Project Name: **Regional**
Project Code: **REG** **Site ID:** **T410** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: M.G. Cannon
Date Desc.: 02/12/84
Map Ref.: Sheet No. : 8062 1:100000
Northing/Long.: 145.747222222222
Easting/Lat.: -17.9486111111111
Locality: 2KM to east of machinery shed Redbank paddock:
Elevation: 40 metres
Rainfall: 3000
Runoff: Rapid
Drainage: Well drained

Geology

ExposureType: Undisturbed soil core
Geol. Ref.: QA
Conf. Sub. is Parent. Mat.: No Data
Substrate Material: Granite

Land Form

Rel/Slope Class: Undulating rises 9-30m 3-10%
Morph. Type: Crest
Elem. Type: Hillcrest
Slope: 8 %
Pattern Type: Rises
Relief: 20 metres
Slope Category: Gently inclined
Aspect: 90 degrees

Surface Soil Condition (dry): Hardsetting

Erosion: No sheet erosion (sheet)

Soil Classification

Australian Soil Classification:
Acidic Dystrophic Red Dermosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Uf6.53
Great Soil Group: No suitable group

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation: Low Strata - , , . *Species includes - None recorded

Surface Coarse Fragments:

Profile Morphology

Ap	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Brown (7.5YR5/2-Dry); ; Sandy medium clay; Moderate grade of structure, 2-5 mm, Cast; Smooth-ped fabric; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Many, fine (1-2mm) roots;
	0.1 - 0.2 m	Dark brown (7.5YR3/3-Moist); Brown (7.5YR5/3-Dry); ; Sandy medium clay; Moderate grade of structure, 2-5 mm, Cast; Smooth-ped fabric; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Many, fine (1-2mm) roots; Gradual, Irregular change to -
A3	0.2 - 0.3 m	Brown (7.5YR4/3-Moist); Brown (10YR5/3-Dry); ; Sandy medium clay; Weak grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Common, medium (2-5mm) roots; Diffuse, Irregular change to -
B1	0.3 - 0.4 m	Brown (7.5YR4/4-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few, medium (2-5mm) roots; Gradual, Irregular change to -
B21	0.4 - 0.6 m	Red (2.5YR5/8-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few, medium (2-5mm) roots;
	0.6 - 0.9 m	Red (2.5YR5/8-Moist); ; Sandy medium clay; Massive grade of structure; Earthy fabric; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few, medium (2-5mm) roots; Diffuse, Irregular change to -
B22	0.9 - 1.2 m	Red (2.5YR5/8-Moist); , 7.5YR78, 0-2% , 5-15mm, Distinct; , 0-2% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Few, medium (2-5mm) roots;
	1.2 - 1.5 m	Red (2.5YR5/8-Moist); , 7.5YR78, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Diffuse, Irregular change to -
BC	1.5 - 1.8 m	Red (2.5YR5/8-Moist); , 7.5YR78, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments;

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1.8 - 2.1 m	Red (2.5YR5/8-Moist); , 7.5YR78, 20-50% , 5-15mm, Distinct; , 20-50% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 2-5 mm, Angular blocky; Smooth-ped fabric; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments;

Morphological Notes

Observation Notes

Site Notes

SW OF TULLY

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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	5.5A	0.047A	1.1H	0.42	0.24	0.05	0.7F	2.5A	2.5F	2.00
								8C		0.63
0.1 - 0.2	5.5A	0.03A								
0.2 - 0.3	5.3A	0.014A	0.3H	0.05	0.05	0.03	0.83F	1.8A	1.3F	1.67
								5C		0.60
0.3 - 0.4	5.2A	0.017A								
0.4 - 0.6	5.1A	0.02A	0.26H	0.06	0.03	0.03	0.83F	1.7A	1.2F	1.76
								3C		1.00
0.6 - 0.9	5.2A	0.016A								
0.9 - 1.2	5.2A	0.013A								
1.2 - 1.5	5.1A	0.011A	<0.02H	0.12	0.03	0.03	1.35F	2.4A	1.6F	1.25
								3C		1.00
1.5 - 1.8	5.1A	0.012A								
1.8 - 2.1	5.1A	0.014A								

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		3.04C	190B	0.077A	0.08A	0.06A		29	54A	7	10	29
0.1 - 0.2								17	47A	9	10	34
0.2 - 0.3		1.68C	77B	0.017A	0.07A	0.07A		32	47A	8	10	35
0.3 - 0.4								35	46A	8	10	37
0.4 - 0.6		0.66C	4B	0.004A	0.04A	0.09A		24	41A	7	10	42
0.6 - 0.9								19	32A	7	15	46
0.9 - 1.2								18	26A	9	22	44
1.2 - 1.5		0.06C	3B	0.005A	0.01A	0.26A		25	30A	8	34	29
1.5 - 1.8								25	30A	9	25	37
1.8 - 2.1								43	27A	8	23	42

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 - 0.3									
0.3 - 0.4									
0.4 - 0.6									
0.6 - 0.9									
0.9 - 1.2									
1.2 - 1.5									
1.5 - 1.8									
1.8 - 2.1									

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
12_HF_CU	Total element - Cu(mg/kg) - HF/HClO4 Digest
12_HF_FE	Total element - Fe(%) - HF/HClO4 Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO4 Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO4 Digest
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
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
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
6B3	Total organic carbon - high frequency induction furnace, infrared
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_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 (%)