

THICK SAND OVER SANDY CLAY

General Description: *Thick to very thick sandy surface soil overlying a red or brown weakly structured sandy clay becoming sandier with depth*

Landform: Gentle slopes and flats

Substrate: Medium to coarse grained alluvium

Vegetation:

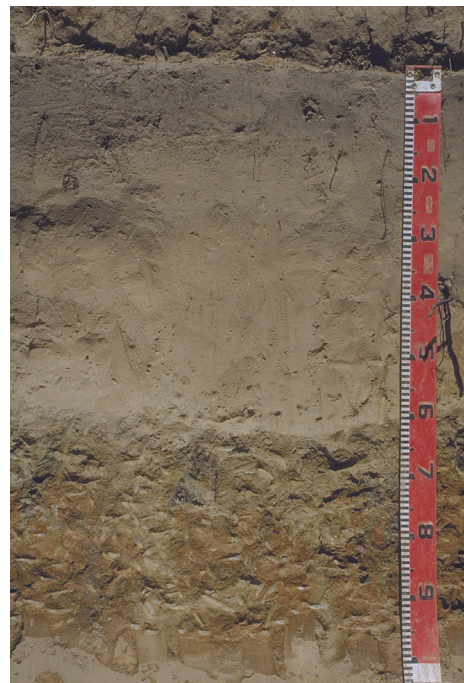


| | | | | |
|-------------------|----------------|-----------|--------------------|------------------|
| Type Site: | Site No.: | CL010 | 1:50,000 mapsheet: | 6628-1 (Barossa) |
| | Hundred: | Moorooroo | Easting: | 316150 |
| | Section: | 19 | Northing: | 6177850 |
| | Sampling date: | 27/07/92 | Annual rainfall: | 535 mm average |

Midslope of very gently inclined outwash fan, 2% slope. Soft surface, no stone. Vineyard.

Soil Description:

| Depth (cm) | Description |
|------------|--|
| 0-20 | Brown soft sand. Clear to: |
| 20-65 | Pale brown soft sand. Abrupt to: |
| 65-75 | Yellowish brown, red and dark brown hard sandy light clay with weak coarse prismatic structure. Abrupt to: |
| 75-100 | Yellowish red, dark brown and orange firm massive sandy clay loam. |



Classification: Eutrophic, Mottled-Subnatric, Brown Sodosol; very thick, non-gravelly, sandy / clayey, deep



Summary of Properties

| | |
|---------------------------------|--|
| Drainage: | Well drained. The clayey subsoil impedes water movement to some extent, but waterlogged conditions are unlikely to persist for more than a day or so. |
| Fertility: | Natural fertility is moderately low, due to the low clay content. Although the nutrient retention capacity of the surface soil is low, concentrations of the measured elements are satisfactory. Calcium and magnesium levels are low, but the cation ratios are correct. Organic carbon levels could be higher. |
| pH: | Slightly acidic throughout. |
| Rooting depth: | More than 100 cm in pit. |
| Barriers to root growth: | |
| Physical: | No physical barriers. |
| Chemical: | No chemical barriers |
| Waterholding capacity: | Approximately 90 mm total, and approximately 55 mm readily available waterholding capacity. The soil profile is ideal for irrigation, with a thick sandy surface which releases water readily for plant uptake, and a clayey subsoil which can store excess water. |
| Seedling emergence: | Good (except where soils are water repellent). |
| Workability: | Good. |
| Erosion Potential: | |
| Water: | Moderately low (only on sloping sites). |
| Wind: | Moderate (sandy surface). |

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 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 | |
| 0-20 | 6.0 | 5.7 | 0 | 0.06 | 0.24 | 0.70 | 99 | 186 | - | 0.5 | 4.7 | 17 | 4.0 | 4.2 | 2.1 | 2.5 | 0.5 | 0.14 | 0.26 | na |
| 20-65 | 6.1 | 5.8 | 0 | 0.18 | 2.42 | 0.12 | 54 | 196 | - | 0.4 | 0.4 | 7.2 | 1.2 | 0.3 | 1.2 | 1.2 | 0.4 | 0.09 | 0.24 | na |
| 65-75 | 6.2 | 5.7 | 0 | 0.19 | 1.37 | 0.19 | 6 | 102 | - | 1.7 | 0.4 | 12 | 0.2 | 0.2 | 7.0 | 3.9 | 3.3 | 0.73 | 0.21 | 10.4 |
| 75-100 | 6.4 | 5.8 | 0 | 0.14 | 1.20 | 0.17 | 8 | 79 | - | 1.6 | 0.6 | 11 | 0.4 | 0.5 | 5.4 | 2.7 | 3.1 | 0.58 | 0.14 | 10.7 |

Note: 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](#)

