Register of Australian Herbage Plant Cultivars

A. Grasses
9. Forage Sorghum
Sorghum halepense Pers. × *S. roxburghii* Stapf (hybrid sorghum) cv. Krish

Reg. No. A-9e-1
Registered September 1967

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Origin

A diploid (2n = 20) forage sorghum developed at the Cooper Laboratory, CSIRO, Lawes, Qld., from F1 seed of a hybrid (2) between *Sorghum halepense* Pers. and *S. roxburghii* Stapf which was provided by Dr. N. Krishnaswamy of the Indian Council of Agricultural Research, Coimbatore, Madras. *Sorghum halepense* is normally a tetraploid with 2n = 40, but the parent of this hybrid was a diploid with 2n = 20.

Krish was released by the Queensland Herbage Plant Liaison Committee in 1965. Submitted by the CSIRO Division of Tropical Pastures, and recommended for registration by the Queensland Herbage Plant Liaison Committee. Registered September 1967.

Morphological description (3).

An erect perennial with numerous tillers and a solid pithy stem which is about 3.8 cm in thickness and sometimes reaches a height of 4 m. Rhizomes are almost entirely absent. the leaves are similar to those of Saccaline but are slightly narrower and the ligule is hairy. The panicle is similar to that of Crooble but is larger and has slightly drooping branches, and the sessile spikelet has more hairs at the base than Crooble. The glumes are usually straw-coloured, but may be tinged with pink or red and usually enclose the caryopsis. The caryopsis is reddish brown in colour and obovoid to ellipsoid approximately 3 mm x 2 mm; it has now brown nucellar layer and the endosperm is starchy. Seeds approx. 160,000 per kg; caryopses 187,000 per kg.

Agronomic characters (3)

Initially selected for the wetter coastal areas of Queensland and northern New South Wales, but has been grown successfully in the Brigalow region of Queensland (1). Requires a soil of high fertility.

Growth from seed is slow and seedling vigour poor; growth in spring is also slow. Produces most of its yield during the latter half of the growing season; and it can outyield other forage sorghums, provided that the first defoliation does not occur before the plants are 10 weeks old. The forage is very palatable to stock and has a high proportion of leaf lamina. Like other forage sorghums Krish contains HCN. It must not be allowed to reach maturity without cutting or grazing as the stems are likely to become very coarse and woody.

Very late in flowering, which does not usually occur before May in south-east Queensland. It is more frost-tolerant than *Sorghum almum* but as a result of low night temperatures and frost seed yield in this area is very low. It shows a high degree of resistance to the common leaf diseases (rust and blight), and also to sugar cane mosaic virus (4).

References

1. Coaldrake, J.E., and Smith, C.A. (1966). CSIRO Aust. Div. Trop. Pastures Ann. Rep. 1965-66, pp. 29-30.
2. Krishnaswamy, N., Raman, V.S., and Chandrasekharan, P. (1956). An interspecific hybrid of grain sorghum and Johnson grass - *S. halepense* (2n = 20) × *S. roxburghii* (2n = 20). *Curr. Sci*. **25**, 195-7.
3. Pritchard, A.J. (1964). Comparative trials with *Sorghum almum* and other forage sorghums in south-east Queensland. *Aust. J. Exp. Agric. Anim. Husb.* **4**, 6-14.
4. Teakle, D.S., and Pritchard, A.J. (1971). Resistance of Krish sorghum to four strains of sugar cane mosaic virus. *Pl. Dis. Reptr* **55**, 596-8.