

DEEP SAND

General Description: *Very thick red to brown sand, slightly more clayey and calcareous with depth*

Landform: Gently undulating dunefield with low to moderate parallel sandhills.

Substrate: Windblown Molineaux Sand.

Vegetation: Mallee.



Type Site:	Site No.:	CM006	1:50,000 mapsheet:	6530-4 (Mundoora)
	Hundred:	Wokurna	Easting:	223650
	Section:	261	Northing:	6262300
	Sampling date:	12/2/92	Annual rainfall:	380 mm average

Crest of sandhill. Loose surface, no stones.

Soil Description:

Depth (cm)	Description
0-10	Orange loose sand. Sharp to:
10-30	Red friable sand. Gradual to:
30-140	Yellowish red soft sand. Clear to:
140-160	Yellowish red soft highly calcareous loamy sand.



Classification: Calcareous, Arenic, Red-Orthic Tenosol; medium, non-gravelly, sandy / sandy, very deep



Summary of Properties

- Drainage:** Rapidly drained. Soil never remains wet for more than few hours.
- Fertility:** Inherent fertility is low, as indicated by the exchangeable cation data. Regular phosphorus applications are essential - levels are adequate at sampling site, but zinc concentrations are low. Organic carbon is very low, contributing to low nutrient retention capacity.
- pH:** Neutral at the surface, alkaline with depth.
- Rooting depth:** Not recorded. Estimated 140 cm in pit, but with few roots below 30 cm.
- Barriers to root growth:**
- Physical:** No physical limitations.
 - Chemical:** Low nutrient retention capacity is the main limitation.
- Waterholding capacity:** Approximately 50 mm in top 100 cm.
- Seedling emergence:** Satisfactory although can be reduced in dry seasons by water repellence.
- Workability:** Very good.
- Erosion Potential:**
- Water:** Low.
 - Wind:** Moderately high.

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	6.9	6.0	0.9	0.04	0.3	0.18	26	115	-	-	0.24	6.6	1.2	0.12	3.4	2.86	0.92	0.14	0.29	na
0-10	7.1	6.2	0.8	0.04	0.4	0.29	29	140	-	-	0.17	6.2	1.3	0.19	2.8	2.45	0.76	0.04	0.33	na
10-30	7.4	6.4	0.0	0.02	0.1	0.09	11	75	-	-	0.18	3.1	0.6	0.06	4.0	3.42	0.81	0.14	0.18	3.5
30-140	8.0	6.9	0.0	0.02	0.1	0.07	1	65	-	0.65	0.28	2.7	0.6	0.07	5.0	3.96	1.38	0.08	0.16	1.6
140-160	9.1	8.0	?	0.07	0.2	0.08	2	65	-	1.17	0.30	2.2	0.5	0.06	5.0	5.20	1.41	0.07	0.19	1.4

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](#)

