CALCAREOUS SANDY LOAM
(Sandy rise soil)

General Description: *Calcareous loamy sand to sandy loam becoming more clayey and calcareous with depth*

Landform: Gently undulating rises.

Substrate: Very highly calcareous medium grained windblown Woorinen Formation deposits.

Vegetation: Mallee.

Type Site: Site No.: EW094

1:50,000 sheet:	5733-2 (Pimbaacla)	Hundred:	Petina
Annual rainfall:	265 mm	Sampling date:	24/11/93
Landform:	Gentle slope of 5%		
Surface:	Soft with no stones		

Soil Description:

Depth (cm)	*Description*
0-12	Brown friable slightly calcareous sandy loam with weak medium subangular blocky structure. Clear to:
12-40	Brown soft very highly calcareous sandy loam with minor carbonate concretions. Gradual to:
40-70	Reddish yellow soft very highly calcareous sandy loam with minor carbonate concretions. Gradual to:
70-150	Light brown soft very highly calcareous sandy clay loam with minor carbonate concretions. Abrupt to:
150-200	Light brown soft very highly calcareous sandy clay loam (Class III A carbonate).

Classification: Epihypersodic, Regolithic, Hypercalcic Calcarosol; thick, non-gravelly, loamy / clay loamy, very deep

Summary of Properties

Drainage Rapid. The soil rarely remains wet for more than a few hours.

Fertility Inherent fertility is low, as indicated by the exchangeable cation data. Regular phosphorus applications are necessary - levels are low. Nitrogen concentrations depend on legume status of pastures and cropping history. Copper and zinc deficiencies may be experienced - levels of both are marginal at the sampling site. Organic carbon concentrations are sub-optimal.

pH Alkaline at the surface, strongly alkaline at depth.

Rooting depth 70 cm in pit.

Barriers to root growth

Physical: There are no physical barriers.

Chemical: High pH and sodicity from 40 cm, and high boron levels from 70 cm retard root growth.

Water holding capacity Approximately 55 mm in the root zone.

Seedling emergence: Satisfactory.

Workability: Soft surface is easily worked.

Erosion Potential

Water: Moderately low.

Wind: Moderate.

Laboratory Data

Depth cm	pH H_2O	pH $CaC1_2$	CO_3 %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO_4-S 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	
0-12	8.8	7.9	4	0.11	0.63	0.72	8.6	320	-	3.4	0.20	2.5	3.3	0.27	5.7	6.94	0.79	0.05	0.62	0.9
12-40	9.1	8.1	14	0.34	3.12	0.42	3.8	240	-	4.9	0.43	1.4	2.5	0.31	5.7	4.76	1.74	0.58	0.57	10.2
40-70	9.7	8.4	19	0.67	7.21	0.20	2.6	350	-	9.3	0.22	1.2	1.1	0.22	4.2	1.76	2.18	1.81	0.72	43.1
70-150	9.6	8.3	29	1.00	9.82	0.16	3.0	450	-	17	0.31	1.5	0.91	0.25	4.6	1.29	2.58	2.63	1.00	57.2
150-200	9.6	8.3	32	1.02	9.30	0.12	3.2	450	-	17	0.34	1.4	0.90	0.50	3.8	1.05	1.67	2.12	0.92	55.8

Note: 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