

CH1: Bleached, Eutrophic, Red Chromosol

General description of the soil

A non-sodic, texture-contrast soil with a high base status (i.e. Eutrophic) in the major part of the red clayey B horizon. A conspicuously bleached A2e horizon is present.

Distribution:	A common soil in subhumid eastern and southern Australia.
Typical land use:	Grazing of improved pastures and some cropping.
Common variants:	Similar soils occur with only a sporadically bleached A2 horizon.
World Reference Base:	Abruptic Lixisol (incomplete data).
Other names:	Red Podzolic Soils and Red Duplex Soils.

Environment and location of the example profile

Landform:	Lower alluvial terrace.
Parent material for substrate:	Alluvial sediments.
Drainage class:	Imperfectly drained.
Surface condition:	Firm.
Site disturbance:	Cultivation.
Native vegetation:	Originally eucalypt woodland.

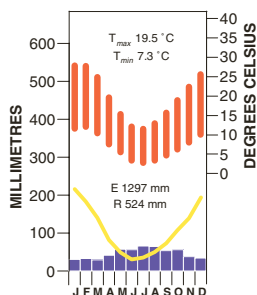


Avoca River catchment, north central Victoria

Site location



Site climate



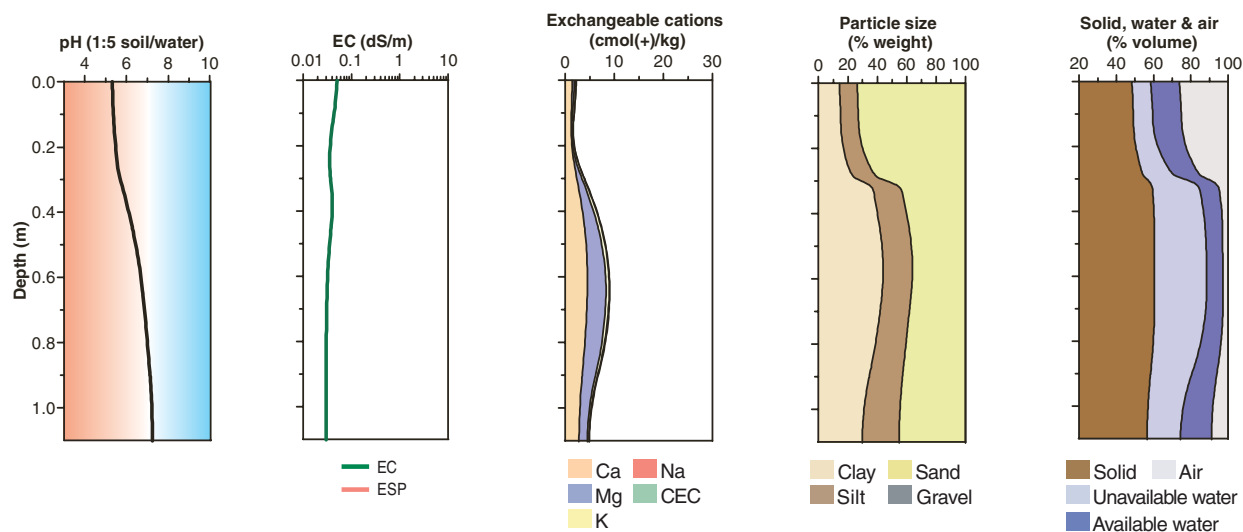
Soil morphology

Horizon	Depth (m)	Colour	Mottles	Texture	Structure			Consistence	Coarse fragments	Segregations	Boundary
					Grade	Shape	Size				
A11	0.00–0.12	brown (7.5YR 4/4)	–	fine sandy loam	massive	–	–	weak (moist)	–	–	clear
A2e	0.12–0.25	conspicuously bleached	–	light fine sandy loam	massive	–	–	weak (moist)	–	–	abrupt
B1	0.25–0.30	yellowish red (5YR 5/8)	–	fine sandy clay loam	weak	angular blocky	10–20 mm	firm (moist)	–	–	abrupt
B21	0.30–0.45	yellowish red (5YR 5/8)	–	medium clay	moderate	angular blocky	10–20 mm parting to 5–10 mm	firm (moist)	–	–	abrupt
B22	0.45–0.65	yellowish red (5YR 4/6)	–	medium heavy clay	weak parting to moderate	angular blocky	20–50 mm parting to 5–10 mm	firm (moist)	–	–	gradual
B23	0.65–0.90	strong brown (7.5YR 5/6)	–	medium clay	strong	angular blocky	10–20 mm parting to 5–10 mm	firm (moist)	–	–	gradual
B3	0.90+	strong brown (7.5YR 5/6)	yellowish red (5YR 5/6) and red (2.5YR 5/8)	very fine sandy clay loam	weak			very firm (moderately moist)	–	–	

Soil chemical and physical properties

Horizon	Sample Depth (m)	pH H ₂ O ^A	pH CaCl ₂ ^B	Elect. Cond. dS/m ^A	CaCO ₃ %	Org. C % ^A	Extr. P mg/kg	Tot. P %	Tot. K %	Cation exchange properties ¹ cmol(+)/kg						ESP %	Bulk dens. Mg/m ³	Particle size %				
										Ca	Mg	K	Na	H+Al	CEC			ECEC	CS	FS	Silt	Clay
A11	0.00–0.12	5.3	4.3	0.05		1.3				1.3	0.4	0.3	< 0.1									
A2e	0.12–0.25	5.4	4.4	< 0.05						0.4	0.1	0.2	< 0.1									
B1	0.25–0.30	5.4	4.4	< 0.05						1.8	0.7	0.4	< 0.1									
B21	0.30–0.45	6.1	5.3	0.05						3.7	1.9	0.6	0.1									
B22	0.45–0.65	6.7	5.7	< 0.05						5.1	3.4	0.7	0.1									
B23	0.65–0.90	7.0	6.0	< 0.05						4.4	3.7	0.6	0.2									
B3	0.90+	7.3	6.2	< 0.05						2.5	1.9	0.3	0.1									

Key profile properties



General qualities of the soil

Infiltration:	Rapid under pasture and woodland but degraded and hardsetting A horizons may limit water entry.
Available water store:	Moderate.
Permeability:	Restricted permeability in the B horizon.
Physical root limitations:	Limited aeration associated with temporary saturation in the A2 horizon.
Erosion hazard:	Moderate on cultivated slopes.
Nutrient availability:	Deficiencies in molybdenum, phosphorus and potassium may occur. Inherent fertility is low.
Toxicities:	Strongly acid surface soil suggests that aluminium and manganese may reach toxic levels.



Alluvial terraces west of Maryborough, Victoria. The profile is from the lower (younger) terrace.

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