Project Name: **Regional**
Project Code: **REG** **Site ID:** **T465** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: R.F. Isbell
Date Desc.: 01/07/86
Map Ref.: Sheet No. : 58 1:5000
Northing/Long.: 147.3125
Easting/Lat.: -19.8111111111111
Locality: D.P.I. experiment farm: Leichardt block: site 76:
Elevation: No Data
Rainfall: 890
Runoff: Slow
Drainage: Well drained

Geology

ExposureType: Soil pit
Geol. Ref.: CPg
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Soil pit, 110 m deep,Porous, Igneous rock (unidentified)

Land Form

Rel/Slope Class: Gently undulating plains <9m 1-3%
Morph. Type: Mid-slope
Elem. Type: Pediment
Slope: 0 %
Pattern Type: Rises
Relief: No Data
Slope Category: Very gently sloped
Aspect: 270 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:
Haplic Eutrophic Red Chromosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Dr2.12
Great Soil Group: Non-calcic brown soil

Site Disturbance: Extensive clearing, for example poisoning, ringbarking

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.14 m	Very dark greyish brown (10YR3/2-Moist); ; Sandy clay loam; Massive grade of structure; Many, fine (1-2mm) roots; Gradual, Wavy change to -
A3	0.14 - 0.22 m	Dark brown (7.5YR3/4-Moist); , 10YR32, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy clay loam (Heavy); Massive grade of structure; Common, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.22 - 0.42 m	Red (2.5YR4/7-Moist); ; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Quartz, coarse fragments; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few, very fine (0-1mm) roots; Diffuse change to -
B22	0.42 - 0.64 m	Red (2.5YR4/7-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Weak grade of structure, 10-20 mm, Prismatic; 2-10%, medium gravelly, 6-20mm, angular, dispersed, Quartz, coarse fragments; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Soft segregations; Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B3	0.64 - 0.85 m	Yellowish red (5YR5/8-Moist); ; Light medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Few, very fine (0-1mm) roots; Gradual change to -
BC	0.85 - 1.1 m	Yellowish red (5YR5/8-Moist); , 10YR82, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Light clay; Weak grade of structure, 20-50 mm, Angular blocky; Few, very fine (0-1mm) roots; Gradual change to -
C	1.1 - 1.25 m	Very pale brown (10YR8/3-Moist); , 10YR76, 10-20% , 5-15mm, Distinct; , 5YR58, 10-20% , 5-15mm, Distinct; Clay loam; Massive grade of structure; Few, very fine (0-1mm) roots;

Morphological Notes

Observation Notes

BC-C HORIZON MOTTLES ARE WEATHERED FELSPARS: MANGANESE NODULE ALSO OCCUR:

Site Notes

BURDEKIN VALLE

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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 - 0.14	6.2A	0.03A	5.63H	2.75	0.13	0.04		9.9A	8.6F	0.40
								7C		0.57
0.14 - 0.22	6.3A	0.04A								
0.22 - 0.42	6.5A	0.03A	5.9H	3.09	0.06	0.11		9.7A	9.2F	1.13
								13C		0.85
0.42 - 0.64	6.9A	0.03A								
0.64 - 0.85	7A	0.04A	12.2H	6.19	0.04	0.22		8.4A	18.7F	2.62
								15C		1.47
0.85 - 1.1	7.5A	0.06A								
1.1 - 1.25	8A	0.07A								

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 - 0.14			13A					1	40A	38	9	13
			6B									
0.14 - 0.22								1	42A	33	8	17
0.22 - 0.42			10A					3	26A	21	6	47
			<3B									
0.42 - 0.64								3	23A	20	6	51
0.64 - 0.85								1	23A	22	7	47
0.85 - 1.1								1	23A	30	13	35
1.1 - 1.25			8A					1	34A	29	12	26
			4B									

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 - 0.14									
0.14 - 0.22									
0.22 - 0.42									
0.42 - 0.64									
0.64 - 0.85									
0.85 - 1.1									
1.1 - 1.25									

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Laboratory Analyses Completed for this profile

13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
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
15J1	Effective CEC
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
9B_9C	Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO3 extractable
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES)
9H1	Phosphate retention
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 (%)