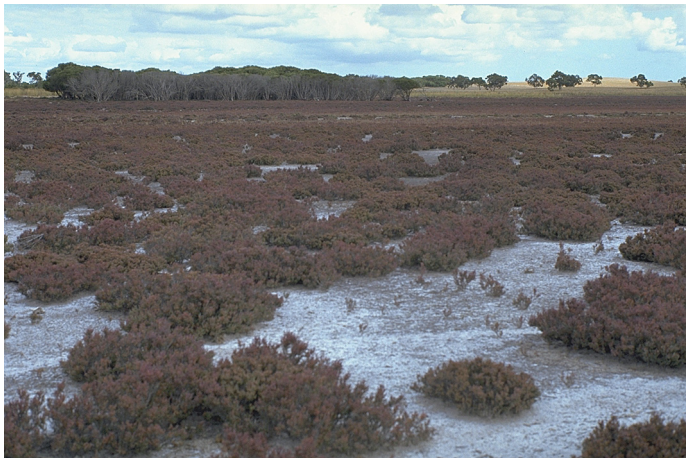
WET SALINE SOIL

General Description: *Dark sandy loam over a black sandy clay on marl with a saline watertable 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 mapsheet:	6926-3 (Tintinara)
Hundred:	Coombe	Easting:	414450
Section:	132	Northing:	6019500
Sampling date:	08/03/1993	Annual rainfall:	490 mm average

Saline swamp. Firm surface. No stones. Watertable at 73 cm - 7,700 dS/m.

Soil Description:

Depth (cm)	*Description*
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.

Watertable 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 (samphire) 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.

Waterholding capacity: 40 mm in halophyte rootzone.

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_2O	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.

Further information: DEWNR Soil and Land Program