Project Name: **Regional**
Project Code: **REG** **Site ID:** **T28** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: R.F. Isbell
Date Desc.: 10/09/64
Map Ref.: Sheet No. : 8258 1:100000
Northing/Long.: 146.808333333333
Easting/Lat.: -19.6291666666667
Locality: Calcium paddock landsdown:grassy woodland:
Elevation: No Data
Rainfall: 870
Runoff: Moderately rapid
Drainage: Poorly drained

Geology

ExposureType: Soil pit
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: Simple-slope
Elem. Type: Pediment
Slope: 1.5 %
Pattern Type: Alluvial fan
Relief: No Data
Slope Category: Very gently sloped
Aspect: No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:
Bleached-Ferric Eutrophic Brown Kandosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Gn2.92
Great Soil Group: Yellow podzolic soil

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

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - Heteropogon contortus, Dichanthium species

Mid Strata - Tree, 3.01-6m, Sparse. *Species includes - Melaleuca species, Planchonia careya

Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - Eucalyptus alba, Eucalyptus drepanophylla

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.06 m	Very dark greyish brown (10YR3/2-Moist); Greyish brown (10YR5/2-Dry); ; Fine sandy loam; Massive grade of structure; Dry; Very firm consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Clear change to -
A2	0.06 - 0.25 m	Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/3-Dry); , 10YR53, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Fine sandy loam (Heavy); Massive grade of structure; Earthy fabric; Dry; Very firm consistence; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Gradual change to -
B1	0.25 - 0.43 m	Yellowish brown (10YR5/5-Moist); Brownish yellow (10YR6/5-Dry); , 5YR46, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy clay loam; Massive grade of structure; Earthy fabric; Common (1-5 per 0.01m2) Medium (2-5mm) macropores, Dry; Strong consistence; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Gradual change to -
B21	0.43 - 0.66 m	Yellowish brown (10YR5/5-Moist); Brownish yellow (10YR6/5-Dry); , 5YR46, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Sandy medium clay; Massive grade of structure; Earthy fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Dry; Strong consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Gradual change to -
B22	0.66 - 0.91 m	Pale brown (10YR6/3-Moist); , 5YR46, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Weak grade of structure, Angular blocky; Earthy fabric; Dry; Strong consistence; 2-10%, Gravel, coarse fragments; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Gradual change to -
	0.91 - 1.17 m	Pale brown (10YR6/3-Moist); , 5YR46, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Weak grade of structure, Angular blocky; Earthy fabric; Strong consistence; 2-10%, Gravel, coarse fragments; Many (20 - 50 %), Ferruginous, Coarse (6 - 20 mm), Nodules;
D	1.17 - 1.3 m	Yellowish brown (10YR5/6-Moist); , 2.5Y61, 10-20% , 5-15mm, Prominent; , 10-20% , 5-15mm, Prominent; Heavy clay; , Polyhedral; Very firm consistence; 2-10%, coarse gravelly, 20-60mm, Gravel, coarse fragments;
	1.3 - 1.4 m	;

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Gravel floater at 130CM:

Observation Notes

HEAVY CLAY LAYER AT 112CM:

Site Notes

LANDSDOWN

Morphological Notes

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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 - 0.06	6A	<0.01A	2.4B	1	0.18	0.15	4.3F	8C	8F	1.88
0.06 - 0.25	5.8A	<0.03A								
0.25 - 0.43	6.1A	<0.03A	2.2B	1.2	0.03	0.1	6F	10C	9.5F	1.00
0.43 - 0.66	6.4A	0.029A	3.2B	2.6	0.03	0.15	5F	11C	11F	1.36
0.66 - 0.91	6.5A	0.029A	2.8B	2.6	0.03	0.2	5.1F	11C	10.7F	1.82
0.91 - 1.17	6.6A	0.059A								
1.17 - 1.3	6.5A	0.059A								

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 - 0.06		0.8D	4B	0.016A	0.06A			5	38D	43	10	9
0.06 - 0.25			4B									
0.25 - 0.43								2	39D	31	7	22
0.43 - 0.66				0.015A								
0.66 - 0.91								8	32D	25	8	36
0.91 - 1.17				0.022A								
1.17 - 1.3												

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 - 0.06									
0.06 - 0.25									
0.25 - 0.43									
0.43 - 0.66									
0.66 - 0.91									
0.91 - 1.17									
1.17 - 1.3									

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_K	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_MG	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_NA	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
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
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5A2	Chloride - 1:5 soil/water extract, automated colour
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)
P10_GRAV	Gravel (%)
P10_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance