DEEP RUBBLY CALCAREOUS CLAY LOAM

General Description: Calcareous sandy loam to clay loam with rubbly carbonate at shallow depth, grading to a very highly calcareous clay loam to light clay

Landform: Gently undulating plain.

Substrate: Very highly calcareous

> medium to fine grained Woorinen Formation

deposits.

Sampling date:

Vegetation:



360 mm average

Annual rainfall:

Type Site: Site No.: CY025 1:50,000 mapsheet: 6430-3 (Wallaroo)

Hundred: Tickera Easting: 750650 Section: 6255500 29 Northing: 20/7/94

Very gentle slope of 1%. Hard surface with no stones.

Soil Description:

Depth (cm) Description

0-25 Dark brown friable massive highly calcareous fine

sandy clay loam. Clear to:

25-43 Dark brown friable massive very highly

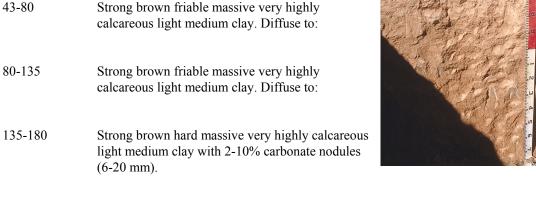
calcareous fine sandy clay loam with 20-50%

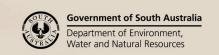
calcrete fragments (20-60 mm). Clear to:

80-135

Classification: Hypervescent, Regolithic, Supracalcic Calcarosol; medium, non-gravelly, clay loamy / clayey,

deep







Summary of Properties

Drainage: Moderately well drained. The soil rarely remains wet for more than a week following

heavy or prolonged rainfall.

Fertility: Inherent fertility is moderate, as indicated by the exchangeable cation data. Surface

fertility relies on organic matter levels which are adequate, and on phosphorus levels which are adequate in the paddock sample at this site. Nutrient availability problems due to high carbonate content and high pH are characteristic of this soil. In particular,

trace element deficiencies can be expected.

pH: Alkaline to strongly alkaline throughout.

Rooting depth: Roots to 80 cm in pit, but few below 43 cm.

Barriers to root growth:

Physical: There are no physical barriers.

Chemical: High salinity, boron concentration, sodicity and pH from 43 cm restrict deeper root

growth. Trace element deficiencies are likely in the subsoil.

Waterholding capacity: Approximately 100 mm in rootzone, but only about 60 mm are effectively available

due to low root density in the subsoil.

Seedling emergence: Good. Organic matter levels need to be maintained to preserve surface structure.

Workability: Good.

Erosion Potential:

Water: Low.

Wind: Low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂		EC1:5 dS/m	ECe dS/m	%	Avail. P mg/kg	K	mg/kg	Boron mg/kg	8 8				CEC	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn	(+)/kg	Ca	Mg	Na	K	
Paddock	8.3	7.5	8.2	0.19	0.9	1.9	33	677	8.5	2.9	-	-	-	1	16.1	13.68	2.13	0.13	2.39	0.8
0-25	8.5	7.7	9.4	0.26	1.3	1.5	8	461	11.9	3.2	-	-	-	1	19.1	15.79	3.38	0.47	1.61	2.5
25-43	8.5	7.8	24.5	0.89	8.8	0.8	8	140	41.2	7.1	-	-	-	1	17.7	9.77	6.07	3.88	0.53	22.0
43-80	9.4	8.3	35.7	1.27	12.9	0.4	4	197	136	20.9	-	-	-	-	14.1	3.50	5.87	6.59	0.74	46.7
80-135	9.3	8.4	31.1	1.91	16.8	0.3	4	269	277	19.7	-	-	-	-	15.3	3.36	6.50	7.45	1.06	48.7
135-180	9.1	8.2	32.7	1.93	15.5	0.2	11	294	220	16.0	-	-	-	-	13.4	3.21	5.42	6.47	0.91	48.2

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

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



