



CENCHRUS CILIARIS

Buffel Grass

A vigorous, rhizomatous perennial, up to 1 m tall. *Culms* erect to somewhat prostrate, smooth, hairless, straggling, often kneeed towards the base, extensively branched. *Nodes* smooth, hairless. *Leaves* more on the culms than basal. *Leaf sheaths* hairless (cultivars Nunbank, Lawes, Molopo and Biloela) or hairy (cultivars Gayndah and Tarewinnabar), shorter than the internodes. *Ligule* a rim of hairs. *Leaf blades* flat, up to 30 cm long and 8 mm wide, hairless, except for sparse long hairs towards the ligule, tapering to a fine point from near the middle, leaf colour varying according to variety: blue in Molopo; bluish-green in Nunbank, Lawes and Biloela; green in Tarewinnabar and Gayndah.

Inflorescence a spike-like cylindrical panicle, up to 10 cm long, with fascicles (Fs) of spikelets attached to the rhachis by very short stalks, purplish in colour. *Spikelets* (S) similar, 4–5 mm long, 1–3 enclosed in an involucre of numerous, stiff, usually pigmented bristles, the larger bristles being flattened at the base, each edge having a row of silky hairs, the whole being termed a fascicle, which falls entire at maturity. *Florets* 2, the lower male or sterile, the upper bisexual. *Glumes* (G_1 , G_2) slightly unequal, ovate, 1-nerved, membranous; the lower glume (G_1) about $\frac{1}{3}$ the length of spikelet; the upper (G_2) longer (about $\frac{1}{2}$). *Lemma* (L_1) of the lower male or sterile floret membranous, 3.5 mm long, 5-nerved. *Palea* (P_1) about $\frac{2}{3}$ the length of L_1 , 2-nerved, 2-keeled. *Anthers*, when present, 3, 2 mm long. *Lemma* (L_2) of the upper fertile floret membranous, 4 mm long, 5-nerved. *Palea* (P_2) about $\frac{3}{4}$ the length of L_2 , 2-nerved, 2-keeled. *Anthers* 3, 2 mm long.

A valuable drought-tolerant and persistent species of African origin, it is used as a planted pasture grass through much of Queensland in areas of less than 750 mm rainfall west to the Mitchell grass country. It tends not to be very palatable in mature stages of growth, but it seeds profusely. It may become locally dominant to the exclusion of most other plants. There are a number of cultivars, the main ones having been mentioned above. These remain quite distinct, since the grass is an obligate apomict (i.e. reproduces asexually). *C. setiger*, introduced from Afghanistan, is rather rarely cultivated in southern Queensland, but is an important sown pasture species in northern Australia. The native or naturalized species are mostly of a weedy nature.

REFERENCES

- Bailey (1902),¹ p. 1841; Gardner (1952),² pp. 283-89; C.S.I.R.O. Australia (1967),³ pp. 83-93; Humphreys (1967b);⁴ Barnard (1969),⁵ pp. 29-31; Commonwealth Bureau of Pastures and Field Crops (1969b);⁶ Burbidge and Gray (1970),⁷ p. 60; Willis (1970),⁸ p. 204; Beadle *et al.* (1972),⁹ pp. 672-73; Vickery (1975),¹⁰ pp. 253-63; Black (1978),¹¹ pp. 214-15; Jessop (1981),¹² pp. 479-80.

KEY TO SPECIES

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| 1. | Burr (involucre) covered with coarse, sharply pointed spines, pointing outwards at maturity. | 2 |
| | Burr with spines or bristles not pointing outwards at maturity. | 4 |
| 2. | Spines on burr surrounded by a ring of slender bristles (Mossman River grass) | <i>C. echinatus</i> ^{2,10,12} |
| | Spines on burr not surrounded by a ring of slender bristles. | 3 |
| 3. | Spikelets generally 6–6.5 mm long (spiny burrgrass) | <i>C. longispinus</i> ^{10,11} |
| | Spikelets generally 4.5–5 mm long (spiny burrgrass) | (<i>pauciflorus</i> in part)
<i>C. incertus</i> ^{2,7,8,10,11}
(<i>pauciflorus</i> in part) |
| 4. | Inner bristles broad-based, triangular, not tapering to a fine, awn-like point (Birdwood grass) | <i>C. setiger</i> ^{2,5,10} |
| | Inner bristles or spines tapering to a fine, awn-like point. | (<i>setigerus</i>)
5 |
| 5. | Bristles or spines upwardly rough; inflorescences openly spike-like. | 6 |
| | Bristles or spines downwardly rough; inflorescences densely spike-like. | 7 |
| 6. | Inner bristles rounded, without a well-developed longitudinal groove (hillside burrgrass) | <i>C. caliculatus</i> ^{1,9,10} |
| | Inner bristles flattened, with a well-developed longitudinal groove. Rare (Gallon's curse) | (<i>australis</i>)
<i>C. biflorus</i> |
| 7. | Bristles joined only at base (buffel grass) | <i>C. ciliaris</i> ^{2,3,4,6,8,10,11,12} |
| | Bristles joined for 1–3 mm (Cloncurry buffel grass) | <i>C. pennisetiformis</i> ^{2,10} |