DEEP RUBBLY CALCAREOUS LOAM

General Description: Highly calcareous loam with increasing carbonate and rubble content at depth, continuing below 100 cm

Landform: Gently undulating plain.

Substrate: Very highly calcareous

medium to fine grained windblown Woorinen Formations sediments.

Vegetation:



Type Site: Site No.: CY013

1:50,000 sheet: 6428-3 (Minlaton) Hundred: Minlacowie Annual rainfall: 425 mm Sampling date: 10/12/92

Landform: Gentle slope of 1% Surface: Hard setting with no stones

Soil Description:

Depth (cm) Description

0-12 Dark brown firm highly calcareous loam with

weak coarse subangular blocky structure. Clear to:

12-40 Dark brown friable massive highly calcareous

loam with more than 50% hard carbonate fragments and nodules (20-200 mm). Clear to:

40-70 Dark yellowish brown soft massive very highly

calcareous fine sandy loam with 10-20% carbonate nodules (6-20 mm). Gradual to:

70-132 Very pale brown soft massive very highly

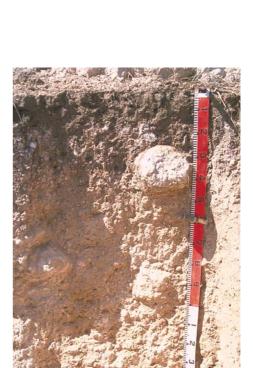
calcareous fine sandy clay loam with more than 50% hard carbonate nodules (20-200 mm).

Gradual to:

132-150 Very pale brown friable massive very highly

calcareous fine sandy light clay.

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



Summary of Properties

Drainage Well drained. The soil never remains wet for more than a day or so at a time.

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 good at this site. Nutrient availability problems due to the high free lime content (CaCO₃%) and high pH are characteristic of these soils. Zinc and copper deficiencies can be expected from time to time.

Potassium levels are adequate.

pH Alkaline throughout.

Rooting depth Roots to 120 cm in pit.

Barriers to root growth

Physical There are no physical barriers.

Chemical High pH and sodicity at depth restrict root growth. Low nutrient availability is also a

contributing factor.

Water holding capacity Approximately 110 mm in 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	ECe dS/m	Org.C %	Avail. P mg/kg	K	mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn	(+)/kg	Ca	Mg	Na	K	
Paddock	8.1	7.7	12	0.22	0.82	1.8	51	1100	-	2.1	0.75	4.7	11	0.45	26.9	22.2	2.75	0.25	3.30	1.0
0-12	8.1	7.7	14	0.24	0.92	1.8	59	1100	-	2.5	0.65	4.7	11	0.38	28.0	23.2	2.90	0.21	3.30	0.7
12-40	8.4	7.8	38	0.15	0.37	0.80	4.1	400	-	2.7	0.74	7.3	3.4	0.09	15.3	13.5	2.56	0.33	0.87	2.2
40-70	8.6	7.9	51	0.16	0.45	0.51	<2.0	230	-	2.9	0.71	4.2	1.8	0.05	10.2	7.71	3.12	0.50	0.56	4.9
70-132	9.1	8.0	55	0.39	1.85	0.32	<2.0	510	-	6.2	0.58	2.7	0.95	0.06	9.0	3.93	4.37	2.29	1.37	25.4
132-150	9.5	8.4	61	0.95	5.93	0.06	<2.0	620	-	15.9	0.39	1.7	0.48	0.10	8.0	1.34	3.69	4.43	1.41	55.4

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