

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM119 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

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|---|------------------------------|
| Desc. By: G.M. Bowman | Locality: |
| Date Desc.: 13/02/91 | Elevation: 165 metres |
| Map Ref.: Sheet No. : 8228 1:100000 | Rainfall: No Data |
| Northing/Long.: 6145700 AMG zone: 55 | Runoff: No Data |
| Easting/Lat.: 487600 Datum: AGD66 | Drainage: No Data |

Geology

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|-----------------------------------|--|
| ExposureType: Auger boring | Conf. Sub. is Parent. Mat.: No Data |
| Geol. Ref.: Qrt | Substrate Material: No Data |

Land Form

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|---------------------------------|--------------------------------|
| Rel/Slope Class: No Data | Pattern Type: Plain |
| Morph. Type: Flat | Relief: No Data |
| Elem. Type: Plain | Slope Category: No Data |
| Slope: 1 % | Aspect: No Data |

Surface Soil Condition (dry): Hardsetting, Surface crust

Erosion:

Soil Classification

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|--|--|
| Australian Soil Classification: | Mapping Unit: N/A |
| Eutrophic Red Dermosol | Principal Profile Form: Dr2.22 |
| ASC Confidence: | Great Soil Group: Non-calcic brown soil |
| Confidence level not specified | |

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments:

Profile Morphology

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|-----|---------------|--|
| Ap | 0 - 0.12 m | Reddish brown (5YR4/4-Moist); ; Fine sandy loam; Weak grade of structure; Earthy fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Dry; Strong consistence; Slightly plastic; Slightly sticky; Cultivation pan, Uncemented, Continuous, Massive; Common, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Abrupt change |
| A12 | 0.12 - 0.22 m | Dark reddish brown (5YR3/3-Moist); ; Fine sandy clay loam; Weak grade of structure; Rough-ped fabric; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Very firm consistence; Slightly plastic; Moderately sticky; Cultivation pan, Uncemented, Continuous, Platy; Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear change to - |
| A2 | 0.22 - 0.29 m | Strong brown (7.5YR4/6-Moist); Reddish yellow (7.5YR6/6-Dry); ; Fine sandy clay loam; Weak grade of structure; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Very firm consistence; Slightly plastic; Moderately sticky; Few, very fine (0-1mm) roots; Sharp |
| B21 | 0.29 - 0.61 m | Red (2.5YR4/6-Moist); ; Light medium clay; Moderate grade of structure; Rough-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Firm consistence; Moderately plastic; Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual change to - |
| B22 | 0.61 - 1 m | Yellowish red (5YR4/6-Moist); Substrate influence, 5YR56, 2-10% , Faint; Medium clay; Strong grade of structure; Smooth-ped fabric; Fine, (0 - 5) mm crack; Coarse, (10 - 20) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Dry; Firm consistence; Moderately plastic; Few cutans, <10% of ped faces or walls coated, distinct; Common (10 - 20 %), Ferromanganiferous, Fine (0 - 2 mm), Soft segregations, weak, segregations; Few, very fine (0-1mm) roots; |

Morphological Notes

Observation Notes

In area irrigated by centre pivot. 100 m north of pivot centre.

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Site Notes

Deepwater s. Matong Mackey No 4

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[illegible]

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Laboratory Analyses Completed for this profile

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| 13A1_AL | Oxalate-extractable aluminium |
| 13A1_FE | Oxalate-extractable iron |
| 13A1_MN | Oxalate-extractable manganese |
| 13A1_SI | Oxalate-extractable silicon |
| 13C1_AL | Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon |
| 13C1_FE | Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon |
| 13C1_MN | Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon |
| 13C1_SI | Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon |
| 14H1_CA | Soluble bases/SE (Ca,Mg,K,Na) |
| 14H1_K | Soluble bases/SE (Ca,Mg,K,Na) |
| 14H1_MG | Soluble bases/SE (Ca,Mg,K,Na) |
| 14H1_NA | Soluble bases/SE (Ca,Mg,K,Na) |
| 15F1_CA | Exchangeable bases by 0.01M silver-thiourea (AgTU)+, no pretreatment for soluble salts |
| 15F1_K | Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts |
| 15F1_MG | Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts |
| 15F1_NA | Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts |
| 15F3 | CEC by 0.01M silver-thiourea (AgTU)+ |
| 15N1 | Exchangeable sodium percentage (ESP) |
| 3A1 | EC of 1:5 soil/water extract |
| 4B1 | pH of 1:5 soil/0.01M calcium chloride extract - direct |
| 6B3 | Total organic carbon - high frequency induction furnace, infrared |
| P10_CF_C | Clay (%) - Coventry and Fett pipette method |
| P10_CF_Z | Silt (%) - Coventry and Fett pipette method |
| P3A1 | Bulk density - g/cm3 |
| P3B3VLc001 | 0.01 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLc003 | 0.03 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLc005 | 0.05 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLc01 | 0.1 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLc03 | 0.3 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLcSAT | Saturated Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate |
| P3B3VLd06 | 0.6 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate |
| P3B3VLd1 | 1 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate |
| P3B3VLd15 | 15 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate |
| P3B3VLd3 | 3 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate |
| P3B3VLd5 | 5 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate |
| P6_LP | Dispersion Index (Loveday and Pyle, 1973) |
| PWS1-2mm | 1000-2000 micron fraction (%) - Wet Sieving after chemical dispersion |
| PWS20-63 | 20-63 micron fraction (%) - Wet Sieving after chemical dispersion |
| PWS212-425 | 212-425 micron fraction (%) - Wet Sieving after chemical dispersion |
| PWS425-1mm | 425-1000 micron fraction (%) - Wet Sieving after chemical dispersion |
| PWS63-212 | 63-212 micron fraction (%) - Wet Sieving after chemical dispersion |