

KA14: Acidic, Mesotrophic, Yellow Kandosol

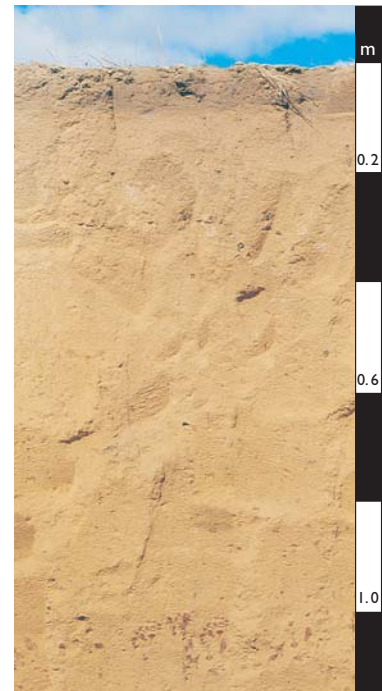
General description of the soil

A sandy Yellow Kandosol with a relatively low base status (i.e. Mesotrophic) in the strongly acid B2 horizon.

Distribution:	Best known in south-west Western Australia but similar soils occur elsewhere, except in Tasmania and Victoria.
Typical land use:	Dryland cropping and improved pastures.
Common variants:	The texture profile may vary as does the nature and amount of ferruginous nodules.
World Reference Base:	Profondic Acrisol (incomplete data).
Other names:	Yellow Earths, Earthy Sands and yellow sandplain soils.

Environment and location of the example profile

Landform:	Gently undulating upland plain.
Parent material or substrate:	Alluvial/colluvial sandsheet.
Drainage class:	Well-drained.
Surface condition:	Loose.
Site disturbance:	Cultivation.
Native vegetation:	Acacia shrubland.

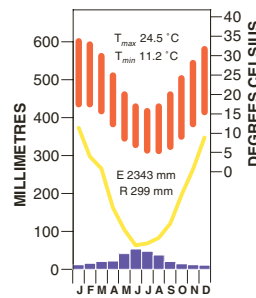


North-west of Merredin, Western Australia

Site location



Site climate



Soil morphology

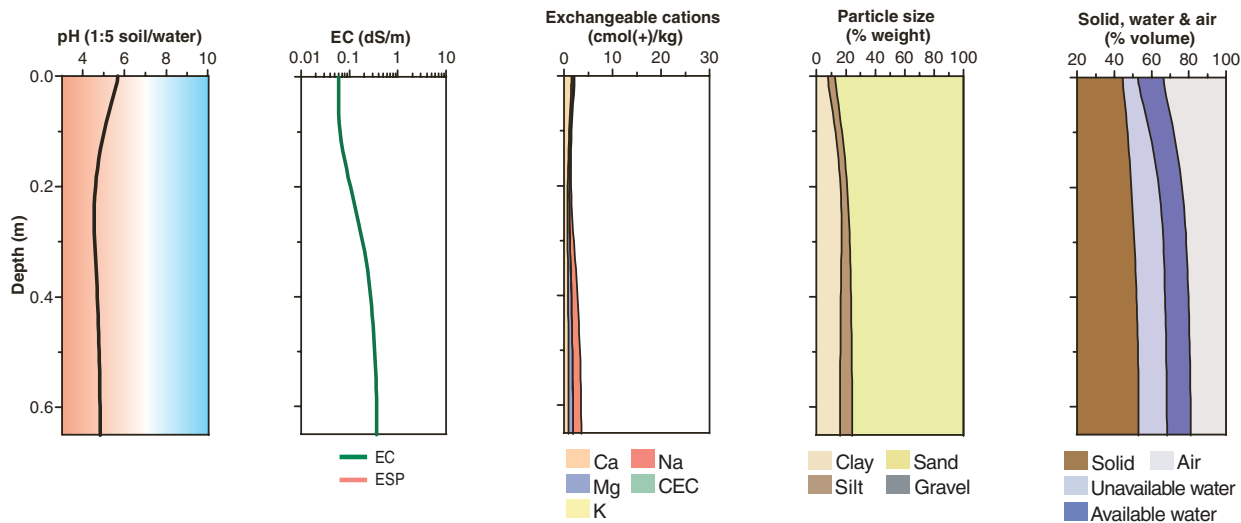
Horizon	Depth (m)	Colour	Mottles	Texture	Structure			Consistence	Coarse fragments	Segregations	Boundary
					Grade	Shape	Size				
A1	0.00–0.10	light brownish grey (10YR 6/2)	–	loamy sand	single grain	–	–	loose	–	–	clear
B1	0.10–0.45	yellow (10YR 7/6)	–	sandy loam	massive	–	–	loose	–	–	diffuse
B21	0.45–1.05	yellow (10YR 7/6)	–	sandy loam	massive	–	–	very weak	–	2–10% soft ferruginous nodules (6–20 mm)	diffuse
B22	1.05–1.20	yellow (10YR 7/6)	–	light sandy clay loam	massive	–	–	very weak	–	10–20% soft ferruginous nodules (6–20 mm)	diffuse
B23	1.20–1.70 +	yellow (10YR 7/6)	–	light sandy clay loam	massive	–	–		–	<2% soft ferruginous nodules (6–20 mm)	

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 ^A	Tot. P %	Tot. K %	Cation exchange properties ^E						ESP %	Bulk dens. Mg/m ³	Particle size % ^B			
										cmol(+)/kg								CS	FS	Silt	Clay
										Ca	Mg	K	Na	H+Al	CEC						
A1	0.00–0.05	5.6	4.7	0.06		1.2	20			1.4	0.4	0.1	0.2					72	15	5	8
B1	0.25–0.30	4.4	4.0	0.06		0.2	< 2			0.6	0.2	<0.1	0.1					63	16	4	18
B21	0.60–0.65	4.8	4.5	0.35		0.1	< 2			0.9	0.9	<0.1	1.6					53	23	8	16

Note: Laboratory data from a similar soil (Grealish & Wagnon 1995)

Key profile properties



General qualities of the soil

Infiltration:	Rapid unless water-repellent.
Available water store:	Generally moderate but less in shallower soils.
Permeability:	High.
Physical root limitations:	None present.
Erosion hazard:	Risk following clearing and cultivation, particularly by wind.
Nutrient availability:	Mostly deficient in major and often minor elements.
Toxicities:	Mainly aluminium induced by strong acidity. Possible salinity at depth.

Cropping lands east of Northam, Western Australia.

Acknowledgements: Soil image, soil description and laboratory data: Agriculture Western Australia. Laboratory data are for a similar soil from Grealish & Wagnon (1995), p. 77. Landscape image: Richard Woldendorp.

