

SHALLOW CALCAREOUS SANDY LOAM

General Description: *Calcareous sandy loam to light sandy clay loam overlying rubbly calcrete within 50 cm of the surface*

Landform: Stony rises on very gently undulating plains or dunefields

Substrate: Highly calcareous medium grained sediments capped by calcrete and overlying Tertiary sand.

Vegetation: Mallee

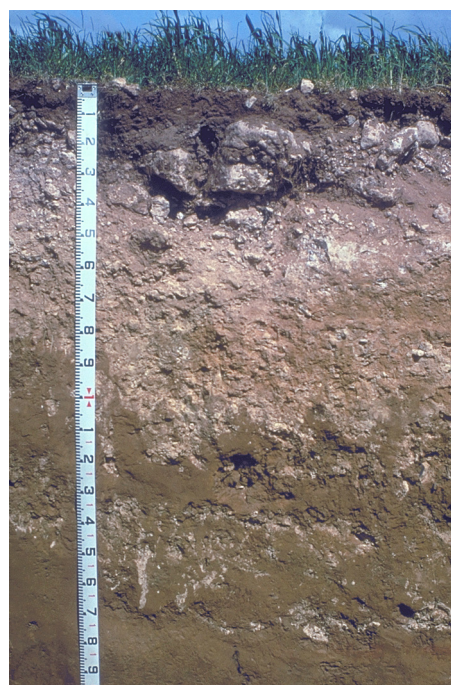


Type Site:	Site No.:	MM005	1:50,000 mapsheet:	6928-3 (Halidon)
	Hundred:	Wilson	Easting:	413250
	Section:	60	Northing:	6132400
	Sampling date:	11/09/1991	Annual rainfall:	310 mm average

Stony ridge on a very gently undulating plain. Soft surface, 2-10% surface calcrete.

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-9	Reddish brown moderately calcareous sandy loam with 10-20% calcrete rubble. Abrupt to:
9-32	Rubbly calcrete with reddish brown highly calcareous light sandy clay loam between the rubble fragments. Gradual to:
32-60	Orange very highly calcareous sandy clay loam with more than 50% calcrete rubble. Diffuse to:
60-85	Orange very highly calcareous sandy clay loam with 10-20% ironstone fragments. Diffuse to:
85-100	Yellowish brown very highly calcareous sandy clay loam. Diffuse to:
100-135	Yellowish brown sandy clay loam with minor fine calcareous and ferruginous segregations. Diffuse to:
135-170	Light sandy clay loam as above. Diffuse to:
170-200	Yellowish brown sandy loam.



Classification: Epihypersodic, Regolithic, Lithocalcic Calcarosol; thin, gravelly, loamy/clay loamy, moderate



Summary of Properties

Drainage:	Well drained. The soil is never saturated for more than a few days.
Fertility:	Inherent fertility is moderate, as indicated by the exchangeable cation data. Copper and zinc appear to be deficient at the sampling site. Organic carbon levels are very low - improvement will augment nutrient retention capacity.
pH:	Alkaline at the surface, strongly alkaline with depth.
Rooting depth:	85 cm in pit.
Barriers to root growth:	
Physical:	Boulder calcrete restricts root development.
Chemical:	High pH, sodicity and boron concentrations all affect root growth.
Waterholding capacity:	Approximately 65 mm.
Seedling emergence:	Slight limitation due to surface stone
Workability:	Easily worked, but stones abrade implements.
Erosion Potential:	
Water:	Low.
Wind:	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	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
										Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	8.8	8.0	4	0.22	1.24	0.2	30	450	3.5	0.15	3.9	5.8	0.32	9.4	7.33	1.59	0.21	1.05	2.2
0-9	8.8	7.9	4	0.13	0.51	0.2	55	440	5.3	0.18	3.6	6.1	0.48	10.9	8.34	1.55	0.12	1.05	1.1
9-32	9.3	8.3	12	0.32	2.20	0.2	16	500	8.1	0.22	4.2	3.9	0.30	11.2	6.69	2.75	0.80	1.30	7.1
32-60	9.9	8.6	31	0.54	3.45	<0.1	8	540	13	0.36	2.2	2.4	0.16	9.3	2.71	3.98	2.37	1.40	25.5
60-85	10.1	8.7	36	0.73	3.01	0.4	3	600	16	0.34	2.2	1.2	0.21	8.1	1.28	3.44	3.81	1.47	47.0
85-100	10.0	8.6	17	0.81	4.47	0.3	3	640	19	0.14	3.1	0.70	0.20	8.2	1.46	2.99	3.93	1.15	47.9
100-135	10.0	8.5	8	0.75	3.50	0.2	<2	600	20	0.23	3.6	0.64	0.10	8.0	1.04	3.06	4.42	1.07	55.3
135-170	9.7	8.4	6	0.72	3.86	0.2	2	550	14	0.069	3.8	0.30	0.17	8.2	0.72	2.89	4.50	0.91	54.9
170-200	7.5	6.5	2	0.59	4.79	0.1	<2	460	1.9	0.094	3.7	0.06	0.14	8.2	0.34	2.41	4.66	0.82	56.8

Note: Paddock sample bulked from 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](#)

