

DEEP SAND

General Description: *Very thick red to brown sand with a more clayey subsoil, calcareous at depth*

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

Substrate: Windblown Molineaux Sand.

Vegetation: Mallee.



Type Site: Site No.: CM004

1:50,000 sheet: 6530-4 (Mundoora)

Hundred: Wokurna

Annual rainfall: 350 mm

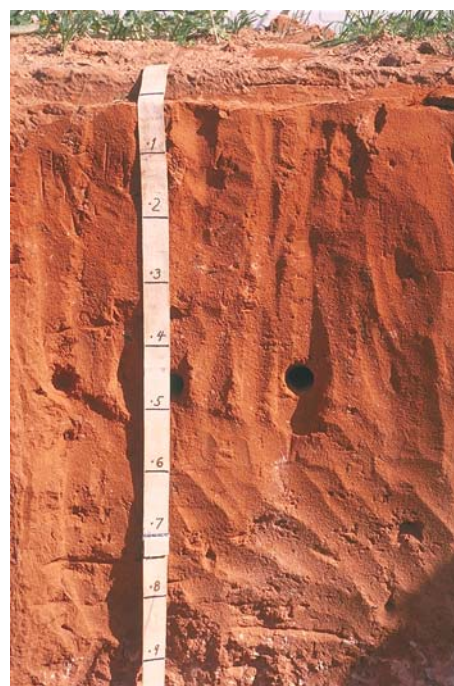
Sampling date: 11/02/92

Landform: Crest of sandhill

Surface: Loose with no stones

Soil Description:

Depth (cm)	Description
0-4	Orange loose sand. Abrupt to:
4-38	Yellowish red friable loamy coarse sand. Diffuse to:
38-69	Yellowish red soft moderately calcareous sand. Gradual to:
69-90	Yellowish red soft highly calcareous sand. Clear to:
90-113	Red friable massive coarse sandy loam with 10-20% fine carbonate segregations. Clear to:
113-139	Yellowish red soft very highly calcareous loamy sand. Clear to:
139-180	Orange soft very highly calcareous sand.



Classification: Calcareous, Regolithic, Red-Orthic Tenosol; very thick, non-gravelly, sandy / loamy, deep

Summary of Properties

Drainage	Rapidly drained. Soil never remains wet for more than a few hours.
Fertility	Surface fertility relies on organic matter levels which are low, and on phosphorus levels which are adequate at this site. The soil's natural capacity to retain nutrients is low, due to the low clay content throughout. Likely response to applied zinc and possibly copper.
pH	Alkaline at the surface, strongly alkaline at depth.
Rooting depth	Approximately 170cm in pit, but few roots below 70 cm.
Barriers to root growth	
Physical:	There are no physical barriers.
Chemical:	Low nutrient retention capacity and very low subsoil reserves prevent strong root growth.
Water holding capacity	Approximately 55 mm in rootzone.
Seedling emergence:	Very good, although water repellence may reduce establishment in dry seasons.
Workability:	Very good.
Erosion Potential	
Water:	Low.
Wind:	Moderate to 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	7.9	7.0	1.9	0.09	0.4	0.31	24	170	-	-	0.21	6.3	1.0	0.18	3.7	2.91	0.71	0.04	0.33	1.1
0-4	7.7	6.7	0.3	0.04	0.3	0.41	28	190	-	-	0.26	6.9	1.0	0.17	4.4	3.48	0.95	0.06	0.40	1.4
4-38	8.7	7.6	0.3	0.09	0.3	0.15	3	140	-	1.0	0.25	3.7	0.2	0.09	6.5	5.97	1.33	0.07	0.40	1.1
38-69	9.2	8.0	1.4	0.07	0.2	0.10	1	70	-	-	0.15	2.1	0.2	0.07	4.4	4.69	1.34	0.07	0.21	1.6
69-90	9.4	8.2	2.0	0.07	0.2	0.08	1	95	-	-	0.20	2.0	0.3	0.06	4.3	3.76	1.55	0.10	0.22	2.3
90-113	9.4	8.3	9.5	0.09	0.3	0.10	1	160	-	2.2	0.37	2.4	0.3	0.07	6.9	4.72	3.71	0.24	0.43	3.5
113-139	9.6	8.4	7.3	0.09	0.4	0.08	2	100	-	-	0.33	1.6	0.3	0.06	4.2	2.84	2.75	0.23	0.30	5.5
139-180	9.6	8.4	4.4	0.09	0.4	0.06	1	100	-	-	0.21	1.2	0.3	0.08	2.8	1.61	1.88	0.21	0.26	7.5

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.