

SAND OVER BROWN SANDY CLAY

General Description: Sand to loamy sand over a brown sandy clay loam to sandy clay, calcareous from shallow depth

Landform: Gently undulating plains with extensive sandhills.

Substrate: Grey and yellow massive sandy clay (Parilla Sand equivalent)

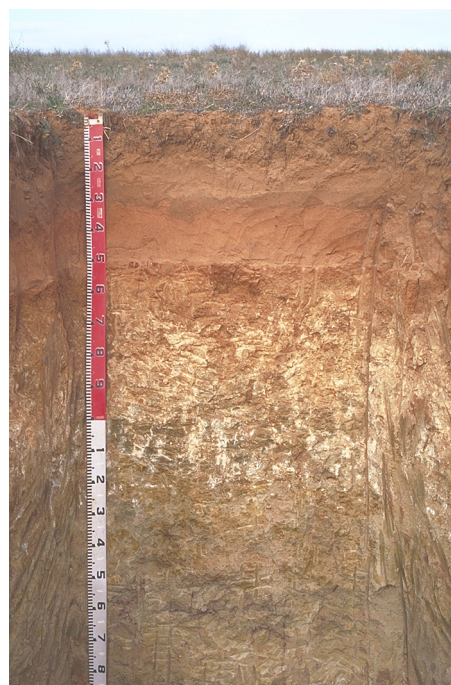
Vegetation: Mallee.



Type Site:	Site No.:	MM125	1:50,000 mapsheet:	7028-2 (Peebinga)
	Hundred:	Peebinga	Easting:	496790
	Section:	44	Northing:	6138130
	Sampling date:	22/05/1996	Annual rainfall:	285 mm average
	Swale, loose surface, no stones.			

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-16	Brown loose loamy sand (recent drift). Abrupt to:
16-26	Brown soft loamy sand (recent drift). Sharp to:
26-46	Orange soft loamy sand. Sharp to:
46-50	Light brown (bleached) soft loamy sand. Clear to:
50-65	Orange and light yellowish brown massive calcareous light sandy clay loam. Clear to:
65-80	Reddish yellow hard calcareous fine sandy light clay with weak coarse blocky structure and 20-50% fine carbonate. Clear to:
80-115	Light yellowish brown and olive brown hard very highly calcareous light medium clay with moderate blocky structure. Clear to:
115-155	Pale olive and olive brown hard massive fine sandy light clay. Gradual to:
155-190	Pale olive and olive brown hard massive fine sandy light clay.



Classification: Calcic, Mottled-Mesonatric, Yellow Sodosol; thick, non-gravelly, sandy / clayey, moderate



Summary of Properties

- Drainage:** Moderately well drained. Soil may remain wet for up to a week following heavy or prolonged rainfall.
- Fertility:** Inherent fertility is low as indicated by the exchangeable cation data. At the sampling site, phosphorus, copper and zinc are all deficient. Organic carbon levels are very low.
- pH:** Neutral at the surface, strongly alkaline with depth.
- Rooting depth:** 80 cm in pit, but few roots below 26 cm (ie mostly in drift sand surface).
- Barriers to root growth:**
- Physical:** Coarsely structured and dispersive clay prevents optimum root distribution.
 - Chemical:** High pH, sodicity and boron concentrations in the subsoil impede root growth, as does low fertility of surface layers.
- Waterholding capacity:** Approximately 50 mm in rootzone.
- Seedling emergence:** Satisfactory, although affected by water repellence in dry seasons.
- Workability:** Good - loose to soft surface is easily worked.
- Erosion Potential:**
- Water:** Low.
 - Wind:** Moderately low.

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	SO ₄ 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	7.0	6.5	0	0.04	0.32	0.4	9	181	3	0.5	0.21	21	4.28	0.38	3.0	2.48	0.68	0.19	0.36	6.2
0-16	6.9	6.5	0	0.07	0.70	0.5	11	190	4	0.6	-	-	-	-	3.5	2.66	0.67	0.14	0.34	4.1
16-26	8.2	7.7	<0.1	0.07	0.49	0.2	5	171	2	0.7	-	-	-	-	3.4	2.07	0.56	0.18	0.27	5.3
26-46	7.7	6.9	<0.1	0.03	0.24	0.3	<4	166	1	0.6	-	-	-	-	4.0	2.83	0.61	0.16	0.33	3.9
46-50	8.3	7.1	<0.1	0.02		0.1	<4	116	1	0.5	-	-	-	-	2.6	1.55	0.53	0.21	0.17	na
50-65	9.4	8.6	0.3	0.24	0.87	0.1	<4	328	2	5.6	-	-	-	-	8.9	2.29	4.20	1.18	0.80	20.4
65-80	9.7	8.8	10.1	0.62	2.34	0.1	<4	565	18	23.8	-	-	-	-	14.5	2.49	7.54	5.06	1.62	34.9
80-115	9.6	8.8	5.4	0.91	3.85	0.1	<4	760	61	24.3	-	-	-	-	23.5	2.11	9.54	11.09	2.07	47.3
115-155	8.7	8.0	<0.1	0.82	7.25	<0.1	<4	66	100	14.0	-	-	-	-	16.6	0.89	6.88	6.17	1.67	37.1
155-190	6.1	5.5	0	1.11	9.44	<0.1	5	554	133	8.9	-	-	-	-	13.6	0.61	5.40	5.44	1.32	40.0

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.

Further information: [DEWNR Soil and Land Program](#)

