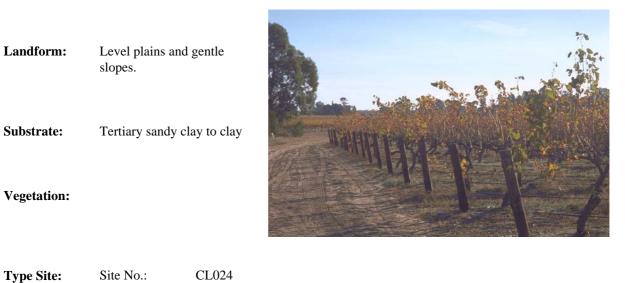
SAND OVER SODIC CLAY

General Description:

Medium to thick sand over a coarsely columnar dispersive brown clay, calcareous with depth



,	6629-2 (Kapunda)	Hundred:	Belvidere
Annual rainfall:	500 mm	Sampling date:	01/11/95
Landform:	Very gentle slope of 1.5%		
Surface:	Loose with no stones		

Soil Description:

Depth (cm)	Description	
0-10	Loose pink sand (recent wind deposited layer). Abrupt to:	
10-28	Brown and dark brown loose loamy sand. Abrupt to:	
28-38	Very pale brown (bleached) with brown mottles loose sand. Sharp to:	
38-50	Yellowish brown, light grey and orange mottled hard sandy heavy clay with very coarse columnar structure. Clear to:	4 5 6
50-75	Strong brown, yellowish brown and light grey mottled hard heavy clay with strong coarse blocky structure. Clear to:	
75-130	Olive yellow and brownish yellow hard sandy medium clay with coarse prismatic structure and minor fine and nodular carbonate segregations.	



Classification: Calcic, Mottled-Mesonatric, Brown Sodosol; thick, non-gravelly, sandy / clayey, deep

Summary of Properties

Drainage:	Moderately well drained. Water will perch on the dispersive clay subsoil for up to a week at a time, waterlogging the bleached sand layer. This is a potential problem under irrigation.							
Fertility:	Natural fertility is low due to the sandy surface (low nutrient retention capacity). Concentrations of measured nutrients at this site are generally marginal.							
pH:	Neutral at the surface, strongly alkaline with depth.							
Rooting depth:	Moderate root growth to 75 cm, but few roots in bleached sand layers.							
Barriers to root growth:								
Physical:	The coarsely structured and dispersive clay subsoil restricts full exploitation by confining roots to the spaces between the large aggregates.							
Chemical:	High pH below 70 cm is the main limitation to deeper root growth.							
Water holding capacity	Approximately 70 mm total available water holding capacity in root zone, of which about 40 mm is readily available.							
Seedling emergence:	Good, except where sand is water repellent.							
Workability:	Good, although disturbance leads to risk of wind erosion.							
Erosion Potential								
Water:	Moderately low due to very gentle slope.							
Wind:	Moderate, due to sandy surface.							

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	%	Avail. P mg/kg	K	mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)			CEC cmol (+)/kg	Exc	ESP				
							ing kg	ing/kg			Cu	Fe	Mn	Zn	(1) 12	Ca	Mg	Na	К	
Row	7.0	6.4	0	0.04	0.35	0.4	46	166	8	0.5	4.2	38	1.7	1.2	2.5	1.91	0.51	0.07	0.23	na
0-10	7.3	6.5	0	0.02	0.21	0.1	22	132	7	0.1	-	-	-	-	1.2	0.78	0.22	0.04	0.14	na
10-28	7.4	6.5	0	0.02	0.22	0.2	16	137	5	0.1	-	-	-	-	1.9	1.04	0.31	0.07	0.14	na
28-38	8.1	6.9	0	0.03	0.35	0.1	6	81	6	0.1	-	-	-	-	1.2	0.55	0.27	0.14	0.04	na
38-50	8.3	6.9	0	0.12	0.29	0.2	<4	137	11	2.6	-	-	-	-	11.4	3.36	4.46	2.38	0.19	20.9
50-75	8.6	7.3	0	0.20	0.74	0.2	<4	168	21	6.4	-	-	-	-	19.9	5.04	9.00	4.45	0.35	22.4
75-130	9.4	8.5	5.1	0.44	1.56	0.1	<4	172	37	7.8	-	-	-	-	13.8	3.85	6.80	3.97	0.35	28.8

Note: Row sample bulked from cores (0-15 cm) taken along rows near 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.