

DEEP SAND

General Description: *Thick loose sand becoming slightly more clayey and calcareous with depth*

Landform: Dunefields.

Substrate: Windblown Molineaux Sand.

Vegetation: Mallee



Type Site: Site No.: MM030

1:50,000 sheet: 7027-4 (Karte)

Hundred: Kingsford

Annual rainfall: 340 mm

Sampling date: 15/11/91

Landform: Crest of low sandhill

Surface: Loose with no stones

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-12	Brown loose sand. Abrupt to:
12-58	Reddish yellow loose sand. Abrupt to:
58-115	Orange loamy sand with sandy loam lamellae. Gradual to:
115-160	Reddish yellow highly calcareous loamy sand. Diffuse to:
160-205	Reddish yellow highly calcareous loamy sand.



Classification: Calcareous, Argic, Yellow-Orthic Tenosol; medium, non-gravelly, sandy / sandy, deep

Summary of Properties

Drainage	Rapidly drained. Soil never remains wet for more than a few hours.
Fertility	Inherent fertility is low, as indicated by the exchangeable cation data and low clay content. Phosphorus, nitrogen, copper and zinc deficiencies are likely, and data suggest low potassium and manganese as well. Organic carbon levels are low.
pH	Neutral at the surface, alkaline with depth.
Rooting depth	160 cm in pit, but few roots below 58 cm.
Barriers to root growth	
Physical:	No physical barriers.
Chemical:	Low nutrient status and retention capacity limit root growth.
Water holding capacity	35 mm in root zone.
Seedling emergence:	Satisfactory although affected by water repellence in dry seasons.
Workability:	Loose surface is easily worked.
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	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	7.3	7.2	<1	0.05	0.37	0.4	8	89	<0.50	0.052	6.0	1.2	0.12	2.1	1.31	0.50	0.10	0.17	na
0-12	7.2	7.3	1	0.03	0.22	0.2	3	79	<0.50	0.15	6.1	0.55	<0.06	1.9	1.02	0.45	0.10	0.16	na
12-40	7.2	7.1	1	0.02	0.12	<0.1	<2	52	<0.50	<0.05	3.7	0.14	<0.06	2.3	1.97	0.64	0.12	0.11	na
40-58	7.7	7.1	1	0.01	0.08	<0.1	<2	79	0.55	<0.05	2.8	0.16	<0.06	3.3	2.13	1.08	0.14	0.13	na
58-80	8.0	7.1	<1	0.02	0.12	<0.1	<2	100	<0.50	0.05	4.1	<0.06	<0.06	7.1	3.98	2.59	0.16	0.22	2.3
80-115	8.8	7.7	<1	0.07	0.22	<0.1	<2	99	<0.50	0.07	2.6	0.14	<0.06	6.3	4.22	2.38	0.15	0.25	2.4
115-160	9.3	8.2	3	0.07	0.23	<0.1	<2	110	<0.53	0.14	1.7	0.27	<0.06	3.0	3.35	1.64	0.12	0.23	na
160-205	9.4	8.3	2	0.08	0.27	<0.1	<2	110	<0.51	0.12	1.7	0.33	<0.06	2.7	2.87	1.93	0.13	0.27	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.