

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 sheet: 6530-4 (Mundoora)

Hundred: Wokurna

Annual rainfall: 350 mm

Sampling date: 12/02/92

Landform: Crest of sandhill

Surface: Loose with no stones

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
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. Estimate 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.
Water holding capacity	Approximately 50 mm in top 100cm.
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 -S 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.