RED GRADATIONAL CLAY LOAM ON CALCRETE

General Description: *Friable clay loam grading to a well structured red clay over calcrete or limestone*

Landform: Undulating rises.

Substrate: Calcrete.

Vegetation:

Type Site:

Site No.:	SE065	1:50,000 mapsheet:	7022-3 (Schank)
Hundred:	Young	Easting:	468300
Section:	7	Northing:	5821500
Sampling date:	20/08/1997	Annual rainfall:	765 mm average

Plain between undulating rises. Firm surface with no stones.

Soil Description:

Depth (cm)	*Description*
0-24	Dark brown friable clay loam with strong polyhedral structure. Gradual to:
24-46	Reddish brown friable light medium clay with strong polyhedral structure. Gradual to:
46-62	Reddish brown friable light medium clay with strong polyhedral structure and minor ferromanganiferous nodules (2-6 mm). Sharp to:
62-74	Very strongly cemented calcrete pan.

Classification: Melanic, Petrocalcic, Red Dermosol; medium, non-gravelly, clay loamy / clayey, moderate

Summary of Properties

Drainage: Well drained. The soil rarely remains wet for more than a couple of days.

Fertility: Inherent fertility is high, as indicated by the exchangeable cation data. The moderately high clay content and very high organic matter status provide ample nutrient retention capacity. Copper concentration appears low at sampling site.

pH: Alkaline throughout.

Rooting depth: 62 cm in pit.

Barriers to root growth:

Physical: The calcrete restricts deeper root growth.

Chemical: There are no chemical limitations.

Waterholding capacity: 120 mm in rootzone.

Seedling emergence: Satisfactory.

Workability: Firm surface is easily worked.

Erosion Potential:

Water: Low.

Wind: Low.

Laboratory Data

Depth cm	pH H_2O	pH $CaCl_2$	CO_3 %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO_4 mg/kg	Boron mg/kg	Trace Elements mg/kg (EDTA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP	Ext Al mg/kg
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K		
Paddock	8.0	7.5	0	0.35	-	5.35	24	303	20.8	1.3	0.65	21	56.5	2.05	29*	26.4	1.32	0.25	0.88	-	0.8
0-21	8.2	7.3	0.7	0.17	-	4.45	10	162	9.0	1.0	1.51	107	364	2.13	35	30.6	0.95	0.57	0.48	1.6	1.0
21-46	8.2	7.3	0.1	0.07	-	1.67	5	210	5.5	0.6	0.27	64	150	0.81	27	24.3	0.65	0.29	0.58	1.0	0.9
46-62	8.3	7.4	0	0.08	-	1.25	4	185	4.9	0.7	0.20	56	127	0.74	29*	26.8	1.36	0.29	0.60	-	1.0
62-74	9.1	7.7	90	0.07	-	0.17	3	65	3.4	0.4	0.14	5	3.5	0.58	5	4.08	0.37	0.16	0.10	na	1.0

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.
* CEC not measured. Value is sum of exchangeable cations which approximates CEC in neutral to alkaline soils.
ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC or estimated CEC.

Further information: DEWNR Soil and Land Program