LOAMY SAND OVER RED SANDY CLAY LOAM

General Description: *Sandy to sandy loam surface over a red brown weakly calcareous clay loamy subsoil grading to alluvium*

Landform: Very gently undulating alluvial flats

Substrate: Coarse textured alluvium

Vegetation:

Type Site: Site No.: CU062

1:50,000 sheet:	6531-4 (Pirie)	Hundred:	Telowie
Annual rainfall:	325 mm	Sampling date:	07/05/96
Landform:	Depression on a very gently undulating plain, 1% slope		
Surface:	Firm with no stones		

Soil Description:

Depth (cm)	*Description*
0-11	Reddish brown firm massive loamy sand. Sharp to:
11-25	Reddish brown very hard massive loamy sand (plough pan). Clear to:
25-30	Yellowish red very hard massive highly calcareous sandy loam. Abrupt to:
30-60	Dark reddish brown hard highly calcareous clay loam with moderate coarse prismatic structure and 2-10% soft carbonate. Gradual to:
60-100	Yellowish red firm highly calcareous fine sandy clay loam with weak coarse prismatic structure and 2-10% soft carbonate. Gradual to:
100-160	Yellowish red soft highly calcareous clayey sand.

Classification: Sodic, Calcic, Red Chromosol; medium, non-gravelly, sandy / clay loamy, deep

Summary of Properties

Drainage Well drained. The soil is unlikely to ever remain wet for more than a few hours.

Fertility Natural fertility is moderate (as indicated by the exchangeable cation data) due to low clay content. Levels of major nutrients and organic carbon are satisfactory.

pH Alkaline at the surface, strongly alkaline with depth.

Rooting depth 120 cm in pit but few roots below 100 cm.

Barriers to root growth

Physical: There is a plough pan near the surface at this site.

Chemical: Very high pH and sodicity prevent root growth below 100 cm.

Water holding capacity Approximately 120 mm in root zone.

Seedling emergence: Good.

Workability: Good.

Erosion Potential

Water: Low

Wind: Moderately low due to light textured surface.

Laboratory Data

Depth cm	pH H_2O	pH $CaC1_2$	CO_3 %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO_4-S 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	7.2	6.8	0	0.08	0.80	0.8	31	400	9	1.1	0.53	6	17.3	5.92	7.0	4.26	1.04	0.10	0.84	1.4
0-11	8.0	7.5	0	0.11	0.99	0.6	17	383	9	1.1	-	-	-	-	6.5	4.22	1.01	0.10	0.84	1.5
11-25	8.1	7.4	0	0.04	0.33	0.3	6	374	3	1.1	-	-	-	-	6.8	4.63	0.94	0.09	0.79	1.3
25-30	8.8	8.2	0.6	0.08	0.28	0.3	5	382	3	1.4	-	-	-	-	6.5	5.10	1.09	0.11	0.83	1.7
30-60	8.9	8.3	1.2	0.12	0.38	0.3	4	791	5	3.4	-	-	-	-	11.9	6.19	4.33	0.38	1.89	3.2
60-100	8.6	8.0	1.8	0.29	0.67	0.2	<4	955	12	9.6	-	-	-	-	9.4	2.53	3.90	2.14	2.16	22.8
100-160	9.9	8.9	1.3	0.48	3.40	0.1	<4	320	37	10.3	-	-	-	-	5.1	1.21	1.54	2.77	0.58	54.3

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.