

GRADATIONAL RED LOAM

General Description: *Red clay loam grading to a red weakly structured clay, calcareous with depth*

Landform: Alluvial fans and flats

Substrate: Variably gravelly sandy clay alluvium and slope wash (Telford Gravel).

Vegetation: *Acacia aneura*, *Marieana sedifolia*.



Type Site: Site No.: CM082

1:50,000 sheet: 6831-1	Hundred: Out of Hundreds
Annual rainfall: 210 mm	Sampling date: 19/11/96
Landform: Very gently inclined alluvial fan, 1% slope	
Surface: Firm with trace of ironstone gravel	

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-15	Red fine sandy clay loam with weak granular structure. Clear to:
15-35	Red light clay with weak polyhedral structure. Gradual to:
35-70	Red very highly calcareous massive light medium clay with 20-50% soft, and 10-20% nodular carbonate. Diffuse to:
70-110	Red very highly calcareous massive light clay with 20-50% nodular (Class III B) carbonate. Diffuse to:
110-150	Red highly calcareous sandy light clay with weak blocky structure and more than 50% quartzite, siltstone, calcrete and ironstone gravel.



Classification: Sodic, Supracalcic, Red Kandosol; medium, non-gravelly, clay loamy / clayey, deep

Summary of Properties

Drainage Well drained - the soil is unlikely to remain wet for more than a day or so following prolonged rain.

Fertility Natural fertility is high as indicated by the exchangeable cation data.

pH Alkaline throughout.

Rooting depth More than 150 cm.

Barriers to root growth

Physical: None, except where gravel beds are impenetrable.

Chemical: None.

Water holding capacity Approximately 140 mm in root zone.

Seedling emergence: Good

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	8.3	7.7	0	0.14	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0-15	8.0	7.6	0	0.08	0.39	-	-	-	-	-	-	-	-	-	16.3	11.3	2.0	0.16	1.57	1.0
15-35	8.2	7.7	0	0.11	0.35	-	-	-	-	-	-	-	-	-	20.7	15.8	2.5	0.28	1.25	1.4
35-70	8.6	7.8	24	0.13	0.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70-110	8.7	7.9	16	0.14	0.32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110-150	8.8	8.0	11	0.16	0.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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.