth  | рН    | 1:5 EC                                |             | Exchangeable Cations Mg K |                      | Exchangeable              |                 | CEC | ECEC       | ESP                   |
|--|-------|---------------------------------------|-------------|---------------------------|----------------------|---------------------------|-----------------|-----|------------|-----------------------|
| m  |       | dS/m                                  | Ca          | Mg                        | N.                   | Na Acidity<br>Cmol (+)/kg |                 |     |            | %                     |
| 0 - 0.1<br>0.1 - 0.2<br>0.3 - 0.4<br>0.7 - 0.8 |       |                                       |             |                           |                      |                           |                 |     |            |                       |
| Depth  | CaCO3 | Organic<br>C                          | Avail.<br>P | Total<br>P                | Total<br>N           | Total<br>K                | Bulk<br>Density |     | ticle Size | Analysis<br>Silt Clay |
| m  | %     | %                                     | mg/kg       | %                         | %                    | %                         | Mg/m3           |     | %          | •                     |
| 0 - 0.1<br>0.1 - 0.2<br>0.3 - 0.4<br>0.7 - 0.8 |       |                                       |             |                           |                      |                           |                 |     |            |                       |
| Depth  | COLE  | Gravimetric/Volumetric Water Contents |             |                           |                      |                           | ents            |     | K sat      | K unsat               |
| m  |       | Sat.                                  | 0.05 Bar    | 0.1 Bar<br>g/s            | 0.5 Bar<br>g - m3/m3 | 1 Bar                     | 5 Bar 15        | Bar | mm/h       | mm/h                  |
| 0 - 0.1<br>0.1 - 0.2<br>0.3 - 0.4<br>0.7 - 0.8 |       |                                       |             |                           |                      |                           |                 |     |            |                       |

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**Laboratory Analyses Completed for this profile**