

## DEEP SALINE SAND

**General Description:** *Bleached sand, with an organically darkened surface (often veneered by a layer of black clay loam to clay), over a gleyed and yellow mottled clayey sand with watertable at about 100 cm*

**Landform:** Saline flats and swamps.

**Substrate:** Clayey sand to sandy clay loam washed and blown into depressions.

**Vegetation:** Samphire or bare.



**Type Site:** Site No.: SE074  
 1:50,000 sheet: 6825-1 (Taunta)      Hundred: McNamara  
 Annual rainfall: 490 mm      Sampling date: 13/09/04  
 Landform: Samphire flat with sporadic organic mat  
 Surface: Soft with no stones. Water table at 90 cm (Sept. 2004).

**Soil Description:**

<i>Depth (cm)</i>	<i>Description</i>
0-5	Very dark grey friable highly calcareous fine sandy clay loam with 2-10% <i>Coxiella</i> shells (recently deposited layer). Sharp to:
5-10	Greyish brown soft highly calcareous loamy fine sand. Sharp to:
10-25	Very pale brown (bleached) soft highly calcareous loamy fine sand. Diffuse to:
25-50	Pale yellow friable highly calcareous loamy fine sand. Gradual to:
50-90	Pale yellow soft highly calcareous light clayey sand. Clear to:
90-120	Grey, brownish yellow and greenish grey mottled soft highly calcareous light clayey sand in a water table.



**Classification:** Calcarosolic, Salic Hydrosol; thin, non-gravelly, clay loamy / sandy, deep

## Summary of Properties

**Drainage:** Poorly to very poorly drained At least the lower part of the profile is wet for most of the time, although the upper 50 cm or so may only be saturated for a few weeks.

**Fertility:** Inherent fertility is very low, as indicated by the low clay content. Phosphorus, nitrogen and trace element deficiencies are likely. Establishment of a salt tolerant pasture will require correction of these deficiencies to maintain vigour.

**pH:** Alkaline to strongly alkaline throughout.

**Rooting depth:** Samphire roots to 25 cm.

### Barriers to root growth:

**Physical:** There are no physical barriers.

**Chemical:** High salinity throughout is the over-riding barrier to root growth.

**Water holding capacity:** Approximately 90 mm above the water table.

**Seedling emergence:** Very poor due to high salinity. Only salt tolerant species will establish in this environment.

**Workability:** Not applicable.

### Erosion Potential

**Water:** Low.

**Wind:** Low.

## Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	EC 1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	Cl mg/kg	SO <sub>4</sub> -S mg/kg	Boron mg/kg	Trace Elements mg/kg (EDTA)				Sum cations cmol (+)/kg	Exchangeable Cations cmol(+)/kg				Est ESP
												Cu	Fe	Zn	Mn		Ca	Mg	Na	K	
0-5	9.2	8.4	23	0.52	3.23	1.44	7	167	254	58	12.8	0.45	6	0.39	4.4	13.5	7.99	4.21	1.04	0.28	7.7
5-10	9.2	8.4	14	0.66	5.96	0.49	2	100	494	70	5.6	0.11	6	0.09	2.21	7.5	5.73	1.01	0.61	0.17	8.1
10-25	9.4	8.4	19	1.00	10.2	0.3	3	96	994	111	2.6	0.11	17	0.21	1.07	11.1	7.87	2.57	0.54	0.16	4.8
25-50	9.3	8.3	7	1.96	21.2	0.14	3	104	2210	223	1.6	0.19	38	0.19	2.78	9.7	6.89	2.48	0.25	0.12	2.6
50-90	9.1	8.5	3	4.24	46.2	0.18	2	182	5552	415	1.7	0.24	49	0.18	3.79	8.7	5.36	3.02	0.20	0.16	2.3
90-120	8.8	8.4	1	7.72	67.3	0.29	3	246	9644	524	2.8	0.9	27	0.69	3.3	5.2	2.17	2.66	0.16	0.23	3.1

**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 estimated by dividing the exchangeable sodium value by the sum of cations.