

CALCAREOUS LOAMY SAND

General Description: *Deep reddish calcareous loamy sand becoming more clayey and calcareous with depth*

Landform: Slopes and crests of low sand hills

Substrate: Calcareous clayey sand to sandy clay loam (sandy Woorinen Formation)

Vegetation: Mallee scrub

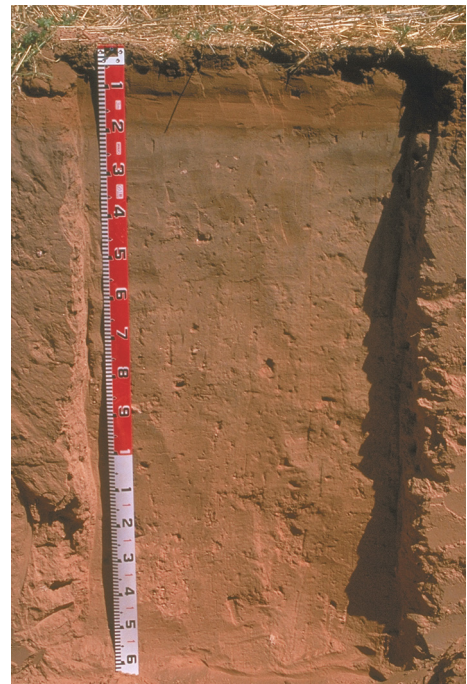


Type Site:	Site No.:	CM010	1:50,000 mapsheet:	6530-2 (Blyth)
	Hundred:	Blyth	Easting:	266250
	Section:	426	Northing:	6240200
	Sampling date:	13/02/92	Annual rainfall:	415 mm average

Dune crest with a loose surface.

Soil Description:

Depth (cm)	Description
0-5	Reddish brown slightly calcareous single grain loamy sand. Abrupt to:
5-12	Reddish brown moderately calcareous single grain loamy sand. Sharp to:
12-20	Yellowish red moderately calcareous massive loamy sand. Abrupt to:
20-50	Brown highly calcareous massive light sandy loam. Clear to:
50-115	Orange very highly calcareous massive clayey sand with 10-20% soft carbonate segregations. Gradual to:
115-137	Orange very highly calcareous massive sandy clay loam with 10-20% soft Class III A carbonate segregations. Clear to:
137-160	Orange very highly calcareous massive clayey sand with 10-20% soft carbonate segregations.



Classification: Ceteric, Regolithic, Calcic Calcarosol; thick, non-gravelly, sandy / loamy, deep.



Summary of Properties

- Drainage:** The soil is rapidly drained and no part of the profile remains wet for more than a couple of hours.
- Fertility:** The soil has a low capacity to store and supply nutrients (low cation exchange capacity) due to its low clay and organic matter content. Phosphorus and zinc levels are low at sampling site.
- pH:** Alkaline at the surface, strongly alkaline with depth.
- Rooting depth:** 115 cm in pit with very few roots extending beyond this depth.
- Barriers to root growth:**
- Physical:** There are no physical barriers.
 - Chemical:** Low fertility and high pH at depth (reducing nutrient availability), restrict healthy root development.
- Waterholding capacity:** Approximately 100 mm in rootzone.
- Seedling emergence:** Good, except that water repellence may be a problem in some years.
- Workability:** Good.
- Erosion Potential:**
- Water:** Low.
 - Wind:** Moderately high, due to the sandy surface, low fertility and exposed position.

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	SO ₄ 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	8.6	7.6	1.0	0.12	1.0	0.74	17	420	-	-	0.26	2.6	3.6	0.32	6.5	5.52	1.07	0.06	1.07	na
0-5	8.4	7.5	0.6	0.16	1.6	0.87	24	460	-	-	0.30	3.1	6.7	0.42	6.4	5.45	1.03	0.05	1.10	na
5-12	9.0	7.9	1.4	0.08	0.5	0.39	7	270	-	-	0.14	1.3	1.4	0.12	7.4	6.78	1.00	0.02	1.15	na
12-20	9.1	8.0	1.0	0.07	0.3	0.17	2	210	-	-	0.13	1.7	0.6	0.03	5.0	5.03	0.80	0.04	0.73	na
20-50	9.3	8.2	3.4	0.07	0.3	0.20	2	90	-	-	0.31	1.3	0.5	0.00	5.1	5.45	1.38	0.10	0.25	na
50-115	9.4	8.3	12.1	0.07	0.2	0.18	2	80	-	1.2	0.29	1.0	0.4	0.02	5.1	4.14	2.56	0.12	0.23	na
115-137	9.5	8.4	20.4	0.10	0.5	0.14	1	130	-	1.6	0.28	1.0	0.2	0.02	5.7	2.54	5.01	0.20	0.34	na
137-160	9.5	8.4	12.0	0.12	0.8	0.10	2	180	-	1.7	0.27	1.0	0.3	0.04	5.1	1.91	4.79	0.20	0.48	na

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](#)

