

DEEP YELLOW SAND

General Description: *Deep yellowish sand, weakly calcareous with depth*

- Landform:** Undulating slopes and dunefields
- Substrate:** Windblown Molineaux Sand.
- Vegetation:** Mallee



Type Site: Site No.: MM158 1:50,000 mapsheet: 6828-4 (Swan Reach)
 Hundred: Forster Easting: 379070
 Section: 128 Northing: 6155660
 Sampling date: 17/07/2007 Annual rainfall: 290 mm average

Midslope of gently inclined rise, 4% slope. Loose surface with no stones.

Soil Description:

Depth (cm)	Description
0-15	Dark brown (7.5YR3/4) loose single loamy sand. Clear to:
15-35	Reddish yellow (7.5YR6/6) loose single grain loamy sand. Gradual to:
35-58	Reddish yellow (7.5YR6/8) loose single grain light loamy sand. Abrupt to:
58-67	Reddish yellow (5YR6/8) soft single grain light loamy sand. Sharp to:
67-70	Yellowish red (5YR5/8) friable massive clayey sand (lamella). Sharp to:
70-95	Reddish yellow (5YR6/8, 7.5YR6/8) friable massive loamy sand. Clear to:
95-110	Yellowish red (5YR5/8) and reddish yellow (7.5YR6/8) firm massive clayey sand. Gradual to:
110-140	Yellow soft massive slightly calcareous light loamy sand. Diffuse to:
140-190	Yellow soft massive moderately calcareous light loamy sand.



Classification: Calcareous, Argic, Yellow-Orthic Tenosol; medium, non-gravelly, sandy / sandy, very deep



Summary of Properties

Drainage: Rapidly drained. Except during extreme events, no part of the profile is likely to be saturated for more than a couple of hours at a time.

Fertility: Inherent fertility is low, as indicated by the exchangeable cation data. This is due to the low clay content. Phosphorus levels are high for field crops, but low for more intensive crops. Potassium levels are low for all types of crop. Test results indicate that copper, zinc and manganese may all be deficient, but this should be checked using tissue testing.

pH: Alkaline at the surface, neutral in the subsurface, and alkaline in the deeper subsoil.

Rooting depth: 140 cm in sampling pit, few roots below 35 cm.

Barriers to root growth:

Physical: There are no physical barriers, although sandy soils are susceptible to compaction.

Chemical: Low nutrient retention capacity the only likely chemical barrier.

Waterholding capacity: (Estimates for total irrigable rootzone)

Total available: 70 mm

Readily available: 40 mm

Seedling emergence: Satisfactory where not water repellent

Workability: Sandy soils are easily worked.

Erosion Potential:

Water: Low.

Wind: Moderately high.

Laboratory Data

Depth cm	pH H ₂ O	pH CaCl ₂	CO ₃ %	EC 1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	Cl mg/kg	SO ₄ -S mg/kg	Boron mg/kg	React Fe mg/kg	Trace Elements mg/kg (EDTA)				Sum cations cmol (+)/kg	Exchangeable Cations cmol(+)/kg				Est. ESP
													Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
0-15	8.5	7.5	0	0.07	0.48	0.42	40	93	19	9.0	1.1	229	0.12	57	5.66	1.79	3.8	2.84	0.6	0.13	0.22	3.4
15-35	6.6	6.0	0	0.03	0.39	0.17	9	76	9	3.8	0.6	259	0.22	57	0.56	0.26	1.7	1.09	0.27	0.09	0.2	na
35-58	7.9	6.8	0	0.03	0.38	0.53	5	74	12	3.6	0.6	443	0.31	48	0.60	0.63	1.7	1.09	0.37	0.08	0.16	na
58-67	7.9	6.8	0	0.04	0.41	0.59	2	60	9	3.2	0.6	547	0.21	26	0.59	0.59	2.5	1.63	0.64	0.09	0.14	na
67-70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70-95	8.1	7.0	0	0.03	0.35	0.06	1	38	12	4.0	0.6	518	0.15	19	1.20	0.20	3.9	2.25	1.36	0.19	0.11	4.9
95-110	8.2	7.0	0	0.03	0.54	0.07	2	62	5	3.6	0.9	387	0.18	17	1.33	0.25	6.3	3.48	2.26	0.37	0.19	5.9
110-140	8.8	7.7	0	0.07	0.44	0.47	1	47	7	5.0	1.0	412	0.20	15	1.51	0.35	5.9	4.12	1.39	0.22	0.16	3.7
140-190	9.1	8.0	1	0.07	0.44	0.05	1	54	5	5.5	1.1	392	0.25	13	1.58	0.29	6.8	5.03	1.33	0.25	0.14	3.7

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 derived by dividing the exchangeable sodium value by the CEC, in this case estimated by the sum of cations.

Further information: [DEWNR Soil and Land Program](#)

