

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 sheet: 6827-2 (Buccleuch)

Hundred:

Marmon Jabuk

Annual rainfall: 375 mm

Sampling date:

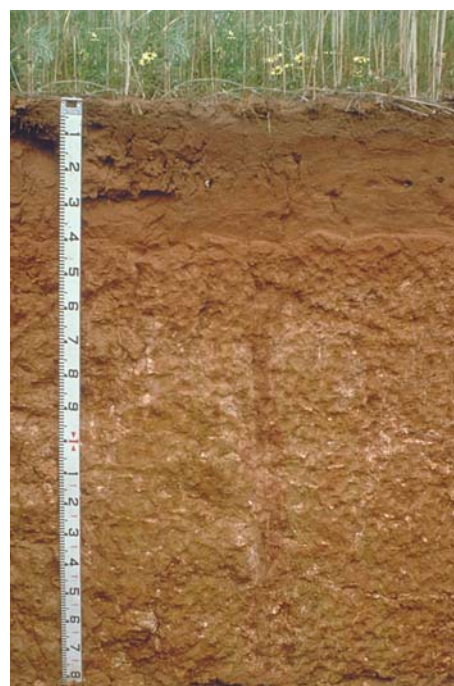
08/10/91

Landform: Flat between undulating rises

Surface: Soft with no stones

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.
Water holding capacity	85 mm in root zone.
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.