

ACIDIC SANDY LOAM OVER BROWN CLAY ON ROCK

General Description: *Stony grey sandy loam with a bleached A2 horizon overlying a brown, yellow and red friable clayey subsoil grading to weathering sandstone*

Landform: Hillslopes throughout the central and western Mt. Lofty Ranges

Substrate: Precambrian sandstone

Vegetation: Stunted stringybark forest



Type Site:	Site No.:	CH110	1:50,000 mapsheet:	6628-1 (Barossa)
	Hundred:	Para Wirra	Easting:	307500
	Section:	693	Northing:	6154650
	Sampling date:	3/3/97	Annual rainfall:	685 mm average

Mid slope of a steep low hill, 40% slope. Firm surface with 10-20% sandstone and quartzite fragments.

Soil Description:

Depth (cm)	Description
0-10	Dark brown massive sandy loam with 20-50% sandstone and quartzite fragments. Clear to:
10-40	Pink (bleached) massive sandy loam with 20-50% sandstone and quartzite fragments. Abrupt to:
40-70	Yellowish red light medium clay with moderate polyhedral structure and 2-10% sandstone fragments. Gradual to:
70-100	Hard sandstone.



Classification: Bleached, Eutrophic, Brown Kurosol; thick, moderately gravelly, loamy / clayey, moderate



Summary of Properties

- Drainage:** Well drained. The soil is never likely to be saturated for more than a day or so following prolonged rain.
- Fertility:** Natural fertility is low. Test data indicate that phosphorus is low, and calcium, magnesium, copper and sulphur are marginal. Low calcium + magnesium and high potassium can lead to hypomagnesia (grass tetany) in cattle.
- pH:** Acidic at the surface, strongly acidic with depth. Dolomitic lime needed for correction.
- Rooting depth:** 70 cm in cutting.
- Barriers to root growth:**
- Physical:** Shallow depth to rock is the main limitation.
 - Chemical:** Acidity will affect sensitive species.
- Waterholding capacity:** Approximately 50 mm in rootzone.
- Seedling emergence:** Fair to good - soil is prone to compaction and hard setting.
- Workability:** Not relevant - too steep. On gentler slopes poor soil structure and abrasive stones hinder effective working.
- Erosion Potential:**
- Water:** Very high due to the slope. The soil itself is also highly erodible.
 - 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 (EDTA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	5.9	4.9	0	0.05	-	2.9	14	352	5.7	1.2	0.9	221	61	4.2	10.8	5.3	1.1	0.11	0.76	1.0
0-10	5.7	4.7	0	0.04	-	2.6	19	252	4.8	0.8	0.6	174	33	2.7	7.9	3.0	0.8	0.13	0.57	1.6
10-40	5.4	4.4	0	0.02	-	0.4	4	116	2.4	0.4	0.4	35	10	0.5	3.8	0.9	0.6	0.11	0.23	2.9
40-70	5.2	4.1	0	0.02	-	0.4	2	178	2.2	0.6	0.4	51	1.5	0.6	13.6	1.9	4.4	0.22	0.42	1.6
70-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Paddock sample bulked from 20 cores (0-10 cm) taken around the cutting.
 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](#)

