

Register of Australian Herbage Plant Cultivars

B. Legumes

9. Annual Medics

e. Medicago polymorpha var. *brevispina* (Benth.) Heyn (burr medic)

cv. Circle Valley

Reg. No. B-9e-2

Registered November 1976

Published in the Journal of the Australian Institute of Agricultural Science 43 (1&2), March-June 1977.

Origin

Selected by Drs. B.J. Quinlivan and C.M. Francis, Western Australia Department of Agriculture from material collected at the Gorge approximately 2 km south of Coolgardie, W.A., in 1967 by Mr A. C. Linto of the Department of Agriculture, Kalgoorlie. It occurred at Coolgardie as a mixed naturalised stand apparently established for many years.

Submitted for registration by the Western Australian Department of Agriculture and recommended for registration by the Western Australian Herbage Plant Liaison Committee. Breeders' seed is being maintained by the Department of Agriculture, Perth, W.A. Registered November 1976.

Morphological description (1, 2)

A trailing prostrate or erect annual depending on plant density, with dense stands reaching a height of 40 cm, otherwise similar morphologically to Serena. Stems ribbed and where exposed to the sun, develop a purple anthocyanin flush. Leaflets obovate to wedge shaped 12-23 mm long, 10-15 mm wide and glabrous. Leaflets with basal purple anthocyanin marking and with further scattered anthocyanin flecking prominent on the leaflets during the winter months. Stipules large, green and glabrous. Peduncle normally shorter than adjacent petiole and normally with three yellow flowers, the corolla being approximately twice the length of the calyx. Mature fruits cylindrical 7-9 mm in length and coiling anti-clockwise, with 4-5 coils. Normally five seeds per fruit, the seeds being oval to kidney shaped and glossy yellow with 280 000 seeds/kg.

Agronomic characters

Circle Valley is some 3 or 4 weeks later flowering than Cyprus barrel medic and is comparable generally in its maturity to Hannaford or Jemalong barrel medic. Testing over 3 years and at six sites in Western Australia has given a mean period to flowering of 140 days from a mid-April germination, 122 days from mid-May and 112 days from mid-June (3).

Circle Valley has an unusually vigorous early winter growth, it flowers prolifically and over a relatively long period, and can form large quantities of seed (in excess of 1 t/ha) provide there are adequate soil moisture and nutrients available.

Circle Valley has regenerated strongly at Speddingup, some 30 km north of Esperance, in a transitional soil zone between the inland alkaline mallee soils and the acid scrub-plain soils nearer the coast. At the same site various cultivars and varieties of barrel and disc failed to establish and persist effectively. Subterranean clover also has proved only partially satisfactory on these extensive soil types which consist of a slightly acid grey-brown surface sand or loamy sand becoming increasingly loamy at depth. They tend towards a neutral reaction at 5-20 cm, and normally have a domed clay horizon at 30-60 cm.

References

1. Barnard, C. (1969). Herbage Plant Species. Div. Plant. Ind., CSIRO, Misc. Publ.
2. Quinlivan, B.J., McComb, J.A., and Devitt, A.C. (1975). Annual medics of Western Australia. W.A. Dep. Agric. Bull. No. 3874.
3. Devitt, A.C., Quinlivan, B.J., and Francis, C.M. Unpublished data. W.A. Dep. Agric., Perth.