

VE4: Epicalcareous-Endoacidic, Self-mulching, Red Vertisol

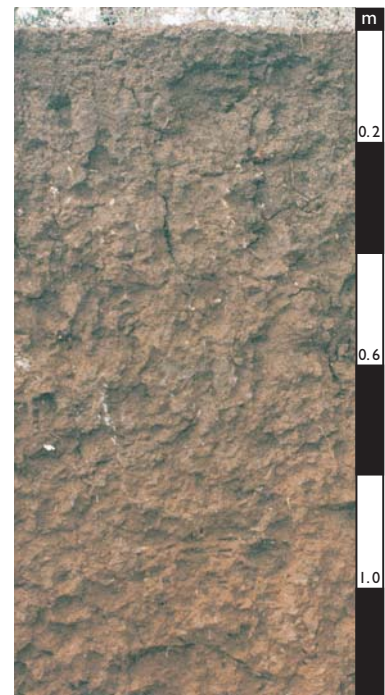
General description of the soil

A red shrink-swell, cracking clay soil that is self-mulching, calcareous in the upper part of the solum and is strongly acid and strongly sodic at depth.

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|------------------------------|---|
| Distribution: | Relatively large areas occur on undulating plains and rises derived from labile sedimentary rocks and transported clays in southern inland Queensland and to a lesser extent throughout northern Australia. |
| Typical land use: | Widely used for a variety of dryland crops and grazing of native and improved pastures. |
| Common variants: | Depths and levels of carbonate, sodicity and strong subsoil acidity vary. |
| World Reference Base: | Vertic Solonchak. |
| Other names: | Red Clays and Red Cracking Clays. |

Environment and location of the example profile

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|--------------------------------------|--|
| Landform: | Gently undulating plain. |
| Parent material or substrate: | Labile sedimentary rocks and transported clays. |
| Drainage class: | Imperfectly drained. |
| Surface condition: | Self-mulching with periodic cracking. |
| Site disturbance: | Cleared. |
| Native vegetation: | Open forest of brigalow (<i>Acacia harpophylla</i>) and belah (<i>Casuarina cristata</i>). |
| Microrelief: | Normal gilgai; 0.15 m vertical interval; profile sampled on mound. |

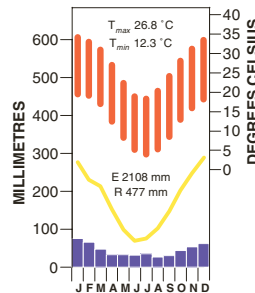


East of St George, Queensland

Site location



Site climate



Soil morphology

| Horizon | Depth (m) | Colour | Mottles | Texture | Structure | | | Consistence | Coarse fragments | Segregations | Boundary |
|---------|-----------|------------------------------|---------|-------------|----------------------------|----------------------|--------------------------------|-------------------|--|--|----------|
| | | | | | Grade | Shape | Size | | | | |
| A1 | 0.00–0.04 | dark brown (7.5YR 3/4) | – | medium clay | strong | granular | 2–5 mm | firm (dry) | – | 2–10% carbonate nodules (2–6 mm) | abrupt |
| B21 | 0.04–0.28 | dark reddish brown (5YR 3/3) | – | heavy clay | strong | angular blocky | 20–50 mm | strong (dry) | <2% rounded tabular fragments (2–6 mm) | – | clear |
| B22 | 0.28–0.71 | dark reddish brown (5YR 3/4) | – | heavy clay | strong parting to moderate | angular blocky | 50–100 mm parting to 10–20 mm | very strong (dry) | <2% rounded tabular fragments (2–6 mm) | 2–10% carbonate nodules (2–6 mm) | clear |
| B23 | 0.71–0.90 | reddish brown (5YR 4/6) | – | heavy clay | moderate | lenticular structure | 50–100 mm | very strong (dry) | – | <2% carbonate nodules, 2–10% manganiferous veins, 2–10% gypsum crystals (all 2–6 mm) | gradual |
| B24 | 0.90+ | reddish brown (5YR 4/8) | – | heavy clay | strong parting to moderate | lenticular structure | 100–200 mm parting to 10–20 mm | strong (dry) | – | – | – |

