

RED CLAY LOAM ON CALCRETED CALCARENITE

General Description: *Red loam to clay loam grading to a well structured red clay on limestone or calcrete at shallow to moderate depth*

Landform: Low ridges (old coastal dunes) separated by corridors (old lagoon floors).

Substrate: Calcreted calcarenite.

Vegetation:



Type Site:	Site No.:	SE009	1:50,000 mapsheet:	7023-2 (Penola)
	Hundred:	Comaum	Easting:	484900
	Section:	154	Northing:	5871000
	Sampling date:	12/10/1992	Annual rainfall:	650 mm average

Upper slope of low rise, 2% slope. Firm surface with 2-10% calcrete (20-60 mm).

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-12	Dark reddish brown friable clay loam with strong fine polyhedral structure and 2-10% calcrete stones (6-200 mm). Gradual to:
12-31	Dark reddish brown friable clay loam with strong fine polyhedral structure and 20-50% calcrete fragments (60-200 mm). Gradual to:
31-37	Dark reddish brown friable light clay with strong fine polyhedral structure and 2-10% calcrete stones (6-200 mm). Sharp to:
37-140	Calcrete capped calcarenite.



Classification: Haplic, Petrocalcic, Red Dermosol; thick, slightly gravelly, clay loamy / clayey, shallow



Summary of Properties

Drainage: Soil is well drained and rarely remains saturated for more than a day or so following heavy or prolonged rainfall.

Fertility: Inherent fertility is high, as indicated by the exchangeable cation data. High calcium saturation and organic matter levels augment fertility. There are no apparent nutrient deficiencies.

pH: Alkaline throughout.

Rooting depth: Some root penetration into calcrete, but most growth is in the upper 37 cm.

Barriers to root growth:

Physical: The calcrete cap on the calcarenite is an effective root barrier.

Chemical: There are no chemical barriers.

Waterholding capacity: Approximately 75 mm in the rootzone.

Seedling emergence: Satisfactory.

Workability: Firm surface is easily worked.

Erosion Potential:

Water: Low.

Wind: 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	
0-12	8.0	7.4	3.0	0.12	-	2.1	29	350	-	2.1	6.1	9.7	16	1.6	25.6	21.5	1.6	0.19	0.94	0.7
12-31	8.1	7.4	1.8	0.12	-	1.2	6.4	140	-	2.1	0.25	12	11	0.78	21.3	20.3	0.8	0.36	0.46	1.7
31-37	8.3	7.7	19.0	0.15	-	2.2	8.6	70	-	1.0	0.22	18	11	0.42	24.7	23.1	0.6	0.47	0.34	1.9
37-140	8.8	7.8	96.2	0.09	0.24	<0.1	<4	28	-	0.6	0.4	1	1.3	0.2	1.1	1.92	0.08	0.14	0.06	na

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](#)

