

SHALLOW CLAY LOAM OVER CALCRETE

(Terre soil)

General Description: Sandy loam to clay loam over calcrete within 50 cm of the surface

Landform: Stony flats and gently undulating rises.

Substrate: Calcreted calcarenite of the Bridgewater Formation.

Vegetation:



Type Site:	Site No.:	EC090	1:50,000 mapsheet:	5830-1 (Elliston)
	Hundred:	Ward	Easting:	494060
	Section:	125	Northing:	6282880
	Sampling date:	12/11/1993	Annual rainfall:	410 mm average

Very gentle slope of 2%. Firm surface with extensive areas of exposed sheet calcrete.

Soil Description:

Depth (cm)	Description
0-5	Dark reddish brown firm clay loam with strong medium angular blocky structure. Gradual to:
5-15	Reddish brown friable moderately calcareous clay loam with strong fine angular blocky structure and 2-10% fine calcrete fragments. Sharp to:
15-	Calcrete



Classification: Epibasic, Petrocalcic, Calcic Calcarosol; medium, non-gravelly, clay loamy / clay loamy, very shallow



Summary of Properties

Drainage: Well drained. The soil rarely remains wet for more than a day or so following heavy or prolonged rainfall, provided that the underlying calcrete is fractured. If not, water may lie on depressions in the calcrete for a week or so.

Fertility: Inherent fertility (ie nutrient retention capacity) is high, as indicated by the exchangeable cation data. However, natural phosphate levels are low, and regular applications are needed to maintain adequate concentrations. Apart from nitrogen, other nutrient elements should not be limiting. Organic carbon levels are very high.

pH: Alkaline throughout.

Rooting depth: 15 cm in pit.

Barriers to root growth:

Physical: The calcrete prevents deeper root growth.

Chemical: There are no chemical limitations.

Waterholding capacity: Approximately 30 mm in the rootzone.

Seedling emergence: Satisfactory.

Workability: The firm surface is easily worked, but sheet rock at or near the surface generally prevents cultivation. Bridgewater calcrete is generally rippable, a necessity for the establishment of perennial crops such as vines.

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	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	
0-5	8.0	7.6	0.3	0.16	0.64	3.1	9	736	-	2.0	0.3	7	7.0	0.5	35.9	28.0	4.4	1.27	3.52	3.5
5-15	8.3	7.8	3.4	0.19	0.58	1.5	6	534	-	0.8	0.3	5	4.6	0.3	39.1	30.0	5.2	1.92	2.97	4.9

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](#)

