

Rainforest (closed forest) on basalt



Landform	Undulating rises to rolling low hills and plateaus (slopes 3–40%).
Woody vegetation	Original vegetation largely cleared. Mixed rainforest with crow's and bumpy ash, hoop and bunya pines, black bean, yellow carabeen, red and white cedars, strangler figs, giant stinging tree. Flooded gum occurs along watercourse and rainforest margins.
Expected pasture composition	<i>No native pastures in uncleared rainforest. Some naturalised paspalum and mat grass and minimal grassy understorey after clearing.</i> * Denotes non-native "Expected Pasture Composition" species.
Preferred	Forest bluegrass, Queensland bluegrass, kangaroo grass, black speargrass, Rhodes grass*, kikuyu*, paspalum*, mat grass.
Intermediate	Early spring grass, couch grass*, red Natal grass*.
Non-preferred	Wiregrasses, blady grass, slender chloris.
Legumes	Glycine pea, woolly glycine.
Annual grasses	Small burr grass.
Suitable sown pastures	Kikuyu, paspalum, green panic, white clover, glycine, siratro, leucaena.
Introduced weeds	Lantana, wild tobacco tree.
Soil	Deep, red, strongly structured clays that are friable and highly permeable. Occurrences also on shallow, dark friable clay loams and clays over weathered parent rock.
Description	Surface: Loose to self-mulching, occasionally hard-setting; Surface texture: clay loam to light or medium clay; Subsoil texture: medium to heavy clay.
Features	Deep soils (often >5 m), with varying amounts of ironstone gravel and rock fragments throughout profile. Shallower soils have bedrock at 0.3–0.8 m.
Water availability	High, PAWC 150–200 mm in root zone; low 50–100 mm in shallow soils.
Rooting depth	Effective rooting depth <0.8 m (prairie) to >1.5 m (krasnozems).

Fertility	Medium to high nitrogen; very low to low (krasnozems) to medium to high phosphorus; medium to high potassium; medium zinc and copper.
Salinity	Low to very low.
Sodicity	Non-sodic
pH	Soil surface strongly acid (5.5) (krasnozems) to slightly acid (6.5) (shallow clays); very strongly acid (4.8) to medium acid (6.0) (krasnozems) or strongly alkaline (8.5) (shallow clays).
Utilisation	30% (sown)
Enterprise	Breeders and fattening.
Land use and management recommendations	<ul style="list-style-type: none"> • Suitable for grazing of improved pastures, dryland and irrigated cropping. • Suitable for dairying and hoop pine plantations. • Maintain maximum surface cover to maintain soil structure and reduce erosion. Avoid trafficking and cultivation when wet to reduce soil compaction. • Rotate intensively cultivated crops with broadacre field crops and legumes to improve soil structure and fertility. Periods under pasture rotation is recommended to enhance long-term soil stability and soil organic matter content. • Regular additions of fertiliser are required to maintain productivity. Lime application required on average every 3–5 years. • Do not cultivate on slopes greater than 10–15%. • Adopt practices such as minimum tillage, stubble mulching, weed control to maintain soil structure and reduce erosion on sloping lands. • Control weeds and undesirable ground cover species (lantana, wild tobacco, bracken fern, blady grass).
Land use limitations	<ul style="list-style-type: none"> • Surface structure becomes cloddy and hard setting under cultivation; plough pans may develop. • Effective rooting depth limited by very strongly acid soils. • Fertility is variable and declines rapidly under development. • Highly erodible on cultivated slopes >3% (krasnozems). • Prairie soils are moderate to high erosion risk, particularly on steeper slopes. • Shallow soils often stony and <0.5 m above weathered bedrock.
Conservation features and related management	<ul style="list-style-type: none"> • Habitat for endemic and rare and threatened flora and fauna. • These rainforests on the fertile elevated plateaus have been extensively cleared and established with kikuyu. • The remnants tend to be small and are threatened at the margins by weed invasion. • Outside of national parks and reserves, the lack of connectivity in the landscape threatens the genetic vigour of the species that make up and inhabit these rainforests.
Regional ecosystems	12.8.3, 12.8.4, 12.8.5, 12.12.15a.
Land resource area	Red Volcanics, 2a (Noble, 1996).