THICK SAND OVER RED SANDY CLAY LOAM
(Sandhill soil)

General Description: *Thick sandy surface soil overlying a red sandy clay loam with abundant carbonate accumulations at depth*

Landform: Low sand dunes

Substrate: Bungunnia Limestone capped by secondary carbonate

Vegetation: Eucalyptus socialis, Triodia spp. and Myoporum spp.

Type Site: Site No.: CM076

1:50,000 sheet:	6830-2 (Bunyung)	Hundred:	Bunyung
Annual rainfall:	220 mm	Sampling date:	18/11/96
Landform:	Low sand rise on a gently undulating plain		
Surface:	Soft with no stones		

Soil Description:

Depth (cm)	*Description*
0-10	Reddish brown loose loamy sand. Abrupt to:
10-25	Red soft loamy sand. Gradual to:
25-50	Red friable light loamy sand. Abrupt to:
50-56	Light red friable light loamy sand. Abrupt to:
56-65	Red hard light sandy clay loam with weak blocky structure. Abrupt to:
65-90	Red hard very highly calcareous sandy clay loam with weak coarse prismatic structure and 10-20% fine carbonate. Clear to:
90-115	Red hard moderately calcareous light sandy clay loam with weak coarse prismatic structure and 2-10% nodular carbonate. Abrupt to:
115-130	Orange very highly calcareous light sandy clay loam with more than 50% nodular (Class III C) carbonate. Abrupt to:
130-140	Limestone.

Classification: Sodic, Lithocalcic, Red Kandosol; thick, non-gravelly, sandy / clay loamy, deep

Summary of Properties

Drainage Rapidly drained. The soil is never likely to remain wet for more than a few hours.

Fertility Inherent fertility is low due to low clay content.

pH Neutral at surface, strongly alkaline with depth.

Rooting depth 130 cm in pit, but few roots below 115 cm.

Barriers to root growth

Physical: No physical barriers.

Chemical: Very high pH and sodicity from 65 cm.

Water holding capacity Approximately 110 mm in root zone.

Seedling emergence: Good.

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	
Paddock	7.0	6.9	0	0.03	0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0-10	7.3	6.9	0	0.03	0.22	-	-	-	-	-	-	-	-	-	4.7	2.9	0.8	0.14	0.40	3.0
10-25	6.7	6.1	0	0.05	0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25-50	8.0	6.9	0	0.03	0.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50-56	8.2	7.0	0	0.04	0.23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56-65	8.8	8.1	0	0.16	0.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65-90	9.3	8.3	5	0.23	0.65	-	-	-	-	-	-	-	-	-	8.5	4.3	3.7	1.60	0.50	18.8
90-115	9.4	8.4	1	0.25	0.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
115-130	9.7	8.3	19	0.31	0.80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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.