

DEEP SAND

General Description: *Thick reddish siliceous sand with slight clay accumulation at depth*

Landform: Flat to gently undulating plain with occasional irregular sandhills and salinized depressions.

Substrate: Windblown Molineaux Sand.

Vegetation: Mallee.



Type Site:	Site No.:	MM112	1:50,000 mapsheet:	6827-3 (Moorlands)
	Hundred:	Coolinong	Easting:	368100
	Section:	49	Northing:	6079850
	Sampling date:	31/03/1993	Annual rainfall:	385 mm average

Crest of sandhill. Loose surface, no stones.

Soil Description:

Depth (cm)	Description
0-9	Dark brown loose sand. Clear to:
9-15	Brown loose sand. Gradual to:
15-40	Brown soft sand. Gradual to:
40-60	Orange soft sand. Clear to:
60-120	Orange soft sand with lamellae of yellowish red sandy loam. Gradual to:
120-150	Yellowish red soft loamy sand. Abrupt to:
150-210	Orange soft loamy sand with lamellae of yellowish red firm sandy clay loam.



Classification: Basic, Argic, Brown-Orthic Tenosol; medium, non-gravelly, sandy / sandy, very 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. Regular phosphorus applications are necessary. Nitrogen deficiencies are likely, and zinc and copper may be deficient from time to time. Manganese is required by lupins. Organic carbon levels are low.
- pH:** Slightly acidic at the surface, alkaline with depth.
- Rooting depth:** 60 cm in pit.
- Barriers to root growth:**
- Physical:** No physical barriers.
- Chemical:** There are no chemical barriers, but low nutrient retention capacity restricts rooting depth.
- Waterholding capacity:** 35 mm in rootzone.
- Seedling emergence:** Usually reduced by water repellence.
- Workability:** Soft / loose surface is easily worked.
- 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	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	6.6	6.0	<1	0.04	0.38	0.7	20	140	1.0	0.17	19	3.1	0.64	3.6	3.25	0.71	0.06	0.40	1.7
0-9	6.7	6.0	<1	0.06	0.50	0.7	17	200	0.80	0.18	14	4.0	0.66	4.4	3.57	0.82	0.03	0.63	0.7
9-15	6.7	6.0	<1	0.03	0.29	0.3	4	150	0.48	0.06	16	2.6	<0.06	3.2	2.96	0.69	0.05	0.77	1.6
15-40	7.2	6.4	<1	0.02	0.17	0.1	<2	88	0.22	<0.05	7.0	1.1	<0.06	2.2	2.15	0.60	0.05	0.30	na
40-60	7.5	6.9	<1	0.02	0.20	<0.1	<2	71	0.36	<0.05	3.6	0.35	<0.06	2.3	1.73	0.50	0.05	0.22	na
60-120	7.5	6.8	<1	0.02	0.16	<0.1	<2	47	0.26	<0.05	2.5	0.29	<0.06	2.5	1.68	0.73	0.07	0.17	na
120-150	8.3	6.8	<1	0.02	0.46	<0.1	<2	45	0.35	<0.05	1.8	0.28	<0.06	2.5	1.78	0.80	0.08	0.27	na
150-210	7.8	7.4	<1	0.02	0.25	<0.1	<2	93	0.35	<0.05	3.1	0.19	<0.06	5.1	3.03	1.60	0.16	0.29	3.1

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](#)

