DEEP SAND

General Description: *Thick to very thick red to brown sand*

Landform: Gently undulating plain with extensive rounded jumbled sandhills.

Substrate: Windblown Molineaux Sand.

Vegetation: Mallee

Type Site:

Site No.:	MM128	1:50,000 mapsheet:	7028-2 (Peebinga)
Hundred:	Peebinga	Easting:	487120
Section:	23	Northing:	6127590
Sampling date:	22/05/1996	Annual rainfall:	300 mm average

Dune slope (4%). Loose surface, no stones.

Soil Description:

Depth (cm)	*Description*
0-13	Brown loose sand (recent drift). Clear to:
13-36	Brown loose sand (recent drift). Sharp to:
36-48	Dark yellowish brown soft loamy sand. Abrupt to:
48-95	Reddish yellow soft sand. Diffuse to:
95-145	Reddish yellow soft loamy sand. Diffuse to:
145-180	Reddish yellow soft loamy sand.

Classification: Basic, Arenic, Yellow-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 and low clay content. Phosphorus, nitrogen, copper and zinc deficiencies are likely (all are low at sampling site), and data suggest low sulphur as well. Organic carbon levels are low.

pH: Neutral at the surface, alkaline with depth.

Rooting depth: 145 cm in pit (including drift sand), but few roots below drift layers.

Barriers to root growth:

Physical: No physical barriers.

Chemical: Low nutrient status and retention capacity limit root growth.

Waterholding capacity: Approximately 30 mm in rootzone.

Seedling emergence: Satisfactory although affected by water repellence in dry seasons.

Workability: Loose surface is easily worked.

Erosion Potential:

Water: Low.

Wind: Moderately high to high.

Laboratory Data

Depth cm	pH H_2O	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	6.6	6.1	0	0.03	0.28	0.4	10	121	5	0.3	0.01	29	3.71	0.37	2.3	1.97	0.41	0.12	0.18	na
0-13	6.4	5.9	0	0.03	0.26	0.4	10	126	6	0.3	-	-	-	-	2.3	1.84	0.37	0.12	0.15	na
13-36	7.2	6.6	<0.1	0.02	0.14	0.1	<4	92	1	0.1	-	-	-	-	1.7	1.03	0.25	0.10	0.12	na
36-48	7.1	6.5	<0.1	0.03	0.21	0.3	<4	82	3	0.2	-	-	-	-	2.6	2.54	0.38	0.13	0.15	na
48-95	7.5	6.8	<0.1	0.02	0.15	0.1	<4	70	1	0.2	-	-	-	-	2.2	1.51	0.29	0.10	0.09	na
95-145	8.0	7.3	<0.1	0.02	0.24	<0.1	<4	58	2	0.3	-	-	-	-	2.3	1.56	0.42	0.12	0.07	na
145-180	8.9	8.3	<0.1	0.05	0.29	<0.1	<4	95	2	0.5	-	-	-	-	2.6	1.82	0.65	0.14	0.06	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.

Further information: DEWNR Soil and Land Program