

SHALLOW SANDY LOAM OVER ROCK

General Description: *Shallow stony loamy sand to sandy loam becoming more clayey with depth over weathering coarse grained basement rock mantled by secondary carbonate*

Landform: Undulating rises.

Substrate: Schist mantled by fine carbonate.

Vegetation:

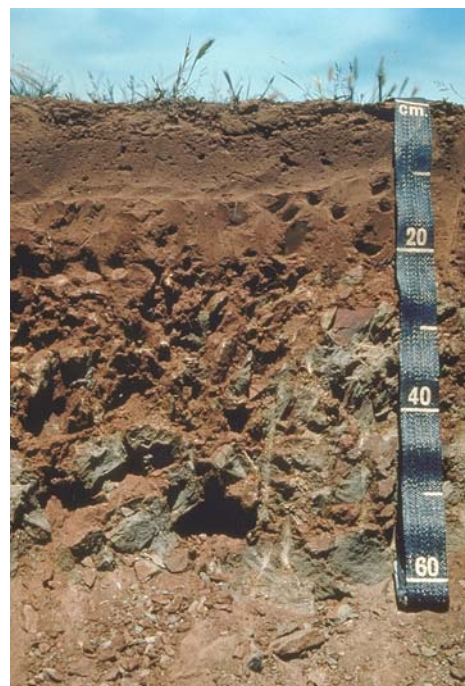


Type Site: Site No.: MO020

1:50,000 sheet:	6727-4 (Monarto)	Hundred:	Monarto
Annual rainfall:	350 mm	Sampling date:	1976
Landform:	Lower slope of long gentle rise, 5% slope		
Surface:	Firm with schist stones		

Soil Description:

Depth (cm)	Description
0-10	Reddish brown soft massive loamy sand with minor quartz gravel. Clear to:
10-17	Dark reddish brown soft massive loamy sand. Clear to:
17-23	Reddish brown soft massive sandy loam with 10-20% rock fragments. Sharp to:
23-30	Dark reddish brown firm massive loam with more than 50% rock fragments. Sharp to:
30-45	Weathering schist with pockets of loam (as above) and fine white carbonate.



Classification: Sodic, Calcic, Red Kandosol; medium, gravelly, sandy / loamy, very shallow

Summary of Properties

Drainage: Well drained. The soil is never saturated for more than a few days.

Fertility: Inherent fertility is moderately low, as indicated by the exchangeable cation data. Low clay content limits nutrient retention capacity.

pH: Neutral at the surface, alkaline with depth.

Rooting depth: Not recorded. Estimate 30 cm in pit.

Barriers to root growth:

Physical: Hard rock at shallow depth is the over-riding limitation.

Chemical: There are no chemical barriers.

Water holding capacity: Approximately 40 mm in the root zone.

Seedling emergence: Satisfactory.

Workability: The soft surface is easily worked, but surface stone and rocky outcrop interfere with tillage.

Erosion Potential

Water: Moderately low to moderate.

Wind: 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	26	64	2	6	7.3	0	0.08	<50	3	2.0	0.43	0.03	0.95	na
10-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17-23	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23-30	13	54	12	22	9.2	29	0.23	68	11	4.2	3.7	1.9	1.3	17.1
30-45	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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