CALCAREOUS SANDY LOAM

(Black oak soil)

General Description: *Calcareous sandy loam over light rubble grading to very highly calcareous sandy clay loam with depth*

Landform: Low rises

Substrate: Fine grained sediment capped by soft carbonate

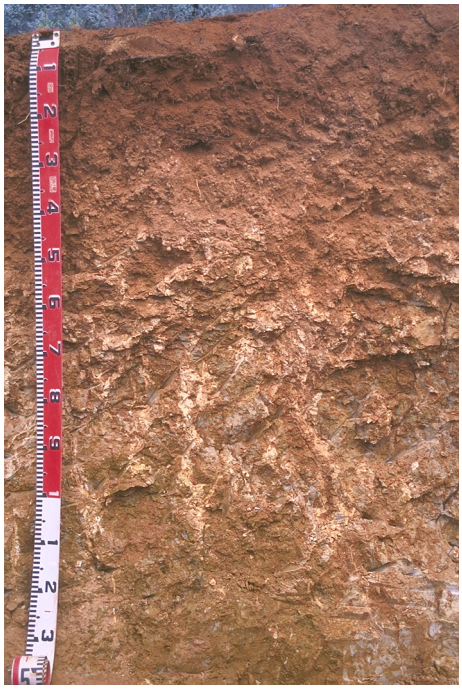
Vegetation: Black oak, pearl bluebush and bullock bush

Type Site:

Site No.:	CM069	1:50,000 mapsheet:	6831-3
District:	Eastern Districts	Easting:	380920
Property:	Sturtvale	Northing:	6307530
Sampling date:	6/10/95	Annual rainfall:	205 mm average

Upper slope of very low rise, 2% slope with a lichen crust surface.

Soil Description:



Depth (cm)	*Description*
0-20	Reddish brown soft highly calcareous sandy loam. Clear to:
20-45	Brown soft very highly calcareous light sandy clay loam with 20-50% carbonate rubble. Gradual to:
45-75	Orange and yellowish brown hard highly calcareous sandy clay loam with weak angular blocky structure and 10-20% soft carbonate. Diffuse to:
75-100	Orange and pale olive very hard slightly calcareous sandy clay loam with moderate angular blocky structure and 2-10% soft carbonate. Diffuse to:
100-140	Yellowish brown and light grey mottled very hard slightly calcareous sandy light clay with moderate angular blocky structure and 2-10% soft carbonate.

Classification: Epihypersodic, Regolithic, Supracalcic Calcarosol; medium, non-gravelly, loamy / clayey, deep

Summary of Properties

Drainage: Well drained. The soil is unlikely to remain wet for more than a day or so after heavy rain.

Fertility: Natural fertility is moderate. High carbonate content at shallow depth limits nutrient uptake.

pH: Alkaline throughout.

Rooting depth: 140 cm in pit, but few roots below 75 cm.

Barriers to root growth:

Physical: Slight limitation due to hard coarsely structured subsoil.

Chemical: High salinity (from 45 cm), high sodicity (from 75 cm) and high boron (from 100 cm) may have some effect on root development. The main limitation is competition from the casuarinas.

Waterholding capacity: Approximately 100 mm in main rootzone, with some additional storage below (although moisture unlikely to reach 75 cm in most years).

Seedling emergence: Good.

Erosion Potential:

Water: Low.

Wind: Moderately low.

Laboratory Data

Depth cm	pH H_2O	pH $CaC1_2$	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	
0-20	8.8	8.2	6.5	0.10	0.53	0.7	4	376	5	1.0	-	-	-	-	7.4	7.33	1.83	0.17	0.80	2.3
20-45	9.2	8.5	17.2	1.02	7.71	0.6	<4	331	72	4.0	-	-	-	-	7.7	5.28	3.69	1.40	0.70	18.2
45-75	9.2	8.7	13.5	1.31	10.6	0.2	<4	310	171	11.5	-	-	-	-	6.3	4.12	3.97	1.04	0.57	16.5
75-100	9.3	8.8	6.8	1.31	9.78	0.1	<4	291	152	15.4	-	-	-	-	7.5	2.59	4.54	2.83	0.56	37.7
100-140	9.0	8.7	0.4	1.80	10.6	0.1	<4	346	203	25.2	-	-	-	-	11.2	2.13	5.92	4.23	0.72	37.8

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