

DEEP SAND

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

Landform: Gently undulating sandhill country

Substrate: Windblown Molineaux Sand, with fine secondary carbonate

Vegetation: Mallee



Type Site: Site No.: MM046

1:50,000 sheet: 7029-3 (Loxton)

Hundred: Gordon

Annual rainfall: 250 mm

Sampling date: 28/07/92

Landform: Crest of low sandhill

Surface: Loose with no stones

Soil Description:

Depth (cm)	Description
0-12	Yellowish red loose loamy sand with weak granular structure - recent drift. Clear to:
12-25	Yellowish red loose loamy sand - recent drift. Clear to:

25-37	Reddish brown loose loamy sand. Sharp to:
37-85	Yellowish red loose loamy sand. Gradual to:
85-125	Yellowish red loose moderately calcareous loamy sand. Clear to:
125-140	Reddish yellow and yellowish red moderately calcareous massive loamy sand. Clear to:
140-180	Reddish yellow, orange and pink highly calcareous fine sandy loam.



Classification: Calcareous, Regolithic, Red-Orthic Tenosol; moderate, non-gravelly, sandy / sandy, very deep

Summary of Properties

Drainage	Rapidly drained. Soil never remains wet for more than a couple of hours following heavy or prolonged rainfall.
Fertility	Inherent fertility is low, as indicated by the exchangeable cation data, and low clay and organic matter contents. Phosphorus, nitrogen, zinc and copper deficiencies are likely (zinc and copper levels appear adequate at sampling site). Organic carbon levels are low.
pH	Alkaline throughout.
Rooting depth	85 cm in pit, but few roots below 37 cm.
Barriers to root growth	
Physical:	No physical barriers
Chemical:	No chemical barriers, but low nutrient retention capacity and status limit root growth.
Water holding capacity	Approximately 35 mm in root zone. 75 mm in potential root zone.
Seedling emergence:	Affected by water repellent surface.
Workability:	Soft / loose surface is easily worked.
Erosion Potential	
Water:	Low.
Wind:	Moderate

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	8.5	7.9	<0.1	0.08	0.31	0.32	6	231	0.6	0.2	2.6	2.6	0.5	4.0	3.05	0.61	0.06	0.42	1.5
0-12	8.7	8.1	0.4	0.09	0.38	0.30	5	217	0.7	0.1	2.2	1.9	0.4	3.9	2.96	0.59	0.08	0.43	2.1
12-25	8.6	8.2	0.1	0.08	0.28	0.26	<5	154	0.8	0.1	2.2	1.5	0.2	4.4	3.71	0.68	0.07	0.27	1.6
25-37	8.4	8.0	0.1	0.08	0.56	0.45	<5	123	0.7	0.1	2.3	1.5	0.2	5.0	4.22	0.88	0.10	0.18	2.0
37-85	8.1	7.6	0.1	0.07	0.64	0.03	<5	46	0.4	0.1	2.1	0.4	0.1	4.4	2.68	0.81	0.11	0.11	2.5
85-125	9.0	8.5	1.0	0.09	0.48	0.06	<5	50	0.5	0.1	1.5	0.2	0.1	3.5	2.59	0.88	0.11	0.09	3.1
125-140	9.0	8.6	0.5	0.09	0.42	0.04	<5	72	0.6	0.1	1.9	0.2	0.2	4.3	2.47	1.50	0.10	0.14	2.3
140-180	9.1	8.5	15.3	0.13	0.69	<0.01	<5	74	0.9	0.4	0.7	0.1	0.1	4.3	3.00	2.10	0.13	0.16	3.0

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.