DEEP RUBBLY CALCAREOUS SANDY LOAM

General Description: Highly calcareous grey sandy loam over a rubbly very highly

calcareous sandy clay loam, continuing below 100 cm with increasing

clay content and variable rubble

Landform: Gently undulating rises.

Substrate: Very highly calcareous

> medium to fine grained Woorinen Formation

deposits.

Vegetation:

CY017 **Type Site:** Site No.:

> Hundred: Melville Easting: 740800 Section: 294S

10/12/1992 Sampling date:

Crest of low rise, 1% slope. Hard setting surface with no stones.

Soil Description:

Depth (cm) Description

0-23Dark brown firm highly calcareous fine sandy

loam with weak coarse subangular blocky

structure. Clear to:

23-42 Dark brown friable massive very highly

calcareous fine sandy clay loam with more than

50% calcrete fragments (20-60 mm). Gradual to:

42-85 Light brown soft massive very highly calcareous

light sandy clay loam with 2-10% carbonate

nodules (6-20 mm). Diffuse to:

85-170 Very pale brown friable massive fine sandy light

clay with 2-10% carbonate nodules (6-20 mm).

clear to:

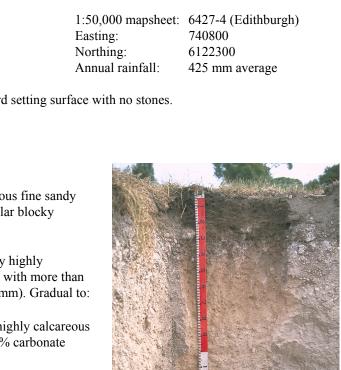
170-180 Laminar calcrete pan. Clear to:

180-210 Reddish yellow friable massive highly calcareous

fine sandy light clay.

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

very deep







Summary of Properties

Drainage: Well drained. The soil rarely remains wet for more than a day or so following heavy

or prolonged rainfall.

Fertility: The soil's natural capacity to retain nutrients 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 low at this site. Nutrient availability problems due to the high free lime content and the high pH are characteristic of this soil. Copper and zinc deficiencies are likely, but concentrations are satisfactory at the

sampling site. Potassium levels are adequate.

pH: Alkaline throughout.

Rooting depth: 120 cm in pit, but few below 85 cm

Barriers to root growth:

Physical: There are no physical barriers.

Chemical: High sodicity and pH from 85 cm restrict deeper root growth.

Waterholding capacity: Approximately 130 mm in the rootzone, but about a third is effectively unavailable

due to low root density in the subsoil.

Seedling emergence: Good.

Workability: Good.

Erosion Potential:

Water: Low.

Wind: Moderate.

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂	-	EC1:5 dS/m		%	Avail. P mg/kg	K	mg/kg	Boron mg/kg	0 0				CEC	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn	(+)/kg	Ca	Mg	Na	K	
Paddock	8.0	7.7	6	0.20	0.81	2.0	12	870	-	2.0	0.67	7.0	6.1	0.65	21.3	16.1	1.90	0.12	2.46	0.6
0-23	8.2	7.8	11	0.19	0.66	1.6	8.4	850	-	2.1	0.69	5.7	8.2	0.39	18.0	15.3	1.94	0.15	2.10	0.8
23-42	8.2	7.9	31	0.18	0.42	1.1	5.3	400	-	2.1	0.71	8.6	2.6	0.19	14.2	13.2	2.11	0.20	0.91	1.4
42-85	8.6	7.9	52	0.16	0.45	0.39	<2.0	160	-	1.6	0.55	4.2	0.72	0.10	7.3	5.68	2.72	0.36	0.23	4.9
85-170	9.3	8.1	53	0.39	2.16	0.22	<2.0	230	-	1.9	0.33	1.9	0.71	0.07	5.8	2.72	3.28	1.57	0.54	27.1
170-180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
180-210	9.5	8.4	45	0.70	3.50	0.13	<2.0	420	-	9.1	0.47	3.2	0.49	0.11	10.2	1.97	5.93	4.01	1.03	39.3

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

