

CALCAREOUS SANDY LOAM

General Description: *Calcareous sandy loam overlying a very highly calcareous rubbly sandy loam becoming less rubbly and more clayey with depth and grading to sandy substrate within 100 cm.*

Landform: Undulating rises

Substrate: Coarse to medium grained
Tertiary age sediments
mantled by fine carbonate

Vegetation: Mallee scrub



Type Site: Site No.: MM148

1:50,000 sheet: 6828-3 (Caurnamont) Hundred: Younghusband
Annual rainfall: 300 mm Sampling date: 03/10/01
Landform: Crest of undulating rise, 4% slope
Surface: Soft with 2-10% calcrete stone to 200 mm

Soil Description:

Depth (cm)	Description
0-10	Dark reddish brown soft single grain moderately calcareous light sandy loam with 2-10% calcrete nodules to 20 mm. Clear to:
10-30	Friable yellowish red massive very highly calcareous heavy sandy loam with 20-50% calcrete nodules to 20 mm (Class III B carbonate). Gradual to:
30-60	Pink and yellowish red firm massive very highly calcareous sandy clay loam with more than 50% fine carbonate segregations. Gradual to:
60-80	Strong brown and reddish yellow firm massive very highly calcareous sandy clay loam with 20-50% fine carbonate segregations. Gradual to:
80-110	Strong brown and brown firm massive highly calcareous light sandy clay loam.



Classification: Epihypersodic, Regolithic, Supracalcic Calcarosol: medium, slightly gravelly, loamy / clay loamy, deep

Summary of Properties

- Drainage:** Rapidly drained. The soil is unlikely to remain wet for more than a few hours.
- Fertility:** Inherent fertility is moderately low. Relatively low surface clay content restricts nutrient holding potential, and high carbonate levels at shallow depth reduce availability of zinc, manganese and phosphorus. Organic carbon concentrations are satisfactory for this environment.
- pH:** Alkaline at the surface, strongly alkaline from 30 cm.
- Rooting depth:** 80 cm in pit but few roots below 60 cm.
- Barriers to root growth:**
- Physical:** There are no physical barriers.
 - Chemical:** High pH from 30 cm and high sodicity from 80 cm limit root growth.
- Water holding capacity:** Approximately 80 mm in the root zone.
- Seedling emergence:** Satisfactory, although water repellence may be a problem in some seasons.
- Workability:** The soft surface is easily worked.

Erosion Potential

- Water:** Low.
- Wind:** Moderately low to moderate.

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	
0-10	8.5	7.5	2.8	0.11	-	1.09	22	276	4.0	1.5	-	-	-	-	11.5	9.76	1.11	0.06	0.63	0.5
10-30	8.7	8.2	23.0	0.13	-	0.73	2	212	4.3	2.7	-	-	-	-	14.5	10.94	2.69	0.28	0.59	1.9
30-60	9.4	8.4	45.9	0.26	-	0.38	2	393	4.0	8.0	-	-	-	-	15.0	6.06	5.67	2.29	0.99	15.3
60-80	9.6	8.7	42.5	0.36	-	0.23	2	471	2.7	9.9	-	-	-	-	12.1	3.20	4.78	2.89	1.23	23.9
80-110	9.8	8.8	28.7	0.38	-	0.12	2	611	2.3	11.5	-	-	-	-	6.2	2.20	3.58	3.20	1.56	30.4

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.