

WET SALINE SOIL

General Description: *Dark sandy loam over a black sandy clay on marl with a saline water table within a metre*

Landform: Saline flats and swamps

Substrate: Very highly calcareous clay (marl) of the Padthaway Formation.

Vegetation: Samphire.



Type Site: Site No.: MM068

1:50,000 sheet:	6926-3 (Tintinara)	Hundred:	Coombe
Annual rainfall:	475 mm	Sampling date:	08/03/93
Landform:	Saline swamp		
Surface:	Firm with no stones. Water table at 73 cm - 7,700 dS/m.		

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-8	Black soft moderately calcareous sandy loam. Abrupt to:
8-12	Dark grey soft slightly calcareous loamy sand. Abrupt to:
12-30	Very dark grey firm slightly calcareous sandy clay with coarse columnar structure. Abrupt to:
30-42	Light grey very highly calcareous medium clay with coarse angular blocky structure. Clear to:
42-73	White massive very highly calcareous medium clay. Diffuse to:
73-120	White and olive grey mottled massive very highly calcareous medium clay.
	Water table at 73 cm. Conductivity = 7,700 dS/m.



Classification: Sodosolic, Salic Hydrosol; thin, non-gravelly, loamy / clayey, shallow

Summary of Properties

Drainage	Poorly drained. Soil is wet for several months or more.
Fertility	Phosphorus and nitrogen are essential for sown salt tolerant species. Zinc and copper may be required, but concentrations are adequate at the sampling site.
pH	Alkaline throughout.
Rooting depth	30 cm (sapphire) in pit. 0 cm for conventional crops and pastures.
Barriers to root growth	
Physical:	No physical barriers.
Chemical:	Extreme salinity, and high sodicity and boron concentrations.
Water holding capacity	40 mm in halophyte root zone.
Seedling emergence:	Satisfactory, but only for salt tolerant species.
Workability:	Trafficability difficult for much of year due to wetness.
Erosion Potential	
Water:	Low.
Wind:	Low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaCl ₂	CO ₃ %	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	9.0	9.0	2	9.72	117	0.8	23	490	24	1.1	-	5.0	0.50	2.9	1.87	3.69	0.01	0.13	na
0-8	9.1	9.0	3	14.00	138	1.1	49	640	25	2.0	-	3.9	0.67	4.2	2.42	5.28	0.02	0.17	na
8-12	8.8	8.4	<0.1	3.80	54	0.2	4	230	5.3	0.20	-	0.83	<0.06	2.2	0.56	1.64	0.54	0.43	na
12-30	8.2	8.0	1	7.00	47.5	0.3	3	960	19	0.46	-	0.73	<0.06	11.6	1.02	4.54	3.47	2.20	30.0
30-42	8.7	8.5	70	7.09	43.4	0.1	<2	600	8.6	0.31	-	0.33	<0.06	6.5	1.06	3.65	2.36	1.46	36.3
42-73	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	1.12	2.97	1.22	0.97	33.9
73-120	8.7	8.4	74	5.36	38.4	<0.1	<2	510	-	-	-	-	-	6.6	0.92	3.18	2.05	1.11	31.1

Note: Paddock sample bulked from 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.