

CALCAREOUS SANDY LOAM

General Description: *Calcareous sandy loam to light sandy clay loam becoming more clayey and calcareous with depth over variable rubbly calcrete (sometimes indurated to sheet calcrete)*

Landform: Flats in a very gently undulating landscape

Substrate: Calcreted Tertiary sandy clay and clay

Vegetation: Mallee



Type Site: Site No.: MR002

1:50,000 sheet: 7029-3 (Loxton)

Hundred: Gordon

Annual rainfall: 275 mm

Sampling date: 24/06/93

Landform: Flat between gentle rises

Surface: Firm with no stones

Soil Description:

Depth (cm)	Description
0-10	Dark reddish brown soft moderately calcareous light sandy clay loam. Clear to:
10-20	Reddish brown firm highly calcareous light sandy clay loam. Abrupt to:
20-40	Yellowish red friable very highly calcareous light sandy clay loam. Clear to:
40-60	Yellowish red friable very highly calcareous sandy clay loam with 20-50% fine carbonate segregations. Clear to:
60-80	Red friable very highly calcareous sandy light clay with 20-50% fine carbonate segregations. Clear to:
80-90	Rubbly calcrete. Sharp to:
90-91	Sheet calcrete.



Classification: Ceteric, Petrocalcic, Hypercalcic Calcarosol; thick, non-gravelly, loamy / clayey, moderate

Summary of Properties

Drainage Well drained. The soil is unlikely to remain wet for more than a day or so following heavy or prolonged rainfall, or irrigation.

Fertility Natural fertility is moderate, as indicated by the exchangeable cation data. All measured nutrient elements are well supplied. Organic carbon levels are moderate.

pH Alkaline throughout.

Rooting depth 80 cm in pit, but few roots below 60 cm.

Barriers to root growth

Physical: There are no physical barriers above the calcrete. This would be a major barrier at shallower depth (eg less than 40 cm).

Chemical: There are no apparent chemical barriers to root growth.

Water holding capacity Approximately 120 mm total available and 60 mm readily available water at the sampling site.

Seedling emergence: No impediments to establishment of cover crops.

Workability: Good.

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	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	8.4	8.0	4.1	0.17	1.00	1.1	112	560	1.1	9.7	4	9.2	6.0	11.2	8.7	2.9	0.50	1.77	4.5
10-20	8.6	8.1	5.2	0.13	0.80	0.6	27	349	0.9	2.7	4	4.3	3.2	9.5	8.6	2.7	0.43	1.20	4.5
20-40	8.6	8.1	12.0	0.14	0.92	0.5	5	208	0.9	0.7	3	2.6	0.3	9.0	9.8	2.9	0.59	0.80	6.6
40-60	8.8	8.2	31.0	0.16	0.80	0.5	4	200	1.7	0.7	2	1.2	0.2	10.3	8.2	4.2	0.78	0.81	7.6
60-80	8.8	8.2	28.7	0.16	0.74	0.3	<4	226	2.5	0.8	2	1.1	0.4	11.6	8.5	4.9	0.70	0.92	6.0
80-91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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.