HIGHLY CALCAREOUS SALINE SANDY LOAM

(Magnesia soil)

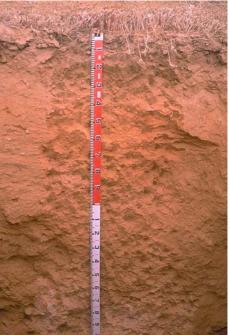
General Description: Highly calcareous loam becoming more clayey and calcareous with depth, grading to more than 50% fine or rubbly carbonate in a sandy clay loam matrix - saline throughout

Landform:	Flat plains.	The Antonia and the second
Substrate:	Very highly calcareous coarse to medium grained Woorinen Formation deposits.	
Vegetation:		

Type Site:	Site No.:	EF017		
	1:50,000 sheet: Annual rainfall: Landform: Surface:	5533-1 (Charra) 310 mm Flat, 0-1% slope Scalded with no stones	Hundred: Sampling date:	Horn 1992

Soil Description:

Depth (cm)	Description	
0-10	Dark brown firm massive very highly calcareous fine sandy loam. Clear to:	
10-30	Brown friable massive very highly calcareous light sandy clay loam. Clear to:	
30-65	Yellowish red friable massive very highly calcareous light sandy clay loam with 2-10% carbonate nodules. Gradual to:	
65-95	Yellowish red soft massive very highly calcareous sandy clay loam with 2-10% carbonate nodules. Gradual to:	
95-125	Strong brown soft massive very highly calcareous light sandy clay loam with 2-10% carbonate nodules. Gradual to:	
125-165	As for 95-125 cm. Diffuse to:	Sal 1
165-220	Reddish yellow soft very highly calcareous light sandy clay loam with 20-50% carbonate nodules.	



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

Summary of Properties

Drainage	Well drained. Soil never remains wet for more than a few days.							
Fertility	Inherent fertility is moderately low, as indicated by the exchangeable cation data. Clay and organic matter levels are moderate, but very high carbonate levels tie up nutrients, although none appears to be deficient at the sampling site (possibly due to low removal from a low productivity site).							
рН	Alkaline throughout.							
Rooting depth	Little root growth.							
Barriers to root growth								
Physical:	There are no physical barriers.							
Chemical:	High salinity and extreme sodicity from the surface severely restrict plant growth.							
Water holding capacity	Not applicable.							
Seedling emergence:	Poor due to high salinity / sodicity.							
Workability:	Easily worked.							
Erosion Potential								
Water:	Low.							
Wind:	Moderate.							

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂	CO3 %	EC1:5 dS/m	ECe dS/m	Org.C %				Boron Trace Elements			ments mg/kg ΓΡΑ)		CEC cmol	Exchangeable Cations cmol(+)/kg				ESP
							mg/kg	mg/kg			Cu	Fe	Mn	Zn	(+)/kg	Ca	Mg	Na	K	
0-10	8.9	8.3	31.5	3.09	36.7	1.4	34	914	-	14.2	0.3	2	16.7	0.6	13.1	7.4	2.2	6.53	3.13	50
10-30	9.1	8.3	39.8	1.59	15.4	1.1	6	550	-	17.7	0.3	1	3.5	0.3	12.4	7.3	2.6	5.70	2.03	46
30-65	8.9	8.4	53.4	3.12	31.0	0.7	<4	388	-	33.7	0.2	1	1.1	0.2	8.5	4.6	4.0	4.57	1.48	54
65-95	9.1	8.5	55.3	2.72	30.8	0.7	8	413	-	34.3	0.1	1	0.6	0.2	8.4	3.0	4.6	4.80	1.53	57
95-125	9.2	8.5	61.0	2.28	26.3	0.5	<4	426	-	24.2	0.2	1	0.5	0.3	7.5	2.1	4.1	4.50	1.39	60
125-165	9.3	8.5	66.7	1.71	19.3	0.4	<4	373	-	17.3	0.2	2	0.7	0.2	6.9	2.3	3.0	4.03	1.20	58
165-220	9.2	8.4	73.6	1.79	19.6	0.1	<4	344	-	12.2	0.2	1	0.7	0.2	6.3	2.5	2.8	3.86	1.11	61

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