

Project Name: Regional
Project Code: REG **Site ID:** T409 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: M.G. Cannon	Locality: 1.5KM N.N.E. of Caravan Hill yards:
Date Desc.: 01/12/84	Elevation: <20 metres
Map Ref.: Sheet No. : 8061 1:100000	Rainfall: 2250
Northing/Long.: 145.822222222222	Runoff: Moderately rapid
Easting/Lat.: -18.0083333333333	Drainage: Moderately well drained

Geology

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

Land Form

Rel/Slope Class: Undulating plains <9m 3-10%	Pattern Type: Rises
Morph. Type: Ridge	Relief: 6 metres
Elem. Type: Hillcrest	Slope Category: Very gently sloped
Slope: 3 %	Aspect: 20 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Melanic Dystrophic Red Dermosol	Principal Profile Form: Gn3.74
ASC Confidence:	Great Soil Group: Lateritic podzolic soil
All necessary analytical data are available.	

Site Disturbance:

Vegetation: Low Strata - Tussock grass, , Closed or dense. *Species includes - None recorded
 Tall Strata - Tree, 12.01-20m, Isolated plants. *Species includes - None Recorded

Surface Coarse Fragments: 2-10%, fine gravelly, 2-6mm, rounded, Gravel

Profile Morphology

A1	0 - 0.1 m	Very dark grey (10YR3/1-Moist); ; Sandy clay loam (Light); Weak grade of structure, 2-5 mm, Cast; Many, fine (1-2mm) roots;
	0.1 - 0.2 m	Very dark grey (10YR3/1-Moist); ; Sandy clay loam (Light); Weak grade of structure, 2-5 mm, Cast; Many, fine (1-2mm) roots; Gradual, Wavy change to -
A2	0.2 - 0.3 m	Brown (10YR4/3-Moist); Pale brown (10YR6/3-Dry); ; Clay loam, sandy; Massive grade of structure; 2-10%, coarse gravelly, 20-60mm, subangular, dispersed, coarse fragments; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Concretions; Common, medium (2-5mm) roots; Gradual, Irregular change to -
B1	0.3 - 0.45 m	Brown (7.5YR5/4-Moist); ; Clay loam, sandy (Heavy); Massive grade of structure; 20-50%, coarse gravelly, 20-60mm, subangular, dispersed, coarse fragments; Many (20 - 50 %), Ferruginous, Coarse (6 - 20 mm), Concretions; Common, medium (2-5mm) roots; Gradual, Irregular change to -
B21	0.45 - 0.6 m	Yellowish red (5YR5/8-Moist); ; Sandy light clay; Weak grade of structure, <2 mm, Subangular blocky; 10-20%, coarse gravelly, 20-60mm, subangular, dispersed, coarse fragments; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Concretions; Common, medium (2-5mm) roots; Wavy change to -
B22	0.6 - 0.9 m	Yellowish red (5YR5/8-Moist); ; Sandy light clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Soft segregations; Common, fine (1-2mm) roots; Diffuse, Wavy change to -
B23	0.9 - 1.2 m	Red (2.5YR4/8-Moist); , 10YR76, 20-50% , 5-15mm, Prominent; , 20-50% , 5-15mm, Prominent; Medium clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Soft segregations; Common, fine (1-2mm) roots; Gradual, Wavy change to -
B31	1.2 - 1.5 m	Weak red (10R4/4-Moist); , 10YR81, 20-50% , 15-30mm, Prominent; , 10YR48, 20-50% , 15-30mm, Prominent; Medium clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Soft segregations; Few, fine (1-2mm) roots;

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B32	1.5 - 1.8 m	Weak red (10R4/4-Moist); , 10YR81, 20-50% , 15-30mm, Prominent; , 10YR48, 20-50% , 15-30mm, Prominent; Sandy light clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Soft segregations;
B32	1.8 - 2 m	Weak red (10R4/4-Moist); , 10YR81, 20-50% , 15-30mm, Prominent; , 10YR48, 20-50% , 15-30mm, Prominent; Sandy light clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Common (10 - 20 %), Ferruginous, Coarse (6 - 20 mm), Soft segregations;

Morphological Notes

Observation Notes

B3 HORIZON HAS IRON RICH RED MOTTLES THAT HARDEN ON EXPOSURE RED MOTTLES ARE NOT STRONGLY LINKED VERTICALLY

Site Notes

KING RNCH TULL

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable Acidity		CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	(+)/kg			%
0 - 0.1	6A	0.068A	1.4H	1.2	0.83	0.12	0.59F	2.8A 11C	4.1F	4.29 1.09
0.1 - 0.2	5.7A	0.037A								
0.2 - 0.3	5.4A	0.023A	0.02H	0.04	0.14	<0.02	1.12F	2.3A 6C	1.3F	
0.3 - 0.45	5.5A	0.021A								
0.45 - 0.6	5.4A	0.014A	0.02H	0.03	0.04	0.02	0.83F	1.2A 3C	0.9F	1.67 0.67
0.6 - 0.9	5.3A	0.02A								
0.9 - 1.2	5.3A	0.017A	<0.02H	0.17	0.02	0.03	0.63F	1.5A 2C	0.9F	2.00 1.50
1.2 - 1.5	5.5A	0.014A								
1.5 - 1.8	5.4A	0.01A	<0.02H	0.09	<0.02	0.04	0.89F	1.3A 2C	1.1F	3.08 2.00
1.8 - 2	5.3A	0.009A								

Depth m	CaCO3	Organic	Avail.	Total	Total	Total	Bulk Density Mg/m3	Particle		Size	Analysis	
	%	C %	P mg/kg	P %	N %	K %		GV	CS	FS %	Silt	Clay
0 - 0.1		4.37C	130B	0.072A	0.2A	0.05A		35	52A	15	6	27
0.1 - 0.2								13	45A	16	7	32
0.2 - 0.3		2.09C	10B	0.015A	0.09A	0.02A		15	43A	17	6	33
0.3 - 0.45								30	43A	18	5	35
0.45 - 0.6		0.65C	2B	0.012A	0.03A	0.02A		27	39A	15	7	38
0.6 - 0.9								22	33A	14	9	44
0.9 - 1.2		0.27C						30	33A	13	14	41
1.2 - 1.5								58	31A	11	20	39
1.5 - 1.8		0.08C	1B	0.004A		0.07A		59	37A	12	18	32
1.8 - 2								51	39A	12	17	32

[illegible]

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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/HClO ₄ Digest
12_HF_FE	Total element - Fe(%) - HF/HClO ₄ Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO ₄ Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO ₄ 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 (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) by compulsive exchange, no pretreatment for soluble salts
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
5A2	Chloride - 1:5 soil/water extract, automated colour
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 H ₂ SO ₄ (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 (%)