

DEEP POORLY STRUCTURED GRADATIONAL LOAM

General Description: *Thick grey massive loam to clay loam with a paler A2 horizon overlying a massive to weakly blocky dark brown to grey clay*

Landform: Flats and lower slopes

Substrate: Fine grained alluvium

Vegetation:



Type Site:	Site No.:	CM018	1:50,000 mapsheet:	6630-2 (Apoinga)
	Hundred:	Stanley	Easting:	304800
	Section:	460	Northing:	6243850
	Sampling date:	14/12/92	Annual rainfall:	500 mm average

Flat between gently undulating rises, hard setting surface, 0% slope.

Soil Description:

Depth (cm)	Description
0-5	Dark brown massive loam. Clear to:
5-30	Brown massive loam. Clear to:
30-45	Pale brown and yellowish red massive clay loam. Clear to:
45-75	Brown massive light medium clay. Gradual to:
75-105	Dark brown massive medium clay. Gradual to:
105-160	Dark brown massive medium clay with 10-20% quartz gravel.



Classification: Sodic, Eutrophic, Brown Kandosol; thick, non-gravelly, loamy/clayey, very deep



Summary of Properties

Drainage: Moderately well to imperfectly drained. The clayey subsoil restricts water movement. The soil may remain saturated for a week to several weeks at a time.

Fertility: The soil has moderate inherent fertility as indicated by the exchangeable cation data. Leaching associated with acidity has reduced the base status of the soil. Organic carbon levels are marginal. Phosphorus is adequate.

pH: Acidic at the surface, mildly alkaline with depth.

Rooting depth: 75 cm in pit, with a few roots to 105 cm. Growth throughout is weak.

Barriers to root growth:

Physical: Poor soil structure (lack of well defined aggregates may impede root growth to some extent).

Chemical: Reduced base status due to low pH affects nutrient availability.

Waterholding capacity: Approximately 130 mm in upper 100 cm.

Seedling emergence: Fair due to poorly structured, hard setting surface.

Workability: Fair. The surface has a limited moisture range for effective working.

Erosion Potential:

Water: Low.

Wind: Low.

Laboratory Data

Depth cm	pH H ₂ O	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 (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP	Ext Al mg/kg
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K		
Paddock	5.9	4.7	0	0.05	0.4	1.49	30	320	-	-	1.65	131	60.6	0.61	9.5	4.60	1.34	0.15	0.74	1.6	0.7
0-5	6.0	5.1	0	0.10	0.8	1.92	38	500	-	-	1.63	129	76.7	0.79	9.6	4.72	1.56	0.17	1.18	1.8	0.5
5-30	6.1	4.7	0	0.02	0.2	1.13	20	210	-	-	1.70	124	38.2	0.32	9.2	4.70	1.47	0.17	0.58	1.8	0.5
30-45	6.8	5.5	0	0.01	0.1	0.31	7	130	-	0.7	1.18	46	15.7	0.07	6.6	3.57	1.88	0.19	0.29	2.9	-
45-75	7.0	5.7	0	0.02	0.2	0.14	11	130	-	1.1	1.04	19	4.2	0.03	7.8	3.02	1.86	0.30	0.29	3.8	-
75-105	7.1	5.9	0	0.05	0.3	0.14	5	180	-	1.9	1.38	6.1	3.5	0.05	13.1	4.92	2.93	0.80	0.47	6.1	-
105-160	8.0	6.5	0	0.04	0.2	0.07	2	150	-	2.0	0.41	5.5	0.7	0.04	15.2	7.73	3.83	1.16	0.27	7.6	-

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](#)

