

Register of Australian Herbage Plant Cultivars

A. Grasses

6. Panic

Panicum maximum Jacq. (Panic or Guinea grass) cv. Makuene

Reg. No. A-6b-3

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Origin

The first record of this plant was its collection from the Makueni district of Kenya and subsequent (1962) transfer to the Grasslands Research Station, Kitale, Kenya. At Kitale, it has the introduction number K6221 and varietal name Makueni (1). It was introduced into Australia in 1965 as CPI 37910 by Dr. B. Grof and Mr. J. Redrup and currently is under intensive evaluation as a pasture plant in the humid wet tropics of north-eastern Australia (2,3,5). Submitted by Queensland Department of Primary Industries and recommended for registration by the Queensland Herbage Plant Liaison Committee. Registered December 1973.

Morphological description (1,2,3,4)

It is tufted perennial with occasional short stolons and growing to 1.8 to 2.4 m in height. It is more robust than common guinea, but less robust and finer stemmed than the giant cultivars Hamil and Coloniao. It is a leafy plant, the leaves are long, (mature leaves up to 80-100 cm) flat, tapering with slightly scabrid margins. The leaves (mature leaves 18-22 mm wide) are wider than those of common guinea (14-16 mm), but narrower than those of Hamil (24-26 mm) and Coloniao (22-24 mm). The leaf canopy in mature plants is held less erect than in cvv. Hamil, Coloniao and common guinea grass.

Makueni is easily distinguished from the commercial cultivars (Hamil, Coloniao and common guinea) in that the whole plant (leaf blade, sheath, exposed stem and spikelet) is densely hairy. The dense white hairs are longer at the base of the sheath and at the junction of the blade and sheath than elsewhere on the leaf or sheath. Leaf blade hairs are pubescent, giving a soft, furry feel, while those on the sheath tend to be hirsute.

Makueni is easily distinguished from coarse guinea (an undesirable type) in that in coarse guinea grass the hairs, tending to hispid, are less dense and are restricted to the base of the leaf blades, around the nodes and on the leaf sheath. The exposed stem and spikelets of coarse guinea are glabrous.

The inflorescence of Makueni is a large, open panicle 25-40 cm in length. It is about the same size as Coloniao, larger than common guinea and smaller than cv. Hamil. The outer glumes of the spikelet are covered in short dense hairs while those of cvv. Hamil, Coloniao, common guinea and coarse guinea are glabrous. The spikelets are 3.0-3.5 mm long, two-flowered with the upper floret fertile. The lower glume is 1/4-1/3 the length of the spikelet. The straw coloured seeds are 2.3-2.5 mm long. Commercial seed consists of the whole spikelet including the outer glumes.

Agronomic characters (2,4)

Annual total dry matter yields of Makueni are similar to those of other commercial cultivars of guinea grass but Makueni makes less growth in summer and substantially out-yields the other cultivars in the cool season on the wet tropical coast. Up to 25% of its total yield is produced in the cool season compared with 20% for common guinea and 15% for cvv. Coloniao and Hamil. This is an important attribute as quality forage is in short supply over this period of the year.

It is persistent and readily accepted by stock. Compatibility with legumes (Centro and stylo) is similar to that of other guinea grasses. Comparable seed yields have also been obtained.

There has been a suggestion from initial results that in vitro digestibility may be lower for Makueni harvested at 4-weekly intervals and this feature is being checked further.

References

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