DEEP SAND

General Description: *Thick sand to loamy sand, becoming slightly more clayey and weakly calcareous with depth*

Landform: Gently undulating sand hill country

Substrate: Windblown Molineaux Sand, with minor secondary carbonates

Vegetation: Mallee

Type Site: Site No.: MM045

1:50,000 sheet:	6828-4 (Swan Reach)	Hundred:	Forster
Annual rainfall:	280 mm	Sampling date:	03/08/92
Landform:	Midslope of moderate sandhill, 4% slope		
Surface:	Loose with no stones		

Soil Description:

Depth (cm)	*Description*
0-11	Reddish brown loose loamy sand. Abrupt to:
11-35	Yellowish red soft loamy sand. Diffuse to:
35-64	Yellowish red very soft loamy sand. Abrupt to:
64-87	Red soft sandy loam. Clear to:
87-105	Yellowish red very soft loamy sand. Clear to:
105-150	Yellowish red very soft calcareous loamy sand. Diffuse to:
150-195	Yellowish red very soft calcareous loamy sand.

Minor fine quartz grit throughout.

Classification: Calcareous, Regolithic, Red-Orthic Tenosol; medium, non-gravelly, sandy / loamy, moderate

Summary of Properties

Drainage Rapidly drained. Soil never remains wet for more than a couple of hours following heavy or prolonged rainfall.

Fertility Inherent fertility is low, as indicated by the exchangeable cation data, and low clay and organic matter contents. Phosphorus, nitrogen, zinc and copper deficiencies are likely (all appear to be deficient at sampling site). Organic carbon levels are also low.

pH Neutral to slightly alkaline at the surface, alkaline with depth.

Rooting depth 195 cm in pit, but few roots below 87 cm.

Barriers to root growth

Physical: No physical barriers.

Chemical: No chemical barriers, but low nutrient retention capacity and status limit root growth.

Water holding capacity Approximately 55 mm in root zone.

Seedling emergence: Slightly impeded by water repellence at the surface.

Workability: Loose / soft surface is easily worked.

Erosion Potential

Water: Low.

Wind: Moderately 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	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	7.3	7.1	<0.1	0.06	0.27	0.43	<5	160	0.6	0.1	4.3	3.0	0.2	3.2	3.53	0.79	0.15	0.22	4.7
0-11	7.3	7.1	<0.1	0.06	0.36	0.53	<5	140	0.6	0.1	4.9	3.3	0.3	3.3	3.93	0.83	0.15	0.29	4.5
11-35	8.2	7.8	<0.1	0.05	0.17	0.09	<5	71	0.4	0.1	2.4	0.2	0.4	2.4	2.23	0.40	0.14	0.09	na
35-64	8.5	8.1	<0.1	0.07	0.18	0.05	<5	64	0.5	0.1	2.2	0.1	0.4	2.4	2.33	0.51	0.19	0.11	na
64-87	8.5	8.1	<0.1	0.08	0.22	0.09	<5	92	1.0	0.2	4.0	0.1	0.2	4.9	4.58	2.02	0.23	0.21	4.7
87-105	8.6	8.2	<0.1	0.07	0.23	0.05	<5	96	0.8	0.2	3.5	0.2	0.3	4.4	3.64	2.18	0.24	0.16	5.5
105-150	9.0	8.4	1.0	0.08	0.23	0.03	<5	65	0.6	0.2	1.6	0.2	0.2	3.2	2.29	1.74	0.23	0.11	7.2
150-195	9.3	8.6	3.2	0.10	0.35	0.03	<5	70	0.9	0.1	1.1	0.1	0.2	1.8	1.45	1.44	0.30	0.09	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.