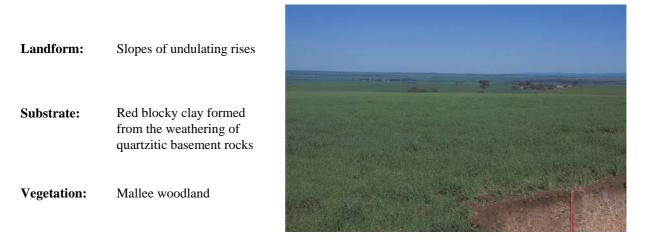
CALCAREOUS CLAY LOAM

General Description:

Calcareous loam to clay loam grading to clay with rubbly carbonate at shallow depth overlying red clay with abundant basement rock fragments



Type Site:	Site No.:	CM060		
	1:50,000 sheet: Annual rainfall: Landform: Surface:	6530-1 (Koolunga) 400 mm Upper slope of an undulat Firm with 10-20% calcret	ting rise, slope 4%	Koolunga 18/08/95

Soil Description:

Depth (cm)	Description	
0-10	Dark reddish brown highly calcareous clay loam with moderate granular structure and 2-10% calcrete fragments. Abrupt to:	1000 - 100 -
10-20	Dark reddish brown highly calcareous light medium clay with moderate polyhedral structure and 2-10% calcrete fragments. Clear to:	a the state
20-40	Brown very highly calcareous massive clay loam with 20-50% carbonate nodules to 2 cm. Diffuse to:	
40-70	Brown very highly calcareous massive light clay with 10-20% carbonate nodules to 2 cm, and 10- 20% sandstone fragments. Diffuse to:	
70-110	Orange very highly calcareous massive light medium clay with 20-50% sandstone fragments. Diffuse to:	
110-160	Dark red firm moderately calcareous medium clay with strong coarse blocky structure and 20-50% sandstone fragments.	

Classification: Endohypersodic, Regolithic, Supracalcic Calcarosol; medium, gravelly, clay loamy/clayey, deep

Summary of Properties

Drainage	Well drained. The soil is unlikely to remain wet for more than a day.						
Fertility	The soil's natural fertility is moderately high (high CEC and calcium saturation), although the moderate surface carbonate reduces nutrient availability. All elements except sulphur are well supplied, but there is a satisfactory level organic carbon which provides a reserve of sulphur as well as nitrogen. The very high calcium level are inducing a marginal magnesium deficiency.						
рН	Alkaline at the surface, strongly alkaline with depth.						
Rooting depth	110 cm in pit, but few roots below 70 cm.						
Barriers to root growth							
Physical:	There are no physical barriers above the underlying clay.						
Chemical:	Very high pH and exchangeable sodium (sodicity) from 70 cm prevent significant deeper root development.						
Water holding capacity	Approximately 80 mm in root zone (moderate).						
Seedling emergence	Good						
Workability	Good except where stone cover is heavy						
Erosion Potential							
Water:	Moderately low						
Wind:	Moderately low						

Laboratory Data

Depth cm	pH H2O	pH CaC1 ₂	CO3 %	EC1:5 dS/m	ECe dS/m	%	Avail. P mg/kg	K	mg/kg	Boron Trace Elements mg/kg (DTPA)			ng/kg	CEC cmol (+)/kg	Exc	ESP				
							mg/ kg	ing kg			Cu	Fe	Mn	Zn	(1)/16	Ca	Mg	Na	К	
Paddock	8.2	7.8	5.7	0.12	0.47	1.6	29	501	8	2.4	0.56	-	5.98	1.40	27.8	24.93	2.37	0.23	1.64	0.8
0-10	8.1	7.8	2.6	0.13	0.56	2.2	47	605	6	2.0	-	-	-	-	27.2	25.47	2.33	0.19	1.84	0.7
10-20	8.3	7.9	8.2	0.12	0.36	1.1	10	267	6	1.7	-	-	-	-	26.1	26.12	2.51	0.21	0.90	0.8
20-40	8.4	7.9	33.4	0.12	0.33	0.9	8	103	8	1.8	-	-	-	-	18.9	19.06	2.36	0.26	0.40	1.4
40-70	8.6	8.0	45.1	0.11	0.36	0.7	7	118	8	2.4	-	-	-	-	12.9	11.38	3.66	0.42	0.28	3.3
70-110	9.6	8.4	48.0	0.40	0.73	0.3	4	154	20	11.9	-	-	-	-	16.2	4.69	11.02	5.05	0.51	31.2
110-160	9.8	9.0	1.5	0.54	0.86	0.0	4	190	15	21.8	-	-	-	-	19.9	3.18	9.62	8.84	0.59	44.4

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.