

SHALLOW SANDY LOAM OVER ROCK

General Description: *Gravelly and stony loamy sand to sandy loam over weathering basement rock within 50 cm.*

Landform: Undulating to rolling stony slopes with variable rock outcrop.

Substrate: Granite.

Vegetation:



Type Site: Site No.: MO009

1:50,000 sheet: 6727-4 (Monarto) Hundred: Mobilong
Annual rainfall: 360 mm Sampling date: 1976
Landform: Upper slope above dissected creek valley, 4% slope
Surface: Soft with up to 20% surface stone and granite outcrop

Soil Description:

| <i>Depth (cm)</i> | <i>Description</i> |
|-------------------|--|
| 0-10 | Dark reddish brown massive firm sandy loam with 20-50% granite gravel (6-20 mm). Clear to: |
| 10-22 | Dark reddish brown massive firm sandy loam with 50-90% granite gravel (6-20 mm). Clear to: |
| 22-30 | Weathering granite with pockets of dark red firm weakly structured medium clay. Clear to: |
| 30-40 | Granite. |



Classification: Basic, Lithic, Leptic Tenosol; medium, moderately gravelly, loamy / clayey, shallow

Summary of Properties

- Drainage:** Rapidly drained. The soil never remains wet for more than a few hours at a time.
- Fertility:** Inherent fertility is moderately low, a reflection of the low clay content. Most nutrient retention capacity is provided by organic matter, as indicated by the moderately high levels in the 0-10 cm layer.
- pH:** Alkaline throughout.
- Rooting depth:** 30 cm in pit.
- Barriers to root growth:**
- Physical:** Hard granite at shallow depth is the over-riding limitation.
 - Chemical:** There are no chemical barriers.
- Water holding capacity:** Approximately 20 mm in the root zone.
- Seedling emergence:** Satisfactory.
- Workability:** The soft surface is easily worked, but rocky outcrop and extensive surface stone hinder cultivation and abrade implements.

Erosion Potential

- Water:** Moderate
- Wind:** Moderately low.

Laboratory Data

| Depth cm | Coarse sand % | Fine sand % | Silt % | Clay % | pH H ₂ O | CO ₃ % | EC 1:5 dS/m | Cl mg/kg | CEC cmol (+)/kg | Exchangeable Cations cmol(+)/kg | | | | ESP |
|-------------|---------------------|-------------------|-----------|-----------|------------------------|----------------------|----------------|-------------|-----------------------|------------------------------------|------|------|------|-----|
| | | | | | | | | | | Ca | Mg | Na | K | |
| 0-10 | 39 | 37 | 4 | 16 | 8.4 | 0.7 | 0.11 | <50 | 14 | 11.5 | 1.3 | 0.22 | 0.94 | 1.6 |
| 10-22 | 58 | 27 | 2 | 10 | 8.6 | 0.1 | 0.07 | <50 | 7 | 5.4 | 0.83 | 0.14 | 0.27 | 2.0 |
| 22-30 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Note: CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements. CEC is estimated at this site from the exchangeable cation data.

ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC.