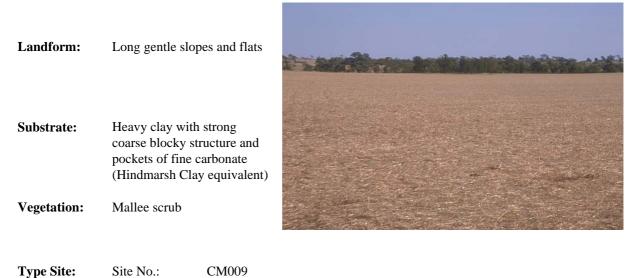
CALCAREOUS CLAY LOAM

General Description: Reddish brown well structured calcareous clay loam, becoming more clayey and calcareous with depth, overlying a Class I carbonate layer within 50 cm. This grades to a heavy clay at about 100 cm.



 Bite 100.	emoor		
1:50,000 sheet:	6530-2 (Blyth)	Hundred:	Blyth
Annual rainfall:	400 mm	Sampling date:	13/02/92
Landform:	Lower slope of long, very g	gently inclined outwas	sh fan, 1% slope
Surface:	Firm with no stones		

Soil Description:

Depth (cm)	Description	
0-10	Dark brown slightly calcareous clay loam with strong granular structure. Clear to:	
10-35	Dark reddish brown slightly calcareous light clay with strong coarse polyhedral structure. Clear to:	
35-105	Yellowish red very highly calcareous light medium clay with moderate coarse polyhedral structure and 20-50% soft carbonate segregations (Class I carbonate). Diffuse to:	
105-170	Red very highly calcareous heavy clay with strong coarse blocky structure and 20-50% soft carbonate segregations.	

Classification: Epihypersodic, Pedal, Hypercalcic Calcarosol; thick, non-gravelly, clay loamy / clayey, deep

Summary of Properties

Drainage	The soil is moderately well drained and is unlikely to remain wet for more than a week in most years.								
Fertility	The inherent fertility of the soil is high, as indicated by the exchangeable cation data. Lower values with depth due to high carbonate content, together with high pH indicate subsoil infertility and particularly induced deficiencies of some elements below about 35 cm. Organic carbon levels are moderate and phosphorus is high at sampling site.								
рН	Neutral at the surface, strongly alkaline with depth.								
Rooting depth	160 cm in pit but below 70 cm roots are confined to vertical biopores.								
Barriers to root growth									
Physical:	There are no physical barriers to root growth above the Hindmarsh Clay. The high strength of this clay causes most root growth to be confined to the surfaces of the coarse aggregates.								
Chemical:	High boron (toxic below 105 cm) and very high pH (limiting nutrient availability) from 35 cm, restrict root growth.								
Water holding capacity	Approximately 100 mm in main root zone, but there is potentially some additional water available to the few roots below this depth.								
Seedling emergence	Good.								
Workability	Good.								
Erosion Potential									
Water:	Low to moderately low.								
Wind:	Low.								

Laboratory Data

Depth cm	pH H2O	pH CaC1 ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	Org.C %	Р			Boron mg/kg	Trace Elements mg/kg (DTPA)			CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP	
							ше/ке	III <u>6</u> /Kg			Cu	Fe	Mn	Zn	(1)/Kg	Ca	Mg	Na	K	
Paddock	7.2	6.3	1.5	0.08	0.5	1.3	42	760	-	-	1.58	8.0	19.4	0.26	24.9	15.50	4.54	0.24	2.48	1.0
0-10	7.3	6.4	2.5	0.08	0.3	1.1	29	650	-	-	1.64	7.2	14.7	0.20	26.2	15.94	4.72	0.30	2.04	1.1
10-35	8.6	7.6	3.0	0.13	0.4	0.6	4	230	-	2.6	1.27	2.6	2.2	0.05	27.2	18.93	5.86	0.62	1.01	2.3
35-105	9.6	8.1	35.6	0.24	1.0	0.3	4	230	-	5.3	0.86	1.6	1.0	0.04	14.3	7.36	5.86	2.57	0.76	18.0
105-170	9.9	8.6	25.2	0.69	2.4	0.1	4	410	-	35.2	0.45	1.7	0.6	0.03	19.2	2.14	9.47	1.98	1.33	10.3

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.