DEEP SAND
(Moornaba soil)

General Description: *Very thick sand, calcareous and slightly more clayey with depth*

Landform: Longitudinal dunefield.

Substrate: Rubbly carbonate in a sandy matrix (Woorinen Formation overlain by Moornaba Sand).

Vegetation: Mallee / Melaleuca

No landscape image available

Type Site: Site No.: EF020

1:50,000 sheet:	5534-3 (Penong)	Hundred:	Out of Hundreds
Annual rainfall:	350 mm	Sampling date:	23/01/92
Landform:	Side slope (3%) of longitudinal dune		
Surface:	Loose with no stones		

Soil Description:

Depth (cm)	*Description*
0-8	Yellowish brown loose sand. Clear to:
8-42	Brownish yellow soft sand. Gradual to:
42-70	Orange firm massive loamy sand. Clear to:
70-100	Yellowish brown friable massive highly calcareous loamy sand. Abrupt to:
100-	Laminar Class IIIC carbonate.

Classification: Calcareous, Petrocalcic, Yellow-Orthic Tenosol; thick, non-gravelly, sandy / sandy, deep

Summary of Properties

Drainage Rapidly drained. The soil never remains wet for more than a few hours.

Fertility Inherent fertility is low as indicated by the exchangeable cation data. Regular phosphorus applications are necessary. Nitrogen levels depend on cropping history and medic content of volunteer pastures. Zinc, copper and manganese deficiencies are possible. At the sampling site (not on farmland), concentrations of all measured elements are low. Organic carbon levels are also low.

pH Alkaline throughout.

Rooting depth 42 cm in pit.

Barriers to root growth

Physical: There are no physical barriers to root growth.

Chemical: There are no chemical barriers to root growth other than low nutrient retention capacity and low nutrient status.

Water holding capacity Approximately 40 mm in the root zone.

Seedling emergence: Satisfactory, although water repellence may be a problem in dry seasons.

Workability: Soft / loose surface is easily worked.

Erosion Potential

Water: Low.

Wind: High.

Laboratory Data

Depth cm	pH H_2O	pH $CaC1_2$	CO_3 %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO_4-S 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	
0-8	8.0	7.5	0	0.04	0.3	0.21	3	47	-	0.8	0.12	4.5	1.5	0.08	2.2	1.8	0.3	0.15	0.13	na
8-42	8.3	7.7	0	0.06	0.4	<0.1	3	68	-	0.5	0.06	2.9	0.20	0.04	1.7	1.3	0.4	0.19	0.13	na
42-70	8.4	7.9	1	0.07	0.4	<0.1	3	96	-	0.6	0.10	3.2	0.20	0.04	3.6	3.3	0.8	0.26	0.24	na
70-100	8.6	7.9	7	0.08	0.4	0.17	3	-	-	0.6	0.19	1.7	0.33	0.08	2.4	2.9	0.6	0.24	0.16	na
100+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: 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