Register of Australian Herbage Plant Cultivars

B. Legumes
4. Glycine
a. Neonotonia wightii (Wight & Arn.) Lackey

cv. Malawi
Reg. No. B-4a-4
Registered January 1976

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Origin
Introduced as CPI 28279 in 1960, this cultivar originated in Malawi, and came to Australian via
the Grasslands Research Station, Marandellas, Rhodesia. It was included in a range of glycines in trails
by CSIRO and the Queensland Department of Primary Industries in south-east Queensland in the early
1960’s. It has been tested on the Atherton Tableland from 1964-75. Submitted for registration by the
Queensland Department of Primary Industries and recommended by the Queensland Herbage Plant

Morphological description (4, 5)
Malawi is usually less branched than Tinaroo and Cooper and stolons are less well rooted. Leaves
generally larger, 50-125 mm long, 40-150 mm wide and darker green than Tinaroo or Cooper, and have
a more glabrous appearance than Clarence. Leaf hairs semi-erect, brown on the leaf margins and veins.
Brown hairs on the ventral surfaces of partly and newly expanded leaflets more closely appressed than
Tinaroo giving the veins a darker, more prominent appearance. Petioles 25-175 mm, semi-erect
retrorsely hirsute. Stems prostrate to semi-erect retrorsely hirsute. Petioles, 3 mm, often with marked
purple pigmentation on dorsal and lateral surfaces; Cooper unpigmented, Tinaroo and Clarence less
strongly pigmented to unpigmented. Leaflets ovate-acute to ovate acuminate. Pods brown, retrorsely
hirsute. Inflorescence axillary many flowered raceme 15-35 cm on peduncle 3-7 cm. Florets, white
approximately 8 mm with violet-purple markings on standard. Chromosome number: tetraploid (2n =
44) (8). Malawi can be distinguished from Tinaroo by longer racemes, stronger appression of hairs on
the stem and young leaflet and darker green leaves; from Cooper by time of flowering and hair colour;
and from Clarence by time of flowering and hair colour; and from Clarence by time of flowering and
retrorsely hirsute stems and petioles. Retrorsely hirsute pods distinguished it from all three cultivars.
There are 50 000-55 000/kg.

Agronomic characters
Establishment and early growth are slower than Clarence and Cooper but similar to Tinaroo.
Seasonal growth pattern, time of flowering and seeding are also similar to Tinaroo (4, 5). On soils
where Tinaroo thrives, Malawi has not been superior. In the main dairying areas of the Atherton
Tableland where soil pH is generally below 6, Malawi has consistently outyielded Tinaroo, Cooper and
Clarence cultivars and combines with grasses to form vigorous and persistent pastures under
commercial grazing conditions. Initially, production is slightly inferior to Desmodium intortum cv.
Greenleaf, but it is more persistent. In south-east Queensland is has shown little promise.
Symbiosis with Rhizobium strain CB756 compares favourably with Tinaroo, Cooper and Clarence
in time to initial nodulation, number of nodules and efficiency of nitrogen fixation (1).
Seed yields of c. 300 kg/ha have been obtained with a header harvester over a number of seasons
at Walkamin in North Queensland.
The protein content and in vitro digestibility of Malawi compare favourably with other
commercial cultivars of N. wightii and Greenleaf desmodium.
References