

Project Name: DD
Project Code: DD **Site ID:** B246 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

| | | | |
|------------------------|---------------------------|-------------------|---------------------|
| Desc. By: | G.D. Hubble | Locality: | |
| Date Desc.: | 07/10/54 | Elevation: | No Data |
| Map Ref.: | Sheet No. : 9142 1:100000 | Rainfall: | 610 |
| Northing/Long.: | 151.311666666667 | Runoff: | Slow |
| Easting/Lat.: | -27.745555555556 | Drainage: | Imperfectly drained |

Geology

| | | | |
|----------------------|----------|------------------------------------|--|
| ExposureType: | Soil pit | Conf. Sub. is Parent. Mat.: | No Data |
| Geol. Ref.: | Qpc | Substrate Material: | Auger boring, 2 m deep, Unconsolidated material (unidentified) |

Land Form

| | | | |
|-------------------------|-----------------------------------|------------------------|----------------|
| Rel/Slope Class: | Gently undulating plains <9m 1-3% | Pattern Type: | Alluvial plain |
| Morph. Type: | No Data | Relief: | No Data |
| Elem. Type: | Plain | Slope Category: | No Data |
| Slope: | 0 % | Aspect: | No Data |

Surface Soil Condition (dry): Self-mulching

Erosion:

Soil Classification

| | | | |
|--|--|--------------------------------|-------------|
| Australian Soil Classification: | Endocalcareous-Endohypersodic Self-Mulching Black Vertisol | Mapping Unit: | N/A |
| | | Principal Profile Form: | Ug5.16 |
| ASC Confidence: | All necessary analytical data are available. | Great Soil Group: | Black earth |

Site Disturbance: No effective disturbance other than grazing by hoofed animals

Vegetation: Low Strata - Tussock grass, . . *Species includes - None recorded
Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - None Recorded

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

| | | |
|----|---------------|--|
| AB | 0 - 0.1 m | Very dark grey (10YR3/1-Moist); ; Heavy clay; 5-10 mm, Granular; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 7.2 (pH meter); Common, very fine (0-1mm) roots; Clear change to - |
| B2 | 0.1 - 0.46 m | Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 7.6 (pH meter); Few, very fine (0-1mm) roots; Gradual change to - |
| B2 | 0.46 - 1.07 m | Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.4 (pH meter); Few, very fine (0-1mm) roots; Gradual change to - |
| B2 | 1.07 - 1.32 m | Very dark grey (10YR3/1-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.7 (pH meter); Diffuse change to - |
| B2 | 1.37 - 1.83 m | Dark greyish brown (10YR4/2-Moist); ; Heavy clay; Moderate grade of structure, Lenticular; Moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.8 (pH meter); |

Morphological Notes

Observation Notes

0-10CM GRANULAR GRADING TO BLOCKY STRUCTURE

Site Notes

DARLING DOWNS

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Laboratory Test Results:

| Depth | pH | 1:5 EC | Ca | Exchangeable Mg | Cations K | Na | Exchangeable Acidity | CEC | ECEC | ESP |
|-------------|------|--------|-------|-----------------|-----------|-------------|----------------------|-----|------|-----|
| m | | dS/m | | | | Cmol (+)/kg | | | | % |
| 0 - 0.1 | 7.2H | 0.042B | 27.8K | 23.3 | 1.7 | 1.6 | 7.5D | | | |
| 0.1 - 0.46 | 7.6H | 0.096B | | | | | | | | |
| 0.46 - 1.07 | 8.4H | 0.297B | 26.2K | 31.8 | 0.7 | 6.7 | 0.9D | | | |
| 1.07 - 1.32 | 8.7H | 0.37B | | | | | | | | |
| 1.37 - 1.83 | 8.8H | 0.385B | | | | | | | | |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle GV | Size CS | Analysis FS | Silt | Clay |
|-------------|-------|-----------|----------|---------|---------|---------|--------------|-------------|---------|-------------|------|------|
| m | % | % | mg/kg | % | % | % | Mg/m3 | | | % | | |
| 0 - 0.1 | | 3.2A | 565C | 0.156F | 0.22B | | 1.20 | 0 | 13C | 10 | 13 | 58 |
| 0.1 - 0.46 | | | | | | | 1.20 | | | | | |
| 0.46 - 1.07 | 0.14C | 0.78A | | | | | | 0.9 | 10C | 7 | 12 | 68 |
| 1.07 - 1.32 | | | | | | | | | | | | |
| 1.37 - 1.83 | 1.11C | 0.19A | | 0.12F | | | | 3 | 8C | 8 | 17 | 65 |

| Depth | COLE | Gravimetric/Volumetric Water Contents | | | | | | | K sat | K unsat |
|-------------|------|---------------------------------------|-------------|---------|---------|-------|-------|--------|-------|---------|
| | | Sat. | 0.05 Bar | 0.1 Bar | 0.5 Bar | 1 Bar | 5 Bar | 15 Bar | mm/h | mm/h |
| m | | | g/g - m3/m3 | | | | | | | |
| 0 - 0.1 | | | | 0.52C | | | | 0.37C | | |
| 0.1 - 0.46 | | | | 0.51C | | | | 0.42C | | |
| 0.46 - 1.07 | | | | | | | | | | |
| 1.07 - 1.32 | | | | | | | | | | |
| 1.37 - 1.83 | | | | 0.02C | | | | | | |

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Laboratory Analyses Completed for this profile

| | |
|-----------|--|
| 15_NR_CA | Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded |
| 15_NR_H | Hydrogen Cation - meq per 100g of soil - Not recorded |
| 15_NR_K | Exch. basic cations (K++) - meq per 100g of soil - Not recorded |
| 15_NR_MG | Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded |
| 15_NR_NA | Exch. basic cations (Na++) - meq per 100g of soil - Not recorded |
| 19B_NR | Calcium Carbonate (CaCO ₃) - Not recorded |
| 2_LOI | Loss on Ignition (%) |
| 2A1 | Air-dry moisture content |
| 3_NR | Electrical conductivity or soluble salts - Not recorded |
| 4_NR | pH of soil - Not recorded |
| 5_NR | Water soluble Chloride - Cl(%) - Not recorded |
| 6A1 | Organic carbon - Walkley and Black |
| 7_NR | Total nitrogen (%) - Not recorded |
| 9_NR | Available P (mg/kg) - Not recorded |
| 9A_NR | Total element - P(%) - Not recorded |
| P10_GRAV | Gravel (%) |
| P10_NR_C | Clay (%) - Not recorded |
| P10_NR_CS | Coarse sand (%) - Not recorded |
| P10_NR_FS | Fine sand (%) - Not recorded |
| P10_NR_Z | Silt (%) - Not recorded |
| P3A_NR | Bulk density - Not recorded |
| P3B_VL_01 | 0.1 BAR Moisture m ³ /m ³ - Volumetric using suction plate |
| P3B_VL_15 | 15 BAR Moisture m ³ /m ³ - Volumetric using pressure plate |