

RED CALCAREOUS LOAM

General Description: *Calcareous loam grading to a very highly calcareous well structured red clayey subsoil*

Landform: Very gentle slopes and flats.

Substrate: Coarsely structured red clay with gypsum crystals.

Vegetation: *Marieana astrosticha*, *Casuarina cristata*, *Atriplex vesicaria*.



Type Site: Site No.: CM081

1:50,000 sheet: 6831-4

Hundred: Out of Hundreds

Annual rainfall: 210 mm

Sampling date: 19/11/96

Landform: Lower slope of 1%

Surface: Scald with a surface crust, 20-50% ironstone and 2-10% quartz gravel

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-10	Dark reddish brown highly calcareous light clay loam with moderate granular structure and 10-20% ironstone fragments. Clear to:
10-35	Red very highly calcareous clay loam with moderate polyhedral structure and 10-20% ironstone fragments. Clear to:
35-70	Red very highly calcareous light clay with strong polyhedral structure, 10-20% ironstone fragments and 10-20% soft carbonate. Diffuse to:
70-120	Red very highly calcareous light medium clay with strong polyhedral structure, 2-10% ironstone fragments and 20-50% soft carbonate. Diffuse to:
120-155	Dark red moderately calcareous heavy clay with strong coarse blocky structure and 10-20% crystalline gypsum.



Classification: Epihypersodic, Pedal, Hypercalcic Calcarosol; thick, moderately gravelly, clay loamy / clayey, deep

Summary of Properties

Drainage	Well drained. The soil is unlikely to remain wet for more than a few days following prolonged rain. The scalded surface tends to shed water.
Fertility	Natural fertility is high as indicated by the exchangeable cation data.
pH	Alkaline throughout.
Rooting depth	120 cm in pit, but few roots below 70 cm.
Barriers to root growth	
Physical:	None until the heavy substrate clay which is too hard and coarsely structured to allow good root distribution.
Chemical:	High sodicity and marginal salinity. High boron above the substrate clay is probable.
Water holding capacity	Approximately 80 mm in rootzone.
Seedling emergence:	Fair to poor due to the crusted surface.
Erosion Potential	
Water:	Moderate, due to poor cover.
Wind:	Moderately low - stock will pulverize the surface creating a wind erosion hazard.

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	8.3	7.9	3	0.85	5.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0-10	8.8	8.0	3	0.20	0.99	-	-	-	-	-	-	-	-	16.2	9.8	2.9	0.82	3.09	5.1	
10-35	8.8	8.1	6	1.34	6.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35-70	8.5	8.2	22	2.33	8.02	-	-	-	-	-	-	-	-	15.4	5.4	6.1	4.04	0.97	26.2	
70-120	8.8	8.5	35	2.29	8.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
120-155	8.3	8.2	14	4.43	8.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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.