

DEEP SAND (Sandhill soil)

General Description: *Thick red sand becoming more clayey and calcareous with depth*

Landform: Slopes and crests of low sand dunes and rises

Substrate: Highly calcareous sandy to loamy windblown material

Vegetation: Saltbush, Sugarwood and Bullock bush shrubland



Type Site: Site No.: CM068

1:50,000 sheet: 6831-3

Hundred:

Out of Hundreds

Annual rainfall: 215 mm

Sampling date:

06/10/95

Landform: Upper slope of low sand rise, 2% slope

Surface: Soft with no stones

Soil Description:

Depth (cm)	Description
0-10	Red soft loamy sand. Clear to:
10-40	Red soft loamy sand. Abrupt to:
40-85	Red soft highly calcareous sand. Sharp to:
85-93	Red firm highly calcareous clayey sand with weak subangular blocky structure. Abrupt to:
93-115	Red firm very highly calcareous sandy clay loam with weak subangular blocky structure and 20-50% soft carbonate. Gradual to:
115-140	Red firm highly calcareous sandy clay loam with weak subangular blocky structure and 10-20% soft carbonate.



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

Summary of Properties

Drainage Rapidly drained - the soil is never wet for more than an hour or so.

Fertility Inherent fertility is low, due to the low clay content.

pH Neutral at the surface, strongly alkaline with depth.

Rooting depth Roots to 140 cm, but few roots below 85 cm.

Barriers to root growth

Physical: No physical barriers.

Chemical: High pH and sodicity (from 85 cm), high boron (from 115 cm), and marginal salinity (from 93 cm).

Water holding capacity More than 100 mm (high).

Seedling emergence: Good

Erosion Potential

Water: Low

Wind: 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	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	
0-10	7.1	6.4	0	0.02	0.14	0.2	10	232	5	0.0	0.32	4.9	3.8	0.26	3.7	3.10	0.90	0.10	0.38	2.7
10-40	7.6	6.7	0	0.02	0.19	0.1	4	221	5	0.1	-	-	-	-	3.2	3.09	0.84	0.09	0.41	2.8
40-85	9.1	8.4	0.7	0.08	0.39	0.1	<4	222	6	0.4	-	-	-	-	3.7	3.04	1.32	0.30	0.38	8.1
85-93	9.5	8.8	0.2	0.43	3.28	0.1	<4	449	10	1.3	-	-	-	-	8.4	2.53	3.13	2.43	1.00	28.9
93-115	9.6	8.5	20.2	0.80	6.33	<0.1	<4	620	59	9.2	-	-	-	-	9.6	2.99	4.32	3.73	1.55	38.9
115-140	9.6	8.5	18.4	0.91	6.41	<0.1	<4	532	98	20.3	-	-	-	-	8.0	2.29	3.72	3.58	1.26	44.8

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.