Project Name: **Regional**
Project Code: **REG** **Site ID:** **T29** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: R.F. Isbell
Locality: Manton paddock approx. 5 chain's north east of stock yards:
Date Desc.: 10/09/64
Elevation: No Data
Map Ref.: Sheet No. : 8258 1:100000
Rainfall: 870
Northing/Long.: 146.820833333333
Runoff: No Data
Easting/Lat.: -19.65
Drainage: No Data

Geology

ExposureType: Soil pit
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: Alluvial plain
Morph. Type: Flat
Relief: No Data
Elem. Type: Plain
Slope Category: Level
Slope: 0 %
Aspect: No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:
Calcic Mottled-Subnatric Grey Sodosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: Dy3.43
Great Soil Group: Solodized solonetz

Site Disturbance: Complete clearing. Pasture, native or improved, but never cultivated

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

Mid Strata - Tree, 3.01-6m, Very sparse. *Species includes - None recorded

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

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.06 m	Very dark greyish brown (10YR3/2-Moist); Grey (10YR5/1-Dry); , 0-0% ; , 0-0% ; Sandy loam (Light); Massive grade of structure; Dry; Very firm consistence; Clear change to -
A21	0.06 - 0.2 m	Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/3-Dry); , 0-0% ; , 0-0% ; Sandy loam (Light); Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Dry; Very firm consistence; Gradual change to -
A22	0.2 - 0.38 m	Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/3-Dry); , 10YR56, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Sandy loam (Heavy); Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Dry; Strong consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Gradual change to -
A23	0.38 - 0.53 m	Yellowish brown (10YR5/4-Moist); Very pale brown (10YR7/3-Dry); , 10YR56, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Sandy loam (Heavy); Massive grade of structure; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Dry; Strong consistence; 2-10%, coarse gravelly, 20-60mm, rounded, Gravel, coarse fragments; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Abrupt change to -
B21	0.53 - 0.69 m	Greyish brown (10YR5/2-Moist); , 10YR56, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Moderate grade of structure, 50-100 mm, Prismatic; Weak grade of structure, 50-100 mm, Columnar; Dry; Rigid consistence; 0-2%, medium gravelly, 6-20mm, Gravel, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Nodules; Gradual change to -
B22	0.69 - 0.84 m	Yellowish brown (10YR5/6-Moist); , 10YR52, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Sandy medium clay; Weak grade of structure, 20-50 mm, Angular blocky; Dry; Rigid consistence; Few (2 - 10 %), Ferromanganiferous, , Nodules; Gradual change to -
Bk	0.84 - 1.02 m	Yellowish brown (10YR5/6-Moist); , 10YR52, 2-10% , 5-15mm, Distinct; , 2-10% , 5-15mm, Distinct; Sandy medium clay; Weak grade of structure, 20-50 mm, Angular blocky; Dry; Rigid consistence; Few (2 - 10 %), Ferromanganiferous, , Nodules; Few (2 - 10 %), Calcareous, , Nodules; Gradual change to -

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C	1.02 - 1.17 m	Dark greyish brown (10YR4/2-Moist); ; Medium clay; Very firm consistence; 2-10%, fine gravelly, 2-6mm, Gravel, coarse fragments; Very few (0 - 2 %), Calcareous, , Concretions; Clear change to -
D	1.17 - 1.32 m	Very dark grey (10YR3/1-Moist); , 10YR52; Medium clay; , Polyhedral; Very firm consistence; 0-2%, fine gravelly, 2-6mm, Sand, coarse fragments; Few (2 - 10 %), Calcareous, , Soft segregations;

Morphological Notes

Observation Notes

SLIGHT DOMING OF COL'S IN B21:0-35CM SEPERATE DEPOSITIONAL LAYER:

Site Notes

LANDSDOWN

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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	5.6A	0.029A	2E	0.7	0.23	0.05	4.2F	7C	7.2F	0.71
0.06 - 0.2	5.7A	<0.03A	1.6E	0.7	0.12	0.1	2.3F	5C	4.8F	2.00
0.2 - 0.38	6.1A	<0.03A								
0.38 - 0.53	6.6A	<0.03A	2.2E	1.5	0.06	0.3	2F	6C	6.1F	5.00
0.53 - 0.69	7.2A	0.089A	5.8E	4.1	0.13	1.7	1.6F	13C	13.3F	13.08
0.69 - 0.84	7.6A	0.119A								
0.84 - 1.02	8.3A	0.148A								
1.02 - 1.17	8.5A	0.208A	6.5E	3.8	0.1	3.3				
1.17 - 1.32	8.8A	0.327A								

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		0.9D	7B	0.015A	0.08A			<2	40D	41	10	7
0.06 - 0.2			4B						39D	41	14	7
0.2 - 0.38												
0.38 - 0.53								5	36D	40	12	13
0.53 - 0.69				0.012A				2	25D	34	12	30
0.69 - 0.84												
0.84 - 1.02												
1.02 - 1.17	0.5A											
1.17 - 1.32				0.01A								

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 - 0.2										
0.2 - 0.38										
0.38 - 0.53										
0.53 - 0.69										
0.69 - 0.84										
0.84 - 1.02										
1.02 - 1.17										
1.17 - 1.32										

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Laboratory Analyses Completed for this profile

15C1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_MG	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, 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
19A1	Carbonates - rapid titration
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