SHALLOW HIGHLY CALCAREOUS SANDY LOAM
(Chintumba soil)

General Description: *Very highly calcareous loamy sand to sandy loam with variable rubble over calcrete at shallow depth*

Landform: Undulating low hills.

Substrate: Hard sheet Ripon Calcrete.

Vegetation: Stipa spp.

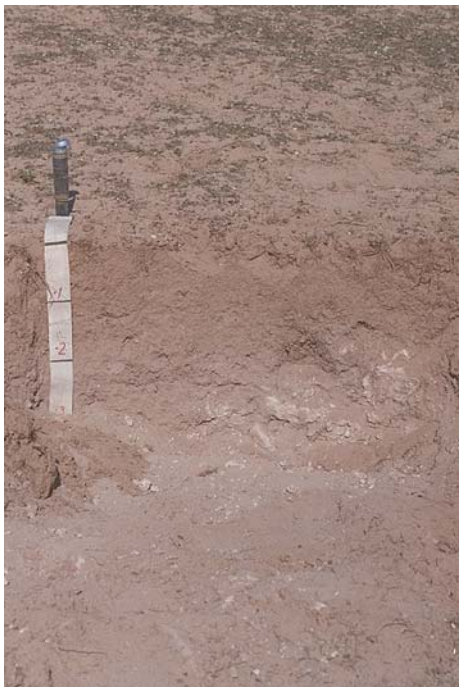
No landscape image available

Type Site: Site No.: EF023

1:50,000 sheet:	5234-1 (Bice)	Hundred:	Bice
Annual rainfall:	275 mm	Sampling date:	27/10/88
Landform:	Lower slope of 1%		
Surface:	Firm with 10-20% surface calcrete (60-200 mm)		

Soil Description:

Depth (cm)	*Description*
0-15	Brown friable massive very highly calcareous sandy loam. Clear to:
15-25	Orange friable massive very highly calcareous sandy loam. Clear to:
25-35	Dark yellowish brown massive soft very highly calcareous light sandy clay loam with more than 50% laminar calcrete fragments. Sharp to:
35-	Laminar calcrete pan.



Classification: Supravescent, Petrocalcic, Lithocalcic Calcarosol; medium, gravelly, loamy / loamy, shallow

Summary of Properties

Drainage Well drained. Soil never remains wet for more than a day.

Fertility Exchangeable cation data indicates moderately low inherent fertility, and extremely high carbonate concentrations cause significant nutrient fixation. Consequently, nutrient release capacity is poor. No phosphorus data, but concentrations are likely to be low - regular applications are essential. The data indicate that zinc levels are low.

pH Alkaline throughout.

Rooting depth Not recorded. Estimate 35 cm in pit.

Barriers to root growth

Physical: The calcrete is an impenetrable barrier to root growth.

Chemical: There are no chemical barriers above the calcrete.

Water holding capacity Approximately 40 mm in the root zone.

Seedling emergence: Satisfactory.

Workability: Firm surface is easily worked, but calcrete stone interferes with and abrades implements.

Erosion Potential

Water: Low.

Wind: Moderately low.

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	
0-15	8.5	7.7	70	0.18	1.15	-	-	-	-	1.6	0.31	2.53	5.42	0.20	8.20	6.3	1.10	0.19	0.71	2
15-25	8.4	7.6	71	0.20	1.01	-	-	-	-	2.0	0.38	2.18	3.86	0.12	9.50	7.3	1.50	0.19	0.56	2
25-35	8.3	7.7	72	0.26	2.41	-	-	-	-	2.9	0.43	3.38	3.38	0.13	9.90	7.1	2.00	0.30	0.51	3

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

* Exchangeable calcium values are estimated as laboratory procedure did not account for very high carbonate content of samples