

Register of Australian Herbage Plant Cultivars

A. Grasses

9. Forage Sorghum

Sorghum × *alimum* Parodi (Columbus grass) cv. Crooble

Reg. No. A-9a-1

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Origin

Developed from an introduction (C.P.I.12019) made by CSIRO in 1948 from the College of Agriculture, Potchefstroom, South Africa. It was chosen on the basis of preliminary trials (1947-50) at Curlew and Crooble in north-west New South Wales as the best available type of the species by C.A. Neal-Smith, CSIRO. Following some selection for yield and rhizome characteristics (8), seed stocks were developed to commercial proportions by Mr. O.C. Uebergang of Crooble during 1952-53 (4). Because of suspected weed risk the sale of *Sorghum alimum* seed was prohibited in Queensland (1). In New South Wales a ban was placed on the sale of seed in 1956 but was removed in 1959 as it became apparent there was no great risk of *Sorghum alimum* becoming a weed (3, 4). At the same time the New South Wales Department of Agriculture commenced to certify seed of Crooble using Mr. Uebergang's plantings as a source of basic seed (3). This certified seed was widely distributed through New South Wales and Queensland in the period 1961-64. Because of strong competition subsequently from uncertified seed and the rapid development of sorghum hybrids as an alternative grazing crop, no seed has been certified since 1964.

Morphological description (4, 7)

An erect, robust, tussocky perennial with numerous tillers and thick short rhizomes which curve upwards to produce new shoots near the parental stool. Stems solid and pithy, about 1 cm in thickness, sometimes reaching height of 3-3.6 m. Leaves 2.5-4.0 cm wide, glabrous except for hairs near the ligule; ligule membranous. Inflorescence a pyramid-shaped panicle with branches in whorls. Spikelets one-flowered, paired; one sessile hermaphrodite spikelet and one pedicelled male spikelet; sessile spikelet, ovate-lanceolate, hairy when young, falls from panicle with a small piece of rachis attached; male pedicellate spikelet more or less persistent; pedicels hairy. Glumes equal, rigid and shiny, black when mature, 4-5 mm long; lemma transparent, often awned, awns readily fall off as the seed matures; palea transparent, longer than the lemma. The glumes enclose the caryopsis which is light brown, ovate to obovate, 2.5-4.0 mm long with margins of embryo usually well defined. Seeds approx. 121,000 per kg; caryopses 181,000 per kg.

Agronomic characters

Adapted to the summer rainfall areas of Queensland and north-western New South Wales with an average precipitation of 460-760 mm. Requires a soils of high fertility and may behave as a short-term perennial on soils of low fertility. On fertile soils at Crooble has remained productive for at least 10 years (5).

It establishes easily and grows very rapidly during spring and summer. Usually commences flowering 7-8 weeks after planting and is predominantly cross pollinated (9). It seeds profusely with very little seed being shed after ripening. It is drought-resistant and salt-tolerant (6) and a good pioneer on newly cleared land. It produces abundant good-quality herbage suitable for hay, silage, or grazing and is capable of sustaining very high stocking rates (3, 4, 10). It is susceptible to the leaf diseases *Helminthosporium turcicum* (blight) and *Puccinia* sp. (rust) (2). It is relatively easily eradicated (4, 5, 8).

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