

New herbage plant cultivars

B. Legumes

10. *Macroptilium*

(c) *Macroptilium longipedunculatum* (Bentham) Urban (Llanos macro) cv. Maldonado

Reg. No. B-10c-1. Registered on April 24, 1991.

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Origin

Line CPI 62158 (NT 3339) was collected by I.L. Miller in December 1971 at Hato El Frio in Venezuela (7°45'N), rainfall 1300 mm, growing just off the road in flat open plains country (Llanos). Evaluation has been carried out by the Northern Territory Department of Primary Industry and Fisheries. The cultivar is named after the Maldonado family who own the property where it was collected.

Submitted by the Northern Territory Department of Primary Industry and Fisheries and recommended for registration by the Northern Territory Herbage Plant Liaison Committee.

Morphological description

Short lived perennial herb to 60 cm high with trailing stems; vegetative parts shortly pilose, hairs of the stem retrorse to spreading. Stipules narrowly triangular, strongly 3-nerved, c. 2.5 mm long, acute. Pulvinus pale coloured, c. 2 mm long. Petioles, petiolules and rachis grooved above and closely ribbed; petioles 24–45 mm long. Leaves

pinnately 3-foliolate; stipules c. 1 mm long, narrowly triangular; petiolules 1–2 mm long; proximal leaflets ovate with asymmetric bases, 20–44 mm long, 10–31 wide. Inflorescence an axillary raceme 230–420 mm long; rachis naked in the lower four fifths, retrorsely pubescent; flowers shortly pediceled, solitary or in 2s and 3s, arising from well spaced burl-like nodes. Calyx tubular, c. 6 mm long, sparsely pubescent; lobes c. 2 mm long, posterior pair narrower than the rest. Standard greyed orange, concave, obovate, emarginate, c. 14 mm long; wings purple, partly adhering to the keel petals, limb orbicular, c. 24 mm long, 11 mm wide; keel petals c. 15 mm long, apex curved and slightly twisted; pistil c. 15 mm long, ovary with many ovules, c. 8 mm long, sericeous; legumes reflexed to patent, linear, 35–70 mm long, retrorsely pubescent; seeds many (10–18); valves twisted on drying. Seeds small, mottled light and dark grey, flattened ovoid, approx 300 000 per kg.

Macroptilium longipedunculatum is a variable species, and Hassler recognized three forms under *Phaseolus longipedunculatus*, including one as var. *linearifolialatus*. Maldonado is close to forma *glabratus* Hassler, having retrorse hairs on the stem and vegetative parts shortly hairy rather than the forma *typicus* Hassler, which is softly and densely pubescent.

Agronomic characters

Maldonado is a short lived perennial, with on average an estimated 20–40 percent of plants surviving from one growing season to the next. It has shown good persistence in introduction trials, surviving for over six years at Katherine Experimental Farm, Mount Bunday Station, Coastal

Plains Research Station and Berrimah Agricultural Research Centre (Cameron *et al.* 1984, Cameron and McCosker 1986). Maldonado has spread well by seed at Berrimah Agricultural Research Centre, Tortilla Flats Research Farm and Mount Bunday Station.

It has shown good growth on neutral to slightly acidic upland red and yellow earth and lithosol soils, and floodplain solodic soils, but has performed poorly on cracking clay floodplain soils. Maldonado has shown good tolerance of water-logging on solodic and yellow earth soils, and of short term flooding on solodic soils. It has survived three months of flooding. A stand which was almost eliminated by 5 months of continuous flooding in 1989 showed good re-establishment and growth during 1990 after being cultivated prior to the wet season.

Maldonado is not specific in its *Rhizobium* requirements, having grown well without inoculation at a number of sites in the Northern Territory, and dry matter yields between 5.2 and 7.3 t/ha have been recorded (A.G. Cameron and B.J. Ross, unpublished data).

During periods of wet weather, Maldonado can be affected by leaf blight caused by *Rhizoctonia* spp, but the areas involved are only small.

In the Northern Territory flowering commences in late April and continues into the dry season while soil moisture lasts. Seed yields of up to 240 kg/ha have been harvested under rain grown

conditions in trials (A.G. Cameron and B.J. Ross, unpublished data) and from a larger irrigated area (N. Thomas, pers. comm.).

Maldonado is readily accepted by cattle as green feed or as hay. When grazed as dry season saved fodder in the Northern Territory Maldonado gave liveweight gains of 345 g/head/day over 56 days from August when stocked at 3 head/ha in 1987 and liveweight losses of 34 g/head/day over 126 days from May when stocked at 2 head/ha in 1988. The corresponding weight changes for *Centrosema pascuorum* cv. Bunday were gains of 323 g/head/day in 1987 and 216 g/head/day in 1988.

Acknowledgement

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References

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- CAMERON, A.G., MILLER, I.L., HARRISON, P.G. and FRITZ, R.J. (1984) A review of pasture plant introduction in the 600-1500 mm rainfall zone of the Northern Territory. Northern Territory Department of Primary Production Technical Bulletin No. 71.