DEEP SANDY LOAM

General Description: *Very thick brown sandy loam overlying calcareous clayey sand.*

Landform: Murray River flats.

Substrate: Coarse textured river deposits (Monoman Formation).

Vegetation:

Type Site:

Site No.:	MR005	1:50,000 mapsheet:	6929-1 (Overland Corner)
Hundred:	Out of Hundreds	Easting:	447250
Location:	Cobdogla Irrigation Area	Northing:	6211550
Sampling date:	27/09/2004	Annual rainfall:	245 mm average

Murray River flat. Hard setting surface with no stones.

Soil Description:

Depth (cm)	*Description*
0-15	Dark reddish brown firm massive sandy loam. Clear to:
15-35	Brown friable massive sandy loam. Gradual to:
35-70	Brown friable massive sandy loam. Clear to:
70-100	Light brown soft massive highly calcareous clayey sand with 2-10% fine carbonate segregations. Gradual to:
100-135	Brownish yellow soft massive highly calcareous light clayey sand. Gradual to:
135-175	Brownish yellow and pale brown mottled soft massive highly calcareous clayey sand.

Classification: Calcareous, Regolithic, Brown-Orthic Tenosol; medium, non-gravelly, loamy / loamy, deep

Summary of Properties

Drainage: Well drained. The soil is unlikely to remain wet for more than a day or so following heavy or prolonged rainfall (or irrigation).

Fertility: Inherent fertility is moderate, as indicated by the clay content and the exchangeable cation data. Test data indicate that levels of all measured nutrients are satisfactory.

pH: Alkaline throughout.

Rooting depth: 175 cm in pit, but few roots below 100 cm.

Barriers to root growth:

Physical: There are no apparent physical barriers.

Chemical: There are no chemical barriers.

Waterholding capacity: (Estimates for potential rootzone of irrigated crops)
Total available: 140 mm
Readily available: 65 mm

Seedling emergence: Fair to good, depending on condition of surface soil.

Workability: Satisfactory. The sandy loam surface, although prone to setting hard, is readily worked over a range of moisture conditions.

Erosion Potential:

Water: Low.

Wind: Low.

Laboratory Data

Depth cm	pH H_2O	pH $CaCl_2$	CO_3 %	EC 1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	Cl mg/kg	SO_4 mg/kg	Boron mg/kg	Trace Elements mg/kg (EDTA)				Sum cations cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
												Cu	Fe	Zn	Mn		Ca	Mg	Na	K	
0-15	7.9	7.1	0	0.097	0.40	1.00	85	602	12	4.7	1.1	10.7	100	12.6	147	12.6	7.84	2.91	0.32	1.49	2.6
15-35	8.2	7.4	0	0.087	0.48	0.32	39	397	13	4.3	0.4	3.85	58	2.32	107	8.3	5.18	1.92	0.30	0.88	3.7
35-70	8.7	7.8	1	0.094	0.41	0.16	18	256	15	6.7	0.2	1.52	27	0.15	67.4	8.6	6.24	1.57	0.29	0.46	3.4
70-100	8.9	7.9	7	0.147	2.12	0.14	11	132	57	31.5	0.2	0.79	6	0.17	8.62	10.8	8.93	1.41	0.16	0.26	1.5
100-135	9.0	7.9	3	0.140	1.85	0.10	9	107	82	25.8	0.2	0.68	8	0.20	10.5	8.8	7.64	0.96	0.04	0.19	0.4
135-175	8.8	7.9	2	0.188	2.55	0.15	9	90	151	29.6	0.3	2.88	15	1.24	46.3	8.5	6.74	1.37	0.19	0.23	2.2

Note: Sum of cations, in a neutral to alkaline soil, approximates the CEC (cation exchange capacity), 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, in this case estimated by the sum of cations.

Further information: DEWNR Soil and Land Program