

## HY5: Bleached-Magnesian, Chromosolic, Redoxic Hydrosol

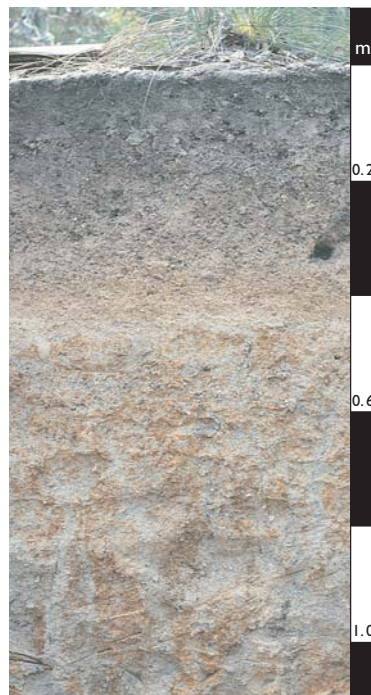
### General description of the soil

A seasonally wet texture-contrast soil with a mottled, neutral to acid upper B2 horizon which has an exchangeable Ca/Mg ratio of less than 0.1. This soil has a conspicuously bleached A2 horizon.

<b>Distribution:</b>	A common soil in the medium–high rainfall areas of north-east Queensland. Probably occurs in similar wet environments elsewhere in eastern and northern Australia.
<b>Typical land use:</b>	Grazing.
<b>Common variants:</b>	Colour and textural variations are common.
<b>World Reference Base:</b>	Gleyic Planosol.
<b>Other names:</b>	Often called Gleyed Podzolic Soils.

### Environment and location of the example profile

<b>Landform:</b>	Alluvial fan.
<b>Parent material or substrate:</b>	Alluvium and colluvium derived from acid igneous rocks.
<b>Drainage class:</b>	Imperfectly drained.
<b>Surface condition:</b>	Hardsetting.
<b>Site disturbance:</b>	No effective disturbance.
<b>Native vegetation:</b>	Woodland.

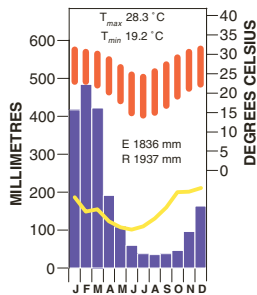


Ingham–Cardwell area, north Queensland

### 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	greyish brown (10YR 5/2)	–	loamy sand	massive	–	–	very weak (moist)	–	–	clear wavy
A2e	0.10–0.35	white (10YR 8/2)	–	coarse sand	massive	–	–		20–50% subangular quartz (2–6 mm)	–	abrupt
B21	0.35–0.60	light brownish grey (2.5Y 6/2)	20–50% brownish yellow (10YR 6/8) distinct (15–30 mm)	medium heavy clay	weak	columnar	20–50 mm		20–50% subangular quartz (2–6 mm)	–	diffuse broken
B22	0.60–0.90	light brownish grey (2.5Y 6/2)	20–50% brownish yellow (10YR 6/8) distinct (15–30 mm)	coarse sandy medium clay	massive	–	–		50–90% subangular quartz (2–6 mm)	10–20% manganiferous concretions (2–6 mm)	
2B2	0.90–1.80	light brownish grey (2.5Y 6/2)	20–50% brownish yellow (10YR 6/8) distinct (15–30 mm)	coarse sandy medium clay	massive	–	–		50–90% subangular quartz (2–6 mm)	10–20% manganiferous concretions (2–6 mm)	

### Soil chemical and physical properties

Horizon	Sample Depth (m)	pH H <sub>2</sub> O <sup>A</sup>	pH CaCl <sub>2</sub>	Elect. Cond. dS/m <sup>A</sup>	CaCO <sub>3</sub> %	Org. C % <sup>D</sup>	Extr. P mg/kg <sup>B</sup>	Tot. P % <sup>A</sup>	Tot. K % <sup>A</sup>	Cation exchange properties <sup>1</sup> cmol(+)/kg						ESP % <sup>A</sup>	Bulk dens. Mg/m <sup>3</sup>	Particle size % <sup>A</sup>			
										Ca	Mg	K	Na	H+Al <sup>B</sup>	CEC			ECEC <sup>A</sup>	CS	FS	Silt
A1	0.00–0.10	6.6		0.02		0.8	3	0.002	2.68	0.2	0.3	0.1	< 0.1	0.4	1	1	–	61	28	5	7
A2e	0.10–0.20	6.6		0.02														63	26	7	4
A2e	0.20–0.30	6.7		0.01		0.1				< 0.1	0.1	< 0.1	< 0.1	0.1	1	< 1	–	68	27	2	3
A2e	0.30–0.35	6.7		0.01														61	31	5	3
B21	0.35–0.60	6.6		0.04			2	0.001	2.60	< 0.1	2.3	0.1	0.2	1.1	4	4	–	43	18	6	33
B22	0.60–0.90	6.5		0.03		0.1				< 0.1	1.9	0.1	0.3	1.0	4	4	–	43	26	9	23

