

WET SALINE SOIL

General Description: *Thin black saline clay overlying a highly calcareous sandy soil with variable calcrete pans and fragments and a saline water table within 100 cm*

Landform: Highly saline flats and salt pans

Substrate: Interbedded limestone and clay

Vegetation: Samphire and salt water tea tree



Type Site: Site No.: SE034

1:50,000 sheet: 6825-4 (Santo)

Hundred: Santo

Annual rainfall: 500 mm

Sampling date: 24/03/95

Landform: Samphire flat

Surface: Saline with 2-10% shells (2-6 mm). Water table at 65 cm, EC = 46.8 dS/m.

Soil Description:

Depth (cm)	Description
0-7	Black massive highly calcareous light clay. Abrupt to:
7-23	Very pale brown very highly calcareous massive soft clayey sand. Abrupt to:
23-40	Weak calcrete pan. Abrupt to:
40-53	White, yellow and orange mottled soft clayey sand. Abrupt to:
53-65	Greyish brown and yellow soft clayey sand. Clear to:
65-80	(Below water table). Yellow and olive mottled soft clayey sand. Abrupt to:
80-100	Moderately strong calcrete pan.



Classification: Petrocalcic, Calcarosolic, Salic Hydrosol; medium, slightly gravelly, clayey / sandy, shallow

Summary of Properties

Drainage Very poorly drained. Water table at 65 cm or shallower throughout the year.

Fertility Not applicable.

pH Alkaline to strongly alkaline throughout.

Rooting depth Samphire roots to 40 cm.

Barriers to root growth

Physical Calcrete pan.

Chemical: Extreme salinity.

Water holding capacity Not applicable.

Seedling emergence Not applicable.

Workability Not applicable.

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	SO ₄ -S 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	8.9	41.8	24.0	61.8	1.6	11	496	2374	21.8	-	-	-	-	9.5	5.25	7.23	0.71	0.31	7.5
0-7	9.0	8.8	44.7	15.8	53.8	2.3	16	539	1976	33.2	-	-	-	-	10.9	2.82	8.27	4.61	0.47	42.3
7-23	9.3	9.1	20.7	5.50	40.4	1.0	<4	143	722	4.7	-	-	-	-	2.3	2.51	1.91	0.26	0.13	11.3
23-40	9.3	8.8	31.1	3.03	27.3	0.4	<4	101	331	3.0	-	-	-	-	1.5	1.48	1.30	0.27	0.16	18.0
40-53	9.3	8.8	10.6	3.20	30.6	<0.1	<4	112	318	2.9	-	-	-	-	1.4	1.39	1.29	0.14	0.13	10.0
53-65	8.9	8.6	0.3	2.83	28.9	0.1	<4	152	303	4.2	-	-	-	-	2.6	1.33	1.86	0.24	0.33	9.2
65-80	9.1	8.7	0.3	2.52	25.3	<0.1	<4	127	258	5.0	-	-	-	-	2.2	1.58	1.49	0.32	0.29	14.5
80-100	9.2	8.6	32.9	4.48	30.3	0.2	<4	131	564	3.9	-	-	-	-	1.7	1.82	1.33	0.14	0.15	8.2

Note: Paddock sample bulked from 20 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.