

DEEP SAND

General Description: *Thick brown sand, yellower with depth*

Landform: Gently undulating plains with extensive low to moderate sandhills

Substrate: Windblown Molineaux Sand.

Vegetation: Mallee



Type Site: Site No.: MM117

1:50,000 sheet: 6827-3 (Moorlands)
Annual rainfall: 400 mm
Landform: Crest of sandhill
Surface: Loose with no stones

Hundred: Roby
Sampling date: 05/04/93

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-10	Brown loose sand. Sharp to:
10-20	Brown soft sand. Clear to:
20-33	Yellowish brown soft sand. Abrupt to:
<hr/> <u>Original soil surface</u>	
33-47	Brown soft sand. Clear to:
47-70	Yellowish brown soft sand. Gradual to:
70-115	Brownish yellow soft sand. Diffuse to:
115-185	Brownish yellow soft sand.



Classification: Basic, Arenic, 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	Neutral to slightly acidic throughout.
Rooting depth	185 cm in pit, but few roots below 70 cm.
Barriers to root growth	
Physical:	No physical barriers.
Chemical:	There are no chemical barriers, but low nutrient retention capacity limits extent of root growth.
Water holding capacity	45 mm in the root zone.
Seedling emergence:	Satisfactory, but can be reduced by water repellence in dry seasons.
Workability:	Soft to 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	6.8	6.4	<1	0.06	0.51	0.7	25	95	0.39	0.15	-	2.2	0.76	3.1	3.19	0.54	0.03	0.33	na
0-10	6.9	6.4	1	0.07	0.80	0.3	21	110	0.57	0.10	-	1.4	0.60	1.9	2.09	0.43	0.02	0.46	na
10-20	6.5	6.0	<1	0.04	0.39	0.6	21	57	0.33	0.14	-	1.4	0.80	3.1	4.02	0.59	0.04	0.26	na
20-33	6.6	6.1	1	0.03	0.30	0.2	12	54	0.72	0.09	-	0.74	0.12	2.0	2.63	0.58	0.07	0.23	na
33-47	6.4	5.7	1	0.02	0.15	0.2	8	55	0.65	<.05	-	0.90	<.06	2.1	1.73	0.39	0.05	0.23	na
47-70	6.5	6.0	<1	0.01	0.11	<0.1	5	56	0.68	<.05	-	0.39	<.06	1.9	1.43	0.34	0.04	0.25	na
70-115	6.8	6.3	<1	0.01	0.09	<0.1	4	53	0.29	<.05	-	0.18	<.06	1.5	1.30	0.43	0.05	0.24	na
115-185	6.8	6.3	<1	0.01	0.11	<0.1	<2	42	0.12	<.05	-	0.17	<.06	1.7	1.19	0.49	0.06	0.26	na

Note: Paddock sample bulked from 20 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