

Black soils on basalt and granite



Landform	Undulating to gently undulating plains and rises formed on predominantly basalt but also granite and granodiorite.
Woody vegetation	Treeless plains with scattered black tea tree scrub; or open mountain coolibah, bloodwood and narrow-leaved ironbark woodlands. Generally understory is absent.
Expected pasture composition	<p><i>* Denotes non-native "Expected Pasture Composition" species.</i></p> <p><i>Bare ground or little grass cover occurs on the hard rock rubble of lava flows.</i></p>
Preferred	Angleton bluegrass* (naturalised), couch grass, forest bluegrass, kangaroo grass, black speargrass.
Intermediate	Pitted bluegrass, silky browntop, canegrass, golden beard grass, lemon-scented grass, native millet.
Non-preferred	Wiregrasses, northern wanderrie grass.
Annual grasses	Comet grass, Flinders grass, two-coloured panic. Non-preferred species include asbestos grass.
Suitable sown pastures	Angleton grass, Indian couch, creeping bluegrass, butterfly pea, leucaena, Caatinga stylo, desmanthus.
Introduced weeds	Mimosa bush, rubbervine, Noogoora burr, grader grass, mission grass.
Soil	Massive black and brown earths; sometimes cracking.
Description	Surface: Self-mulching; Surface texture: medium clay; Subsoil texture: medium to heavy clay.

Features

Slight gilgai development. High moisture holding capacity. Slow internal drainage. Carbonate concretions at depth. Black basalt soils can have high boulder coverage.

Water availability

High

Fertility

High (basalt-derived soils); moderate nitrogen (5 mg/kg); moderate phosphorus (11 mg/kg); high potassium (1.0 cmol /kg).

Moderate (granite-derived soils); moderate nitrogen (5 mg/kg); moderate phosphorus (6 mg/kg); moderate potassium (0.7 cmol /kg).

Salinity

Non-saline

Sodicity

Non-sodic

pH

Neutral (7.0) surface increasing alkalinity at depth.

Long-term carrying capacity information (A condition)

Based on fully watered area for 1AE = 450 kg animal consuming 8kg DM/day				
Median annual rainfall 663 – 742 mm				
Pasture type	Median tree cover (TBA m ² /ha) (FPC %)	Median annual pasture growth (DM kg/ha)	Safe annual utilisation pasture growth (%)	LTCC (ha/AE)
Native species	0 TBA/FPC	1250 - 1460	30%	6.7 – 7.8
	6 TBA 15 FPC	690 - 980	30%	10 – 14

Enterprise

Breeding and growing.

Land use and management recommendations

- Suitable for grazing of native pastures.
- Rotational wet seasons spelling to maintain perennial pasture composition.
- Manage grazing pressure to ensure at least 50% ground cover at break of season.
- Strategic burning (late dry hot burn) to manage woody weeds (e.g. rubbervine).

Land use limitations

- Internal drainage may be slow leaving soils prone to waterlogging.
- Basalt soils have rocky profile throughout.
- Narrow range of optimum moisture for tillage and traffic.

Conservation features and related management

- Largely restricted to the south-west of the Einasleigh bioregion.
- Subject to high grazing pressure.
- Subject to weed infestation by rubbervine (*Cryptostegia grandiflora*) and grader grass (*Themeda quadrivalvis*) and invasive exotic weed species such as mimosa (*Acacia farnesiana*) that may change the community to a tall open shrubland.

Regional Ecosystems

9.3.10a-b, 9.3.11a.

Land system, Local Pasture Unit

Rosella (59) (Perry *et al* 1964); LPU 28 (Tothill and Gillies 1992).

NG01 Black soils on basalt and granite



Area of land type in region: 0.005%
Median rainfall (region): 544 – 1297 mm
Average rainfall (region): 580 – 1370 mm
Area of land type with FPC: 62%
Median FPC: 15%
Median TBA: 6 m²/ha



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