

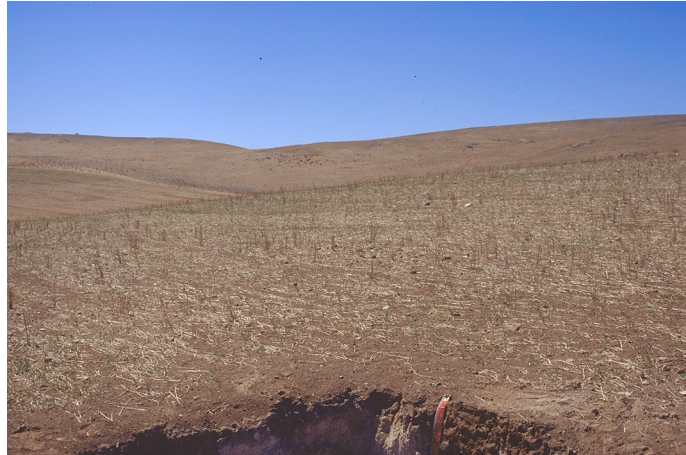
## SHALLOW CALCAREOUS LOAM

**General Description:** *Calcareous brown to grey loam, becoming more calcareous and usually more clayey with depth, grading to weathering calcareous basement rock within 100 cm.*

**Landform:** Undulating to rolling rises and low hills.

**Substrate:** Fine grained basement rock, either calcareous or mantled by secondary carbonate.

**Vegetation:**

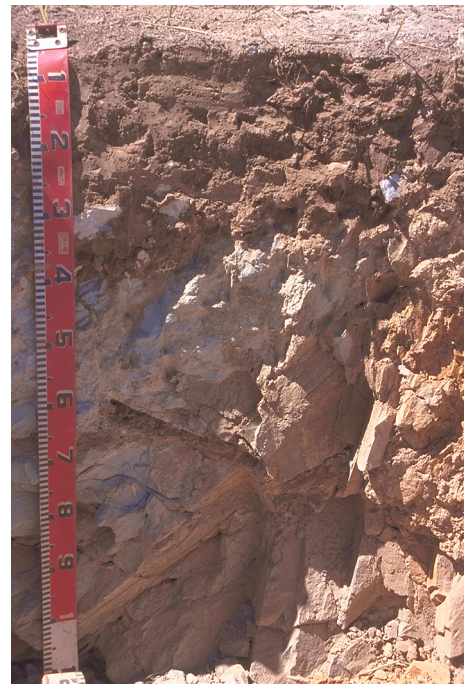


<b>Type Site:</b>	Site No.:	CM912	1:50,000 mapsheet:	6630-1 (Burra)
	Hundred:	Ayres	Easting:	296500
	Section:	504	Northing:	6280100
	Sampling date:	21/03/2000	Annual rainfall:	465 mm average

Upper slope of undulating low hills, 10% slope. Firm surface with 2-10% fragments of calcareous siltstone (20-60 mm), and minor outcrop.

### Soil Description:

Depth (cm)	Description
0-13	Dark brown firm massive highly calcareous silty loam with 2-10% siltstone fragments (6-20 mm). Clear to:
13-27	Brown firm massive very highly calcareous silty loam with 2-10% siltstone fragments (6-20 mm). Gradual to:
27-40	Brown firm massive very highly calcareous silty clay loam with 20-50% fine carbonate segregations, and 2-10% siltstone and 10-20% calcrete fragments (20-60 mm). Gradual to:
40-70	Light grey firm massive highly calcareous silty loam with 20-50% siltstone fragments (20-60 mm). Gradual to:
70-110	Soft weathering siltstone.



**Classification:** Epihypersodic, Paralithic, Hypercalcic Calcarosol; medium, slightly gravelly, silty / silty, moderate



### Summary of Properties

**Drainage:** Rapidly drained. The soil rarely remains wet for more than a few hours following heavy or prolonged rainfall.

**Fertility:** Inherent fertility is moderately low. Low clay content, high carbonate content and high pH at the surface restrict nutrient retention capacity and nutrient availability.

**pH:** Alkaline at the surface, strongly alkaline with depth.

**Rooting depth:** 70 cm in pit, but few roots below 40 cm.

#### Barriers to root growth:

**Physical:** Basement rock is the only significant barrier, and then only if it is hard within 80 cm or so of the surface.

**Chemical:** High pH and sodicity, and marginal salinity, limit root growth below 40 cm.

**Waterholding capacity:** Approximately 70 mm in the rootzone.

**Seedling emergence:** Good.

**Workability:** Firm surface is easily worked, although rocky reefs prevent working of some parts of paddocks with these soils.

#### Erosion Potential:

**Water:** Moderate.

**Wind:** Moderately low.

### Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO <sub>4</sub> mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)				Sum cations cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
0-13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13-27	9.1	8.1	-	0.50	-	0.89	4	139	29	-	-	-	-	-	-	-	-	-	-	-
27-40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40-70	9.3	8.5	-	0.96	-	0.35	4	76	113	1.8	-	-	-	13.7	6.22	2.66	4.65	0.18	33.9	
70-110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Note:** Sum of cations (an estimate of cation exchange capacity or CEC) 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 estimated CEC.

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

