SHALLOW CALCAREOUS LOAM

General Description: Calcareous silty loam becoming more calcareous with depth overlying soft weathering calcareous fine grained rock

Landform: Upper slopes of undulating

to rolling rises and low hills

Substrate: Precambrian siltstone

mantled by soft carbonate





Type Site: Site No.: CM084

1:50,000 sheet: 6630-4 (Spalding) Hundred: Ayers Annual rainfall: 475 mm Sampling date: 27/02/97

Landform: Upper slope of an undulating rise, 7% slope Surface: Firm with 2-10% siltstone and calcrete fragments

Soil Description:

Depth (cm) Description

0-10 Dark reddish brown highly calcareous silty loam

with weak granular structure. Clear to:

10-20 Dark reddish brown very highly calcareous silty

loam with weak blocky structure and 2-10%

calcrete fragments. Clear to:

20-35 Brown very highly calcareous massive silty loam

with 20-50% siltstone fragments and 20-50% fine

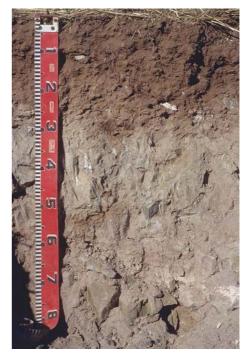
carbonate segregations. Clear to:

35-70 Light grey very highly calcareous massive silty

clay loam with more than 50% siltstone fragments

and 20-50% fine carbonate segregations. Clear to:

70-80 Weathering siltstone (non calcareous).



Classification: Hypervescent, Paralithic, Hypercalcic Calcarosol; moderate, slightly gravelly, silty/silty,

moderate

Summary of Properties

Drainage Well drained. The soil is never likely to remain saturated for more than a day or so.

Fertility Natural fertility is moderately low due to low clay content, and tendency for

calcareous soils to reduce availability of some nutrient elements. However, test data at this site indicate no deficiencies. Organic carbon levels are also satisfactory.

pH Alkaline throughout.

Rooting depth 70 cm in pit.

Barriers to root growth

Physical: Basement rock is a barrier, but roots will grow into cleavages to extract moisture.

Chemical: None.

Water holding capacity Approximately 75 mm in root zone.

Seedling emergence: Good.

Workability: Good.

Erosion Potential

Water: Moderate, due to the slope. Soil itself is relatively stable, unless pulverized.

Wind: Moderately low. Calcareous soils powder when dry if overstocked or excessively

worked.

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂	CO ₃	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	K mg/kg mg/kg			Trace Elements mg/kg (EDTA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
							mg/kg	mg/kg			Cu	Fe	Mn	Zn	(+)/Kg	Ca	Mg	Na	K	
Paddock	8.2	7.6	10.5	0.15	1	2.0	44	806	9.9	1.7	1.9	6.9	28	4.2	14.0	12.6	1.4	0.11	1.08	0.8
0-10	8.4	7.7	13.5	0.14	-	2.0	36	774	8.1	1.4	1.7	5.8	23	3.9	13.2	12.1	1.4	0.11	1.04	0.8
10-20	8.6	7.8	25.2	0.12	1	1.1	14	626	7.9	1.0	2.1	4.5	9.5	3.9	10.7	9.9	1.2	0.14	0.55	1.3
20-35	8.4	7.7	41.9	0.15	1	1.1	16	424	13.9	1.1	2.0	3.1	5.6	4.0	7.2	8.6	1.2	0.15	0.14	2.1
35-70	8.8	7.9	48.6	0.13	- 1	0.5	10	439	15.2	0.7	0.9	4.1	3.1	3.5	3.3	3.8	1.2	0.19	0.03	5.8
70-80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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.