

BLEACHED SILICEOUS SAND

General Description: *Thick bleached sand with an organically darkened surface and a yellow or brown sandy subsoil*

Landform: Undulating to rolling rises overlain in places by irregular sandhills.

Substrate: Windblown Molineaux Sand.

Vegetation: Mallee heath



Type Site: Site No.: MM099

1:50,000 sheet: 6926-3 (Tintinara)
 Annual rainfall: 455 mm
 Landform: Crest of low sandhill
 Surface; Loose with no stones

Hundred: Lewis
 Sampling date: 09/03/93

Soil Description:

Depth (cm)	Description
0-13	Dark greyish brown loose sand. Clear to:
13-28	Yellowish brown loose sand. Gradual to:
28-60	Light yellowish brown loose sand. Diffuse to:
60-145	Brownish yellow, yellowish red and very pale brown speckled loose sand. Diffuse to:
145-220	Loose sand (as above) with lamellae of soft reddish yellow sandy loam.



Classification: Basic, Argic, Bleached-Orthic Tenosol; medium, non-gravelly, sandy / sandy, very deep

Summary of Properties

Drainage	Rapidly drained. The soil never remains wet for more than a few hours.
Fertility	Inherent fertility is very low, as indicated by the exchangeable cation data. Phosphorus, nitrogen, copper and zinc deficiencies can be expected. Manganese required by lupins. Phosphorus, copper and zinc appear to be deficient at the sampling site. Organic carbon concentrations are low.
pH	Neutral to slightly acidic at the surface, neutral at depth.
Rooting depth	60 cm in pit.
Barriers to root growth	
Physical:	No physical barriers.
Chemical:	No chemical barriers. Low nutrient retention capacity is the main reason for lack of root penetration.
Water holding capacity	35 mm in root zone.
Seedling emergence:	Satisfactory, but can be reduced by water repellence in dry years.
Workability:	Soft / 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	6.6	6.3	2	0.03	0.22	0.5	10	70	0.61	0.13	18	1.7	0.34	3.0	2.92	0.34	0.07	0.14	na
0-13	6.3	6.1	3	0.02	0.18	0.4	10	73	<0.4	0.14	18	2.2	0.45	2.9	2.32	0.28	0.08	0.13	na
13-28	6.0	5.7	2	0.01	0.13	0.2	9	<40	<0.4	0.07	30	0.47	0.11	2.5	1.59	0.19	0.08	0.07	na
28-60	6.8	6.7	1	0.01	0.08	<0.1	<2	<40	<0.4	<0.05	11	0.08	0.09	2.0	1.20	0.17	0.09	0.08	na
60-100	7.3	6.9	<1	0.01	0.08	<0.1	<2	42	<0.4	<0.05	7.5	0.09	0.09	2.8	1.43	0.29	0.09	0.11	na
100-145	7.1	6.8	<1	0.01	0.06	<0.1	<2	42	<0.4	<0.05	7.1	0.08	0.09	2.5	1.65	0.47	0.09	0.10	na
145-200	7.2	6.9	<1	0.01	0.05	<0.1	<2	49	<0.4	<0.05	6.0	0.15	0.12	2.7	1.53	0.51	0.10	0.13	na
200-220	7.3	6.9	<1	0.01	0.05	<0.1	<2	52	<0.4	<0.05	6.4	0.1	0.09	3.0	1.54	0.51	0.07	0.16	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.