

Project Name: Regional
Project Code: REG **Site ID:** T406 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	M.G. Cannon	Locality:	1.8KM along access track in 'south' paddock King Ranch:
Date Desc.:	01/12/84	Elevation:	20 metres
Map Ref.:	Sheet No. : 8061 1:100000	Rainfall:	2389
Northing/Long.:	145.791666666667	Runoff:	Very slow
Easting/Lat.:	-18.072222222222	Drainage:	Poorly drained

Geology

Exposure Type:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	QA	Substrate Material:	Unconsolidated material (unidentified)

Land Form

Rel/Slope Class:	Level plain <9m <1%	Pattern Type:	Stagnant alluvial plain
Morph. Type:	Closed Depression	Relief:	No Data
Elem. Type:	Swamp	Slope Category:	Level
Slope:	<1 %	Aspect:	No Data

Surface Soil Condition (dry): Cracking, Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Mesotrophic Kandosolic Redoxic Hydrosol	Mapping Unit:	N/A
ASC Confidence:	All necessary analytical data are available.	Principal Profile Form:	Uf
		Great Soil Group:	No suitable group

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

Vegetation:

Tall Strata - Tree, 1.01-3m, Isolated plants. *Species includes - Melaleuca viridiflora

Surface Coarse Fragments:

Profile Morphology

A	0 - 0.08 m	Very dark grey (10YR3/1-Moist); ; Light clay; Massive grade of structure; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores,
A21b	0.08 - 0.13 m	Greyish brown (10YR5/2-Moist); ; Sandy clay loam; Massive grade of structure; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores,
	0.13 - 0.2 m	Light brownish grey (10YR6/2-Moist); White (10YR8/1-Dry); ; Clayey coarse sand; Massive grade of structure; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, 20-50%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments;
	0.2 - 0.3 m	Light brownish grey (10YR6/2-Moist); White (10YR8/1-Dry); , 10YR68, 0-2% , 0-5mm, Distinct; , 0-2% , 0-5mm, Distinct; Coarse sandy clay loam; Massive grade of structure; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, 20-50%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments;
B21b	0.3 - 0.5 m	Light brownish grey (10YR6/2-Moist); , 10YR68, 0-2% , 0-5mm, Distinct; , 0-2% , 0-5mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, 2-10%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct;
	0.5 - 0.75 m	Light brownish grey (10YR6/2-Moist); , 10YR68, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, 2-10%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct;
B22b	0.75 - 0.9 m	Light grey (10YR7/1-Moist); , 10YR68, 10-20% , 15-30mm, Distinct; , 10YR56, 10-20% , 15-30mm, Distinct; Sandy medium clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, 2-10%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Many cutans, >50% of ped faces or walls coated, prominent; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Soft segregations;

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0.9 - 1.2 m	Light grey (10YR7/1-Moist); , 10YR68, 10-20% , 15-30mm, Distinct; , 10-20% , 15-30mm, Distinct; Sandy medium clay; Moderate grade of structure, 2-5 mm, Subangular blocky; Smooth-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, 2-10%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Many cutans, >50% of ped faces or walls coated, prominent; Common (10 - 20 %), Manganiferous, Medium (2 -6 mm), Soft segregations;
B23b 1.2 - 1.5 m	Light grey (10YR7/1-Moist); , 10YR68, 0-2% , 15-30mm, Distinct; , 0-2% , 15-30mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, 2-10%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct;
1.5 - 1.9 m	Light grey (10YR7/1-Moist); , 10YR68, 2-10% , 15-30mm, Distinct; , 2-10% , 15-30mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, 20-50%, medium gravelly, 6-20mm, subangular, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct;

Morphological Notes

Observation Notes

Site Notes

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.08	5.2A	0.079A	0.99H	0.78	0.25	0.09	1.09F	2.9A 6C	3.2F	3.10 1.50
0.08 - 0.13	5.3A	0.027A								
0.13 - 0.2	5.5A	0.014A	0.16H	0.2	0.05	0.02	0.53F	0.9A 2C	1F	2.22 1.00
0.2 - 0.3	5.6A	0.015A								
0.3 - 0.5	5.8A	0.013A	0.24H	0.69	0.1	0.02	0.36F	1.7A 3C	1.4F	1.18 0.67
0.5 - 0.75	5.6A	0.014A								
0.75 - 0.9	5.7A	0.012A								
0.9 - 1.2	5.8A	0.009A	0.43H	1.48	0.18	0.05	0.28F	2.5A 4C	2.4F	2.00 1.25
1.2 - 1.5	5.7A	0.009A								
1.5 - 1.9	5.6A	0.007A								

Depth m	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density Mg/m3	Particle		Size	Analysis	
	%	%	mg/kg	%	%	%		GV	CS	FS %	Silt	Clay
0 - 0.08		1.97C	9B	0.014A	0.1A	1.87A		58	46A	25	0	29
0.08 - 0.13								11	49A	20	12	20
0.13 - 0.2		0.27C	3B	0.005A	0.03A	1.54A		26	71A	12	8	10
0.2 - 0.3								61	55A	19	11	15
0.3 - 0.5		0.2C	2B	0.006A		1.84A		38	53A	12	9	25
0.5 - 0.75								39	46A	11	8	35
0.75 - 0.9								37	43A	9	5	43
0.9 - 1.2		0.12C	1B					38	44A	9	7	41
1.2 - 1.5								27	37A	15	11	37
1.5 - 1.9								34	41A	17	14	28

[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 (%)