

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 mapsheet: | 6831-3 |
| District: | Eastern Districts | Easting: | 381080 |
| Property: | Sturtvale | Northing: | 6307750 |
| Sampling date: | 6/10/95 | Annual rainfall: | 205 mm average |

Upper slope of low sand rise, soft surface, 2% slope.

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).

Waterholding 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 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.

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

