

**SHALLOW CALCAREOUS LOAM**

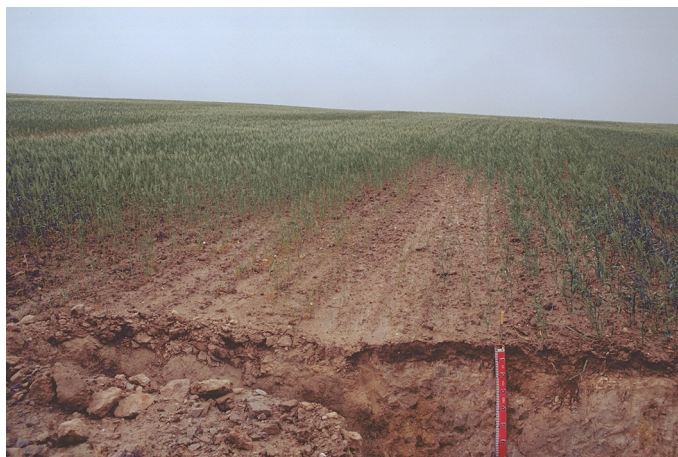
(Scalded)

**General Description:** *Brown highly calcareous loam becoming more calcareous and silty with depth and grading to weathering basement rock within 100 cm*

**Landform:** Undulating rises

**Substrate:** Weathering siltstone mantled by soft carbonate

**Vegetation:**



**Type Site:**

Site No.:	CU051B	1:50,000 mapsheet:	6631-3 (Bundaleer)
Hundred:	Reynolds	Easting:	282330
Section:	228	Northing:	6295800
Sampling date:	03/11/1994	Annual rainfall:	460 mm average

Paired non scalded (CU051A) and scalded (CU051B) site on the mid slope of an undulating low hill. Firm surface with minor quartzite stones and 6% slope. Up to 10% of the surface is scalded.

**Soil Description:** **CU051B (scalded site)**

<i>Depth (cm)</i>	<i>Description</i>
0-10	Brown very highly calcareous loam with moderate granular structure. Abrupt to:
10-30	Pink very highly calcareous massive soft silty loam. Gradual to:
30-55	Light brown very highly calcareous massive soft silty loam. Gradual to:
55-100	Weathering very highly calcareous siltstone.



**Classification:** Hypervescent, Paralithic, Hypercalcic Calcarosol; medium, non-gravelly, loamy / silty, moderate.



**Summary of Properties**

- Drainage:** The soil is well drained, with a permeable profile and adequate slope for runoff.
- Fertility:** The natural fertility of the soil is moderate, most of the nutrient retention capacity being attributable to surface organic matter. The high carbonate content reduces nutrient availability.
- pH:** Alkaline at the surface, strongly alkaline with depth.
- Rooting depth:** 70 cm in natural soil pit (although few roots below 45 cm). There are few roots below 10 cm in the scalded soil pit
- Barriers to root growth:**
- Physical:** There are no physical barriers apart from shallow depth to rock.
- Chemical:** Very high pH at shallow depth in the natural soil is the main limitation. On the scalded soil, high salinity and sodicity are additional limitations.
- Waterholding capacity:** Approximately 75 mm above the rock (moderately high).
- Seedling emergence:** Good in natural soil; poor in scalded soil due to high surface salinity.
- Workability:** Good.
- Erosion Potential:**
- Water:** Moderate due to the high erodibility of the soil, and the slope.
- Wind:** Moderately low, although these soils will easily pulverize and blow.

**Laboratory Data**

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO <sub>4</sub> mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)			CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP	SAR	Cl mg/kg
											Cu	Mn	Zn		Ca	Mg	Na	K			
0-10	8.5	8.1	-	2.92	16.71	0.6	-	-	162	6.2	-	-	-	6.6	5.55	2.58	1.64	0.63	24.9	19.1	1888
10-30	10.1	9.1	-	1.31	9.22	0.1	-	-	57	3.9	-	-	-	5.6	4.08	2.71	1.72	0.24	30.6	23.0	1136
30-55	10.2	9.1	-	0.82	7.24	0.1	-	-	27	2.9	-	-	-	5.9	3.53	3.05	1.96	0.25	33.4	21.9	921
55-100	10.1	9.1	-	0.79	6.28	<0.1	-	-	20	2.4	-	-	-	5.9	2.91	3.52	1.20	0.20	20.4	17.8	729

**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. SAR is sodium adsorption ratio measured on the saturation extract.

**Further information:** [DEWNR Soil and Land Program](#)

