DEEP SAND

General Description: Thick sand, becoming slightly more clayey and weakly calcareous with depth

Landform: Gently undulating sandhill

country

Substrate: Windblown Molineaux

Sand, with fine secondary

carbonate

Vegetation: Mallee



Type Site: Site No.: MM046 1:50,000 mapsheet: 7029-3 (Loxton)

Hundred:GordonEasting:471650Section:7BNorthing:6201850

Sampling date: 28/07/1992 Annual rainfall: 260 mm average

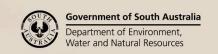
Crest of low sandhill. Loose surface, no stones.

Soil Description:

| Depth (cm) | Description |
|------------|---|
| 0-12 | Yellowish red loose loamy sand with weak granular structure - recent drift. Clear to: |
| 12-25 | Yellowish red loose loamy sand - recent drift. Clear to: |
| 25-37 | Reddish brown loose loamy sand. Sharp to: |
| 37-85 | Yellowish red loose loamy sand. Gradual to: |
| 85-125 | Yellowish red loose moderately calcareous loamy sand. Clear to: |
| 125-140 | Reddish yellow and yellowish red moderately calcareous massive loamy sand. Clear to: |
| 140-180 | Reddish yellow, orange and pink highly calcareous fine sandy loam. |



Classification: Calcareous, Regolithic, Red-Orthic Tenosol; moderate, non-gravelly, sandy / sandy, very deep





Summary of Properties

Drainage: Rapidly drained. Soil never remains wet for more than a couple of hours following

heavy or prolonged rainfall.

Fertility: Inherent fertility is low, as indicated by the exchangeable cation data, and low clay

and organic matter contents. Phosphorus, nitrogen, zinc and copper deficiencies are likely (zinc and copper levels appear adequate at sampling site). Organic carbon

levels are low.

pH: Alkaline throughout.

Rooting depth: 85 cm in pit, but few roots below 37 cm.

Barriers to root growth:

Physical: No physical barriers

Chemical: No chemical barriers, but low nutrient retention capacity and status limit root growth.

Waterholding capacity: Approximately 35 mm in rootzone. 75 mm in potential rootzone.

Seedling emergence: Affected by water repellent surface.

Workability: Soft / loose surface is easily worked.

Erosion Potential:

Water: Low.

Wind: Moderate

Laboratory Data

| Depth cm | pH H ₂ O | pH CaC1 ₂ | CO ₃ | EC1:5 dS/m | ECe dS/m | Org.C | P | Avail. K | Boron mg/kg | Trace Elements mg/kg (DTPA) | | | | CEC cmol | Exchangeable Cations cmol(+)/kg | | | | ESP |
|-------------|------------------------|-------------------------|-----------------|---------------|-------------|--------|-------|-------------|----------------|-----------------------------|-----|-----|-----|-------------|---------------------------------|------|------|------|-----|
| | | | | | | | mg/kg | mg/kg | | Cu | Fe | Mn | Zn | (+)/kg | Ca | Mg | Na | K | |
| Paddock | 8.5 | 7.9 | <0.1 | 0.08 | 0.31 | 0.32 | 6 | 231 | 0.6 | 0.2 | 2.6 | 2.6 | 0.5 | 4.0 | 3.05 | 0.61 | 0.06 | 0.42 | 1.5 |
| | | | | | | | | | | | | | | | | | | | |
| 0-12 | 8.7 | 8.1 | 0.4 | 0.09 | 0.38 | 0.30 | 5 | 217 | 0.7 | 0.1 | 2.2 | 1.9 | 0.4 | 3.9 | 2.96 | 0.59 | 0.08 | 0.43 | 2.1 |
| 12-25 | 8.6 | 8.2 | 0.1 | 0.08 | 0.28 | 0.26 | <5 | 154 | 0.8 | 0.1 | 2.2 | 1.5 | 0.2 | 4.4 | 3.71 | 0.68 | 0.07 | 0.27 | 1.6 |
| 25-37 | 8.4 | 8.0 | 0.1 | 0.08 | 0.56 | 0.45 | <5 | 123 | 0.7 | 0.1 | 2.3 | 1.5 | 0.2 | 5.0 | 4.22 | 0.88 | 0.10 | 0.18 | 2.0 |
| 37-85 | 8.1 | 7.6 | 0.1 | 0.07 | 0.64 | 0.03 | <5 | 46 | 0.4 | 0.1 | 2.1 | 0.4 | 0.1 | 4.4 | 2.68 | 0.81 | 0.11 | 0.11 | 2.5 |
| 85-125 | 9.0 | 8.5 | 1.0 | 0.09 | 0.48 | 0.06 | <5 | 50 | 0.5 | 0.1 | 1.5 | 0.2 | 0.1 | 3.5 | 2.59 | 0.88 | 0.11 | 0.09 | 3.1 |
| 125-140 | 9.0 | 8.6 | 0.5 | 0.09 | 0.42 | 0.04 | <5 | 72 | 0.6 | 0.1 | 1.9 | 0.2 | 0.2 | 4.3 | 2.47 | 1.50 | 0.10 | 0.14 | 2.3 |
| 140-180 | 9.1 | 8.5 | 15.3 | 0.13 | 0.69 | < 0.01 | <5 | 74 | 0.9 | 0.4 | 0.7 | 0.1 | 0.1 | 4.3 | 3.00 | 2.10 | 0.13 | 0.16 | 3.0 |

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



