

SANDY LOAM OVER RED CLAY ON CALCRETE

General Description: *Sandy loam over red sandy clay on calcrete within 50 cm of the surface*

Landform: Gently undulating rises.

Substrate: Calcrete.

Vegetation:



Type Site: Site No.: CY012

1:50,000 sheet: 6428-3 (Minlaton)

Hundred: Minlacowie

Annual rainfall: 440 mm

Sampling date: 09/12/92

Landform: Depression

Surface: Hard setting with minor calcrete stone (20-60 mm)

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-10	Dark reddish brown friable massive sandy loam. Clear to:
10-25	Yellowish red friable massive light sandy clay loam. Clear to:
25-51	Red hard slightly calcareous medium clay with moderate coarse angular blocky structure. Clear to:
51-71	Fragmentary calcrete pan. Abrupt to:
71-	Massive calcrete pan.



Classification: Haplic, Petrocalcic, Red Chromosol; medium, non-gravelly, loamy / clayey, moderate

Summary of Properties

Drainage	Moderately well drained. The soil may remain wet for a week or so following heavy or prolonged rainfall. This is due to the position of the site in a depression, and the possibility that the calcrete is unfractured.
Fertility	The soil's natural capacity to retain nutrients is high in the subsoil and moderate in the surface layers as indicated by the exchangeable cation data. Surface fertility relies on organic matter levels which are adequate, and on phosphorus levels which are low at this site. Potassium levels are adequate, but zinc is low according to the DTPA test.
pH	Neutral throughout.
Rooting depth	51 cm in pit.
Barriers to root growth	
Physical	The calcrete prevents virtually any root growth, unless it is fractured.
Chemical	There are no chemical barriers to root growth above the calcrete.
Water holding capacity	Approximately 85 mm in the rootzone.
Seedling emergence	Good to fair. Organic matter levels need to be maintained to preserve surface structure.
Workability	Good to fair.
Erosion Potential	
Water	Low.
Wind	Moderately low.

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	
Paddock	6.5	5.8	<1	0.08	0.38	1.2	11	590	-	1.9	0.34	32	20	0.26	9.4	7.28	1.18	0.27	1.36	2.9
0-10	6.6	6.1	<1	0.10	0.55	1.7	16	660	-	1.6	0.37	34	21	0.41	10.4	8.14	1.25	0.20	1.47	1.9
10-25	6.7	6.0	<1	0.04	0.23	0.19	6.3	360	-	1.2	0.33	8.9	6.4	0.08	7.9	5.73	1.46	0.17	0.79	2.2
25-51	7.5	6.8	2	0.06	0.16	0.12	<2.0	350	-	3.8	0.90	9.1	6.6	0.11	27.9	16.1	5.43	0.71	1.23	2.5
51-71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Paddock sample bulked from 20 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