

DEEP SAND OVER SANDY CLAY LOAM

General Description: *Very thick bleached sand over a weakly structured sandy clay loam*

Landform: Undulating rises

Substrate: Hard massive sandy Tertiary sediments (Parilla Sand equivalent)

Vegetation: Mallee



Type Site: Site No.: MM059

1:50,000 sheet: 7026-2 (Shaugh)

Hundred: Fisk

Annual rainfall: 425 mm

Sampling date: 26/08/92

Landform: Flat

Surface: Soft with no stones

Soil Description:

Depth (cm)	Description
0-13	Dark brown soft single grain light sandy loam. Abrupt to:
13-38	Brown soft single grain sand. Diffuse to:
38-70	Orange soft single grain sand. Diffuse to:
70-95	Orange soft single grain sand. Sharp to:
95-110	Red and yellowish brown sandy clay loam with weak coarse columnar structure. Gradual to:
110-150	Red and yellowish brown massive sandy loam. Diffuse to:
150-200	Red and yellowish brown massive sandy loam.



Classification: Haplic, Mesotrophic, Red Chromosol; very thick, non-gravelly, sandy / clay loamy, deep

Summary of Properties

Drainage	Well to rapidly drained. Soil never remains wet for more than a day following heavy or prolonged rainfall.
Fertility	Inherent fertility is low as indicated by the exchangeable cation data, low clay content and low organic carbon levels. Phosphorus and nitrogen applications are regularly required. Zinc and copper are often marginal (as at sampling site). Manganese may be needed for lupins.
pH	Slightly acidic throughout.
Rooting depth	110 cm in pit.
Barriers to root growth	
Physical:	The massive or coarsely structured and dense subsoil and substrate impose a slight restriction on root development
Chemical:	Low nutrient status and storage capacity limit root growth.
Water holding capacity	80 mm in root zone.
Seedling emergence:	Can be reduced by water repellence in dry years.
Workability:	Soft to loose surface is easily worked.
Erosion Potential	
Water:	Low.
Wind:	Moderate to 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	6.7	6.0	1	0.03	0.29	0.6	9	71	<0.4	0.15	16	3.8	0.52	2.6	1.95	0.36	0.07	0.11	na
0-13	6.5	5.9	<1	0.03	0.26	0.7	10	59	<0.4	0.14	21	3.2	0.57	3.2	2.50	0.41	0.06	0.13	na
13-38	6.2	5.9	<1	0.02	0.23	0.2	3	41	0.8	<0.05	24	0.11	<0.06	1.3	0.75	0.23	0.06	0.07	na
38-70	6.4	6.5	<1	0.02	0.22	<0.1	<2	43	0.5	<0.05	7.1	<0.06	<0.06	0.9	0.46	0.20	0.07	0.05	na
70-95	6.8	6.7	<1	0.02	0.26	<0.1	<2	56	<0.4	<0.05	6	0.08	<0.06	0.9	0.50	0.25	0.06	0.10	na
95-110	6.0	5.4	<1	0.03	0.3	<0.1	<2	64	<0.4	<0.05	4.6	<0.06	<0.06	5.0	1.83	1.76	0.14	0.15	2.8
110-150	5.7	5.2	<1	0.03	0.22	0.1	<2	46	0.5	<0.05	5.2	<0.06	<0.06	3.5	1.12	1.40	0.15	0.08	4.3
150-200	6.1	5.7	<1	0.03	0.25	<0.1	<2	<40	<0.4	<0.05	4.4	0.09	<0.06	3.0	0.92	1.41	0.17	0.08	5.7

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.