

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed144 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

| | | | |
|------------------------|----------------------------|-------------------|----------------------|
| Desc. By: | D. McGarry | Locality: | Auscott Ltd, Auscott |
| Date Desc.: | 19/01/86 | Elevation: | 199 metres |
| Map Ref.: | Sheet No. : 8837_N 1:50000 | Rainfall: | No Data |
| Northing/Long.: | 6658700 AMG zone: 55 | Runoff: | No Data |
| Easting/Lat.: | 749700 Datum: AGD66 | 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: | Terrace flat | Slope Category: | Level |
| Slope: | 0 % | Aspect: | No Data |

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

Erosion:

Soil Classification

| | | | |
|--|--------------------------------|--------------------------------|-----------|
| Australian Soil Classification: | N/A | Mapping Unit: | N/A |
| ASC Confidence: | Confidence level not specified | Principal Profile Form: | Ug5.25 |
| | | Great Soil Group: | Grey clay |

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

| | | |
|-----|---------------|---|
| A11 | 0 - 0.1 m | Very dark grey (10YR3/1-Moist); Very dark grey (10YR3/1-Dry); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Rough-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; |
| A12 | 0.1 - 0.25 m | Dark grey (10YR4/1-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 7.6 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to - |
| A13 | 0.25 - 0.7 m | Dark grey (10YR4/1-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to - |
| A14 | 0.7 - 1 m | Dark grey (10YR4/1-Moist); ; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); |
| A15 | 1 - 1.75 m | Dark grey (10YR4/1-Moist); ; Medium heavy clay; Weak grade of structure, 20-50 mm, Lenticular; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); Gradual, Smooth change to - |
| B2 | 1.75 - 2.62 m | Brown (7.5YR4/4-Moist); , 7.5YR44, 2-10% , 5-15mm, Prominent; Light medium clay; Moderate grade of structure, 50-100 mm, Lenticular; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 9 (pH meter); |

Morphological Notes

Observation Notes

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

Site Notes

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Wheat stubble in field. Large deep cracks on surface. Very friable self mulching surface.

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Laboratory Test Results:

| Depth | pH | 1:5 EC | Exchangeable Cations | | | Exchangeable Acidity | | CEC | ECEC | ESP |
|-----------|-------|--------|----------------------|-------|------|----------------------|-------------|-----|------|-----|
| m | | dS/m | Ca | Mg | K | Na | Cmol (+)/kg | | | % |
| 0 - 0.02 | 8.03A | 0.107A | 23.62B | 17.57 | 3.09 | 1 | | | | |
| 0 - 0.1 | 7.91A | 0.117A | 24.65B | 18.14 | 2.56 | 1.59 | | | | |
| 0.1 - 0.2 | 8.64A | 0.114A | 25.22B | 18.04 | 1.74 | 2.44 | | | | |
| 0.3 - 0.4 | 9.23A | 0.149A | 24.38B | 18.11 | 1.42 | 4.63 | | | | |
| 0.7 - 0.8 | 9.41A | 0.392A | 18.15B | 18.02 | 1.44 | 9.46999 | | | | |
| | | | | | | 9 | | | | |
| 1.2 - 1.3 | 9.3A | 0.633A | 14.07B | 18.18 | 1.68 | 13.8 | | | | |
| 2.5 - 2.6 | 9.19A | 1.023A | 10.29B | 18.52 | 1.19 | 12.84 | | | | |

[illegible][illegible]

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Laboratory Analyses Completed for this profile

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|----------|--|
| 15A2_CA | Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) - 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 |