

HIGHLY CALCAREOUS SANDY LOAM (Sandy Wookata soil)

General Description: *Very highly calcareous sandy loam over very highly calcareous coarse grained Woorinen Formation deposits*

Landform: Undulating rises.

Substrate: Calcreted calcarenite
(Bridgewater Formation).

Vegetation:

Type Site:	Site No.:	EC097	1:50,000 mapsheet:	5830-1 (Elliston)
	Hundred:	Ward	Easting:	487690
	Section:	123	Northing:	6282420
	Sampling date:	23/11/1993	Annual rainfall:	410 mm average

Gentle slope of 2%. Soft surface with minor calcrete stone.

Soil Description:

Depth (cm)	Description
0-15	Very dark greyish brown soft very highly calcareous sandy loam with weak fine subangular blocky structure. Diffuse to:
15-30	Brown soft very highly calcareous loamy sand. Diffuse to:
30-90	Light brown soft very highly calcareous loamy sand with 2-10% carbonate concretions. Sharp to:
90-	Calcrete.



Classification: Supravescent, Petrocalcic, Hypercalcic Calcarosol; medium, non-gravelly, loamy / sandy, moderate



Summary of Properties

Drainage:	Rapidly drained. The soil is never wet for more than a few hours.
Fertility:	Inherent fertility is low, although high surface organic carbon boosts nutrient retention capacity. Regular phosphorus applications are needed - concentrations at sampling site are adequate. Nitrogen levels depend on legume status of pastures and cropping history. Copper and zinc deficiencies are likely - zinc is marginally deficient.
pH:	Alkaline throughout.
Rooting depth:	90 cm in pit.
Barriers to root growth:	
Physical:	There are no physical barriers until the calcrete - depth to calcrete is critical in determining rootzone depth.
Chemical:	There are no chemical barriers.
Waterholding capacity:	Approximately 100 mm in rootzone.
Seedling emergence:	Satisfactory.
Workability:	Soft surface is easily worked.
Erosion Potential:	
Water:	Low.
Wind:	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 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	
0-15	8.3	7.6	62	0.18	0.61	2.0	26	650	-	2.7	0.30	4.2	4.9	0.39	15.4	14.72	2.00	0.32	1.50	2.1
15-30	8.4	7.6	73	0.19	0.72	1.0	4.4	290	-	1.7	0.15	3.6	1.3	0.15	9.6	10.07	1.71	0.32	0.71	3.3
30-90	8.9	7.6	78	0.31	2.50	0.46	4.4	150	-	2.2	0.13	2.3	0.53	0.10	5.0	4.23	2.09	0.86	0.44	17.2

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.

Further information: [DEWNR Soil and Land Program](#)

