

Project Name: Regional
Project Code: REG **Site ID:** T38 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: R.F. Isbell **Locality:** 4KM south east of Koumala:1KM from main road up Koumala Repeater Station Road:
Date Desc.: 28/09/64 **Elevation:** 305 metres
Map Ref.: Sheet No. : 8754 1:100000 **Rainfall:** 1524
Northing/Long.: 149.275 **Runoff:** Very rapid
Easting/Lat.: -21.6375 **Drainage:** Well drained

Geology

Exposure Type: Existing vertical exposure **Conf. Sub. is Parent. Mat.:** No Data
Geol. Ref.: DCC **Substrate Material:** Existing vertical exposure, 1.2 m deep, Andesite

Land Form

Rel/Slope Class: Steep mountains >300m 32-56% **Pattern Type:** Mountains
Morph. Type: Mid-slope **Relief:** 152 metres
Elem. Type: Hillslope **Slope Category:** Moderately inclined
Slope: 30 % **Aspect:** No Data

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification: Humose Eutrophic Red Ferrosol **Mapping Unit:** N/A
ASC Confidence: Analytical data are incomplete but reasonable confidence. **Principal Profile Form:** Gn3.11
Great Soil Group: Krasnozem

Site Disturbance: No effective disturbance. Natural

Vegetation: Low Strata - Tussock grass, 0.51-1m, Mid-dense. *Species includes - Imperata cylindrica, Xanthorrhoea species
Tall Strata - Tree, 6.01-12m, Sparse. *Species includes - Eucalyptus tereticornis, Eucalyptus tessellaris,
Eucalyptus abergiana

Surface Coarse Fragments: 20-50%, coarse gravelly, 20-60mm, , Andesite

Profile Morphology

A11	0 - 0.13 m	Black (5YR2/1-Moist); Very dark grey (5YR3/1-Dry); ; Loam; Strong grade of structure, 5-10 mm, Angular blocky; Dry; Very firm consistence; 2-10%, coarse gravelly, 20-60mm, Gravel, coarse fragments; Gradual change to -
A12	0.13 - 0.3 m	Dark reddish brown (5YR2/2-Moist); Dark reddish brown (5YR3/2-Dry); ; Clay loam; Strong grade of structure, 5-10 mm, Angular blocky; Dry; Strong consistence; 20-50%, cobbly, 60-200mm, Gravel, coarse fragments; Gradual change to -
B1	0.3 - 0.41 m	Dark reddish brown (5YR2/3-Moist); Dark reddish brown (5YR3/3-Dry); ; Light clay; Strong grade of structure, 5-10 mm, Angular blocky; Dry; Strong consistence; 2-10%, coarse gravelly, 20-60mm, Gravel, coarse fragments; Clear change to -
B2	0.41 - 0.66 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moist; Very firm consistence; 0-2%, Sand, coarse fragments; Gradual change to -
	0.66 - 0.91 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Very firm consistence; 0-2%, Sand, coarse fragments; Gradual change to -
	0.91 - 1.12 m	Yellowish red (5YR4/6-Moist); ; Light medium clay; Moderate grade of structure, 20-50 mm, Angular blocky; Very firm consistence; Field pH 5 (pH meter);

Morphological Notes

Observation Notes

TRACES WEATHERED PARENT MATERIAL FROM 90CM LOOKS LIKE ANDESITE:

Site Notes

KOUMALA

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Laboratory Test Results:

Depth m	pH	1:5 EC	Ca	Exchangeable		Cations K	Na	Exchangeable	CEC	ECEC	ESP
		dS/m		Mg	Acidity			Cmol (+)/kg			
0 - 0.13	7A	0.145A	27B	9	0.85	0.08			35C		0.23
0.13 - 0.3	6.2A	0.056A									
0.3 - 0.41	5.6A	0.065A	10B	5	0.21	0.08			18C		0.44
0.41 - 0.66	5.6A	0.032A	10B	6	0.12	0.08			24C		0.33
0.66 - 0.91	5.8A	0.029A									
0.91 - 1.12	6A	0.029A									

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Particle		Size	Analysis	
m	%	C	P	P	N	K	Density	GV	CS	FS	Silt	Clay
		%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.13		8.27D	114B	0.08A	0.27A			2	9D	30	33	27
0.13 - 0.3		5.58D	18B		0.15A			7	11D	24	25	38
0.3 - 0.41			3B	0.05A				3	7D	26	27	40
0.41 - 0.66			1B	0.027A				<2	1D	10	30	60
0.66 - 0.91												
0.91 - 1.12			1B	0.013A								

[illegible]

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
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
9G_BSES	Available P (mg/kg) - Acid P - 0.005M H ₂ SO ₄ (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