

DEEP SAND

General Description: *Deep siliceous sand, slightly calcareous with depth*

Landform: Low to moderate sandhills

Substrate: Windblown coarse textured deposits (Molineaux Sand).

Vegetation: Mallee



Type Site: Site No.: MM025

1:50,000 sheet: 6828-2 (Bandon)

Hundred: Bowhill

Annual rainfall: 300 mm

Sampling date: 28/10/91

Landform: Crest of moderate sandhill

Surface: Loose with no stones

Soil Description:

Depth (cm)	Description
0-13	Brown loose sand (drift). Sharp to:
13-33	Orange loose sand (drift). Sharp to:
33-44	Brown loose sand (drift). Clear to:
44-59	Brown loose sand. Gradual to:
59-83	Orange loose sand. Diffuse to:
83-120	Orange loose sand. Diffuse to:
120-180	Orange soft highly calcareous loamy sand. Diffuse to:
180-210	Reddish yellow highly calcareous loamy sand. Diffuse to:
210-240	Reddish yellow highly calcareous loamy sand with 2-10% calcrete fragments.



Classification: Calcareous, 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 and low clay and organic matter contents. Phosphorus, nitrogen, copper and zinc deficiencies are likely, confirmed by data (except nitrogen - no data). Organic carbon levels are very low.
pH	Alkaline throughout.
Rooting depth	30 cm in pit.
Barriers to root growth	
Physical:	No physical barriers.
Chemical:	No chemical barriers. Low nutrient status determines root depth.
Water holding capacity	25 mm.
Seedling emergence:	Satisfactory although affected by water repellence in dry seasons.
Workability:	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	8.7	7.6	<1	0.07	0.44	0.2	13	220	1.0	<0.05	2.4	1.3	0.09	3.1	2.80	0.70	0.10	0.41	3.2
0-13	8.8	7.7	1	0.06	0.26	0.2	9	170	0.90	<0.05	2.6	1.5	<0.06	3.1	3.17	0.64	0.11	0.39	3.5
13-33	9.2	8.0	<1	0.06	0.19	<0.1	2	150	3.0	0.06	2.0	1.0	<0.06	2.6	3.34	0.58	0.11	0.33	na
33-44	9.1	8.0	1	0.06	0.21	0.2	<2	95	0.84	<0.05	2.8	1.1	<0.06	3.0	3.25	0.60	0.12	0.24	na
44-59	8.9	7.9	1	0.05	0.28	0.2	<2	65	11	<0.05	4.3	0.61	<0.06	2.7	2.92	0.70	0.11	0.21	na
59-83	8.9	7.9	<1	0.05	0.30	<0.1	<2	76	1.0	<0.05	3.4	0.48	<0.06	3.1	2.87	0.91	0.14	0.15	4.5
83-120	9.1	7.9	1	0.07	0.32	<0.1	<2	73	11	0.06	31	0.34	<0.06	4.1	3.56	1.16	0.16	0.19	3.9
120-180	9.2	8.2	3	0.07	0.25	<0.1	<2	88	<0.50	0.09	2.0	0.39	<0.06	2.8	3.68	1.25	0.22	0.22	na
180-210	9.3	8.2	4	0.07	0.27	<0.1	<2	120	22	0.10	1.2	0.48	<0.06	2.6	3.27	1.36	0.16	0.27	na
210-240	9.4	8.3	3	0.08	0.18	<0.1	<2	190	<0.50	0.07	1.3	0.45	<0.06	3.0	2.91	1.89	0.22	0.51	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.