Project Name: **Regional**
Project Code: **REG** **Site ID:** **T80** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (QLD)**

Site Information

Desc. By: R.F. Isbell
Locality: 4.8KM west of Paluma Dam turn off:0.3KM west of Taravale turn off:
Date Desc.: 12/11/68
Elevation: 838 metres
Map Ref.: Sheet No. : 8159 1:100000
Rainfall: 1524
Northing/Long.: 146.133333333333
Runoff: Moderately rapid
Easting/Lat.: -19.0208333333333
Drainage: No Data

Geology

ExposureType: Undisturbed soil core
Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: Cuy
Substrate Material: Undisturbed soil core, Rhyolite

Land Form

Rel/Slope Class: Gently undulating rises 9-30m 1-3%
Pattern Type: Plain
Morph. Type: No Data
Relief: 15 metres
Elem. Type: Hillslope
Slope Category: Gently inclined
Slope: 0 %
Aspect: No Data

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

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

Site Disturbance: Limited clearing, for example selective logging

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - Imperata cylindrica
Tall Strata - Tree, 20.01-35m, Mid-dense. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Very dark grey (10YR3/1-Moist); ; Loam; Strong grade of structure, 2-5 mm, Granular; Moderately moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Many, fine (1-2mm) roots; Gradual change to -
A12	0.1 - 0.2 m	Very dark grey (10YR3/1-Moist); , 10YR42, 2-10% ; , 2-10% ; Clay loam (Light); Moderate grade of structure, 2-5 mm, Granular; Moderately moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, Gravel, coarse fragments; Many, fine (1-2mm) roots; Gradual change to -
A2	0.2 - 0.3 m	Dark greyish brown (10YR4/2-Moist); Light brownish grey (10YR6/2-Dry); , 7.5YR43; Clay loam; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Firm consistence; Few, fine (1-2mm) roots; Clear change to -
B1	0.3 - 0.4 m	Brown (7.5YR4/4-Moist); Pink (7.5YR7/4-Dry); , 10YR42, 2-10% ; , 2-10% ; Light clay (Heavy); Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Firm consistence; Few, fine (1-2mm) roots; Clear change to -
B21	0.4 - 0.6 m	Yellowish red (5YR5/6-Moist); , 2.5YR56; , 10YR76; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; FewGradual change to -
B22	0.6 - 0.9 m	Yellowish red (5YR5/6-Moist); , 2.5YR56; , 10YR76; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence; Clear change to -
B31	0.9 - 1.2 m	Reddish yellow (5YR6/6-Moist); , 2.5YR46; , 10YR75; Medium heavy clay; Moderate grade of structure, 20-50 mm, Angular blocky; Moderately moist; Very firm consistence; Gradual change to -
B32	1.2 - 1.5 m	White (2.5Y8/1-Moist); , 7.5YR68; , 10R44; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence;
B32	1.5 - 1.8 m	White (2.5Y8/1-Moist); , 7.5YR68; , 10R44; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence;

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B32	1.8 - 2.1 m	White (2.5Y8/1-Moist); , 7.5YR68; , 10R44; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence;
B32	2.1 - 2.4 m	White (2.5Y8/1-Moist); , 7.5YR68; , 10R44; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence; Few, fine (1-2mm) roots;
B32	2.4 - 2.7 m	White (2.5Y8/1-Moist); , 7.5YR68; , 10R44; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence; Few, fine (1-2mm) roots;
B32	2.7 - 3 m	White (2.5Y8/1-Moist); , 7.5YR68; , 10R44; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence; Few, fine (1-2mm) roots;
B32	3 - 3.3 m	White (2.5Y8/1-Moist); , 7.5YR68; , 10R44; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence; Few, fine (1-2mm) roots;
B32	3.3 - 3.6 m	White (2.5Y8/1-Moist); , 7.5YR68; , 10R44; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence; Few, fine (1-2mm) roots;
B32	3.6 - 3.9 m	White (2.5Y8/1-Moist); , 7.5YR68; , 10R44; Medium heavy clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Very firm consistence; Few, fine (1-2mm) roots; Gradual change to -
B33	3.9 - 4.2 m	Reddish yellow (5YR6/6-Moist); , 5YR82; , 7.5YR68; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Weak consistence; Few
B33	4.2 - 4.5 m	Reddish yellow (5YR6/6-Moist); , 5YR82; , 7.5YR68; Medium clay; Moderate grade of structure, 10-20 mm, Angular blocky; Moderately moist; Weak consistence; Few

Morphological Notes

B33 Profile continues as above:suggestion of w'd rock fabric:

Observation Notes

120-450CM RED MOTTLING IS VERTICALLY ORIENTATED:10-60CM SOME WORM CASTS:30-40CM MIX OF MATERIAL BY WORM ACTIVITY:

Site Notes

TARAVALE

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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	0.062A	3.5B	1.9	0.38	0.12				
0.1 - 0.2	5.8A	0.032A	0.6B	0.8	0.24	0.11				
0.2 - 0.3	5.8A	0.032A	0.2B	0.4	0.1	0.08				
0.3 - 0.4	5.7A	0.023A								
0.4 - 0.6	5.7A	0.014A	0.2B	1.3	0.05	0.05				
0.6 - 0.9	5.5A	0.017A	0.2B	1.1	0.02	0.11				
0.9 - 1.2	5.4A	0.017A								
1.2 - 1.5	5A	0.023A	0.1B	0.3	0.02	0.07				
1.5 - 1.8	4.9A	0.026A								
1.8 - 2.1	4.5A	0.041A	0.1B	0.1	0.05	0.05				
2.1 - 2.4	4.2A	0.05A								
2.4 - 2.7	4.2A	0.053A								
2.7 - 3	4.1A	0.071A								
3 - 3.3	4A	0.08A								
3.3 - 3.6	3.9A	0.068A								
3.6 - 3.9	3.9A	0.08A								
3.9 - 4.2	3.8A	0.089A								
4.2 - 4.5	4.1A	0.101A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
m	%	%	mg/kg	%	%	%	Mg/m3	GV	CS	FS	Silt	Clay
0 - 0.1		10.3D	6A 11.1B	0.027A	0.425A	0.05A		13	35D	9	12	24
0.1 - 0.2		4.8D	3A 7.8B	0.025A	0.235A	0.059A		8	34D	9	20	32
0.2 - 0.3		2.7D	1A 4.9B	0.017A	0.12A	0.046A		8	32D	6	16	40
0.3 - 0.4												
0.4 - 0.6				0.009A		0.046A		<2	21D	4	16	56
0.6 - 0.9				0.008A	0.006A	0.041A		<2	23D	5	22	52
0.9 - 1.2												
1.2 - 1.5				0.019A		0.042A						
1.5 - 1.8												
1.8 - 2.1				0.009A	0.001A	0.134A		<2	19D	8	29	43
2.1 - 2.4												
2.4 - 2.7												
2.7 - 3												
3 - 3.3				0.006A		0.157A						
3.3 - 3.6												
3.6 - 3.9												
3.9 - 4.2				0.006A		0.202A						
4.2 - 4.5												

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									

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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
2.1 - 2.4
2.4 - 2.7
2.7 - 3
3 - 3.3
3.3 - 3.6
3.6 - 3.9
3.9 - 4.2
4.2 - 4.5

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Laboratory Analyses Completed for this profile

10A1	Total sulfur - X-ray fluorescence
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
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
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A1	Total phosphorus - X-ray fluorescence
9B_9C	Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO3 extractable
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
XRD_C_Hm	Hematite - X-Ray Diffraction
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction