

CALCAREOUS SANDY LOAM (Bookabie / Wiabuna soil)

General Description: *Calcareous sandy loam grading to a very highly calcareous sandy clay loam with variable rubble, continuing below 120 cm*

Landform: Gently undulating rises.

Substrate: Very highly calcareous clayey sand to sandy clay (Woorinen Formation).

Vegetation: Mallee / bluebush



Type Site: Site No.: EF028

1:50,000 sheet: 5534-3 (Penong)

Hundred: Catt

Annual rainfall: 325 mm

Sampling date: 09/03/88

Landform: Crest of low rise

Surface: Firm with no stones

Soil Description:

Depth (cm)	Description
0-10	Dark reddish brown highly calcareous sandy loam. Clear to:
10-30	Dark reddish brown highly calcareous light sandy clay loam. Gradual to:
30-60	Brown very highly calcareous light sandy clay loam. Clear to:
60-70	As above with more than 50% Class III C carbonate nodules. Clear to:
70-100	Orange very highly calcareous clayey sand. Gradual to:
100-140	Brownish yellow very highly calcareous fine sandy light clay with 10-20% Class III A carbonate nodules. Gradual to:
140-160	Reddish yellow very highly calcareous fine sandy light clay.



Classification: Hypervescent, Regolithic, Lithocalcic Calcarosol; very thick, non-gravelly, loamy / clay loamy, deep

Summary of Properties

- Drainage** Well drained. The soil is never wet for more than a few days.
- Fertility** Inherent fertility is moderately low. High carbonate content to the surface reduces the availability of phosphorus, zinc, manganese and copper.
- pH** Alkaline at the surface, strongly alkaline at depth.
- Rooting depth** 70cm in pit.
- Barriers to root growth**
- Physical:** There are no physical barriers.
 - Chemical:** High pH and boron concentrations from 60 cm limit root growth.
- Water holding capacity** Approximately 85 mm in the root zone.
- Seedling emergence:** Satisfactory.
- Workability:** Surface soil is firm to soft and easily worked.
- 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	
0-10	8.5	8.1		0.34	1.38					2.5	0.20	2.89	6.63	0.17						
10-30	8.8	8.3		0.20	0.74					3.2	0.29	1.89	3.41	0.10						
30-60	9.3	8.6		0.44	3.01					11.0	0.24	2.51	1.66	0.06						
60-70	9.9	8.8		1.14	8.82					28.0	0.57	1.45	0.48	0.25						
70-100	9.9	8.8		1.30	9.70					34.4	0.32	2.96	0.37	0.19						
100-140	9.9	8.8		1.20	9.26					28.1	0.34	2.61	0.50	0.13						
140-160	9.7	8.6		1.40	13.52					26.8	0.33	2.29	0.62	0.10						

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