Project Name: **Regional**
Project Code: **REG** **Site ID:** **T291** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: G.G. Murtha
Date Desc.: 20/08/80
Map Ref.: Sheet No. : 8162 1:100000
Northing/Long.: 146.033333333333
Easting/Lat.: -17.6
Locality:
Elevation: 15 metres
Rainfall: 3500
Runoff: Very slow
Drainage: Moderately well drained

Geology

ExposureType: No Data
Geol. Ref.: QA
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Unconsolidated material (unidentified)

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%
Morph. Type: Lower-slope
Elem. Type: Fan
Slope: 0 %
Pattern Type: Alluvial fan
Relief: 3 metres
Slope Category: Very gently sloped
Aspect: No Data

Surface Soil Condition (dry): Recently cultivated

Erosion:

Soil Classification

Australian Soil Classification:
Acidic Dystrophic Red Dermosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn3.71
Great Soil Group: No suitable group

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

Ap	0 - 0.1 m	Brown (10YR4/3-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moist; Weak consistence; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules;
Ap	0.1 - 0.2 m	Brown (10YR4/3-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moist; Weak consistence; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules;
Ap	0.2 - 0.3 m	Brown (10YR4/3-Moist); , 7.5YR54, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Light clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Moist; Weak consistence; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Clear change to -
B1	0.4 - 0.6 m	Yellowish red (5YR5/6-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Moist; Weak consistence; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Concretions; Diffuse change to -
B2	0.6 - 0.9 m	Red (2.5YR4/6-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Subangular blocky; Wet; Moderately plastic; Normal plasticity; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Concretions; Diffuse change to -
BC	0.9 - 1.2 m	Red (2.5YR4/6-Moist); , 7.5YR66, 2-10% , 0-5mm, Faint; , 2-10% , 0-5mm, Faint; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Wet; Moderately plastic; Normal plasticity; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Concretions;
BC	1.2 - 1.5 m	Yellowish red (5YR5/8-Moist); , 10YR68, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Moist; Weak consistence; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Concretions;
BC	1.5 - 1.8 m	Yellowish red (5YR5/8-Moist); , 10YR68, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Medium clay; Strong grade of structure, 10-20 mm, Subangular blocky; Moist; Weak consistence;

Morphological Notes

Observation Notes

FREE WATER IN PROFIE FROM 60-120CM

Site Notes

MOURILYAN

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.1	4.8A	0.041A	0.03H	<0.01	0.12	0.03	2.4F	2.56A	2.6F	1.17
								8.2C		0.37
0.1 - 0.2	4.8A	0.038A								
0.2 - 0.4	4.7A	0.044A	0.07H	<0.01	0.07	0.03	2.3F	2.5A	2.5F	1.20
								6.9C		0.43
0.4 - 0.6	4.6A	0.047A								
0.6 - 0.9	4.6A	0.002A	<0.02H	<0.01	0.5	0.03	1.7F	1.7A	2.3F	1.76
								3.1C		0.97
0.9 - 1.2	4.6A	0.044A								
1.2 - 1.5	4.7A	0.056A								
1.5 - 1.8	4.8A	0.062A								

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 - 0.1		1.26D	53B	0.11A	0.12A	0.51A		0	14A	24	12	49
0.1 - 0.2								0	14A	26	12	49
0.2 - 0.4		1.13D	53B		0.11A			0	13A	26	12	49
0.4 - 0.6								0	12A	28	12	48
0.6 - 0.9		0.23D		0.045A		0.53A		0	12A	30	10	48
0.9 - 1.2			9B					0	9A	28	11	52
1.2 - 1.5												
1.5 - 1.8								0	4A	28	25	44

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 - 0.1									
0.1 - 0.2									
0.2 - 0.4									
0.4 - 0.6									
0.6 - 0.9									
0.9 - 1.2									
1.2 - 1.5									
1.5 - 1.8									

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
15A2_CEC	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
15E1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble
15E1_K	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MG	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15G_C	Exchange acidity (hydrogen and aluminium) - meq per 100g of soil - By 1M KCl exch. acidity by titration to pH 8.4
15J1	Effective CEC
17A1	Total potassium - X-ray fluorescence
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A1	Total phosphorus - X-ray fluorescence
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)
MIN_EC	Exchange Capacity - Minerology
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_CS	Coarse sand (%) - Coventry and Fett pipette method
P10_CF_FS	Fine sand (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method
P10_GRAV	Gravel (%)
XRD_C_Ch2	Chloritized 2:1 minerals - X-Ray Diffraction
XRD_C_Gb	Gibbsite - X-Ray Diffraction
XRD_C_Gt	Geothite - X-Ray Diffraction
XRD_C_Il	Illite - X-Ray Diffraction
XRD_C_K2O	K2O - X-Ray Diffraction or Clay Fraction (air dry)
XRD_C_Ka	Kaolin - X-Ray Diffraction