

Project Name: Balonne-Maranoa Soil Survey and Soil Moisture Profiles
Project Code: B-M **Site ID:** SM09 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	Gunn, RH	Locality:	Approximately 2 miles east of Johnston Creek "Fairview" homestead.
Date Desc.:	05/08/71	Elevation:	No Data
Map Ref.:	1:100000	Rainfall:	No Data
Northing/Long.:	147.791037	Runoff:	Rapid
Easting/Lat.:	-26.8130277	Drainage:	Well drained

Geology

Exposure Type:	Auger boring	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	No Data	Substrate Material:	No Data

Land Form

Rel/Slope Class:	No Data	Pattern Type:	No Data
Morph. Type:	Upper-slope	Relief:	No Data
Elem. Type:	No Data	Slope Category:	Gently inclined
Slope:	1 %	Aspect:	No Data

Surface Soil Condition (dry):

Erosion: Severe (sheet)

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Gn2.12
		Great Soil Group:	N/A

Site Disturbance:

Vegetation: Low Strata - , , . *Species includes - Aristida species, Bothriochloa species
Mid Strata - , , . *Species includes - Canthium odoratum
Tall Strata - Tree, , . *Species includes - Eucalyptus melanophloia, Eucalyptus populnea

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.25 m	Dark reddish brown (5YR3/4-Moist); , 0-0% ; Clay loam; Massive grade of structure; Earthy fabric; Firm consistence; 2-10%, fine gravelly, 2-6mm, subangular, coarse fragments; Field pH 5.7 (pH meter);
	0.25 - 0.7 m	Dark red (10R3/6-Moist); , 0-0% ; Light clay; Massive grade of structure; Earthy fabric; Firm consistence; 10-20%, fine gravelly, 2-6mm, subangular, coarse fragments; Field pH 6.5 (pH meter);
	0.7 - 1.2 m	Dark red (10R3/6-Moist); , 0-0% ; Medium clay; Massive grade of structure; Earthy fabric; Firm consistence; 20-50%, fine gravelly, 2-6mm, subangular, coarse fragments; 0-2%, coarse gravelly, 20-60mm, subangular, coarse fragments; Field pH 7.2 (pH meter);
	1.2 - 1.4 m	, 0-0% ; Massive grade of structure; Earthy fabric; 50-90%, fine gravelly, 2-6mm, subangular, coarse fragments; Field pH 7.2 (pH meter);
	1.4 - m	; Field pH 7.7 (pH meter);

Morphological Notes

A1 Firm, sealed surface, with gravel veneer -size range 1-15mm length (of fine gravel on surface in stripped sites-occasional grass tussock only). Very porous horizon, as soil fauna are present, tunnels up to 10 mm in diameter.
Texture: LC - MC.
Texture: fine gravel on Mottled Zone. Consistence: rubbly.
Hard Mottled Zone.

Observation Notes

PPF: gr loamy Gn2.12. Parent material: reworked red earth and fine gravel. Microrelief: even-scattered low termite mounds. "Representative Catchment". Surface veneer, are subrounded glazed ferruginised rock fragments.

Site Notes

Soil Family: Ea. Mapping symbol: (S)uXAn. Land unit: 24 (5200km2). Land use: sheep grazing. Vegetation: (small area of secondary vegetation - mainly cleared). Woodland, probably ex mulga, E melanophloia.

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			

0 - 0.25
0.25 - 0.7
0.7 - 1.2

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 - 0.25							1.52	6.9	20.2F	32.6	14	26.3
0.25 - 0.7							1.36	14.3	17.9F	27.6	9.3	30.9
0.7 - 1.2								12.9	16.5F	28.1	10.3	32.2

0 - 0.25
0.25 - 0.7
0.7 - 1.2

[illegible]

0 - 0.25
0.25 - 0.7
0.7 - 1.2

12.5E
14.27E

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Laboratory Analyses Completed for this profile

P10_GRAV	Gravel (%)
P10_HYD_C	Clay (%) - Hydrometer Method
P10_HYD_CS	Coarse Sand (%) - Hydrometer Method
P10_HYD_FS	Fine Sand (%) - Hydrometer Method
P10_HYD_Z	Silt (%) - Hydrometer Method
P3A1_CLOD	Bulk density g/cm3 - Clods at 0.1 Bar moisture content (McIntyre & Stirk, 1954, Aust. J. Agric. Res. 5:291-6)
P3B1VL_15	15 BAR Moisture m3/m3 - Volumetric using <2mm sample on pressure plate
P3B2VL_03	0.3 BAR Moisture m3/m3 - Volumetric using disturbed sample on pressure plate