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 mapsheet:	6827-3 (Moorlands)
Hundred:	Roby	Easting:	376300
Section:	X1A	Northing:	6078450
Sampling date:	05/04/1993	Annual rainfall:	395 mm average

Crest of sandhill. Loose surface, no stones.

Soil Description:

Depth (cm)	*Description*
0-10	Brown loose sand. Sharp to:
10-20	Brown soft sand. Clear to:
20-33	Yellowish brown soft sand. Abrupt to:
	Original soil surface
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.

Waterholding capacity: 45 mm in the rootzone.

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_2O	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

Further information: DEWNR Soil and Land Program