

Mitchell grasslands



Landform	Flat to gently undulating plains (1–3%).
Woody vegetation	Commonly treeless, but may be associated with tree lines of myall, coolibah, poplar box, belah, whitewood or bauhinia along water courses and lower slopes.
Expected pasture composition	* Denotes non-native "Expected Pasture Composition" species.
Preferred	Curly and hoop Mitchell grasses, Queensland bluegrass, yabila grass, silky browntop.
Intermediate	Native millet, early spring grass.
Non-preferred	Feathertop wiregrass, white speargrass.
Legumes	Burr medic (naturalised), rhynchosia, emu foot, spurred vetch.
Annual grasses	Native couch, small Flinders grass.
Suitable sown pastures	Purple pigeon grass, Bambatsi, Angleton bluegrass, desmanthus, medic (barrel), Caatinga stylo. Leucaena where soils >120 cm. Short term (2 to 5 years) lucerne, burgundy bean, snail medic.
Introduced weeds	Noogoora burr, Bathurst burr, parthenium.
Soils	Soils are deep cracking self-mulching clays (black or brown vertosol).
Description	Surface: Strong and fine self-mulching; Surface texture: medium to heavy clay; Subsoil texture: medium to heavy clay.
Water availability	Low to fair.
Rooting depth	Less than 1 m.

Fertility	Low total nitrogen; low to moderate phosphorus.
Salinity	Low to medium.
Sodicity	Sodic to strongly sodic below 30 cm.
pH	Neutral at surface, becoming strongly alkaline below 30 cm.

Utilisation 30%

Enterprise Finishing

Land use and management recommendations

- Most of the Mitchell grass country is currently utilised for farming.
- Grazing on native pastures by cattle and some sheep does occur.
- Maintain surface cover to minimise erosion.
- In open areas, fire is only useful to remove older (rank) grass. Burning should occur only after adequate rainfall as a dry, hot fire could kill the grass.
- This land type has some potential for pasture improvement.

Land use limitations

- Subsoil sodicity is common.
- Soil erosion hazard when cultivated.
- Rooting depth (in some shallow soils).
- Establishment problems with some small seeded plants and pastures.
- Dense stands of burrs (galvanised) and broad-leaved plants (mintweed, mimosa, pigweed, darling pea) may limit pasture growth, productivity and be toxic to stock.

Conservation features and related management

- The Mitchell grasslands provide habitat for rare and threatened flora species (austral toadflax, native hawk weeds, native thistle, lobed bluegrass, finger panic) and the endangered grey snake and the vulnerable Dunmall's snake.
- Deep soil cracks provide important refuges for mammals (e.g. common and striped faced dunnarts, common and narrow-nose planigales) and reptiles (e.g. earless dragons and soil-crack skink); whilst grassy ground cover is important for birds such as the brolga and bustards.
- Many birds (e.g. cockatiel, red-rumped parrot, corella) feed on the grasslands but nest elsewhere.
- Mitchell grasslands have been extensively modified through cultivation and grazing practices.
- Maintenance of ground cover in grasslands is important to minimise risk of sheet and gully erosion, reduce runoff, improve water quality and protect the wildlife habitat.
- Some areas are being degraded by weed infestation (e.g. parthenium). Vigilance in controlling weed and feral animals can help prevent the degradation of these areas.

Regional ecosystems

11.9.3. 11.9.3a, 11.3.21, 11.4.4, 11.8.11, 11.9.14, 12.5.15.

Land units; Map units; land resource areas, Soil associations

Land Units (Galloway *et al* 1974) 14, 19; Map Units (DPI 1984) 66, 67; LRA, Soil Associations (DPI 1996) Rolling Downs, 6a, 6b; LRA (DPI 1987) 1 - Open Downs.