

CALCAREOUS LOAM OVER CLAY

General Description: *Calcareous loam becoming more calcareous with depth, overlying substrate clay within 120 cm.*

Landform: Level to gently undulating plains and fans.

Substrate: Red, coarsely structured Tertiary (Hindmarsh) clay.

Vegetation: Mallee.



Type Site: Site No.: CL909

1:50,000 sheet: 6529-2 (Dublin)

Hundred: Grace

Annual rainfall: 400 mm

Sampling date: 08/03/91

Landform: Level plain, 0% slope

Surface: Firm with no stones

Soil Description:

Depth (cm)	Description
0-6	Brown firm highly calcareous loam with weak granular structure. Clear to:
6-15	Brown firm massive very highly calcareous loam. Clear to:
15-75	Strong brown firm massive very highly calcareous loam with more than 50% fine carbonate segregations. Diffuse to:
75-140	Strong brown hard highly calcareous medium clay with moderate coarse angular blocky structure and 20-50% fine carbonate segregations.



Classification: Hypervescent, Regolithic, Hypercalcic Calcarosol; medium, non-gravelly, loamy / clayey, moderate

Summary of Properties

Drainage: Well drained. The soil rarely remains wet for more than a day or so following heavy or prolonged rainfall.

Fertility: Inherent fertility is moderate. Nutrient retention capacity is favourable, but high surface carbonate content reduces availability of phosphorus, copper, zinc, manganese and iron.

pH: Alkaline at the surface, strongly alkaline with depth.

Rooting depth: 68 cm in pit but few roots below 15 cm.

Barriers to root growth:

Physical: There are no physical barriers above the substrate clay.

Chemical: High pH, high boron concentrations and probable high sodicity restrict root growth.

Water holding capacity: Approximately 45 mm in the potential root zone.

Seedling emergence: Satisfactory.

Workability: Calcareous loamy soils are easily worked over a wide range of moisture levels.

Erosion Potential

Water: Low.

Wind: Moderately low.

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 -S 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	
0-6	8.4	7.8	17	0.16	-	1.96	43	820	-	-	0.9	4.9	20.9	0.6	-	-	-	-	-	-
6-15	8.4	7.7	19	0.18	-	1.31	16	560	-	-	0.9	4.0	6.3	0.2	-	-	-	-	-	-
15-75	9.3	8.1	37	0.30	-	0.35	3	170	-	13	1.2	3.3	1.6	0.0	-	-	-	-	-	-
75-140	9.6	8.3	7	0.79	-	0.06	1	440	-	32	0.7	5.7	1.6	0.0	-	-	-	-	-	-