

## DEEP GRADATIONAL CLAY LOAM

**General Description:** *Well structured dark reddish brown clay loam to light clay overlying a coarsely structured red heavy clay containing soft carbonate segregations with depth*

**Landform:** Outwash fans of undulating to rolling low hills

**Substrate:** Clayey outwash sediments with variable gravel

**Vegetation:**

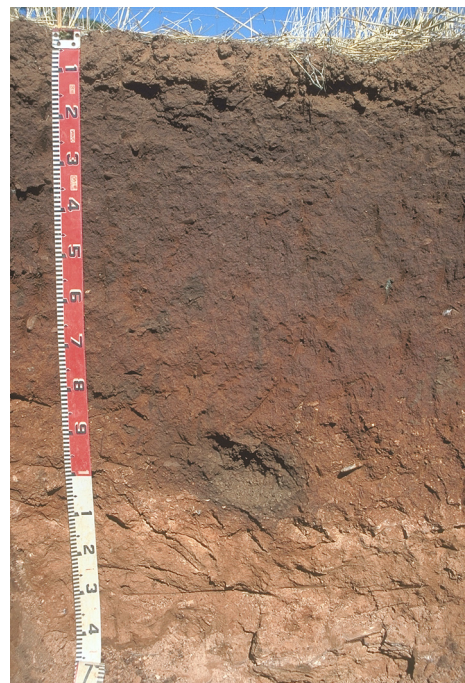


<b>Type Site:</b>	Site No.:	CM085	1:50,000 mapsheet:	6630-4 (Spalding)
	Hundred:	Ayers	Easting:	290200
	Section:	856	Northing:	6290800
	Sampling date:	27/2/97	Annual rainfall:	450 mm average

Upper slope of gently inclined alluvial fan. Firm surface, 2-10% quartzite stone. 3% slope.

### Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-12	Dark reddish brown light clay loam with weak granular structure and 2-10% siltstone gravel. Abrupt to:
12-30	Dark reddish brown light clay with weak platy structure breaking to strong polyhedral and 2-10% siltstone gravel. Clear to:
30-45	Dark reddish brown light medium clay with strong coarse prismatic structure breaking to strong polyhedral and 2-10% siltstone gravel. Gradual to:
45-85	Red light medium clay with strong polyhedral structure and 2-10% siltstone gravel. Gradual to:
85-140	Reddish yellow very highly calcareous massive light clay with 20-50% soft carbonate segregations and 10-20% siltstone gravel. Clear to:
140-150	Laminar calcrete pan.



**Classification:** Haplic, Hypercalcic, Red Dermosol; medium, slightly gravelly, clay loamy / clayey, deep



## Summary of Properties

<b>Drainage:</b>	Moderately well drained. The soil is unlikely to remain saturated for more than a week.
<b>Fertility:</b>	Natural fertility is moderately high. Test results indicate that all elements analysed are adequately supplied with the possible exception of sulphur. Organic carbon is low.
<b>pH:</b>	Slightly acidic at the surface, alkaline with depth.
<b>Rooting depth:</b>	85 cm in pit.
<b>Barriers to root growth:</b>	
<b>Physical:</b>	There are no apparent barriers.
<b>Chemical:</b>	There are no apparent barriers.
<b>Waterholding capacity:</b>	Approximately 110 mm in rootzone.
<b>Seedling emergence:</b>	Good.
<b>Workability:</b>	Good.
<b>Erosion Potential:</b>	
<b>Water:</b>	Moderately low, but runoff from upslope must be controlled.
<b>Wind:</b>	Low.

## Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO <sub>4</sub> mg/kg	Boron mg/kg	Trace Elements mg/kg (EDTA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	6.6	5.8	0	0.09	-	1.1	53	629	5.6	1.0	2.5	146	256	2.3	10.1	6.7	1.6	0.12	1.15	1.2
0-12	6.5	5.5	0	0.07	-	1.2	78	611	4.9	0.8	2.3	178	226	2.2	9.1	5.3	1.2	0.11	1.19	1.2
12-30	7.2	6.4	0	0.04	-	0.7	30	618	2.7	0.8	4.2	160	451	1.9	17.2	10.6	2.5	0.18	1.13	1.0
30-45	7.5	6.9	0	0.09	-	0.4	18	399	3.1	0.8	3.8	123	378	2.0	19.3	13.8	3.6	0.32	0.76	1.7
45-85	8.1	7.5	0	0.07	-	0.2	23	340	4.2	0.7	3.5	86	299	2.3	18.5	13.2	3.8	0.30	0.68	1.6
85-140	8.8	7.8	26.9	0.04	-	0.1	12	287	17	0.6	0.8	2	3.5	3.2	10.6	7.9	3.1	0.37	0.51	3.5
140-150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**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.

**Further information:** [DEWNR Soil and Land Program](#)

