Project Name: MAR
Project Code: MAR **Site ID:** B312 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: C.H. Thompson
Date Desc.: 06/06/57
Map Ref.: Sheet No. : 7963 1:100000
Northing/Long.: 145.4675
Easting/Lat.: -17.0202777777778
Locality:
Elevation: 415 metres
Rainfall: 914
Runoff: Moderately rapid
Drainage: Well drained

Geology

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

Land Form

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

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:
Vertic Eutrophic Red Chromosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Dr2.62
Great Soil Group: Red earth

Site Disturbance: Cultivation. Irrigated, past or present

Vegetation:

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

Ap	0 - 0.18 m	Light brown (7.5YR6/4-Moist); ; Loamy sand; Massive grade of structure; Dry; Very weak consistence; 2-10%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Nodules; Field pH 6.4 (pH meter); Clear change to -
B1	0.33 - 0.41 m	Dark red (2.5YR3/8-Moist); ; Sandy clay loam; Massive grade of structure; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moist; Weak consistence; 10-20%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 6.5 (pH meter); Gradual change to -
B21	0.41 - 0.81 m	Dark red (10R3/8-Moist); ; Light clay; Massive grade of structure; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Fine (0 - 2 mm), Nodules; Field pH 6.3 (pH meter); Diffuse change to -
B22	0.86 - 1.24 m	Dark red (10R3/8-Moist); ; Light clay; Massive grade of structure; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules; Field pH 6.5 (pH meter); Diffuse change to -
B23	1.24 - 1.73 m	Red (10R4/8-Moist); ; Light clay; Massive grade of structure; Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules; Field pH 6.7 (pH meter); Diffuse change to -
B3	1.73 - 2.34 m	Red (2.5YR4/8-Moist); ; Clay loam, coarse sandy; Massive grade of structure; Moist; Weak consistence; 20-50%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Few (2 - 10 %), Manganiferous, Very coarse (20 - 60 mm), Nodules; Field pH 6 (pH meter);

Morphological Notes

Observation Notes

BROAD LOW BANK ON UNDULATING PLAIN:

Site Notes

MAREEBA

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.18	6.4H	0.01C	1.1K	0.23	0.2	0		2.2J		0.00
0.33 - 0.41	6.5H	0.01C								
0.41 - 0.81	6.3H	0.01C								
0.86 - 1.24	6.5H	0.01C								
1.24 - 1.73	6.7H	0.01C								
1.73 - 2.34	6H	0.01C								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.18		0.3E	26C	0.011F	0.02B			3	38C	52	3	6
0.33 - 0.41								2	33C	42	4	22
0.41 - 0.81								2	24C	26	3	48
0.86 - 1.24												
1.24 - 1.73												
1.73 - 2.34												

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	
m		g/g - m3/m3						mm/h	mm/h
0 - 0.18									
0.33 - 0.41									
0.41 - 0.81									
0.86 - 1.24									
1.24 - 1.73									
1.73 - 2.34									

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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_CEC	CEC - 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
2A1	Air-dry moisture content
3A_TSS	Electrical conductivity or soluble salts - Total soluble salts %
4_NR	pH of soil - Not recorded
5_NR	Water soluble Chloride - Cl(%) - Not recordede
6Z	Organic carbon (%) - Not recorded
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