SHALLOW RUBBLY CALCAREOUS SANDY LOAM

General Description: Calcareous sandy loam to sandy clay loam with variable rubble, over calcrete at shallow depth

Flat to gently undulating Landform:

plains.

Substrate: Highly calcareous medium to

> fine grained sediments (Padthaway Formation), capped by calcrete.

Vegetation: Mallee



Type Site: MM081 1:50,000 mapsheet: 6826-4 (Binnie) Site No.:

> Hundred: Strawbridge Easting: 385800 Section: Northing: 6047600

1992 Annual rainfall: Sampling date: 460 mm average

Flat, with firm surface and 20-50% calcrete stone (60-200 mm)

Soil Description:

Depth (cm) Description

0-7 Dark greyish brown firm calcareous granular

> structured sandy clay loam with 10-20% carbonate nodules (20-60 mm). Abrupt to:

7-11 Yellowish red moderately calcareous hard

massive sandy clay with 10-20% carbonate

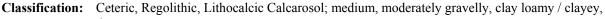
11-25

25-60

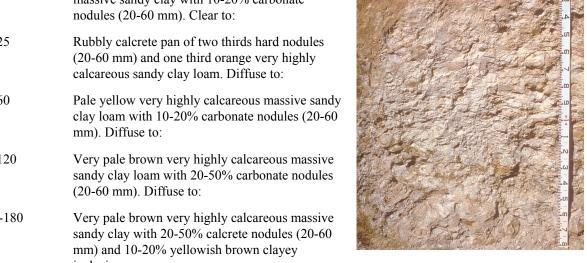
60-120

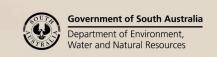
120-180

inclusions.



deep







Summary of Properties

Drainage: Well drained. Soil never remains saturated for more than a few days.

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

phosphorus additions are needed and nitrogen depends on pasture legumes. Copper and zinc (adequate at sampling site) can be deficient. Manganese may be required on

cereals. Organic carbon levels are high.

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

Rooting depth: 60 cm in pit.

Barriers to root growth:

Physical: Calcrete rubble impedes downward root growth.

Chemical: No chemical barriers above calcrete, but high pH from 60 cm prevents further root

growth, if any have penetrated the calcrete.

Waterholding capacity: 60 mm in rootzone.

Seedling emergence: Satisfactory.

Workability: Firm surface is easily worked, but stones interfere with and abrade equipment.

Erosion Potential:

Water: Low.

Wind: Low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂	CO ₃	EC1:5 dS/m	ECe dS/m	%	Avail. P	K	mg/kg					CEC cmol	Exchangeable Cations cmol(+)/kg				ESP
							mg/kg	mg/kg		Cu	Fe	Mn	Zn	(+)/kg	Ca	Mg	Na	K	
Paddock	8.3	7.6	3	0.15	0.84	1.6	20	220	2	0.25	-	3.8	0.56	14.8	12.80	0.79	0.06	0.62	0.4
0-7	8.4	7.6	3	0.13	0.85	1.9	18	220	1.1	0.26	-	3.7	0.57	15.8	14.19	0.87	0.09	0.58	0.6
7-11	8.4	7.7	<1	0.11	0.56	0.9	5	180	0.77	0.09	-	0.9	0.19	19.3	15.35	1.07	0.10	0.55	0.5
11-25	8.7	7.9	55	0.13	0.47	1.1	6	130	1.1	0.1	-	0.62	0.37	14.5	14.26	1.06	0.10	0.39	0.7
25-60	9.1	8.1	74	0.11	0.38	0.4	<2	87	0.83	0.07	-	0.15	0.37	8.5	8.79	1.43	0.23	0.25	2.7
60-120	9.3	8.2	75	0.11	0.46	0.2	<2	79	0.57	0.07	-	0.23	0.27	8.1	7.38	2.00	0.30	0.20	4.1
120-180	9.4	8.2	59	0.23	1.35	0.1	<2	110	0.71	<.05	-	0.86	0.47	11.6	8.10	3.30	1.29	0.35	11.1

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: <u>DEWNR Soil and Land Program</u>



