

**HARD SANDY LOAM OVER RED CLAY**

(Sandy red brown earth)

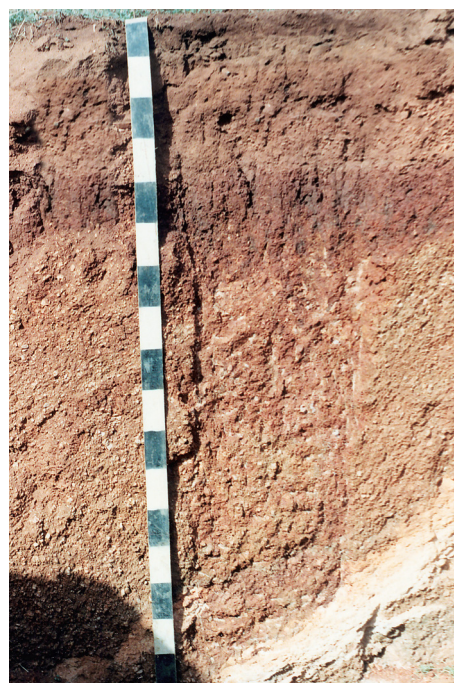
**General Description:** *Thick sandy loam over a well structured red clay***Landform:** Gently undulating rises.**Substrate:** Deeply weathered granite.**Vegetation:**

<b>Type Site:</b>	Site No.:	EL009	1:50,000 mapsheet:	6129-3 (Tumby)
	Hundred:	Yaranyacka	Easting:	607800
	Section:	418	Northing:	6207550
	Sampling date:	27/03/1992	Annual rainfall:	340 mm average

Gentle slope of 4-6%. Hard setting surface with 10-20% gneiss stones (60-200 mm) and 2-10% gneiss and granite outcrop.

**Soil Description:**

<i>Depth (cm)</i>	<i>Description</i>
0-10	Dark reddish brown friable massive coarse sandy loam. Clear to:
10-22	Dark reddish brown friable massive coarse sandy clay loam with 2-10% granite fragments. Clear to:
22-40	Reddish brown friable massive coarse sandy clay loam with 20-50% granite fragments. Abrupt to:
40-60	Dark reddish brown hard medium clay with coarse prismatic breaking to fine subangular blocky structure and 2-10% weathering granite fragments. Diffuse to:
60-157	Yellowish red very hard massive medium clay with more than 50% weathering granite fragments. Abrupt to:
157-180	Weathering granite with quartz veins and fine carbonate segregations.

**Classification:** Eutrophic, Subnatric, Red Sodosol; thick, gravelly, loamy / clayey, deep

## Summary of Properties

<b>Drainage:</b>	Moderately well drained. Soil rarely remains wet for more than a week or so following heavy or prolonged rainfall.
<b>Fertility:</b>	Inherent fertility is moderate, as indicated by the exchangeable cation data. Higher organic carbon concentrations (low at sampling site) would improve nutrient retention capacity. Phosphorus levels are also low - regular applications are essential.
<b>pH:</b>	Slightly acidic at the surface, alkaline with depth
<b>Rooting depth:</b>	60 cm in pit.
<b>Barriers to root growth:</b>	
<b>Physical:</b>	The clayey subsoil retards root growth to some extent.
<b>Chemical:</b>	pH and sodicity below 60 cm are likely to be high enough to severely limit root growth.
<b>Waterholding capacity:</b>	Approximately 65 mm in the rootzone.
<b>Seedling emergence:</b>	Fair due to hard setting surface which tends to seal over. Increased organic matter levels will help overcome the problem.
<b>Workability:</b>	The soil has a limited surface soil moisture content for effective cultivation. If worked too wet the soil will puddle and if worked too dry, it will shatter.
<b>Erosion Potential:</b>	
<b>Water:</b>	Moderately low due to the slope.
<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 (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
0-10	6.6	6.1	0	0.1	1.1	0.80	11	-	5.6	1.3	0.79	11.5	18.4	0.24	9.7	6.8	1.4	0.25	1.66	3
10-22	6.7	6.5	0	0.1	0.7	0.28	3	-	7.5	1.0	0.44	19.4	1.61	0.64	8.2	5.9	1.6	0.20	1.14	2
22-40	7.2	6.3	0	0.1	-	0.28	3	-	3.5	1.1	0.44	19.4	1.61	0.64	6.7	4.5	2.1	0.24	0.53	4
40-60	8.3	7.3	0	0.4	2.0	-	-	-	22	5.0	0.26	24.9	1.05	0.26	22.7	9.3	9.4	3.00	1.50	13

**Note:** 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](#)

