

## BROWN CRACKING CLAY

**General Description:** *Reddish brown to brown well structured clay, becoming more clayey and coarser structured with depth, and having variable fine carbonate accumulations, often to the surface*

**Landform:** Flat to very gently undulating plains.

**Substrate:** Tertiary clay, coarsely structured, usually with slickensides.

**Vegetation:**



**Type Site:** Site No.: CM908

1:50,000 sheet: 6630-2 (Apoinga)

Hundred: Stanley

Annual rainfall: 550 mm

Sampling date: March 1990

Landform: Level plain, 0% slope

Surface: Firm, seasonally cracking, no stones

### Soil Description:

Depth (cm)	Description
0-15	Dark brown firm light clay with strong medium granular structure. Abrupt to:
15-40	Brown hard medium clay with strong coarse prismatic structure. Gradual to:
40-80	Brown hard heavy clay with coarse prismatic structure. Gradual to:
80-100	Brown hard very highly calcareous heavy clay with very coarse prismatic structure.



**Classification:** Epicalcareous-Endohypersodic?, Epipedal, Brown Vertisol

## *Summary of Properties*

**Drainage:** Imperfectly drained. The soil may remain wet for up to two weeks following heavy or prolonged rainfall, due to high clay content.

**Fertility:** Inherent fertility is high, due to high clay and organic matter contents.

**pH:** Neutral at the surface, alkaline with depth.

**Rooting depth:** 100 cm in pit, but few roots below 60 cm.

### **Barriers to root growth:**

**Physical:** High soil strength restricts root growth to some extent.

**Chemical:** There are no apparent chemical barriers to root growth.

**Water holding capacity:** Approximately 105 mm in the potential root zone.

**Seedling emergence:** Satisfactory to fair. Surface soil may seal over, particularly if organic carbon levels are low.

**Workability:** Clayey surface tends to become sticky and intractable when wet.

### **Erosion Potential**

**Water:** Low.

**Wind:** Low.

## *Laboratory Data*

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	EC 1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Boron mg/kg
0-15	6.6	6.2	2	0.14	-	1.56	86	2.3
15-40	7.8	7.0	3	0.06	-	0.62	7	2.6
40-80	8.4	7.4	3	0.13	-	0.49	7	2.5
80-100	8.5	7.7	55	0.26	-	0.46	6	4.0