SHALLOW SANDY LOAM OVER CALCRETE

General Description: *Red non calcareous sandy loam with variable rubble over calcrete at shallow depth*

Landform: Flats and rises in stony undulating land

Substrate: Sheet calcrete

Vegetation: Mallee

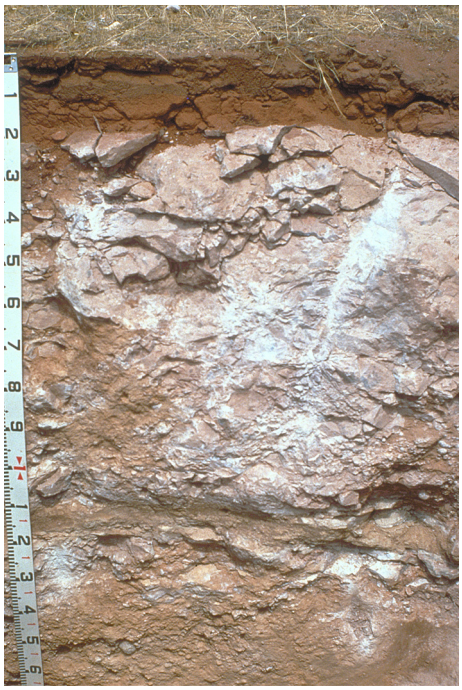
Type Site:

Site No.:	MM021	1:50,000 mapsheet:	6727-1 (Mobilong)
Hundred:	Burdett	Easting:	358400
Section:	143	Northing:	6121500
Sampling date:	31/10/1991	Annual rainfall:	345 mm average

Flat between undulating rises, firm surface with 10-20% calcrete stone, 60-200 mm.

Soil Description:

Depth (cm)	*Description*
0-9	Reddish brown weakly granular sandy loam with 2-10% calcrete fragments (20-200 mm). Abrupt to:
9-20	Red massive light sandy clay loam with minor calcrete fragments (20-200 mm). Abrupt to:
20-125	Sheet calcrete. Clear to:
125-180	Very highly calcareous sandy clay loam with more than 50% calcrete fragments.



Classification: Haplic, Petrocalcic, Red Kandosol; thin, gravelly, loamy / loamy, very shallow

Summary of Properties

Drainage: Moderately well drained by cracks in the calcrete.

Fertility: Inherent fertility is moderately low as indicated by the exchangeable cation data. Phosphorus, nitrogen, zinc and copper deficiencies are likely, and the data suggest marginal deficiencies of the latter three at the sampling site. Organic carbon levels are good.

pH: Alkaline throughout.

Rooting depth: 20 cm in pit.

Barriers to root growth:

Physical: The calcrete effectively prevents root growth.

Chemical: No chemical limitations above calcrete, but pH is very high below.

Waterholding capacity: 25 mm in rootzone.

Seedling emergence: Slight limitations due to stoniness.

Workability: Firm surface is easily worked, but stones abrade implements and may interfere with harvest operations. Cultivation continually brings stone to the surface.

Erosion Potential:

Water: Low.

Wind: Low.

Laboratory Data

Depth cm	pH H_2O	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	8.3	7.6	1	0.09	0.51	1.3	11	330	7.6	0.24	3.7	1.4	<0.06	11.3	9.24	1.08	0.18	0.91	1.6
0-9	8.0	7.5	1	0.05	0.48	0.7	8	260	0.8	0.12	4.8	8.9	0.27	8.1	5.94	0.89	0.16	0.66	2.0
9-20	8.2	7.6	1	0.04	0.23	0.3	3	200	0.9	0.08	3.3	1.5	<0.06	8.1	5.78	1.01	0.24	0.50	3.0
20-125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
125-180	9.6	8.2	70	0.16	0.75	0.1	<2	180	1.2	0.20	1.2	0.37	<0.06	4.2	3.21	1.77	0.84	0.38	20.0

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