

Register of Australian Herbage Plant Cultivars

B. Legumes

10. *Macroptilium*

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

Reg. No. B-10c-1

Registered 24 April 1991

Originator: A. G. Cameron

Northern Territory Department of Primary Industry and Fisheries, PO Box 79, Berrimah, N.T. 0828, Australia.

Registrar: R. N. Oram

CSIRO Division of Plant Industry, GPO Box 1600, Canberra, A.C.T. 2601, Australia.

Released by Northern Territory Department of Primary Industry and Fisheries

Australian Journal of Experimental Agriculture, 1992, 32, 264.

Origin

Line CPI 62158 (NT 3339) was collected by I. L. Miller in December 1971 at Hato El Frio, 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, about 2.5 mm long, acute. Pulvinus pale coloured, about 2 mm long. Petioles, petiolules, and rachis grooved above and closely ribbed; petioles 24–45 mm long. Leaves pinnately 3-foliolate; stipules about 1 mm long, narrowly triangular; petiolules 1–2 mm long; proximal leaflets ovate with asymmetric bases, 20–44 mm long, 10–31 mm wide; terminal leaflet broadly lanceolate to deltoid, 25–48 mm long, 13–30 mm wide. Inflorescence an axillary raceme 230–420 mm long; rachis naked in the lower four-fifths, retrorsely pubescent; flowers shortly pediceled, solitary or in twos and threes, arising from well-spaced, burl-like nodes. Calyx tubular, about 6 mm long, sparsely pubescent; lobes about 2 mm long, posterior pair narrower than the rest. Standard greyed orange, concave, obovate, emarginate, about 14 mm long; wings purple, partly adhering to the keel petals, limb orbicular, about 24 mm long, 11 mm wide; keel petals about 15 mm long, apex curved and slightly twisted; pistil about 15 mm long, ovary with many ovules, about 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, about 300 000 per kg.

Macroptilium longipedunculatum is a variable species, and Hassler recognised 3 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% of plants surviving from one growing season to the next. It has shown good persistence in introduction trials, surviving for over 6 years at Katherine Experimental Farm, Mt 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 Mt Bunday Station.

It has shown good growth on neutral to slightly acidic upland red and yellow earth and lithosol soils, and floodplain sodic soils, but has performed poorly on cracking clay floodplain soils. Maldonado has shown good tolerance of waterlogging on sodic and yellow earth soils, and of short-term flooding on sodic soils. It has survived 3 months of flooding. A stand that 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 requirements for *Rhizobium*, having grown well without inoculation at various sites in the Northern Territory. Dry matter yields of 5.2–7.3 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.

Acknowledgment

I wish to thank Mr C. Dunlop, Senior Botanist, Conservation Commission of the Northern Territory, for providing a complete description of Maldonado.

References

- Cameron, A. G., and McCosker, T. H. (1986). Introduced pasture species screening on Mount Bunday Station, N.T. 1979–83. N.T. Dept of Primary Production Technical Bulletin No. 97.
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. N.T. Dept of Primary Production Technical Bulletin No. 71.