

## SANDY LOAM OVER RED CLAY

**General Description:** *Sandy loam to light sandy clay loam over a moderately well structured red clay, with abundant fine (Class III A) carbonate from about 50 cm*

**Landform:** Lower slopes and flats of gently undulating rises

**Substrate:** Medium to coarse grained gritty alluvium

**Vegetation:** Mallee scrub



**Type Site:** Site No.: MP002

1:50,000 sheet: 6728-3 (Tepko)

Hundred: Finniss

Annual rainfall: 325 mm

Sampling date: 30/07/92

Landform: Lower slope of gently undulating rise, 1% slope

Surface: Soft with no stone

### Soil Description:

Depth (cm)	Description
0-10	Reddish brown friable sandy loam. Abrupt to:
10-23	Reddish brown friable sandy loam. Clear to:
23-29	Reddish brown firm light sandy clay loam. Sharp to:
29-51	Red moderately calcareous hard light clay with weak prismatic breaking to fine moderate polyhedral structure. Gradual to:
51-80	Orange highly calcareous friable light sandy clay loam with 20-50% fine carbonate. Gradual to:
80-110	Reddish brown highly calcareous hard sandy clay with 20-50% fine carbonate. Gradual to:
110-150	Red and brown highly calcareous sandy clay loam. Diffuse to:
150-185	Red and brown coarse sandy clay loam. Minor quartz grit throughout.



**Classification:** Sodic, Hypercalcic, Red Chromosol; medium, non gravelly, loamy / clayey, deep

## Summary of Properties

**Drainage** Well drained. Soil is unlikely to remain wet for more than a day or so following heavy or prolonged rainfall.

**Fertility** Natural fertility is moderate to high as indicated by the exchangeable cation data. Concentrations of all measured nutrient elements at the sampling site are adequate. Organic carbon levels are high for this environment.

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

**Rooting depth** 80 cm in pit but few roots below 50 cm.

### Barriers to root growth

**Physical:** There are no physical barriers to root growth.

**Chemical:** High sodicity and high pH from 50 cm restrict root growth below this depth.

**Water holding capacity** Approximately 80 mm in root zone.

**Seedling emergence:** Good.

**Workability:** Good.

### Erosion Potential

**Water:** Low.

**Wind:** Moderately 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	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
										Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	7.0	6.5	-	0.10	0.49	1.26	42	870	2.4	0.4	8.8	6.0	1.1	8.8	6.72	2.00	0.19	2.08	2.2
0-10	7.2	6.9	<0.1	0.15	0.75	1.28	50	1060	2.5	0.4	9.3	7.0	1.3	10.0	7.46	2.24	0.21	2.63	2.1
10-23	7.0	6.5	-	0.12	0.77	0.73	36	880	2.5	0.4	6.0	4.5	0.5	7.8	6.07	1.87	0.21	2.28	2.7
23-29	8.1	7.7	<0.1	0.18	1.09	0.70	9	770	3.8	0.4	4.3	2.7	0.6	12.8	8.51	2.43	0.21	1.80	1.6
29-51	8.5	8.1	5.4	0.28	1.13	0.64	<5	290	5.0	0.8	10.7	1.1	0.2	28.5	15.73	10.32	1.22	0.89	4.3
51-80	9.3	8.4	34.6	0.51	2.09	0.40	<5	250	9.1	1.3	5.9	1.4	0.2	17.5	5.11	10.32	3.99	0.69	22.8
80-110	9.8	8.7	26.3	0.66	1.68	0.23	<5	310	12.8	0.8	4.4	0.7	0.2	15.0	2.07	7.66	7.47	0.70	49.8
110-150	9.8	8.8	7.1	0.61	1.09	0.06	<5	290	11.6	0.9	4.5	0.5	0.2	13.5	1.41	6.58	7.04	0.60	52.1
150-185	9.6	9.0	0.2	0.52	0.83	0.03	<5	280	8.8	0.6	5.7	0.4	0.3	13.5	0.93	6.17	6.91	0.52	51.2

**Note:** Paddock sample bulked from 20 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.