

SANDY LOAM OVER RED SANDY CLAY

General Description: *Thick red sandy loam over a reddish sandy clay, calcareous with depth, grading to coarse to medium grained sediments*

Landform: Flats and swales in gently undulating rises

Substrate: Medium to coarse grained Tertiary sediments

Vegetation: Mallee

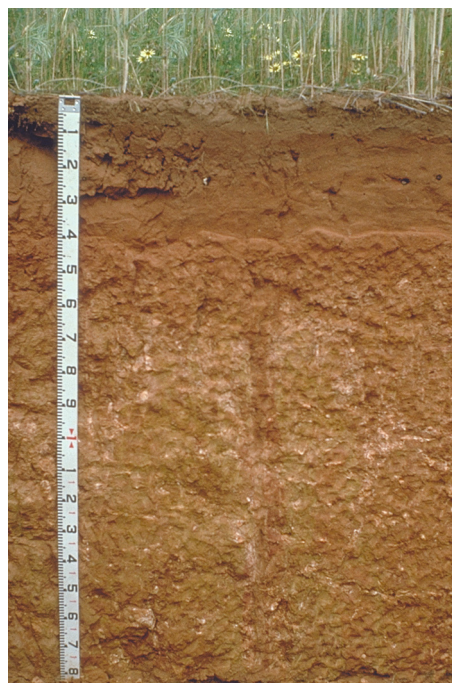


Type Site:	Site No.:	MM019	1:50,000 mapsheet:	6827-2 (Buccleuch)
	Hundred:	Marmon Jabuk	Easting:	407200
	Section:	4	Northing:	6096700
	Sampling date:	08/10/1991	Annual rainfall:	375 mm average

Flat between undulating rises, soft surface, no stone

Soil Description:

Depth (cm)	Description
0-8	Reddish brown soft light sandy loam. Abrupt to:
8-28	Reddish brown firm massive highly calcareous sandy loam. Gradual to:
28-40	Red massive highly calcareous light sandy clay loam. Abrupt to:
40-60	Red highly calcareous sandy clay with weak coarse columnar structure. Diffuse to:
60-93	Red and orange massive highly calcareous sandy clay. Diffuse to:
93-145	Red and orange massive highly calcareous sandy clay with 2-10% calcrete fragments. Diffuse to:
145-185	Red and orange massive highly calcareous fine sandy clay loam with 2-10% calcrete fragments.



Classification: Sodic, Calcic, Red Chromosol; thick, non-gravelly, loamy / clayey, deep



Summary of Properties

- Drainage:** Well drained. Soil never remains wet for more than a few days.
- Fertility:** Inherent fertility is low as indicated by the exchangeable cation data. Although reasonably clayey, nutrient retention capacity is low. Phosphorus, copper and zinc appear to be deficient at the sampling site. Organic carbon levels are also low.
- pH:** Neutral at the surface, alkaline at depth.
- Rooting depth:** 93 cm in pit, but few roots deeper than 60 cm.
- Barriers to root growth:**
- Physical:** No obvious physical barriers.
 - Chemical:** High pH and sodicity from 93 cm prevent deeper root growth. Low fertility is probably the reason for restricted growth at the sampling site.
- Waterholding capacity:** 85 mm in rootzone.
- Seedling emergence:** Satisfactory.
- Workability:** Soft / firm surface is easily worked.
- Erosion Potential:**
- Water:** Low.
 - Wind:** Low to moderately low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaCl ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
										Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	6.7	6.4	<0.1	0.08	0.57	0.68	16	170	0.7	0.11	25	6.7	0.27	4.0	3.32	0.77	0.09	0.46	2.3
0-8	6.7	6.7	<0.1	0.07	0.28	0.58	15	130	0.8	0.12	12	7.6	0.30	4.3	3.26	0.79	0.08	0.37	1.9
8-28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28-40	8.6	7.4	1.7	0.10	0.27	0.25	3.2	70	1.9	0.11	4.2	1.5	0.03	4.1	4.40	0.85	0.10	0.22	2.4
40-60	8.9	7.3	1.1	0.14	0.33	0.18	2.7	340	4.0	0.10	4.3	1.3	0.05	7.2	4.27	3.18	0.29	0.77	4.0
60-93	9.2	7.4	3.2	0.22	0.66	0.14	2.2	470	10	0.12	3.4	0.35	0.04	7.0	2.24	4.04	1.01	0.86	14.4
93-145	9.5	8.0	1.3	0.30	1.28	0.12	2.4	420	8	0.20	3.1	0.30	0.08	5.2	1.13	2.72	1.83	0.71	35.2
145-185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Paddock sample bulked from cores (0-10 cm) taken around the pit.
 CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements.
 ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC.

Further information: [DEWNR Soil and Land Program](#)

