

Register of Australian Herbage Plant Cultivars

A. Grasses

16. *Brachiaria*

Brachiaria decumbens Stapf. (signal grass) cv. Basilisk

Reg. No. A-16a-1

Registered September 1973

Published in the Journal of the Australian Institute of Agricultural Science 40 (1), March 1974

Origin

Indigenous to the open grasslands of the Great Lakes Plateau in Uganda and adjoining East African countries (6,9). *Brachiaria decumbens* is grown in the Congo under the name *Brachia eminii* (6,11) and has been introduced and grown to some extent in the West Indies (11), Venezuela (12) and Surinam (2).

Seed was introduced from the Department of Agriculture, Kampala, Uganda in 1930 (CPI 1694) and 1937 (CPI 6798) and it is probable that these were identical lines. Only one type can presently be identified in Queensland (5).

Commercial seed of Basilisk has derived from CPI 1694 which was multiplied by C.S.I.R. at Gatton and later Fitzroyvale, and grown at South Johnstone Research Station of the Queensland Department of Agriculture and Stock (8).

Trials at South Johnstone during 1956-66 showed it gave very high yields of dry matter, responding to nitrogen applications with higher dry matter and crude protein yields. However, seed germination was always very poor and it was not until it was shown that germination could be improved with sulphuric acid treatment that its commercial utilization became feasible.

It was approved for commercial release by the Queensland Herbage Plant Liaison Committee in 1966. Submitted by Queensland Department of Primary Industries and recommended for registration by the Queensland Herbage Plant Liaison Committee. Registered September 1973.

Morphological description (7,9)

A vigorous trailing perennial grass; erect shoots arise from a long prostrate stoloniferous base; the stolons root and branch readily at the nodes forming a dense turf. The culms are erect, 30-45 cm high, many noded and rooting from lower nodes; the uppermost internode is by far the longest and very slender and glabrous. The leaf sheaths are tight, terete or somewhat compressed and keeled upwards, and more or less finely hirsute. The ligule is a ciliolate rim. The leaf blades are short and dark green, being narrowly lanceolate from a rounded base tapering to an acute point, 4-8 cm long by 8.0-10.6 mm wide, flat, thin and shortly hirsute with finely cartilaginous and scabrid margins. The inflorescence is a secund panicle of 2-3 sessile, more or less curved, spike-like racemes attached at right angles to the rachis of the panicle and spreading horizontally. The main rachis is slender, semi-terete and glabrous. The racemes are 2-seriate, secund, very dense, and 2-5 cm long; the rachis of the raceme is subherbaceous, flat, up to 1.6 mm wide, dark purple and glabrous on the back, minutely pubescent on the front, and ciliate along the edges. The spikelets are closely contiguous, oblong, 5 mm long, pale greyish-green and hairy. Glumes are very unequal, membranous; the lower broad ovate, 1/2-1/3 length of spikelet, finely 9-nerved; upper corresponding in size and outline to the spikelet, very convex, 7-nerved, silky hair on upper half. Lower floret male, with lemma 5-nerved as long as spikelet. Upper floret fertile, broad, oblong, 4.5 mm × 1.5 mm; lemma and palea hard crustaceous, palea whitish and almost smooth. Lemma and palea tightly invest the caryopsis. Basilisk is a tetraploid, chromosome number $4x = 36$ and an obligate aposporous apomict (7).

Agronomic characters (1,3,4,10,11,12)

Adapted to humid tropical areas of summer rainfall with a dry season of not more than 4-5 months (11) e.g. wet coastal areas of north Queensland. However, it is more tolerant of drought than para grass (*Brachiaria mutica*); it grows well on steep hillsides and quick drying, shallow soils where para grass could not succeed (4).

Basilisk forms an aggressive, high yielding sward. Although it has been reported not to combine well with *Stylosanthes* (11) but satisfactorily with *Centrosema* (10), in fact an association between this aggressive grass and all currently available tropical legumes persists for only a short time (4).

This cultivar responds markedly to nitrogen fertilization in dry matter yield and protein content (1). In a cutting experiment its annual dry matter production (33,000 kg/ha) significantly exceeded that of Pangola grass (*Digitaria decumbens*), para grass (*Brachiaria mutica*) and Guinea grass (*Panicum maximum*) (1).

It is palatable except when the stems are mature (10), and stands up well to heavy stocking and trampling (10,12).

Seed production is good during the first 12 months from planting provided the grass is not cut frequently (11). Seed requires a period of after-ripening of about 12 months, but germination of recently harvested seed may be improved by treatment with sulphuric acid. Ten to fifteen minutes in commercial sulphuric acid improved germination of recently harvested seed from 0 to 33% (3).

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